IFB STPD 12-001-A

Statement of Work

FOR CALNET 3, CATEGORY 1

VOICE AND DATA SERVICES

ADDENDUM 9

08/22/13

SUBCATEGORY 1.2 – MPLS, VPN AND CONVERGED VOIP

TECHNICAL REQUIREMENTS

Issued by:

STATE OF CALIFORNIA

California Department of Technology

Statewide Technology Procurement Division

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TECHNICAL REQUIREMENTS

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

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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_____ 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

	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.		
	Bidder's Product Description:		
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.		
	Bidder's Product Description:		
3	The MPLS WAN VPN service shall support the ability to assign specific application priority over other applications.		
	Bidder's Product Description:		
4	The MPLS WAN VPN service shall provide any-to-any connectivity		
	Bidder's Product Description:		

	MPLS Service Functionality	Bidder Meets or Exceeds? Y	N
5	The MPLS WAN VPN service shall not use the public Internet for transport. Remote access to this solution may use the public Internet.		
	Bidder's Product Description:		
6	The MPLS WAN VPN service shall be a fully Managed Service that includes the Customer Edge router as described in 7c below		
	Bidder's Product Description:		
7	The MPLS WAN VPN service shall support the following configurations:		
7a	Port only configuration		
	Bidder's Product Description:		
7b	Bundled port and access configuration		
	Bidder's Product Description:		
7c	Bundled port, access and Customer Edge router configuration		
	Bidder's Product Description:		

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

Vulnerability CVSS2 Base Score	Informal Category Name	Max Time to Apply Patch/Update
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 remediations were implemented.

Bidder understands the Requirement and shall meet or exceed it? Yes_____ 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 wiht 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_____

1.2.2.1.2 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:

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

	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.		
2	All Standards Track IETF RFC's associated with MPLS constrained by Border Gateway Protocol (BGP) routing		
3	All Standards Track IETF RFC's associated with Transport of Layer 2 frames over MPLS		
4	IETF MPLS Working Group Standards Track RFCs		
5	IETF Layer 3 VPN Working Group Standards Track RFCs		
6	IETF Pseudo Wire Emulation Edge-to-Edge Working Group Standards Track RFCs		
7	All IETF Standards Track RFC's associated with:		
7a	General IPSec		
7b	Encapsulating Security Payload (ESP) and Authentication Header (AH)		
7c	Key Exchange, Cryptographic Algorithms		
7d	Internet Protocol Security (IPSec) Policy Handling		
7e	IPSec Management Information Bases (MIBs)		
7f	Remote Access, Certificate Authorities		

	Standard	Bidder Meets or Exceeds? Y	N
7g	Secure Socket Layer (SSL) and Transport Layer Security (TLS)		
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.		

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

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

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_____ No_____

Description:

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, .dfx, .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):

1.2.2.6 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

	Requirement	Bidder Meets or Exceeds? Y	N
1	Contractors shall be able to scale the number of VPNs supported by the network.		
	Bidders shall describe here the Contractor's ability to scale the number of VPNs:		
2	Contractor shall support multiple VPNs per access loop		
	Bidders shall describe here the number of VPN's that will be supported in any one (1) access loop:		
3	Contractor shall support multiple VPNs across the MPLS network		
	Bidders shall describe here the number of VPN's that will be supported across the Bidder's MPLS network:		

	Requirement	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)		
	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:		
5	Contractor shall provide redundant network circuits in the backbone network		
	Bidders shall describe here the specific network configurations that will be utilized to provide redundancy to survive failures in the backbone network:		
6	Contractor shall provide network diversity to eliminate single points of failure in the backbone network		
	Bidders shall describe here the diversity that will be designed in the MPLS network to eliminate single points of failure in the backbone network:		
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.		
	Bidders shall describe here the specific remote access Customers shall have to the MPLS:		
8	The remote access service shall be secured.		
	Bidders shall describe here how the MPLS remote access solution will be secured:		
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		
	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:		

	Requirement	Bidder Meets or Exceeds? Y	N
10	Contractor shall list points-of-presence (PoP) where provider edge routers are located		
	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):		
11	The MPLS WAN VPN service shall be resilient		
	Bidders shall describe here the minimum level of service that will be maintained amid network failure:		
12	Contractor shall provide support for multiple Layer 2 access protocols		
	Bidders shall describe here the Layer 2 access protocols that will be utilized with the Contractor's solution:		
13	Contractor shall provide segregation of Customer traffic in a VPN environment		
	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:		
14	The MPLS WAN VPN service shall support IPv4 Capability		
	Bidder's Product Description:		
15	The MPLS WAN VPN service shall support IPv6 Capability when/where offered commercially by the Contractor		
	Bidder's Product Description:		
16	The Contractor shall provide MPLS port diversity capability within the same MPLS POP		
	Bidders shall describe here the MPLS port diversity capability to be included in the Contractor's solution:		

	Requirement	Bidder Meets or Exceeds? Y	N
17	The Contractor shall provide MPLS PoP diversity capability		
	Bidders shall describe here the MPLS point-of-presence diversity capability to be included in the Contractor's solution:		
18	The Contractor shall provide dial backup capability to support routing of traffic outside of the MPLS network in case of MPLS network failure		
	Bidders shall describe here the dial backup capability supported by the Contractor's solution:		
19	The MPLS WAN VPN service shall support IP Multicasting		
	Bidders shall describe here the maximum number of multicast routes that will be supported by the Contractor's solution:		
20	The MPLS WAN VPN service shall provide Multiple CoS to support the prioritization of Entity applications and traffic flows		
	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:		
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.		
	Bidder's Product Description:		
22	The MPLS WAN VPN service shall support access speeds from 128 Kbps to 10 Gbps		
	Bidder's Product Description:		

	Requirement	Bidder Meets or Exceeds? Y	N
23	The MPLS WAN VPN service shall support multiple network interfaces		
	Bidders shall list here the network interfaces that will be supported for CALNET 3, e.g., Dedicated Private Line, SONET, or Ethernet:		
24	The MPLS WAN VPN service shall support multiple Layer 2 protocols		
	Bidders shall list here the Layer 2 protocols that will be supported for CALNET 3:		
25	The MPLS WAN VPN service shall support wireless Customer access capability to the MPLS network		
	Bidders Product Description:		
26	The MPLS WAN VPN service shall support Digital Subscriber Line (DSL) with speeds from 128 Kbps to 1500 Kbps		
	Bidder's Product Description:		
27	The MPLS WAN VPN service shall support Customer access to the MPLS network via satellite communications		
	Bidders shall list here all of the satellite communications speeds that will be supported for CALNET 3:		
28	The MPLS service shall include inside wiring/demarcation extension up to 300 feet in Customer provided conduit.		
	Bidder's Product Description:		
29	The MPLS service shall include business line and modem for out-of-band emergency access to the managed router		
	Bidder's Product Description:		

	Requirement	Bidder Meets or Exceeds? Y	N
30	Contractor shall identify managed router reports available at no additional charge. Bidder shall describe the method of accessing these reports.		
	Bidder's Product Description:		
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.		
	Bidder's Product Description:		
31b	Router Monitoring. Proactively detect, isolate and resolve logical faults associated with the managed router. Router monitoring shall be provided 24x365.		
	Bidder's Product Description:		
31c	Router Management. Manage router configuration. This includes passwords, access lists and configuration changes due to moves, adds, changes and deletes.		
	Bidder's Product Description:		
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.		
	Bidder's Product Description:		

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

	Requirement	Bidder Agrees? Y	Bidder Agrees? N	Bidder's Product Identifier
1	MPLS Transport DS1 Port service at minimum line rate of 128 Kbps			
	Bidder's Product Description:			
2	MPLS Transport DS1 Port service at minimum line rate of 384 Kbps			
	Bidder's Product Description:			
3	MPLS Transport DS1 Port service at minimum line rate of 512 Kbps			
	Bidder's Product Description:			
4	MPLS Transport DS1 Port service at minimum line rate of 768 Kbps			
	Bidder's Product Description:			
5	MPLS Transport DS1 Port service at minimum line rate of 1.024 Mbps			
	Bidder's Product Description:			
6	MPLS Transport DS1 Port service at minimum line rate of 1.544 Mbps			
	Bidder's Product Description:			
7	MPLS Transport NxDS1 Port service at minimum line rate of 3.088 Mbps			
	Bidder's Product Description:			
8	MPLS Transport NxDS1 Port service at minimum line rate of 4.632 Mbps			
	Bidder's Product Description:			
9	MPLS Transport NxDS1 Port service at minimum line rate of 6.176 Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
10	MPLS Transport NxDS1 Port service at minimum line rate of 7.720 Mbps			
	Bidder's Product Description:			
11	MPLS Transport NxDS1 Port service at minimum line rate of 9.264 Mbps			
	Bidder's Product Description:			
12	MPLS Transport DS3 Port service at minimum line rate of 10 Mbps			
	Bidder's Product Description:			
13	MPLS Transport NxDS1 Port service at minimum line rate of 12.352 Mbps			
	Bidder's Product Description:			
14	MPLS Transport DS3 Port service at minimum line rate of 20 Mbps			
	Bidder's Product Description:			
15	MPLS Transport DS3 Port service at minimum line rate of 45 Mbps			
	Bidder's Product Description:			
16	MPLS Transport OC3 Port service at minimum line rate of 155 Mbps			
	Bidder's Product Description:			
17	MPLS Transport OC12 Port service at minimum line rate of 622 Mbps			
	Bidder's Product Description:			
18	MPLS Transport Ethernet Port service at minimum line rate of one (1) Mbps			
	Bidder's Product Description:			
19	MPLS Transport Ethernet Port service at minimum line rate of two (2) Mbps			
	Bidder's Product Description:			
20	MPLS Transport Ethernet Port service at minimum line rate of three (3) Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
21	MPLS Transport Ethernet Port service at minimum line rate of four (4) Mbps			
	Bidder's Product Description:			
22	MPLS Transport Ethernet Port service at minimum line rate of five (5) Mbps			
	Bidder's Product Description:			
23	MPLS Transport Ethernet Port service at minimum line rate of six (6) Mbps			
	Bidder's Product Description:			
24	MPLS Transport Ethernet Port service at minimum line rate of seven (7) Mbps			
	Bidder's Product Description:			
25	MPLS Transport Ethernet Port service at minimum line rate of eight (8) Mbps			
	Bidder's Product Description:			
26	MPLS Transport Ethernet Port service at minimum line rate of nine (9) Mbps			
	Bidder's Product Description:			
27	MPLS Transport Ethernet Port service at minimum line rate of 10 Mbps			
	Bidder's Product Description:			
28	MPLS Transport Ethernet Port service at minimum line rate of 20 Mbps			
	Bidder's Product Description:			
29	MPLS Transport Ethernet Port service at minimum line rate of 30 Mbps			
	Bidder's Product Description:			
30	MPLS Transport Ethernet Port service at minimum line rate of 40 Mbps			
	Bidder's Product Description:			
31	MPLS Transport Ethernet Port service at minimum line rate of 50 Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
32	MPLS Transport Ethernet Port service at minimum line rate of 60 Mbps			
	Bidder's Product Description:			
33	MPLS Transport Ethernet Port service at minimum line rate of 70 Mbps			
	Bidder's Product Description:			
34	MPLS Transport Ethernet Port service at minimum line rate of 80 Mbps			
	Bidder's Product Description:			
35	MPLS Transport Ethernet Port service at minimum line rate of 90 Mbps			
	Bidder's Product Description:			
36	MPLS Transport Ethernet Port service at minimum line rate of 100 Mbps			
	Bidder's Product Description:			
37	MPLS Transport Ethernet Port service at minimum line rate of 200 Mbps			
	Bidder's Product Description:			
38	MPLS Transport Ethernet Port service at minimum line rate of 300 Mbps			
	Bidder's Product Description:			
39	MPLS Transport Ethernet Port service at minimum line rate of 400 Mbps			
	Bidder's Product Description:			
40	MPLS Transport Ethernet Port service at minimum line rate of 500 Mbps			
	Bidder's Product Description:			
41	MPLS Transport Ethernet Port service at minimum line rate of 600 Mbps			
	Bidder's Product Description:			
42	MPLS Transport Ethernet Port service at minimum line rate of 700 Mbps			
	Bidder's Product Description:			

Requirement		Bidder Agrees? Y	N	Bidder's Product Identifier
43	MPLS Transport Ethernet Port service at minimum line rate of 900 Mbps			
	Bidder's Product Description:			
44	MPLS Transport Ethernet Port service at minimum line rate of one (1) Gbps			
	Bidder's Product Description:			

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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

Requirement		Bidder Agrees? Y	N	Bidder's Product Identifier
1	MPLS Transport DS1 Port and Access service at minimum line rate of 128 Kbps			
	Bidder's Product Description:			
2	MPLS Transport DS1 Port and Access service at minimum line rate of 256 Kbps			
	Bidder's Product Description:			
3	MPLS Transport DS1 Port and Access service at minimum line rate of 384 Kbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
4	MPLS Transport DS1 Port and Access service at minimum line rate of 512 Kbps			
	Bidder's Product Description:			
5	MPLS Transport DS1 Port and Access service at minimum line rate of 768 Kbps			
	Bidder's Product Description:			
6	MPLS Transport DS1 Port and Access service at minimum line rate of 1.024 Mbps			
	Bidder's Product Description:			
7	MPLS Transport DS1 Port and Access service at minimum line rate of 1.544 Mbps			
	Bidder's Product Description:			
8	MPLS Transport NxDS1 Port and Access service at minimum line rate of 3.088 Mbps			
	Bidder's Product Description:			
9	MPLS Transport NxDS1 Port and Access service at minimum line rate of 4.632 Mbps			
	Bidder's Product Description:			
10	MPLS Transport NxDS1 Port and Access service at minimum line rate of 6.176 Mbps			
	Bidder's Product Description:			
11	MPLS Transport NxDS1 Port and Access service at minimum line rate of 7.720 Mbps			
	Bidder's Product Description:			
12	MPLS Transport NxDS1 Port and Access service at minimum line rate of 9.264 Mbps			
	Bidder's Product Description:			
13	MPLS Transport DS3 Port and Access service at minimum line rate of 10 Mbps			
	Bidder's Product Description:			
14	MPLS Transport NxDS1 Port and Access service at minimum line rate of 12.352 Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
15	MPLS Transport DS3 Port and Access service at minimum line rate of 15 Mbps			
	Bidder's Product Description:			
16	MPLS Transport DS3 Port and Access service at minimum line rate of 20 Mbps			
	Bidder's Product Description:			
17	MPLS Transport DS3 Port and Access service at minimum line rate of 25 Mbps			
	Bidder's Product Description:			
18	MPLS Transport DS3 Port and Access service at minimum line rate of 30 Mbps			
	Bidder's Product Description:			
19	MPLS Transport DS3 Port and Access service at minimum line rate of 45 Mbps			
	Bidder's Product Description:			

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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

	Requirement	Bidder Agrees? Y	Bidder Agrees? N	Bidder's Product Identifier
1	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 128 Kbps			
	Bidder's Product Description:			
2	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 384 Kbps			
	Bidder's Product Description:			
3	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 512 Kbps			
	Bidder's Product Description:			
4	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 768 Kbps			
	Bidder's Product Description:			
5	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 1.024 Mbps			
	Bidder's Product Description:			
6	MPLS Transport DS1 port, access and router bundled service at minimum line rate of 1.544 Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
7	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 3.088 Mbps			
	Bidder's Product Description:			
8	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 4.362 Mbps			
	Bidder's Product Description:			
9	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 5.000 Mbps			
	Bidder's Product Description:			
10	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 6.176 Mbps			
	Bidder's Product Description:			
11	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 7.720 Mbps			
	Bidder's Product Description:			
12	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 9.264 Mbps			
	Bidder's Product Description:			
13	MPLS Transport NxDS1 port, access and router bundled service at minimum line rate of 12.352 Mbps			
	Bidder's Product Description:			
14	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 10 Mbps			
	Bidder's Product Description:			
15	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 15 Mbps			
	Bidder's Product Description:			
16	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 20 Mbps			
	Bidder's Product Description:			
17	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 25 Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
18	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 30 Mbps			
	Bidder's Product Description:			
19	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 40 Mbps			
	Bidder's Product Description:			
20	MPLS Transport DS3 port, access and router bundled service at minimum line rate of 45 Mbps			
	Bidder's Product Description:			

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
1	MPLS port, access and router on-net Transport service at minimum line rate of 155 Mbps (OC3)			
	Bidder's Product Description:			
2	MPLS port, access and router on-net Transport service at minimum line rate of 625 Mbps (OC12			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
3	MPLS port, access and router on-net Transport service at minimum line rate of 2.5 Gbps (OC48)			
	Bidder's Product Description:			
4	MPLS port, access and router on-net Transport service at minimum line rate of 10 Gbps (OC192)			
	Bidder's Product Description:			

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
1	MPLS port, access and router off-net Transport service at minimum line rate of 155 Mbps (OC3)			
	Bidder's Product Description:			
2	MPLS port, access and router off-net Transport service at minimum line rate of 625 Mbps (OC12)			
	Bidder's Product Description:			
3	MPLS port, access and router off-net Transport service at minimum line rate of 2.5 Gbps (OC48)			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
4	MPLS port, access and router off-net Transport service at minimum line rate of 10 Gbps (OC192)			
	Bidder's Product Description:			

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
1	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of one (1) Mbps			
	Bidder's Product Description:			
2	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of two (2) Mbps			
	Bidder's Product Description:			
3	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of three (3) Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
4	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of four (4) Mbps			
	Bidder's Product Description:			
5	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of five (5) Mbps			
	Bidder's Product Description:			
6	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of six (6) Mbps			
	Bidder's Product Description:			
7	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of seven (7) Mbps			
	Bidder's Product Description:			
8	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of eight (8) Mbps			
	Bidder's Product Description:			
9	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of nine (9) Mbps			
	Bidder's Product Description:			
10	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 10 Mbps			
	Bidder's Product Description:			
11	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 20 Mbps			
	Bidder's Product Description:			
12	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 30 Mbps			
	Bidder's Product Description:			
13	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 40 Mbps			
	Bidder's Product Description:			
14	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 50 Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
15	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 60 Mbps			
	Bidder's Product Description:			
16	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 70 Mbps			
	Bidder's Product Description:			
17	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 80 Mbps			
	Bidder's Product Description:			
18	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 90 Mbps			
	Bidder's Product Description:			
19	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 100 Mbps			
	Bidder's Product Description:			
20	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 150 Mbps			
	Bidder's Product Description:			
21	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 200 Mbps			
	Bidder's Product Description:			
22	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 250 Mbps			
	Bidder's Product Description:			
23	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 300 Mbps			
	Bidder's Product Description:			
24	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 400 Mbps			
	Bidder's Product Description:			
25	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 450 Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
26	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 500 Mbps			
	Bidder's Product Description:			
27	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 600 Mbps			
	Bidder's Product Description:			
28	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 700 Mbps			
	Bidder's Product Description:			
29	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 800 Mbps			
	Bidder's Product Description:			
30	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 900 Mbps			
	Bidder's Product Description:			
31	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 1 Gbps			
	Bidder's Product Description:			
32	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 2 Gbps			
	Bidder's Product Description:			
33	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 2.5 Gbps			
	Bidder's Product Description:			
34	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 3 Gbps			
	Bidder's Product Description:			
35	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 3.5 Gbps			
	Bidder's Product Description:			
36	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 4 Gbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
37	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 4.5 Gbps			
	Bidder's Product Description:			
38	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 5 Gbps			
	Bidder's Product Description:			
39	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 5.5 Gbps			
	Bidder's Product Description:			
40	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 6 Gbps			
	Bidder's Product Description:			
41	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 6.5 Gbps			
	Bidder's Product Description:			
42	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 7 Gbps			
	Bidder's Product Description:			
43	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 7.5 Gbps			
	Bidder's Product Description:			
44	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 8 Gbps			
	Bidder's Product Description:			
45	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 8.5 Gbps			
	Bidder's Product Description:			
46	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 9 Gbps			
	Bidder's Product Description:			
47	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 9.5 Gbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
48	MPLS port, access and router Ethernet on-net Transport service at minimum line rate of 10 Gbps			
	Bidder's Product Description:			

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
1	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one (1) Mbps			
	Bidder's Product Description:			
2	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of two (2) Mbps			
	Bidder's Product Description:			
3	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of three (3) Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	Bidder Agrees? N	Bidder's Product Identifier
4	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of four (4) Mbps			
	Bidder's Product Description:			
5	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of five (5) Mbps			
	Bidder's Product Description:			
6	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of six (6) Mbps			
	Bidder's Product Description:			
7	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of seven (7) Mbps			
	Bidder's Product Description:			
8	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of eight (8) Mbps			
	Bidder's Product Description:			
9	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of nine (9) Mbps			
	Bidder's Product Description:			
10	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 10 Mbps			
	Bidder's Product Description:			
11	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 20 Mbps			
	Bidder's Product Description:			
12	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 30 Mbps			
	Bidder's Product Description:			
13	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 40 Mbps			
	Bidder's Product Description:			
14	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 50 Mbps			
	Bidder's Product Description:			

Requirement		Bidder Agrees? Y	Bidder Agrees? N	Bidder's Product Identifier
15	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 60 Mbps			
	Bidder's Product Description:			
16	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 70 Mbps			
	Bidder's Product Description:			
17	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 80 Mbps			
	Bidder's Product Description:			
18	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 90 Mbps			
	Bidder's Product Description:			
19	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 100 Mbps			
	Bidder's Product Description:			
20	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 150 Mbps			
	Bidder's Product Description:			
21	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 200 Mbps			
	Bidder's Product Description:			
22	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 300 Mbps			
	Bidder's Product Description:			
23	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 400 Mbps			
	Bidder's Product Description:			
24	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 450 Mbps			
	Bidder's Product Description:			
25	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 500 Mbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	Bidder Agrees? N	Bidder's Product Identifier
26	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 600 Mbps			
	Bidder's Product Description:			
27	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 700 Mbps			
	Bidder's Product Description:			
28	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 800 Mbps			
	Bidder's Product Description:			
29	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of 900 Mbps			
	Bidder's Product Description:			
30	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 1 Gbps			
	Bidder's Product Description:			
31	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 2 Gbps			
	Bidder's Product Description:			
32	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 2.5 Gbps			
	Bidder's Product Description:			
33	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 3 Gbps			
	Bidder's Product Description:			
34	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 3.5 Gbps			
	Bidder's Product Description:			
35	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 4 Gbps			
	Bidder's Product Description:			
36	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 4.5 Gbps			
	Bidder's Product Description:			

	Requirement	Bidder Agrees? Y	N	Bidder's Product Identifier
37	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 5 Gbps			
	Bidder's Product Description:			
38	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 5.5 Gbps			
	Bidder's Product Description:			
39	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 6 Gbps			
	Bidder's Product Description:			
40	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 6.5 Gbps			
	Bidder's Product Description:			
41	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 7 Gbps			
	Bidder's Product Description:			
42	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 7.5 Gbps			
	Bidder's Product Description:			
43	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 8 Gbps			
	Bidder's Product Description:			
44	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 8.5 Gbps			
	Bidder's Product Description:			
45	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 9 Gbps			
	Bidder's Product Description:			
46	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 9.5 Gbps			
	Bidder's Product Description:			
47	MPLS port, access and router Ethernet off-net Transport service at minimum line rate of one 10 Gbps			
	Bidder's Product Description:			

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

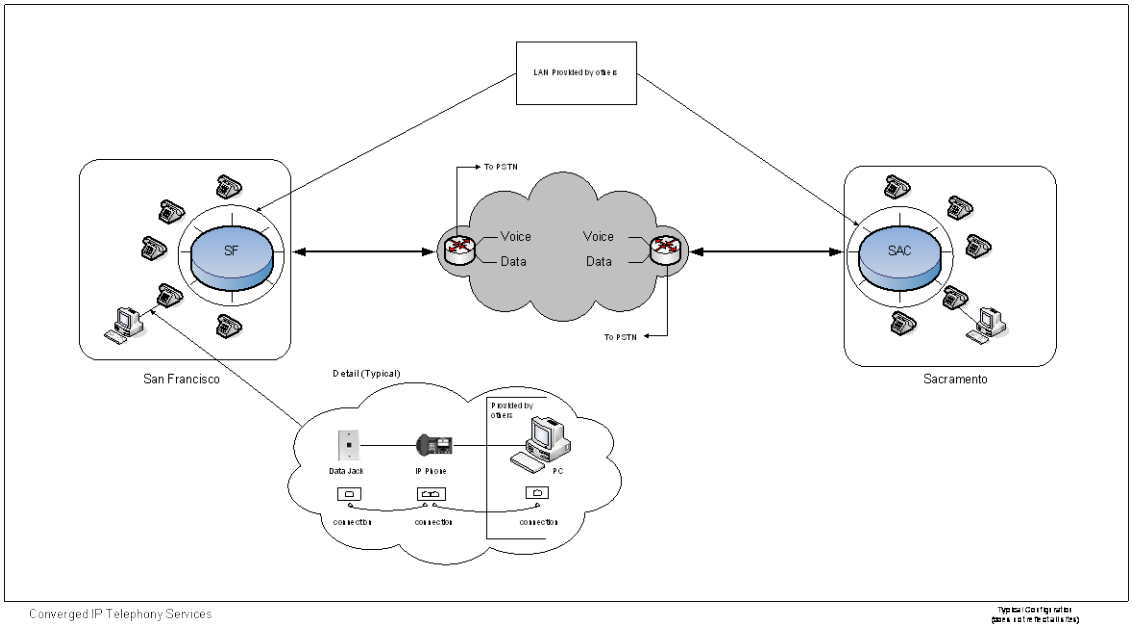
	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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____ 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, .dfx, .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_____ No_____

Embedded Soft Copy of Drawing (Optional):

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:

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

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

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

	Standard	Bidder Meets or Exceeds? Y	N
1	IETF RFC 3261 SIP (Session Initiation Protocol) and all subsequent RFC's		
2	IETF RFC 2132 for DHCP 4703, 6355		
3	IETF RFC's 2916 ENUM, 2806, 6116, 6117		
4	IPv4		
5	IPv6 when and where offered commercially by the Contractor		
6	IETF RFC 1349 ToS, 2474, 2475 DiffServ 3260		
7	ITU-T E.164		
8	ITU G.165/G.168 and subsequent standards for echo cancellation		
9	ITU-T G.711, G.723.x, G.726, G.728, or G.729.x		
10	ITU-T H.248.1 (MEGACO), H.323, H.350 when and where offered commercially by the Contractor		
11	ITU-T P.800 series of Standards for telephone transmission quality. ITU-T P.910		
12	ITU-T T.30, T.37 and T.38, Group III fax		
13	Media Gateway Control Protocol (MGCP) IETF RFC 3435 when and where offered commercially by the Contractor		
14	IETF RFC 3550 Real-Time Transport Protocol (RTP) 5506, 5761, 6015, 6222		
15	IETF RFC 2205 Resource Reservation Protocol (RSVP) 2750, 4495, 5946, 6437		
16	IETF RFC 768 User Datagram Protocol (UDP)		

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____ 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_____ No_____

Description:

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:

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

	Converged VoIP Basic Call Package Features	Bidder Meets or Exceeds? Y	N
1	**900 Blocking** – No calls from 900-xxx-xxxx will be processed to any subscribers		

	Converged VoIP Basic Call Package Features	Bidder Meets or Exceeds? Y	N
2	**Auto Attendant** – 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.		
3	**Call Forward – Busy Don't Answer** – 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. **(Indicate the limitation of paths the call may take)**		
4	**Call Forward – All Calls** – 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		
5	**Call Hold** – Allows the called party to put a caller on hold and retrieve them from the hold state		
6	**Call Notify -** Enables a subscriber to define criteria that causes certain incoming calls to initiate an email notification.		
7	**Call Transfer** – Allows a station End-User to transfer any call in progress to another telephone number without the assistance of an operator		
8	**Call Pickup** – Allows a subscriber to answer any calls directed to another station line within his or her own predefined call pickup group		
9	**Call Park** – 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		
10	**Conference** – Allows a voice station End-User to establish a multiparty conference connection of a minimum of three (3) conferees including themselves without attendant assistance.		
11	**Call Waiting -** When a second call is received while a subscriber is engaged in a call, the subscriber is informed via an audible tone.		
12	**Caller ID** – Phone number of the calling party is displayed on the terminal equipment		
13	**Class of Service** - The CoS configured on the transport required for the proper operation of the service.		
14	**Conference Bridge** – Allows callers from diverse locations/platforms to dial in to a specified telephone number to participate in a conference call		

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

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_____ No_____

Description:

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____ 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

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
1	**Standard Converged VoIP Handset Service Package**	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			
	Bidder's Product Description:				
2	**Midrange Converged VoIP Handset Service Package**	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			
	Bidder's Product Description:				
3	**Executive Converged VoIP Handset Service Package**	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			
	Bidder's Product Description:				
4	**Attendant Converged VoIP Handset Service Package**	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			
	Bidder's Product Description:				
5	**Converged VoIP Standard Conference Room Speakerphone Service Package**	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			
	Bidder's Product Description:				

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
6	**Converged VoIP Executive Conference Room Speakerphone Service Package**	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			
	Bidder's Product Description:				

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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_____

Description:

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____ 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_____

Description:

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

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
1	**Converged VoIP Site Survivability Network Failure**	Site survivability option			
	Bidder's Product Description:				
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]			
	Bidder's Product Description:				
3	**Converged VoIP Block of 20 Additional Direct Inward Dialing (DID) Number Reservation**	Block of 20 DID numbers held in reservation.			
	Bidder's Product Description:				
4	**Converged VoIP Web-Based Attendant Console**	Enables a subscriber (e.g., receptionist) to monitor a configurable set of subscribers			
	Bidder's Product Description:				
5	**Converged VoIP Additional Line Appearance**	Additional line appearances for multi-line handsets.			
	Bidder's Product Description:				
6	**Converged VoIP Analog and Facsimile Support**	Analog device or facsimile support			
	Bidder's Product Description:				

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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 Contactor 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

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
1	**Converged VoIP Off-Net Toll-Free**	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.			
	Bidder's Product Description:				

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 Features

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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____ 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____ 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____ 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

	Country	Bidders Meets or Exceeds? Y	N	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
1	Brazil:					
2	Canada:					
3	China:					
4	France:					
5	Germany:					
6	Israel:					
7	Italy:					
8	Japan:					
9	Korea:					
10	Mexico:					
11	Spain:					
12	Switzerland:					
13	United Kingdom:					

Bidder's 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

	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

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 feature requirements are listed in Table 1.2.3.5.a.

Table 1.2.3.5.a Converged VoIP Voice Mail Service Features

	Converged VoIP Basic Call Package Features	Bidder Meets or Exceeds? Y	N
1	Minimum message length will be at least two (2) minutes each		
2	Message review, including skip back or ahead		

	Converged VoIP Basic Call Package Features	Bidder Meets or Exceeds? Y	N
3	Message saving and erasing		
4	Erased message retrieval before call is ended		
5	Messaging forwarding to another voice mailbox in the system with the ability to append additional comments		
6	Message sending		
7	Password protection		
8	Personalized greetings (both permanent and temporary)		
9	Message waiting indicator signal received at workstation within one (1) minute		
10	Remote access capability from any telephone location on or off net		
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		
12	Web based End-User administration software		
13	Ability to integrate with Unified Messaging applications with no hardware modification		

Bidder understands the requirement and shall meet or exceed it? Yes____ 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

	Feature	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Unique Identifier
1	**Converged VoIP Voice Mail**	Minimum feature requirements as listed in Table 1.2.3.5.a			
	Bidder's Product Description:				

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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 are Commercially Available Areas

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

	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
26	Azusa				
27	Bakersfield				
28	Baldwin Park				
29	Banning				
30	Barstow				
31	Beaumont				
32	Bell				
33	Bell Gardens				
34	Bellflower				
35	Belmont				
36	Belvedere				
37	Benicia				
38	Berkeley				
39	Beverly Hills				
40	Big Bear Lake				
41	Biggs				
42	Bishop				
43	Blue Lake				
44	Blythe				
45	Bradbury				
46	Brawley				
47	Brea				
48	Brentwood				
49	Brisbane				
50	Buellton				
51	Buena Park				
52	Burbank				
53	Burlingame				
54	Calabasas				
55	Calexico				
56	California City				
57	Calimesa				
58	Calipatria				
59	Calistoga				
60	Camarillo				

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

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

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

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

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

	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
234	Livingston				
235	Lodi				
236	Loma Linda				
237	Lomita				
238	Lompoc				
239	Long Beach				
240	Loomis				
241	Los Alamitos				
242	Los Altos				
243	Los Altos Hills				
244	Los Angeles				
245	Los Banos				
246	Los Gatos				
247	Loyalton				
248	Lynwood				
249	Madera				
250	Malibu				
251	Mammoth Lakes				
252	Manhattan Beach				
253	Manteca				
254	Maricopa				
255	Marina				
256	Martinez				
257	Marysville				
258	Maywood				
259	Mcfarland				
260	Mendota				
261	Menlo Park				
262	Merced				
263	Mill Valley				
264	Millbrae				
265	Milpitas				
266	Mission Viejo				
267	Modesto				
268	Monrovia				

	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
269	Montague				
270	Montclair				
271	Monte Sereno				
272	Montebello				
273	Monterey				
274	Monterey Park				
275	Moorpark				
276	Moraga				
277	Moreno Valley				
278	Morgan Hill				
279	Morro Bay				
280	Mount Shasta				
281	Mountain View				
282	Murrieta				
283	Napa				
284	National City				
285	Needles				
286	Nevada City				
287	Newark				
288	Newman				
289	Newport Beach				
290	Norco				
291	Norwalk				
292	Novato				
293	Oakdale				
294	Oakland				
295	Oakley				
296	Oceanside				
297	Ojai				
298	Ontario				
299	Orange				
300	Orange Cove				
301	Orinda				
302	Orland				
303	Oroville				

	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
304	Oxnard				
305	Pacific Grove				
306	Pacifica				
307	Palm Desert				
308	Palm Springs				
309	Palmdale				
310	Palo Alto				
311	Palos Verdes Estates				
312	Paradise				
313	Paramount				
314	Parlier				
315	Pasadena				
316	Patterson				
317	Perris				
318	Petaluma				
319	Pico Rivera				
320	Piedmont				
321	Pinole				
322	Pismo Beach				
323	Pittsburg				
324	Placentia				
325	Placerville				
326	Pleasant Hill				
327	Pleasanton				
328	Plymouth				
329	Point Arena				
330	Pomona				
331	Port Hueneme				
332	Porterville				
333	Portola				
334	Portola Valley				
335	Poway				
336	Rancho Cordova				

	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
337	Rancho Cucamonga				
338	Rancho Mirage				
339	Rancho Palos Verdes				
340	Rancho Santa Margarita				
341	Red Bluff				
342	Redding				
343	Redlands				
344	Redondo Beach				
345	Redwood City				
346	Reedley				
347	Rialto				
348	Richmond				
349	Ridgecrest				
350	Rio Dell				
351	Rio Vista				
352	Ripon				
353	Riverbank				
354	Riverside				
355	Rocklin				
356	Rohnert Park				
357	Rolling Hills				
358	Rolling Hills Estates				
359	Rosemead				
360	Roseville				
361	Ross				
362	Sacramento				
363	Salinas				
364	San Anselmo				
365	San Bernardino				
366	San Bruno				
367	San Buenaventura				
368	San Carlos				

	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
369	San Clemente				
370	San Diego				
371	San Dimas				
372	San Fernando				
373	San Francisco				
374	San Gabriel				
375	San Jacinto				
376	San Joaquin				
377	San Jose				
378	San Juan Bautista				
379	San Juan Capistrano				
380	San Leandro				
381	San Luis Obispo				
382	San Marcos				
383	San Marino				
384	San Mateo				
385	San Pablo				
386	San Rafael				
387	San Ramon				
388	Sand City				
389	Sanger				
390	Santa Ana				
391	Santa Barbara				
392	Santa Clara				
393	Santa Clarita				
394	Santa Cruz				
395	Santa Fe Springs				
396	Santa Maria				
397	Santa Monica				
398	Santa Paula				
399	Santa Rosa				
400	Santee				
401	Saratoga				
402	Sausalito				

	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
403	Scotts Valley				
404	Seal Beach				
405	Seaside				
406	Sebastopol				
407	Selma				
408	Shafter				
409	Shasta Lake				
410	Sierra Madre				
411	Signal Hill				
412	Simi Valley				
413	Solana Beach				
414	Soledad				
415	Solvang				
416	Sonoma				
417	Sonora				
418	South El Monte				
419	South Gate				
420	South Lake Tahoe				
421	South Pasadena				
422	South San Francisco				
423	St Helena				
424	Stanton				
425	Stockton				
426	Suisun City				
427	Sunnyvale				
428	Susanville				
429	Sutter Creek				
430	Taft				
431	Tehachapi				
432	Tehama				
433	Temecula				
434	Temple City				
435	Thousand Oaks				
436	Tiburon				

	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
437	Torrance				
438	Tracy				
439	Trinidad				
440	Truckee				
441	Tulare				
442	Tulelake				
443	Turlock				
444	Tustin				
445	Twentynine Palms				
446	Ukiah				
447	Union City				
448	Upland				
449	Vacaville				
450	Vallejo				
451	Vernon				
452	Victorville				
453	Villa Park				
454	Visalia				
455	Vista				
456	Walnut				
457	Walnut Creek				
458	Wasco				
459	Waterford				
460	Watsonville				
461	Weed				
462	West Covina				
463	West Hollywood				
464	West Los Angeles				
465	West Sacramento				
466	Westlake Village				
467	Westminster				
468	Westmorland				
469	Wheatland				
470	Whittier				
471	Williams				

	Service Location	Converged IP		VoIP Voice Mail	
		Yes	No	Yes	No
472	Willits				
473	Willows				
474	Windsor				
475	Winters				
476	Woodlake				
477	Woodland				
478	Woodside				
479	Yorba Linda				
480	Yountville				
481	Yreka				
482	Yuba City				
483	Yucaipa				
484	Yucca Valley				

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 Commercially Available Areas

	Service Location	Standalone IP		VoIP Voice Mail	
		Yes	No	Yes	No
1					
2					
3					

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____ 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

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
1	**Caller Paid Dial-in Reservation-less Service**	Also known as "Meet-Me" service, participants dial a pre-established number and access code to join the conference call.			
	Bidder's Product Description:				
2	**Toll-Free Dial-in Reservation-less Service**	Also known as "Meet-Me" service, participants dial a pre-established toll-free number and access code to join the conference call.			
	Bidder's Product Description:				
3	**Caller Paid Dial-in Reserved Service**	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.			
	Bidder's Product Description:				

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
4	**Toll-Free Dial-in Reserved Service**	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.			
	Bidder's Product Description:				
5	**Operator-Dialed Service**	An operator sets up the conference call by placing calls to each of the participants.			
	Bidder's Product Description:				
6	**Operator-Assisted Dial-in Service**	Participants dial in to the conference number and the operator screens the callers for information such as password, name or location.			
	Bidder's Product Description:				
7	**Recording Service**	The capability to record to various media including CD, audiocassette or the Digitized Replay option below.			
	Bidder's Product Description:				
8	**Digitized Replay**	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.			
	Bidder's Product Description:				
9	**Transcription**	Contractor provided transcribing a conference call			
	Bidder's Product Description:				
10	**Language Interpretation/ Translation**	Real-time interpretation and translation services			
	Bidder's Product Description:				
11	**Security List Screening**	Host specifies a list of participants who may dial into the conference call. Conference Attendant screens callers against the list.			
	Bidder's Product Description:				

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
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.			
	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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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____ 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____ 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____ 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____ 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____ 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____ 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____ 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____ 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

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
1	**SIP Calling Plan A**	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.			
	Bidder's Product Description:				

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
2	**SIP Calling Plan B**	Unlimited local calling with off-net long distance (Unites 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.			
	Bidder's Product Description:				
3	**U.S. Off-Net Calling for Calling Plan B**	Domestic Off-Net calling for Calling Plan B Customers			
	Bidder's Product Description:				
4	**SIP Calling Plan C**	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.			
	Bidder's Product Description:				
5	**SIP Calling Plan D**	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.			
	Bidder's Product Description:				
6	**Inbound Toll-Free Calling for Calling Plan D**	Inbound Toll-Free calling for SIP Calling Plan D Customers.			
	Bidder's Product Description:				

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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 Off-Net International Long Distance Calling configurations detailed in Table 1.2.5.9.a.

Table 1.2.5.9.a SIP Trunk Off-Net International Long Distance Calling

	Country	Bidders Meets or Exceeds? Y	N	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
1	Brazil:					
2	Canada:					
3	China:					
4	France:					
5	Germany:					
6	Israel:					
7	Italy:					
8	Japan:					
9	Korea:					
10	Mexico:					
11	Spain:					
12	Switzerland:					
13	United Kingdom					

Bidder's 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

	Country	Peak Time Product Identifier	Off-Peak Product Identifier	IMTC Product Identifier
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

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____ 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____ 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

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

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
3	**Extended Demarcation – Copper four-Pair – Sunday and Holiday Hours**	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment as described above. Includes 300 feet of four-pair cable and an RJ48 or equivalent jack.			
	Bidder's Product Description:				
4	**Extended Demarcation – Copper 25 Pair – Regular Hours**	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment 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.			
	Bidder's Product Description:				
5	**Extended Demarcation – Copper 25 Pair – Overtime Hours**	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment 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.			
	Bidder's Product Description:				

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
6	**Extended Demarcation – Copper 25 Pair – Sunday and Holiday Hours**	Wiring services to extend Facilities from the Customer's MPOE to the Customer's point of utilization from a copper trunk or trunking equipment 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.			
	Bidder's Product Description:				
7	**Extended Demarcation – Optical Fiber Link – Regular Hours**	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.			
	Bidder's Product Description:				
8	**Extended Demarcation – Optical Fiber Link – Overtime Hours**	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.			
	Bidder's Product Description:				

	Feature Name	Feature Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
9	**Extended Demarcation – Optical Fiber Link – Sunday and Holiday Hours**	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.			
	Bidder's Product Description:				

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

	Feature Name	Feature Description	Bidder's Product Identifier
1			
	Bidder's Product Description:		
2			
	Bidder's Product Description:		
3			
	Bidder's Product Description:		

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____ 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

	Labor Classification Name	Classification Description	Bidder Meets or Exceeds? Y	N	Bidder's Product Identifier
1	**Field Service Repair Technician Regular Hours**	Field technician properly trained to an expert level for the service being dispatched to diagnose and/or repair a CALNET 3 service problem that turns out to be caused by factors outside the responsibility of the Contractor.			
	Bidder's Product Description:				
2	**Field Service Repair Technician Overtime Hours**	Field technician properly trained to an expert level for the service being dispatched to diagnose and/or repair a CALNET 3 service problem that turns out to be caused by factors outside the responsibility of the Contractor.			
	Bidder's Product Description:				
3	**Field Service Repair Technician Sunday and Holiday Hours**	Field technician properly trained to an expert level for the service being dispatched to diagnose and/or repair a CALNET 3 service problem that turns out to be caused by factors outside the responsibility of the Contractor.			
	Bidder's Product 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____ 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____ 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____ 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)

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

#	Stop Clock Condition (SCC)	SCC Definition
6	**FACILITIES**	Lack of building entrance Facilities or conduit structure that are the End-User's responsibility to provide.
7	**ACCESS**	Limited access or contact with End-User provided the Contractor documents in the trouble ticket several efforts to contact End-User for the following: ***a.*** Access necessary to correct the problem is not available because access has not been arranged by site contact or End-User representative; ***b.*** Site contact refuses access to technician who displays proper identification; ***c.*** Customer provides incorrect site contact information which prevents access, provided that Contractor takes reasonable steps to notify End-User of the improper contact information and takes reasonable steps to obtain the correct information; and, ***d.*** Site has limited hours of business that directly impacts the Contractor's ability to resolve the problem. If it is determined later that the cause of the problem was not at the site in question, then the Access SCC shall not apply.
8	**STAFF**	Any problem or delay to the extent caused by End-User's staff that prevents or delays Contractor's resolution of the problem. In such event, Contractor shall make a timely request to End-User staff to correct the problem or delay and document in trouble ticket.
9	**APPLICATION**	End-User software applications that interfere with repair of the trouble.
10	**CPE**	Repair/replacement of CPE not provided by Contractor if the problem has been isolated to the CPE. If determined later that the CPE was not the cause of the service outage, the CPE SCC will not apply.
11	**NO RESPONSE**	Failure of the trouble ticket originator or responsible End-User to return a call from Contractor's technician for on-line close-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	**MAINTENANCE**	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.

#	Stop Clock Condition (SCC)	SCC Definition
13	**THIRD PARTY**	Any problem or delay caused by a third party not under the control of Contractor, not preventable by Contractor, including, at a minimum, cable cuts not caused by the Contractor. Contractor's 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	**FORCE MAJEURE**	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____ 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)

SLA Name: Availability

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

Measurement Process: The monthly Availability Percentage shall be based on the accumulative total of all Unavailable Time derived from all trouble tickets closed, for the 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.

Objective(s) A applies to the following Services:

- Converged VoIP Service (1.2.3.2)
- Converged VoIP Voice Mail Service (1.2.3.5)
- Audio Conferencing (1.2.4)
- SIP Trunk

Objective(s) A:

	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
Converged VoIP Service	≥ 98.7%	≥ 99.2%	≥ 99.5%	
Converged VoIP Voice Mail Service	≥ 98.9%	≥ 99.2%	≥ 99.5%	
SIP Trunk	≥ 98.9%	≥ 99.2%	≥ 99.5%	

Objective(s) B applies to the following Service(s):

- MPLS (1.2.2) (Includes 1.2.2.8.1 through 1.2.2.8.7)

Objective(s) B:

The objectives will be based on the transport type. The speeds appear in ranges.

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
DS1	≥ 99.2%	≥ 99.5%	≥ 99.8%	
DS3	≥ 99.7%	≥ 99.8%	≥ 99.9%	
OCx	≥ 99.7%	≥ 99.8%	≥ 99.9%	
Ethernet	≥ 99.2%	≥ 99.5%	≥ 99.8%	

Rights and Remedies	**Per Occurrence:** N/A
	Monthly Aggregated Measurements: 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____

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

SLA Name: Catastrophic Outage 1 (CAT 1)

Definition: The total loss of service at a single address based on a common cause resulting in one (1) or more of the following:

- Failure of two (2) or more service types, or
- Failure of ten (10) access circuits, or
- Failure of 50 or more End-User VoIP service package or VoIP voice mail service (seat)
- Failure of a single MPLS port or access circuit with a transport speed greater than or equal to 200 Mbps

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

Service(s):

Converged VoIP Service (1.2.3.2)	
VoIP Voice Mail Service (1.2.3.5)	MPLS (1.2.2) (includes 1.2.2.8.1 through 1.2.2.8.7)

Objective (s):
The objective restoral time shall be:

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
MPLS	≤ 3 hours	≤2 hours	≤1 hour	
VoIP Voice Mail	≤ 3 hours	≤2 hours	≤1 hour	
Converged VoIP Service	≤ 8 hours	≤2 hours	≤1 hour	

Rights and Remedies	**Per Occurrence:** 100 percent of the TMRC for each End-User service not meeting the committed objective for each CAT 1 fault
	Monthly Aggregated Measurements: N/A

Bidder understands the Requirement and shall meet or exceed it? Yes____ No____

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

SLA Name: Catastrophic Outage 2 (CAT 2)

Definition:

Any service affecting failure in the Contractor's (or subcontractor's or Affiliate's) network up to and including the Provider Edge (PE) equipment.

Measurement Process: The Outage Duration begins when a network alarm is received by the Contractor from an outage-causing event or the opening of a trouble ticket by the Customer or 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.

Service(s):

MPLS (1.2.2) (includes (1.2.2.8.1 through 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)

Objective (s):

The objective restoral time shall be:

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
MPLS:	≤ 1 hour	≤ 30 minutes	≤ 15 minutes	
Converged VoIP Service:	≤ 1 hour	≤ 30 minutes	≤ 15 minutes	
VoIP Voice Mail Service:	≤ 1 hour	≤ 30 minutes	≤ 15 minutes	
Audio Conferencing:	≤ 1 hour	≤ 30 minutes	≤ 15 minutes	
SIP Trunking	≤ 1 hour	≤ 30 minutes	≤ 15 minutes	

Rights and Remedies	**Per Occurrence:** 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.
	Monthly Aggregated Measurements: N/A

Bidder understands the Requirement and shall meet or exceed it? Yes____ No____

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

SLA Name: Catastrophic Outage 3 (CAT 3)

Definition: 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

Measurement Process: The Outage Duration begins when a network alarm is received by the Contractor from an outage-causing event or the opening of a trouble ticket by the Customer, 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.

Service(s):

MPLS (1.2.2) (includes 1.2.2.8.1 through 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)

Objective (s):
The objective restoral time shall be:

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B or P)
MPLS	≤ 30 minutes	N/A	≤ 15 minutes	
Converged VoIP Service	≤ 30 minutes	N/A	≤ 15 minutes	
VoIP Voice Mail Service	≤ 30 minutes	N/A	≤ 15 minutes	
Audio Conferencing	≤ 30 minutes	N/A	≤ 15 minutes	
SIP Trunking	≤ 30 minutes	N/A	≤ 15 minutes	

Rights and Remedies	**Per Occurrence:** 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.
	Monthly Aggregated Measurements: N/A

Bidder understands the Requirement and shall meet or exceed it? Yes____ No____

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

SLA Name: Delay – Round Trip Transmission for MPLS Services

Definition: 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.

Measurement Process: 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.

Service(s):

MPLS (1.2.2) (includes 1.2.2.8.1 through 1.2.2.8.7)	

Objective (s): based on a 1,000 byte ping:

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (S or P)
MPLS ≥ 128 Kbps to < 1.536 Mbps	N/A	<400ms	<340ms	
MPLS ≥ 1.536 Mbps to < 40 Mbps	N/A	<120ms	<95ms	
MPLS ≥ 40 Mbps	N/A	<110ms	<90ms	

Rights and Remedies

Per Occurrence: N/A

Monthly Aggregated Measurements:
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)

SLA Name: VoIP Delay – One-Way Transmission

Definition: Average one-way transfer delay measured from Customer Equipment (CE) to the remote CE

Measurement Process: 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.

Service(s):

Converged VoIP Service (1.2.3.2)	

Objective (s):

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
Converged VoIP Service	≤ 170 ms	≤ 130 ms	≤ 90 ms	

Rights and Remedies

Per Occurrence: N/A

Monthly Aggregated Measurements:
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____ No____

1.2.9.8.7 Excessive Outage (M-S)

SLA Name: Excessive Outage

Definition: A Service failure that remains unresolved for more than the committed objective,.

Measurement Process: 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.

Service(s):

MPLS (1.2.2) (includes 1.2.2.8.1 through 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)	

Objective (s):

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
MPLS	16 hours	12 hours	8 hours	
Converged VoIP Service	16 hours	12 hours	8 hours	
VoIP Voice Mail Service	16 hours	12 hours	8 hours	
Audio Conferencing	16 hours	12 hours	8 hours	
SIP Trunking	16 hours	12 hours	8 hours	

Rights and Remedies

Per Occurrence: 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.

Upon request from the Customer or the CALNET 3 CMO, the Contractor shall provide a briefing on the excessive outage restoration.

Monthly Aggregated Measurements: N/A

Bidder understands the Requirement and shall meet or exceed it? Yes____ No____

1.2.9.8.8 Jitter (M-S)

SLA Name: Jitter

Definition: Variations in transfer delay measured from the Customer Edge (CE) to the remote CE

Measurement Process: 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.

Service(s):

Converged VoIP Service (1.2.3.2)	

Objective (s):

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B or S)
Converged VoIP Service	≤ 30ms	≤ 15ms	N/A	

Rights and Remedies

Per Occurrence: 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.

Monthly Aggregated Measurements: N/A

Bidder understands the Requirement and shall meet or exceed it? Yes____ No____

1.2.9.8.9 Notification

SLA Name: Notification	
Definition: 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.	
Measurement Process: 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.	
Service(s): All services	
Objective (s): 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	
Rights and Remedies	**Per Occurrence:** Senior Management Escalation
	Monthly Aggregated Measurements: N/A

Bidder understands the Requirement and shall meet or exceed it? Yes____ No____

1.2.9.8.10 Packet Loss (M-S)

SLA Name: Packet Loss

Definition: 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.

Measurement Process: 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 .

Service(s):

MPLS (1.2.2) (includes 1.2.2.8.1 through 1.2.2.8.7)	
Converged VoIP Service (1.2.3.2)	

Objective (s):

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
MPLS	≤ .75% packet loss	≤ .5% packet loss	≤ .25% packet loss	
Converged VoIP Service	≤ .75% packet loss	≤ .5% packet loss	≤ .25% packet loss	

Rights and Remedies

Per Occurrence: 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.

Monthly Aggregated Measurements: N/A

Bidder understands the Requirement and shall meet or exceed it? Yes____ No____

1.2.9.8.11 Provisioning (M-S)

SLA Name: Provisioning

Definition: Provisioning shall include new services, moves, adds and changes, completed by the Contractor on or before the due dates. The Provisioning SLA shall be based on committed installation intervals established in this SLA or due dates negotiated between 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).

Provisioning SLAs have two (2) objectives:

Objective 1: Individual Service Request

Objective 2: Successful Install Monthly Percentage by Service Type

Note: Provisioning timelines include extended demarcation wiring, when appropriate.

Measurement Process:

Objective 1: Individual Service Request: 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.

Objective 2: Successful Install Monthly Percentage per Service Type: 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.

Service (Features must be installed in conjunction with the service except when listed below)	Committed Interval Calendar Days	Coordinated/Managed Project
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

Objective (s):
Individual Service Requests: Service installed on or before the committed or negotiated due date.
Successful Install Monthly Percentage per Service:

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B, S or P)
MPLS Port Transport:	N/A	≥ 90%	≥ 95%	
MPLS Port and Access Bundle Transport:	N/A	≥ 90%	≥ 95%	
MPLS Port, Access and Router Transport:	N/A	≥ 90%	≥ 95%	
Converged VoIP Service:	N/A	≥ 90%	≥ 95%	
VoIP Voice Mail Service:	N/A	≥ 90%	≥ 95%	
Audio Conferencing:	N/A	≥ 90%	≥ 95%	
SIP Trunking	N/A	≥ 90%	≥ 95%	
MPLS Port, Access and Router Bundled On-Net Transport Speeds	N/A	≥ 90%	≥ 95%	
MPLS Port, Access and Router Bundled Off-Net Transport Speeds	N/A	≥ 90%	≥ 95%	
MPLS Port, Access and Router Bundled Ethernet On-Net Transport	N/A	≥ 90%	≥ 95%	
MPLS Port, Access and Router Bundled Ethernet Off-Net Transport	N/A	≥ 90%	≥ 95%	

Rights and Remedies	**Per Occurrence:** Objective 1: Individual Service Requests: 50 percent of installation fee credited to Customer for any missed committed objective.
	Monthly Aggregated Measurements: 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.

Bidder understands the Requirement and shall meet or exceed it? Yes____ No____

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

SLA Name: Time to Repair (TTR)

Definition: A service outage that remains unresolved for more than the objective level.

Measurement Process: 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.

Service(s):

MPLS (1.2.2) (includes 1.2.2.8.1 through 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)

Objective (s):
The Unavailable Time objective shall not exceed:

Service	Basic (B)	Standard (S)	Premier (P)	Bidder's Objective Commitment (B or S)
MPLS:	6 hours	4 hours	N/A	
Converged VoIP Service:	8 hours	4 hours	N/A	
VoIP Voice Mail Service:	6 hours	4 hours	N/A	
Audio Conferencing:	6 hours	4 hours	N/A	
SIP Trunking	6 hours	4 hours	N/A	

Rights and Remedies	**Per Occurrence:** 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.
	Monthly Aggregated Measurements: N/A

Bidder understands the Requirement and shall meet or exceed it? Yes____ No____

1.2.9.8.13 Managed Service Proactive Notification

SLA Name: Managed Service Proactive Notification	
Definition: The proactive outage notification SLA provides credits if the Contractor fails to open a trouble ticket and notify Customer of an Outage for a managed service. Notification to the Customer shall occur through means agreed to by Contractor and CALNET 3 CMO. 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.	
Measurement Process: The Outage Duration start shall be determined by the first Contractor network alarm resulting from the outage-causing event or the opening of a trouble ticket by the Customer, whichever occurs first. The Contractor has fifteen (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.	
Service(s):	
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)	
Objective (s): 15 Minutes	
Rights and Remedies	**Per Occurrence:** 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.
	Monthly Aggregated Measurements: 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)

SLA Name: Excessive Usage of Site Survivability Network Failure Service

Definition: The usage of Site Survivability Network Failure Service shall not exceed the objective commitment identified below in a month, per site.

Measurement Process: 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:

- Converged VoIP Site Survivability Network Failure

Objective(s):

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	

Rights and Remedies

Per Occurrence: N/A

Monthly Aggregated Measurements:
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.

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.

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.

Bidder understands the Requirement and shall meet or exceed it? Yes____ 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____