

Statement of Work



**Commonwealth of Pennsylvania
Office of Administration / Information Technology**

**Schedule B
Statement of Work**

Introduction

This Statement of Work covers activities pertaining to the Commonwealth of Pennsylvania (“Commonwealth”) voice and data networks. These include: network administration; installations, moves, adds, and changes (IMACs); network operations; network engineering; remote access services; telecom billing, financial administration; premise voice systems; audio and video conferencing; internet services, business partner connectivity; virtual private networking (VPN); circuit/transport technology; end user communication tools; technology refresh; and support and maintenance of the Commonwealth’s Telecommunications Management System.

The Contractor will be expected to provide the Services described in this Statement of Work for all Commonwealth locations. Schedule L – Commonwealth Service Locations contain the list of current locations.

The Contractor shall provide information on the managed network services using a media that is efficient, easy to use, easily accessible by end users, and subject to approval by the Commonwealth. The Commonwealth expects that the Contractor will bring value to areas in addition to those identified in this Statement of Work.

Services Overview

- Ordering, installing, and testing equipment and software as needed in order to provide the Services, support projects, and maintain compliance with current IT environment architecture and standards.
- Performing corporate facilities site surveys; staging and configuring the equipment; delivering the equipment; installing the equipment; managing the installation of the Services; testing, operating and managing the IT environment.
- Managing site preparation and cleanup including making arrangements for access and coordination with Commonwealth’ business unit representatives at Commonwealth service locations.
- Managing and maintaining current network connections with Contractor resources or Commonwealth third party vendors.
- Coordinating all in-scope Contractor activities with other Commonwealth third party vendors where there are interdependencies between the network and the Services provided by such Commonwealth third party vendors.
- Cooperating with other Commonwealth third party vendors in the resolution of problems, service disruptions, or any other service degradation, where the services of each Commonwealth third party vendor interface with the Contractor.
- Managing billing (including providing adequate invoice auditing to provide accurate invoices and appropriate credits are obtained and identified for any overpayments) from the applicable Commonwealth third party vendors providing transport services and requesting it in the format requested by Commonwealth. In the event such billing formats are not provided, Commonwealth will work with Contractor to address this issue with the third party vendor.

Maintenance

- Apply configuration management and formal procedures to remotely maintain the optimum environment for Commonwealth, to include creating and maintaining documentation, controls, and implementation of logical and physical changes.
- Perform system deployment and integration.
- Perform project management activities in accordance with Commonwealth policies.
- Plan and coordinate the installation of copper or fiber station, riser and outside cabling at local and remote sites. Work with regional site personnel to jointly plan implementation dates that suit Commonwealth requirements.
- Manage cable plant installation/construction.
- Plan and install software and upgrades to maintain interoperability, availability, currency, and equipment at manufacturer's recommended version level.
- Perform preventative maintenance.
- Interface with other Commonwealth third party vendors.
- Coordinate software upgrades/downloads with Commonwealth site contacts in accordance with change management process.
- Manage inventory of software and configurations and ensure appropriate levels of backups for the inventory data.
- Perform periodic assessments of software for performance and/or operational improvements, and make recommendations for implementation as appropriate

Statement of Work Matrix for Telecommunications Managed Services

The following Statement of Work Matrix is to clearly define responsibilities between Commonwealth and the Contractor.

Ref ID	
1.1	GENERAL REQUIREMENTS
1.2	The Contractor shall act as a single point of accountability for all subcontractors and all services provided under this contract.
1.3	The Contractor shall be responsible for coordinating with all applicable subcontractors and providers of services or product.
1.4	The Contractor shall provide all services under this proposal to all COSTARS participants.
1.5	The Contractor shall be required to attend regularly scheduled executive status meetings held in the Harrisburg area. The Contractor shall provide the agenda prior to the meeting and have staff and subcontractors at the meeting when appropriate for the current discussions.
1.6	The Contractor shall be responsive in meeting the capacity needs of the Commonwealth.
1.7	The Contractor shall deliver services and/or equipment without any loss of existing services at that location.
1.8	The Contractor shall provide root cause analysis report directly to the requesting Commonwealth agency.
1.9	The Contractor shall provide, at the earliest time possible, notice to all affected users of any scheduled or unscheduled service interruptions with consideration to Commonwealth scheduled holidays and standard work week (M -F 8 - 5).

Ref ID	
1.10	At the time a service order is acknowledged/received, the Contractor shall determine unusual installation factors that require additional cost and notify the Commonwealth requestor of service. The Contractor shall give an itemized bill for additional cost and specified reasons to the Commonwealth.
1.11	The Contractor's measurement and monitoring of service level performance shall permit reporting at a level of detail and frequency sufficient to permit the Commonwealth to verify compliance with the service levels, and shall be subject to audit.
1.12	The Contractor shall ensure all equipment installed is new and fully warranted.
1.13	The Contractor shall coordinate all managed equipment maintenance within the agencies maintenance windows.
1.14	The Contractor shall provides customer premise equipment for the duration of the Contract Term, including any Renewal Term(s), regardless of when the equipment is placed into service.
1.15	The Contractor shall provide Uninterruptible Power Supplies for any Contractor owned and managed equipment.
1.16	The Contractor shall provide the Commonwealth with a universal rate structure which charges the same rates for the same services statewide, regardless of serving distance, and/or geographical area.
1.17	The Contractor may provide the Commonwealth with alternative rate structures if an overall cost saving can be achieved and described.

Ref ID	
1.18	The Contractor shall provide quarterly customer satisfaction surveys to the Commonwealth. The Contractor shall use these results and provide dashboard measurements to be reviewed at PMO meetings.
1.19	The Contractor shall provide "Quarterly Inactive Reports" identifying lines and/or circuits that are not in use or have not had activity.
1.20	<p>The Contractor shall advise the Commonwealth of new technologies which include, but are not limited to the following:</p> <ul style="list-style-type: none">- Data and voice transport networks- Routing, switching and data termination devices- Voice switching and gateway devices- Voice messaging systems- End user telephony devices- Interactive voice response systems- Automatic call distribution systems- Intrusion detection and prevention systems- Firewall systems- Broadband Internet access technologies- Internet and Web filtering technologies
1.21	The Contractor shall allow the Commonwealth to place an emergency or temporary order for service without a minimum service commitment.

1.22	DATA NETWORK SERVICES
1.23	Miscellaneous Data Services
1.24	The Contractor shall provide, as part of its service package offerings, maintenance services that are tiered offerings based on the criticality of the affected location.
1.25	The Contractor shall provide its professional service offering that includes shared network managers that supports multiple entities.
1.26	The Contractor shall provide, as part of its service package offerings, Customer Premises Data Equipment (CPE) that supports all technologies included in its proposed network solution.
1.27	The Contractor shall provide service package offerings for installation services including demarcation extensions to the CPE device, maintenance services, and network management services.
1.28	The Contractor shall provide and maintain out of band remote network management capabilities.
1.29	The Contractor shall be responsible for coordination and implementation of software upgrades and repairs for all managed equipment.
1.30	The Contractor shall as part of its proposed solution should support existing frame relay and ATM connectivity.
1.31	The Contractor shall prioritize TSP circuits per federal regulations and mark applicable circuits as TSP within its system, to provide easy identification when a trouble ticket is created.

1.32	The Contractor shall be responsible to deliver Intrastate and Interstate facilities to the assigned demarcation of the building. This includes residential service and newly built buildings.
1.33	The Contractor shall provide as part of its services a description and a diagram of the proposed network which must be in Visio format, and must show all systems and circuits through which significant amounts of Commonwealth traffic will pass. This should include all systems managed by the Contractor or its subcontractors.
1.34	The Contractor shall ensure its proposed design solution for the Commonwealth allows for the separation of agency traffic.
1.35	The Contractor shall provide dynamic fault tolerant routing to ensure high reliability in the event of network component or path failures as part of its proposed solution.
1.36	All services are interoperable with similar standards based services provided by other vendors.
1.37	The Contractor shall ensure that its services will not interfere with existing public safety networks or radio systems currently used for air traffic control and analog/digital radio and Public Television Broadcast communications.
1.38	The Contractor shall notify the Commonwealth when the networks diagram changes.
1.39	The Contractor shall specify which services being implemented will minimize the impact of a facility failure on the proposed service.
1.40	The Contractor shall evaluate and recommend the integration of multiple services on common facilities as part of the overall enterprise network architecture.

1.41	The Contractor shall include the provision of Layer 3 edge equipment as a managed service offering with provisions for a 3-year technology refresh.
1.42	No throttling of Commonwealth traffic should be permitted across the entire Commonwealth network, and no throttling of traffic of individual agencies which may have data intensive needs.
1.43	Order Management
1.44	The Contractor shall complete service orders based on the standard order interval for that service defined in Contractor's Standard Service Intervals. As of the Execution Date, the Standard Service Intervals are set forth in the document provided by the Contractor to the Commonwealth labeled VzB Standard Service Intervals v1_9_25_09.xls
1.45	The Contractor shall perform acceptance testing with the contract participant Commonwealth prior to declaring ready for use. All test results shall be shared with Contract Participants the Commonwealth.
1.46	The Contractor shall obtain acceptance from the order creator certifying that the work requested on the order was completed to the satisfaction of the requestor prior to billing.
1.47	Response and Redundancy
1.48	The Contractor shall react and respond to incidents that are caused by an external provider and/or Contractor and shall notify the Commonwealth of the incidents.
1.49	The Contractor shall provide environmental requirements and report on any known or discovered temperature and/or power conditions that would impact or have the potential to impact performance.

1.50	The Contractor shall have the ability to deliver redundant transport services from an alternate service provider.
1.51	Internet Services
1.52	The Contractor shall provide the Commonwealth with an Internet access network supported by two different Internet Service Providers (ISP), physically redundant, and geographically diverse. The Internet access network shall be capable of supporting all Commonwealth inbound/outbound traffic and peak traffic at all times.
1.53	The Contractor shall address all security, management and performance issues associated with the implementation of multiple Internet connections and multiple ISPs.
1.54	The Contractor shall provide Internet connections that provide redundancy and fail over.
1.55	The Contractor shall provide the Commonwealth with Internet Access Network Statistics for average inbound/outbound traffic and peak traffic for each billing period.
1.56	The Contractor shall provide separate Internet domains for Contract Participants utilizing Commonwealth assigned IPv6 address space.
1.57	The Contractor shall offer tiered level of billing for the Commonwealth's Internet access network with quarterly billing adjustments to occur based on bandwidth usage trends.
1.58	IP Address Services
1.59	The Contractor shall support all data communication protocols in use within the Commonwealth.

1.60	The Contractor shall support the existing Commonwealth IPv4 address space and RFC 1918 IP address configurations in conjunction with existing Network Address Translation.
1.61	The Contractor shall provide and maintain a current, dated network diagram, including IP addresses to be available for review. The Contractor shall notify the Commonwealth when a change to the diagram occurs.
1.62	The Contractor shall provide an IPV6 strategy which includes an enterprise migration plan to take the Commonwealth from the IPv4 address format to the IPv6 format.
1.63	The Contractor shall provide an infrastructure that supports IPv6 and IPv4.
1.64	The Contractor shall support and enable IPV6 on all managed devices as requested by the Commonwealth.
1.65	MPLS and QOS
1.66	The Contractor shall provide an infrastructure that supports Multi-protocol Label Switch (MPLS).
1.67	The Contractor shall support and enable MPLS on all managed devices as requested by the Commonwealth.
1.68	The Contractor shall support and enable Quality of Service (QOS) on all managed devices as requested by the Commonwealth.
1.69	The Contractor shall support QOS capabilities.
1.70	The Contractor shall provide a QOS strategy.
1.71	Voice Over IP (VOIP)

1.72	The Contractor shall provide a locally hosted IP telephony solution that is compatible with the Department of Health's VOIP telephones. Additionally, the Contractor shall provide a web-based administrative/management platform to administer and manage the VOIP phones.
1.73	The Contractor shall provide a centralized VOIP solution and CO based IPT solution that presents a clear direction and progression to reach convergence during Transition for DOH and otherwise pursuant to transformation.
1.74	The Contractor's proposed VOIP or telephony solution shall utilize industry standard encryption technologies according to NIST guidelines
1.75	COPANET
1.76	The Contractor shall utilize the campus network (the COPANET) equipment as part of its proposed network solution for the Commonwealth.
1.77	The Contractor shall assume responsibility for management, monitoring and maintenance of the COPANET.
1.78	The Contractor shall manage and maintain the Commonwealth's laboratory environment for the COPANET.
1.79	As part of the COPANET management, monitoring and maintenance, and with the Commonwealth's concurrence, the Contractor shall implement system patches and upgrades as they become available.

1.80	As part of the COPANET management, monitoring and maintenance the Contractor shall utilize existing Cisco Smartnet (equipment support and replacement) contract and open problem tickets on the Commonwealth's behalf for problem resolution.
1.81	As part of the COPANET management, monitoring and maintenance the Contractor shall provide the Commonwealth network management access passwords and web portals to provide view-only access to the element management system for network and nodal status.
1.82	As part of the COPANET management, monitoring and maintenance, at the Commonwealth's request, the Contractor shall provide management services to remotely provision the movement of existing circuits between nodes and ports, provision the addition of new circuits in the network or change circuit configurations within the limits of the hardware available.
1.83	As part of the COPANET management, monitoring and maintenance the Contractor shall monitor for alarms and performance issues with the manufacturer's element management system (Cisco CTM) and take action to notify the Commonwealth, analyze the data and respond consistent with the manufacturers recommendations and Commonwealth telecommunications standard practices.
1.84	The Commonwealth will provide the Contractor with two Cisco ONS 15454 and two Catalyst 6504 devices, with appropriate components for the use as the COPANET lab equipment. The Contractor shall provide the Commonwealth access to the equipment to participate in testing.

1.85	The Contractor shall utilize the lab equipment as part of the Contractor's COPANET sparing plan. The Contractor shall utilize the Commonwealth's equipment maintenance contract for replenishment of COPANET lab equipment.
1.86	The Contractor shall locate the COPANET lab equipment at an appropriate facility within the Harrisburg metropolitan area. If the Contractor proposes an alternate location for the COPANET lab equipment they shall have the equivalent spare parts available within the Harrisburg metro area at its cost.
1.87	The Contractor shall provide emergency repair service in the event of an incident that causes a break or disturbance to the Commonwealth owned single and multimode fiber in the Harrisburg area. Contractor must have at its disposal a truck or trailer equipped for fusion splicing, as fusion splicing will be required for all repairs and all repairs will have to pass re-certification after repair. The Contractor shall be required to determine cause and responsibility for a break in Commonwealth owned fiber.
1.88	Network Operations Center
1.89	The Contractor shall provide a Network Operations Center (NOC) for the delivery of all Commonwealth telecommunications services.
1.90	The Contractor shall perform the following for network monitoring and management: network and fault management, performance management, maintenance, report management, and operations and problem tracking.
1.91	The Contractor shall ensure its NOC is fully staffed and operational 24x7x365.

1.92	The Contractor shall perform remote monitoring from a centralized location on a twenty-four-hour-per-day, seven-days-per-week, 365-day-per-year ("24x7x365") basis for availability and threshold exceptions.
1.93	The Contractor shall perform network utilization monitoring and make it accessible to the Commonwealth.
1.94	The Contractor shall provide a real time monitoring system that allows for historical tracking of network related problems and equipment failures to facilitate proactive network management and make it accessible to the Commonwealth.
1.95	The Contractor shall have the capability to perform on-demand, detailed data capture and analysis with a suite of network tools.
1.96	The Contractor shall perform network packet decoding for troubleshooting network performance.
1.97	The Contractor shall, as part of its network management services, have the ability to generate alerts or simple network management protocol (SNMP) traps and forward them to selected Commonwealth personnel via email.
1.98	The Contractor shall work closely with Commonwealth LAN administrative staff to resolve WAN/LAN configuration and performance issues.
1.99	The Contractor shall perform trend analysis as it relates to network performance and outages for services provided throughout the Commonwealth regardless of Contract Participant.
1.100	The Contractor shall perform trend analysis as it relates to capacity planning and capacity management.

1.101	The Contractor shall provide an auto-discovery tool to ensure the managed network devices are identified and included in the network inventory.
1.102	The Contractor shall provide the Commonwealth with the capability to view real-time network up/down status as well as access to the help desk trouble ticketing system for maintenance activity.
1.103	The Contractor shall generate network reports that provide the ability to perform review and analysis of statistics.
1.104	Technology Refresh for Data Networks
1.105	The Contractor shall provide end-to-end data circuit connectivity for all circuits/services terminated on a demarcation (that includes extended demarcation) including installation, comprehensive testing, maintenance, and problem resolution.
1.106	The Contractor shall provide point-to-point, two wire and four wire services.
1.107	The Contractor shall ensure that basic digital transport facilities are available at a wide range of bandwidth levels.
1.108	The Contractor shall provide inter-city and metro point-to-point, and point-to-multi-point Ethernet services.
1.109	The Contractor shall provide Ethernet solutions as part of its proposal.
1.110	The Contractor shall have the ability to offer diversity from the CO to the customer's demarcation point avoiding all single points of failure.
1.111	The Contractor shall provide ongoing evaluation and recommendation of new technologies in order to enhance, improve, and reduce costs of service.

1.112	The Contractor shall provide a non-production environment for testing new technologies, updates, upgrades, and additions to the production network operated by the Contractor for the Commonwealth.
1.113	The Contractor shall identify and recommend methods and strategies to improve the existing Commonwealth WAN environment as part of its design solution.
1.114	Telecommunications Service Priority (TSP) Program
1.115	The Contractor shall participate in the Telecommunications Service Priority (TSP) program.

1.116	Reporting
1.117	The Contractor shall provide daily, weekly, and monthly reports about switches, routers, remote access devices and transport.
1.118	The Contractor shall maintain access logs for all managed devices and provide realtime electronically to the Commonwealth.
1.119	The Contractor shall provide utilization and exception reports for all managed devices.
1.120	The Contractor shall provide standard web browser access from the Commonwealth to network management reports.
1.121	Circuit Testing
1.122	The Contractor shall, at the time of the SmartJack installation, perform peak to peak voltage readings and those results should be noted on the service order.
1.123	The Contractor shall, at minimum, test T1 circuits for 24 hours before turning over to the Commonwealth. The Contractor shall allow for an additional 24 hour acceptance testing period before closing the service order and billing commences.
1.124	The Contractor shall conduct tests and test patterns pursuant to the Process and Procedures Manual..

1.125	VOICE NETWORK SERVICES
1.126	Miscellaneous Voice Services
1.127	The Contractor shall ensure the infrastructure supports all current terminating equipment and systems.
1.128	The Contractor shall be responsible for providing local exchange services comparable, but not limited to the functionality and similarity in features to the existing local central office (CO) based exchange services currently used within Commonwealth infrastructure, as well as any additional features specified in Exhibit F-3 of Attachment B.
1.129	The Contractor shall cooperate with other service vendors involved in provisioning or restoring a portion of the National Security Emergency Preparedness (NSEP) service by honoring provisioning or restoration priority level assignments, or requests for assistance to provision or restore NSEP services.
1.130	The Contractor shall ensure all primary rate ISDN circuits meet the current International Telecommunications Union-Telecommunications Standardization Sector (ITU-T) primary rate ISDN specifications and support voice-grade data transmissions.
1.131	The Contractor shall ensure that all service vendors supplying underlying facilities are provided information necessary to implement priority treatment of facilities that support NSEP services.
1.132	All services delivered shall be compatible with the existing switching equipment located at the serving ILECs/CLECs central offices and the agencies terminating telephone systems. The Contractor shall be responsible for all interfacing requirements.
1.133	The Contractor shall ensure that all facilities are engineered to provide a grade of service equal to or better than P.01.

1.134	The Contractor shall document and maintain in the Process and Procedures Manual how routing of calls to 1-9-1-1 will be routed to the Commonwealth's Capitol Police.
1.135	The Contractor shall route 1-9-1-1 calls to the Commonwealth Capitol Police.
1.136	The Contractor shall support enhanced 9-1-1 requirements.
1.137	The Contractor shall provide an enterprise IVR solution that can be utilized by any Contract Participant without regard to physical location.
1.138	The Contractor shall specify what services implemented will minimize the impact of a facility failure on the proposed services.
1.139	The Contractor shall maintain the table of classes of service assignable at the telephone number level.
1.140	The Contractor shall ensure that all locations served by the Contractor or its subcontractors have transparent access to 9-1-1 emergency service via the public switched network. "Transparent" means that whether a user dials any standardized PBX or CO-based system access code for a local line, there will be no routing delays: the user will experience the same speed of access to the local 9-1-1 facility as experienced by all users of that geographic subdivision served by the 9-1-1 facility.
1.141	The Contractor shall provide Centralized Automatic Message Accounting (CAMA) services supporting call party release and other enhanced features to locations within the Commonwealth requiring enhanced 9-1-1 services.
1.142	The Contractor shall confirm 9-1-1 emergency access from all Commonwealth locations to the correct public safety answering point (PSAP) before implementing any new service to include location and call back information.

1.143	The Contractor shall provide the following classes of services: "911" only, Centrex only, Centrex and local, Centrex and local and directory assistance, Centrex and local and all of Pennsylvania, North American numbering plan less "809" NPA's, North American numbering plan and "809" NPA's and North American numbering plan and international.
1.144	The Contractor shall have the ability to offer diversity from the CO to the Contract Participant demarcation point avoiding all single points of failure.
1.145	The Contractor shall support the ability of Commonwealth offices in the Harrisburg Capital Complex to dial 1-9-1-1 to reach the Commonwealth's Capitol Police desk.
1.146	The Contractor shall provide protection from high voltage electrical surge caused when lightning strikes the cabling between the buildings.
1.147	The Contractor shall provide the Commonwealth (upon request) agency specific traffic studies for analog Centrex lines, analog business lines or trunks, ISDN PRI trunks, and/or digital Centrex lines.
1.148	The Contractor shall provide monthly and 13 month rolling traffic statistics and analysis reports, including usage, for enterprise, agency, location, and station levels.
1.149	The Contractor shall provide immediate access to local and long distance call detail reports from CO-based switches.
1.150	The Contractor shall provide detailed and summary reports to the Commonwealth and its agencies. These reports shall include calls by month, calls by location, peak hour traffic, exception, frequently called number , long duration calls, off-hours call information, operator assisted calls, 900 calls and toll free call reports.
1.151	The Contractor shall ensure that long distance usage charges are billable to the origination station line number.

1.152	The Contractor shall be able to control the routing of outbound traffic for cost optimization.
1.153	The Contractor shall ensure all equipment deliveries shall be inside delivery to the 'ship to' address.
1.154	The Contractor shall inform the Commonwealth one business day before a service visit to confirm phone number, address and access permission.
1.155	The Contractor shall ensure all deliveries under the Contract are securely packaged so as to avoid breakage or damage in accordance with industry standard practice.
1.156	The Contractor shall coordinate a schedule with the Contract Participant for all complex voice orders involving multiple systems.
1.157	The Contractor shall comply with FCC rulings on "portability."
1.158	The Contractor shall provide point- to-point, two wire and four wire services.
1.159	The Contractor shall have the ability to offer diversity from the CO to the customer's demarcation point avoiding all single points of failure.
1.160	The Contractor shall react and respond to incidents that are caused by an external provider and/or Contractor and shall notify the Commonwealth of the incidents.
1.161	The Contractor's maintenance personnel will inform the location contact before arriving for work.
1.162	The Contractor shall keep the NPA/NXX routing information up to date and provide the updates to the Commonwealth on a monthly basis.

1.163	The Contractor shall provide a description and a diagram of the proposed network which must be in Visio format, and must show all systems and circuits through which significant amounts of Commonwealth traffic will pass. This should include all systems managed by the Contractor or its subcontractors.
1.164	The Contractor shall provide long distance service with and without local phone service.
1.165	Miscellaneous Telephone Equipment
1.166	The Contractor shall ensure its miscellaneous telephone equipment/accessory inventory list includes, at minimum, all items as shown on Exhibit F-2 of Attachment B.
1.167	The Contractor shall provide the detailed catalog of the equipment that shall be used. Technical specifications shall be provided for all station equipment and enclosures proposed.
1.168	The Contractor shall ensure all deliveries will be F.O.B. Destination.
1.169	Cabling Services
1.170	The Contractor shall ensure on site technicians are skilled and have all the necessary resources, tools and materials to perform cabling, jack inserts, terminal box, faceplates, testing and labeling.
1.171	The Contractor shall ensure the patch panel and/or wiring block is labeled with the telecommunications outlet number and locations of the remote end in accordance with TIA 606 standards.
1.172	The Contractor shall ensure all cabling be installed and tested in accordance with the current version of the EIA/TIA -568 Commercial Building Wiring Standard and all associated reference documents.
1.173	The Contractor shall ensure jacks be wired according to EIA/TIA-568 Commercial Building Wiring Standard EIA/TIA 568B, bulletin TSB-36, or bulletin TSB-40A standards, based on relevancy.

1.174	The Contractor shall ensure that all 5e/6/future unshielded twisted pair (UTP) cable are installed and adhere to the installation and testing requirements of the current versions of IIA/TIA/TSB/EIA standards.
1.175	The Contractor shall ensure cabling is type CMR unless cabling is run in air plenum space in which case cabling must be CMP.
1.176	The Contractor shall perform testing which may include, but is not limited to, attenuation testing, near-end crosstalk (NEXT) testing, distance testing (time domain reflectometer - TDR), wiremap testing, and tone testing for any and all of the circuits and systems. The nature of the testing is determined by the devices in use and the circuit type. Testing is typically per TIA/EIA TSB-67 standard and all associated reference documents. As a minimum, the test results for each telecommunications outlet location must contain the jack number and wire map.
1.177	The Contractor shall ensure testing and certification for all cables and their associated jacks, patch panels and jumpers meet the appropriate standard for the type of network being installed (i.e., voice, data). The Contractor shall provide a complete copy of all certification test results to the Contract Participant.
1.178	The Contractor shall provide up to date cable records in a uniform manner located at the MDF, IDF, or patch panel.
1.179	The Contractor shall follow the Commonwealth's format for cable records.
1.180	The Contractor shall professionally dress and label all cables at both ends.
1.181	The Contractor shall ensure the numbering and coloring scheme is kept uniform and consistent throughout the entire site.
1.182	The Contractor shall ensure re-used cabling is tested and recertified.
1.183	The Contractor shall ensure all cable records remain the property of the Commonwealth and deliver them to the Commonwealth.

1.184	Order Management
1.185	The Contractor shall allow a Contract Participant to place an emergency or temporary order for service without a minimum service commitment.
1.186	The Contractor shall complete orders within the timeframe defined by the requested due date.
1.187	Prior to billing of any order completed by the Contractor, the Contractor must obtain acceptance from the order creator certifying that the work requested on the order was completed to the order creator's satisfaction.
1.188	The Contractor shall complete service orders based on the standard order interval for that service.
1.189	The Contractor shall obtain acceptance from the creator of the order certifying that the work requested on the order was completed to the satisfaction of the customer prior to billing.
1.190	Installation, Moves, Adds and Changes
1.191	The Contractor shall be responsible to deliver Intrastate and Interstate facilities to the assigned demarcation of the building. This includes residential service and newly built buildings.
1.192	The Contractor shall perform acceptance testing with the Contract Participant prior to declaring ready for use. All test results shall be shared with Contract Participants.
1.193	The Contractor shall provide end-to-end circuit connectivity (that includes extended demarcation) including installation, comprehensive testing, maintenance, and problem resolution.
1.194	The Contractor shall provide end-to-end data circuit connectivity for all circuits/services terminated on a demarcation (that includes extended demarcation) including installation, comprehensive testing, maintenance, and problem resolution.

1.195	The Contractor shall perform moves, adds, changes and maintenance.
1.196	<p>The Contractor shall provide confirmation of its ability to perform IMAC, cabling and maintenance requests for telecommunications services. The Contractor must be able to perform:</p> <ol style="list-style-type: none"> 1. Cabling from demarcation to end telephone 2. Private Branch eXchanges (PBX) 3. CPU & Consoles such as (Tone Commander) ISDN sets, attendant consoles, variety of IP sets (Polycom, Cisco, etc.) 4. PC voice mail systems (a variety) associated with a variety of PBX systems 5. Conference phones, such as Polycom 6. The term installation refers to the complete installation from the telecommunications outlet (voice, video or data) to the terminal block, patch panel or the Light Interface Unit (LIU) 7. All cables will be labeled at both ends. Additionally, the patch panel or LIU will be labeled with the telecommunications outlet number and locations of the remote end.
1.197	For newly purchased phones, the Contractor shall assemble the phones, place the phones on user's desks, plug phones into the jack and test and apply a printed label for new phones.
1.198	The Contractor shall have contingencies available in the event a required part is out of stock and/or unavailable to the service technician performing the maintenance work.
1.199	Performance Management
1.200	The Contractor shall react and respond to incidents, as well as notify the Commonwealth of service disruptions caused by another service Contractor.
1.201	The Contractor shall have an alternative detailed plan for resolution of service during a major outage.
1.202	The Contractor shall have the ability to deliver redundant transport services from an alternate service Contractor.

1.203	Directory Listing Services
1.204	The Contractor shall provide Directory Listing and Assistance services to the Commonwealth. This includes providing all business, government, guide to human services, easy reference, public safety, and emergency service listings, as well as yellow page advertising as needed. Information shall be provided in a timely fashion to all Directory Listing entities, which includes dialed information services as well as phone book publishers.
1.205	The Contractor shall disseminate information related to additions, changes, deletions and other required information to all appropriate Contractors, including 555-1212, 411, 800, or any other Independent Company providing Directory Assistance services as part of the order process. The Contractor shall also be responsible for the removal of any old information.
1.206	The Contractor shall provide a common source for providing all directory assistance and operator services to the Commonwealth, including all public safety and emergency services as appropriate. Directory Assistance and Operator services must be available to all Commonwealth locations.
1.207	The Contractor shall accept the raw information provided by the Commonwealth and shall organize and archive the additions, changes, and deletions into the proper cap, sub-cap, indent and sub-indent formats. The Contractor is responsible for coordinating and submitting all information required by the appropriate telephone company responsible for Directory Listings and Assistance in its coverage area as part of the order process. The Contractor will also be responsible for the removal of any old information. In addition, the Contractor shall ensure all publication deadlines are met.
1.208	The Contractor shall provide and maintain a Directory Listing schedule to the Commonwealth outlining all of the different telephone company publication submission deadlines and distribution dates that are applicable.

1.209	The Contractor shall ensure that all directory assistance and operator services fees will be a flat rate per call regardless of duration or distance of call.
1.210	The Contractor shall ensure that fees for directory assistance and operator services shall be charged to the individual Commonwealth locations using the working telephone number (WTN).
1.211	Automated Call Distribution
1.212	The Contractor shall provide the Commonwealth with custom designed ACD reporting package(s) that includes at minimum: cradle to grave, incoming and outgoing call statistics, details and trends.
1.213	The Contractor shall provide an ACD solution that includes the following packages: basic to enhanced system feature packages, agent feature package set, supervisor feature package set, management and information system feature package set.
1.214	The Contractor shall provide Line of Business Reporting as part of its ACD solution. This should provide the Commonwealth with daily, weekly, monthly, quarterly and yearly reports on the types of calls that are being handled by its help desk.
1.215	The Contractor shall provide a hosted Telephone Call Recording service for Commonwealth ACD Call Centers and CO-based services.
1.216	The Contractor shall provide a diverse and redundant ACD solution with the ability to automatically reroute calls to the alternate server to prevent the loss of call distribution.
1.217	The Contractor shall provide the same call reporting details during failover as during normal operations.

1.218	The Contractor ACD solution shall include call monitoring for quality assurance purposes.
1.219	The Contractor ACD solution shall include customized codes not limited to: agent not ready codes and line of business codes.
1.220	The Contractor shall ensure that answer supervision techniques are used which accurately detect the condition of the remote end device (i.e., on-hook / off-hook).
1.221	The Contractor shall supply an ACD-based Workforce Management solution that includes, but is not limited to the following features: forecasting, adherence management, web enabled, staff scheduling and reporting/scorecards.
1.222	The Contractor shall provide the ability to run ACD reports remotely.

1.223	PBX and Key Systems
1.224	The Contractor installed PBX systems must include and support: VOIP, inherent ISDN (integrated service digital network), ACD, and SMDR (station message detail recording), IVR (Interactive Voice Response) capabilities, T-1 (DS1)/DS3 compatible, PBX/MLTS 9-1-1 calls must support location information (minimum of building and floor location of caller) and station identification level and must be capable of enabling Telephony Services Application Programmers Interface (TSAPI) or Telephone API.
1.225	The Contractor installed PBX systems must be equipped to allow remote administration for all PBX's furnished under this contract..
1.226	The Contractor's PBX/KEY systems must have a minimum redundancy level of duplicate central processing units, RAM memory and power supply. The redundant system must be capable of "hot swapping," that is, the ability to change integral parts without any loss of service.
1.227	The Contractor's PBX/KEY system must be configured non-blocking and provide a platform with open face specifications which will allow intra and inter-network videoconferencing and future advances in technology without requiring non-affected elements to be replaced.
1.228	The Contractor shall provide remote maintenance 24/7 that includes monitoring of the PBX for minor and major alarms. A technician will be dispatched for all alarms not cleared remotely, and the local site will be notified.
1.229	Toll-free Services
1.230	The Contractor shall provide an implementation plan for toll-free services to make the proposed services fully operational.
1.231	Toll-free services must seamlessly integrate into existing telecommunications systems as to avoid impact to users.

1.232	The Contractor shall document its network architecture (including single points of failure), call routing plan, network protection, and disaster recovery plan for inbound toll-free services.
1.233	The Contractor shall provide switched and dedicated toll-free services.
1.234	The Contractor shall provide a hosted IVR solution for toll-free services.
1.235	The Contractor shall provide toll-free service that provides, at minimum, equal feature functionality that currently exists.
1.236	The Contractor shall ensure online reports for toll free services are available hourly, daily, weekly and monthly.
1.237	The Contractor shall maintain a detailed description of each basic 800 service feature and how it functions.
1.238	The Contractor shall deliver a solution that supports the Commonwealth's routing of Information and Referral requests from its citizens that dial N-1-1. (i.e. 8-1-1 and any additional numbers that will be available to the Commonwealth) including the transfer of a caller to the designated public safety answering point.
1.239	Messaging and Voice Mail Services
1.240	The Contractor shall provide a station message detailed recording (SMDR). The system must also be able to furnish, at a minimum, station, account, trunk and summary reports.
1.241	The Contractor's voice message solution shall provide adequate protection against unauthorized access and hacker fraud.
1.242	The Contractor's voice mail system shall allow Commonwealth administrators the ability to reset voice mail passwords.

1.243	The Contractor shall provide both audible and visual message waiting indicators.
1.244	The Contractor shall provide voice mail reports consisting of, but not limited to, the following fields: User Name, Bill Group Name (with the ability to sort by agency), Mailbox Name and Number, System Access Count by Number, Pager (including the time messages were sent to a pager), number of times mailbox accessed, number of times callers zero out of mailbox, number of times a mailbox is full, message aging by mailbox and un-initialized mailboxes (including date installed).
1.245	Telecommunications Service Priority (TSP) Program
1.246	The Contractor shall participate in the Telecommunications Service Priority (TSP) program.
1.247	The Contractor shall prioritize TSP circuits per federal regulations and mark applicable circuits as TSP within its system, to provide easy identification when a trouble ticket is called in.
1.248	VOIP and Video Services
1.249	The Contractor shall deliver a network that supports the Commonwealth's currently-deployed compressed video systems.
1.250	The Contractor shall provide and describe a service between Commonwealth locations to support secure video conferencing requirements. The proposed services must be able to support SVC's, Quality of Service (QoS) capabilities, multicast, multipoint and fully meshed multicast/multipoint for video networking.
1.251	The Contractor's network solution will support bandwidth requirements for video networking from 384 Kbps (ISDN2B+D) to 45 Mbps (DS3).

1.252	The Contractor's proposed network services must support all video network standards which include, but are not limited to H.320, H.321, H.323, H324, and H.310.
1.253	The Contractor's proposed network solution must accommodate the Commonwealth as its bandwidth requirement for video networking increases and must include new technologies, particularly Video over IP (hereinafter referred to as VIP).
1.254	Voice Reporting and Training Services
1.255	The Contractor shall provide detailed real-time, online reports that contain at the minimum the following fields: summary, the call number, the terminating number, abandoned calls, time to answer, call detail, call attempt, call duration, incomplete calls, retries, area code, frequent calling number, trending and call routing.
1.256	The Contractor shall provide and describe how historical monthly reports will be delivered.
1.257	At the end of each calendar month, the Contractor will provide a summary report to the Commonwealth. The monthly report will include MAC, cabling and maintenance charges, but not limited to: agency name, number of service orders completed and total dollar amount of service orders billed.
1.258	The Contractor shall design and provide a monthly maintenance management report on dispatch center logging, tracking, and updating Commonwealth service calls.
1.259	The Contractor shall provide real-time or near real-time "Trap and Trace" service with results provided immediately (the ability to report and obtain caller information, name, number, and address for nuisance, threatening, or dropped, possible emergency, calls; identify/trace threatening, harassing, and nuisance telephone calls).
1.260	The Contractor shall provide a training plan for system administration during the life of both the initial warranty period and any subsequent maintenance contracts. Training shall include the process for completing moves adds and changes (MAC) for the general phone systems, voice mail, ACD, call accounting packages and other peripherals purchased from the contract.

1.261	Technology Refresh for Voice Services
1.262	The Contractor shall provide advice for coin/card phone services as new technologies emerge.
1.263	The Contractor shall provide ongoing evaluation of new technologies and advise the Commonwealth on their potential to enhance, improve, and reduce costs of service.
1.264	Payphone Services
1.265	The Contractor shall appoint a project manager to oversee the total payphone installation.
1.266	The Contractor shall protect adjacent property and shall provide and maintain all passageways, fences, lights, guards, and other facilities as required by public authority or local conditions.
1.267	In the event of restructuring of Commonwealth building assets between Commonwealth entities, the Contractor will continue to support the payphones within the building and adjust its billing records to charge the new entity unless otherwise directed.
1.268	The Contractor shall ensure that all services and equipment proposed during the term of the contract complies with all Federal and State laws, rules and regulations including but not limited to rate making, branding, provision of consumer information, access to local, IntraLata, and InterLata carriers, accommodations for individuals with disabilities and any applicable construction, electrical and safety codes.
1.269	The Contractor shall comply with all applicable regulations and mandates of the Commonwealth Public Utilities Commission (PUC) and the Federal Communications Commission (FCC) and must meet all applicable requirements of the Telecommunications Act of 1996 and any amendments or replacements of the act. All installations must be in compliance with the Americans With Disabilities Act to include the installation of text telephones (TTY).

1.270	The Contractor shall be solely responsible for the compatibility of the proposed service and equipment with any and all circuits and facilities as provided by the LEC and all other common carriers to meet the requirements of these specifications.
1.271	The Contractor's transition plan will include the transition of payphones.
1.272	The selected Contractor shall install new enclosures or refurbished as new to conform to, or are an approved equal to, those listed in the payphones inventory.
1.273	The Contractor shall include a complete description of any special environmental considerations, which are required to ensure proper operation of payphone services.
1.274	The Contractor shall provide and install adequate surge and lightning protection equipment on all lines used.
1.275	<p>The following payment options and services shall be available to the public when placing calls from coin/card stations:</p> <ul style="list-style-type: none"> ● cash station-to-station (only local calls and intraLata) ● collect station-to-station ● billed to third number station-to-station (all LEC calling cards, but cannot process proprietary cards) ● calling card station-to-station ● time and charge quotations ● cash person-to-person (local and intraLata only, no cash calls of any type on interLata or interstate) ● collect person-to-person ● billed to third number person-to-person ● calling card person-to-person ● calls to toll free 800/888/877/etc numbers
1.276	The Commonwealth shall bear no responsibility for theft of funds, and furthermore, no stolen or lost funds shall be deducted from revenue on which commissions are paid to the Commonwealth.

1.277	The Commonwealth shall bear no responsibility for fraudulent calls.
1.278	The Commonwealth shall bear no responsibility for unbillable or uncollectible calls
1.279	The Contractor shall offer a variety of enclosure and pedestal types to provide the Commonwealth maximum options. In select locations (e.g. highways and other high traffic areas), enclosures shall provide noise suppression. The following enclosure types shall be offered as a minimum: drive-up, wall, pedestal, booth, flush mount. The Contractor is encouraged to offer a variety of these types, plus additional types.
1.280	The Contractor shall provide information on the long distance carrier it has chosen to provide the public coin/card phones.
1.281	The design and placement of signs indicating the location of coin/card stations shall adhere to Commonwealth agency needs as well as conform to a reasonable interpretation of good common sense and propriety. Recognizing that two principal purposes for the public payphones are the convenience of the public and maximization of commission revenue to the Commonwealth, Contractor agrees to place more location signs than might generally be considered normal in unusual areas such as state parks or multiple locations within a building. The Contractor shall reach agreement with the using agency in these situations. The Commonwealth shall make the decision if the Contractor and the using agency cannot agree on a signage issue.

1.282	<p>The Contractor shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none">● Coin/card stations shall be used, or continue to be used, in locations where they are presently in place.● Coin stations shall be supplied with current telephone directories; both white and yellow pages which will be mailed or hand delivered if not reachable by mail to each location for the Commonwealth's distribution for that area payphone(s).
1.283	<p>The Contractor shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none">● There shall be no charge for busy, no answer, or incomplete calls regardless of how long the user waits before hanging up.● Stations shall be continually scanned for malfunction by the Contractor's maintenance operation.
1.284	<p>The Contractor shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none">● The stations shall display the name of the Contractor(s) providing local, IntraLata and InterLata service.● The stations shall display the telephone number of the station Contractor's repair service. This number is required to be accessible 24 hours a day, 7 days a week, 365 days a year.● The stations shall have adequate usage instructions and the charge for a local call displayed on the coin/card telephone housing.

1.285	<p>The Contractor shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none">● Coin/card stations shall not require an external power source to remain operational. The telephone line should be the only source of power required for the station to function.● Coin stations shall accept nickels, dimes, and quarters as payment options.● Each Contractor shall specify its approximate set-up time in seconds for directly dialed and operator handled calls.
1.286	<p>The Contractor shall ensure the station equipment includes the following physical and design characteristics:</p> <ul style="list-style-type: none">● Tamper proof locks - upper and lower housings.● Discrete tones upon coin deposits.● Slug rejection chute design.● Chute string cutter to prevent stuffing of chute.● Floating case hardened metal plate to prevent side drilling entry.● Installation reinforced by security studs to prevent theft of telephone.● Meet the requirements of the hearing impaired legislation and the Americans With Disabilities Act (ADA), the Telecommunications Act of 1996, and Act 181 of 2002 and any updates or replacement of the act.

1.287	<p>The Contractor shall ensure the station equipment includes the following physical and design characteristics:</p> <ul style="list-style-type: none"> ● Dial tone/touch-dial service. ● A steel housing that protects the counting, collecting, storing and electronic components of the telephone. ● Operating ease with concise instructions on the faceplate. ● Industry standard design. ● An armored handset cord that is resistant to stretching and breaking to minimize out-of-service conditions. ● Magnetic coin stops to capture non-coin deposits. ● Automatic locking coin receptacles. ● Security seals on coin receptacles.
1.288	<p>The Contractor shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none"> ● Automatic user access to predetermined primary IntraLata and InterLata carriers. ● Automatic user access is immediate dial tone to the carrier without dialing any codes ● Access to IntraLata and InterLata carriers through 800/888/877/950/10XXX, or any other FCC/PUC approved access codes. ● Contractor shall make available, and shall identify, the cost if any, for calls to Directory Assistance 411 and/or 555-1212 service.
1.289	<p>The Contractor shall ensure all payphones without call back capabilities are labeled stating so.</p>
1.290	<p>The Contractor shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none"> ● Free calling to emergency service, 911, and 0 ● Free calls to toll free services 800/888/877/etc. numbers ● Free access to live operator assistance for collect local, IntraLata and InterLata calls, and other user needs 24 hours a day, seven days a week, 365 days a year.

1.291	The Contractor shall supply TTY equipment and enclosures with new payphone installations. At the end of the contract the installed TTY equipment will become the property of the Commonwealth.
1.292	The Contractor shall supply cabling and conduit required to complete a coin/phone card installation.
1.293	The Contractor shall certify that all equipment, enclosures and software included shall be in good working order at test and acceptance, and that the Contractor shall repair or replace malfunctioning equipment, enclosures and software and return them to good working order.
1.294	The Contractor shall be responsible for the complete installation of payphones. It shall be the Contractor's responsibility to provide any required interface equipment.
1.295	The Contractor shall be responsible for all permits applicable to the installation, operation, and maintenance of the telephone equipment, enclosures, associated wiring, and dial tone services.
1.296	The Contractor shall ascertain that all coin/card station installations comply with the ADA, e.g., height of coin slot, accessibility by wheel chair etc. If in-place stations are retained, locations not in compliance must be brought into compliance. In addition, in multiple station locations, if a TTY (text telephone) is required by law, the Contractor shall install an Ultratec Pay Phone TDD M240, M120, or approved equal.

1.297	In the event that portable equipment or supplies are located in any room or space any time the Contractor is on site, it shall be the Contractor's responsibility to protect all such equipment and supplies while performing under this contract. Should such equipment or supplies interfere with the performance of this contract, it shall be the Contractor's responsibility to remove, store, and protect such equipment or supplies until the work is completed and then replace the same where found or as directed by the Commonwealth.
1.298	The Contractor shall clean up and remove all debris and packaging material from the site, The Contractor will provide its own trash cans or dumpsters at the site for the debris and remove them at the end of the site installation. Commonwealth trash cans or dumpsters will not be used without permission from the Commonwealth. Upon completion of the installation, the premises shall be left in order and ready for immediate use.
1.299	The Contractor shall use the same name and location address to identify the locations of payphones as the Commonwealth. If the Commonwealth changes the name and address of a location, the Contractor shall also change the name and location address
1.300	The Contractor shall not assess any charges to the Commonwealth for the telephone lines, station equipment, cabling, telephone directories, Contractor work, associated wiring or any other cost to install and maintain the coin/card public telephone service.
1.301	The Contractor shall clean and sanitized all coin/card stations. Cleaning is to include the removal of all graffiti, stickers, posters, litter, dust and dirt on each station. The Contractor shall provide a cleaning schedule as part of the proposal.
1.302	The Contractor shall have sufficient repair personnel to be able to simultaneously respond to multiple repair events on coin/card telephone stations located throughout Pennsylvania.

1.303	The selected Contractor shall provide the necessary labor, parts, materials, and transportation to maintain all proposed coin/card telephones, enclosures in good working order and in compliance with the equipment manufacturer's specifications throughout the life of the contract. This includes responsibility for damages to coin/card public telephones.
1.304	The Contractor shall remotely test each coin/card station once a day to determine if it is functioning normally.
1.305	The Contractor shall provide routine and preventive maintenance at no additional charge to the Commonwealth. This includes provision of facilities, personnel, transportation, lodging, labor, parts, software, modifications, and any other items/services relating to routine and preventive maintenance.
1.306	The Contractor shall ensure the help desk system is used to track payphone trouble tickets.
1.307	The Contractor shall provide a detailed time line schedule for all in service and/or change of service activity.
1.308	On an annual basis, the Contractor shall recommend changes to payphone locations based on call volume, profitability and future site potential.
1.309	The Contractor will monitor the usage of payphones at each location and determine if addition payphones should be installed at high usage locations. The Contractor will advise the Commonwealth of its findings.

1.310	The Contractor shall make payments for payphone commissions from coin/card public payphones monthly by the 30th calendar day (or last day of the month if the month has fewer than 30 days) of the following month to each designated Commonwealth using agency.
1.311	It is solely the Contractor's responsibility to collect the revenue on the billed calls generated through the coin/card telephones. Uncollected or uncollectible calls are not to be subtracted from the gross revenue base for the purpose of determining the commission payments to the Commonwealth.
1.312	The Contractor shall develop a log for coin/card station inspections, and for maintenance work performed on all stations. The log is to be submitted to the Commonwealth monthly.
1.313	The Contractor shall maintain complete and accurate call accounting records for the term of the contract, plus extensions to it. This data shall be available for audit at the request of the Commonwealth or designees. All information should be retrievable in a print format and electronic media. These records shall be transferred to the Commonwealth at the termination of the contract. The electronic media required to read the data may not be proprietary.
1.314	The Contractor shall provide a report that contains monthly gross revenue generated by each telephone by revenue category, i.e., local, IntraLata, and InterLata, with accompanying commissions calculated by telephone and summarized by location.
1.315	The Contractor shall provide a report that contains monthly gross revenue generated by each telephone by sent-paid and non-sent-paid categories, summarized by location

1.316	The Contractor shall provide a report that contains monthly gross revenue generated by each telephone by sent-paid and non-sent-paid categories.
1.317	The Contractor shall provide a report that contains monthly gross revenue generated by each telephone by sent-paid and non-sent-paid categories, summarized by using agency.
1.318	The Contractor shall provide a report that contains monthly gross revenue generated by each telephone by revenue category, i.e., local, IntraLata, and InterLata, with accompanying commissions calculated by telephone and summarized by agency.
1.319	The Contractor shall submit the projected annual gross billed revenue, the commission percentage, the projected annual dollar commission payment, and the minimum annual dollar guarantee for each service to the Commonwealth.
1.320	The Contractor shall provide a monthly report summarizing the statistics for stations in each using agency and shall be supply the report to the Commonwealth within 30 calendar days after the end of the month.
1.321	The Contractor will provide a monthly report of how many times a TTY device is used per each payphone.
1.322	The Contractor shall provide a report that contains monthly gross revenue generated by each telephone by revenue category, i.e., local, IntraLata, and InterLata, with accompanying commissions calculated by telephone.
1.323	The Contractor shall provide sufficient training to adequately orient selected Commonwealth employees on the proper use of payphone systems.

1.324	All training shall be accomplished at a location in Harrisburg to be identified at a later date. The Contractor must be able to provide to all Commonwealth Telecommunications Management Officers (TMO) information regarding the types of equipment and service available for coin/card public phone services. Training shall also encompass methods by which these TMO's can assess their environments and develop a plan for placement of coin/card telephones that maximizes usage, services, commissions, and addresses special agency needs.
1.325	Contractor shall allow the Commonwealth to make use of any training material provided.
1.326	The Contractor shall demonstrate a series of local and long distance telephone calls placed from public payphones in which multiple stations are installed. The calls shall be received using a variety of terminating switches/station equipment.
1.327	The Contractor shall ensure that each location being transitioned will have a minimum of at least one working payphone.
1.328	During transition, the Contractor shall reinstall any existing Commonwealth or otherwise owned TTY devices currently in the old equipment and reinstall them into the new equipment.
1.329	The Contractor shall be responsible for all costs and/or penalties associated with the replacement of the existing stations, enclosures, and TTYs installations.
1.330	Contractor shall submit a complete and detailed schedule of the time required for installation steps, utility coordination, training, cutover, testing and acceptance for coin/card phone systems. The schedule shall include staff charts, date, and any cutover aspects.

1.331	The Contractor shall replace on a one-for-one basis all existing coin operated stations and/or card operated stations.
1.332	The coin/card public payphone conversion is requiring completion within six (6) months from the date of the contract award. If Contractor requires additional time include the reasons why and its time for completing the project.
1.333	SECURITY SERVICES
1.334	Auditing
1.335	The Contractor shall permit the Commonwealth to perform security risk assessments by a qualified and approved security vendor on an annual or as needed basis to supplement internal auditing and compliance activities.
1.336	The Contractor shall complete an independent SAS70 audit on an annual basis and provide the results to the Commonwealth.
1.337	Incident Response
1.338	The Contractor shall comply with to the Commonwealth's Computer Incident Response Team standards and policies.
1.339	The Contractor shall develop a Commonwealth incident response plan for cybersecurity events and threats and provide it to the Commonwealth for approval.
1.340	The Contractor shall provide all security logs for a particular event and/or troubleshooting upon request.
1.341	The Contractor shall remediate any critical information security related vulnerabilities affecting managed devices within 24 hours in coordination with the Commonwealth.

1.342	Device Management and Integration
1.343	The Contractor shall maintain current documentation on all managed devices to include device identification, operating systems versions, patch levels, configuration settings, and change history. This documentation must be securely available online to the Commonwealth for the duration of the contract.
1.344	The Contractor shall ensure that both hardware and software is maintained at manufacturer's current supported and release level as coordinated with the Commonwealth.
1.345	The Contractor shall ensure that all managed devices must have the ability to feed its logs into the Commonwealth security information and event management system.
1.346	Demilitarized Zone
1.347	The Contractor shall provide the capability to extend the Internet demilitarized zone (DMZ) to multiple locations.
1.348	Intrusion Prevention Systems
1.349	The Contractor shall provide the Commonwealth with a redundant and diverse Enterprise network-based Intrusion Prevention Services (IPS) solution.
1.350	The Contractor shall offer the Commonwealth a redundant and diverse agency network-based IPS solution.
1.351	Various Security Requirements

1.352	The Contractor shall ensure that staffing resources involved with the design, implementation, transition, administration, and support of all functions within the managed services have training, certification, hands-on working experience.
1.353	Business Partner Connectivity
1.354	The Contractor shall ensure that all data communication services with the exception of Internet access via the Commonwealth network are available to Commonwealth Business Partners.
1.355	The Contractor shall provide the Commonwealth with a Business Partner DMZ solution.
1.356	Physical Access
1.357	The Contractor shall provide authorized Commonwealth personnel physical access upon request to Contractor owned equipment at Contractor facilities.
1.358	Email Scanning and Instant Messaging
1.359	The Contractor shall provide an enterprise class integrated messaging service (e-mail scanning) that protects the integrity of the Commonwealth's network from actual and potential damage caused by e-mail threats and addresses regulatory compliance requirements.
1.360	The Contractor shall provide a secure Instant Messaging solution.
1.361	Firewall Management

1.362	The Contractor shall provide a fully managed enterprise firewall solution for all Commonwealth traffic.
1.363	Authentication
1.364	The Contractor shall leverage the Commonwealth's Public Key Infrastructure for authentication when digital signatures are required.
1.365	The Contractor shall integrate user authentication for remote access with the Commonwealth's current standards.
1.366	Remote Access
1.367	The Contractor shall provide the Commonwealth with a redundant Remote Access Solution supported by two physically diverse Remote Access servers.
1.368	The Contractor must provide number portability to maintain all local and toll-free access numbers currently in use for the Commonwealth's dial-in remote access services or provide a migration plan to convert to other access numbers.
1.369	The Contractor shall ensure that toll-free numbers for the Commonwealth dial-in access are part of a turn-key solution for the remote access service.
1.370	The Contractor shall provide a customized dialer component that provides automated selection of the local access number for individual dial access users.
1.371	The Contractor shall provide network access control for the remote access solution.

1.372	HELP DESK SERVICES
1.373	The Contractor shall provide a consolidated and integrated, 24x7x365 days Help Desk to support Commonwealth Contract Participants.
1.374	The Contractor shall ensure that the help desk will be located within the United States.
1.375	The Contractor's Help Desk shall serve as a single point of contact for all services provided by the Contractor.
1.376	The Contractor shall be responsible for the purchase of software, licenses, hardware, staff training and all development required to integrate with the Commonwealth's Remedy Systems.
1.377	The Contractor's Help Desk system shall provide a common web interface that allows all Contract Participants the ability to search, query, print, and review trouble tickets.
1.378	The Contractor's help desk system shall ensure all tickets, regardless of ticket status or generation source, must remain accessible to Contract Participants at all times and must have search/query capability.
1.379	The Contractor shall retain all help desk data in its original format for online access and historical purposes for the term of the Contract, including extensions.
1.380	The Contractor shall ensure all help desk reporting activities are logged by the Contractor, detailed, and accessible to all Contract Participants in a case log format.

1.381	The Contractor shall provide all Contract Participants with Standard Operating Procedures to include all information and troubleshooting the Contractor requires from the Commonwealth to have the trouble tickets escalated.
1.382	The Contractor shall accept help desk requests via voice, email, online web form, or transfer via Remedy DSO to the help desk.
1.383	The Contractor shall not reject or refuse to accept a trouble ticket based on incomplete troubleshooting/information provided by the Contract Participants help desks.
1.384	The Contractor shall accept individual trouble tickets referencing the same incident from more than one Contract Participant.
1.385	The Contractor's help desk system shall accept multiple attachments to each trouble ticket
1.386	The Contractor shall generate a help desk ticket and notify Contract Participants upon detection by the Contractor's NOC when critical alerts and all service failures occur.
1.387	The Contractor shall work with the onsite contacts listed in the trouble ticket for further troubleshooting/information in regard to a trouble tickets and not the Contract Participants help desks.
1.388	The Contractor shall call or email the ticket requestor, prior to closing any ticket, to ensure that the incident has been resolved to the satisfaction of Contract Participants.
1.389	The Contractor's help desk system shall provide notifications to contacts and ticket requestors regarding the status of their trouble tickets.

1.390	The Contractor's Remedy system shall be capable of integrating with all Remedy modules utilized by the Commonwealth. (Including: help desk, asset management and change management).
1.391	The Contractor's help desk system shall support the bi-directional, electronic transmission of tickets for all Contract Participant help desk systems.
1.392	The Contractor's help desk system shall generate monthly reports, separate for each Contract Participant, which lists with details all of the trouble tickets opened for that particular month.
1.393	The Contractor shall include programming of all agreed upon SLAs into the Remedy ticket tracking software. All Contract Participants should be able to run reports on missed SLAs to include response and resolve times.
1.394	DISASTER RECOVERY SERVICES
1.395	The Contractor shall jointly develop with the Commonwealth a comprehensive and detailed disaster recovery and business continuity plan (DRBCP).
1.396	The Contractor shall identify the resources that will be available and committed to Commonwealth in the event of a disaster, including staffing, point of contact, equipment. The Contractor shall include resource planning in the DRBCP.
1.397	The Contractor shall meet one day, annually for a DRBCP planning activity with Commonwealth to review risks, threats, and plans.
1.398	The Contractor shall exercise the DRBCP, at minimum annually. The scheduled exercise shall be coordinated with the Commonwealth to minimize the impact on business operations.

1.399	The Contractor shall provide the Commonwealth the ability to observe and/or participate in the DRBCP exercise.
1.400	The Contractor shall document and provide the DRBCP exercise results to the Commonwealth with identified deficiencies and associated remediation plans.
1.401	The Contractor shall update its DRBCP on an annual basis.
1.402	The Contractor shall share its DRBCP with authorized Commonwealth personnel.
1.403	The DRBCP shall cover any type of disaster and have a maximum recovery time of 72 hours for basic services.
1.404	The DRBCP shall cover any type of disaster and have a maximum recovery time of 96 hours for business as usual.
1.405	The Contractor shall provide an operational backup NOC which shall be located within the United States, with a minimum separation of 50 miles from the primary NOC.
1.406	The Contractor shall specify the period of time required for the network to recover from a failure due to a disaster on the local loop; an inter-office facility; an intraLATA facility; and an interLATA facility.
1.407	The Contractor shall prioritize restoration of services as documented by Commonwealth.
1.408	The Contractor shall jointly develop with each agency a comprehensive agency business continuity plan (ABCP), for network data and voice services only, upon request of the agency.

1.409	The Contractor shall provide an incident manager in the event of a disaster that will be immediately available to the appropriate Commonwealth resources to the point of full recovery.
1.410	The Contractor must document the methodology that will be used to test disaster recovery procedures and reporting process.
1.411	SYSTEM MANAGEMENT SERVICES
1.412	The Contractor shall ensure the transfer of billing information for posting to the SAP accounting system complies with established standards.
1.413	The Contractor shall apply credit adjustments in the third billing cycle after the credit is earned. Crediting adjustments will be applied against the actual service item's SAP account code.
1.414	The Commonwealth shall not be liable for any un-invoiced charges submitted by the Contractor older than 180 days. The Commonwealth will provide reasonable cooperation to the Contractor to support the Contractor's efforts to identify suspected or confirmed Remote Toll Fraud.
1.415	A statement of account will be provided to the Commonwealth within 60 days of acceptance reflecting the services and the associated billing. This statement of account will be provided to meet Verizon's requirement to bill services within 180 days until the single view bill and e-bonding to CTMS is finalized. The statement of account will provide the Commonwealth with a status of their Charges each month until the service can be billed via the CTMS interface via the single view bill platform.
1.416	The Contractor shall provide appropriate technical support staff which can support the Commonwealth's billing requirements.
1.417	The Contractor shall retain all inventory data in its original format for online access and historical purposes for the length of the contract, including renewals.

1.418	The Contractor shall provide, on request, historical trend usage/cost information for each monthly bill, and include both monthly and cumulative cost information.
1.419	The Contractor shall integrate with the Commonwealth's Telecommunications Management System (CTMS). The integrated system shall enable users to electronically enter a service order, receive confirmation, and track the order from creation through completion.
1.420	The Contractor shall provide web based access to the VOIP and/or IP telephony platform.
1.421	The Contractor shall ensure all items and/or feature settings in the inventory agree with the Contractor's switch items and/or feature settings at all times. The Contractor shall initiate audits and provide audit results to the Commonwealth.
1.422	The Contractor shall ensure all inventory information, including any resale inventory items, must be complete and accurate at all times in the CTMS.
1.423	The Contractor shall allow for bulk uploads when the Commonwealth determines that the need exists. The Contractor shall develop an automated process to upload large amounts of data directly into the CTMS.
1.424	The Contractor shall ensure that Telephone Directory Listings are accessible via the CTMS.
1.425	CTMS Support

1.426	The Contractor shall integrate with the CTMS. The system shall enable users to electronically enter a service order from start to finish, receive a confirmation and track the order from process start to end.
1.427	The Contractor shall ensure the CTMS is available for access by all users on a 24x7x365 basis, with the exception being scheduled maintenance approved by the CTMS Administrator.
1.428	The Contractor shall provide primary and secondary support 24x7x365 to manage and make modifications to the Commonwealth's telecommunications management system (ISS) application.
1.429	The Contractor shall provide the hardware and software platform to support the CTMS application.
1.430	The Contractor shall coordinate in advance any CTMS program changes that are necessary according to a schedule provided by the Commonwealth.
1.431	The Contractor shall be required to comply with the Commonwealth's SAP data interchange format.
1.432	The Contractor shall ensure the trouble ticket module within the CTMS application interfaces with the Contractor's help desk ticketing system.
1.433	The Contractor shall ensure its support team is located within the U.S.
1.434	The Contractor shall receive orders electronically from Contract Participants located in business areas throughout the State via the CTMS.

1.435	The Contractor shall allow an order to be changed or cancelled anytime within a time period specified by the Commonwealth prior to the scheduled completion date. This change or cancellation may come from any authorized Commonwealth participant.
1.436	The Contractor shall not change any established installation dates initiated by the Contractor without the Commonwealth's concurrence.
1.437	The Contractor shall commit to providing a facilities ready date to the Commonwealth within 5 business days of receiving the order. If facilities are not available in that service area, a commitment date to provide the service should be noted, adhered to by the Contractor, and communicated to the creator of the order.
1.438	The Contractor shall notify the Commonwealth when scheduled date changes occur. The Contractor shall provide the Commonwealth with a reason for the scheduled date change which must be documented in the status history. The Commonwealth will work with the Contractor for agreement on an acceptable time period for the date change notification.
1.439	The Contractor shall test and verify completeness of order in accordance with agreed to acceptance criteria.
1.440	The Contractor shall ensure that orders exceeding or with the potential to exceed the requested completion date will electronically generate an exception notice to the creator of the order. Order status shall be updated accordingly.
1.441	The Contractor shall ensure it's expediting process and procedures include provisions that allow the Commonwealth to verbally submit prior to placing a system generated request.

1.442	The Contractor shall notify the Contract Participant when the new or re-provisioned services are available.
1.443	The Contractor is responsible for meeting installation dates as established.
1.444	The Contractor shall ensure its product catalog is available from within CTMS. All products and/or services that are offered by the Contractor and/or its subcontractors must be included in this online catalog which must be updated when additional services are available. The catalog must list, at minimum, a product code, detailed description, and any associated costs. Each product and its associated features should be grouped together in the catalog in an organized manner to facilitate easy reference.
1.445	The Contractor shall provide standard monthly summary reports for service orders as required by the Commonwealth. The reports must be available in both CSV and PDF formats, depending on the specific report. The Commonwealth requires that the reports be generated in two different formats: Enterprise Wide and Contract Participant Specific. Separate reports shall be generated for each Contract Participant. Reports are to be transferred to business area designated folders on the Commonwealth FTP Server.
1.446	The Contractor shall have the ability to provide reporting from both standard queries and ad hoc queries.
1.447	The Contractor shall provide a complete Customer Service Report by location by Contract Participant be available for download in both CSV and PDF formats.
1.448	The Contractor shall provide system training at least monthly. Training to be held at a Commonwealth location at Commonwealth discretion.

1.449	The Contractor shall provide additional training sessions based on Commonwealth need and content. Training to be held at a Commonwealth facility in the Harrisburg area.
1.450	The Contractor shall provide an annual Users Conference on existing and prospective services.
1.451	The Contractor shall be able to comply with federal E-Rate discount program.