LINK
MICHIGAN
Telecommunications
Network Services

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GLOSSARY OF TERMS AND CONDITIONS

The following terms and abbreviations as defined below shall be used throughout this document.

Active Equipment – Equipment or facilities that require battery or domestic power to operate.

Additional Service - Any functions and/or services outside of the scope of the Contract that once added will result in the need to provide the Contractor with additional consideration.

Agreement – Final contract signed by the Vendor and State, inclusive of all terms and conditions of the resulting contract.

Amendment Labor Rates – Any schedule of fully-loaded hourly labor rates, provided by the Vendor, which will become part of the final Contract.

Application - System solution to be designed, constructed, and deployed during the performance of the Contract, including all application software, operating systems software, tools, utilities, hardware, equipment and related documentation and other materials comprising the integrated solution. The term "Application" when used in the context of a specific Stage of the Contract shall be interpreted to refer to the system solution(s) to be designed, constructed and deployed during, or as the object of, that Stage of the Contract or any of the discrete sub-projects comprising a Project Stage;

Backbone – The main part of the Vendor communications network that connects primary nodes, a primary shared communications path that serves multiple users via multiplexing at designated jumping off points. This is inclusive of all facilities and equipment used to provide and connect switching services.

BICI – Building Industry Consulting Service International, a professional organization.

Business Day – Any day other than a Saturday, Sunday or State-recognized legal holiday.

Business Function Testing - "Start-to-finish" global testing of an entire Application. Business Function Testing tests business function cycles of the Application, simulating real-life usage as closely as possible, and is based on the lifecycle of the core functions that the Application is expected to perform.

Central Office Facilities – A business telephone service providing PBX style services over a broad coverage area. Such service may be provided through multiple switches or a single CO based switch.

Central Office Facilities Type Services – Telephone services providing common PBX features including call forwarding, line hunting, group pickup, etc. Central Office Facilities services are also referred to as Centrex and Centranet service.

Charge Request – A change to the State's system.

CO – Local exchange Central Office; the LEC main facility termination location which houses switching equipment for the transport of communications services.

Competitive LEC (CLEC) – Competitive Local Exchange Carrier; LECs competing with ILECs for network service provisioning. CLECs may build their own networks or lease facilities from ILECs.

Contract – As used in this document, the term "Contract" shall, unless the context requires otherwise, be considered to be references to this Contract, including any Statements of Work and other Exhibits.

Contract Exhibits - Exhibits attached to, or referenced in, this Contract.

Contractor - An individual, corporation or other entity and its Subcontractor engaged in the business of supplying Services through a contract with the State and replying to this RFP.

Custom Software Deliverable - Deliverable that incorporates software which is not entirely unmodified Standard Software.

Customer Premise Equipment (CPE) – State owned equipment located at individual state sites.

Cut Sheet – Documentation defining the installation of equipment, method of installing, manufacturer specifications and manufacturer definition of equipment.

Cutover – The transfer of services from existing contractor services to new Vendor services and/or the introduction and initiation of services to any office.

Day – A timeframe consisting of 24 hours for each 365 calendar days of the year.

Deliverables - All tangible embodiments of the Services delivered or to be delivered to the State under this Contract that are listed or described in any applicable Statements of Work, as such Exhibit and Statements of Work may be amended or added from time to time.

Demarc – The point of interface (demarcation) that delineates State owned facilities and equipment from Vendor facilities and equipment. Demarcs shall be those currently established by the State inclusive of wiring blocks and jacks.

Developed Materials - All software and other materials produced by Contractor or its Subcontractors in the performance of the Contract, including software program code, in both object code and source code forms, and all related materials, including designs, data models, database models, object models, program listings, flow charts, application manuals, technical manuals, training manuals, user manuals and operating procedures. The term "Developed Materials" does not include any pre-existing software, such as Standard Software or modifications thereto produced outside this Contract, but does include all modifications, enhancements and interfaces to either Standard Software or other pre-existing materials that are created in the performance of the Contract.

DIT – Michigan Department of Information Technology.

DMB - Michigan Department of Management and Budget.

DOD – Direct Outward Dial.

Down Time – Period of time where services are not active and available to users.

DTMF – Dual Tone Modulated Frequency dial pad tones also known as Touch Tones as generated from a common telephone.

Effective Date - Has the meaning given in the Introduction to this Contract.

EIA/TIA – Electronic Industries Alliance / Telecommunications Industry Association, combined: contribute voluntary standards for telecommunications.

ETR – Estimated Time to Restore Service.

Existing Services at Cutover – All communications services contracted from vendors by the State.

Hours – Continuous duration of time based on a 24-hour clock.

Including - "Including, without limitation," wherever the word "including" appears in this Contract, whether or not such word is capitalized.

Incumbent – Current State contractor.

Incumbent LEC (ILEC) – Provider of Local Exchange Carrier services for the State prior to the award and initiation of the contract resulting from this RFP.

Information – All data and records developed or obtained during the performance of, or acquired or developed by reason of, the Contract, including but not limited to, all studies, reports, written and software data files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.

Information Technology (IT) – Refers to the tools and processes used for gathering, storing, manipulating, transmitting, sharing, and sensing of information including, but not limited to, data processing, computing, information systems, telecommunications, and various audio and video technologies.

Initial Transition Period – Period of time between Contract Effective Date and January 1, 2004, during which Contractor is assimilating and beginning to perform Services.

Integration Testing - Test phase that will test the overall integration of a Custom Software Deliverable with previously delivered software Deliverables with which it interfaces. Integration Testing focuses on integration of all software Deliverable components, including but not limited to printing, reports, batch system, online system, remote system access, tapes, security and external interfaces.

Inter-LATA – All calls originated and terminated in different LATA's.

Intra-LATA – All calls originated and terminated in the same LATA. ISDN - Integrated Services Digital Network type service or related devices.

LATA - Local Access and Transport Area; geographic boundary established at the breakup of AT&T to define the boundaries between local exchange and inter-exchange carriers.

LEC – Local Exchange Carrier that provides telephone local exchange service.

Local Exchanges – The telephone number exchanges that may be contacted (telephoned) through a LEC Central Office without incurring toll charges.

LPIC – Intra-LATA Primary Inter-exchange Carrier providing services within a single LATA.

MOST – The State's Telemanagement System.

MTBF – Mean Time Between Failures.

MTTR – Mean Time To Repair.

New Services - All services, functions, products and materials that are requested in writing by the State to be provided by Contractor, which are outside the scope of Contractor's responsibilities under all Statements of Work issued under this Contract that are in effect at the time the State's request is made. Any services, functions, products and materials that are requested by the State to be provided by Contractor but which, although not specifically enumerated in any Statements of Work issued under this Contract that are in effect at the time the State's request is made, are reasonably necessary in order for Contractor to complete performance of its obligations in accordance with the requirements and specifications of such existing Statements of Work, shall be considered to be in-scope Services, not New Services.

Non-Work Day – Any period of time outside of the Work Day.

Off-Net – Phone calls which are carried in part on a network but are destined for a phone not on the network.

On-Net – Calls which stay on a customer's private network.

Party or Parties, - One or both parties to this Contract, respectively, unless the context requires otherwise.

Passive – Items of equipment or facilities that do not require battery or domestic power to operate.

PBX – Private Branch Exchange.

PIC – Primary Inter-exchange Carrier. PIC is maintained by the LEC or provider of the local services through system programming.

Premises – A leased or owned State office location requiring service from the Vendor.

Project - Generic term referring to the complete set of activities, including the Services, to be undertaken and performed pursuant to this Contract.

Project Management Office (PMO) - Organization staffed by the State with support from Contractor to oversee the performance of the Contract.

Proposal – Vendor's response to this Request for Proposal.

Regression Testing - Continual re-testing of previously tested Custom Software Deliverables to ensure that such Custom Software Deliverables continue to operate correctly. Regression Testing is necessary to test components that may be affected by a change to another component.

Repairs – Services initiated through trouble reports to vendors regarding installed service malfunctions and resulting corrections.

Replacement Services – Communications services provided to the State by contractors of which responsible vendors must provide replacement services.

Requirements - Specific business, functional, technical and other requirements of the State to be achieved by the Application or otherwise through the performance of the Services and the completion of the Contract.

Service Bundle - Relate to per unit charge and not management costs.

Specifications – Written specification and general requirements set forth in the RFP; the Proposal; and the documentation which define the requirements and criteria for acceptance.

Stage - Discrete phase of the Contract as describe in other Statements of Work added to this Contract.

Standard Software - Object code version of computer programs, and any related documentation (excluding maintenance diagnostics), provided by Contractor to the State (under reasonable and customary license terms and conditions acceptable to the State), that is either (i) owned by Contractor prior to the Effective Date, or (ii) owned by a third party, provided Contractor has obtained the legal right from the original licensor to license such Standard Software. Standard Software also includes the source code version of Standard Software where provided by Contractor, and any modifications or enhancements to Standard Software that are produced outside this Contract. Standard Software also includes loadable micro-code that enables the underlying equipment to function according to its published specifications.

State – the State, its departments, divisions, agencies, offices, commissions, officers, employees and agents.

State Facility – Any State occupied structure, inclusive of leased, rented or owned facility and locations.

State Review Period - Time period specified in the applicable Contract Exhibit during which the State is to complete its review and, as applicable, testing of a Deliverable for approval.

Subcontractor - Company to which Contractor delegates performance of a portion of the Services, but does not include independent contractors engaged by Contractor solely in a staff augmentation role.

System Testing - All of the testing of a Custom Software Deliverable to be conducted by Contractor prior to turning over the Deliverable to the State for approval.

Technical Testing - Includes: (1) testing of the hardware environment, network and communications environment, and peripherals (such as printers); (2) testing of the software environment (architectural and technical); (3) stress testing and benchmarking of the online applications; (4) execution at full volume of the batch applications to determine the batch window; and (5) testing of batch applications to validate that programs have sufficient startup, recovery, and restart logic. Technical Testing is conducted contemporaneously with Business Functionality Testing.

Technology – The methods, procedures and associated equipment used to provide service.

Telephone Service Requests (TSR) – A document defining specific requests for work defining job sites, work to be completed, due dates, etc. TSR's shall be released only by Administrative Services.

Termination Equipment – Any equipment necessary for the connection of Vendor provided facilities to State equipment or facilities.

Unit Testing - Using test conditions provided in the detailed specification to test the logic of a Custom Software Deliverable component. During Unit Testing, additional test conditions may be defined to help ensure that all logic paths are tested, and test data is created to test the software as needed.

User Acceptance Testing (UAT) - Testing of Custom Software Deliverables to be carried out by the State with the support and assistance of Contractor to determine whether the Deliverables should be approved or accepted by the State.

Vendor – An individual, corporation or other entity and their Subcontractor engaged in the business of supplying Services and replying to this RFP.

Vendor Employee – Any individual employed by or subcontracted to a Vendor providing services to the State.

WAN – Wide Area Network.

Work Day – A period of time between 8:00 A.M. and 5:00 P.M., Monday through Friday, excluding State holidays for State employees as noted on the Collective Bargaining Agreement in force with the State and its employees. Such days may vary with calendar years. Capitalized terms used in this Contract shall have the meanings described within the this Glossary of Terms and Abbreviations, unless the context requires otherwise.

EXECUTIVE SUMMARY

Access to high-speed telecommunications services has been identified as Michigan's most important infrastructure issue for the new century. A number of programs have been launched as part of the LinkMichigan initiative to address this issue and to transform Michigan's telecommunications infrastructure into one of the most robust and advanced in the nation. This LinkMichigan Request for Proposal (RFP) is one step toward that goal.

The LinkMichigan initiative is specifically designed to address the opportunities and challenges associated with providing ubiquitous broadband access throughout the State. The initiative will give Michigan a decisive edge in an increasingly global and interconnected economy. Achieving ubiquitous broadband access requires a robust digital transport, a partnership between governments and the private sector, and willingness by all parties to become invested in success through innovative solutions.

However, it is not enough to simply create a telecommunications network that provides ubiquitous and robust broadband. Equally important, these services must be priced such that the average institution, business, and consumer will be encouraged to purchase and take advantage of the many benefits available from such a system today and in the future. Simply stated, this is Michigan's challenge and vision — make high-speed broadband available and affordable to citizens, businesses, and institutions statewide no matter where they are. Both Governor Engler and the state legislature endorse this vision and have supported initiatives and legislation to make it happen.

Details of the LinkMichigan Plan can be found in the May 2001 LinkMichigan Report prepared by the Michigan Economic Development Corporation (MEDC) which outlines the LinkMichigan strategy (See www.linkmichigan.michigan.org). A principal recommendation of the plan is statewide public user aggregation. This RFP embodies State government's first step toward aggregation of its demand. The entire voice, data and video network needs of all State agencies may be united under one, consolidated contract for services. Service Features identified within this RFP constitute the aggregate of current State operations and as such represents the State's willingness to discuss future innovative solutions in the delivery of these services. Consideration will be given to those proposals that clearly identify, prove beneficial to, and balance meeting the objectives of LinkMichigan, the needs of citizens, and the operational needs of state government.

In issuing this RFP, the State is aware of the important role "anchor tenants," including state government offices, can play in facilitating the build-out of high-speed backbone and other needed infrastructure components. Just as a long-term lease with a large department store provides a solid return on capital investments in the world of commercial real estate; so too can broadband demands from reliable aggregated users provide a solid foundation for the building of an advanced high-speed infrastructure. For this reason, the State is interested in understanding the level of infrastructure investment that vendors would expect to undertake in Michigan as part of this aggregated demand contract. Vendors should indicate where they will develop and construct advanced technology broadband infrastructure components that would improve state government telecommunication systems and how these investments could be leveraged to enhance high-speed broadband services for other consumers.

In considering infrastructure investments, vendors should be mindful of the new Michigan Broadband Development Authority (MBDA) and its financing programs, which may be able to assist in the financing of infrastructure projects committed to as part of proposals for improving state government telecommunications services. MBDA's mission is to provide lower-cost financing, on favorable terms, to broadband service providers (including integrators) to assist and expedite the build-out of high-speed broadband infrastructure in Michigan. Where appropriate, MBDA may enter into joint venture and partnership agreements with broadband developers and operators to participate in infrastructure development. In addition, MBDA plans to establish a seed capital loan program to make prudent capital loans to persons planning to apply to the authority for financing of broadband infrastructure.

MBDA has completed an initial $50 million bond sale to the Michigan State Housing Development Authority (MSHDA) to provide MBDA initial capitalization. This capitalization will provide working capital to enable MBDA to set up its operations, hire staff and consultants, set up reserve accounts to secure its notes and bonds, and provide funds for joint venture investments. MBDA's financing approach will be to identify projects that are justified on economic and technological grounds and are shown to provide important enhancements of broadband infrastructure and services. The winning Respondent to this solicitation may be well positioned to apply for authority financing, since the demand for services associated with this solicitation should reduce the financial risk of projects designed to help serve the demand. Moreover, to the extent high-speed broadband infrastructure development projects are supported by reliable demand for broadband services from state government facilities, the projects would be in a favorable position to apply for MBDA financing.

With the State's aggregated demand serving as an "anchor tenant" for broadband demand, and MBDA providing lower-cost financing on favorable terms, advanced technology broadband infrastructure investments will carry significantly less risk and cost than they would on a stand-alone basis. Leveraging these two programs could provide for significant progress toward the LinkMichigan objective of "facilitating the development of the most advanced and robust telecommunications infrastructure in the country." Vendors should carefully consider how their proposals will further this objective and what assistance MBDA financing could provide.

It is anticipated that the winning vendor to this solicitation will commit to and make substantial advanced technology broadband infrastructure investments in Michigan with an objective to enhance high-speed broadband service to the state. MBDA may be able to provide an attractive source of lower-cost financing, on favorable terms, to help finance the investments should the winning vendor have the need. A criterion in the evaluation of responses will be the level and type of advanced technology broadband infrastructure investment proposed to serve the aggregated demand of state entities under this solicitation. Additionally, the extent to which those investments could potentially support the provision of enhanced broadband services to other institutions and citizens across the state will also be reviewed. For this reason, vendors should indicate <u>in detail</u> within the appropriate Service Features the level and type of advanced technology broadband infrastructure investments they will make, how those investments will support enhanced broadband services to the state, and how those investments could potentially support extending services to other entities. In considering the level of investment, vendors should consider both of these possibilities: (1) assuming the availability of MBDA financing for up to 70 percent of the capital required (in the form of low interest debt) and (2) assuming

MBDA financing is not utilized. Vendors should also indicate whether they intend to apply for MBDA financing to support their investments.

This Request for Proposal (RFP) consists of four sections designed to provide an overview of the State's current systems and services, a detailed description of needs and requirements, as well as terms and conditions and other related materials. Section I addresses general RFP information and instructions to bidders. Section II-A and II-B address Contract terms and conditions and Section III, and with associated appendices, provide detailed requirements and cost models. Section III contains requirements for five general service categories. These include: voice, data, wireless, CPE & infrastructure, and support functions. The general categories listed above are further broken down in sections 1-30 at a greater level of detail including specific areas such as calling cards, cellular phones, video and audio conferencing, and others.

In reviewing Section III, Statement of Work, vendors should be aware that currently several business partners provide the majority of services to State government. As a security consideration, some specific details (location, configuration, etc.) associated with Service Features may not be identified. However, sufficient information has been provided to allow for vendors to gage the scope of work for comparative purposes. It should be noted that proposal price comparisons will be based on a "snapshot in time" projection of how the State's network might look in the future. This snapshot is provided for the State as a basis for pricing comparison and for the vendors as a basis for projecting revenue and discounting. In some cases the snapshot is not a real network and there is no intention of contracting for this or any fixed network topology.

With the creation of the Department of Information Technology a more centralized operation in the delivery of future telecommunication services is planned. Likewise, as a result of this solicitation, it is the intent of the State to obtain a single integrator capable of forming a collective team to deliver needed State products and services. Vendors should give particular attention to the need for centralization of the management of services, the economies of scale associated with centralization, and the operational effectiveness of centralized processes.

SECTION I - GENERAL

1.0 PURPOSE

The purpose of this RFP is to meet the State's telecommunications product needs, service needs, and goals inclusive of the Link Michigan initiative. Vendors should refer to Section 3 of the RFP for a description of the current environment including voice, data, video, wireless, and support. Vendors should use this information as baseline requirements for their proposal. However, the requirements depicted in the Section 3 are not meant to be overly restrictive, or to limit creative final solutions. Likewise, Vendor's should not translate the Functional Requirements defined in Section 3 as the proposed design. Innovative approaches are encouraged to meet the functional requirements so long as the Vendor's proposal meets the minimum functional requirements.

Technology used in proposed solutions must be compatible with current industry standards. The State considers it desirable to Contract with a single Prime Vendor to provide for all components of the RFP. For this reason, we request that all Vendors respond to each section of the RFP.

In addition as a result of this RFP the State may make any resulting agreement(s) available to all colleges, universities, K-12 school systems, state and local governments, governmental agencies, and municipalities, through the State's extended purchasing program. Use of any contract resulting from this RFP process is strictly voluntary. Members may enter into purchase/lease agreements, in accordance with their respective purchasing policies.

1.1 GOALS

- The specific goals and objectives of the State in issuing this RFP include:
- Obtain a single integrator capable of forming a collective team to deliver needed state products and services;
- Obtain Vendor services for a variety of telecommunications technologies, allowing the State and its agencies the flexibility to implement programs without technological restrictions;
- Obtaining service contracts for the migration of the communications infrastructure to higher speed digital technology, allowing a single network for voice, video and data;
- Obtain universal service costs for all users;
- Obtain broadband services for the remote areas of the state;
- Develop oversight and verification capabilities in the areas of ordering and provisioning of services, network management and billing;
- Provide reliable voice-grade communications to the end users in the most cost-effective manner and under terms that are in the best interests of the State;
- Make available to the various State users an assortment of communications options from which they may choose in order to allow them to further the goals assigned to them under State regulations;
- Attain a clear accounting trail with reference to services rendered to the State and to the mandated agency charge-backs;
- Reduce to an absolute minimum any service disruptions or other situations which may negatively impact the end user;
- Strive to provide the shortest lead-times possible in installing new services or modifying existing ones;
- Reduce costs, reduce cycle time and provide better service.

The scope of services are:

2.0 Long Distance Services
3.0 Calling Cards
4.0 Audio Teleconferencing
5.0 Toll-Free Services
6.0 Video Communications
7.0 Cellular Services
8.0 Paging/Messaging
9.0 Payphones
10.0 Avaya PBX Equipment
11.0 PBX Voice Instrument, Repair and Installation of Phones
12.0 PBX Equipment Maintenance
13.0 Central Office Facilities
14.0 Central Office Management, Repair, and Installation
15.0 Central Office Management, Installation, Moves, Adds, Changes
16.0 Remote Access
17.0 Voice Messaging
18.0 Network Reporting Services
19.0 WAN Management, Monitor, and Maintenance
20.0 WAN Installation and Moves/Adds/Changes (MACs)
21.0 Network Node Monitoring
22.0 ISP Services
23.0 Help Desk
24.0 Cable Design & Engineering
25.0 Cable Services, Install/MAC
26.0 Transition Planning and Exit Strategies
27.0 Billing/Rate Structure
28.0 Key Systems
29.0 PBX Systems
30.0 Optional Services

1.2 INCLUSIONS

Each Offer must include all Services at all State facilities regardless of specific locations. The Vendor is encouraged to team with other service providers to create the most encompassing proposal. In all cases, a single Vendor Contact representing any team of providers must be retained for all services offered from a single Vendor entity.

1.3 TERM OF CONTRACT

The State is not liable for any cost incurred by any Vendor prior to signing of a Contract by all parties. The activities in the proposed Contract cover the period 1-4-2003 to 1-4-2009 with the option to extend the contract for one-year annual renewals. The State fiscal year is October lst through September 30th. The prospective Vendor should realize that payments in any given fiscal year are contingent upon enactment of legislative appropriations.

1.4 ISSUING OFFICE

This RFP is issued by the State, Department of Management and Budget (DMB), Acquisition Services, hereafter known as Acquisition Services, for the State, Department of Information Technology. Where actions are a combination of those of Acquisition Services and the Department of Information Technology, the authority will be known as the State.

Acquisition Services is the sole point of contact in the State with regard to all procurement and contractual matters relating to the services described herein. Acquisition Services is the only office authorized to change, modify, amend, alter, clarify, etc., the prices, specifications, terms, and conditions of this Request For Proposal and any Contract(s) awarded as a result of this Request. Acquisition Services will remain the SOLE POINT OF CONTACT throughout the procurement process, until such time as the Director of Acquisition Services shall direct otherwise in writing. All communications concerning this procurement must be addressed to:

Greg Faremouth, Buyer

Strategic Division

DMB, Acquisition Services

2nd Floor, Mason Building

P.O. Box 30026

Lansing, MI 48909

Email: faremouthg@michigan.gov

517-241-1646

1.5 CONTRACT ADMINISTRATOR

Upon receipt at Acquisition Services of the properly executed Contract Agreement, it is anticipated that the Director of Acquisition Services will direct that the person named below or any other person so designated be authorized to administer the Contract on a day to day basis during the term of the Contract. However, administration of any Contract resulting from this Request implies no authority to change, modify, clarify, amend, or otherwise alter the prices, terms, conditions, and specifications of such Contract. That authority is retained by Acquisition Services. The Contract Administrator for this project is:

Thomas J. Fogle, Director

Telecommunications and Network Management

Department of Information Technology

611 West Ottawa

PO Box 30743

Lansing, MI 48909

Email: foglet@michigan.gov

1.6 PURCHASE ORDERS

Orders for delivery of commodities and/or services may be issued directly by the State Departments through the issuance of a Purchase Order Form referencing this Contract (Blanket Purchase Order) agreement and the terms and conditions contained herein. Vendor is asked to reference the Purchase Order Number on all invoices for payment.

Service Order Based Contracts

The following concepts are fundamental to the State's expectations for network services contracts:

1. Supplier contracts shall provide a framework for individual service orders to be submitted throughout the terms of the contracts. A specific fixed network (either State wide or within any specific region or county) will be established by contract.
2. Pricing of service orders shall be based on contracted unit pricing schedules.
3. Overall revenue commitments (aggregating all proposed service in all proposed geographies) are preferred over volume (i.e., minutes, hours, and bandwidth), circuit, site, or service specific sub-commitments.

1.7 COST LIABILITY

The State assumes no responsibility or liability for costs incurred by the Vendor prior to the signing of any Contract resulting from this Request. Total liability of the State is limited to the terms and conditions of any resulting Contract.

1.8 STATE STANDARDS

EXISTING TECHNOLOGY STANDARDS. The Vendor will adhere to all existing standards as described within the comprehensive listing of the State's existing technology standards at www.state.mi.us/cio/oits.

PM METHODOLOGY STANDARDS. The State has adopted a standard; documented Project Management Methodology (PMM) for use on all Information Technology (IT) based projects. This policy is referenced in the document titled "Project Management Methodology" – DMB Administrative Guide Procedure 1380.02 issued June 2000. Vendors may obtain a copy of this procedure by contacting the DMB Office of Information Technology Solutions. The State Project Management Methodology can be obtained from the DMB Office of Project Management's website at http://www.state.mi.us/cio/opm.

The Vendor shall use the State's PMM to manage State Information Technology (IT) based projects. The requesting agency will provide the applicable documentation and internal agency processes for the methodology. If the Vendor requires training on the methodology, those costs shall be the responsibility of the Vendor, unless otherwise stated.

1.9 ELECTRONIC FUNDS TRANSFER

Electronic transfer of funds is available to State Vendors. Vendors are encouraged to register with the State Office of Financial Management so the State can make payments related to this Contract electronically (www.state.mi.us/dmb/ofm/)

1.10 RFP ORGANIZATION AND TIMELINE

This RFP document consists of four main sections:

a) RFP background information & framework (Section 1)

This section describes the RFP purpose, provides Vendor instructions, contact information, and various submission requirements.

b) Contractual Terms and Conditions (Section 2)

This section describes the contractual obligations that a Vendor will be held to upon the State awarding a contract

c) Technical Service Specifications (Section 3)

Section 3 includes the fundamental specifications and service attributes required to meet the State's telecommunications needs. This section solicits substantial technical and service support information.

d) Attachments and Appendices

Provide additional background information to improve non-incumbent providers' understanding of the State's networking needs.

1.11 CRITICAL RFP DATES

24 June '02	RFP Issuance
6 August '02	Bid Questions and Clarification Due
20 August '02	Bid Answers back to vendors.
24 September '02	Bid Submissions due
October '02	Bid Evaluations
November '02	Oral Presentations
November - December '02	Internal State Business Case Processes
December 2002	Contract Finalization
4 January 2003	Term Commencement for Contract(s)

BIDDING INFORMATION

1.12 QUESTIONS

Questions concerning the specifications contained herein are to be submitted, via e-mail or by mail, no later than 5:00pm on August 6, 2002 to:

Greg Faremouth

Acquisition Services Strategic Division

DMB, Office of Acquisitions Services

P O Box 30026

Lansing, MI 48909

Email: faremouthg@state.mi.us

And:

Thomas J. Fogle, Director

Telecommunications and Network Management

Department of Information Technology

611 West Ottawa

PO Box 30743

Lansing, MI 48909

Email: foglet@michigan.gov

The State will not respond to telephone inquiries or visitation by Vendors or their representatives. All questions are to be put in writing and must be submitted electronically and sent as an attachment in Microsoft Word or Rich Text Format (RTF). Answers to questions will be prepared as an addendum and posted on the state's web site under the corresponding bid number:

(Reference: www.state.mi.us/dmb/oop/webapp/purchasing).

The posted addendum officially revises and supercedes the original specifications, terms and conditions. Addendums will be posted on the web throughout the question & answer period every Friday by 5 p.m.

Answers to questions will be posted throughout the week. Vendors are encouraged to submit questions as they arise.

1.13 PROPOSALS

To be considered, each Vendor must submit a COMPLETE response to this RFP, using the format provided. No other distribution of proposals is to be made by the Vendor. **VENDORS MUST COMPLETE, SIGN, AND RETURN FORM DMB 285**. The Technical Proposal itself must include a statement as to the period during which the Technical Proposal itself remains valid. This period must be at least one hundred twenty days from the due date for responses to this RFP. However, the rates quoted in the PRICE PROPOSAL remain firm for the period of the contract unless the State and or the Vendor takes advantage of the price re-opener provision.

1.14 ORAL PRESENTATION

Vendors who submit proposals may be required to make oral presentations of their proposals or structured demonstrations of their solutions to the State. These sessions provide an opportunity for the Vendors to clarify the proposals and solutions through mutual understanding. Acquisition Services, DMB, will schedule these presentations. If required,. The Office currently anticipates such meetings occurring 3-4 weeks after the bid opening - approximately between the dates of November 4, 2002 and November 22, 2002.

1.15 ECONOMY OF PREPARATION

Each proposal should be prepared simply and economically, providing a straightforward, concise description of the Vendor's ability to meet the requirements of the RFP. Fancy bindings, colored displays, promotional material, etc., will receive no evaluation credit. Emphasis should be on completeness and clarity of content.

1.16 SELECTION CRITERIA (THREE – STEP PROCESS)

Responses to this RFP will be evaluated using a three-step Selection Process. The first step will involve an evaluation of the following factors as presented in the Vendor's response to this RFP:

Step I – Minimum Technical Evaluation

Once technical proposals are opened, vendors failing to meet the minimum qualification criteria outlined below will be automatically excluded from the review process.

The evaluation committee will be asked to answer the following questions prior to a detailed review of the entire proposal. Proposals that receive one or more "No" evaluations (in Step I.) or do not satisfy the key evaluation categories (in Step II.) will not be reviewed further.

MINIMUM QUALIFICATION QUESTIONS	Y / N
Does the Vendor's proposal follow the required order and format?	
Has the Vendor demonstrated qualifications on at least three (3) relevant telecommunication implementations?	
If the response proposes a teaming arrangement involving Subcontractors, has the response demonstrated prior successful interaction among the key firms?	
Does the Vendor's financial status demonstrate high probability that the firm will remain an ongoing concern throughout the potential life of the contract?	

Step II – Technical/Price Proposal Evaluation

a) The remaining vendors (after Step I: minimum qualifications) will be evaluated based on the quality, clarity, and thoroughness of their responses, as outlined in Section IV of this request. Proposals that meet the initial criteria will then be evaluated on the merits of their technical response, according to the areas highlighted in the table below. With only those vendors' proposals that pass this section be reviewed further.

b) Key evaluation categories (with explanation) will include, but not be limited to, the following. Please note that proposals will be evaluated according to the totality of the solution and approach proposed.

EVALUATION CATEGORY	DESCRIPTION
Qualifications and Experience in Relevant Projects	Vendors must demonstrate experience and success in implementing solutions similar to the one being sought by the State
Key Personnel	Vendors must commit project management and leadership that are proven, experienced subject matter experts in the government and telecommunication markets
References	Vendors will be evaluated based on the assessment of previous clients that are familiar with either the technology solution or the personnel proposed
Understanding of the State's Issues and Needs	Vendors must clearly demonstrate an understanding of the "problem" and recommend a solution specifically designed to resolve or improve this situation
Quality and relevance of architecture and platform proposed	The degree to which the proposed architecture meets the goals specified in Section III and also operates effectively within the State's technical environment
Quality of Service Level and Security solution(s) proposed	The degree to which the proposal meets the vision and adheres to the standards of the State. In addition, where provided for; the levels of performance and security guaranteed by the Vendor should match or exceed the Service Level Agreements.
Quality of help desk solution proposed	The degree to which the help desk solution proposed meets the functional requirements and vision of the State.
Quality and clarity of work plans provided	The ability of the Vendor to clearly illustrate the approach and timelines for technology implementation.
Degree to which the deliverables proposed meets the State's vision and timelines	The degree to which the Vendors deliverables, schedules and timelines meet the functional requirements and vision of the State.
Quality of the project management approach proposed	The Vendor will be evaluated on their ability to manage projects.
Quality of security approach reflecting an understanding of the State's standards	The degree to which the security solution proposed meets the functional requirements and vision of the State.
Vision and Long-term Flexibility of Solution	The ability of the Vendor to articulate a clear long-term approach to achieving a successful telecommunications environment for the State; the ability of the technology/management proposed to deliver on the components of this vision and approach.

Step III – Solution Demonstrations and Presentations

All Vendors that have been qualified in Step II may be evaluated in an interactive presentation and/or structured demonstration setting. The demonstrations may be held at a State's facility, and Vendors will be provided with key questions and demonstration topics in advance of the session. The "structured" demonstrations will mainly focus on the Vendor's ability to deliver the key functional requirements outlined in Sections III. These sessions may include discussions about the Vendor's technology, the Vendor's implementation approach, or the Vendor's pricing approach and strategy. No formal price negotiations will be undertaken in this step.

1.17 BAFO (BEST AND FINAL OFFER)

If the selection process described in the RFP does not lead to a viable award recommendation, or significant deficiencies are identified, the JEC at its discretion may prepare a Deficiency Report and Clarification Request (DR/CR) for each proposal determined to be in the competitive range. Vendors will be allowed to respond in writing to the (DR/CR) with a BAFO. The BAFO may include any changes to the original proposal to address the listed deficiencies, including alterations to the original cost proposal to address correction of such deficiencies. The BAFO must be submitted by the deadline established by the Office of Acquisition Services.

After reviewing the BAFO, the JEC will re-evaluate the proposals using the original evaluation method, unless an alteration to the originally published evaluation criteria is to be made. Such changes in the criteria will be published to all Vendors as part of the issuance of the DR/CR's.

The JEC may conduct a cost benefit analysis of the highest rates proposals in order to determine which of the Vendors represents the best possible coordination of performance and cost to meet the needs of the State. The JEC will submit a synopsis of their findings with a recommendation for award to the State Acquisition Director. The State Acquisition Director shall determine if the proposed recommendation supports the best interests of the State as defined by statute.

Vendors will NOT be provided any information about other proposals or prices, or where the Vendor stands in relation to others at any time during the evaluation process. Any request for such information will be viewed as a compromise to the stated evaluation process and the requesting Vendor may be eliminated from further consideration. Successful requests for proposal information by a Vendor, its Subcontractor, or an affiliated party before contract award may also result in disqualification.

Vendors are cautioned to propose their best possible offers at the outset of the process, as there is no guarantee that any Vendor will be allowed an opportunity to submit a BAFO.

VENDORS ARE CAUTIONED TO PROPOSE THEIR BEST POSSIBLE OFFERS AT THE OUTSET OF THE PROCESS.

1.18 DISCUSSIONS / NEGOTIATIONS

Following evaluation of proposals based on the above criteria, the State reserves the right to enter into discussions/negotiations with one or more Vendors. The purpose of these discussions/negotiations would be to clarify/modify the technical and cost proposal to insure full compliance with the requirements of the RFP and satisfy the State's needs.

1.19 AWARD RECOMMENDATION

Thereafter, award recommendation, subject to the paragraphs below, will be made to the Director of Acquisition Services, for that responsive and responsible Vendor qualified in Step IV and offering the best value to the state for the goods/services offered; the quality of the commodities/services to be supplied, their conformity with specifications, their suitability to the requirements of the State, and delivery terms being taken into consideration.

a) The State reserves the right to award by item, part or portion of an item, group of items or total proposal, to reject any and all proposals in whole or in part, if, in the Director of Acquisition Services judgment, the best interest of the State will be so served. It is the State's intention, however, to award a single contract for the telecommunications services and technology articulated in Section III.

b) The State reserves the right to evaluate the financial stability of any Vendor. The State may seek financial information from the Vendor and from third parties. If the State determines in its sole discretion that contracting with a Vendor presents an unacceptable risk to the State, the State reserves the right to not award a contract to the Vendor.

The award of a contract to one Vendor does not mean that the other proposals lacked merit, but that, all factors considered, the selected proposal was deemed to provide the best value to the State.

1.20 SEALED BID RECEIPT

SEALED BIDS (PROPOSALS) MUST BE RECEIVED AND TIME STAMPED IN THE OFFICE OF ACQUISITION SERVICES ON OR BEFORE THE DUE DATE AND TIME SPECIFIED ON THE COVER PAGE OF THE RFP. VENDORS ARE RESPONSIBLE FOR TIMELY RECEIPT IN THE OFFICE OF ACQUISITION SERVICES OF THEIR PROPOSAL. PROPOSALS WHICH ARE RECEIVED AFTER THE SPECIFIED DUE DATE AND TIME CANNOT BE CONSIDERED.

1.21 INDEPENDENT PRICE DETERMINATION

1. By submission of a proposal, the Vendor certifies, and in the case of a joint proposal, each party thereto certifies as to its own organization, that in connection with this proposal:

   i) The prices in the proposal have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition as to any matter relating to such prices with any other Vendor or with any competitor; and

   ii) Unless otherwise required by law, the prices which have been quoted in the proposal have not been knowingly disclosed by the Vendor and will not knowingly be disclosed by the Vendor prior to award directly or indirectly to any other Vendor or to any competitor; and

   iii) No attempt has been made or will be made by the Vendor to induce any other person or firm to submit or not submit a proposal for the purpose of restricting competition.

2. Each person signing the proposal certifies that she/he:

   i) Is the person in the Vendor's organization responsible within that organization for the decision as to the prices being offered in the proposal and has not participated (and will not participate) in any action contrary to **subsection l.(i)., (ii)., and (iii) above**; or

   ii) Is not the person in the Vendor's organization responsible within that organization for the decision as to the prices being offered in the proposal but has been authorized, in writing, to act as agent for the persons responsible for such decision in certifying that such persons have not participated (and will not participate) in any action contrary to **subsection l.(ii)., (ii)., and (iii) above**.

3. Should a Vendor be awarded a Contract resulting from this RFP, and be found to have failed to abide by the provisions set forth in this section, Vendor will be in default of the Contract. Consequences may include cancellation of the Contract.

1.22 STATE ADMINISTRATIVE BOARD

Vendors are advised that all contracts/purchase orders in excess of $250,000 must be approved by the State Administrative Board (Board) prior to final award. The decision of this Board is final.

1.23 RESELLING OF SUPPLIER SERVICES

The State requires that Vendors offer these like services to extended purchasing members as their individual needs arise.

1.24 RFP RESPONSE INSTRUCTIONS

This RFP for State telecommunications services is a necessarily long and complex document with some obvious duplication (to protect the context of multi-service or multi-region bids). Compliance with the following response instructions is vital to ensure that the State understands your proposal.

1.25 PROPOSAL FORMAT

All responses to this RFP are required to use the proposal format and paragraph numbering provided by the State. The enclosed proposal has been completed using Microsoft Office 2000. Vendors should provide their proposals using Office 2000 also. Your cooperation in providing clear, concise feedback in the format specified is essential to our review process.

1.26 RESPONSE REQUIREMENTS

All Vendors to this RFP must provide the following:

Answers to all questions in **Section 1, Section 2, and Section 3**.

Answers to all technical questions in **Section 3**.

Mark all other proposal paragraphs "N.A" to indicated "Not Applicable" to your proposal.

Complete financial schedules using the instructions in **Appendix D**

Submit one clearly marked original and 8 hard copies of your entire proposal (including completed financial schedules). Provide 8 copies of the "For Information Only Section (**Section III-30 of the Statement of Work**)" in a separate binder/envelope clearly labeled as such.

1.27 ASSET DISCLAIMER

In responding to this RFP, Vendor should be aware that the State shouldn't sell any assets to the Vendor without passage of additional legislation. However, this should not prevent the Vendor from providing proposed solutions that examine the sale of State assets.

SECTION II-A – NON-NEGOTIABLE TERMS AND CONDITIONS

CONTRACT # (To be determined at time of Contract award)
The purpose of this RFP is to meet the State's telecommunications product needs, service needs
This is Contract [#], between [CONTRACTOR] ("Contractor"), and the State (the "State"), acting by and through the Department of Management and Budget ("DMB") for the Department of Information Technology ("DIT"). The effective date of this Contract [#] is _____, 2002 (the "Effective Date").

INTRODUCTION

The statements appearing in this Introduction are intended to provide the background for and to be a general introduction to this Contract and are not intended to expand the scope of the Parties' obligations under this Contract or to alter the plain meaning of the terms and conditions of this Contract. However, to the extent the terms and conditions of this Contract are unclear or otherwise ambiguous, such terms and conditions are to be interpreted and construed in light of such statements.

1.0 CONTRACT OBJECTIVES AND SCOPE

1.1 OBJECTIVES

See Section I, 1.0 and 1.1

1.2 INTERPRETATION

Section 1.1 is intended to provide background and context for this Contract and is not intended to expand the scope of the Parties' obligations under this Contract or to alter the plain meaning of the terms and conditions of this Contract. However, to the extent the terms and conditions of this Contract are unclear or otherwise ambiguous, such terms and conditions are to be interpreted and construed in light of the provisions of **Section 1.1**.

2.0 LEGAL EFFECT AND TERM

2.1 LEGAL EFFECT

Except as otherwise agreed in writing by the parties, the State assumes no liability for costs incurred by Contractor or payment under this Contract until Contractor is notified in writing that this Contract has been approved by the DMB, the State Administrative Board and Michigan Department of Attorney General. The total liability of the State under this Contract is limited in accordance with the terms and conditions of this Contract.

2.2 MODIFICATION OF SERVICE

The Director of Purchasing reserves the right to modify this service during the course of this Contract. Such modification may include adding or deleting tasks that this service shall encompass and/or any other modifications deemed necessary.

Any Contract resulting from this RFP may not be revised, modified, amended, extended, or augmented, except by a writing executed by the parties hereto, and any breach or default by a party shall not be waived or released other than in writing signed by the other party.

The State reserves the right to request from time to time, any changes to the requirements and specifications of the Contract and the work to be performed by the Contractor under the Contract. The Contractor shall provide a change order process and all requisite forms. The State reserves the right to negotiate the process during contract negotiation. At a minimum, the State would like the Contractor to provide a detailed outline of all work to be done, including tasks necessary to accomplish the deliverables, timeframes, listing of key personnel assigned, estimated hours for each individual per task, and a complete and detailed cost justification.

1. Within five (5) business days of receipt of a request by the State for any such change, or such other period of time as to which the parties may agree mutually in writing, the Contractor shall submit to the State a proposal describing any changes in products, services, timing of delivery, assignment of personnel, and the like, and any associated price adjustment. The price adjustment shall be based on a good faith determination and calculation by the Contractor of the additional cost to the Contractor in implementing the change request less any savings realized by the Contractor as a result of implementing the change request. The Contractor's proposal shall describe in reasonable detail the basis for the Contractor's proposed price adjustment, including the estimated number of hours by task by labor category required to implement the change request.

2. If the State accepts the Contractor's proposal, it will issue a change notice and the Contractor will implement the change request described therein. The Contractor will not implement any change request until a change notice has been issued validly. The Contractor shall not be entitled to any compensation for implementing any change request or change notice except as provided explicitly in an approved change notice.

3. If the State does not accept the Contractor's proposal, the State may:

   a) withdraw its change request; or

   b) modify its change request, in which case the procedures set forth above will apply to the modified change request.

If the State requests or directs the Contractor to perform any activities that are outside the scope of the Contractor's responsibilities under the Contract ("New Work"), the Contractor must notify the State promptly, and before commencing performance of the requested activities, that it believes the requested activities are New Work. If the Contractor fails to so notify the State prior to commencing performance of the requested activities, any such activities performed before notice, is given by the Contractor shall be conclusively considered to be In-scope Services, not New Work.

If the State requests or directs the Contractor to perform any services or functions that are consistent with and similar to the services being provided by the Contractor under the Contract, but which the Contractor reasonably and in good faith believes are not included within the scope of the Contractor's responsibilities and charges as set forth in the Contract, then prior to performing such services or function, the Contractor shall promptly notify the State in writing that it considers the services or function to be an "Additional Service" for which the Contractor should receive additional compensation. If the Contractor does not so notify the State, the Contractor shall have no right to claim thereafter that it is entitled to additional compensation for performing such services or functions. If the Contractor does so notify the State, then such a service or function shall be governed by the change request procedure set forth in the preceding paragraph.

IN THE EVENT PRICES ARE NOT ACCEPTABLE TO THE STATE, THE CONTRACT SHALL BE SUBJECT TO COMPETITIVE BIDDING BASED UPON THE NEW SPECIFICATIONS.

2.3 SEVERABILITY

Each provision of the Contract shall be deemed to be severable from all other provisions of the Contract and, if one or more of the provisions of the Agreement shall be declared invalid, the remaining provisions of the Contract shall remain in full force and effect.

2.4 RELATIONSHIP OF THE PARTIES

The relationship between the State and the Contractor is that of client and independent Contractor. No agent, employee, or servant of the Contractor or any of its Subcontractors shall be or shall be deemed to be an employee, agent, or servant of the State for any reason. The Contractor will be solely and entirely responsible for its acts and the acts of its agents, employees, servants and Subcontractors during the performances of this Contract.

3.0 CONTRACTOR PERSONNEL AND THIRD PARTIES

3.1 CONTRACTOR PERSONNEL

a) Personnel Qualifications. All persons assigned by Contractor to the performance of Services under this Contract shall be employees of Contractor or its majority-owned (directly or indirectly, at any tier) subsidiaries (or a State-approved Subcontractor) and shall be fully qualified to perform the work assigned to them. Contractor shall include a similar provision in any subcontract entered into with a Subcontractor. For the purposes of this Contract, independent contractors engaged by Contractor solely in a staff augmentation role shall be treated as if they were employees of Contractor.

b) Key Personnel.

i) In discharging its obligations under this Contract, Contractor shall provide the named Key Personnel on the terms indicated. Exhibit C provides an organization chart showing the roles of certain Key Personnel.

ii) Key Personnel shall be dedicated full-time to the Project for its duration in the applicable Statement of Work with respect to other individuals designated as Key Personnel for that Statement of Work.

iii) The State will have the right to recommend and approve in writing the initial assignment, as well as any proposed reassignment or replacement, of any Key Personnel. Before assigning an individual to any Key Personnel position, Contractor will notify the State of the proposed assignment, will introduce the individual to the appropriate State representatives, and will provide the State with a resume and any other information about the individual reasonably requested by the State. The State reserves the right to interview the individual before granting written approval.

iv) Contractor shall not remove any Key Personnel from their assigned roles or the Contract without the prior written consent of the State (an "Unauthorized Removal"). It shall not be considered an Unauthorized Removal if Key Personnel must be replaced for reasons beyond the reasonable control of Contractor, including illness, disability, and resignation or for cause termination of the Key Personnel's employment. Any Unauthorized Removal may be considered by the State to be a material breach of the Contract, in respect of which the State may elect to exercise its rights under **Section 14.1**.

v) It is acknowledged that an Unauthorized Removal will interfere with the timely and proper completion of the Contract, to the loss and damage of the State, and that it would be impracticable and extremely difficult to fix the actual damage sustained by the State as a result of any Unauthorized Removal. Therefore, Contractor and the State agree that in the case of any Unauthorized Removal in respect of which the State does not elect to exercise its rights under Section 19.1, the State may assess liquidated damages against Contractor as specified below. For amounts due the State as liquidated damages, the State may at its option deduct the amount due from any money payable to Contractor by the State or may bill Contractor as a separate item.

For the Unauthorized Removal of any Key Personnel designated in the applicable Statement of Work, the liquidated damages amount shall be $100,000 per individual provided Contractor identifies a replacement approved by the State pursuant to Section 3.100 and assigns the replacement to the Project to shadow the Key Personnel s/he is replacing for a period of at least sixty (60) days prior to such Key Personnel's removal.

If Contractor fails to assign a replacement to shadow the removed Key Personnel for at least sixty (60) days, in addition to the $100,000 liquidated damages for an Unauthorized Removal, Contractor shall pay the amount of $1,666.67 per day (1/30th of $50,000 per day), for each day of the sixty (60) day shadow period that the replacement Key Personnel does not shadow the removed Key Personnel, up to $100,000 maximum per individual. The total liquidated damages that may be assessed per Unauthorized Removal and failure to provide sixty (60) days of shadowing shall not exceed $200,000 per individual.

c) Re-assignment of non-Key Personnel. Prior to re-deploying to other projects, at the completion of their assigned tasks on the Project, teams of its non-Key Personnel who are performing Services on-site at State facilities or who are otherwise dedicated primarily to the Project, Contractor will give the State at least ten (10) Business Days notice of the proposed re-deployment to give the State an opportunity to object to the re-deployment if the State believes such team's Contract responsibilities are not likely to be completed and approved by the State prior to the proposed date of re-deployment.

d) Re-assignment of Personnel at the State's Request. The State reserves the right to require the removal from the Project of Contractor personnel found, in the judgment of the State, to be unacceptable. Replacement personnel for the removed person shall have equal or superior experience and qualifications.

e) Staffing Levels.

i) All staff requirements not specified in the applicable Statement of Work or State-approved project plan as State personnel will be supplied by Contractor. This includes secretarial, clerical and Contract administration support staff.

ii) Contractor shall not provide fewer personnel for the completion of Contract tasks than indicated in Contractor's project plan approved by the State unless Contractor demonstrates to the State's reasonable satisfaction that Contractor is able to complete performance of any tasks in question in accordance with the Contract time schedule using fewer, or unless otherwise set forth in the applicable Statement of Work. If the level of personnel specified in Contractor's project plan is insufficient to complete any Contractor Contract tasks in accordance with the Contract time schedule, Contractor shall promptly add additional qualified personnel to the performance of the affected tasks, at no additional charge to the State, in an amount sufficient to complete performance of Contractor's tasks in accordance with the Contract time schedule.

f) Personnel Turnover. The Parties agree that it is in their best interests to keep the turnover rate of employees of Contractor and its Subcontractors who are performing the Services to a reasonable minimum. Accordingly, if the State determines that the turnover rate of such employees is excessive and so notifies Contractor, Contractor will provide data concerning the turnover rate of such employees, meet with the State to discuss the reasons for the turnover rate and otherwise use commercially reasonable efforts to minimize such turnover rate. If requested to do so by the State, Vendor will submit to the State its proposals for reducing the turnover rate to an acceptable level. In any event, notwithstanding the turnover of personnel, Vendor remains obligated to perform the Services without degradation and in accordance with the State-approved Contract schedule.

g) Location. All staff assigned by Contractor to work on the Contract will perform their duties either primarily at Contractor's offices and facilities or at State facilities. Without limiting the generality of the foregoing, Key Personnel will, at a minimum, spend at least the amount of time on-site at State facilities as indicated in the applicable Statement of Work. Subject to availability, selected Contractor personnel may be assigned office space to be shared with State personnel.

3.2 CONTRACTOR IDENTIFICATION

Contractor employees shall be clearly identifiable while on Government property by wearing a State-issued badge, as required. Contractor employees are required to clearly identify themselves and the company they work for whenever making contact with State personnel by telephone or other electronic means.

3.3 COOPERATION WITH THIRD PARTIES

Contractor agrees to cause its personnel and the personnel of any Subcontractors to cooperate with the State and its agents and other Contractors including the State's Quality Assurance personnel, and, as reasonably requested by the State, to provide to the State's agents and other Contractors with reasonable access to Contractor's Project personnel, systems and facilities. The State acknowledges that Contractor's time schedule for the Contract is very specific and agrees not to unnecessarily or unreasonably interfere with, delay or otherwise impeded Contractor's performance under this Contract with such requests for access.

3.4 SUBCONTRACTING BY CONTRACTOR

a) Contractor shall have full responsibility for the successful performance and completion of all of the Services. The State will consider Contractor to be the sole point of contact with regard to all contractual matters under this Contract, including payment of any and all charges for Services.

b) Contractor shall not delegate any duties under this Contract to a Subcontractor unless the Office of Acquisition Services has given written consent to such delegation. The State shall have the right of prior written approval of all Subcontractors and to require Contractor to replace any Subcontractors found, in the reasonable judgment of the State, to be unacceptable. In any subcontracts entered into by Contractor for the performance of the Services, Contractor shall require the Subcontractor, to the extent of the Services to be performed by the Subcontractor, to be bound to Contractor by the terms of this Contract and to assume toward Contractor all of the obligations and responsibilities that Contractor, by this Contract, assumes toward the State. The State reserves the right to receive copies of and review all subcontracts, although Contractor may delete or mask any proprietary information, including pricing contained in such contracts prior to providing them to the State. The management of any Subcontractor will be the responsibility of Contractor, and Contractor shall remain responsible for the performance of its Subcontractors to the same extent as if Contractor had not subcontracted such performance. All payments to Subcontractors or suppliers of Contractor shall be made by Contractor. Except as otherwise agreed in writing by the State and Contractor, the State will not be obligated to direct payments for the Services other than to Contractor. The State's written approval of any Subcontractor engaged by Contractor to perform any obligation under this Contract shall not relieve Contractor of any obligations or performance

required under this Contract. Attached as Exhibit M is a list of the Subcontractors, if any, approved by the State as of the execution of this Contract, together with a copy of the applicable subcontract.

c) Except where specifically approved in writing by the State on a case-by-case basis, Contractor shall flow down the obligations in **Sections 14.1, 8.0, 9.0, 10.0, 11.0, 12.0, 17.1, 17.2, 17.4, and 18.7** in all of its agreements with any Subcontractors providing services in connection with this Contract.

3.5 CONTRACTOR RESPONSIBILITY FOR PERSONNEL

Contractor shall be responsible for all acts and omissions of its employees, as well as the acts and omissions of any other personnel furnished by Contractor to perform the Services.

4.0 PERFORMANCE

4.1 PERFORMANCE – IN GENERAL

The State hereby engages Contractor to execute the Contract and perform the Services, and Contractor undertakes to execute and complete the Contract and Services in their entirety in accordance with the terms and conditions of this Contract and with the participation of State representatives as specified in this Contract.

4.2 TIME OF PERFORMANCE

a) Contractor shall provide the necessary to, and shall, complete all Contract Services and Deliverables in accordance with the time schedules contained in the Statements of Work and other Exhibits governing the work, and with professional quality.

b) Without limiting the generality of **Section 4.2(a)**, Contractor shall promptly notify the State upon becoming aware of any circumstances that may reasonably be expected to jeopardize the timely and successful completion of any Contract Deliverables or tasks on the scheduled due dates set forth in the latest State-approved delivery schedule and, in such event, shall inform the State of the projected actual delivery date.

c) If Contractor believes that a delay in performance by the State has caused or will cause Contractor to be unable to perform its obligations in accordance with specified Contract time periods, Contractor shall promptly notify the State and shall use commercially reasonable efforts to perform its obligations in accordance with such Contract time periods notwithstanding the State's failure.

4.3 PROBLEM MANAGEMENT STANDARDS

The parties have agreed on certain problem management standards applicable to Contractor's performance of warranty and support Services under this Contract (collectively, "Problem Management Standards"). Copies and/or references to these standards shall be incorporated into any executed Contract resulting from this solicitation.

4.4 BANKRUPTCY

If Contractor shall file for protection under the bankruptcy laws, or if an involuntary petition shall be filed against Contractor and not removed within ten days, or if the Contractor becomes insolvent, be adjudicated bankrupt, or if it should make a general assignment for the benefit of creditors, or if a receiver shall be appointed due to its insolvency, the State may, without prejudice to any other right or remedy, terminate this Contract and, at its option, may take possession of the "Work in Process" and finish such Works in Process by whatever appropriate method the State may deem expedient. Contractor will fix appropriate notices or labels on the Work in Process to indicate ownership by the State. To the extent reasonably possible, materials and Work in Process shall be stored separately from other stock and marked conspicuously with labels indicating ownership by the State.

To secure the State's progress payments prior to the delivery of any services or materials required for the execution of Contractor's obligations hereunder, and any work which Contractor may subcontract in the support of the performance of its obligations hereunder, shall vest in the State to the extent the State has made progress payments hereunder.

The parties hereby agree that this Contract shall constitute the Security Agreement required by the Uniform Commercial Code of Michigan. Each party will execute promptly any financing statement required to perfect and protect the interests of the other as defined herein.

5.0 STATE RESPONSIBILITIES

5.1 STATE PERFORMANCE OBLIGATIONS

a) Personnel. The State shall provide adequate to perform the State's tasks described herein. If the State fails to provide such personnel, Contractor will use commercially reasonable efforts to perform its obligations notwithstanding such failure and to otherwise work around and mitigate the adverse effects of such failure.

b) Equipment and Other . To facilitate Contractor's performance of the Services, the State shall provide to Contractor such equipment and as identified in the Statements of Work or other Contract Exhibits as items to be provided by the State.

c) Facilities. The State shall designate space as long as it is available, to house Contractor's personnel who the parties agree will perform the Services at State facilities (collectively, the "State Facilities"). Such State Facilities shall be of the same or similar kind and quality provided to the State's own employees. Contractor shall have reasonable access to, and unless agreed otherwise by the parties in writing shall observe and comply with all rules and regulations relating to, each of the State Facilities (including hours of operation) used by Contractor in the course of providing the Services. Contractor agrees that it will not, without the prior written consent of the State, use any State Facilities or access any State information systems provided for Contractor's use, or to which Contractor otherwise gains access in the course of performing the Services, for any purpose other than providing the Services to the State.

d) Return. Contractor shall be responsible for returning to the State any State-furnished equipment, facilities and other when no longer required for the Contract in the same condition as when provided by the State, reasonable wear and tear excepted.

5.2 SAVINGS CLAUSE

The State's failure to perform its responsibilities set forth in this Contract shall not be deemed to be grounds for termination by Contractor. However, Contractor will not be liable for any default or delay in the performance of its obligations under this Contract to the extent such default or delay is caused by nonperformance of the State's obligations under this Contract, provided Contractor provides the State with reasonable written notice of such nonperformance and Contractor uses commercially reasonable efforts to perform notwithstanding the State's failure to perform.

5.3 FINANCIAL REPORTS

Contractor will provide copies of its audited financial statements quarterly. In addition, Contractor will provide quarterly reports concerning the financial stability of any Subcontractors. The State may request, and Contractor will provide at no additional cost, additional supporting information used as the basis of its report.

6.0 FINANCIAL

6.1 PRICING

a) Fixed Prices for Services. Each Statement of Work issued under this Contract shall specify the firm, fixed prices for all Services and items to be provided hereunder, and the associated payment milestones and payment amounts. To the extent the parties agree that certain specific Services will be provided on a time and materials basis, such Services shall be provided at the Amendment Labor Rates.

b) Adjustments for Reductions in Scope of Services. If the scope of the Services under any Statement of Work issued under this Contract is subsequently reduced by the State, the parties shall negotiate an equitable reduction in Contractor's charges under such Statement of Work commensurate with the reduction in scope, using the rates in provided in Contractor's response.

c) Services Covered. For all Services, functions and items provided or to be provided by Contractor (and its Subcontractors, if any) under this Contract, the State shall not be obligated to pay any amounts in addition to the charges specified in this Contract.

d) Reserved.

e) Installation Charges. During the Initial Transition Period, the Contractor shall not attempt to charge, and the State shall not be required to pay any additional fees for installation and Cutover from the existing telecommunications system to the Services. In addition, during the Contract, the Contractor shall not attempt to charge, and the State shall not be required to pay any additional fees for installation and Cutover from the telecommunications systems in existence at the time of this Contract to Contractor for provided services. Contractor is limited to the fees and rates expressly provided for in this Contract.

6.2 STATE FUNDING OBLIGATION

The State's obligation under this Contract is payable only and solely from funds appropriated for the purpose of this Contract. Contractor acknowledges and agrees that all funds for payments after the end of the current fiscal year are subject to the availability of a legislative appropriation for the purpose of this Contract. Events of non-appropriation are addressed further in **Section 14** of this Contract.

6.3 MOST FAVORED CUSTOMER

In the event that the Contractor's charges to any customer, or to any federal, state or local governmental entity, which purchases comparable levels and types of services from the Contractor are more favorable, as established by the State, to such customer or governmental entity than the Contractor's charges to the State under the Contract, the Contractor shall notify immediately the State of the same and reduce its charges to the same level as the charges to such customer or governmental entity. Such reduction in charges shall be retroactive to the date on which the more favorable charges to such customer or governmental entity became effective. Any failure by the Contractor to comply with this Section shall be considered to be a material breach of the Contract. Contractor must furnish the State annually, upon request, with a certification of its compliance with this Section, which Certification shall be signed by an officer of the Contractor.

7.0 RISK OF LOSS

Risk of loss for each item of equipment provided under this Contract by Contractor shall pass upon written acknowledgement of receipt of such item by the State at State facilities.

7.1 DAMAGE DISPUTES

The Contractor shall identify damage of returned equipment, and shall store equipment for Government inspection.

8.0 CONFIDENTIALITY

8.1 CONFIDENTIAL INFORMATION

Contractor and the State each acknowledge that the other possesses and will continue to possess confidential information that has been developed or received by it. As used in this Section, "Confidential Information" of Contractor shall mean all non-public proprietary information of Contractor (other than Confidential Information of the State as defined below) which is marked confidential, restricted, proprietary or with a similar designation. "Confidential Information" of the State shall mean any information which is retained in confidence by the State (or otherwise required to be held in confidence by the State pursuant to applicable federal, state and local laws and regulations) or which, in the case of tangible materials provided to Contractor by the State pursuant to its performance under this Contract, is marked as confidential, proprietary or with a similar designation by the State. In the case of information of either Contractor or the State "Confidential Information" shall exclude any information (including this Contract) that is publicly available pursuant to the Michigan Freedom of Information Act, 1976 Public Act No. 442, as amended, MCL 15.231 et. seq.

8.2 PROTECTION OF CONFIDENTIAL INFORMATION

The State and Contractor will each use at least the same degree of care to prevent disclosing to third parties the Confidential Information of the other as it employs to avoid unauthorized disclosure, publication or dissemination of its own confidential information of like character, but in no event less than reasonable care. Neither Contractor nor the State will (i) make any use of the Confidential Information of the other except as contemplated by this Contract, (ii) acquire any right in or assert any lien against the Confidential Information of the other, or (iii) if requested to do so, refuse for any reason to promptly return the other party's Confidential Information to the other party. Each party will limit disclosure of the other party's Confidential Information to employees and Subcontractors who must have access in order to fulfill the purposes of this Contract. Disclosure to, and use by, a Subcontractor is permissible where (A) use of a Subcontractor is authorized under this Contract, (B) such disclosure is necessary or otherwise naturally occurs in connection with work that is within such Subcontractor's scope of responsibility, and (C) Contractor obligates the Subcontractor in a written Contract to protect the State's Confidential Information in confidence. At the State's request, any employee of Contractor and of any Subcontractor having access or continued access to the State's Confidential Information may be required to execute an acknowledgment that the employee has been advised of Contractor's and the Subcontractor's obligations under this Section and of the employee's obligation to Contractor or Subcontractor, as the case may be, to protect such Confidential Information from unauthorized use or disclosure.

8.3 EXCLUSIONS

Notwithstanding the foregoing, the provisions of **Section 8** will not apply to any particular information which the State or Contractor can demonstrate (i) was, at the time of disclosure of it, in the public domain; (ii) after disclosure of it, is published or otherwise becomes part of the public domain through no fault of the receiving party; (iii) was in the possession of the receiving party at the time of disclosure of it without an obligation of confidentiality; (iv) was received after disclosure of it from a third party who had a lawful right to disclose such information without any obligation to restrict its further disclosure; or (v) was independently developed by the receiving party without reference to Confidential Information of the furnishing party.

Further, the provisions of **Section 8** will not apply to any particular Confidential Information to the extent the receiving party is required by law to disclose such Confidential Information, provided that the receiving party (i) promptly provides the furnishing party with notice of the legal request, and (ii) assists the furnishing party in resisting or limiting the scope of such disclosure as reasonably requested by the furnishing party.

8.4 NO IMPLIED RIGHTS

Nothing contained in this **Section 8** (Confidentiality) shall be construed as obligating a party to disclose any particular Confidential Information to the other party, or as granting to or conferring on a party, expressly or impliedly, any right or license to the Confidential Information of the other party.

8.5 REMEDIES

Each party acknowledges that, if it breaches (or attempts or threatens to breach) its obligations under **Section 8**, the other party may be irreparably harmed. Accordingly, if a court of competent jurisdiction should find that a party has breached (or attempted or threatened to breach) any such obligations, the non-breaching party shall be entitled to seek an injunction preventing such breach (or attempted or threatened breach).

8.6 SURVIVAL

The parties' respective obligations under this **Section 8** shall survive the termination or expiration of this Contract for any reason.

9.0 PROPRIETARY RIGHTS AND SOFTWARE

9.1 RIGHTS IN DATA

The State will be and remain the owner of all data made available by the State to Contractor or its agents, Subcontractors or representatives pursuant to this Contract. Contractor will not use the State's data for any purpose other than providing the Services, nor will any part of the State's data be disclosed, sold, assigned, leased or otherwise disposed of to the general public or to specific third parties or commercially exploited by or on behalf of Contractor, nor will any employee of Contractor other than those on a strictly need to know basis have access to the State's data. Contractor will not possess or assert any lien or other right against the State's data. Without limiting the generality of Section, Contractor shall only use personally identifiable information as strictly necessary to provide the Services and shall disclose such information only to its employees who have a strict need to know such information. Contractor shall comply at all times with all laws and regulations applicable to such personally identifiable information.

9.2 OWNERSHIP OF MATERIALS

State and Contractor will continue to own their respective proprietary technologies and materials.

9.3 GENERAL SKILLS

Notwithstanding anything to the contrary in this Section, each party, its Subcontractors and their personnel shall be free to use and employ its and their general skills, know-how and expertise, and to use, disclose and employ any generalized ideas, concepts, know-how, methods, techniques or skills gained or learned during the course of performing the Services, so long as it or they acquire and apply the foregoing without disclosure of any confidential or proprietary information of the other party.

10.0 REPRESENTATIONS AND WARRANTIES

10.1 CONTRACTOR'S REPRESENTATIONS AND WARRANTIES

Contractor represents and warrants to the State as follows:

a) The Contractor represents and warrants that it is capable in all respects of fulfilling and shall fulfill all of its obligations under this Contract. Contractor further represents and warrants that the performance of all obligations under this Contract shall be provided in a timely, professional, and workman-like manner and shall meet the performance and operational standards required under this Contract.

b) Contractor represents and warrants that the Contract Appendices and Exhibits identify all equipment and software and services necessary for the Deliverable(s) to perform and operate in compliance with the requirements and other standards of performance contained in this Contract.

c) Contractor represents and warrants that it is the lawful owner or licensee of any Deliverable licensed or sold to the State by Contractor or developed by Contractor under this Contract, and Contractor has all of the rights necessary to convey to the State the ownership rights or licensed use, as applicable, of any and all Deliverables. None of the Deliverables provided by Contractor to the State under neither this Contract, nor their use by the State, will infringe the patent, copyright, trade secret, or other proprietary rights of any third party.

d) If, under this Contract, Contractor procures any equipment, software or other Deliverable for the State (including equipment, software and other Deliverables manufactured, re-marketed or otherwise sold by Contractor under Contractor's name), then in addition to and not in lieu of Contractor's other responsibilities with respect to such items as set forth in this Contract, Contractor represents and warrants that it shall assign or otherwise transfer to the State or its designees, or afford the State the benefits of, any manufacturer's warranty for such Deliverable.

e) Contractor represents and warrants that the contract signatory has the power and authority, including any necessary corporate authorizations, necessary to enter into this Contract, on behalf of Contractor.

f) Contractor represents and warrants that it is qualified and registered to transact business in all locations where required.

g) Contractor represents and warrants that neither the Contractor nor any Affiliates, nor any employee of either, has, shall have, or shall acquire, any contractual, financial, business, or other interest, direct or indirect, that would conflict in any manner or degree with Contractor's performance of its duties and responsibilities to the State under this Contract or otherwise create an appearance of impropriety with respect to the award or performance of this Agreement. Contractor shall notify the State within two (2) days of any such interest that may be incompatible with the interests of the State.

h) Contractor represents and warrants that neither Contractor nor any Affiliates, nor any employee of either has accepted or shall accept anything of value based on an understanding that the actions of the Contractor or Affiliates or employee on behalf of the State would be influenced. Contractor shall not attempt to influence any State employee by the direct or indirect offer of anything of value.

i) Contractor represents and warrants that neither Contractor nor any Affiliates, nor any employee of either has paid or agreed to pay any person, other than bona fide employees and consultants working solely for Contractor or such Affiliate, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this Contract.

j) Contractor represents and warrants that the prices proposed by Contractor were arrived at independently, without consultation, communication, or agreement with any other Contractor for the purpose of restricting competition; the prices quoted were not knowingly disclosed by Contractor to any other Contractor; and no attempt was made by Contractor to induce any other person to submit or not submit a proposal for the purpose of restricting competition.

k) Contractor represents and warrants that all financial statements, reports, and other information furnished by Contractor to the State as part of its response to the RFP or otherwise in connection with the award of this Contract fairly and accurately represent the business, properties, financial condition, and results of operations of Contractor as of the respective dates, or for the respective periods, covered by such financial statements, reports, other information. Since the respective dates or periods covered by such financial statements, reports, or other information, there have been no material adverse change in the business, properties, financial condition, or results of operations of Contractor.

l) Contractor represents and warrants that all written information furnished to the State by or behalf of Contractor in connection with this Contract, including its bid, it true, accurate, and complete, and contains no untrue statement of material fact or omits any material fact necessary to make such information not misleading.

m) Contractor represents and warrants that it is not in material default or breach of any other contract or agreement that it may have with the State or any of its departments, commissions, boards, or agencies. Contractor further represents and warrants that it has not been a party to any contract with the State or any of its departments, which were terminated by the State or such department within the previous five (5) years for the reason that Contractor failed to perform or otherwise breached an obligation of such contract.

n) Contractor will comply with all laws concerning antitrust behavior and collusion.

10.2 PERFORMANCE WARRANTY

The Contractor represents and warrants that all Service Bundles, after Final Acceptance, will perform and operate in compliance with the requirements and other standards of performance contained in this Contract (including all descriptions, specifications and drawings made a part of the Contract). In the event of a breach of the foregoing warranty, Contractor will promptly correct the affected Deliverable(s) at no charge to the State.

10.3 NO SURREPTITIOUS CODE WARRANTY

The Contractor represents and warrants that no copy of licensed Software provided to the State contains or will contain any Self-Help Code or any Unauthorized Code as defined below. This warranty is referred to in this Contract as the "No Surreptitious Code Warranty."

As used in this Contract, "Self-Help Code" means any back door, time bomb, drop dead device, or other software routine designed to disable a computer program automatically with the passage of time or under the positive control of a person other than the licensee of the software. Self-Help Code does not include Software routines in a computer program, if any, designed to permit an owner of the computer program (or other person acting by authority of the owner) to obtain access to a licensee's computer system(s) (e.g. remote access via modem) for purposes of maintenance or technical support.

As used in this Contract, "Unauthorized Code" means any virus, Trojan horse, spyware, worm or other Software routines or components designed to permit unauthorized access to disable, erase, or otherwise harm software, equipment, or data; or to perform any other such actions. The term Unauthorized Code does not include Self-Help Code.

In addition, Contractor will use up-to-date commercial virus detection software to detect the presence of and remove any viruses from any software prior to delivering it to the State.

10.4 CALENDAR WARRANTY

The Contractor represents and warrants that all software for which the Contractor either sells or licenses to the State and used by the State prior to, during or after the calendar year 2000, includes or shall include, at no added cost to the State, design and performance so the State shall not experience software abnormality and/or the generation of incorrect results from the software, due to date oriented processing, in the operation of the business of the State.

The software design, to insure calendar year rollover compatibility, shall include, but is not limited to: data structures (databases, data files, etc.) that provide 4-digit date century; stored data that contain date century recognition, including, but not limited to, data stored in databases and hardware device internal system dates; calculations and program logic (e.g., sort algorithms, calendar generation, event recognition, and all processing actions that use or produce date values) that accommodates same century and multi-century formulas and date values; interfaces that supply data to and receive data from other systems or organizations that prevent non-compliant dates and data from entering any State system; user interfaces (i.e., screens, reports, etc.) that accurately show 4 digit years; and assurance that the year 2000 shall be correctly treated as a leap year within all calculation and calendar logic.

10.5 THIRD-PARTY SOFTWARE WARRANTY

The Contractor represents and warrants that it will disclose the use or incorporation of any third-party software into the Deliverables. At the time of Delivery, the Contractor shall provide in writing the name and use of any Third-party Software, including information regarding the Contractor's authorization to include and utilize such software. The notice shall include a copy of any ownership agreement or license that authorizes the Contractor to use the Third-party Software.

10.6 PHYSICAL MEDIA WARRANTY

Contractor represents and warrants that each licensed copy of the Software provided by the Contractor is free from physical defects in the media that tangibly embodies the copy. This warranty does not apply to defects discovered more than thirty (30) days after that date of Final Acceptance of the Software by the State. This warranty does not apply to defects arising from acts of Excusable Failure. If the Contractor breaches this warranty, then the State shall be entitled to replacement of the non-compliant copy by Contractor, at Contractor's expense (including shipping and handling).

10.7 CONSEQUENCES FOR BREACH

In addition to any remedies available in law, if the Contractor breaches any of the warranties contained in this section, such breach may be considered as a default in the performance of a material obligation of this Contract.

10.8 DISCLAIMER

THE FOREGOING EXPRESS WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES AND EACH PARTY EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

11.0 INSURANCE

11.1 COVERAGE

Contractor shall purchase and maintain insurance at Contractor's expense for at least the following types and amounts of insurance coverage, which amounts shall be not less than any limits set forth in this Section or as required by law, whichever is greater:

a) Commercial General Liability Insurance (including premises/operations liability, independent Contractors liability, contractual liability, products liability, completed operations liability, broad form property damage liability, personal injury liability and extended bodily injury and death coverage) in a minimum amount of $2,000,000 per occurrence and $5,000,000 aggregate combined single limit for bodily injury or death, personal injury or property damage.

b) Workers Compensation Insurance (including workers' disability compensation, disability benefit and other similar employee benefits) covering Contractor's employees in an amount not less than the limits required by law and Employers Liability Insurance covering Contractor's employees in an amount not less than $500,000 per occurrence. A non-resident Subcontractor shall have insurance for benefits payable under Michigan's Workers' Disability Compensation Law for any employee resident of and hired in Michigan; and as respects any other employee protected by workers' disability compensation laws of any other State, Contractor and its Subcontractors shall have insurance or participate in a mandatory State fund to cover the benefits payable to any such employee.

c) Professional Liability Insurance issued to and covering the liability of Contractor for errors or omissions committed by Contractor, its Subcontractors, agents and employees, in the performance of this Contract. The policy shall have limits of liability of not less than $2,000,000 per claim.

d) Technology Insurance and Business Interruption Insurance naming the State as loss payee, providing coverage for direct loss to the State and any legal liability of the State arising out of or related to fraudulent or dishonest acts committed by the employees of Contractor or its Subcontractors, acting alone or in collusion with others, in a minimum amount of $5,000,000 with a maximum deductible of $50,000 for the first $1,000,000 in coverage and an additional deductible of $950,000 on the next $4,000,000 in coverage.

e) Commercial Automobile Liability Insurance including coverage for owned, hired and non-owned vehicles with a combined single limit minimum of $1,000,000 per occurrence for bodily injury, personal injury and property damage or as required by law.

f) Umbrella Liability Insurance in a minimum amount of $150,000,000, which shall apply, at a minimum, to the insurance required by **Sections 11.1(a), (c), and (d)**.

g) The insurers selected by Contractor shall have an A.M. Best rating of A-, or as otherwise approved in writing by the State, or better or, if such ratings are no longer available, with a comparable rating from a recognized insurance rating agency.

11.2 SUBCONTRACTORS

Except where the State has approved in writing a Contractor subcontract with other insurance provisions, Contractor shall require all of its Subcontractors hereunder to purchase and maintain the insurance coverage described in **Section 11.1** in connection with the performance of work by such Subcontractors. Alternatively, Contractor may include any Subcontractors under Contractor's insurance on each coverage required in **Section 11.1** above.

11.3 CERTIFICATES OF INSURANCE AND OTHER REQUIREMENTS

Within thirty (30) days after the date of execution of this Contract, Contractor shall furnish to the Office of Acquisition Services certificate(s) of insurance verifying insurance coverage or providing satisfactory evidence of self-insurance as required above (the "Certificates"). The contract number must be shown on each Certificate. The Certificates shall provide that the Office of Acquisition Services shall be given at least thirty (30) days prior written notice (bearing the contract number) of termination, nonrenewable or reduction in limit or in scope of coverage of such policies. Within thirty (30) days following the execution of this Contract, and every year thereafter, the Contractor shall provide evidence that the State and its agents, officers and employees are additional insured under each commercial general liability and commercial automobile liability policy. Insurance policies listing the State as an additional insured are required to contain language that provides, "Any litigation activity on behalf of the State or any of its subdivisions, as additional insured must be coordinated with the Department of Attorney General." In the event the insurer's attorney is asked to represent the State, the insurer's attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State. Contractor shall maintain all required insurance coverage throughout the term of the Contract and any extensions thereto and, in the case of claims-made Commercial General Liability policies, shall secure tail coverage for at least three (3) years following the expiration or termination for any reason of this Contract. The minimum limits of coverage specified above are not intended, and shall not be construed; to limit any liability or indemnity of Contractor under this Contract to any indemnified party or other persons. Contractor shall be responsible for all deductibles with regard to such insurance. If Contractor fails to pay any premium for required insurance as specified herein, or if any insurer cancels or significantly reduces any required insurance without the State's written consent, at the State's election (but without any obligation to do so) after the State has given Contractor at least thirty (30) days written notice, the State may pay such premium or procure similar insurance coverage from another company or companies; and at the State's election, the State may deduct the entire cost (or part thereof) from any payment due Contractor, or Contractor shall pay the entire cost (or any part thereof) upon demand by the State.

12.0 INDEMNIFICATION

12.1 PATENT/COPYRIGHT INFRINGEMENT INDEMNITY

To the extent permitted by law, the Contractor shall indemnify, defend and hold harmless the State from and against all losses, liabilities, damages (including taxes), and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties) incurred in connection with any action or proceeding threatened or brought against the State to the extent that such action or proceeding is based on a claim that any piece of equipment, software, commodity or service supplied by the Contractor or its Subcontractors, or the operation of such equipment, software, commodity or service, or the use or reproduction of any documentation provided with such equipment, software, commodity or service infringes any United States patent, copyright, trademark or trade secret of any person or entity, which is enforceable under the laws of the United States.

In addition, should the equipment, software, commodity, or service, or its operation, become or in the State's or Contractor's opinion be likely to become the subject of a claim of infringement, the Contractor shall at the Contractor's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if such option is not reasonably available to the Contractor, (ii) replace or modify to the State's satisfaction the same with equipment, software, commodity or service of equivalent function and performance so that it becomes non-infringing, or, if such option is not reasonably available to Contractor, (iii) accept its return by the State with appropriate credits to the State against the Contractor's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.

12.2 OTHER INDEMNITIES

a) General Indemnification

To the extent permitted by law, the Contractor shall indemnify, defend and hold harmless the State from liability of any kind, including all claims and losses, and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties), accruing or resulting to any person, firm or corporation that may be injured or damaged by the Contractor in the performance of this Contract and that are attributable to the negligence or tortuous acts of the Contractor or any of its Subcontractors, or by anyone else for whose acts any of them may be liable provided that the Contractor is notified in writing within thirty (30) days from the time that the State has knowledge of such claims. The Contractor shall not be liable to the State for consequential damages arising out of claims brought by third parties except for claims for infringement of any United States patent, copyright, trademark or trade secret.

b) Code Indemnification

To the extent permitted by law, the Contractor shall indemnify, defend and hold harmless the State from any claim, loss, or expense arising from Contractor's breach of the No Surreptitious Code Warranty.

c) Indemnification Not Limited

In any and all claims against the State, its departments, divisions, agencies, sections, commissions, officers, employees and agents, by any employee of the Contractor any of its Subcontractors, the indemnification obligation under the Contract shall not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the Contractor or any of its Subcontractors under worker's disability compensation acts, disability benefit acts or other employee benefit acts. This indemnification clause is intended to be comprehensive. Any overlap in sub clauses, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other sub clauses.

d) Continuation of Indemnification Obligations

The Contractor's duty to indemnify pursuant to **Sections 12.1 and 12.2** continues in full force and effect, not withstanding the expiration or early cancellation of the Contract, with respect to any claims based on facts or conditions that occurred prior to expiration or cancellation.

12.3 INDEMNIFICATION PROCEDURES

The procedures set forth below shall apply to all indemnity obligations under this Contract.

a) After receipt by the State of notice of the action or proceeding involving a claim in respect of which it will seek indemnification, the State shall promptly notify Contractor of such claim in writing and take or assist Contractor in taking, as the case may be, any reasonable action to avoid the imposition of a default judgment against Contractor. No failure to so notify Contractor shall relieve Contractor of its indemnification obligations except to the extent that Contractor can demonstrate damages attributable to such failure. Within ten (10) days following receipt of written notice from the State relating to any claim, Contractor shall notify the State in writing whether Contractor agrees to assume control of the defense and settlement of that claim (a "Notice of Election"). After notifying Contractor of a claim and prior to the State receiving Contractor's Notice of Election, the State shall be entitled to defend against the claim, at Contractor's expense, and Contractor will be responsible for any reasonable costs incurred by the State in defending against the claim during such period.

b) If Contractor delivers a Notice of Election relating to any claim: (i) the State shall be entitled to participate in the defense of such claim and to employ counsel at its own expense to assist in the handling of such claim and to monitor and advise the State about the status and progress of the Defense; (ii) Contractor shall, at the request of the State, demonstrate to the reasonable satisfaction of the State, Contractor's financial ability to carry out its defense and indemnity obligations under this Contract; (iii) Contractor shall periodically advise the State about the status and progress of the defense and shall obtain the prior written approval of the State before entering into any settlement of such claim or ceasing to defend against such claim and (iv) to the extent that any principles of Michigan governmental or public law may be involved or challenged, the State shall have the right, at its own expense, to control the defense of that portion of such claim involving the principles of Michigan governmental or public law. Notwithstanding the foregoing, the State may retain control of the defense and settlement of a claim by written notice to Contractor given within ten (10) days after the State's receipt of Contractor's information requested by the State pursuant to clause (ii) of this paragraph if the State determines that Contractor has failed to demonstrate to the reasonable satisfaction of the State Contractor's financial ability to carry out its defense and indemnity obligations under this Section. Any litigation activity on behalf of the State, or any of its subdivisions pursuant to this Section, must be coordinated with the Department of Attorney General. In the event the insurer's attorney represents the State pursuant to this Section, the insurer's attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State.

c) If Contractor does not deliver a Notice of Election relating to any claim of which it is notified by the State as provided above, the State shall have the right to defend the claim in such manner as it may deem appropriate, at the cost and expense of Contractor. If it is determined that the claim was one against which Contractor was required to indemnify the State, upon request of the State, Contractor shall promptly reimburse the State for all such reasonable costs and expenses.

13.0 LIMITATION OF LIABILITY AND EXCUSABLE FAILURE

13.1 LIMITATION OF LIABILITY

The Contractor's liability for damages to the State shall be limited to two times the value of the Contract. The foregoing limitation of liability shall not apply to claims for infringement of United States patent, copyright, trademarks or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the Contractor; to claims covered by other specific provisions of this Contract calling for liquidated damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on this Contract.

The State's liability for damages to the Contractor shall be limited to the value of the Contract.

The parties agree that neither the Contractor nor the State shall be liable to each other, regardless of the form of action, for consequential, incidental, indirect, or special damages. The foregoing limitation of liability shall not apply to claims for infringement of United States patent, copyright, trademark or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the Contractor; to claims covered by other specific provisions of this Contract calling for liquidated damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on this Contract.

13.2 EXCUSABLE FAILURE

Neither party will be liable for any default or delay in the performance of its obligations under this Contract to the extent such default or delay is caused by fire, flood, earthquake, elements of nature or acts of God; riots, civil disorders, rebellions or revolutions in any country; injunctions (provided the injunction was not issued as a result of any fault or negligence of the party seeking to have its default or delay excused); or any other cause beyond the reasonable control of such party; provided the non-performing party and its Subcontractors are without fault in causing such default or delay, and such default or delay could not have been prevented by reasonable precautions and cannot reasonably be circumvented by the non-performing party through the use of alternate sources, workaround plans or other means, including disaster recovery plans. In such event, the non-performing party will be excused from any further performance or observance of the obligation(s) so affected for as long as such circumstances prevail and such party continues to use its best efforts to recommence performance or observance whenever and to whatever extent possible without delay and provided further that such party promptly notifies the other party in writing of the inception of the excusable failure occurrence, and also of its abatement or cessation. If any of the above-enumerated circumstances substantially prevent, hinder, or delay Contractor's performance of the Services for more than fourteen (14) consecutive days, and the State determines that performance is not likely to be resumed within a period of time that is satisfactory to the State in its reasonable discretion, then at the State's option: (a) the State may procure the affected Services from an alternate source, and the State shall not be liable for payment for the unperformed Services under this Contract for so long as the delay in performance shall continue; (b) the State may terminate any portion of this Contract so affected and the charges payable there under shall be equitably adjusted to reflect those Services terminated; or (c) the State may terminate this Contract without liability to Contractor as of a date specified by the State in a written notice of termination to Contractor. Contractor will not have the right to any additional payments from the State as a result of any excusable failure occurrence or to payments for Services not rendered as a result of the excusable failure condition. Defaults or delays in performance by Contractor which are caused by acts or omissions of its Subcontractors will not relieve Contractor of its obligations under this Contract except to the extent that a Subcontractor is itself subject to an excusable failure condition described above and Contractor cannot reasonably circumvent the effect of the Subcontractor's default or delay in performance through the use of alternate sources, workaround plans or other means.

13.3 COST LIABILITY

The State assumes no responsibility or liability for costs incurred by the Contractor prior to the signing of this Agreement by all parties. Total liability of the State is limited to the terms and conditions of this Contract.

14.0 TERMINATION BY THE STATE

The State may terminate this Contract without further liability or penalty to the State, its departments, divisions, agencies, offices, commissions, officers, agents and employees for any of the following reasons:

14.1 TERMINATION FOR CAUSE

a) In the event that Contractor breaches any of its material duties or obligations under this Contract, which are either not capable of or subject to being cured, or are not cured within the time period specified in the written notice of breach provided by the State (such time period not to be less than thirty (30) days), or pose a serious and imminent threat to the health and safety of any person, or the imminent loss, damage or destruction of any real or tangible personal property, the State may, having provided written notice of termination to Contractor, terminate this Contract in whole or in part, for cause, as of the date specified in the notice of termination.

b) In the event that this Contract is terminated for cause, in addition to any legal remedies otherwise available to the State by law or equity, Contractor shall be responsible for all costs incurred by the State in terminating this Contract, including but not limited to, State administrative costs, attorneys fees and court costs, and any additional costs the State may incur to procure the Services required by this Contract from other sources. Excess re-procurement costs shall not be considered by the parties to be consequential, indirect or incidental damages, and shall not be excluded by any other terms otherwise included in this Contract, including the cap on damages contained in **Section 13.1**; provided, however, that any such costs recovered by the State under this paragraph shall otherwise be treated as damages recovered by the State for the purposes of **Section 13.1.**

c) In the event the State chooses to partially terminate this Contract for cause, charges payable under this Contract will be equitably adjusted to reflect those Services that are terminated.

d) In the event this Contract is terminated for cause pursuant to this section, and it is determined, for any reason, that Contractor was not in breach of contract pursuant to the provisions of this section, that termination for cause shall be deemed to have been a termination for convenience, effective as of the same date, and the rights and obligations of the parties shall be limited to that otherwise provided in this Contract for a termination for convenience.

14.2 TERMINATION FOR CONVENIENCE BY THE STATE

The State may terminate this Contract for its convenience, in whole or part, if the State determines that such a termination is in the State's best interest. Reasons for such termination shall be left to the sole discretion of the State and may include, but not necessarily be limited to (a) the State no longer needs the Services or products specified in the Contract, (b) relocation of office, program changes, changes in laws, rules, or regulations make implementation of the Contract Services no longer practical or feasible, or (c) unacceptable prices for additional services requested by the State. The State may terminate this Contract for its convenience, in whole or in part, by giving Contractor written notice at least thirty (30) days prior to the date of termination. If the State chooses to terminate this Contract in part, the charges payable under this Contract shall be equitably adjusted to reflect those Services that are terminated.

14.3 NON-APPROPRIATION

a) Contractor acknowledges that, if this Contract extends for several fiscal years, continuation of this Contract is subject to appropriation or availability of funds for this Contract. If funds to enable the State to effect continued payment under this Contract are not appropriated or otherwise made available, the State shall have the right to terminate this Contract and all affected Statements of Work, in whole or in part, at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of termination to Contractor. The State shall give Contractor at least thirty (30) days advance written notice of termination for non-appropriation or unavailability (or such time as is available if the State receives notice of the final decision less than thirty (30) days before the funding cutoff).

b) If funding for the Contract is reduced by law, or funds to pay Contractor for the agreed-to level of the Services to be provided by Contractor are not appropriated or otherwise made available, the State may, upon thirty (30) days written notice to Contractor, reduce the level of the Services in such manner and for such periods of time as the State may elect. The charges payable under this Contract will be equitably adjusted to reflect any equipment, services or commodities not provided by reason of such reduction.

c) In the event the State terminates this Contract or reduces the level of Services to be provided by Contractor pursuant to this **Section 14.3**, the State shall pay Contractor for all work-in-progress performed through the effective date of the termination or reduction in level, as the case may be, to the extent funds are available. For the avoidance of doubt, this **Section 14.3** will not preclude Contractor from raising against the State in a court of competent jurisdiction, any claim for a shortfall in payment for Services performed prior to the effective date of termination.

14.4 CRIMINAL CONVICTION

The State may terminate this Contract immediately and without further liability or penalty in the event Contractor, an officer of Contractor, or an owner of a 25% or greater share of Contractor is convicted of a criminal offense incident to the application for, or performance of, a State, public or private Contract or subcontract; convicted of a criminal offense, including any of the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, attempting to influence a public employee to breach the ethical conduct standards for State employees; convicted under State or federal antitrust statutes; or convicted of any other criminal offense which in the sole discretion of the State reflects upon Contractor's business integrity.

14.5 APPROVALS RESCINDED.

The State may terminate this Contract without further liability or penalty in the event any final administrative or judicial decision or adjudication disapproves a previously approved request for purchase of personal services pursuant to Constitution 1963, Article 11, section 5, and Civil Service Rule 4-6. Termination may be in whole or in part and may be immediate as of the date of the written notice to Contractor or may be effective as of the date stated in such written notice.

14.6 RIGHTS AND OBLIGATIONS UPON TERMINATION

a) If this Contract is terminated by the State for any reason, Contractor shall (a) stop all work as specified in the notice of termination, (b) take any action that may be necessary, or that the State may direct, for preservation and protection of Deliverables or other property derived or resulting from this Contract that may be in Contractor's possession, (c) return all materials and property provided directly or indirectly to Contractor by any entity, agent or employee of the State, (d) in the event that the Contractor maintains title in equipment and software, Contractor will transfer title in, and deliver to, the State, unless otherwise directed, all Deliverables and other Developed Materials resulting from the Contract (which shall be provided to the State on an "As-Is" basis except to the extent the amounts paid by the State in respect of such items included compensation to Contractor for the provision of warranty services in respect of such materials), and (e) take any action to mitigate and limit any potential damages, or requests for Contractor adjustment or termination settlement costs, to the maximum practical extent, including terminating or limiting as otherwise applicable those subcontracts and outstanding orders for material and supplies resulting from the terminated Contract.

b) In the event the State terminates this Contract prior to its expiration for its own convenience, the State shall pay Contractor for all charges due for Services provided prior to the date of termination and, if applicable, as a separate item of payment pursuant to this Contract, for partially completed Deliverables, on a percentage of completion basis. All completed or partially completed Deliverables prepared by Contractor pursuant to this Contract shall, at the option of the State, become the State's property, and Contractor shall be entitled to receive equitable fair compensation for such Deliverables. Regardless of the basis for the termination, the State shall not be obligated to pay, or otherwise compensate, Contractor for any lost expected future profits, costs or expenses incurred with respect to Services not actually performed for the State.

c) If any such termination by the State is for cause, the State shall have the right to set-off against any amounts due Contractor the amount of any damages for which Contractor is liable to the State under this Contract or pursuant to law or equity.

d) Upon a good faith termination, the State shall have the right to assume, at its option, any and all subcontracts and agreements for services and materials provided under this Contract, and may further pursue completion of the Services under this Contract by replacement contract or otherwise as the State may in its sole judgment deem expedient.

14.7 TERMINATION ASSISTANCE

If this Contract (or any Statement of Work issued under it) is terminated for any reason prior to completion, Contractor agrees to provide for up to one year after the termination all reasonable termination assistance requested by the State to facilitate the orderly transfer of such Services to the State or its designees in a manner designed to minimize interruption and adverse effect. Such termination assistance will be deemed by the parties to be governed by the terms and conditions of this Contract (notwithstanding its termination) other than any terms or conditions that do not reasonably apply to such termination assistance. Such termination assistance shall be at no additional charge to the State if the termination is for Contractor's Default pursuant to **Section 14.1**.

14.8 RESERVATION OF RIGHTS

Any termination of this Contract or any Statement of Work issued under it by a party shall be with full reservation of, and without prejudice to, any rights or remedies otherwise available to such party with respect to any claims arising prior to or as a result of such termination.

14.9 TRANSITION OUT OF THIS CONTRACT

a) In the event that this Agreement is terminated, dissolved, voided, rescinded, nullified, or otherwise rendered unenforceable, the Contractor agrees to perform the following obligations, and any others upon which the State and the Contractor agree:

(i) Cooperating with any Contractors, Contractors, or other entities with whom the State contracts to meet its IT needs, for at least one year after the termination of this Agreement;

(ii) Allowing the State to use the Contractor's Subcontractors, Contractors, or employees, as necessary to meet its IT needs;

(iii) Providing the State with all asset management data generated from the inception of this Agreement through the date on which this Agreement is terminated, in a format required by the PO;

(iv) Reconciling all accounts between the State and the Contractor;

(v) Assigning any software licenses to the State that are necessary to allow the State to meet its IT needs;

(vi) Conveying to the State, for value, any hardware, equipment, or other property that is necessary to allow the State to meet its IT needs;

(vii) Allowing the State to assume or enter into any leases necessary to meet its IT needs;

(viii) Allowing the State to request the winding up of any pending or ongoing projects at the price to which the State and the Contractor agreed at the inception of the project;

(ix) Freezing all non-critical software changes;

(x) Notifying all of the Contractor's Subcontractors of procedures to be followed during the transition out phase;

(xi) Reviewing all software libraries (tests and production) with the new service provider, in the event a new service provider has been retained by the State;

(xii) Disclosing analyses for space requirements for databases and software libraries;

(xiii) Delivering tapes of production databases (with content listings) to the new operations staff;

(xiv) Assisting with the loading of the databases;

(xv) Assisting with the communications network turnover, if applicable;

(xvi) Assisting in the execution of a parallel operation until the effective date of termination of this Agreement;

(xvii) Answering questions regarding post-migration services;

(xviii) Delivering to the State any remaining owed reports and documentation still in the Contractor's possession.

b) In the event that this Agreement is terminated, dissolved, voided, rescinded, nullified, or otherwise rendered unenforceable, the State agrees to perform the following obligations, and any others upon which the State and the Contractor agree:

(i) Reconciling all accounts between the State and the Contractor;

(ii) Completing any pending post-project reviews.

15.0 STOP WORK

15.1 ISSUANCE OF STOP WORK ORDER

The State may, at any time, by written stop work order to Contractor, require that Contractor stop all, or any part, of the work called for by this Contract for a period of up to ninety (90) days after the stop work order is delivered to Contractor, and for any further period to which the parties may agree. The stop work order shall be specifically identified as such and shall indicate that it is issued under this **Section 20**. Upon receipt of the stop work order, Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the stop work order during the period of work stoppage. Within the period of the stop work order, the State shall either: (a) cancel the stop work order; or (b) terminate the work covered by the stop work order as provided in **Section 17** of this Contract.

15.2 CANCELLATION OR EXPIRATION OF STOP WORK ORDER

If a stop work order issued under this **Section 20** is canceled or the period of the stop work order or any extension thereof expires, Contractor shall resume work. The parties shall agree upon an equitable adjustment in the delivery schedule, the Contract price, or both, and the Contract shall be modified, in writing, accordingly, if: (a) the stop work order results in an increase in the time required for, or in Contractor's costs properly allocable to, the performance of any part of this Contract; and (b) Contractor asserts its right to an equitable adjustment within thirty (30) days after the end of the period of work stoppage; provided that, if the State decides the facts justify the action, the State may receive and act upon a Contractor proposal submitted at any time before final payment under this Contract.

15.3 ALLOWANCE OF CONTRACTOR COSTS

If the stop work order is not canceled and the work covered by the stop work order is terminated for reasons other than material breach, such termination shall be deemed to be a termination for convenience under **Section 17.2**, and the State shall allow reasonable costs resulting from the stop work order in arriving at the termination settlement. For the avoidance of doubt, the State shall not be liable to Contractor for loss of profits because of a stop work order issued under this **Section 20**.

16.0 DISPUTE RESOLUTION

16.1 IN GENERAL

a) Any claim, counterclaim, or dispute between the State and Contractor arising out of or relating to this Contract or any Statement of Work shall be resolved as set forth herein.

b) For all Contractor claims seeking an increase in the amounts payable to Contractor under this Contract, or the time for Contractor's performance, Contractor shall submit an affidavit executed by Contractor's Contract Director or his designee certifying that (i) the claim is made in good faith, (ii) the amount claimed accurately reflects the adjustments in the amounts payable to Contractor or the time for Contractor's performance for which Contractor believes the State is liable and covers all costs of every type to which Contractor is entitled from the occurrence of the claimed event, and (iii) the supporting data provided with such an affidavit are current and complete to Contractor's best knowledge and belief.

16.2 INFORMAL DISPUTE RESOLUTION

a) If the parties are unable to resolve any disputes, the parties shall meet with the Director of Acquisition Services, DMB, or designee, for the purpose of attempting to resolve such dispute without the need for formal legal proceedings, as follows:

b) The representatives of Contractor and the State shall meet as often as the parties reasonably deem necessary in order to gather and furnish to each other all information with respect to the matter in issue which the parties believe to be appropriate and germane in connection with its resolution. The representatives shall discuss the problem and negotiate in good faith in an effort to resolve the dispute without the necessity of any formal proceeding.

c) During the course of negotiations, all reasonable requests made by one party to another for non-privileged information reasonably related to this Contract will be honored in order that each of the parties may be fully advised of the other's position.

d) The specific format for the discussions will be left to the discretion of the designated State and Contractor representatives, but may include the preparation of agreed upon statements of fact or written statements of position.

e) Following the completion of this process, the Director of Acquisition Services, DMB, or designee, shall issue a written opinion regarding the issue(s) in dispute. The opinion regarding the dispute shall be considered the State's final action and the exhaustion of administrative remedies.

f) This **Section 21.2** will not be construed to prevent a Party from instituting, and a party is authorized to institute, formal proceedings earlier to avoid the expiration of any applicable limitations period, to preserve a superior position with respect to other creditors, or pursuant to **Section 21.3**.

16.3 INJUNCTIVE RELIEF

The only circumstance in which disputes between the State and Contractor will not be subject to the provisions of **Section 21.2** is where a party makes a good faith determination that a breach of the terms of this Contract by the other party is such that the damages to such party resulting from the breach will be so immediate, so large or severe and so incapable of adequate redress after the fact that a temporary restraining order or other immediate injunctive relief is the only adequate remedy.

16.4 CONTINUED PERFORMANCE

Each party agrees to continue performing its obligations under this Contract while a dispute is being resolved except to the extent the issue in dispute precludes performance (dispute over payment shall not be deemed to preclude performance) and without limiting either party's right to terminate this Contract as provided in **Section 17**, as the case may be.

16.5 GOVERNING LAW

This Contract shall in all respects be governed by, and construed in accordance with, the substantive laws of the State without regard to any Michigan choice of law rules that would apply the substantive law of any other jurisdiction.

16.6 JURISDICTION

Contractor irrevocably consents with respect to any claims it has against the State, arising out of or in connection with this Contract, to the exclusive jurisdiction of the Michigan Court of Claims or the Ingham County Circuit Court, in whichever court jurisdiction may be proper, and, with respect to any action by the State against Contractor, to the exclusive jurisdiction of the applicable State District or Circuit Court. With respect to any claim between the parties, Contractor consents to venue in Ingham County, Michigan, and irrevocably waives any objections it may have to such jurisdiction on the grounds of lack of personal jurisdiction of such court or the laying of venue of such court or on the basis of forum non conveniens or otherwise. Contractor agrees to appoint agents in the State to receive service of process.

17.0 FEDERAL AND STATE CONTRACTUAL REQUIREMENTS

17.1 NONDISCRIMINATION

In the performance of this Contract, Contractor agrees not to discriminate against any employee or applicant for employment, with respect to his or her hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, ancestry, age, sex, height, weight, marital status, physical or mental disability. Contractor further agrees that every subcontract entered into for the performance of any contract or purchase order resulting here from will contain a provision requiring non-discrimination in employment, as herein specified, binding upon each Subcontractor. This covenant is required pursuant to the Elliot Larsen Civil Rights Act, 1976 Public Act 453, as amended, MCL 37.2101, et seq. and the Persons with Disabilities Civil Rights Act, 1976 Public Act 220, as amended, MCL 37.1101, et seq., and any breach thereof may be regarded as a material breach of this Contract.

17.2 UNFAIR LABOR PRACTICES

Pursuant to 1980 Public Act 278, as amended, MCL 423.231, et seq., the State shall not award a contract or subcontract to an employer whose name appears in the current register of employers failing to correct an unfair labor practice compiled pursuant to section 2 of the Act. This information is compiled by the United States National Labor Relations Board. A Contractor of the State, in relation to the contract, shall not enter into a contract with a Subcontractor, manufacturer, or supplier whose name appears in this register. Pursuant to section 4 of 1980 Public Act 278, MCL 423.324, the State may void any contract if, subsequent to award of the contract, the name of Contractor as an employer or the name of the Subcontractor, manufacturer, or supplier of Contractor appears in the register.

17.3 DISCLOSURE OF LITIGATION

a) Disclosure. Contractor shall promptly notify the State of any criminal litigation, investigations or proceedings which arise during the term involving Contractor, or, to the extent Contractor is aware, any of Contractor's Subcontractors or any of the foregoing entities' then-current officers or directors. In addition, Contractor, upon request from the State, shall promptly notify the State of any civil litigation, arbitration or proceeding which arises during the term of the Contract and extensions thereto, to which Contractor (or, to the extent Contractor is aware, any Subcontractor hereunder) is a party, and which involves; (i) software systems development or systems integration projects and which either relates to an amount in excess of $1,000,000 or might reasonably be expected to adversely affect the viability or financial stability of Contractor or any Subcontractor hereunder; or (ii)a claim or written allegation of fraud against Contractor or, to the extent Contractor is aware, any Subcontractor hereunder by a governmental or public entity arising out of their business dealings with governmental or public entities. All notices under this **Section 22.3(a)** a must be provided to the State within ten (10) Business Days following the date on which Contractor first became aware of any such litigation, investigation, arbitration or other proceeding (collectively, a "Proceeding"). Details of settlements which are prevented from disclosure by the terms of the settlement may be annotated as such. Annually during the term of this Contract and extensions thereto, on or before February 15th of each year, Contractor shall, after investigation, certify that it is in compliance with this **Section 22.3(a)**. With respect to such certification, Contractor may rely on similar good faith certifications of its Subcontractors to the extent it is entitled to them, which certifications shall be available for inspection at the option of the State.

Each Contractor must include in its proposal a complete disclosure of any pending or prior criminal litigation, investigations or proceedings involving the Contractor (and each Subcontractor included in the Contractor's proposal) or any of its officers or directors. In addition, each Contractor (and each Subcontractor included in the Contractor's proposal) must include in its proposal a complete disclosure of any civil litigation, arbitration or proceeding to which it is a party and which is pending or was concluded within seven (7) years from the date of this RFP. This is a continuing disclosure requirement. Any such litigation potentially materially impacting the Contractor, investigation, arbitration or other proceeding (collectively, "Proceeding") commencing after submission of a proposal must be disclosed in a written statement to the Contract Administrator within 15 days of its occurrence. Details of settlements which are prevented from disclosure by the terms of the settlement may be annotated as such.

b) Assurances. In the event that any such Proceeding disclosed to the State pursuant to this Section, or of which the State otherwise becomes aware, during the term of this Contract would cause a reasonable party to be concerned about:

(i) The ability of Contractor (or a Subcontractor hereunder) to continue to perform this Contract in accordance with its terms and conditions, or

(ii) Whether Contractor (or a Subcontractor hereunder) in performing Services for the State is engaged in conduct which is similar in nature to conduct alleged in such Proceeding, which conduct would constitute a breach of this Contract or a violation of Michigan law, regulations or public policy, then Contractor shall be required to provide the State all reasonable assurances requested by the State to demonstrate that:

(A) Contractor and/or its Subcontractors hereunder will be able to continue to perform this Contract and any Statements of Work in accordance with its terms and conditions, and;

(B) Contractor and/or its Subcontractors hereunder have not and will not engage in conduct in performing the Services which is similar in nature to the conduct alleged in such Proceeding.

17.4 COMPLIANCE WITH LAWS

Contractor shall comply with all applicable state, federal and local laws and ordinances in providing the Services.

18.0 GENERAL

18.1 AMENDMENTS

This Contract may not be modified, amended, extended, or augmented, except by a writing executed by the parties hereto, and any breach or default by a party shall not be waived or released other than in a writing signed by the other party.

18.2 ASSIGNMENT

a) Neither party shall have the right to assign this Contract, or to assign or delegate any of its duties or obligations under this Contract, to any other party (whether by operation of law or otherwise), without the prior written consent of the other party; provided, however, that the State may assign this Contract to any other State agency, department, division or department without the prior consent of Contractor. Any purported assignment in violation of this Section shall be null and void.

b) Contractor may not, without the prior written approval of the State, assign its right to receive payments due under this Contract. In the event of any such permitted assignment, Contractor shall not be relieved of its responsibility to perform any duty imposed upon it herein, and the requirement under this Contract that all payments shall be made to one entity shall continue.

18.3 ENTIRE CONTRACT; ORDER OF PRECEDENCE

a) This Contract, including any Statements of Work and Exhibits referred to herein and attached hereto, each of which is incorporated herein for all purposes, constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

b) In the event of any inconsistency between the terms of this Contract and a Statement of Work, the terms of the Statement of Work will take precedence (as to that Statement of Work only); provided, however, that a Statement of Work may not modify or amend the terms of **Sections 12 through 23** of this Contract, which may be modified or amended only by a formal Contract amendment.

18.4 HEADINGS

Captions and headings used in this Contract are for information and organization purposes. Captions and headings, including inaccurate references, do not, in any way, define or limit the requirements or terms and conditions of this Contract.

18.5 RELATIONSHIP OF THE PARTIES (INDEPENDENT CONTRACTOR RELATIONSHIP)

The relationship between the State and Contractor is that of client and independent Contractor. No agent, employee, or servant of Contractor or any of its Subcontractors shall be or shall be deemed to be an employee, agent or servant of the State for any reason. Contractor will be solely and entirely responsible for its acts and the acts of its agents, employees, servants and Subcontractors during the performance of this Contract.

18.6 NOTICES

Any notice given to a party under this Contract shall be deemed effective, if addressed to such party as addressed below, upon: (i) delivery, if hand delivered; (ii) receipt of a confirmed transmission by facsimile if a copy of the notice is sent by another means specified in this **Section 0; (iii**) the third (3rd) Business Day after being sent by U.S. mail, postage pre-paid, return receipt requested; or (iv) the next Business Day after being sent by a nationally recognized overnight express courier with a reliable tracking system.

State:

State Office of Acquisition Services

Attention: Greg Faremouth

530 West Allegan

Lansing, Michigan 48933

With a copy to:

Thomas J. Fogle, Director

Telecommunications and Network Management

Department of Information Technology

611 West Ottawa

PO Box 30743

Lansing, Michigan 48909

Contractor:

Either party may change its address where notices are to be sent by giving notice in accordance with this Section.

18.7 MEDIA RELEASES

Contractor will not make any news releases, public announcements or public disclosures, nor will it have any conversations with representatives of the news media, pertaining to this Contract, the Services or the Contract without the prior written approval of the State, and then only in accordance with explicit written instructions from the State.

18.8 REFORMATION AND SEVERABILITY

Each provision of this Contract shall be deemed to be severable from all other provisions of the Contract and, if one or more of the provisions of the Contract shall be declared invalid, the remaining provisions of the Contract shall remain in full force and effect.

18.9 CONSENTS AND APPROVALS

Except as expressly provided otherwise in this Contract, if either party requires the consent or approval of the other party for the taking of any action under this Contract, such consent or approval shall be in writing and shall not be unreasonably withheld or delayed.

18.10 NO WAIVER OF DEFAULT

The failure of a party to insist upon strict adherence to any term of this Contract shall not be considered a waiver or deprive the party of the right thereafter to insist upon strict adherence to that term, or any other term, of the Contract.

18.11 SURVIVAL

Any provisions of this Contract that impose continuing obligations on the parties including the parties' respective warranty, indemnity and confidentiality obligations, shall survive the expiration or termination of this Contract for any reason.

18.12 COVENANT OF GOOD FAITH

Each party agrees that, in its dealings with the other party or in connection with this Contract, it shall act reasonably and in good faith. Unless stated otherwise in the Contract, the parties will not unreasonably delay, condition or withhold the giving of any consent, decision or approval that is either requested or reasonably required of them in order for the other party to perform its responsibilities under the Contract.

18.13 APPROVAL

The State assumes no liability for payment under this Contract or the terms of any Contract Change Notice or Statement of Work issued under this Contract until Contractor is notified in writing that the Statement of Work has been approved by the DMB Office of Acquisition Services and, if required, the State Administrative Board and the Michigan Office of Attorney General.

18.14 SURPLUS PROPERTY PROCESS

All parties to this Contract agree to abide by the DMB Act and relevant procedures out of the State Administrative Guide. The disposal of surplus property is governed by the Management and Budget Act, which states:

The department shall issue directives to provide for the disclosure, transfer, and disposal of surplus, salvage, and scrap material of state agencies. The department may dispose of surplus and of salvage or scrap by donating or selling the property or equipment to a unit of local government. However, if a unit of local government is not interested in the property or equipment, the department may sell the surplus, salvage, or scrap at auction. MCL 18.1267(1).

18.15 ENVIRONMENTAL PROVISION

a) If, during contract performance, the Contractor unexpectedly encounters a material which is hazardous or suspected to be hazardous, the Contractor shall advise DIT immediately. The Contractor shall cease performance immediately and shall take measures to cover the exposed area, post warning signs, and cover any debris. The Contractor shall wait for further instruction from DIT before commencing work in the affected area. At all times, the Contractor shall comply with all applicable laws, rules, regulations, and guidance.

b) The Contractor shall assume full responsibility and liability for compliance with all applicable laws, rules, regulations, and guidance pertaining to the protection of workers, visitors, and persons occupying areas adjacent to affected sites. The Contractor agrees to indemnify the State against, and hold the State harmless from, any and all claims of failure to comply with applicable environmental, safety, or health laws or regulations on the part of the Contractor or any of its employees, Subcontractors, or agents. The State assumes no liability for any exposure of Contractor personnel to asbestos or other hazardous material. The Contractor will provide adequate insurance and assumes full responsibility for ensuring adequate protection of Contractor personnel against exposure to asbestos or other hazardous material while such personnel are performing work in support of this contract.

SECTION II-B – NEGOTIABLE TERMS AND CONDITIONS

CONTRACT # _(To be determined at award of bid)

NEGOTIABLE TERMS AND CONDITIONS

This section identifies items and subject matter, in the form of suggested clauses, which are expected to be included within the Contract's Terms and Conditions. You should read the following items and respond in a narrative fashion whether you agree with the proposed clause. If you do not agree with the proposed clause, please provide alternative language along with any items necessary to understand and evaluate your proposed alternative language. Finally, all responses should include individual pricing information when agreement to a particular clause will have a significant impact on the Contract price.

1.0 LEGAL EFFECT AND TERM

1.1 BENCHMARKING

a) General - No earlier than twelve (12) months after the Effective Date, the State may request a Benchmark Study to determine whether the charges and Performance Standards being measured remain competitive, taking into account comparable services, performance standards, volume commitments, and terms and conditions. The State may, upon at least 120 days prior written notice, initiate these Benchmark Studies on any individual Service Bundle, or combination of Service Bundles. The State may initiate Benchmark Studies of Services anytime after the initial twelve (12) month waiting period, provided that no individual Service Bundle had a Benchmark Study begin within twelve (12) months of the conclusion of a previous Benchmark Study on the same Service.

b) Benchmark Principles - Each Benchmark Study will be consistent with the following principles:

(i) the Parties will mutually agree upon a third party Bench marker to conduct the Benchmark Study, taking into consideration the skills, experience, responsiveness, objectivity, availability, fees and expenses of qualified firms or individuals;

(ii) the Parties will share equally the fees and expenses the Bench marker charges in conducting the Benchmark Study;

(iii) the Benchmark Study will be conducted in a collaborative fashion (i.e., both Parties will remain involved throughout);

(iv) prior to conducting the Benchmark Process, the Bench marker will execute appropriate confidentiality agreements;

(v) all information and data generated and provided by the Bench marker will be shared with both Parties;

(vi) in the event any changes to the charges or Performance Standards are implemented, such changes will be effective starting the first month after completion of the appropriate amendment to the Agreement, unless a different date is mutually agreed to by the Parties; and

(vii) not withstanding the provisions of this section, the State reserves the right to audit bills, invoices, and any related financial data at any time.

c) Benchmark Study Methodology - Vendor shall reasonably cooperate with the State and/or the Bench marker in connection with the effort described in this Section, but in no event shall the Vendor have any obligation to disclose other customer information or information regarding Vendor's costs. Further, the Benchmark Study shall be conducted so as to not interfere with the on-going provision of Services by the Vendor. The State, Vendor, and the Bench marker will conduct the Benchmark Study adhering to the following guidelines:

(i) the data used by the Bench marker will be a representative sample derived from a sufficient number of other outsourced organizations that share substantially similar attributes with respect to size, scope and nature of overall services, geographic scope of overall services, quality standards, technology, and service levels (the Benchmark Comparators);

(ii) the Bench marker shall normalize the data to accommodate differences between the volume of services, scope of services, service levels, financing or payment streams, costs and other relevant factors pertaining to the Agreement and those applicable to the Benchmark Comparators;

(iii) a minimum of 3 months of usage data must be provided by the Parties for assessment, but the State or Vendor may provide more if mutually agreed;

(iv) the data used by the Bench marker in the Benchmark Study will be reasonably current, i.e., based on services provided to the State and the Benchmark Comparators no more than 12 months prior to the start of the Benchmark Process;

(v) Vendor will have the right to participate, comment upon and review the Bench marker's normalization methodology and any and all findings. Vendor and the State shall mutually agree to the Bench marker methodology, and to any appropriate adjustments because of differences between the services provided to the Benchmark Comparators and the Services provided to the State;

(vi) the Parties will agree to cooperate with the Bench marker in the Benchmark Study activities and to provide the Bench marker with such information as is reasonably necessary to conduct the Benchmark Study;

(vii) the Bench marker will provide the Benchmark Results, including the data, analysis, findings, and any supporting documentation, to the State and Vendor, as appropriate, throughout the Benchmark Study; and

(viii) the Benchmark Results will be prepared promptly, but no later than ninety (90) days from the conclusion of the Benchmark Study.

d) Benchmark Results - The State and Vendor will review and act upon the Benchmark Results as follows:

(i) The State and Vendor will review the Benchmark Results during the Benchmark Review Period.

(ii) If either Party disputes in good faith the Benchmark Results, such Party will submit to the other Party within ten (10) days a written notice identifying with specificity the nature of the Party's issues (e.g., assumptions, factors which were not considered, etc.) for further discussion and resolution. In the event the Parties are unable to resolve the issue(s), then the matter will thereafter be resolved in accordance with **Section 21** (Dispute Resolution). The results of the dispute resolution process will be considered the "Benchmark Results".

(iii) The State and Vendor will agree to discuss in good faith any appropriate adjustments (either an increase or decrease) to the price, Service Bundles, or Service Levels based upon the Benchmark Results. In the event the Benchmark Results are less than the charges then being charged the State in the aggregate for that Service and that the variance from standard industry charges cannot be attributed to unique requirements of the Service Bundles or Service Levels, or otherwise demonstrate that Vendor's pricing is not in the top quartile of the benchmark range, as determined by the Benchmark Comparators, for the aggregate Service Bundle being benchmarked, as a guideline, Vendor will consider: (1) adjusting the charges downward and/or improving the performance metrics, as applicable, to reflect the Benchmark Results; (2) maintaining the prices and performance metrics as they are and offering the State other services of equal value to the difference between the existing Exhibit charges and the Benchmark Results; or (3) doing neither (1) nor (2) and notifying the State of the extent to which Vendor is able to reduce the charges or improve the performance metrics, if any. If Vendor elects option (3), then the State shall have the right to accept Vendor's proposal or terminate the applicable Service in accordance with the terms of the Agreement. If no appropriate adjustments to the price, Services or Service Levels are agreed upon within sixty (60) days after conclusion of the Benchmark Review Period, or another period of time as may be mutually agreed between the Parties, the State may terminate the Service Bundle in accordance with the terms of this Agreement.

1.2 TECHNOLOGY CHANGE CLAUSE

If during a contract agreement new technology becomes available that in the opinion of the State represents a lower cost of operation or better or improved performance, the State reserves the right to demand that the carrier provide such services to the State. Vendor shall provide a written reply addressing the concerns and provide an alternative mechanism to handle technology change to protect the State.

If the Vendor discontinues support on any hardware and software covered by this Contract the State requires replacement with the currently supported technology at no additional cost.

2.0 PERFORMANCE

2.1 LIQUIDATED DAMAGES

The parties acknowledge that late delivery will interfere with the timely and proper completion of the Contract, to the loss and damage of the State, and that it would be impracticable and extremely difficult to fix the actual damage sustained by the State as a result of any such delay. Therefore, Vendor and the State agree that in the case of any such late delivery in respect of which the State does not elect to exercise its rights under **Section 17.1**, the State may assess liquidated damages against the Vendor for each service bundle where actual damage occurs.

In response to this subsection, please confirm your agreement to including a liquidated damages clause in the contract and provide any information you feel is necessary to determine liquidated damage amounts for each individual service bundle. Vendor should feel free to provide suggested liquidated damage amounts where it seems appropriate.

2.2 PROBLEM MANAGEMENT STANDARDS

The parties will agree on certain problem management standards applicable to Vendor's performance of warranty and support Services under this Contract (collectively, "Problem Management Standards"). Such standards will be included in the Contract as an exhibit.

2.3 CARRIER SOLVENCY CLAUSE

Given the nature of the current communications industry the State may request that all Vendors, including the prime and SubVendors, supply copies of their audited financial statements quarterly. Further, the State requests that any agreement entered into with the winning Vendor of this RFP be voided in the event of any of the following occurrences:

- Voluntary or involuntary bankruptcy
- Drop of one full point a bond rating as measured by Moody's within a 12 month period
- A significant drop in credit rating as measured by Dunn and Bradstreet
- Vendors responding to this RFP should:
    - Supply a copy of the most recent audited financial report including auditor's comments and footnotes to the financials.
    - Agree in writing to a voided agreement in the event of bankruptcy or insolvency or explain why.

2.4 MERGER, ACQUISITION AND DIVESTITURE – STATE

Any merger, acquisition or divestiture of governmental services to/from the private sector or the merger, acquisition, divestiture or cessation of governmental services to/from local government authorities or quasi government authorities by the State as a result of law, or executive order that affects telecommunications service(s) should cause the proposed annual and contract value to be adjusted. The adjustment will be based upon gross telecommunications expenditures acquired, merged or divested as determined by the State/Department of Information Technology.

Acknowledge acceptance of this proposed solution or in writing suggest alternative solutions.

2.5 MERGER, ACQUISITION AND DIVESTITURE - VENDOR

In the event of any merger, acquisition or divestiture or cessation of a business or product line by the carrier of a material part of the services offered to the State, during the course of any agreement(s), then the contract with the State becomes voided by the State. The purpose of this request is to protect the State from loss of service because of carrier merger acquisition or divestiture of an operating division, subsidiary or business unit that provides material services to the State.

Acknowledge and agree or explain why and propose an alternative protection mechanism for STATE in the event of carrier merger, acquisition or divestiture.

2.6 BUSINESS CHANGE

Often in the course of ordinary business operations it becomes necessary to discontinue certain business practices. Should the State discontinue business operations to comply with legislative mandate, Michigan law or executive order or for other causes and if these decisions affect telecommunications expenditures then the annual and contract value should be adjusted to reflect this change. (See also merger acquisition and divestiture clauses referencing cessation of services).

In some instances business change is the result of external factors such as economic slowdown. In this case the State is affected indirectly by the loss of tax revenue outside its control. In this instance the State needs the ability to reduce all expenditures including telecommunications expenditures proportionate to executive mandate to reduce cost. In this instance the State would notify the carrier that effective immediately that State intends to reduce telecommunications by seeking a concurrent reduction in the annual contract value. The carrier will have 30 days to reply in writing with an objection to this action. The carrier may request legitimate clarification and support documentation from the Director of Acquisition Services to support the request.

3.0 FINANCIAL

3.1 LABOR RATES

If Vendor expects to bill the State labor rates for time and materials, Vendor will provide detailed pricing information on proposed pricing schemes including detailed schedules disclosing time and material labor rates.

3.2 PERFORMANCE PENALITIES

Penalties for nonperformance should be broken down into two categories, minor and major, each with its own monetary value. A minor penalty, for example, would be for packet loss of more than 1 percent. A major penalty would be for falling below any of the availability percentages. There also needs to be a threshold where a minor penalty becomes a major penalty, for example, if the packet loss is more than 25 percent for a continuous 15 minutes. A minor penalty should be worth the cost of one day's service of a particular service category. A major penalty should be 5 percent to 10 percent of the monthly cost for each occurrence. A full month's credit should be issued if there are between five and 10 major infractions or more than 15 minor infractions in a month. More than 10 major infractions total during any time frame should be cause to quit the contract.

3.3 LIMIT PASS-THROUGH

The State agrees to pay for all legitimate services properly billed and invoiced. The State does not expect to pay any other fees, pass thru items, taxes or other charges not specifically related to the delivery of the services and equipment ordered. This includes (but is not limited to): Pre-subscribed Inter-exchange carrier charges (PICC), Universal Service Fund (USF) charges, surcharges, or other such charges that are not directly assessable to the State.

The Vendor should acknowledge and agree to this request in their RFP reply or explain in detail:

Their policies for billing indirect costs.

Provide evidence of actual invoices paid for each of these items, also include evidence of actual amounts collected with audited financial statements (with specific line detail) or letters from the auditors citing the actual dollars collected for each item and formula(s) that would be used to calculate the State share for each of these items that would appear on the invoice for services.

3.4 MINIMUM REVENUE COMMITMENT

The State does not anticipate providing Vendor with guaranteed revenue commitments. Vendor must specify any minimum annual revenue commitment required to maintain its proposal.

3.5 ALLOW NEW PRICING

The State is concerned that future technologies being deployed (or planned) in the marketplace including the way that services are charged may change over the duration of the proposed contract cycle. For example, future carrier options might include flat rate un-metered usage options versus tradition billing that includes charges based upon minutes of use. There are two options for meeting the State requirements these include contracts of shorter duration or the flexibility to move between currently available carrier billing options.

Explain the ability to move users (including State or all users) between available billing options.

4.0 EQUIPMENT

4.1 HARDWARE

If the Vendor expects to acquire additional hardware under this Contract for or on behalf of the State, the State expects the Vendor to provide a complete list of items that it must acquire. This comprised list will then be included as an Exhibit to the Contract and the State will propose the following language for inclusion in the Contract:

Exhibit J lists the items of hardware required for the Contract that is to be acquired by Vendor for and on behalf of the State. The list in **Exhibit J** includes all hardware required to complete the Contract and make the Deliverables operable; if any additional hardware is required in order for the Deliverables to meet the requirements of this Contract, such hardware shall be provided to the State by Vendor at no additional charge (except where agreed upon and specified in a Contract Change Notice). **Exhibit J** also identifies certain items of hardware to be provided by the State. The acquisition costs of the hardware to be acquired by Vendor are included in the total firm fixed price of the Contract, which shall remain fixed regardless of the actual cost to Vendor to acquire the listed hardware. The parties acknowledge that **Exhibit J** may be changed or modified from time to time. Vendor may substitute equivalent or superior items that are compatible with the State's Service Bundles, with no change in the Contract price. If the State requests any substitutions in the listed items, the amount Vendor is entitled to invoice the State for this Contract shall be adjusted to reflect the difference in the cost between the originally listed item and the substitute item; all substitutions requested by the State must be made through the change control process so that Vendor may request any necessary adjustments due to such substitution. Instead of Vendor ordering and purchasing any items of hardware listed in **Exhibit J**, the State may, at its election, directly order or purchase such items, in which case the total amount Vendor is entitled to invoice the State for the Contract shall be reduced by the line-item cost of the applicable item(s), as set out in **Exhibit J**. The State will coordinate with Vendor in purchasing any hardware directly so as not to impair Vendor's ability to perform the Services in a timely manner.

Please identify whether the Vendor will agree to the above language or, in the alternative, provide alternative suggested language covering the acquisition of new hardware. Please provide Exhibits.

4.2 EQUIPMENT TO BE NEW

All equipment provided under this Contract by Vendor shall be new, unless specifically agreed otherwise in writing by the State.

4.3 RISK OF LOSS

Risk of loss for each item of equipment provided under this Contract by Vendor shall pass upon written acknowledgement of receipt of such item by the State at State facilities.

4.4 DAMAGE DISPUTES

The Vendor shall identify damage of returned equipment, and shall store equipment for State inspection.

5.0 PROPRIETARY RIGHTS AND SOFTWARE

5.1 STANDARD SOFTWARE

If the Vendor expects to acquire additional software under this Contract for or on behalf of the State, the State expects the Vendor to provide a complete list of items that it must acquire. This comprised list will then be included as an exhibit to the Contract and the State will propose the following language for inclusion in the Contract:

(a) All Standard Software used in performing the Services shall be provided to the State under a separate license agreement between the State and the owner (or authorized licensor) of such software.

(b) Vendor shall not introduce any Standard Software in providing the Services without the State's prior written approval. Unless the parties mutually agree otherwise in writing, Standard Software shall be licensed in the name of the State under an agreement agreed to by the State.

Vendor's Standard Software is being licensed to the State under the license agreement attached as **Exhibit K**. **Exhibit I** lists the other Standard Software required for the Contract which is to be acquired by Vendor for and on behalf of the State. The list in **Exhibit I** includes all software (other than the Standard Software) required to complete the Contract and make the Deliverables operable; if any additional software is required in order for the Applications to meet the requirements of this Contract, such software shall be provided to the State by Vendor at no additional charge (except where agreed upon and specified in a Contract Change Notice). **Exhibit I** also identifies certain software to be provided by the State. The acquisition costs of the software to be acquired by Vendor are included in the total firm fixed price of the Contract, which shall remain fixed regardless of the actual cost to Vendor to acquire the listed software. The parties acknowledge that **Exhibit I** may be changed or modified from time to time. Vendor may substitute equivalent or superior items, with no change in the Contract price. If the State requests any substitutions in the listed items, the amount the State is entitled to invoice the State for the Contract shall be adjusted to reflect the difference in the cost between the originally listed item and the substitute item; all substitutions requested by the State must be made through the change control process so that Vendor may request any necessary adjustments due to such substitution. Instead of Vendor ordering and purchasing any software listed in **Exhibit I**, the State may, at its election, directly order or purchase such software, in which case the total amount Vendor is entitled to invoice the State for the Contract shall be reduced by the line-item cost of the applicable item(s), as set out in **Exhibit I**. The State will coordinate with Vendor in purchasing any Standard Software directly so as not to impair Vendor's ability to perform the Services in a timely manner.

Please identify whether the Vendor will agree to the above language or, in the alternative, provide alternative suggested language covering the acquisition of new software. Please provide proposed Exhibits.

6.0 REPRESENTATIONS AND WARRANTIES

6.1 EQUIPMENT WARRANTY

To the extent Vendor is responsible under this Contract for maintaining equipment/system(s), Vendor represents and warrants that it will maintain such equipment/system(s) in good operating condition and will undertake all repairs and preventive maintenance in accordance with the applicable manufacturer's recommendations for the period specified in this Contract.

The Vendor represents and warrants that the equipment/system(s) shall be in good operating condition and shall operate and perform to the requirements and other standards of performance contained in this Contract, when installed, at the time of Final Acceptance by the State, and for a period as designated in the Statement of Work commencing upon the first day following Final Acceptance.

Within the number of business days/hours listed in the Statement of Work following notification by the State, the Vendor shall adjust, repair or replace all equipment that is defective or not performing in compliance with the Contract. The Vendor shall assume all costs for replacing parts or units and their installation including transportation and delivery fees, if any.

The Vendor shall provide an adequately staffed toll-free telephone number to allow the State to report equipment failures and problems to be remedied by the Vendor.

The Vendor agrees that all warranty service it provides under this Contract shall be performed by original equipment manufacturer (OEM) trained, certified and authorized technicians.

The Vendor further agrees to act as the sole point of contact for warranty service. The Vendor warrants that it has and will obtain and pass through to the State any and all warranties obtained or available from the original equipment manufacturer, including any replacement, upgraded, or additional equipment warranties.

7.0 PROJECT MANAGEMENT

7.1 PROJECT DELIVERABLES

Vendor must coordinate with the State and prior service provider during all phases of service replacement. Vendor response shall address each of the following items in their response. After contract initiation, the Vendor will update each item, and perform the required activity.

Vendor must provide the State with the Project Deliverables in accordance with the timeframes set forth in the Vendor's Project Work Plan. All deliverables under this contract must be complete. All deliverables shall be subject to the State's acceptance. Following completion or delivery of a deliverable, the Vendor shall perform acceptance tests under supervision of State staff. If the State detects a deficiency, the State shall provide the Vendor with a written notice of its non-acceptance specifying the deficiency. Vendor shall correct the deficiency within the number of days identified in the Project Work Plan. If the Vendor is unable to correct the deficiency within the allotted timeframe, the State may at its discretion: terminate this Contract without penalty to the State, obtain a full refund, and pursue available remedies under this Contract; or continue to review the deliverable and require Vendor to continue to correct or eliminate the deficiency. By accepting a deliverable, the State represents only that it has detected no deficiencies of sufficient gravity that warrant withholding of acceptance of the deliverable. Acceptance by the State does not discharge the Vendor's obligation to meet the objectives and requirements of this Contact as a whole.

Describe Vendor's approach to ensure an acceptable project deliverable is produced.

7.2 PROJECT MILESTONES

Provide a project schedule listing installation milestones and anticipated dates. For example: milestones shall include at a minimum, the delivery of each of the following:

- High level analysis;
- Project work plan;
- Project Kick-Off Meeting;
- Detailed review;
- Deployment plan;
- Service installation on a site by site basis;
- Quality of Service testing;
- Phase end documents;
- Periodic site review complete;
- Final documents;
- Post implementation review.

7.3 QUALITY OF SERVICE TESTING

Each circuit at each site shall be tested to ensure service compliance as defined for each Service defined within the RFP. The Vendor shall provide Quality of Service (QoS) reports verifying each circuit or line, with actual test results (units measured) for each parameter tested. Describe Vendor's approach to ensure this offering is achieved to include guarantees.

7.4 PHASE END DOCUMENTS

The Vendor shall maintain a complete set of documentation associated with each milestone, and present it to the State as an end of phase service deployment. All such documentation shall be provided on both paper and computerized file copy. Describe Vendor's approach to ensure this offering is achieved to include guarantees.

7.5 PERIODIC SITE REVIEW

During each phase of the project, the State shall select specific sites for service verification based upon the State's prior site review and findings. Any or all sites may be reviewed. Vendor attendance at each site will be solely at the discretion of the State. The Vendor must adhere to the State's request for attendance within 48 hours of notice. Vendor shall maintain a complete report including all sites installed, tested and accepted as meeting service requirements, including those sites with completed site reviews. Describe Vendor's approach to ensure this offering is achieved to include guarantees.

7.6 FINAL DOCUMENTS

Complete documents listing all services, sites and related material required for the continued support of services including service outage reporting, service verification and future replacement service must be delivered prior to final network acceptance and maintained throughout the duration of the contract. Describe Vendor's approach to ensure this offering is achieved to include guarantees.

7.7 POST IMPLEMENTATION REVIEW

General review of all sites, including future plans of service expansion; consolidation or general improvements shall be conducted by the Vendor and reported to the State within 20 days of full implementation. Describe Vendor's approach to ensure this offering is achieved to include guarantees.

7.8 LOCAL AREA REPRESENTATION

The State anticipates Vendor personnel identified as "key" shall have daily presence with the Lansing metropolitan area. Describe Vendor's approach to ensure this offering is achieved to include guarantees.

8.0 TRANSITION

8.1 END OF CONTRACT TRANSITION

In the event this contract is terminated, for convenience or cause, or upon expiration, the Vendor agrees to comply with direction provided by the Program Office to assist in the orderly transition of equipment, services, software, leases, etc. to the State or a third party designated by the State. In the event of termination or the expiration of this Contract, the Vendor agrees to make all reasonable efforts to effect an orderly transition of services within a reasonable period of time that in no event will exceed one year. These efforts shall include, but are not limited to, the following:

(a) Personnel - The Vendor shall work with the State, or a specified third party, to develop a transition plan setting forth the specific tasks and schedule to be accomplished by the parties, to effect an orderly transition. The Vendor shall allow as many personnel as practicable to remain on the job to help the State, or a specified third party, maintain the continuity and consistency of the services required by this contract.

(b) Equipment - The State will have the option to purchase from the Vendor all, or part of, equipment and related infrastructure being provided by the Vendor which is dedicated solely to providing services under this contract. In the event the State so chooses, the Vendor shall transfer title to all such personal property which the State specifies at a mutually agreed upon price which shall not exceed the net book value of such equipment. This shall include the option to assume all specified leases (assuming such leases are assumable). As part of the transition plan, the Vendor shall provide a complete listing of all such property and leases furnished under the contract. It is agreed that all such property will be provided on an "as is, where is" basis.

(c) Information - The Vendor agrees to provide reasonable detailed specifications for all hardware and software needed by the State, or specified third party, to properly provide the services required under this Contract. The Vendor will also provide any licenses required to perform the services under this Contract, including, but not limited to, a license to the Vendor's asset management software for a period not to exceed 365 days.

(d) Software. - The Vendor shall reasonably assist the State in the acquisition of any Vendor software required to perform the services under this Contract. This shall include any documentation being used by the Vendor to perform the services under this Contract. If the State transfers any software licenses to the Vendor, those licenses shall, upon expiration of the Contract, transfer back to the State at their current revision level.

(e) Payment - If the transition results from a termination for any reason, reimbursement shall be governed by the termination provisions of this contract. If the transition results from expiration, the Vendor will be reimbursed for all reasonable transition costs (i.e. costs incurred within the agreed period after contract expiration that result from transition operations) and a reasonable profit.

8.2 MOVING FROM AN INCUMBENT CARRIER TO A NEW CARRIER

In the event that the State terminates the contract prior to the full term of the contract, due to the incumbent carrier failing to meet its obligations defined elsewhere in the contract, the incumbent carrier will be required to pay for the transitions costs including the costs of its connectivity and equipment and the costs for the overlapping period of the new carrier's connectivity and equipment.

The carrier will not charge the State for the cost of its circuits, equipment and other facilities during the transition period from the previous carrier to this new carrier's network.

9.0 GENERAL

9.1 STATE AGENCY PROJECT/STATUS

The Vendor must participate in project and/or status meetings with the information technology professionals from the Agency, during the term of the contract, as required by each Agency. It is anticipated that the beginning of each project will require, at a minimum, biweekly project/status meetings.

Meetings will cover the technical, schedule, and resource aspects of the project. Emphasis should be placed on the accomplishments for the concluded reporting period, the planned activity for the future reporting period, and identification and resolution of all issues and problems. The review shall be conducted at a time and location to be determined jointly by the State and Vendor Project Managers. The agenda and minutes of each meeting shall be produced and distributed as mutually agreed by the State and Vendor Project Managers.

Describe your approach to Project Management and define the State's role in your approach.

SECTION III – STATEMENT OF WORK

1.0 INTRODUCTION AND INSTRUCTIONS

1.1 RFP RESPONSE INSTRUCTIONS

This RFP for Statewide telecommunications services is a necessarily long and complex document with State obvious duplication to protect the context of multi-service or multi-region bids. For example, it is highly likely that qualified project management teams will differ between the service offerings and service regions.

Within this Section of the RFP all Services are grouped into twenty-nine (29) categories beginning with "common features" and ending with "optional services". Each category uses the same format of tables and figures. In each category, there are four basic Tables containing Service/Support [Functional] Requirements, Technical Question, Proposed Alternatives, and Managed Services. Some categories have additional Tables such as Software Features [Functional] Requirements, and Equipment Features [Functional] Requirements. Additionally, some categories have figures that are used primarily as informational data tables and do not necessarily require a response.

Each Table is segmented into two or three columns. The first being the Service, the second being a Description, and the last being a Proposal Paragraph Number. Respondents are cautioned to ensure special attention is given to the third column. All responses pertaining to the particular Service, amplified and clarified by the Description, must be placed within the specified Proposal Paragraph number of the Respondent's proposal. Proposal responses not following this procedure will be classified as non-responsive and will not be given further consideration or evaluation by the State.

To be considered responsive, the State anticipates all proposals to reflect the following criteria:

1.2 RFP PARAGRAPH FORMAT

To ensure that the State understands your proposal, the Vendor's response must include a copy of each requirement and/or question and label the response with the associated paragraph number. If common terms and conditions and/or requirements differ across any of the service offerings or regions, the Vendor is to clearly identify and address any differences for each requirement. Contractors should define terms and acronyms used.

1.3 RFP ORGANIZATION MATRIX

The following chart illustrates the "service by region" matrix concept.

Due to the existing industry competition, the State is requesting pricing by LATA for some services. The State's intent is to encourage partnerships that result in the most favorable prices. References to pricing by geographic region are highlighted in **Sections 10, 11, 12, 13, 14, 15, 19, 20, 21, 24, and 25**. Vendor is expected to use this matrix in the pricing sheets (Appendix C) or attach additional sheets whenever possible.

1.3.1 Matrix - "Service by Region"						
Region Service	**313 LATA – Detroit Area**	**616 LATA Grand Rapids area**	**517 (North) LATA Saginaw Area**	**517 (South) LATA Lansing Area**	**906 LATA Upper Peninsula Area**	**All LATA's State-wide**
PBX Equipment						
PBX Voice Instrument, Repair and Installation of Phones						
PBX Equipment Maintenance						
Central Office Facilities						
Central Office Management, Repair, and Installation						
Central Office Management, Installation, MACs						
WAN Mgmt. Monitor, & Maintenance						

1.3.1 Matrix - "Service by Region"						
Region Service	**313 LATA – Detroit Area**	**616 LATA Grand Rapids area**	**517 (North) LATA Saginaw Area**	**517 (South) LATA Lansing Area**	**906 LATA Upper Peninsula Area**	**All LATA's State-wide**
WAN Installation and MACs						
Network Node Monitoring						
Cable Design & Engineering						
Cable Services, Install/MAC						

1.4 PROJECT SCOPE REQUIREMENTS

This section covers the items required for the project as a whole. To be considered responsive all items must be addressed.

1.5 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for this project. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

1.5.1 Table – "Project Scope [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Critical Business Links	The State has identified critical services and service levels as well as communications components interconnecting many of it's facilities, that are classified as "Business Critical Links" and noted as follows: • State Police Lien network and circuits • Corrections network • Front end Process down • LMAN Failure of any of these important business, services or communications links has the potential to: (1) materially reduce or modify service levels to a degree that alters or effectively voids them, (2) cause harm to State Government operations and/or (3) adversely affect the Health or Public safety of State citizens. Vendors responding to this RFP should: 1. Consider the failure or inability to provide continuing uninterrupted service across business critical communications (including any and all identified business critical links) as unacceptable. 2. Describe proposed service level agreements for business critical communications and how they differ from proposed service level agreements for other "non-critical" services. 3. Describe failure conditions for business critical links and how they will be measured. 4. Describe the conditions under which the failure of any identified business critical link(s) can void contract agreements in their entirety.	**1.5.1.1**

1.5.1 Table – "Project Scope [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Establish User/Carrier Committee	The State acknowledges the complexity of managing and maintaining a large network and requests the formation of a committee to be formed from representatives of the State and the carrier hereinafter referred to as the Telecommunications Joint Communications Committee (TJCC). The TJCC will be represented by: From the State by: • Deputy Director, Infrastructure Services (as needed or formally requested in writing by Senior Vice President of the carrier) • Director, Telecommunications and Network Mgt. • State Project Manager • Agency Staff Representatives (not to exceed 4) • Account Receivable Staff (charged with carrier billing approvals) • Representative of Michigan Broadband Development Authority • Others as needed The Carrier will be represented by: • Senior Vice President in Charge of Interest Account (as needed or formally requested in writing by the State Chief Information Officer) • Senior Account Manager • Vendor Project Manager • Regional Account Managers (no to exceed 4) • Billing Coordinator (charged with explaining State billing data) • Others as needed	**1.5.1.2**

1.5.1 Table – "Project Scope [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**

Establish User/Carrier Committee Continued	The TJCC will meet at a minimum, monthly chaired by the Senior State representative. A recording secretary will be appointed and the proposed agenda may be:
	• Opening remarks (State and Carrier)
	• Reading of last months minutes
	• New business or agenda changes
	• Status of action items
	  • Sub-committee reports
	  • Resolution reports
	• Moves adds and change reports
	  • Carrier reports
	  • State reports
	  • Action items
	• Open trouble Tickets
	  • Carrier reports
	  • State reports
	  • Action items
	• Other problems
	• Planning issues
	• Other Business
	• Adjournment
	
	The proposed committee will be the process through which all operational problems will be resolved. Representative on both sides ***must*** have decision making authority. All problems not resolved by individual management teams should go to the TJCC for resolution. The goal of the TJCC is problem avoidance and quick problem resolution. Either the Senior Vice President of the carrier or the State Chief Information Officer can call emergency meetings of the JCC.
	Vendors replying to this RFP should agree in writing with this request or explain why they should not comply with this request.	

1.5.1 Table – "Project Scope [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Qualified Personnel for Overall Project Management	Vendors must identify the competence of personnel whom the Vendor intends to assign to the project. Qualifications will be measured by education and experience, with particular reference to experience on projects of this magnitude. Emphasis will be placed upon the qualifications of Vendor's Project Manager and Manager's dedicated management time as well as that of other key personnel working on this project. Vendors are required to submit a current resume with references for the Project Manager and all Key Personnel. (Also refer to Section II-A 3.1)	**1.5.1.3**
Installation Timeframes	The Vendor must clearly define installation timeframes (from award of contract and receipt of future orders to install or activate) for each of the services proposed in response to this RFP. The Vendor must adhere to the installation timeframes unless otherwise agreed upon by the State. It is crucial that communications continue throughout the network conversion. All replacement services must be tested as fully functional and have successfully passed a 30-day trial for each circuit prior to Cutover. A gradual, progressive transition from legacy Vendor to awarded services must be provided. If the Vendor fails to meet the above-mentioned timeframes, the State reserves the right to pursue any or all remedies. Describe your approach to maintain communications service during the transition phase and guarantees offered.	**1.5.1.4**
High Level Analysis	A high level project analysis providing a clear description of the service provided, circuit conversions, type of Vendor equipment to be installed, equipment requirements and associated installation characteristics must be provided for initial installation discussions. Analysis shall be detailed enough to allow the State to understand the Vendor's methodology in replacing previous Vendor technology with Vendor services. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.5.1.5**

1.5.1 Table – "Project Scope [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Project Work Plan	The Vendor shall provide a general work plan for each service bid. The Project Work Plan shall provide detailed information, including without limitation, deliverables, tasks, critical events, schedule, and resource requirements. The schedule will not be subject to change as a result of time required by Vendor to correct deficiencies without the State's prior written approval. Any updates to the schedule shall be subject to written approval by the State. The Vendor shall make any and all changes required by the State. In the event of a change to the Project Work Plan, unless the State's agrees in writing, the Vendor shall not be relieved of liability, including liquidated damages, arising from its failure to perform its obligations under this Agreement.	**1.5.1.6**
Project Kick-Off Meeting	The Vendor shall host a kick-off meeting with Agency representatives to announce the Vendor contract award and define the services provided. The Vendor must provide summary literature, outlining service changes, responsible Vendor individuals, and contact information and project timeframes. The Vendor must be prepared to answer Agency questions and set up appointments to meet with such personnel, if necessary.	**1.5.1.7**
Detailed Review	Vendor shall perform a detailed site review based upon contracted services. Required circuits shall be itemized, clearly defining services at each location. It may be required that the Vendor visit each site, qualify the available information, and make the appropriate corrections to such data in order to ensure proper replacement service installation. The Vendor will provide an accurate database to the State, inclusive of Agency name, address, contact names, contact telephone numbers, existing services and associated telephone/circuit numbers, replacement circuit numbers (telephone numbers shall be transportable between service providers), quantity of services and associated costs. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.5.1.8**

1.5.1 Table – "Project Scope [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Deployment Plan	Deployment plan listing all sites, required service types, methodology, required many hours per site, installation completion date and acceptance test date shall be delivered prior to any site installation. Include escalation procedures to address inadequate service during and following implementation of new service. Escalation procedures must denote all levels of management personnel for each level of escalation (including title, position, and name of specific individual); methods by which escalation is initiated and conducted; and criteria for escalation at each level. The State reserves the right to set priorities for site location service delivery. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.5.1.9**
Service Installation Plan	The Vendor shall provide a detailed account to the State, on a site-by-site basis, of the work as preformed, circuits installed, problems encountered and occurrence of completion. No installation shall be considered complete if service problems occur, installations do not meet required standards and codes, or not all required services at a site are complete and fully functional as replacement service Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.5.1.10**
Maintenance Test Plans	Complete maintenance test plan required to ensure continued operation of Vendor services to the quality of service test parameters. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.5.1.11**
Outside Lansing Area Representation	Describe Vendor approach to statewide presence in terms of personnel.	**1.5.1.12**

1.6 MINIMUM COMMON REQUIREMENTS FOR ALL SERVICES

All items noted in this Section are common requirements of all Services. Vendor is to specifically address any one-time charges in Appendix C (pricing sheets).

1.6.1 Table – "Common Service [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Aggregated Compatible Services	The State intends to provision all existing services with same or equivalent fully compatible services, of equal or better technology. Use of more current technology to aggregate traffic, improve efficiency or enhance services is highly desirable. Vendors must include in their response, how they will provide the best solution. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.1**
Premises-based Termination Equipment	The Vendor shall provide network termination equipment to be installed with the proposed network services. All termination equipment proposed by the Vendor must work in conjunction with and enhance the performance of its proposed network services while interfacing to existing State equipment. Vendor termination equipment consists of any bridges, gateways, routers or other equipment necessary to provide interface conversions. Determination of compatibility of the proposed network termination equipment will be at the sole discretion of the State. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.2**
Technology Refresh	It is recognized that technology will change during the term of the contract. The Vendor is invited to propose additional or alternate offerings for consideration by the State. The Vendor is expected to inform the State of new technology developments during the Contract. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.3**
Database of Services	Vendor shall survey each State Facility and create a database of all services at each State address and provide a copy to the State. The Database must be updated continually and maintained by the Vendor with updates provided to the State upon request. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.4**

1.6.1 Table – "Common Service [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Dependability	Services must be maintained at a 99.99% dependability factor, reflecting that any individual telephone line, circuit or service is available for use 99.99% of the time based upon a 30 day time period. Describe Vendor's approach toward and experience in providing a minimum 99.99% reliability and dependability. Specifically address guarantees and SLA components and penalties for non-performance for each service.	**1.6.1.5**
Downtime Credit	Credit must be issued on a per line or circuit basis when a particular network line or circuit experiences downtime. The Vendor must credit the affected circuit for the entire monthly fee inclusive of all fixed feature costs. The State shall receive full credit for variable usage costs applied to any data circuit listed as a backup circuit for primary data circuits, which fail. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.6**
Installation Standards	Installations shall be in compliance with current Bellcore standards, National Electrical Code, BICSI and the EIA/TIA Wiring Standard. State Vendor's compliance.	**1.6.1.7**
Vendor Equipment	Vendor shall provide all services using quality switching equipment with power backup facilities. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.8**
Service Interruptions	The Vendor shall notify the State of any interruptions of service during the implementation, installation of or repair of any service. The Vendor must clearly describe, in detail, in its response, its plan to minimize the disruption when converting the State from its existing technology to any new service. The plan described in the Vendor's response must include, at a minimum, conversion from the existing situations to the proposed services. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.9**

1.6.1 Table – "Common Service [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Final Acceptance of Installation	All Services must be tested by the Vendor prior to final connectivity to State equipment and after connectivity is complete. A 30-day in-service acceptance test must include circuit and/or line tests under fully loaded operation, and be completed prior to transition. Acceptance by the State of any network service will require the completion of a full billing cycle, first delivery and acceptance of all period reports and an initial acceptance review of first invoice. Provide acceptance tests for each Service. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.10**
Service Orders	After the initial Services are installed, it is expected that service quantities will increase and decrease as State demands and responsibilities change. The Vendor must allow for system changes in the future at no additional cost to the State. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.11**
Single Point of Contact	The Vendor must serve as the single point of contact for the State for all major maintenance and repair issues. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.12**
Vendor Site Services	When required by the State, all Vendor personnel, upon entering the premises of a State, must inform the designated State contact of his/her arrival. The Vendor personnel must also inform the designated State contact when leaving the State premises. State compliance.	**1.6.1.13**
Maintenance/ Service Hours	All services performed on State sites shall be during the standard operating hours of that office unless approved by the State. Most offices operate between the hours of 8:00 A.M. and 5:00 P.M. Others such as State Police, State prisons and FIA Office of Juvenile Justice are open 24x7x365. The State shall define the hours of operation when issuing repair or service requests. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.14**

1.6.1 Table – "Common Service [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Network Management	The Vendor must describe in its response, how it will perform 24x7x365 ay monitoring, reporting and maintenance of its network in support of Services including addressing of system failure (full and component), network overload, network performance, alert management, management reports and other related items. The Vendor must describe, in its response, how proactive monitoring, trouble ticketing, service level agreement monitoring, management reporting and user notification is performed on its network. The Vendor should include any and all network management offerings it deems appropriate. For monitoring and verification purposes, the State requires access to the same network monitoring information as the Vendor. The Vendor must describe how it will provide this service to the State. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.15**
Service Availability	The Vendor shall make service available 24x7x365. The Vendor shall be responsible for implementation and appropriate maintenance. The Vendor shall have a sufficient number of trained personnel to ensure that emergency calls will be answered promptly, 24x7x365 Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.16**

1.6.1 Table – "Common Service [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Critical Maintenance and Escalation	The Vendor must provide critical maintenance for Services designated by the State as critical to State operation and/or public safety. For example, critical maintenance services shall be required when one of the following situations occur: • Total system failure • Loss of service to emergency services • Loss of service to any State Department, Division or Bureau • Loss of an attendant console Critical services shall be remotely verified within 15 minutes of report of service outage. Repairs shall be escalated to second level of support if not restored within one hour of report. Services should be restored within two hours of report. The Vendor shall utilize all available support to ensure restoration of services. After the first two hours and every hour of failure thereafter, Vendor shall provide telephoned reports defining the methods used to restore services, and the Estimated Time to Restore (ETR) services. If services are not restored within 24 hours, the State may request an investigation and/or services from an alternate Vendor. All charges for such services shall be forwarded to the Vendor. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.17**

1.6.1 Table – "Common Service [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Emergency Maintenance Requirements	The Vendor must provide emergency maintenance for those network services designated by the State as important to the function of the State. Inclusive of those problems shall be any problem affecting the main telephone number and its hunt group, DID operation, or loss of State office access to data services, inclusive of State data network connectivity or point to point operation. All such reports must be remotely tested by the Vendor within 30 minutes of report, with repairs initiated within the hour. If services are not restored within two hours of report, second level support shall be obtained through the Vendor. If services are not restored within 8 hours, the emergency maintenance problem shall be escalated to critical maintenance. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.18**
Routine Maintenance Requirements	The Vendor must provide routine maintenance for those network services designated by the State as routine maintenance services. Services could include single voice or low speed data circuit. The Vendor must test the affected service within two (2) hours of receipt of the trouble report from the State agency. The Vendor must complete all testing of the affected circuits or network service within four (4) hours of the initial service call reported by the State. Services shall be restored within 8 hours of report. If repairs are not completed within 8 hours of State issued report, the repair may be upgraded to emergency status. Any critical line such as services for the Executive Office or where State or public safety is an issue may be immediately escalated to Critical upon initial report. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.19**

1.6.1 Table – "Common Service [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
New Service Requests	Vendor shall install all new services on or before the State requested due dates. Scheduled installation day and time of day must be provided to the State within five (5) business days of transmission of State Telephone Service Request (TSR). Unless otherwise requested in writing on a TSR, 90% of all data circuits installation, moves and changes shall be fully functional within 30 days of request. 100% of all data circuit installation, moves and changes shall be fully functional within 60 days of request. 90% of all voice grade telephone line installations, add moves and changes, must be completed within 7 days of request. 100% of all voice grade telephone line installation, moves and changes must be completed within 14 days of request. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.20**
System Security Requirements	The Vendor must have implemented various security measures based on actual security situations in the field. The Vendor must provide, in its response, those security measures that will be taken in regards to the following: • Receipt and implementation of new service orders, service disconnect orders and service move orders; • Access to the network service by the State for testing or maintenance, service moves, additions and changes; • Access to the network service by the Vendor service personnel and/or technicians for service moves, additions and changes; • Access by the State to network service billing records. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.21**
Network Traffic Security	The Vendor must describe, in its response, the measures it will take to ensure the confidentiality of the State's traffic placed over the Vendor's network. The Vendor must describe all standard and optional security services. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.22**

1.6.1 Table – "Common Service [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Vendor Proposed SLAs	The Vendor shall submit a draft service level guarantee(s) for each Service (consistent with sections including financial penalties in the form of service credits or rebates for non-compliance). Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.23**
Change Control Procedures	Individual line or circuit installations requirements may change during initial installation or thereafter. All changes shall be made in writing on a Change Request or TSR form and require acceptance by the State prior to initiation. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.24**
Initiate Change Request	The person who requests the change (the "Originator") will forward to the other party (the "Recipient") a Change Request, which will include the following: • Project identification; • Originator's name and title; • The date of the Change Request; • A description of the proposed change; • The reason for the proposed change. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.25**
Log Change Request	The State will assign a number to and log each Change Request. The Vendor must record the number and refer to it for any communications regarding the service activity. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.26**
Impact of Change	The Recipient will make reasonable efforts to investigate the impact of the Change Request on the price, timetable, Statement of Work, specifications and relevant obligations in accordance with the schedule set out in the project plan for each priority category. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.27**

1.6.1 Table – "Common Service [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Charges for Change	If the State is the Originator, the Vendor will inform the State Agency if there will be any charges for the Services in conducting the impact study and the State will decide whether the Vendor should conduct the impact study. Describe Vendor's approach to ensure this offering is achieved to include guarantees.	**1.6.1.28**
Background Check	All individuals working on the project including the Vendor, subcontractors, and their employees shall undergo regular and recurring criminal background checks and drug and alcohol testing though Michigan State Police. No individual will be permitted to work on the project that, in the sole opinion of Michigan State Police, is determined to be a criminal or health and safety risk to the State. State acceptance and compliance.	**1.6.1.29**

1.7 OVERVIEW OF IMPLEMENTATION PLAN

This Section describes the State's implementation support specifications, including time frames, roles and responsibilities, and acceptance testing for the implementation of the network services. The Vendor's response shall demonstrate that it is willing and able to assist in minimizing implementation risk, while at the same time providing overall cost savings to the State. Vendor's responses to this Section will be evaluated based on the following State objectives:

Minimize the impact to the State's business operations.

Minimize the technical, operational, and financial costs of service migration to the State.

Implement as many services as possible simultaneously.

Complete the implementation process, including testing, as quickly as possible.

Maximize cost savings without sacrificing quality and performance during all stages of the implementation process.

1.8 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for implementation services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

1.8.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Account Team	The chosen Vendor(s) account team shall assume overall project management and coordination responsibility for all conversion activities from the incumbent's to the new Vendor's network. This includes full responsibility for the end-to-end implementation of all services, regardless of whether a service is ordered as "enhanced baseline" or "full service." The chosen Vendor shall perform all coordination activities with other Vendors who are providing any portion of a service that is required for the end-to-end delivery of the Vendor's service (e.g., an access circuit from a Local Exchange Carrier (LEC)) to ensure the successful provisioning, installation, and testing of the service. The Vendor shall serve as the State's single point of contact for all implementation activities. However, the State reserves the right to interface with any Vendor providing service to the State. Describe your understanding and compliance.	**1.8.1.1**
Project Manager	The Vendor shall provide at least one project manager fully dedicated to the State who has experience in implementing a network/system of at least similar size and scope.	**1.8.1.2**
Qualifications	The Vendor shall identify the project manager(s) and provide a resume and background that qualifies the project manager(s) to lead a conversion of this magnitude.	**1.8.1.3**
On-site Support	The Vendor shall provide at least one on-site project manager and associated on-site implementation support team members during implementation activities.	**1.8.1.4**
Team Replacement	The Vendor shall provide an implementation team of sufficient size, breadth of experience, and depth of expertise to support the Cutover of all services covered under this agreement.	**1.8.1.5**

1.8.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Project Plan	The Vendor shall be responsible for the development and maintenance of the overall project plan and any required project databases.	**1.8.1.6**
Status Reporting	The Vendor will provide monthly status reports of the conversion process.	**1.8.1.7**
Minimize State Resources	The Vendor must assume that all interaction will be conducted through the State for all processes of the conversion activities (including filling out order forms, optimizing/engineering network services, and setting up billing hierarchies). The Vendor must make every effort to minimize the required by the State during this process.	**1.8.1.8**
State Coordination	The Vendor is responsible for coordinating all activities with the State and the State's vendors as necessary to successfully implement service Cutover, which will be done outside of business hours.	**1.8.1.9**
Vendor Coordination	The Vendor must coordinate with the State and the State's vendors to design, provision, and physically Cutover all hardware, software, facilities, and central office services at each of the State's locations during voice and data service Cutovers.	**1.8.1.10**
Functional Testing	The Vendor shall perform basic functionality testing of installed services at each of the State's location during voice and data service Cutovers.	**1.8.1.11**

1.8.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Vendor Roles	Vendor responsibilities for the implementation planning process prior to implementation and during the actual implementation process include (but are not limited to) the following: • Overall network design (which must receive the State's approval), • Tracking and maintaining the master conversion plan, • Preparing and supplying all documentation required to support the implementation process (including preparing installation or removal orders for the LEC services), • Coordinating with any LECs involved in a Cutover, • Creating service orders to initiate Cutovers (including the creation of installation and removal orders for LEC services), • Performing provisioning and testing activities, and • Specifying and implementing all addressing and routing plan changes (which must be performed collaboratively with the State and must incorporate the State's current addressing plan).	**1.8.1.12**

1.8.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Transition Plan	The Vendor shall complete the final implementation plan within 90 days of the execution date of the Agreement. However, the State expects the Vendor to complete its pre-implementation planning as part of the proposal process. The Cutover(s) of service(s) shall occur on a mutually agreed date. The implementation plan shall be solely the Vendor's responsibility; however, it must be developed in coordination with the State. The Vendor is expected to interview key State contacts as defined by the State, perform collaborative planning with the State, create the plan, and meet with the State for review and approval of the plan. The plan must provide detailed information that clearly lays out the processes and Vendor responsibilities for the Cutover of service, including risk mitigation steps and back-out procedures. The actual execution of the implementation plan shall not begin until the State has given its approval to the plan and has given the Vendor permission to begin implementation.	**1.8.1.13**
Vendor Collaboration	Any costs associated with the network design specifications and any costs that the Vendor would incur during implementation must build into its pricing for services in its response. The State expects the Vendor to work collaboratively with any LEC providing service to the State. Consequently, any LEC-related costs that are not identified by the Vendor and are charged to the State by the LEC must be paid by the Vendor to LEC on behalf of the State.	**1.8.1.14**
Right of Refusal	The Vendor shall identify all proposed Subcontractors to be used during the implementation and the relationship the Vendor has with the specific Subcontractors. The State reserves the right to interview and deny the use of any and all Subcontractors.	**1.8.1.15**

1.8.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Escalation Plan	The Vendor shall describe its implementation escalation procedures (with a minimum of five levels of escalation) for each severity level (i.e., time frames and conditions associated with escalating various types/categories of troubles to each successive level of management), including the following information for each level: • Name, position, location, name and contact number of individual • Time frames for notification of each level. The escalation procedure should include an escalation path to State with one at least at a vice president level and the Vendor is **strongly** encouraged to provide an escalation path to a senior executive with final decision authority. The Vendor shall provide the State with regular updates whenever there is a change in the Vendor's contact information.	**1.8.1.16**
Conversion Management	The Vendor shall describe its approach for managing the conversion from the current routing plan to the Vendor's routing plan. All current routing functionality (e.g., flexible routing service/least cost routing) must be maintained.	**1.8.1.17**
Changes in Design	For all Centrex and PBX locations, the Vendor must specify in its response to this RFP, any technical design changes the State must implement in order to utilize the Vendor's proposed voice services. The changes include (but are not limited to): • Port changes on State Centrex's or PBXs • Connection signaling (e.g., SS7, ISDN, etc.) • Flexible routing services on the State Centrex's • Integration with States Voice Mail Systems. • Additional hardware or software needed: • At State locations • In the State's Centrex provider networks • In the Vendor's network	**1.8.1.18**

1.8.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Related Changes	The Vendor must clearly identify all service or equipment related charges that the State may incur as a result of the implementation of the Vendor's voice services, especially at a LEC Centrex or one of the State's PBXs, so that the full functionality of the Vendor's voice service(s) are delivered to the State. The State expects the Vendor to work collaboratively with any LEC providing service to the State. Consequently, any LEC-related costs that are not identified by the Vendor and are charged to the State by the LEC must be paid by the Vendor to LEC on behalf of the State.	**1.8.1.19**
Minimize Risk	The Vendor shall describe how it plans to eliminate the risk to the State during Cutover of voice or data services.	**1.8.1.20**
Cutover Phasing	Although preliminary installation and testing of dedicated access locations may occur during business hours, the actual Cutover of all dedicated access locations shall be conducted during hours as specified by the State.	**1.8.1.21**
Back-out Strategy	The Vendor shall include a "back-out" plan for all proposed new technologies in case the solution is not workable. This plan should contain a timetable with the maximum installation time for reverting back to the network State prior to Vendor involvement.	**1.8.1.22**
Address Scheme	The State's current addressing scheme is to be kept intact to the extent that it is feasible and reasonable to do so without incurring significant technical or administrative difficulties. The Vendor is responsible for investigating and resolving any addressing issues, particularly if it may cause deviation from the State's current addressing scheme.	**1.8.1.23**

1.8.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**1.8.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**1.8.2.2**

1.8.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**1.8.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**1.8.3.2**
Provide a detailed technical service description for the alternative proposed.	**1.8.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**1.8.3.4**

1.8.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage implementation services for the State.	**1.8.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**1.8.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**1.8.4.3**
Resources	Provide a detail schedule for staffing associated with implementation. Schedule must include related labor charges, broken out by skill levels.	**1.8.4.4**

1.9 DISASTER RECOVERY

This Section sets forth the State's operational and technical specifications for Disaster Recovery for all proposed voice and data services.

Overview

The purpose of Disaster Recovery procedures is to recover from failure incidents that affect any portions of the Vendor's voice and data network services, including network management, ordering and provisioning systems that provide services to the State. It also addresses the Vendor's capabilities to assist the State when disaster conditions impact the State's facilities. Specifications are detailed to give the Vendor insight into the State's Disaster Recovery requirements. The Vendor has a responsibility to aid the State in recovering services by providing assistance in effecting the State's disaster recovery Plans. The Vendor is also expected to work with the State and with the LECs (local exchange carriers) providing service to the State during LEC disaster events. Accordingly, the Vendor must demonstrate a collaborative approach to planning and implementing disaster recovery plans to ensure business continuity for the State. However, the State expects the Vendor to design its network providing services to the State in such a manner as to minimize the impact to the State resulting from a failure in the Vendor's network.

Since the State will have a significant reliance on the Vendor to provide these services, the goal of this Section is to understand the Vendor's capabilities for providing service continuity and to what extent these match current requirements at the State. The Vendor may attach to its response and reference any existing disaster recovery plan that is relevant to the size and scope of the State. The Vendor's response should cover all areas; however, if items are covered in the overall plan, please refer to the specific section in the overall plan where the details of each offering exist.

The Vendor shall be fully responsible for coordinating all disaster recovery efforts across any and all Vendors (including LECs and equipment manufacturers) that provide service to the State.

1.10 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for disaster recovery services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

1.10.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Right to Declare	The State shall have the right to define and designate when a disaster has occurred that would require implementation of a joint disaster recovery plan.	**1.10.1.1**
Single Point of Contact	The Vendor shall act as the single point of contact during disaster recovery events and shall be fully responsible for coordinating all disaster recovery efforts across any and all Vendors that provide service to the State and State agencies. Describe how you will implement and fulfill this requirement.	**1.10.1.2**
Define Roles	Define criteria establishing a disaster and expected participation of the State (i.e. define and delineate roles and responsibilities for the Vendor and the State.)	**1.10.1.3**
Capabilities	Briefly describe all capabilities the Vendor will make available to support the State in the event of the failure of: • A State Node • The loss of a State end-user location (i.e., building is unusable by the State). • The loss of a critical system • The loss of a critical circuit	**1.10.1.4**
Alternate Site	Describe the Vendor's ability, including estimated time frames and the operational processes, for re-routing to alternative sites in the event of a disaster.	**1.10.1.5**

1.10.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Commitment to Currency	Define and describe the level of commitment to providing adequate upfront and ongoing to develop a disaster recovery plan for voice and data services provided to the State, and to ensure that the disaster recovery plan is modified to incorporate changes in the network (e.g., new services, significant growth in services, new State sites.) Include how the plan is to be kept current with the State's own disaster recovery plan.	**1.10.1.6**
Collaboration	Describe your process on working collaboratively with the State, including participating in face-to-face meetings with the State and possibly with other State Vendors, to develop a joint disaster recovery plan that recognizes and integrates the State's disaster recovery plan and the Vendor's disaster recovery plan.	**1.10.1.7**
Protection Against Loss	Describe how you will protect the State against the following events (to include guarantees and penalty for non-protection): • Cut of a major fiber route • Loss of an Inter-LATA facility • Loss of a dedicated access facility to CPE at a State site • Loss of a LEC Central office • Loss of an IXC POP • Loss of the Vendor Network Management Center serving the State • Loss of the Vendor's network management system(s) serving the State • Loss of a frame/ATM switch • Loss of a voice switch • Any other unplanned loss	**1.10.1.8**
Continuity	All Vendor systems will be designed for business continuity purposes to minimize downtime and any impact to the State.	**1.10.1.9**

1.10.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Recovery Plan	For each service listed in the RFP, the Vendor must provide a disaster recovery/business continuity plan for the State that incorporates each of the following elements: • Role of physical diversity • Automatic rerouting details • Recovery methods and procedures • Alternative facilities and carriers • Recovery time frames	**1.10.1.10**
Testing Plan	The Vendor shall indicate its ability to support Disaster Recovery testing on the networks by rerouting or activating backup routes during the testing period and then returning service to the primary route at the State's direction.	**1.10.1.11**
Key Personnel	The Vendor must provide the contact(s) responsible to the State for execution of the disaster recovery plans, and must detail the specific roles and responsibilities of Vendor personnel.	**1.10.1.12**
Additional Cost	The State will not incur any charges should a disaster affect the Vendor's service to the State. Should the Vendor's recovery plan not be adequate to restore full service, the State retains the right to obtain replacement service from another carrier during any period of service outage, and until the State is satisfied that service has been properly restored, without penalty (e.g., minimum commitments reduced accordingly, no termination charges, etc.).	**1.10.1.13**
Test Frequency	The Vendor must describe its network disaster recovery plan, including the specific test plans/continuity testing that it implements to ensure business continuity, and the frequency with which it implements/conducts its test plan.	**1.10.1.14**
State Cost	The Vendor shall agree to provide the State with replacement service or equipment as a result of a failure of any State-owned equipment or facilities (e.g., State WAN node, State office site, etc.) and describe how the Vendor will charge the State for the replacement service and/or equipment, including any discounts off of the list price and any one time charges.	**1.10.1.15**

1.10.2 Table – "Technical Questions "	Proposal Paragraph #
Will you meet the functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**1.10.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**1.10.2.2**
The Vendor will describe any software tools it will use to administer these functions.	**1.10.2.3**

1.10.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**1.10.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**1.10.3.2**
Provide a detailed technical service description for the alternative proposed.	**1.10.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**1.10.3.4**

1.10.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage disaster recovery services for the State.	**1.10.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**1.10.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**1.10.4.3**
Resources	Provide a detail schedule for staffing associated with disaster recovery. Schedule must include related labor charges, broken out by skill levels.	**1.10.4.4**

2.0 LONG DISTANCE SERVICES

2.1 CURRENT STATE ENVIRONMENT

The State currently has two contracts for long distance service: the Qwest contract expires December 7, 2002 and the Sprint contract expires March 16, 2003. This long distance service is provisioned via two dedicated connections for voice traffic supplied by two service providers.

During 2001, the total minutes (72,136,552) for long distance service was divided in four segments:

Intrastate – Intra-LATA – 33,527,605

Intrastate – Inter-LATA – 27,911,141

Interstate - 10,460,808

International - 236,998

2.2 SERVICE/SUPPORT REQUIREMENTS:

The service features below are minimum requirements for Long Distance services. Review each service feature and succinctly describe compliance or material differences in your proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

2.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Long Distance Definition	As specified in Section 13 Central Office Facilities Services, all calls made between all State entities located within the State on a statewide basis shall be considered On-Net. Per minute and per call charges are NOT allowed for calling services. All charges for calls to and from State entities between exchanges are inclusive of the monthly line charge. Therefore, On-Net calls must not be charged in Long Distance Service pricing. Describe your compliance and abilities to provide this service.	**2.2.1.1**

2.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Technology Updates	It is recognized that technology will change during the term of the contract. The Vendor is invited to propose additional, or alternate innovated technologies for consideration by the State. Any such technology services may or may not be accepted by the State at any time during a resulting contract as the balance of Vendor service product line. The influx and transition of new technology may result in the disconnection or discontinuation of a defined service and connection to new technology. The Vendor may not impose any charges for a given service when the State discontinues one service for the replacement of another while remaining a Vendor customer. The Vendor shall continue the availability of all services and technologies unless otherwise directed by the State. Describe your compliance and abilities to provide this service.	**2.2.1.2**
Interfacing With Other Vendors	During and after installation, vendors must contact alternate State vendors to resolve problems if they occur. The State will mediate in the event of unresolved conflicts. Vendors must attend any meetings called by the State to resolve such conflicts without additional charges being imposed on the State. Mandatory attendance shall follow the timeframes as defined in the repair definitions within this document. Vendors must abide by State resolution of all such conflicts, and perform services as directed by the State. Describe the process for meeting these requirements.	**2.2.1.3**

2.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Subscription for Local and Toll Services	The Vendor shall fully cooperate with any other State Vendor or entity, to ensure complete compliance with the North American dialing Plan and any international plans providing service. Once service is established, the Vendor shall be solely responsible to insure that a freeze is placed on the local service provider (LSP), Intra-LATA Primary Inter-exchange Carrier (LPIC) and Primary Inter-exchange Carrier (PIC). The State shall not be responsible for the payment of any bills generated due to LSP, LPIC or PIC changes not requested by the State. All account errors that may result from "slamming" or other unauthorized activity shall be monitored and paid for by the Vendor. Any and all charges levied by the LEC or other entity for LPIC changes shall be invoiced to and paid directly by the service provider. All PIC selections defined by the State shall be "frozen" by the telephone service provider. Any charges resulting from unauthorized changes performed by the Vendor shall be invoiced to and paid by the local telephone provider. Describe your compliance and abilities to provide this service.	**2.2.1.4**
State Agency Project/Status Meetings	The Vendor must participate in project and/or status meetings with the information technology professionals from the using agency, during the term of the contract, as required by the State agency. It is anticipated that the beginning of the project will require, at a minimum, biweekly project/status meetings. Describe your compliance and abilities to provide this service.	**2.2.1.5**
Installation Standards	Installations shall be in compliance with current Bellcore standards, National Electrical Code, BICSI and the EIA/TIA Wiring Standard. State Vendor's compliance.	**2.2.1.6**

2.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Vendor Equipment	Vendor shall provide all services using quality switching equipment with fully redundant hardware, automatic recovery resource switching and power backup facilities. Describe your compliance and abilities to provide this service.	**2.2.1.7**
Service Interruptions	The Vendor shall notify the State of any unscheduled interruptions of service during the implementation, installation of or repair of any service. The Vendor must clearly describe, in detail, in its response, its plan to minimize the disruption when converting the State from its existing technology to any new service. The plan described in the Vendor's response must include, at a minimum, conversion from the existing situations to the proposed services.	**2.2.1.8**
Final Acceptance of Installation	All Vendor services must be tested by the Vendor prior to final connectivity to State equipment and after connectivity is complete. A 30-day in service acceptance test must include circuit and/or line tests under fully loaded operation, and be completed prior to transition. Acceptance by the State of any network service will require the completion of a full billing cycle, first delivery and acceptance of all period reports and an initial acceptance review of first invoice. Describe your compliance and abilities to provide this service.	**2.2.1.9**

2.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
System Fraud Control	The Vendor shall be responsible to monitor network traffic, validate fraudulent traffic, mitigate fraud, analyze fraud patterns and refer cases for investigation and utilize methods for fraud avoidance. The Vendor must provide a network security service, monitoring call fraud, 24x7x365, to detect and prevent unauthorized service use. The State shall not be held liable for costs of suspected fraudulent calls. State accounts shall be credited for the cost of the fraudulent activity once detected. Monitoring shall include excessive call charges on a single line, account or calling card, excessive call duration, "third world" calls, high quantity of calls to the same geographic location and questionable third party charge-backs. Vendor shall include in the response an established plan for the prevention of unauthorized use of services proposed to meet the requirements of this RFP. Definition of methods employed for fraud detection shall include unauthorized changing of the primary Intra-LATA and Inter-LATA carrier (slamming) and assurance that unauthorized third party charges, (cramming) do not result in charges to the State. Describe your compliance and abilities to provide this service.	**2.2.1.10**
Implementation Plan	Provide a comprehensive implementation plan that details the smooth transition from our current environment to your proposed services. Include the following information. • A brief description of the major steps in the implementation process. • Any major activity that involves our employees or premises (e.g., end user surveys, delivery dates for equipment, database loading, etc.) • Time frames for critical activities and other tasks required of the State. • Special attention must be acknowledged in implementation plans for those agencies that require a very high level of security (Corrections, State Police, and some Family Independence Agency locations).	**2.2.1.11**

2.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Escalation Procedures	Describe your escalation procedures for addressing problems during implementation. These procedures must include, at a minimum, the names and telephone numbers of the appropriate persons to be contacted.	**2.2.1.12**
Account Team Support	• Provide an overview of your account team support structure. Indicate the support level offered and identify the account team members and responsibilities. • Provide one local point of contact throughout implementation and operations of the services during normal business hours (8 a.m. 5 p.m.). This contact shall be responsible for all coordination within its company until the service is implemented and a correct billing received at each State location.	**2.2.1.13**
Customer Support	• The State requires problem resolution 24x7x365. Provide an escalation chart that contains the next point of contact for the State if the main contact is unavailable listing at least three (3) levels of contacts. This escalation chart is to be updated and circulated to a main contact in each agency whenever a change occurs. • All customer service representatives shall be adequately trained to assist the State. They shall be knowledgeable of the Vendor's offerings to the State if it is listed as a contact to the State. (Example: If a number is given to the State for resolving billing issues, the person(s) answering that number are to be aware of the rate structure, charges waived, etc.) • The Vendor shall make recommendations to the State for installing dedicated access to agency sites. • The Vendor shall be responsive to State inquiries by returning phone calls within one hour. Describe your compliance and abilities to provide this service.	**2.2.1.14**

2.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Service Order Turnaround	Provide average or standard lead times for all standard service offerings herein. See Figure 15.2.2	**2.2.1.15**
Mean Time To Repair	Provide your average Mean Time To Repair (MTTR). How will you ensure the State a minimal MTTR?	**2.2.1.16**
Priority Restore Process	Vendors must describe their priority restore policy.	**2.2.1.17**
Network Design	• Briefly describe the advantages of your network design. • Describe your network's availability and reliability. • How do you ensure survivability and service continuity? • How does your network deliver off net calls to local exchanges?	**2.2.1.18**
Ongoing Optimization	Provide a brief summary of how you will ensure proactive network management of your telecommunications environment through evolving network design and improvements. Describe how these services will be available to develop and maintain the State's telecommunications network.	**2.2.1.19**
Standards Compliance	Provide proof or a statement of compliance to all relative, ANSI, FCC, and MPSC standards, rules and regulations for all services to be provided. It is the Vendor's responsibility to make certain the latest issue of codes and standards are incorporated in the services to be provided.	**2.2.1.20**
Network Disaster Recovery	Provide a comprehensive network disaster recovery plan.	**2.2.1.21**

2.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Qualified Personnel	• Each Vendor shall submit a list of at least three customer locations at which the Vendor has installed and maintained network services as being requested in this RFP. Such a list shall include the name, address and telephone number of the individual(s) responsible for the project management and installation of comparable services, a list of the services included in the Cutover, the date on which the services were Cutover, and the scope and size of the project at Cutover. Extensive experience in the project management of large Cutovers is mandatory for the success of this project. • The Vendor shall provide a list of maintenance customer installations with the same information as required above. • The Vendor must certify the experience and factory training of all personnel, software maintenance and/or supervisory personnel who will program, install or maintain the selected services. • It is preferred that all Vendor personnel be in-house, full time employees. If the Vendor will be utilizing contract employees and/or Subcontractors, identify such and the services to be provided. The State reserves final approval for which Subcontractors may be used by the Vendor.	**2.2.1.22**
Quality Assurance Program	Vendor must have a quality assurance program. Describe the quality assurance program. Reports from the quality assurance provider shall be submitted to the Acquisition Services and the Department of Information Technology on a quarterly basis in a format agreed to by the State.	**2.2.1.23**

2.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Operator Services	• Operator services may apply to charge card calls and instances where rotary dial phones are used at either the originating or terminating end of the call. In such instances the following conditions apply: • The Vendor must maintain adequate personnel to provide an average operating answer performance as follows on a monthly basis: • 90% of operator assistance calls answered within ten (10) seconds. • The Vendor will not charge the State an operator assistance fee resulting from the use of a rotary phone in the call. • Computerized operator coverage must allow the option to speak to a person. • Computerized operator coverage must allow TDD access.	**2.2.1.24**

2.3 SOFTWARE FEATURES

The software features below are minimum requirements for Long Distance services. Review each software feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

2.3.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Dedicated Termination Overflow	If an on-net call cannot be completed (e.g., all dedicated on-net access lines are busy), Vendor's service must convert the on-net number to a 10 digit off-net number and terminate it via the public switched network at no additional charge. Describe your compliance and abilities to provide this service.	**2.3.1.1**

2.3.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Customized Dialing Plan	The State may want to choose the dialing plan that will be used in its virtual network. The Vendor must allow the State to design its own on-net dialing plan for its virtual network. The default dialing plan will be the North American Numbering Plan. Describe your compliance and abilities to provide this service.	**2.3.1.2**
Forced On-Net Routing	Vendor's service must be able to translate 11-digit dialed calls to the State's private dialing plan and terminate the call to an on-net location. Describe your compliance and abilities to provide this service.	**2.3.1.3**
Call Screening	Vendor's service must support class of service screening with the following features: • Calls screened by call type, time of day, day of week, and destination number. • Optional codes that may override assigned classes of service at dedicated access locations. • Multiple classes (categories) of service. • Ability to customize classes of service to allow screening to the last digit. Describe your compliance and abilities to provide this service.	**2.3.1.4**

2.3.2 Table – "Technical Questions"	**Proposal Paragraph #**
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**2.3.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**2.3.2.2**

2.3.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**2.3.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**2.3.3.2**
Provide a detailed technical service description for the alternative proposed.	**2.3.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**2.3.3.4**

2.3.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage long distance services for the State.	**2.3.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**2.3.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**2.3.4.3**
Resources	Provide a detail schedule for staffing associated with long distance. Schedule must include related labor charges, broken out by skill levels.	**2.3.4.4**

3.0 CALLING CARDS

3.1 CURRENT STATE ENVIRONMENT:

The State has approximately 27,000 calling cards in use. State agencies purchase their calling cards directly from the contracted carriers.

Report on service and minutes (approximately 610,000) of yearly usage is as follows:

Intrastate-Intra-LATA----------52,973

Intrastate-Inter-LATA----------492,710

Interstate-Long Distance-------56,763

International----------7,159

3.2 SERVICE / SUPPORT REQUIREMENTS

The service features below are minimum requirements for calling card services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

3.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Pricing	All calls made between State entities shall be on net calls and not charged in the event a calling card is used. Describe your compliance and abilities to provide this service.	**3.2.1.1**
Access	Vendor shall allow services from all other Vendor telephone services, including pay telephone service providers. The calling card Vendor shall ensure that the services utilize designated carriers (local, Intra-LATA or Inter-LATA) for transport, ensuring that charges are rated at contracted rates. All calls processed outside of North America, shall reflect the lowest cost-calling plan available to the terminating country. Describe your compliance and abilities to provide this service.	**3.2.1.2**

3.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Operator And Directory Assistance Services 24x7x365.	Services shall allow access to operator assistance and directory assistance. The Vendor shall provide calling card services that include human operator service that is available 24x7x365. The Vendor shall describe, in its response, its operator service offering. Describe your compliance and abilities to provide this service.	**3.2.1.3**
Provisioning	Vendor shall be responsible for the delivery of requested cards to State offices as defined by the State. Delivery shall be within 10 days of written request via e-mail, fax or postal mail forwarded by the State. Describe your compliance and abilities to provide this service.	**3.2.1.4**
Authorization Codes	Calling cards shall utilize a minimum of a 10-digit access code followed by a four (4) digit Personal Identification Number (PIN). Authorization code and PIN shall be random digits, not those of existing telephone numbers. Authorization numbers shall be unique per card. Cards with same access codes and different PIN numbers shall not be allowed. Describe how PIN numbers can be changed at the holder's discretion. Describe your compliance and abilities to provide this service.	**3.2.1.5**

3.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Activation and Cancellation	• Cards shall be activated only after received by the State, and a toll free telephone number is called to verify receipt of card, and to activate cards. • Cards shall be deactivated immediately when requested card cancellation order is placed by the State. The State shall bear no cost to deactivate cards, nor be responsible for calls initiated through said calling cards once cancellation order has been placed by the State. • The State shall not be charged for use of calling cards after request of deactivation by the State. • Calling cards may be canceled at any time, with no resulting penalty. Describe your activation/cancellation processes in particular and all responsibilities expected of the State. Describe your compliance and abilities to provide this service.	**3.2.1.6**
Physical Characteristics	• Calling cards shall be standard credit card size of durable plastic or composite substance, the size of industry standard credit cards. • Cards shall be magnetic strip encoded with the appropriate access number for use with intelligent pay telephones. • The calling card number shall be printed on the card. • Card shall be printed with STATE OF MICHIGAN in an indelible fashion. • Card shall include printed instructions on how to use the card to make calling card calls. A toll free assistance number shall be included on the card. Card shall contain printed instructions for returning a lost card (Including toll-free 800 report number). Describe your compliance and abilities to provide this service.	**3.2.1.7**

3.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Toll Free Help Desk	The Vendor must provide a help desk available through a toll free number, with caller assistance available 24x7x365, to assist callers in making calls and using the Vendor calling card. Describe your compliance and abilities to provide this service.	**3.2.1.8**
Fraud Control	The State requires the Vendor to safeguard the calling card numbers and prevent unauthorized or fraudulent use by its employees, agents or to disclose these numbers to anyone outside the corporation. Describe how it can discern legitimate usage from fraud usage especially when calls are made to those international locations deemed as 'high fraud risk" by the Vendor. The Vendor shall describe, in its response, how this type of monitoring is accomplished and the options that can be invoked by the Vendor (i.e., suspension of the calling card, etc.)	**3.2.1.9**
Theft and Fraud Liability	Describe the Vendor's limits of liability for theft and fraud.	**3.2.1.10**
Misdial Correction Feature	Callers shall be allowed to correct a miss-dialed phone number or authorization code without having to hang up and redial. How do you propose giving credit for a misdialed call? Describe your compliance and abilities to provide this service.	**3.2.1.11**
Multiple Calling Feature	Callers shall be able to place additional calls after terminating the first call without hanging up and redialing the access number and authorization codes. Describe your compliance and abilities to provide this service.	**3.2.1.12**
Call Restriction	Vendor shall be able to individually restrict charge cards from making international and/or interstate calls. Describe your compliance and abilities to provide this service.	**3.2.1.13**

3.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Pre-Paid Calling Cards	The Vendor may propose prepaid calling services as part of their calling card offering. Services definitions shall include the dollar increments available for cards, how cards will be acquired and distributed, the time period cards will be honored once used, time delays in obtaining cards and general availability. Describe your compliance and abilities to provide this service.	**3.2.1.14**

3.2.2 Table – "Technical Questions"	**Proposal Paragraph #**
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**3.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**3.2.2.2**
The Vendor will describe any software tools it will use to administer these functions.	**3.2.2.3**
What is your annual revenue for and estimated market share of calling card services in the geographic areas you are proposing?	**3.2.2.4**

3.2.3 Table – "Proposed Alternatives"	**Proposal Paragraph #**
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**3.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**3.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**3.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**3.2.3.4**

3.2.4 Table – "Managed Services "		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage calling card services for the State.	**3.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**3.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**3.2.4.3**
Resources	Provide a detail schedule for staffing associated with calling cards. Schedule must include related labor charges, broken out by skill levels.	**3.2.4.4**

4.0 AUDIO TELECONFERENCING

4.1 CURRENT STATE ENVIRONMENT:

Audio conferencing is provided via a service provider for large conference bridge requirements. The total minutes for conference calls are approximately 93,000 yearly, which serves approximately 50% of employees of 12 major State agencies.

4.2 SYSTEM FEATURES (FUNCTIONAL) REQUIREMENTS

The service features below are minimum requirements for Audio conferencing services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

4.2.1 Table – "System Feature [Functional] Requirements"

System Feature	Description	Proposal Paragraph #
Audio Teleconferencing Pricing	Vendor shall provide, at a minimum, audio conferencing via dial-in, 800 dial-in, and dial out. Describe your compliance and abilities to provide this service.	**4.2.1.1**
Coordinator Set-up	The Conference coordinator shall be able to screen participants and put them on hold until the conference chairperson is ready to begin. Describe your compliance and abilities to provide this service.	**4.2.1.2**
Coordinator-on Demand	Any participant can access a coordinator at any time during the conference by dialing a short access code from a touch-tone phone. Describe your compliance and abilities to provide this service.	**4.2.1.3**
Roll Call and Announcement	The Coordinator can link all participants, conduct a roll call and then is allowed to leave the conference. Describe your compliance and abilities to provide this service.	**4.2.1.4**

4.2.1 Table – "System Feature [Functional] Requirements"		
System Feature	**Description**	**Proposal Paragraph #**
Advance Notification	Vendor may be requested to notify participants by phone or fax of an upcoming conference call. Describe your offering capabilities and functions.	**4.2.1.5**
Lecture Mode/Listen Only	Allows a speaker to "lecture" uninterrupted by other participants during some or all of the conference. Describe your offering capabilities and functions.	**4.2.1.6**
Question and Answer Sessions	Participants in "listen only" mode shall be able to signal that they have a question using their touch-tone keypad. They are placed in queue and can be screened before going on-line with their question. Describe your compliance and abilities to provide this service.	**4.2.1.7**
Automated Polling	Participants shall be able to respond to pre-establish multiple-choice questions with their touch-tone phones. Results are tabulated by the conference system and can be provided both during the conference and later in printed form. Describe your compliance and abilities to provide this service.	**4.2.1.8**
Tape Recording	Customer shall be able to request cassette tapes of the conference. Describe your compliance and abilities to provide this service.	**4.2.1.9**
Conference FAX	Customer shall be able to request distribution of documents via fax to all participants before, during, or after the conference call. Describe your compliance and abilities to provide this service.	**4.2.1.10**
Transcription Service	Customer shall be able to request a written record of the conference call. Describe your compliance and abilities to provide this service.	**4.2.1.11**

4.2.1 Table – "System Feature [Functional] Requirements"		
System Feature	**Description**	**Proposal Paragraph #**
Password Security	Each participant shall be able to provide, in addition to the conference chairperson's name, a customer-specified password before being allowed to access the call. Describe your compliance and abilities to provide this service.	**4.2.1.12**
Security Lock-Out	Customer shall be able to block all access into the conference using a touch-tone phone. Describe your compliance and abilities to provide this service.	**4.2.1.13**
Standing Conferences	Customer shall only have to make one call to the Vendor to make reservations for regularly recurring conferences. Describe your compliance and abilities to provide this service.	**4.2.1.14**
Additional Dial Outs	Once the conference is underway, additional people shall be able to be included in the call. Describe your compliance and abilities to provide this service.	**4.2.1.15**
Entry and Exit Tones	Tones shall be generated when a participant joins or exits a conference call. Describe your compliance and abilities to provide this service.	**4.2.1.16**
Participant Lists	At the customer's request a list of participants names can be faxed or mailed to the customer immediately after the conference to help with record keeping. Describe your compliance and abilities to provide this service.	**4.2.1.17**

4.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**4.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**4.2.2.2**

4.2.2 Table – "Technical Questions"	Proposal Paragraph #
Describe the process to ensure that individual agencies are billed for usage.	**4.2.2.3**
Describe the process to initiate an audio teleconference to include the option for attendant service and security.	**4.2.2.4**
What are additional conference call features and associated costs?	**4.2.2.5**
Describe your experience in delivering these functions in environments similar to the State.	**4.2.2.6**
What is your annual revenue for and estimated market share of audio conferencing services in the geographic areas you are proposing?	**4.2.2.7**

4.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**4.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**4.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**4.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**4.2.3.4**

4.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage Audio conferencing services for the State.	**4.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**4.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**4.2.4.3**
Resources	Provide a detail schedule for staffing associated with Audio conferencing. Schedule must include related labor charges, broken out by skill levels.	**4.2.4.4**

5.0 TOLL-FREE SERVICES

5.1 CURRENT STATE ENVIRONMENT

Most State agencies make use of incoming toll-free numbers. The actual usage cannot be stated at this time since this service is billed directly to each agency.

5.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for toll-free services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

5.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Pricing	The State requires postalized pricing for all toll free services. Describe your compliance and abilities to provide this service.	**5.2.1.1**
Number Portability	Describe support for incoming toll-free numbers. Vendor must address number portability of existing and new numbers.	**5.2.1.2**
Single Number Service	Vendor's service must provide one number to function in interstate, intrastate, and Canadian markets. Describe your compliance and abilities to provide this service.	**5.2.1.3**
Area Code and Exchange Routing	Vendor's service shall be capable of routing calls from a single toll-free number to multiple locations based on the area code or area code and local exchange of the calling party. Describe your compliance and abilities to provide this service.	**5.2.1.4**
Time of Day, Day of Week, Day of Year Routing	Vendor's service must route calls based on the time of day, day of week and day of year of the call. Describe this requirement.	**5.2.1.5**

5.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Percentage of Calls Routed	The State may need to balance traffic across multiple call centers to more effectively use personnel and facilities. Vendor's service must let the State specify the percentage of calls routed to each call center. Describe how this will be accomplished.	**5.2.1.6**
Real-Time ANI Delivery	The State will want to identify priority callers and access caller-specific information when the incoming call is received. Vendor's service must provide real-time Automatic Number Identification (ANI) delivery. This feature must be available through both in-band and out-of-band signaling. Provide the details for this feature.	**5.2.1.7**
Dialed Number Identification Service (DNIS)	The State will want to route calls to separate toll-free numbers and separate attendant groups, and to answer calls differently based on the dialed number. Vendor's service must be able to identify specific toll-free numbers when multiple numbers terminate on the same trunk group. This feature must be delivered in conjunction with real-time ANI. Describe your compliance and abilities to provide this service.	**5.2.1.8**
Off-Net Route Advance	Vendor's service must allow toll-free calls to overflow from the original target T1 to local business lines at the same location. Multiple toll-free numbers within a single trunk group must be allowed to route to unique local business lines. Describe your compliance and abilities to provide this service.	**5.2.1.9**
Rerouting Response Time	At times, the State will need to change the routing pattern of our toll-free calls and will require a very quick response time to our rerouting requests. Vendor's service must provide rerouting to occur within 15 minutes. Describe your compliance and abilities to provide this service.	**5.2.1.10**

5.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Intelligent Call Processing	The State requires the ability to maintain total control over the routing of our toll-free calls. Vendor's system must be capable of dynamically controlling toll-free call routing. Describe your compliance and abilities to provide this service.	**5.2.1.11**
Intelligent Network Call Distribution	Vendor's network must be capable of interfacing with the State's Automatic Call Distributors (ACD's) and route calls based on dynamic agent status data. Describe your compliance and abilities to provide this service.	**5.2.1.12**
International Toll-Free	Provide an overview of your international toll-free service offering, including all countries served.	**5.2.1.13**
RESP ORG Responsibility	The Vendor shall act as the Responsible Organization ("RESP ORG") for "inbound toll-free" services requirements, and as the designated RESP ORG, the Vendor must maintain "inbound toll-free" service records in a database. Describe your compliance and abilities to provide this service.	**5.2.1.14**
Directory Listings	The Vendor shall provide toll-free number listing in the national "inbound toll-free" directory and "inbound toll-free" directory assistance operator service at no cost to the State. There will be no charge for non list toll-free numbers. Describe your compliance and abilities to provide this service.	**5.2.1.15**

5.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet the functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**5.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**5.2.2.2**
Describe your policy for liability for toll fraud?	**5.2.2.3**
Describe your guarantee for your toll-free service. Specifically address a money-back guarantee option.	**5.2.2.4**

5.2.2 Table – "Technical Questions"	Proposal Paragraph #
Describe the capacity and flexibility of toll free services.	**5.2.2.5**
Describe additional features and associated costs.	**5.2.2.6**
Describe the process to obtain new toll-free numbers, to include ordering timeframes.	**5.2.2.7**
Provide details of security and fraud protection plans.	**5.2.2.8**
Describe your experience in delivering these functions in environments similar to the State.	**5.2.2.9**

5.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**5.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**5.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**5.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**5.2.3.4**

5.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage toll-free services for the State.	**5.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**5.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**5.2.4.3**
Resources	Provide a detail schedule for staffing associated with toll-free services. Schedule must include related labor charges, broken out by skill levels.	**5.2.4.4**

6.0 VIDEO COMMUNICATIONS

6.1 CURRENT STATE ENVIRONMENT:

Video Communications consists of the deployment, within the State, of point-to-point and/or multi-point video equipment, related equipment, network and transmission services, and operational support for videoconferences and multimedia services. Managed services include, but are not limited to, providing systems integration and systems management services, equipment, call set-up, and call management services, design and planning services, training, consultation for end user access to product and services, trouble monitoring, and resolution, end-to-end quality control for point-to-point and multi-point connections, and long range planning implementation of new technology for multimedia communications.

Currently the State has approximately one hundred video conferencing units. Consumer and Industry Services, Department of Corrections, Family Independence Agency (FIA), Department of Natural (DNR), and Department of State make regular use of video communications. Consumer and Industry Services use Tandberg and Polycom equipment to conduct hearings, primarily over ISDN lines. The Department of Corrections has a successful Telemedicine application, which has been in use for several years. The installed manufacturer's equipment is VTEL, and most of the traffic is routed over T-1's at varying speeds depending on the application being used. The Department of Corrections has recently installed Polycom equipment at some sites for conference and hearing use. FIA provides distance learning, training, and conducts some meetings over ISDN BRI, and T-1's, using Polycom equipment. Several T-1's are located at strategic sites for use with a Polycom model FX with bridging capability. DNR conducts meetings and training using BRI, IP over the data network, and bridging using VTEL and Polycom equipment. The Department of State has recently installed Polycom View stations for use in licensing hearings, over ISDN circuits. Numerous other systems, (PictureTel, Intel, and some unknown systems) are also in use within other State agencies. Other agencies make use of off site locations for conferencing and bridging needs.

Ameritech and Sprint currently provide video bridging services, as well as equipment and services. Each has a State contract for these items that expire September 30, 2004.

The State wishes to enable its users, and constituents to seamlessly communicate with one another and external entities via video communications. The State also wishes to take advantage of streaming video technology. The State desires that interactive video communications between two or more points should be as "effortless" as voice communications and streaming video content should be as simple as launching a web browser.

6.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for video communication services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

6.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Equipment	Describe equipment that Vendor will sell and service.	**6.2.1.1**
Site Availability and Site Maintenance	Describe process for ensuring that the appropriate sites using the video infrastructure are available and functioning. Describe process for assisting users with instructions for equipment usage when necessary.	**6.2.1.2**
Call Set up	Describe provisioning for, support of, operations, and costs associated with the call set up process	**6.2.1.3**
Gateway	Describe provisioning for, support of, operations, and costs associated with the gatekeeper and gateway operation.	**6.2.1.4**
Bridging	Describe bridging and gatekeeper operation and costs supporting H.320, H.323 and emerging technologies for on-net and off-net communications.	**6.2.1.5**
Encryption	Describe standards based encryption for all video communications.	**6.2.1.6**
Session Operations	Describe cascading, segmenting, chairman control, audio switching and continuous presence service for simultaneous inclusion of a minimum of seven sites. Describe support for document sharing and real-time access to other online information.	**6.2.1.7**
On-site Support	Describe provisioning of on-Site support, to supervise, support conferences, coordination, and perform testing. Specific consideration of 24x7x365 operations support.	**6.2.1.8**

6.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Scheduling	Describe the Vendor's ability to work with Designated Users (i.e., "schedulers") to schedule conference rooms and sites, both operator-assisted and Authorized User-initiated through a secure, network-accessible channel. Provide procedures for resolving scheduling conflicts. Provide a scheduling system that will accommodate emerging technologies scheduling needs within the same integrated system with provision for new standards to include directory-enabled services.	**6.2.1.9**
Unscheduled Attendees	Allow unscheduled conference attendee additions to an existing conference within 10 minutes.	**6.2.1.10**
Trouble Escalation	Describe your trouble escalation process.	**6.2.1.11**
Video Directory	Describe the Vendor's ability to: • Establish and maintain a video directory including distribution and posting of the directory to a secure, network-accessible channel. • Provide for migration to a directory-enabled infrastructure. • Ensure the video directory interfaces with the scheduling system to provide information necessary for State User's prioritization of conferences.	**6.2.1.12**
Database	Describe the Vendor's process for the maintenance of a secure database in an industry standard format containing host employee ID, host name, account number, originating location, dialed location(s), date and time, type of session, type of call (point-to-point or bridged), duration and applicable charge, with access for ad hoc queries by Designated Users.	**6.2.1.13**

6.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Reports	At minimum the following reports should be provided: • Summary report including a cost analysis. • Monthly and YTD summary reports by host including: • Conference ID and conferee • Conference types (by site name) • Reserved minutes and connections • Total number of connects. • Total number of minutes for each Agency and other business functions. • Total feature charges. • Total number of connections that came up late, delay in minutes, resolution and cause. • Total number and types of connections where there were problems within the connection/conference but the conferences were not canceled due to problems. • Total number of and types of connections where the connection/conference were canceled during a connection due to problems. Also list what types of problems these were, and total charges. • Statewide Video Communications usage reports, to include ad-hoc reporting features, should be available to Designated Users on a secure, network-accessible channel.	**6.2.1.14**
Personnel	Describe the qualifications and certifications that your helpdesk technicians possess. What are standard hours of operation for helpdesk, and how do you handle 7x 24 needs?	**6.2.1.15**
Additional Reports	Describe administrative procedures and process, plus additional reports that the Vendor desires and/or recommends.	**6.2.1.16**

6.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet the functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**6.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**6.2.2.2**
Provide an overview for how you will provide a highly reliable Statewide converged Video Communications network and Video Conferencing Equipment to support Video Communications for Telemedicine, Training, and other State business communications.	**6.2.2.3**
Describe how you will provide video conferencing services, including Authorized User support, engineering design/support, operations, and provide for videoconference services to be fully functional on a daily basis.	**6.2.2.4**
Describe the number of sites (minimum of 7) that are available when continuous presence is being used in Video Communications.	**6.2.2.5**
Describe the life cycle of proposed system(s) and the upgrade requirements as well as how you intend to remain current, technologically and administratively, following full implementation.	**6.2.2.6**
Describe the Vendor's experience in delivering the above functions in environments similar to the State.	**6.2.2.7**
Describe all software tools Vendor will use to administer the above functions.	**6.2.2.8**
Provide an overview of the convergence of video applications with other applications. Describe if video will be transported on a convergent network, and if so, how video applications will be prioritized over the network.	**6.2.2.9**
Describe fully how the Vendor intends to migrate the State from H.320 to H.323 protocol. Include time frame and cost.	**6.2.2.10**
Describe how the Vendor intends to support the existing H.320 network until migration to a converged network for voice, video and data eliminates the need for the existing H.320 systems, including but not limited to: State-independent ISDN systems, and CODECS, room control system(s), audio systems and cameras.	**6.2.2.11**

6.2.2 Table – "Technical Questions"	Proposal Paragraph #
Describe how the Vendor intends to support: A migration plan providing support for all the current functionality of the existing systems, including but not limited to bridging, gateway services, and continuous presence. Working with representative(s) from Designated Users in the planning process to assist in addressing compatibility issues concerning Equipment, Software, scheduling, and support issues.	**6.2.2.12**
Describe how Vendor will support implementation of ITU standards related to Video Communications when standards are revised, and as new standards are adopted, and how will you document these standards changes and implementations.	**6.2.2.13**
Describe Vendor's support of the Video Communications T.120 and T.120 Annex C standards.	**6.2.2.14**
Describe how you support the provision of access to the Video Communications system database, to Designated Users via a secure, network-accessible channel.	**6.2.2.15**
Describe video equipment that you sell and maintain.	**6.2.2.16**

6.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**6.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**6.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**6.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**6.2.3.4**

6.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage video communication services for the State.	**6.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**6.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**6.2.4.3**
Resources	Provide a detail schedule for staffing associated with video communication. Schedule must include related labor charges, broken out by skill levels.	**6.2.4.4**

7.0 CELLULAR SERVICE

7.1 CURRENT STATE ENVIRONMENT

The State currently purchases cellular and/or wireless telephone devices for over 5,000 wireless telephone users. The current providers are Data Control Technologies, Inc., Ameritech (expires January 31, 2003), Nextel (expires January 31, 2003) and CenturyTel. All current contracts, except Nextel and Ameritech, have been extended until August 1, 2002.

7.2 SERVICE/SUPPORT REQUIREMENTS:

The service features below are minimum requirements for cellular telephone service. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

7.2.1 Table - Service / Support [Functional] Requirements

Service Feature	Description	Proposal Paragraph #
Support	Vendor shall indicate which wireless telephones they support. Analog, digital, Dual-Mode, Tri-Mode, or other (describe.)	**7.2.1.1**
Telephone Sets	How do you propose keeping the State current with technology changes that occur frequently in wireless devices. Describe the telephone sets that are included in the monthly fee.	**7.2.1.2**
Online System	Vendors shall provide an online or Web application to allow the State to order, change, and terminate accounts as well as order cellular telephones and accessories. Describe your compliance and abilities to provide this service.	**7.2.1.3**
Local Coverage	Vendor will provide amplifiers in building when cellular coverage is not acceptable as determined by the State. Describe your compliance and abilities to provide this service to include the type of amplification equipment proposed. How will this service be priced?	**7.2.1.4**
State Coverage	Describe your plan to provide ubiquitous cellular coverage statewide. Is this coverage included in your monthly access charge?	**7.2.1.5**

7.2.1 Table - Service / Support [Functional] Requirements		
Service Feature	**Description**	**Proposal Paragraph #**
National Coverage	Describe your plan to provide ubiquitous cellular coverage nationwide. Is this coverage included in your monthly access charge?	**7.2.1.6**
Fees	Describe the Vendor's proposed fee/services structure, specifically, how the fees will include the following and list a price for each feature: • Two-way Messaging • Call Waiting • Caller ID • Redial • Voice Mail • E-mail • Text Messaging • Long distance (Nationwide & Intrastate) • Mobile to Mobile • Voice-mail retrieval • Roaming within the State • 3-way calling • Unlimited Internet access • Task Groups – Single Button	**7.2.1.7**
Pooled Minutes	The State requires pooled minutes for the entire State. How will the Vendor meet this requirement?	**7.2.1.8**
Training	Describe how the Vendor will provide administrative and user training upon initiation of services, and on-going training as requested.	**7.2.1.9**
Monitoring	Describe how the Vendor shall gather detailed system information, and make such information available to the State. System shall include network management, network planning, and billing systems.	**7.2.1.10**
Network Management System	Describe how the Vendor will maintain a network management system (NMS) to monitor all wireless telephone equipment, including any system servers, and how the State will have a view into the NMS for monitoring and escalation purposes. What is the cost for this service?	**7.2.1.11**

7.2.1 Table - Service / Support [Functional] Requirements		
Service Feature	**Description**	**Proposal Paragraph #**
Escalation Procedures	Describe how escalation will be provided from the NMS to the ticketing system; technicians will be available on a 24x7x365 basis to perform network management operations from Vendor's NOC; the Vendor will provide an interface to Vendor's NOC from the State NOC. What is the cost for this service?	**7.2.1.12**
Customer Service	Describe the Vendor's ability to staff and provide a single point of contact Help Desk for all technical support issues to the State.	**7.2.1.13**
Help Desk Integration	Describe the Vendor's ability to integrate the Vendor's help desk with other existing State help desk operations and systems; be staffed 24x7x365; to allow support requests to be taken via telephone, e-mail, and web interface from the State. What is the cost for this service?	**7.2.1.14**
Ticketing System	Describe the Vendor's formal trouble ticketing system; the ability to provide a dedicated toll-free number for the State's use; procedures for the State to escalate tickets. What is the cost for this service?	**7.2.1.15**
Security	Describe the Vendor's security measures at voice network access points, for dedicated and switched access. Vendor's proposal must provide security and fraud protection plans. How do you propose transmission security and cloning prevention? What is the cost for this service?	**7.2.1.16**
Audit Support	Describe the Vendor's support for audits that will include traffic data and call detail information. What is the cost for this service?	**7.2.1.17**
Maintenance	Describe the Vendor's ability to provide proactive maintenance to ensure maximum uptime; to provide for an automated trouble ticketing system and advance notice of any maintenance either scheduled or emergency in nature. What is the cost for this service?	**7.2.1.18**
Software	Describe the Vendor's ability to provide software for telephone programming. All software must be capable of allowing the saving of all telephone lists under a unique file name and address books for individual locations. What is the cost for this service?	**7.2.1.19**
Disaster Recovery	Describe the Vendor's disaster recovery plans as related to business resumption services offered. What is the cost for this service?	**7.2.1.20**

7.2.1 Table - Service / Support [Functional] Requirements		
Service Feature	**Description**	**Proposal Paragraph #**
Dropped Call	Describe how the Vendor will credit the user account for ALL dropped calls. Describe what your process is for crediting the account.	**7.2.1.21**
Help Desk Tickets	For tier—1 help desk issues, 85% of tickets must be initiated within 30 minutes of notification of the problem and resolved within 1 hour of the ticket being open. Describe your compliance and abilities to provide this service.	**7.2.1.22**
Reporting Requirements	Describe how the Vendor will provide regular periodic monthly reports, an ad-hoc reporting capability, and make reports available via a web interface. Describe the ability to submit monthly reports on all service level agreement metrics with details on system outages to include the following: Details on the outage, reason for outage, length of outage, systems affected and impact. The monthly report must include a management overview with a synopsis of current wireless telephones in use. Vendor shall provide reporting to include: • Management Overview Report • Originating User (number) • Number Dialed • Date/Time of Call Length of Call • Rate or Rate Code • Cost of Call • Incoming Caller's Number • Toll Charges • Dispatch Charges What is the cost for this service?	**7.2.1.23**
Wireless	Describe your current and future deployment of PDAs and wireless data.	**7.2.1.24**

7.2.2 Table – Technical Questions	Proposal Paragraph #

7.2.2 Table – Technical Questions	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**7.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**7.2.2.2**
The State has a management agreement with AAT Communications, Corp. to manage State property, - including a large number of wireless towers, for the location and collocation of wireless facilities. Describe how you would utilize this arrangement in the areas of the State where you would have to deploy new sites to meet the coverage requirements stated above.	**7.2.2.3**
What is your proposal to meet wireless service requirements?	**7.2.2.4**
Describe your approach for a cost-effective solution to the State's wireless telephone needs.	**7.2.2.5**
Describe in detail your system to order new telephones, change account information, and disable telephones.	**7.2.2.6**
Explain your pricing plans and pooled minutes. (The State will not consider cancellation charges.)	**7.2.2.7**
Provide details of security and fraud protection plans.	**7.2.2.8**
Describe any GPS or vehicle tracking system your company can provide. What is the cost for this service?	**7.2.2.9**

7.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**7.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**7.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**7.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**7.2.3.4**

7.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage cellular services for the State.	**7.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**7.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**7.2.4.3**
Resources	Provide a detail schedule for staffing associated with cellular services. Schedule must include related labor charges, broken out by skill levels.	**7.2.4.4**

8.0 PAGING/MESSAGING

8.1 CURRENT STATE ENVIRONMENT:

The State has contracts with Arch and Range pager and messaging services, which both expire on August 1, 2003. Data reported from 12 of 23 major agencies provides the following pager distribution: 1,431 pagers in use (294 alphanumeric, 1,137 numeric). Pager service includes 1,153 pagers with just local/statewide service and 62 pagers with nationwide service. Total dollars spent for all reporting agencies from August 2000-August 2001 was $561,580.

8.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for paging/messaging services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

8.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Coverage	Describe the proposed pager/messaging service coverage including these features, at a minimum: Must have a State-wide footprint. Vendor will be required to provide paging devices. Paging capability includes toll-free access, voice messaging, numeric and alphanumeric functions with two-way capabilities, and email. Pager service plan options must include local, regional, national, and international coverage.	**8.2.1.1**
Order Processing	Vendor must provide an online system to allow the State to order change, and terminate accounts as well as order pagers and accessories. Describe your compliance and abilities to provide this service.	**8.2.1.2**

8.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Monitoring	Describe how the Vendor shall gather detailed system information, and make such information available to external applications to include network management, network planning, and billing systems. Vendor will maintain a network management system (NMS) to monitor all pager infrastructure related equipment, including any system servers. The State will have a view into the NMS for monitoring and escalation purposes. Technicians will be available on a 24x7x365 basis to perform network management operations from Vendor's NOC. The State will have an interface to Vendor's NOC from State NOC. Describe your compliance and abilities to provide this service.	**8.2.1.3**
Customer Service	Describe how the Vendor shall staff and provide a single point of contact Help Desk for all technical support issues. Vendor's help desk must (1) integrate with the other existing State help desk operations and systems, (2) be staffed 24x7x365, (3) support requests must be taken via phone, email, and web interface from the State central help desks and entered into a formal trouble ticketing system, and (4) provide a toll-free number for support calls from the various help desk contacts. Procedures are required for the State to escalate tickets. Vendor must be able to provide any service moves/adds/changes in addition to possible online system access from the State. Describe your compliance and abilities to provide this service.	**8.2.1.4**
Security	Describe how the Vendor shall provide the State with security and fraud protection plans.	**8.2.1.5**
Maintenance	Describe how the Vendor will provide proactive maintenance to ensure maximum uptime. Vendor's proposal must provide for (1) an automated trouble ticketing system and advance notice of any maintenance either scheduled or emergency in nature, (2) current policies and procedures to ensure change management for new installs, upgrades, or modifications, (3) troubleshooting and fault management, and (4) loaner or replacement equipment where applicable.	**8.2.1.6**
Disaster Recovery	Describe how the Vendor shall provide disaster recovery plans as related to business resumption services offered.	**8.2.1.7**

8.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Response Time	Describe how the Vendor shall provide 24 hour by 7day service with a maximum two hour response time.	**8.2.1.8**
Reporting Requirement	Describe how the Vendor shall provide regular monthly reports, an ad-hoc reporting capability, and make reports available via a web interface. Vendor must submit monthly reports on all service level agreement metrics with details on system outages to include (1) details on the outage, (2) reason for outage, (3) length of outage, (4) systems affected, and (5) impact. The monthly report must include a management overview with a synopsis of current pagers in use, and details on newly issued pagers since the previous report. Describe your compliance and abilities to provide this service.	**8.2.1.9**
Pricing	Describe and provide detail on the Vendor's pricing for pager hardware models with options for lease/rental or outright purchase, monthly charge for airtime access, area coverage at the local, regional, and national level. The Vendor shall provide costs for the following: • Alphanumeric Paging with E-mail Response • Numeric Paging • Voicemail • Toll-Free Number – Instate and National • Two-way Service • Operator Dispatch • Broadcast Paging	**8.2.1.10**

8.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**8.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**8.2.2.2**
Describe the system to order new pagers, change account information, and disable accounts.	**8.2.2.3**
Explain available pager hardware and detailed features.	**8.2.2.4**

8.2.2 Table – "Technical Questions"	Proposal Paragraph #
Describe pager service plan options with detailed information, address local versus regional coverage as well as a toll-free number option.	**8.2.2.5**
What pager accessories will be available?	**8.2.2.6**
Describe the proposal to provide State with priority service for emergency traffic during times of disaster.	**8.2.2.7**
Provide an overview of your maintenance program.	**8.2.2.8**
Provide details of security and fraud protection plans.	**8.2.2.9**
Explain how you will meet reporting requirements.	**8.2.2.10**

8.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**8.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**8.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**8.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**8.2.3.4**

8.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage paging/messaging services for the State.	**8.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**8.2.4.2**
References	Provide at least three but, no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**8.2.4.3**
Resources	Provide a detail schedule for staffing associated with paging/messaging. Schedule must include related labor charges, broken out by skill levels.	**8.2.4.4**

9.0 PAYPHONE SERVICES

9.1 CURRENT STATE ENVIRONMENT:

Pay phones in State buildings and on State property provide the public an ability to place telephone calls when visiting State facilities. The State requires at least one payphone at each Building that State Offices occupy, and other facilities such as parks, campgrounds, etc. Currently the State has about 900 payphones where calls may be local, domestic and international long distance. Calls may be paid by various methods (e.g., coins, calling cards, collect, credit cards, third party billed, etc.). There is no current contract for payphones. This section does not include inmate pay phone service, as they are not included in the scope of the Agreement.

9.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for pay telephone services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

9.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Vendor Representation	The Vendor shall describe their provisioning support in (at a minimum) the following areas: • Consistent Vendor representation (familiar with the State typical order and provisioning activities) • Authorization as a pay phone services provider in the State. • Provision of pay phone calling to all the United States and all country members of the ITU. Charged rates inclusive of all FCC; and other regulatory, legislative, and judicial charges. Calls charged as sent, paid, collect, third party billed, calling card, purchasing cards, and commercial credit cards. • Electronic order submission.	**9.2.1.1**

9.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Operational Support Capabilities	The Vendor shall describe their operational support capabilities in, at a minimum, the following areas: • Operator and directory assistance services 24x7x365. • Pay phones accessible to the disabled. • 24x7x365 service monitoring and trouble reporting hotline. • Rapid response service restoration with formal trouble escalation process and contacts. • Monthly service affecting outage report. • Centralized technician dispatch. • Problem and resolution notification to the State network control center. • Support coordination of third party access providers.	**9.2.1.2**
Pay Phone Removal	No pay phone will be removed from State buildings or State controlled properties without prior approval from State. Describe your compliance and abilities to provide this service.	**9.2.1.3**
Commissions	Describe the Vendor's assistance in maximizing commissions for commission and incentive programs, and accurately post credits to the customer of record accounts commissions no later than 15 days after the end of the previous month.	**9.2.1.4**
Rates	The Vendor shall describe their usage management capabilities in, at a minimum, the following areas: • Review usage patterns to identify potential abuses and poor practices. • Charged rates that are no higher than the dominant carrier for Inter-LATA toll, Ameritech for Intra-LATA toll, and the local ILEC for local calls • The Vendor assuming financial responsibility for all fraudulent long distance calls. Describe your compliance and abilities to provide this service.	**9.2.1.5**

9.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Phone Books	Appropriate ILEC phone books at each phone. Describe your compliance and abilities to provide this service.	**9.2.1.6**
Service Level	Service will be available 99.99 % of the time. 90% of troubles are repaired with in 4 hours. Describe your compliance and abilities to provide this service.	**9.2.1.7**

9.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**9.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**9.2.2.2**
The Vendor will provide an overview for how it will provide pay phone services throughout the State.	**9.2.2.3**
The Vendor will describe how local and long distance calls will be processed, and how it will install, maintain, and administer these telephone sets. Vendor will also describe its commission program.	**9.2.2.4**
The Vendor will describe how the provisioning of these services will interrelate with the provisioning of other Services as identified in this RFP.	**9.2.2.5**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**9.2.2.6**
The Vendor will describe any software tools it will use to administer these functions.	**9.2.2.7**
What is your annual revenue for and estimated market share of payphones in the geographic areas you are proposing?	**9.2.2.8**

9.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**9.2.3.1**

9.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**9.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**9.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**9.2.3.4**

9.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage payphone services for the State.	**9.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**9.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**9.2.4.3**
Resources	Provide a detail schedule for staffing associated with payphones. Schedule must include related labor charges, broken out by skill levels.	**9.2.4.4**

10.0 AVAYA PBX EQUIPMENT

10.1 CURRENT STATE ENVIRONMENT:

The State has an extensive Avaya G3 product line. Approximately 50% of the State's Executive Branch is serviced by eight Avaya G3 PBX communications servers, with a majority of supported voice stations located in the Lansing Metropolitan Area. The current configuration supports 44,000 PBX ports, 15,295 Centrex lines, 65 off premise extension (OPX) lines, and 1,416 tie-lines via 59 T-1 circuits.

The State also has many PBX's throughout the State from many different manufacturers. For more details, please see Appendix F.

The State's Extended MAN (XMAN) consists of three PBXs in Lansing, networked together over a private 31-mile fiber optic ring that is dedicated to the voice communications infrastructure.

In addition, PBX's in Grand Rapids, Detroit and Saginaw are connected via T-1 and DS-3 circuits, with additional T-1 and DS-3 circuits provided over the WAN. The Avaya 6400 series phone sets are used across all sites.

The purpose of this section is to obtain quotations for the States embedded base of Avaya PBX equipment, adjuncts, parts and associated station equipment. Vendors wishing to submit quotations for different lines of PBX equipment should refer to **Section 29** and verify compliance to the specifications outlined within that section. These systems will be in various State owned and/or leased buildings throughout the State. The State does not anticipate and/or desire wholesale replacement of the current environment, but will entertain and give serious consideration to innovative proposals that demonstrates a reduction in cost associated with increased capabilities and advancement in technology.

10.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for the Avaya PBX equipment, adjuncts, parts, and associated station equipment. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

10.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Standards	The infrastructure materials and labor shall meet ANSI, EIA/TIA and BICSI standards. All applicable National Electrical Codes, Building Codes and jurisdictional requirements are to be met. All materials must be UL listed. Describe your compliance and abilities to provide this service.	**10.2.1.1**
Jumper and Cross Connect Work	The PBX Vendor will be responsible for running all cross connect jumpers and the installation of station equipment from the station jacks to the desk top. Describe your compliance and abilities to provide this service.	**10.2.1.2**
Right of Ownership	All data, materials, documentation and other products prepared or acquired by the Vendor shall belong exclusively to the State. The State shall also own and retain intellectual property rights covering technology developed as part of the services described herein and paid for by the State. Describe your compliance and abilities to provide this service.	**10.2.1.3**
Deployment of Systems	State agencies need the ability to deploy, in a timely manner, new PBX equipment of various sizes, adjunct systems, parts and station equipment. Describe your compliance and abilities to provide this service.	**10.2.1.4**
Provision of New Systems	The Vendor must be able to provide fully operational new PBX systems to meet the needs of a diverse assortment of State agencies. Describe your compliance and abilities to provide this service.	**10.2.1.5**
Maintenance and MAC work	The Vendor must be able to fully support the new PBX's equipment and MAC work. Describe your compliance and abilities to provide this service.	**10.2.1.6**

10.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
New Equipment	All equipment must be new and at the highest manufacturer's issue and revision levels agreed to by the State. Describe your compliance and abilities to provide this service.	**10.2.1.7**
Software Releases	All software must be at the highest manufacturers release and revision levels agreed to by the State. Describe your compliance and abilities to provide this service.	**10.2.1.8**
Network Interfaces	The Vendor must provide, install, test and insure the proper operation of all required interfaces to the States private network, Ameritech Centrex, GTE Centranet, any inter-exchange carriers and the public switch networks. Describe your qualifications for complying with this requirement.	**10.2.1.9**
Consultation	The Vendor must help the various State agencies to analyze their telecommunications needs and configure and program the PBX systems and associated station/trunk equipment to fill those needs. Explain how you will accomplish this requirement.	**10.2.1.10**
Software Translations	The Vendor must provide all software translations on the PBX systems as required and/or requested by the State agencies during the installation and acceptance period at no additional cost to the State. Describe your compliance and abilities to provide this service.	**10.2.1.11**
Training	The Vendor must train, on site, all site personnel on the use and operation of their telephones and system features during or before the acceptance period at no additional cost to the State. The State will require training on technology updates. Describe what will be included to meet these training needs. Include additional costs, if any, for refresher training. Describe your compliance and abilities to provide this service.	**10.2.1.12**

10.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Turn-key Implementation	The State recognizes that each Vendor may approach PBX design and implementation in different ways. Therefore, the bid quotes for the cost models must include all equipment, hardware, software, programming, additional cabling if needed, training, etc. for the PBX to operate in conformance with the requirements of the cost models even if the specific items, features or labor required for the proper operation of the PBX system has not been individually addressed in the cost models. Explain how the Vendor will provide this type of "turn-key" implementation.	**10.2.1.13**
Installation	The Vendor must insure that the installation team is completely familiar with and understands the work plan and contract requirements prior to the installation of any PBX equipment, adjuncts, parts, and associated station equipment. Explain how that will be accomplished.	**10.2.1.14**
Technical Work Plan	The Vendor must work with the State to provide the State with a technical work plan for the entire project prior to the start of each installation. This plan must include a Gantt type display showing each event, task and decision point. All technical work plans must meet with the approval of the State agency that is purchasing the PBX equipment, adjuncts, parts, and associated station equipment. The work plan must provide for minimal disruption of existing telephone service. Provide a detailed over view of the events, task and decision points and describe how you will implement the new system with a minimum disruption of existing telephone service.	**10.2.1.15**

10.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Building Structure Modifications and Restoration	• The Vendor will maintain a clean work area free of debris and trash. • The Vendor is responsible for the repair of any damage caused to the facility as a result of the Vendor's activities. Restoration will be equal to or better than the condition of the facility prior to the project. • The Vendor is responsible for removing and replacing all ceiling tiles, duct covers, and power pole covers as required for the installation. • The Vendor will need prior approval from the State's project manager for any work that requires modification of the building structure or design. Describe your compliance and abilities to provide this service.	**10.2.1.16**
Permits	The Vendor is responsible for obtaining all required permits prior to the start of each project. Describe the plans to accomplish this requirement.	**10.2.1.17**
Labor Equipment Requirements	The Vendor is responsible for providing all supervision, labor, tools test sets, equipment, hardware, cabling materials, transportation, hauling and hoisting and miscellaneous materials as part of any contract issued by the State. Describe your compliance and abilities to provide this service.	**10.2.1.18**
Standards	The Vendor and their representatives will follow and adhere to all OSHA and MIOSHA requirements and standards. Describe your compliance and abilities to provide this service.	**10.2.1.19**
Working Conditions	The Vendor will not compromise safe working techniques and/or environments during any portion of the work associated with any contracts issued by the State. Provide documentation to support this requirement.	**10.2.1.20**

10.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
New Materials Requirement	All materials are to be new and 100% free of defects. Describe your compliance and abilities to provide this service.	**10.2.1.21**
Environmental Requirements	The Vendor is responsible for providing to the State project manager all space, environmental and electrical requirements for the switch room immediately after the receipt of a purchase order from the State for the project. Describe the plans to accomplish this requirement.	**10.2.1.22**
Connectivity	The Vendor is responsible for interfacing, connecting and testing existing ancillary telephone equipment such as paging systems, answering machines, auxiliary bells, elevator phones, etc. with their PBX. Describe the plans to accomplish this requirement.	**10.2.1.23**
Engineering and Design Costs	The Vendor is required to absorb all programming, engineering and design costs for any new PBX equipment or adjuncts or additions/upgrades to existing PBX systems or adjuncts. Provide documentation to support this requirement.	**10.2.1.24**
Ordering Time Frames	It will be necessary to purchase additional parts and equipment to support existing PBX systems and adjuncts. Explain the process and time intervals for ordering additional equipment.	**10.2.1.25**
Engineering Costs	The Vendor is required to absorb all engineering and design costs for all upgrades or additions to existing PBX systems or adjuncts. Describe your compliance and abilities to provide this service.	**10.2.1.26**
Pricing	Provide a current price sheet including item pricing and installation for all new adjuncts, parts and features associated with new PBX systems. This pricing will be included in the contract and used to purchase equipment at the State's discretion. Please submit this pricing information electronically. Pricing information for ALL parts will be evaluated along with the Cost Models.	**10.2.1.27**

10.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Asset Management	As the need for additional telephone service increases on the State owned PBXs, it will be necessary to obtain additional telephone equipment. These needs may include such items as circuit packs, carriers, adjuncts and EPNs. Explain how the Vendor will handle adding to the existing State owned equipment. How does the Vendor propose to track their assets in a lease/purchase or lease arrangement?	**10.2.1.28**
Engineering Requirement	Some equipment additions will require engineering. Explain how the Vendor will handle the required engineering. Explain the qualifications of those who will be involved in the engineering process.	**10.2.1.29**
Ownership of Equipment	In the event that the Vendor gains ownership of the new equipment, propose options for the transfer of ownership of the equipment or other alternatives at the end or termination of the contract.	**10.2.1.30**
Order Time Frames	The State is in constant need of additional telephone equipment. This equipment must be put into service in a timely manner. What is the expected time from ordering the equipment to deployment of the equipment?	**10.2.1.31**
Ordering Process	It will be necessary to purchase new PBX equipment and adjuncts. Please explain the process for ordering additional equipment.	**10.2.1.32**
Engineering Costs	The Vendor is required to absorb all engineering and design costs for new PBX equipment or adjuncts. Explain the process. Explain the process and describe your compliance and abilities to provide this service.	**10.2.1.33**

10.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Needs Assessments	As the need for additional telephone service increases, it will be necessary to obtain additional PBX equipment and adjunct equipment. The Vendor will be expected to work with the various State agencies that will be using the new equipment to determine their needs and service requirements. Please explain how the Vendor will handle the needs assessment of the various State agencies. How does the Vendor propose to track their assets?	**10.2.1.34**

10.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**10.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**10.2.2.2**
For each of the State defined geographic regions in which you are offering service indicate: • Number of service/support dispatch facilities • Number of installation and repair technicians • Whether you own or resell the support services bid in your response. • Location of the service/support dispatch facilities	**10.2.2.3**
What is your annual revenue for and estimated market share of PBX provisioning services in the geographic areas you are proposing?	**10.2.2.4**
Detail your customer problem reporting, analysis, and resolution procedures. Indicate how "partner" service center participation is handled, including trouble ticket systems. What is the State visibility to problem resolution involving partner service centers?	**10.2.2.5**
To what extent is the State expected to participate in problem resolution?	**10.2.2.6**
Describe how you will monitor the offered services to ensure compliance with service level guarantees.	**10.2.2.7**

10.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**10.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**10.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**10.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**10.2.3.4**

10.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage PBX services for the State.	**10.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**10.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**10.2.4.3**
Resources	Provide a detail schedule for staffing associated with PBX systems. Schedule must include related labor charges, broken out by skill levels.	**10.2.4.4**

11.0 PBX VOICE INSTRUMENT, REPAIR AND INSTALLATION OF PHONES

11.1 CURRENT STATE ENVIRONMENT:

The State's voice network consists of a combination of PBX and Centrex services. PBX services include approximately 26,000 lines connected to Lucent/Avaya G3 equipment. All telephone sets are currently Lucent/Avaya instruments. There are also a number of stand-alone small PBX's and Key Systems in agency offices scattered throughout the State.

Representative geographical distribution of the PBX switches and models is shown in the figure below.

11.1.1 Figure – "Geographical distribution of the PBX switches and models"

	Lansing				Saginaw	Grand Rapids	Detroit		
SET TYPE	CP	GT	SC	CTX	SG	GR	DT	DE	TOTAL SETS
Misc Mfgr.									
KXT-2335	265	656	21	29	6	0	24	0	1,001
KXT-2355	100	343	41	68	5	0	34	0	591
2500	546	431	230	18	293	0	244	0	1,762
2500B	12	9	18	1	0	0	0	0	40
2553B	4	1	2	1	0	0	0	1	9
2554	53	117	79	4	1	0	5	1	260
KXT-3145	5	5	5	1	0	0	0	0	16
4500	25	197	7	0	0	0	35	0	264
Meridian									
5009	0	0	0	81	0	0	0	0	81
5112	0	0	0	40	0	0	0	0	40
5209	0	0	0	27	0	0	0	0	27
5312	0	0	0	66	0	0	0	0	66
Lucent/ Avaya									
6220	412	1,095	247	210	22	0	38	2	2,026
6221	7	55	12	3	3	0	0	0	80
6402	956	153	0	0	24	0	0	20	1,153
6408	1,081	925	377	0	46	0	0	855	3,284
6416D	178	667	274	0	0	0	0	24	1,143
6416DM	1,318	584	204	0	29	0	0	552	2,687
6424D	29	297	119	0	0	0	0	5	450
6424DM	588	325	29	0	15	0	0	220	1,177
7205	0	0	0	0	0	0	15	0	15
7303	6	1	0	0	0	0	136	0	143
7405	1	82	2	0	0	0	26	0	111
7406D02	2	28	1	0	0	0	8	0	39
7407D01	1	37	0	0	0	0	2	0	40

11.1.1 Figure – "Geographical distribution of the PBX switches and models"

	Lansing				Saginaw	Grand Rapids	Detroit		
SET TYPE	**CP**	**GT**	**SC**	**CTX**	**SG**	**GR**	**DT**	**DE**	**TOTAL SETS**
7410D01	5	44	0	0	0	0	1	0	50
7406D01	1	30	0	0	0	0	23	0	54
7406D02	0	23	0	0	0	0	7	0	30
7406D05	0	4	0	0	0	0	3	0	7
7406D06	0	17	0	0	0	0	5	0	22
7406D07	6	290	0	0	0	0	21	0	317
7406D08	1	6	0	0	0	0	7	0	14
7410D02	4	85	2	0	0	0	0	0	91
7407D02	2	39	0	0	2	0	2	0	45
7434	0	21	1	0	0	0	5	0	27
8110	397	1,749	239	128	16	0	25	0	2,554
8403	0	1	0	0	0	90	0	0	91
8410B	1	3	3	0	0	7	0	0	14
8411	0	1	0	0	0	59	0	0	60
8410D	0	402	72	0	0	97	0	0	571
8434	0	260	43	0	0	20	0	0	323
Switch Total	6,006	8,983	2,028	677	462	273	666	1,680	**20,775**
Lansing	17,694	Capitol (**CP**), Grand Tower (**GT**), Secondary (**SC**), Lansing Centrex (**CTX**)							
Detroit	2,346	Detroit Plaza (**DT**), Cadillac Place (**DE**)							
Saginaw	462	Saginaw State Office Bldg and Tittabawassee Rd. (**SG**)							
Gr Rapids	273	Grand Rapids State Office Bldg. (**GR**)							
	20,775								

As a reference, not necessarily an indication of future workload, the number and location of Trouble Calls performed by the State Telecom Service Center in calendar year 2001 is provided in the figure below.

11.1.2 Figure – "Trouble Calls performed by STATE Telecom Services"	
Capitol	1,400
Grand Tower	1,700
Secondary	430
Gr Rapids	10
Saginaw	90
Detroit	280
Centrex	290

As a reference, not necessarily an indication of future workload, the number and location of moves/adds/changes performed by the State Telecom Service Center in calendar year 2001 is provided in the figure below.

11.1.3 Figure – "Moves/adds/changes performed by STATE Telecom Services"	
Capitol	11,000
Grand Tower	9,000
Secondary	1,830
Gr Rapids	80
Saginaw	450
Detroit	1,700
Centrex	1,140

11.2 SERVICE/SUPPORT REQUIREMENTS

The State requires the Vendor to maintain an inventory of sets in the field, and repair reported or discovered trouble with the sets, cabling, and network that supports the functionality of the end-user voice instruments.

The Vendor must be able to respond quickly to reported or discovered trouble, and dispatch technicians to any geographic area that is managed by the Vendor. The Vendor must also be able to escalate the priority of dispatch and repair of reported trouble, at the request of the State, and maintain a list of critical sites, as directed by the State, which will always receive highest priority service.

The service features below are minimum requirements for PBX services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

11.2.1 Table – "Service / Support Requirements"

Service Feature	Description	Proposal Paragraph #
Response to Service Trouble Call(s)	The Vendor shall describe their implementation of the following monthly reports including, at a minimum: • Service level compliance (MTTR-Mean Time to Repair.) • Number of service calls by location. • Number of service calls by instrument model. • Number of service calls by problem cause code. • Customized reports.	**11.2.1.1**
Operational Support	The Vendor shall describe their operational support capabilities in, at a minimum, the following areas: • 24x7x365 trouble reporting hotline. • On-line electronic access for trouble ticket submission and status inquiry. • Rapid response service restoration with formal trouble escalation process and contacts. • Monthly service affecting outage report. • Centralized technician dispatch. • Problem and resolution notification to the State network control center. • Support coordination of third party access providers.	**11.2.1.2**
Response to New Service Calls/work Orders	The Vendor shall describe their provisioning support in the following areas:	**11.2.1.3**
Representation	Consistent Vendor representation (familiar with the State typical order and provisioning activities.)	**11.2.1.4**
Order Submission	Electronic order submission.	**11.2.1.5**
Configuration	Customer configuration of line and instrument parameters.	**11.2.1.6**
Provisioning	Standard provisioning interval.	**11.2.1.7**
Scheduling	Schedule the procurement of circuits, installation of Equipment and installation of transport service, as well as the completion of all other activities necessary to achieve timely and successful project Install and MAC completion.	**11.2.1.8**

11.2.1 Table – "Service / Support Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Acceptance	Service Acceptance interval on turn-up to The State.	**11.2.1.9**
Reporting	Weekly work-in-process reporting.	**11.2.1.10**
Order Expedite	Process for Expedite Order.	**11.2.1.11**
Correctness	Process for validating Install and MAC orders for correctness and proper authorization.	**11.2.1.12**
Changes	Coordinating and making changes to the cabling infrastructure.	**11.2.1.13**
Space	Conducting site surveys and coordinating physical space requirements.	**11.2.1.14**
Change Orders	Process for Order change acceptance and control.	**11.2.1.15**
Asset Management	Update the State's Asset inventory management database (MOST system) upon completion of Install and MACs.	**11.2.1.16**
Escalation	Process for escalation of work order priority.	**11.2.1.17**
Chronic Problems	Process to track chronic problem sites or equipment.	**11.2.1.18**
Priority	Process to identify sites that are "critical" and should always receive highest priority.	**11.2.1.19**
Site Environment	• Fire-stopping all core drilled holes and firewall penetrations made in order to complete an Install and MAC. • Avoiding the disturbance of Site landscaping by using existing infrastructure (e.g., open conduit, existing cable plant) where feasible to support inter-building connections. • For any Install and MACs that touch or change State properties, returning the property to its original condition (e.g., landscaping, paint, etc.).	**11.2.1.20**
Added Support	Please describe additional support for end-user and circuit provisioning.	**11.2.1.21**

11.2.1 Table – "Service / Support Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Service Level Agreement	The State expects contractual service level guarantees to ensure the technical, provisioning, billing, and operational performance of networking services bid in response to this RFP. Guarantees shall be structured on a "per circuit" or "per instrument" basis with measurement over a monthly interval. Vendor shall submit a draft service level guarantee for each offered service including financial penalties in the form of service credits or rebates for non-compliance.	**11.2.1.22**
Standards	Vendor 's methods and materials must comply with Industry standards (Electronics Industries Alliance/Telecommunications Industry Association – EIA/TIA, ANSI, BICSI) and State standards. Describe assurance methods.	**11.2.1.23**
Experience	Vendor must have a thorough knowledge of Avaya G3 PBX equipment and Ameritech Centrex features. Describe compliance and experience.	**11.2.1.24**
Synchrony	Vendor must coordinate fieldwork with any software/switch translations. Some orders must be accomplished synchronously with software changes. Describe you compliance and abilities to provide this service.	**11.2.1.25**
Coordination	• Vendor must coordinate fieldwork with customers/end-users. • Vendor must coordinate fieldwork with major construction work and adhere to construction project timetables. • Vendor must coordinate fieldwork with office remodeling work and adhere to remodeling project timetables. Describe you compliance and abilities to provide this service.	**11.2.1.26**
Service Disruption	Vendor must be able and willing to perform fieldwork after hours, before hours, and on weekends if necessary to complete work on time or minimize disruptions in service. Describe you compliance and abilities to provide this service.	**11.2.1.27**

11.2.1 Table – "Service / Support Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Emergency MAC's	Vendor must be able to expedite emergency MAC orders, as defined by the State, and provide less than 8-hour response to these emergency MACs. Describe you compliance and abilities to provide this service.	**11.2.1.28**
Service Center	Vendor must maintain a service call center to take orders and answer customer questions about order status, order changes, and other pertinent changes. Describe you compliance and abilities to provide this service.	**11.2.1.29**
Meetings	Vendor must provide representation at construction planning meetings, when requested. Describe you compliance and abilities to provide this service.	**11.2.1.30**
Emergency Trouble Calls	Vendor must be able to expedite emergency trouble calls, as defined by the State, and provide less than 4-hour response to these emergency trouble calls. Describe you compliance and abilities to provide this service.	**11.2.1.31**
Work Orders	Vendor must provide a process to enter work orders into the State's Telemanagement system (MOST) for billing. (The "MOST" Telemanagement system is a customized Telemanagement and asset management system supplied by MATCH systems of Grand Rapids, Michigan.) Describe you compliance and abilities to provide this service.	**11.2.1.32**
Cable Records	Vendor must provide a process to enter cable record changes into the State's Telemanagement system (MOST) for maintaining accurate cable records. Describe you compliance and abilities to provide this service.	**11.2.1.33**
Database Updates	Vendor must provide a process to update the State's Tele-management system (MOST) number database as names and phone numbers are added, changed, and deleted. This database must be kept up-to-date for the use of the State Operators. Describe you compliance and abilities to provide this service.	**11.2.1.34**

11.2.1 Table – "Service / Support Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Service Response Times	Describe your compliance to Figure "Service Response Times"	**11.2.1.35**

11.2.2 Figure – "Service Response Times"	
Service Feature	**Description**
Repair Service – Premise wiring	1 day
Repair Service – Instrument	1 day
Repair Service – Line and Instrument configuration	1 day
Installation (<=10 lines) – Premise wiring	5 days
Installation (<= 10 lines) – Instrument	5 days
Installation (<=10 lines) – Line and Instrument Configuration	2 days
Installation (>10 lines) – Premise wiring	Per project schedule
Installation (>10 lines) – Instrument	Per project schedule
Installation (>10 lines) – Line and Instrument Configuration	Per project schedule
Move (<=10 lines) – Premise wiring	5 days
Move (<=10 lines) – Instrument	2 days
Move (<=10 lines) – Line and Instrument Configuration	2 days
Move (>10 lines) – Premise wiring	Per project schedule
Move (>10 lines) – Instrument	Per project schedule

11.2.2 Figure – "Service Response Times"	
Service Feature	**Description**
Move (>10 lines) – Line and Instrument Configuration	Per project schedule
Add (<=10 lines) – Premise wiring	5 days
Add (<=10 lines) – Instrument	2 days
Add (<=10 lines) – Line and Instrument Configuration	2 days
Add (>10 lines) – Premise wiring	Per project schedule
Add(>10 lines) – Instrument	Per project schedule
Add (>10 lines) – Line and Instrument Configuration	Per project schedule
Change (<=10 lines) – Premise wiring	5 days
Change (<=10 lines) – Instrument	2 days
Change(<=10 lines) – Line and Instrument Configuration	2 days
Change(> 10 lines) – Premise wiring	Per project schedule
Change(> 10 lines) – Instrument	Per project schedule
Change(> 10 lines) – Line and Instrument Configuration	Per project schedule

11.2.3 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**11.2.3.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**11.2.3.2**

11.2.3 Table – "Technical Questions"	Proposal Paragraph #
For each of the State defined geographic regions in which you are offering service indicate: • Number of service/support dispatch facilities • Number of installation and repair technicians • Whether you own or resell the support services bid in your response. • Location of the service/support dispatch facilities	**11.2.3.3**
To what extent is the State expected to participate in problem resolution?	**11.2.3.4**

11.2.4 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**11.2.4.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**11.2.4.2**
Provide a detailed technical service description for the alternative proposed.	**11.2.4.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**11.2.4.4**

11.2.5 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage PBX services for the State.	**11.2.5.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**11.2.5.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**11.2.5.3**
Resources	Provide a detail schedule for staffing associated with Telecom PBX voice instruments. Schedule must include related labor charges, broken out by skill levels.	**11.2.5.4**

12.0 PBX EQUIPMENT MAINTENANCE

12.1 CURRENT STATE ENVIRONMENT:

The State has several voice platforms located in various cities throughout the State. The equipment consists mainly of Avaya G3 PBXs and Avaya Octel voicemail systems, but there are other Avaya platforms such as Avaya Conversants that also need to be serviced. In all, the State has about 44,000 PBX ports and about 26,000 voice mailboxes. The size and location of these sites are referenced in figure 12.2.2 and figure 12.2.3.

12.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for equipment maintenance services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

12.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Certified	All service personnel must be certified by Avaya to perform maintenance on Lucent/Avaya equipment that requires service must be certified at the appropriate level for the maintenance tasks that they are performing, and must have a minimum of 3 years of experience at that level. Please provide a list of all personnel that will be working on State equipment and at what level they are certified. Describe your compliance and abilities to provide this service.	**12.2.1.1**
Security	All service personnel must meet State security requirements. Describe your compliance and abilities to provide this service.	**12.2.1.2**
System Alarms	Describe how the Vendor will remotely receive all alarms on all PBX and Adjunct equipment 24x7x365.	**12.2.1.3**
Remote Testing	Describe how the Vendor will be able to remotely dial into all PBX and Adjunct equipment to clear alarms, to test systems and to repair problems 24x7x365. Describe how many people will staff this function and what are their qualifications?	**12.2.1.4**

12.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
System Access	Describe how the Vendor will provide State approved encryption devices for dial in access to all State owned equipment. Describe the encryption systems and methods.	**12.2.1.5**
Dispatch During Normal Business Hours	Describe the procedures that the Vendor uses for the dispatching of a technician during normal business hours. How will those procedures insure that a technician is dispatched within one hour after receiving any major alarm that cannot be cleared remotely?	**12.2.1.6**
Dispatch After Normal Business Hours	Describe the procedures that the Vendor uses for the dispatching of a technician after normal business hours, before normal business hours, on weekends, and on holidays.	**12.2.1.7**
Notification	Describe how the Vendor will notify a designated State representative of all major alarms on all PBX equipment 24x7x365 within 10 minutes of alarm receipt.	**12.2.1.8**
Spare Parts	Describe the Vendor's capabilities and procedures for maintaining appropriate stock of spare parts on site or available within 8 hours, at current revision levels, available 24x7x365, for all parts critical for the operation of the State's PBX equipment.	**12.2.1.9**
Defective Parts	All defective parts for all PBX equipment are to be replaced with spare parts, which are at the current revision level. Describe how this will be accomplished.	**12.2.1.10**
Spare Parts Inventory	Vendor must have as a minimum, at the present revision level, one spare working circuit pack, cable, electromechanical device and any part critical for the operation of the equipment for all PBX equipment. Provide a list of spare parts that you will carry, their quantity, and where they will be locate.	**12.2.1.11**
Repaired Parts	All parts that are repaired must also be brought up to the current revision level before being returned to the inventory of spare parts. Describe how this will be accomplished.	**12.2.1.12**

12.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Minimum Inventory	If a defective part is replaced with a spare, the Vendor must have another spare part of the same type and at current revision level in the pool of spare parts. At no time is the Vendor to allow the inventory of spare parts to fall below one spare for each part for all PBX equipment. Describe how this will be accomplished.	**12.2.1.13**
On-site Response	The Vendor must have a technician on the PBX site within four hours after receipt of any major alarm, within eight hours after receipt of any minor alarm and within 48 hours after receipt of any warning alarm from all PBX equipment. Describe how this will be accomplished for multiple sites.	**12.2.1.14**
Escalation	Vendor must provide escalation procedures and contact numbers for escalating problems 24x7x365. Vendor must have access to Avaya tier 2, 3 and 4 support on a 24x7x365 basis, and escalation procedures for problem resolution. Describe the process for handling problem resolution and escalation.	**12.2.1.15**
Escalation Notice	Vendor must notify the designated State representative of any and all escalation actions when they occur. Please explain how this will be accomplished.	**12.2.1.16**
Dedicated Technician	Vendor is to provide a technician for servicing the State owned Lucent/Avaya equipment in the greater Lansing area. The technician is to be located on site at a Lansing switch room from 7:00 a.m. until 4:00 p.m. Monday through Friday, excluding State holidays. The technician is responsible for performing all aspect of service on all of the current Lucent/Avaya equipment including routine maintenance and repair according to Lucent/Avaya standards. Describe how you will meet this requirement.	**12.2.1.17**
Responsibility	The dedicated technician will be responsible for the installation of all PBX equipment and any telecommunications equipment as assigned by the State. Describe how this will be accomplished.	**12.2.1.18**

12.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Warranty Work	The dedicated technician is to perform all warranty work on all equipment. Describe how this will be handled.	**12.2.1.19**
Records Database	The dedicated technician is to keep an easily accessed and readable database of all network circuits. The dedicated technician will also be responsible for reporting network problems the to network service providers and working with the network service providers to resolve problems. The dedicated technician will also be responsible for network programming and installation. Describe how this will be accomplished.	**12.2.1.20**
Point of Contact	The dedicated technician will be the first point of contact for all problems received by the State help desk. In the event that a critical problem arises, it will be necessary to contact the technician even if the technician is not in the Lansing switch room at the time that the problem is reported. Please explain how we will be able to contact the technician when he is not in the Lansing switch room.	**12.2.1.21**
Problem Resolution	The dedicated technician will be responsible for assisting the State in resolving telecommunication issues. This includes providing technical information, trouble shooting and correcting programming errors, assisting State technicians in resolving station problems and reporting any potential system problems. Provide a detailed explanation of the qualifications of the technician in these areas to include Lucent/Avaya certification.	**12.2.1.22**

12.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Maintenance	The Vendor is expected to perform full system backups on all PBXs on a weekly basis. The Vendor is expected to perform incremental backups on call management systems (CMS) equipment on a weekly basis. The Vendor is expected to perform full system backups on all Conversants, voicemail and CMS on a monthly basis, Sundays between the hours of 4 PM and midnight. The Vendor is expected to perform full system backups on all G3si on a quarterly basis. The Vendor is to provide the appropriate media for such backups and when backups are completed, return the backup media to the State. The State will keep only the last three backups in archive. The media prior to the last 3 backups will be returned to the Vendor for reuse. Describe how this can be handled for all of our PBX and Lucent/Avaya equipment, the software to be used, and expectations for the STATE personnel.	**12.2.1.23**
Business Hour Maintenance	The Vendor is expected to perform all maintenance on all PBX equipment during normal business hours at no additional cost to the State. Describe compliance process.	**12.2.1.24**
Warranty	As new parts/equipment come out of warranty, they will need to be added to the maintenance contract. As old parts/equipment are removed from service, they will need to be removed from the equipment contract. Describe how this will be accomplished.	**12.2.1.25**

12.2.2 Figure – "Equipment Locations"		
Lansing		
Capital Octel 350	12,000 mailboxes	144 ports
Centrex Octel 250	2,000 mailboxes	16 ports
Applications Octel 350	2,000 mailboxes	84 ports
Logan Octel 250	2,000 mailboxes	24 ports
Secondary Octel 250	3,000 mailboxes	48 ports
FIA IVR		190 ports
Grand Tower G3r		20,000 ports
Mason G3r		14,000 ports
Secondary G3r		4,000 ports
Detroit		
Applications Octel 250	500 mailboxes	32 ports
Cadillac Place Octel 250	2,000 mailboxes	48 ports
Cadillac Place G3r		4,000 ports
UA IVR		96 ports
Saginaw		
Saginaw G3si		1,000 ports
Saginaw Octel 250	400 mailboxes	24 ports
Grand Rapids		
Grand Rapids G3si		1,000 ports
Grand Rapids Octel 250	300 mailboxes	24 ports
Kalamazoo		
Kalamazoo Octel 250	400 mailboxes	35 ports
Jackson		
Jackson Octel 250	300 mailboxes	16 ports
Flint		
Flint Octel 250	1,000 mailboxes	44 ports

12.2.3 Figure – "Remote Extended Processor Nodes"	
EPN Name	Address
SAGINAW	7109 W Saginaw
HERITAGE	3950 Heritage
OKEMOS	2501 Woodlake Circle
AIRPORT	Lansing Metro Airport
735 EAST MICHIGAN	735 EAST MICHIGAN

12.2.3 Figure – "Remote Extended Processor Nodes"	
EPN Name	Address
300 N WASHINGTON	300 N WASHINGTON
COOLIDGE	2501 Coolidge
1500 ABBOTT RD	1500 ABBOTT RD
RICKLE RD	7707 Rickle Rd
3423 N MLK	3423 N MLK
MERCANTILE	6500 Mercantile
HOLT	940 Long Blvd
Romney Bldg	101 S Capitol
CCC	400 S Pine
GOV'S RES	Governor's Residence
CHANDLER	Chandler Bldg
5656 S. Cedar	5656 S Cedar
Eyde	Eyde Parkway

12.2.4 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**12.2.4.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**12.2.4.2**

12.2.5 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**12.2.5.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**12.2.5.2**
Provide a detailed technical service description for the alternative proposed.	**12.2.5.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**12.2.5.4**

12.2.6 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage equipment maintenance services for the State.	**12.2.6.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**12.2.6.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**12.2.6.3**
Resources	Provide a detail schedule for staffing associated with equipment maintenance. Schedule must include related labor charges, broken out by skill levels.	**12.2.6.4**

13.0 CENTRAL OFFICE FACILITIES

13.1 CURRENT STATE ENVIRONMENT

The State voice network consists of a combination of PBX, Central Office Facilities and long distance access to provide telephone services to the State. Support and management is provided internally for approximately 50% of the telecommunication needs of the Executive Branch. Some State facilities use a combination of business lines, PBX trunking, Direct Inward Dial (DID) trunks, Foreign Exchange (FX) lines, Off Premise Exchange (OPX) lines and other common trunking arrangements. Separate voicemail systems exist for this diverse environment.

The State requires Central Office Facilities, "Centrex/Centranet-type" service and other voice/analog services on a statewide basis.

In addition, Other Voice/Analog services include analog data, alarm and radio circuits. All services shall be fully compatible with current services utilized by the State. It shall be the sole responsibility of the Vendor to ensure that all services are installed as direct replacement of existing service, transparent to end users.

The State currently has contracts with Ameritech for Centrex service, which expires on December 31, 2002, and Netspan, which expires on January 4, 2003; and, with Verizon for Centranet service, which expires on December 14, 2002.

13.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for Central Office Facilities services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

13.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Service Offering	Vendors shall propose offerings based on current technologies and Vendor capability. The service may be from a single PBX, linked PBXs, IP based switches or any other proven current technology. The State shall not act as an alpha or beta test site. Provide in your response, details of the technology to be used, proposed equipment including models, manufacturer, software and software release version levels.	**13.2.1.1**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Local Service	All calls made between all State entities on a statewide basis shall be considered on net. Per minute and per call charges are NOT allowed for calling services. All charges for calls to and from State entities between exchanges are inclusive of the monthly line charge. Describe how this will be accomplished.	**13.2.1.2**
Local Number Portability	Vendor shall negotiate with the incumbent Vendor to ensure that existing telephone numbers are retained with service conversion. All number assignments shall be the responsibility of the Vendor, with strict coordination through the State. The Vendor must provide future telephone number portability with its line numbering. Describe how this will be accomplished.	**13.2.1.3**
Subscription for Local and Toll Services	The Vendor shall fully cooperate with all other State vendors or entities, to ensure complete compliance with the North American Dialing Plan and any international plans providing service. Once service is established, the Vendor shall be solely responsible to insure that a freeze is placed on the local service provider (LSP), Intra-LATA Primary Inter-exchange Carrier (LPIC) and Primary Inter-exchange Carrier (PIC). The State shall not be responsible for the payment of any bills generated due to LSP, LPIC or PIC changes not requested by the State. All account errors that may result from "slamming" or other unauthorized activity shall be monitored by the Vendor and paid by the Vendor. Any and all charges levied by the LEC or other entity for LPIC changes shall be invoiced to and paid directly by the service provider. All PIC selections defined by the State shall be "frozen" by the telephone service provider. Any charges resulting from unauthorized changes performed by the Vendor shall be invoiced to and paid by the local telephone service provider. Describe how this will be accomplished.	**13.2.1.4**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Multiple Local Service Sites	The Vendor may not quote local exchange rates that vary from calling area to calling area or geographic distance. A single local exchange usage rate must be quoted for all local calling areas within Michigan. Specify this pricing response.	**13.2.1.5**
Premises-based Termination Equipment	The Vendor shall provide network termination equipment to be installed with the proposed network services. All termination equipment proposed by the Vendor must work in conjunction with and enhance the performance of its proposed network services while interfacing to existing State equipment. Vendor termination equipment consists of any bridges, gateways, routers or other equipment necessary to provide interface conversions. Acceptance of the proposed network termination equipment will be at the sole discretion of the State. Describe the process to guarantee this.	**13.2.1.6**
Technology Updates	It is recognized that technology will change during the term of the contract. The Vendor is invited to propose additional or alternate offerings for consideration by the State. Any such services may be accepted by the State at any time during a resulting contract as the balance of Vendor service product line. The influx and transition of new technology may result in the disconnection or discontinuation of a defined service and connection to new technology. The Vendor may not impose any charges for a given service when the State discontinues one service for the replacement of another while remaining a Vendor customer. The Vendor shall continue the availability of all services and technologies unless otherwise directed by the State. Describe your compliance and abilities to provide this service.	**13.2.1.7**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Site Surveys	Vendor shall survey each site and create a database of all services at each State address. Vendor shall provide such to the State along with monthly updates. Services may be converted from one technology to another with no termination charges. Implementation of new technology resulting in lower costs or reduced circuit and service requirements shall not result in termination charges. Describe this process.	**13.2.1.8**
Interfacing With Other Vendors	During and after installation, vendors must contact alternate State vendors to resolve problems if they occur. The State will mediate in the event of unresolved conflicts. Vendors must attend any meetings called by the State to resolve such conflicts without additional charges being imposed on the State. Mandatory attendance shall follow the timeframes as defined in the repair definitions within this document. Vendors must abide by State resolution of all such conflicts, and perform services as directed by the State. Describe the process for meeting these requirements.	**13.2.1.9**
State Agency Project/Status Meetings	The Vendor must participate in project and/or status meetings with the information technology professionals from the using agency, during the term of the contract, as required by the State Agency. It is anticipated that the beginning of the project will require, at a minimum, biweekly project/status meetings. Describe your compliance and abilities to provide this service.	**13.2.1.10**
Installation Standards	Installations shall be in compliance with current Bellcore standards, National Electrical Code, BICSI and the EIA/TIA Wiring Standard. Describe your compliance and abilities to provide this service.	**13.2.1.11**
Vendor Equipment	Vendor shall provide all services using quality switching equipment with fully redundant hardware, automatic recovery resource switching and power backup facilities. Describe your compliance and abilities to provide this service.	**13.2.1.12**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Service Interruptions	The Vendor shall notify the State of any unscheduled interruptions of service during the implementation, installation of or repair of any service. The Vendor must clearly describe, in detail, in its response, its plan to minimize the disruption when converting the State from its existing technology to any new service. The plan described in the Vendor's response must include, at a minimum, conversion from the existing situations to the proposed services.	**13.2.1.13**
Final Acceptance of Installation	All Vendor services must be tested by the Vendor prior to final connectivity to State equipment and after connectivity is complete. A 30-day in service acceptance test must include circuit and/or line tests under fully loaded operation, and are completed prior to transition. Acceptance by the State of any network service will require the completion of a full billing cycle, first delivery and acceptance of all period reports and an initial acceptance review of first invoice. Describe your compliance and abilities to provide this service.	**13.2.1.14**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
System Fraud Control	The Vendor shall be responsible to monitor network traffic, validate fraudulent traffic, mitigate fraud, analyze fraud patterns and refer cases for investigation and utilize methods for fraud avoidance. The Vendor must provide a network security service, monitoring call fraud, 24x7x365, to detect and prevent unauthorized service use. The State shall not be held liable for costs of suspected fraudulent calls. State accounts shall be credited for the cost of the fraudulent activity once detected. Monitoring shall include excessive call charges on a single line, account or calling card, excessive call duration, "third world" calls, high quantity of calls to the same geographic location and questionable third party charge-backs. Vendor shall include in the response an established plan for the prevention of unauthorized use of services proposed to meet the requirements of this RFP. Definition of methods employed for fraud detection shall include unauthorized changing of the primary Intra-LATA and Inter-LATA carrier (slamming) and assurance that unauthorized third party charges, (cramming) do not result in charges to the State. Describe your compliance and abilities to provide this service.	**13.2.1.15**
Dialing Plan Compatibility	The local exchange service provided by the Vendor must adhere to all standards for the North American and International dialing plans. The Vendor must State, in its response, whether local calls within the same calling area will require a seven-digit (NNX + XXXX) or ten-digit NPA+NNX+XXXX) dialing plan. The Vendor must provide toll services that conform to the international dialing plan of the International Telecommunications Union (ITU) for all international calls. Describe your compliance and abilities to provide this service.	**13.2.1.16**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Service Grade P.01	The Vendor shall be responsible to ensure a grade of P.01, resulting in a call blockage or service failure rate not to exceed 1 call for every 100 calls placed. Provide details ensuring this grade of service. Describe your compliance and abilities to provide this service.	**13.2.1.17**
Dual Service During Line Relocation	When voice lines are moved from one physical location to another, the Vendor shall provide "dual service" allowing for the contracted network service being moved to appear at both locations of the State. This dual service will be provided for the time period defined by the State. All such service may result in a "double" the monthly cost of the line, prorated by the number of days dual service is requested. Describe how dual service will be supplied.	**13.2.1.18**
Disconnection Recording	In the event of a voice circuit being removed from service, the Vendor shall provide an "out of service" intercept notice to any caller to that number. In any case, the caller must receive a referral number or announcement that is defined by the State at time of disconnection until the next Directory publication. Describe your compliance and abilities to provide this service.	**13.2.1.19**
Operator Services	The Vendor shall provide local and Intra-LATA human operator services for assistance in placing local, person-to-person, collect and local third party calls. All such services shall be programmable to allow or disallow services on a line-by-line basis. The Vendor must provide local operator service 24x7x365. Describe your compliance and abilities to provide this service.	**13.2.1.20**
Access to Directory Assistance	The Vendor must provide local and intra-State directory assistance service by direct-dial services. The Vendor must provide directory assistance 24x7x365. Describe your compliance and abilities to provide this service.	**13.2.1.21**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Basic Rate ISDN Services	The Vendor shall provide Central Office Facilities compatible ISDN services for the purposes of voice telephone operation. All services allotted standard analog telephones shall be compatible and fully functional with State utilized telephones. Presently the services are defined as Bellcore "National" and "Custom" interface, with T and U interface operations. Describe your compliance and abilities to provide this service.	**13.2.1.22**
Primary Rate ISDN Services	The Vendor shall provide Central Office Facilities-compatible ISDN PRI services for connection of PBXs with foreign exchange, trunk DID or PBX interconnection operation. Services shall be 23-channel, 64 Kbps clear channel operation. Call setup and completion must be fully compatible with analog calling services. Describe your compliance and abilities to provide this service.	**13.2.1.23**
Busy Condition Studies/Reports	The State expects a report that indicates the number of times in a set period of time (i.e., hourly, daily, weekly or monthly) that a caller encountered a busy condition when calling a Vendor provided telephone line. Such service shall not be limited by line hunting. Services shall allow up to 250 lines to be simultaneously monitored at a time, for a duration of up to 30 days, per the direction of the State. Describe how these reports are requested and received.	**13.2.1.24**
Access Restrictions	The State requires the ability to provide access restrictions that may be programmed on a line-by-line basis. Such restrictions shall include allowance to local, State or national dial locations, on a line-by-line basis. 911 services shall not at any time be restricted. Describe the process for enabling this feature.	**13.2.1.25**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Facilities Management	Vendor shall monitor all network facilities to ensure proper operation. The Vendor shall utilize automatic alternate routing schemes, switching to backup or alternate facilities when errors occur. Vendor shall update alternate routing selections when changes in the industry occur (new LEC exchanges, area codes, toll changes, etc.). Describe your methods of facilities management.	**13.2.1.26**
Direct SMDR Connectivity	Subscriber Maintenance Detailed Recording (SMDR) enables the State to receive call related data on all State originated calls on a real time basis. Detailed records are delivered to an applications processor call collection device and fed in ASCII format to a State server for final storage and processing. Describe the process for collecting and receiving this information.	**13.2.1.27**
Administration Management System	This system allows the State to program specific line and feature arrangements on all lines. Changes are made via a computerized program operating on a remote link to Vendor communications equipment. Describe your compliance and abilities to provide this service.	**13.2.1.28**
Direct-Inward-Dialing (DID)	The Vendor must propose DID service as part of its local exchange service offering. The Vendor shall maintain the type replacement circuit currently available to State offices for the proposed DID service inclusive of DID analog trunks, digital trunks and digital ISDN PRI circuits. DID trunking must be provided for inward bound and two-way inward/outward bound services. Inward/outward bound services must allow the transfer of originating number and dialed number information transfer. The inward bound Dialed Number Identification Service (DNIS) must be fully compatible to the receiving telecommunications equipment at State sites. The Vendor must specify the minimum and maximum number of digits being delivered to the State's premise equipment. Describe your compliance and abilities to provide this service.	**13.2.1.29**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Tie Line/Trunk	The service provides an interconnection between a satellite or tributary PBX and a main PBX in the switched services network. Describe your compliance and abilities to provide this service.	**13.2.1.30**
Implementation Plan	Provide a comprehensive implementation plan that details the smooth transition from our current environment to your proposed services. Include the following information. • A brief description of the major steps in the implementation process. • Any major activity that involves State employees or premises (e.g., end user surveys, delivery dates for equipment, database loading, etc.) • Time frames for critical activities and other tasks required of The State. • Special attention must be acknowledged in implementation plans for those agencies that require a very high level of security (For example, Corrections, State Police, and some Family Independence facilities).	**13.2.1.31**
Escalation Procedures	Describe your escalation procedures for addressing problems during implementation. These procedures must include, at a minimum, the names and telephone numbers of the appropriate persons (culminating in a senior executive with decision authority) to be contacted.	**13.2.1.32**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Account Team Support	Provide an overview of your account team support structure. Indicate the support level offered and identify the account team members and responsibilities. Provide one local point of contact throughout implementation of the services during normal business hours (8 a.m. 5 p.m.). This contact shall be responsible for all coordination within its company until the service is implemented and a correct billing received at each State location. (After which billing issues may be resolved in a normal fashion through the Vendor's billing department.) Describe your compliance and abilities to provide this service.	**13.2.1.33**
Customer Support	• The State requires problem resolution 24x7x365. Provide an escalation chart that contains the next point of contact for the State if the main contact is unavailable listing at least three (3) levels of contacts. This escalation chart is to be updated and circulated to a main contact in each department whenever a change in it occurs. • All customer service representatives shall be adequately trained to assist the State. They shall be knowledgeable of the Vendor's offerings to the State if it is listed as a contact to the State. (Example: If a number is given to the State for resolving billing issues, the person(s) answering that number are to be aware of the rate structure, charges waived, etc.) • The Vendor shall make recommendations to the State for installing dedicated access to agency sites. • The Vendor shall be responsive to State inquiries by returning phone calls within one hour. Describe your compliance and abilities to provide this service.	**13.2.1.34**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Service Order Turn-around	Provide average or standard lead times for all standard service offerings herein. Describe your compliance and abilities to provide this service.	**13.2.1.35**
Mean Time To Repair	• Provide your average Mean Time To Repair (MTTR). • How will you ensure the State a minimal MTTR?	**13.2.1.36**
Priority Restore Process	Vendors must describe their priority restore policy.	**13.2.1.37**
Network Design	• Briefly describe the advantages of your network design • Describe your network's availability and reliability • How do you ensure survivability and service continuity?	**13.2.1.38**
Ongoing Optimization	Provide a brief summary of how your company ensures proactive network management of your telecommunications environment through evolving network design and improvements. Describe how these services will be available to develop and maintain the State's telecommunications network.	**13.2.1.39**
Network Disaster Recovery	Provide a comprehensive network disaster recovery plan.	**13.2.1.40**

13.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Qualified Personnel	• Each Vendor shall submit a list of at least three customer locations at which the Vendor has installed and maintained network services as being requested in this RFP. Such a list shall include the name, address and telephone number of the individual(s) responsible for the project management and installation of comparable services, a list of the services included in the Cutover, the date on which the services were Cutover, and the scope and size of the project at Cutover. Extensive experience in the project management of large Cutovers is mandatory for the success of this project. • The Vendor shall provide a list of maintenance customer installations with the same information as required above. • The Vendor must certify the experience and factory training of all personnel, software maintenance and/or supervisory personnel, who will program, install or maintain the selected services. • It is preferred that all Vendor personnel be in-house, full time employees. If the Vendor will be utilizing contract employees and/or Subcontractors, identify such and the services to be provided. The State reserves final approval for which Subcontractors may be used on State tasks by the Vendor.	**13.2.1.41**
Quality Assurance Program	• Vendor must have a quality assurance program. Describe the quality assurance program. • Reports from the quality assurance provider shall be submitted to the Acquisition Services on a quarterly basis.	**13.2.1.42**

13.3 911 REQUIREMENTS:

The State has an extensive telecommunications network, which spans several counties and Public Safety Answering Positions (PSAPs). Getting the correct address and location of all of our system numbers to the correct PSAP is vital for the safety and operation of State government. It is therefore necessary for the Vendor to set up, operate and maintain the National Emergency Number Association (NENA) date base for the State.

13.3.1 Table - 911 Service / Support [Functional] Requirements

Service Feature	Description	Proposal Paragraph #
Date Base	The Vendor must build a database, which contains the building address, the floor, and the pillar location and telephone numbers for all telephones used by the State. Explain how the information will be collected, verified, downloaded to the NENA date base, given to the correct PSAP, and updated.	**13.3.1.1**
Audits	It will be necessary to audit the actual location and addresses of all State telephones against the NENA date base on a semiannual basis. Explain how this will be accomplished.	**13.3.1.2**
Errors	The number and types of all errors are to be corrected and reported to the State by the Vendor within 24 hours. Explain how this will be accomplished.	**13.3.1.3**

13.4 SOFTWARE FEATURES

Vendor must propose services with, at a minimum, the following features that shall be inclusive of the basic monthly line cost. No additional charges shall be assessed lines utilizing any or all of these features. The Vendor must note in their response, any features that are conflicting, and the reason for such conflict. All feature assignments must be retained by the Vendor, whenever any line is modified or relocated. All features capabilities must be programmable, allowing assignments to lines on a line-by-line basis. A feature must be available to all devices used for audible communications on the Vendor network, inclusive of ISDN or other convergence technology offered or used by the Vendor. Features defined with the term "ISDN" are specific to ISDN type telephones and may not apply to other analog services.

The service features below are minimum requirements for Software Features. Review each service feature and succinctly describe your compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

13.4.1 Table – "Software Feature [Functional] Requirements"

Software Feature	Description	Proposal Paragraph #
Attendant Camp On (Non-data Link Console)	Allows calls incoming to an attendant with a non-data link console to be transferred to a busy station within the same terminal group by the attendant. Describe your compliance and abilities to provide this service.	**13.4.1.1**
Attendant Direct Station Select	Allows an attendant with a console to place calls to stations in the business group. Describe your compliance and abilities to provide this service.	**13.4.1.2**
Audible or Visual Message Waiting Indicators	Informs a user that a message is waiting. Audible indicators provide an indication tone when the user goes off-hook. Visual indicators active-deactivate a message waiting indicator lamp on a station set. There shall not be any cost difference between audible and visual. Describe your compliance and abilities to provide this service.	**13.4.1.3**

13.4.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Automatic Callback-Calling	Enables a station user calling a busy station within the system to be automatically connected to the called line when the line becomes idle. Feature allows a calling party to camp on or queue the called station for up to 15 minutes. A DTMF tone for cancellation shall be provided, to allow the user to cancel the queue prior to the 15-minute timeframe. Describe your compliance and abilities to provide this service.	**13.4.1.4**
Automatic Call Distribution	An automatic call distribution system feature shall provide call queuing, holding a transferred call until a trunk is available for the completion of call transfer. The system shall allow programming for up to four selections of an opening menu and at a minimum, four levels deep, allowing users to access three additional menus beyond the initial listings. The Vendor shall provide on site support for the determination of new call processing and information mailbox applications to agencies with approved funding. Support may consist of several site visits in order to determine State office needs, service definitions, service make up, cost quoting and assistance with final system programming and recording. Describe your compliance and abilities to provide this service.	**13.4.1.5**
Automatic Route Selection (ARS)	The capability of automatically determining the route a call will take based upon a set of predetermined rules and variables. An unlimited number of paths must be available. This feature must allow the routing patterns to be changed as a function of time of day. Describe your compliance and abilities to provide this service.	**13.4.1.6**
Basic Circuit-Switched Voice Services	This feature grouping provides establishment and control for circuit-switched voice connections between two ISDN basic rate interfaces (BRI) and voice connections between an ISDN BRI and existing port types on the Vendor switch such as plain old telephone service, 911 lines, and operator trunks. Describe your compliance and abilities to provide this service.	**13.4.1.7**

13.4.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Call Drop	This feature provides the user the capability to drop the last party. Describe your compliance and abilities to provide this service.	**13.4.1.8**
Collect or 3rd Party Call Acceptance	The allowance of collect calls and third party billed calls acceptance based upon State request. Describe your compliance and abilities to provide this service.	**13.4.1.9**
Call Forwarding – Busy Line	Provides for the automatic routing of incoming calls to a pre-selected station line when the called station line is busy. This feature will not be provided on a station line with Call Waiting. Describe your compliance and abilities to provide this service.	**13.4.1.10**
Call Forwarding Don't Answer – All Calls	Provides automatic routing of incoming calls to a pre-selected station line when the called telephone is not answered within a predetermined number of rings. Describe your compliance and abilities to provide this service.	**13.4.1.11**
Call Forwarding Variable	Allows a station user to redirect incoming calls to another line in the system or to a number outside of the system. This feature shall allow only incoming DID call or all calls to be forwarded. Describe your compliance and abilities to provide this service.	**13.4.1.12**
Call Hold	Allows a station user to place an established call on "hold" leaving the line free for dialing other calls. Describe your compliance and abilities to provide this service.	**13.4.1.13**
Caller Identification	The local exchange service must provide incoming caller identification (Caller ID) allowing for the display of calling telephone number to an industry standard Caller ID device, telephone instrument or premises-based telephone system. Describe your compliance and abilities to provide this service.	**13.4.1.14**

13.4.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Call Park	Allows a user active on a call to park the call at the user's directory (extension) number. Describe your compliance and abilities to provide this service.	**13.4.1.15**
Call Pick up Groups	This feature allows a user to answer any call within an associated preset pickup group. If more than one line within the pickup group has an unanswered incoming call, the call to be answered is selected by the switching system. Describe your compliance and abilities to provide this service.	**13.4.1.16**
Call Pickup	Allows a station user to answer any call directed to another line outside of the immediate call pickup group by dialing a special code followed by the ringing station telephone number. Called on a conference call by pressing the DROP button. Describe your compliance and abilities to provide this service.	**13.4.1.17**
Call Service Restriction	The Vendor must propose local exchange service that allows the State to block access to some or all prerecorded announcements, talk lines, and information services. The Vendor shall provide and maintain a list of all recommended lines for restriction. The Vendor list must include any additional area codes and/or exchanges that provide such pay-per-call services which are currently available and as are introduced in the future North American numbering plan and dialing services. The network must allow per line programming services that allow or disallow any or all such services on a line-by-line basis. Describe your compliance and abilities to provide this service.	**13.4.1.18**
Call Trace Capability	The ability of a user to initiate a trace to caller originating number on a demand basis without previous notification or preparation. Describe your compliance and abilities to provide this service.	**13.4.1.19**

13.4.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Call Transfer; All Calls	Allows a station user to transfer any established call to another line within the system. It may also be arranged to transfer calls outside the system. Describe your compliance and abilities to provide this service.	**13.4.1.20**
Call Waiting	System must allow the release of an alert tone to a subscriber with a call in progress if a second call is placed to that subscriber. Describe your compliance and abilities to provide this service.	**13.4.1.21**
Conference Call-Six Way	Allows any station to sequentially call up to five other parties in a common call path. The station adds parties together to make a six-way call. Describe your compliance and abilities to provide this service.	**13.4.1.22**
Consultation Hold	Allows a station user to hold any established call, dial another telephone number for consultation, and then return to the originally established call. Describe your compliance and abilities to provide this service.	**13.4.1.23**
Dial Trunk Access	Allows a user to have the private facilities terminated at the Vendor main switch locations and access them by dialing a unique access code per facility. Describe your compliance and abilities to provide this service.	**13.4.1.24**
Dial Access to Private Facilities	Allows a user to have the private facilities terminated at the central office and access them by dialing a unique access code per facility. Describe your compliance and abilities to provide this service.	**13.4.1.25**
Direct Inward/Outward Dialing (DID/DOD)	Allows incoming calls from the local exchange and long distance network to reach an individual station or group of stations in the system without the assistance of an attendant. Describe your compliance and abilities to provide this service.	**13.4.1.26**

13.4.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Distinctive Ringing	Enables the user to determine the source of an incoming call from a distinctive ring. Describe your compliance and abilities to provide this service.	**13.4.1.27**
Facility Restriction Level (FRL)	Facility restriction levels define the calling privileges associated with a line. Each outgoing route within a routing pattern is assigned an FRL that identifies the minimum level of privilege needed to access the facility. The originating line must have an FRL equal to or greater than that of the facility to be used. Describe your compliance and abilities to provide this service.	**13.4.1.28**
Fast Transfer	ISDN functionality allowing implicit transfer procedures for two party calls or conference calls. Describe your compliance and abilities to provide this service.	**13.4.1.29**
Incoming Line Hunt	Services shall include unlimited line hunt of incoming calls to lines or trunks based upon a line busy scenario. Forwarding shall be to any other line in the network. Describe any limitations of this feature when used within your network. Describe your compliance and abilities to provide this service.	**13.4.1.30**
Intercom Dialing	Allows for a setup for station-to-station calls, providing a closed-user group of individual stations in the group. Describe your compliance and abilities to provide this service.	**13.4.1.31**
Last Call Return	The Vendor shall allow a called party to call back the last called party by means of DTMF commands. Describe your compliance and abilities to provide this service.	**13.4.1.32**
Multiple Call Appearances	This feature allows an telephone to have more than one call appearance button assigned to a single directory number. Describe your compliance and abilities to provide this service.	**13.4.1.33**

13.4.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Music On Hold	The provision of music to parties placed on hold as a result of the three way calling, call transfer, call hold, call waiting and attendant camp-on features. Describe how your company will supply registered music source with no costs imposed on the State for royalties and service licensing or registration. Describe your compliance and abilities to provide this service.	**13.4.1.34**
Night Service	Permits the routing of calls normally directed to the attendant to selected station lines within the system when the attendant position is not occupied. Describe your compliance and abilities to provide this service.	**13.4.1.35**
Speed Calling	Allows a station user to call a pre-designated 7 to 10 digit telephone number by dialing a valid one or two digit dialing code. Describe your compliance and abilities to provide this service.	**13.4.1.36**
Three Way Calling	Enables a station user to establish voice connection with two other parties. Describe your compliance and abilities to provide this service.	**13.4.1.37**
Trunk Answer Any Station	Permits any station within a group to dial a code and be connected to an incoming call to the listed directory number of the systems. Describe your compliance and abilities to provide this service.	**13.4.1.38**
Uniform Call Distribution	A type of line hunting that provides an even distribution of incoming calls among the available members of a hunt group. Describe your compliance and abilities to provide this service.	**13.4.1.39**

13.4.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Voice Messaging	Voice Messaging services shall be comprised of four applications: Voice Mail, Information Mailboxes, Automated Attendant and other call processing applications. The Vendor shall be responsible to replace all existing voicemail services as exists at the time of Cutover. All voice mail services defined in **Section 17** are included. Describe your compliance and abilities to provide this service.	**13.4.1.40**
Voice Mail Feature List	Voice mail shall be provisioned with the following features: • Urgent Messages Callers must be able to denote that messages are "urgent" by DTMF selection after recording a message. Urgent messages shall be played to a user retrieving messages prior to all other messages and shall be designated as "urgent". • Escape to Attendant System shall allow a caller who reaches voice mail to transfer to an alternate telephone number by pressing "0" when reaching voice mail. A call hunt, incorporating up to six alternate stations, must be provided when requested by the State. Describe your compliance and abilities to provide this service.	**13.4.1.41**
Voice Mail Boxes	The Vendor shall provide voice-messaging mailboxes utilizing DTMF prompts and permitting interaction with the service via any touch-tone telephone. The system shall recognize the station that the caller attempted to call, and provide a user customized message indicating that the called party is not available and to leave a message. The service must allow, at a minimum, up to 60 messages in a mailbox at any one time; message length of three minutes in duration and message retention of up to 60 days. Describe your compliance and abilities to provide this service.	**13.4.1.42**

13.4.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Box Assignment	Voice mailbox shall be either assigned to a defined line number or as a virtual mailbox. In the case of actual telephone line associations, calls shall be automatically forwarded to voice mail if either the called line is busy and/or not answered. This functionality shall be completely programmable allowing either or neither option, with subscriber turn on/off capability for an all call forwarding operation. In the case of a virtual mailbox, a caller may call a single master line number with associated hunting trunks, to either leave or retrieve messages left by other callers. These services shall be fully functional with Centrex forwarding capabilities. Describe your compliance and abilities to provide this service.	**13.4.1.43**

13.4.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Voice Mail Features	• Group Lists. Service shall allow users to send a message to many users simultaneously through the creation of a Group List. Each user has the capability to create and change three lists containing up to 25 mailbox destinations in each list. • Future Delivery. A mailbox user must have the ability to record a message for delivery in the future on a date and time determined by him or her. The delivery date is programmed along with the body of the message. The user can send up to five Future Delivery Messages up to 30 days in advance. The Future Delivery Message is stored until the due date. The recipient can receive up to five Future Delivery Messages in the mailbox at one time. • Guest Mailboxes. Subscribers may assign a portion of their Voice Mail or Call Answering mailbox to individuals who are not subscribers, but with whom there is frequent communication. This is done by assigning a password to the guest. Each mailbox subscriber shall have the capability of formulating 3 Guest Mailboxes. • Broadcast. The system shall allow a system administrator to broadcast a system wide message notification to all Vendor mailbox users. Describe your compliance and abilities to provide this service.	**13.4.1.44**

13.4.1 Table – "Software Feature [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Voice Mail Features Continued	• Expanded Mailbox. Vendor shall allow the use of "Expanded Mailboxes" providing increased mailbox capacity to accommodate heavier call volume and longer message type. Expanded Mailboxes include all of the functionality of the service while providing increased mailbox capacity to a maximum of 60 messages stored, 60 days in duration, and six-minute message length. • Information Mailboxes. Information mailboxes are similar to voice mailboxes with the exception of the ability to leave a message. Caller's reach an information mailbox may receive the message only, and not be able to "0" out or leave messages. Outgoing messages may be up to 6 minutes in length with the owner ability to change the message at anytime. The service shall utilize stored password protection. • Automated Attendant. Automated attendant services shall greet callers; inform callers of selection options, and to transfer callers to the destination of their choice. The Automated Attendant service shall present callers with a menu of choices, allowing call transfer to dialed numbers or information, and operate in full concert with other types of voice messaging services. Describe your compliance and abilities to provide this service.	**13.4.1.45**

13.5 OTHER VOICE/ANALOG SERVICES (SPECIAL SERVICES)

The following services are of limited use within the State, but required within this RFP. The Vendor shall review each type circuit to determine the exact requirements based upon the current Vendor definition. Each service must be replaced entirely, with the awarded Vendor performing site audits to ensure replacement service operation without the installation of additional State owned Customer Premises Equipment (CPE). If such is required, the Vendor shall supply without additional charge to the State.

13.5.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Protective Alarm Circuits	The service provides a channel for an alarm system with a DC interface at the customer premises. The alarm points may be arranged in series or parallel configurations. Describe your compliance and abilities to provide this service.	**13.5.1.1**
Fire Dispatch Circuits	The service provides a group altering system that operates warning devices at various locations from a central point. This service is used by fire or ambulance complaints to alert their members. Describe your compliance and abilities to provide this service.	**13.5.1.2**
Private Line Voice Circuits	The service provides full time transmission of voice only between two or more stations or order equipment, e.g. turrets, order tables, etc. A private line is for the exclusive use of certain stations or order equipment and has no access to the switched message network. Signaling between stations or order equipment may be voice, manual, automatic, dial or no signal condition. Describe your compliance and abilities to provide this service.	**13.5.1.3**
Radio Circuits	The service provides a channel used to access non-broadcast radio transceivers. Describe your compliance and abilities to provide this service.	**13.5.1.4**

13.5.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Blocks of Numbers	The State, at times, has the need to reserve blocks of telephone numbers for upcoming moves. Describe the process to accomplish this.	**13.5.1.5**

13.5.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**13.5.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**13.5.2.2**

13.5.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**13.5.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**13.5.3.2**
Provide a detailed technical service description for the alternative proposed.	**13.5.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**13.5.3.4**

13.5.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage central office facilities services for the State.	**13.5.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**13.5.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**13.5.4.3**
Resources	Provide a detail schedule for staffing associated with central office facilities. Schedule must include related labor charges, broken out by skill levels.	**13.5.4.4**

14.0 CENTRAL OFFICE MANAGEMENT, REPAIR, AND INSTALLATION

14.1 CURRENT STATE ENVIRONMENT:

The State's voice network consists of a combination of PBX and Centrex services. Centrex service is provided by SBC\Ameritech. The current Centrex contract expires on December 31, 2002. Over 15,000 Centrex lines are installed, statewide. Meridian 5000 and 8000 series sets are used.

The State requires the Vendor to maintain sets in the field and repair reported and discovered trouble with the sets, cabling, and network that supports the functionality of the end-user voice instruments.

The Vendor must be able to respond quickly to reported or discovered trouble, and dispatch technicians to any geographic area that is managed by the Vendor. The Vendor must also be able to escalate the priority of dispatch and repair of reported trouble, at the request of the State, and maintain a list of critical sites, as directed by the State, which will always receive highest priority service.

14.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for central office services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

14.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Response to Service Trouble Call	The Vendor shall describe their implementation of the following monthly reports including, at a minimum: • Service level compliance (MTTR-Mean Time to Repair.) • Number of service calls by location. • Number of service calls by instrument model • Number of service calls by problem cause code • Customized reports	**14.2.1.1**

14.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Operational Support	The Vendor shall describe their operational support capabilities in, at a minimum, the following areas: • 24x7x365 trouble reporting hotline. • On-line electronic access for trouble ticket submission and status inquiry. • Rapid response service restoration with formal trouble escalation process and contacts. • Monthly service affecting outage report. • Centralized technician dispatch. • Problem and resolution notification to the State network control center. • Support coordination of third party access providers.	**14.2.1.2**
Service Level Agreement	The State expects contractual service level guarantees to ensure the technical, provisioning, billing, and operational performance of networking services bid in response to this RFP. Guarantees shall be structured on a "per circuit" or "per instrument" basis with measurement over a monthly interval. Describe your compliance and abilities to provide this service.	**14.2.1.3**
Minimum Service Requirements	Review the minimum service requirements specifications in figure 14.2.2 below relative to your services and State your corresponding specifications in the proposal paragraph indicated.	**14.2.1.4**

14.2.2 Figure – "Minimum Service Requirements"	
Service Feature	**Description**
Repair Service – Premise wiring	1 day
Repair Service – Instrument	1 day
Repair Service – Line and Instrument	1 day

14.2.3 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**14.2.3.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**14.2.3.2**
For each of the State defined geographic regions in which you are offering service to The State, indicate: • Number of service/support dispatch facilities. • Number of installation and repair technicians at each facility. • Whether you own or subcontract the support services bid in your response.	**14.2.3.3**
Detail your customer problem reporting, analysis, and resolution procedures. Indicate how Joint Partnership Integration service center participation is handled, including trouble ticket systems. What is The State's visibility to problem resolution involving partner service centers?	**14.2.3.4**
To what extent is the State expected to participate in problem resolution?	**14.2.3.5**

14.2.4 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**14.2.4.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**14.2.4.2**
Provide a detailed technical service description for the alternative proposed.	**14.2.4.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**14.2.4.4**

14.2.5 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage central office services for the State.	**14.2.5.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**14.2.5.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**14.2.5.3**
Resources	Provide a detail schedule for staffing associated with central office services. Schedule must include related labor charges, broken out by skill levels.	**14.2.5.4**

15.0 CENTRAL OFFICE MANAGEMENT, INSTALLATION, MOVES, ADDS, AND CHANGES

15.1 CURRENT STATE ENVIRONMENT:

The State's voice network consists of a combination of PBX and Centrex services. Over 15,000 Centrex lines are installed, statewide. Meridian 5000 and 8000 series sets are used.

The State envisions the Vendor deploying an infrastructure capable substantially minimizing the cost of MAC's by providing end users with the ability to make the majority of changes to the system. MACs could be minimized by enabling end-users with the ability to independently:

Change features on a phone, desktop, mobile terminal thru a "user-friendly" interface.

Relocate their phone within a building.

Use a secure network interface to an application that allows for the automated entry and status inquiry of MAC requests.

15.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for Central Office MACs services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

15.2.1 Table – "Service / Support Requirements"

Service Feature	Description	Proposal Paragraph #
Response to Service Trouble Call	The Vendor shall describe their implementation of the following monthly reports including, at a minimum: • Service level compliance (MTTR) • Number of service calls by location. • Number of service calls by instrument model • Number of service calls by problem cause code • Customized reports Describe your compliance and abilities to provide this service.	**15.2.1.1**

15.2.1 Table – "Service / Support Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Response to New Service Call	The Vendor shall describe their provisioning support in (at a minimum) the following areas: • Consistent Vendor representation (familiar with the State typical order and provisioning activities) • Electronic order submission • Standard provisioning interval (within five days for software changes, within ten days for new sites/services) • Service Acceptance interval on turn-up to the State • Weekly work-in-process reporting. • Process for Expedite Order • Process for Order change acceptance and control • Process for tracking installation and MAC activity from initiation to completion • Process for validating Install and MAC orders for correctness and proper authorization. • Coordinating and making changes to the cabling infrastructure. • Conducting site surveys and coordinating physical space requirements. • Schedule the procurement of circuits, installation of equipment and installation of transport service, as well as the completion of all other activities necessary to achieve timely and successful project Install and MAC completion • Securing and displaying all appropriate permits as required to complete any Install and MAC functions. • Fire-stopping all core drilled holes and firewall penetrations made in order to complete an Install and MAC.	**15.2.1.2**

15.2.1 Table – "Service / Support Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Operational Support	The Vendor shall describe their operational support capabilities in, at a minimum, the following areas: • 24x7x365 trouble reporting hotline. • On-line electronic access for trouble ticket submission and status inquiry. • Rapid response service restoration with formal trouble escalation process and contacts. • Monthly service affecting outage report. • Centralized technician dispatch. • Problem and resolution notification to the State network control center. • Support coordination of third party access providers.	**15.2.1.3**
Service Level Agreement	The State expects contractual service level guarantees to ensure the technical, provisioning, billing, and operational performance of networking services bid in response to this RFP. Guarantees shall be structured on a "per circuit" or "per instrument" basis with measurement over a monthly interval. Respondent shall submit a draft service level guarantee for each offered service (consistent with section including financial penalties in the form of service credits or rebates for non-compliance. Describe your compliance and abilities to provide this service.	**15.2.1.4**
Service Response Times	Describe your compliance to **Figure 15.2.2**	**15.2.1.5**

15.2.2 Figure – "Service Response Times"	
Service Feature	**Description**
Installation (<= 10 lines) – Premise Wiring	5 days
Installation (<= 10 lines) – Instrument	2 days
Installation (<= 10 lines) – Line and Instrument Configuration	2 days
Installation (> 10 lines) – Premise Wiring	Per project schedule
Installation (> 10 lines) – Instrument	Per project schedule
Installation (> 10 lines) – Line and Instrument Configuration	Per project schedule
Move (<= 10 lines) – Premise Wiring	5 days
Move (<= 10 lines) – Instrument	2 days
Move (<= 10 lines) – Line and Instrument Configuration	2 days
Move (> 10 lines) – Premise Wiring	Per project schedule
Move (> 10 lines) – Instrument	Per project schedule
Move (> 10 lines) – Line and Instrument Configuration	Per project schedule
Add (<= 10 lines) – Premise Wiring	5 days
Add (<= 10 lines) – Instrument	2 days
Add (<= 10 lines) – Line and Instrument Configuration	2 days
Add (> 10 lines) – Premise Wiring	Per project schedule
Add (> 10 lines) – Instrument	Per project schedule
Add (> 10 lines) – Line and Instrument Configuration	Per project schedule
Change (<= 10 lines) – Premise Wiring	5 days
Change (<= 10 lines) – Instrument	2 days
Change (<= 10 lines) – Line and Instrument Configuration	2 days
Change (> 10 lines) – Premise Wiring	Per project schedule
Change (> 10 lines) – Instrument	Per project schedule

15.2.2 Figure – "Service Response Times"	
Service Feature	**Description**
Change (> 10 lines) – Line and Instrument Configuration	Per project schedule

15.2.3 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**15.2.3.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**15.2.3.2**
For each of the State defined geographic regions in which you are offering service to The State, indicate: • Number of service/support dispatch facilities • Number of installation and repair technicians at each facility • Whether you own or subcontract the support services bid in your response. • Location of the service/support dispatch facilities	**15.2.3.3**
What is your annual revenue for and estimated market share of voice instrument provisioning services in the geographic areas you are proposing?	**15.2.3.4**
Detail your customer problem reporting, analysis, and resolution procedures. Indicate how Joint Partnership Integration service center participation is handled, including trouble ticket systems. What is The State's visibility to problem resolution involving partner service centers?	**15.2.3.5**

15.2.4 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**15.2.4.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**15.2.4.2**
Provide a detailed technical service description for the alternative proposed.	**15.2.4.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**15.2.4.4**

15.2.5 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage Central Office services for the State.	**15.2.5.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**15.2.5.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**15.2.5.3**
Resources	Provide a detail schedule for staffing associated with Central Office MACs. Schedule must include related labor charges, broken out by skill levels.	**15.2.5.4**

16.0 REMOTE ACCESS

16.1 CURRENT STATE ENVIRONMENT:

The State provides dial-up access for its corporate data network to employees and business partners for accessing the State computing and data. Currently there are 3,500 users and it is expected to increase to 45,000 by 2004. Users include full- and part-time telecommuters, "on the road" sales force, the State consultants at customer sites, occasional home PC users, and field service personnel. It is the State's policy to provide access to the same complement of systems through the Network Access Gateway system, as when connected directly to the corporate LAN. The Network Access Gateway system is used for the entire spectrum of the State office automation and data access; most prominent are e-mail, Intranet, and Internet access.

Security must be managed by systems operated by the State. Respondent shall support security being managed by the State privately operated systems. There are approximately 3,200 remote users today but the State anticipates greater usage.

16.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for remote access services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

16.2.1 Table – "Service/Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Connection Speed	Describe all connection speeds that are available.	**16.2.1.1**
Windows Network Client	Describe the Vendor's support for standard Windows dial network client.	**16.2.1.2**
Support Radius	Describe the Vendor's support for the State managed Radius user authentication.	**16.2.1.3**
International Access	Describe the Vendor's capability to provide seamless international remote access and authentication.	**16.2.1.4**
Local Dial-in	Describe the Vendor's support of providing local dial-in points of presence.	**16.2.1.5**
VPN Standards	Describe the Vendor's support and compliance with the State VPN access standards.	**16.2.1.6**

16.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Internet Access	Describe the Vendor's capability to provide a U.S. domestic dial-up Internet access solution. The Vendor shall provide local dial (i.e., non-toll call) access and toll-free dial access.	**16.2.1.7**
NPA-NXX	The Vendor will provide a listing of NPA-NXX and the city names for all current access nodes in the State. Describe your compliance and abilities to provide this service.	**16.2.1.8**
International Dial	How will the Vendor provide an international dial-up Internet access solution? The Vendor shall provide the list of countries where it can provide dial access.	**16.2.1.9**
Compatible	Describe how the Vendor will provide V.34, V.90, and V.120 (i.e., ISDN) compatible ports.	**16.2.1.10**
Dialer Compatibility	Describe how the Vendor's dialer software will be compatible with Microsoft Windows NT, Windows 95, Windows 98, Windows 2000 Professional, Windows XP and Macintosh operating systems. The Vendor shall list all additional operating system platforms it supports.	**16.2.1.11**
Coding/ Scripting	Describe how the Vendor will be financially responsible for all coding/scripting required ensuring the dialer's compatibility on all remote access PCs/access devices.	**16.2.1.12**
Dialer	Describe the dialer's ability to save frequently used numbers for easy access.	**16.2.1.13**
Time of Connection	How will the Vendor provide specific provisions to configure the user connection to "time out " based on inactivity level (both absolute and specific levels of inactivity or trigger thresholds).	**16.2.1.14**
Software	What is the Vendor's software release strategy for the dialer software, the frequency of updates, and the distribution mechanism for dialer software updates.	**16.2.1.15**
Dialer Updates	How does the Vendor propose to provide a mechanism for automated telephone book download and related updates.	**16.2.1.16**

16.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Authorized Users	How will the Vendor ensure that only authorized users are granted access to the Internet. Describe how it will prevent duplicate login attempts using the same ID, validate user ID and password, and provide the State the ability to selectively block access to Internet sites for a sub-set of the State user population. In addition, describe the options available to the State for usage audits.	**16.2.1.17**
Fraud Control	Describe the Vendor's mechanisms for detecting and eliminating fraudulent and/or unauthorized use of the services provided to the State.	**16.2.1.18**
Standards	The Vendor shall define and commit to the following standard service levels: • Time from initiation of a call to successful authentication. • must be less than 40 seconds 97 percent of the time. • Average percentage of successful authentication/logons on the first dial-in attempt. Must be greater than 97 percent. • Average number of users per dial-port (both actual and the design specification). Minimum acceptable ratio is 3:1. • Average percentage of calls that are expected to receive busy signal. Must be less than 3 percent at any one time. The Vendor shall measure and monthly report on the services levels stated/committed above. The Vendor shall also describe the credits it proposes if it fails to meet the committed service levels.	**16.2.1.19**
Pricing Model	The Vendor shall propose the solution pricing. The Vendor's flat rate pricing schedule must include a pricing tier assuming usage of 50 hours/month per active user. The billing detail must itemize usage by active user accounts.	**16.2.1.20**

16.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Passwords	Describe how the Vendor will be able to support automated password expiration (e.g., users MUST be forced to change the password after every 45 days), for the accounts identified by the State. Passwords must be 6-14 characters in length.	**16.2.1.21**
Internet Features	The Vendor must briefly describe the architecture, features and capabilities of its commercial Internet access service offering. The Vendor must address the following in its description: • Vendor's ability to provide dedicated Internet access from T1 access speed to OC48 access speed. • Redundancy in the Vendor's network between the Vendor's Internet access POPs and the Internet NAPs. • Primary and Secondary DNS services. • Domestic public and private peering locations and the providers. • Average and peak network utilization for the Vendor Internet backbone, peering points, and the Network Access Points (NAPs). • Average percentage Internet backbone availability. • Average and variance in end-to-end round trip delay on the Vendor Internet backbone. • List of major customers.	**16.2.1.22**
Internet Availability	The State expects that the Vendor's Internet service shall be available at all Vendor POPs. The State shall not be liable for any charges associated with the back haul between the Vendor's POPs and the Internet NAPs. Describe your compliance and abilities to provide this service.	**16.2.1.23**
Terms and Conditions	The State reserves the right to order Internet access on "full service" basis. Describe your compliance and abilities to provide this service.	**16.2.1.24**

16.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Internet Fraud	The Vendor shall also describe its mechanisms for detecting and eliminating fraudulent and/or unauthorized use of the services provided to the State.	**16.2.1.25**
Remote LAN Access	The Vendor shall provide a U.S. domestic remote LAN access solution. The Vendor shall provide a service that allows an authorized client to receive a private network IP address that can be used to access services. The Vendor shall provide local dial (i.e., non-toll call) access and toll-free dial access. Describe your compliance and abilities to provide this service.	**16.2.1.26**
LAN Applications	The Vendor shall list the LAN applications and protocols that may not be accessed remotely (i.e., not supported) using the Vendor's dial-up service.	**16.2.1.27**
International Remote LAN	The Vendor shall provide an international remote LAN access solution. The Vendor shall provide a service that allows an authorized client to receive a private network IP address that can be used to access services. The Vendor shall provide the list of countries where it can provide dial access.	**16.2.1.28**
WAN Description	The Vendor shall provide a design for the overall architecture of its wide area network including details on the use of private and public networks and peering points.	**16.2.1.29**
Connecting to State's Network	The Vendor shall describe its solution for connecting its network to the State's network. At the State's request, the Vendor shall provide a design of the recommended connection locations, the State access sites, and the number and size of connections to each site.	**16.2.1.30**
Number of Concurrent Users	The Vendor shall provide details of the maximum number of concurrent users supported by each connection from the Vendor's network to the State's network.	**16.2.1.31**
Diversity of Connections	The Vendor shall provide diverse connections and routing to each of the State access sites and be committed to retaining the diversity of connections for the life of the Agreement.	**16.2.1.32**

16.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Load Balancing	The Vendor shall provide load balancing across connections from the Vendor's network into a given State access site. Describe your compliance and abilities to provide this service.	**16.2.1.33**
Fail-Over	The Vendor shall provide a solution that allows one State access site to fail-over to another in the event of a failure at the first site (automated/manual fail-over).	**16.2.1.34**
Redundant Equipment	The Vendor shall provide and support customer premise equipment (CPE) that can connect either to a switch or router. The Vendor shall identify the equipment that shall be installed at each location. The Vendor must provide redundancy within the CPE at the State site.	**16.2.1.35**
Vendor Protocol	The Vendor shall define the network-addressing schema and the transport protocol (e.g., TCP/IP, ATM, etc.) used in the Vendor's network.	**16.2.1.36**
Vendor Proposed Network	The Vendor shall describe how resilience, redundancy and fail-over are achieved in the Vendor's network, and specifically what measures are to be implemented for the proposed remote access solution for the State.	**16.2.1.37**
Diverse Routing	The Vendor shall provide diverse routing within its network. Describe your compliance and abilities to provide this service.	**16.2.1.38**
Proposed POP Architecture	The Vendor shall provide an overview of the proposed POP architecture, including standard equipment for 56-Kbps, 33-Kbps and Integrated Services Digital Network (ISDN) links, POP routing/switching capacity and fail-over plans, and the mechanism for rerouting traffic from a totally failed POP.	**16.2.1.39**
Ports	The Vendor shall provide V.34, V.90, and V.120 (ISDN) compatible ports. Describe your compliance and abilities to provide this service.	**16.2.1.40**
Fail-Over Port	The Vendor shall provide a fail-over mechanism in the event that a given port within a POP is unavailable. Describe your compliance and abilities to provide this service.	**16.2.1.41**

16.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
POP Failure	The Vendor shall provide a fail-over mechanism in the event that an entire POP is unavailable. Describe your compliance and abilities to provide this service.	**16.2.1.42**
Dialer Software	The Vendor shall provide the remote LAN access dialer product/software. Describe your compliance and abilities to provide this service.	**16.2.1.43**
Multi-Protocol	The dialer provided by the Vendor shall allow for multi-protocol use, including TCP/IP. Describe your compliance and abilities to provide this service.	**16.2.1.44**
DNS DNCP	The dialer provided by the Vendor shall allow for customization of IP functionality, including Domain Name Service (DNS) addressing and Dynamic Host Configuration Protocol (DHCP). Describe your compliance and abilities to provide this service.	**16.2.1.45**
Customizable Dialer	The dialer provided by the Vendor shall be customizable to allow the State to transfer specific data, such as NT IDs. Describe your compliance and abilities to provide this service.	**16.2.1.46**
Smart Dialer	The Vendor shall deliver a 'smart' dialer that is capable of providing user the most cost-effective dial-up access node number based on the user's geographical location. The users are expected to indicate their geographical location by entering a local area number. The dialer provided by the Vendor shall also allow the user to select the access telephone number by country, city, and area code. Describe your compliance and abilities to provide this service.	**16.2.1.47**

16.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Time-Out	The dialer provided by the Vendor shall provide specific provisions to configure the user connection to "time out " based on inactivity level (both absolute and specific levels of inactivity or trigger thresholds). Describe your compliance and abilities to provide this service.	**16.2.1.48**
Automatic Updates	The Vendor solution shall provide a mechanism for automated telephone book download and related updates. Describe your compliance and abilities to provide this service.	**16.2.1.49**
Security	The Vendor shall describe the security of its proposed solution, including client level security, and protection of proprietary IP addresses.	**16.2.1.50**
Authentication	The Vendor shall provide a description of the proposed authentication solution and related functionality, including: • How many authentication servers are used domestically and globally? • How do the servers replicate? • How the servers propagate password/user changes? • How the authentication service fails-over if the primary server for a given POP is unavailable? • What protocols are supported by the proposed authentication solution (e.g., Radius, TACACS+, etc.)?	**16.2.1.51**
Filtered Access	The Vendor shall provide the ability for filtered access such that specific users can only access the servers/applications to which they are authorized. Describe your compliance and abilities to provide this service.	**16.2.1.52**
Password Protection	The Vendor shall provide a password-protected connection service. The password length shall not be longer than 14 alphanumeric characters, nor less than six characters. Describe your compliance and abilities to provide this service.	**16.2.1.53**

16.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
User ID's	The Vendor shall describe how propagation of user IDs and passwords is achieved. Specifically, the Vendor shall identify how quickly remote access user's names/ passwords are removed from the authentication systems in the event that the State wishes to rescind permission to access the State's network.	**16.2.1.54**
Password Updates	The Vendor shall describe how a user can automatically update or change a password without contacting the service help desk.	**16.2.1.55**
Security Breaches	The Vendor shall describe how it detects breach in security and fraudulent use. The Vendor shall be required to immediately inform the State in the event that any attempted breach of security is detected.	**16.2.1.56**
Addition of Users	The Vendor shall provide a mechanism in which user names and passwords can be added through a flat file transfer from the State. Describe your compliance and abilities to provide this service.	**16.2.1.57**
Credits	The Vendor shall measure and monthly report on the services levels stated/committed above. The Vendor shall also describe the credits it proposes if it fails to meet the committed service levels.	**16.2.1.58**

16.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Solution Pricing	The Vendor shall propose the solution pricing structure (e.g., flat monthly rate, usage based pricing, etc.). Vendor must provide pricing built on a "pooling of minutes" concept that is based on the total State's usage, and not on each individual's usage. Overage (excess usage) charges will only apply if the sum of all users' usage exceeds that of the overall pool of minute/hours that has been contracted (e.g., if pricing is structured so that each user has 50 hours per month included in the MRC before overage charges apply and one user uses 47 hours and the other user uses 53 hours, no overage charges shall apply due to the pooling concept). The Vendor's flat rate pricing schedule must include a pricing tier assuming usage of 50 hours/month per active user. The billing detail must itemize usage by active user accounts.	**16.2.1.59**
Automated Password Expiration	At the State's direction, the Vendor shall be able to support automated password expiration (e.g., users must be prompted to change the password after every 45 days, etc.) for the accounts identified by the State. Describe your compliance and abilities to provide this service.	**16.2.1.60**

16.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**16.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**16.2.2.2**

16.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**16.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**16.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**16.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**16.2.3.4**

16.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage remote access services for the State.	**16.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**16.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**16.2.4.3**
Resources	Provide a detail schedule for staffing associated with remote access. Schedule must include related labor charges, broken out by skill levels.	**16.2.4.4**

17.0 VOICE MESSAGING

17.1 CURRENT STATE ENVIRONMENT:

The State provides Voice Messaging (VM) services in various cities throughout the State. The Voice messaging information provided in this RFP section, identifies the current systems environment and conditions as currently known. The State reserves the right to choose service options from the Vendor whether on equipment purchase, installation, maintenance, or a combination of the services to meet the State's best interests.

There are 13 VM servers currently maintained by DIT Telecommunications Services, 109 VM servers at the Department of FIA, approximately 15 servers at other department agencies, and a few unidentified VM servers that belong to various remote State offices.

The Local Exchange Vendor usually provides voice mail service at remote State offices, when the offices are outside of the State-Owned Voice Messaging systems' coverage area.

The existing VM servers use Avaya's ARIA platform. The majority (98%) of these servers' model is Aria 250. A few of them are Aria 350.

Many of these servers have integrated Voice/Fax messaging on the same system. Some VM servers contain enhanced features and some have a combination of features such as Enhanced call Processing, Voice Forms, Automated attendant, AMIS networking, visual messenger, www.messenger, Fax-on-demand, Mailbox Manager, and Octel Designer software for special applications (e.g., Outcall Notification System by Mutari).

In the past, some State agencies have elected to purchase hardware and software from other vendors when the price is lower than the listed contracted price. In those cases, the Vendor must defend their price and product to justify their pricing. Even though the hardware or the software that interfaces with the voice messaging server is purchased from another Vendor, the Vendor must continue on-going support and maintenance.

Currently the State expects the Vendor to provide consultation to the State, as needed, for all Voice Messaging issues or configurations.

The term Voice messaging system and Integrated Voice/Fax messaging system will be used interchangeably in this document.

The State currently has a voicemail contract with Avaya that expires on April 12, 2004.

17.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for Voice Messaging Services on a fully integrated platform, allowing the interoperation of network features. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

17.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Voice Mail Integration	The Voice Messaging Server must have the capability to integrate with various phone systems: i.e., Lucent G3, Lucent Definity, Ameritech Mark II, TIE, ITI Tadiran, GTE-Verizon NEC 2400, Ameritech Centrex and GTE – Centranet. Describe which phone systems your voice mail equipment integrates with.	**17.2.1.1**
Remote Accessibility	Voice mail message retrieval shall be a dial-up local access number or toll-free number, at no access cost for those calling from anywhere in the State. Describe your compliance and abilities to provide this service.	**17.2.1.2**
Service Availability	Voice messaging service should be available 24x7x365 and use the keys of a touch-tone phone for feature activation and message manipulation. Describe your compliance and abilities to provide this service.	**17.2.1.3**
Grade of Service	Voice messaging should be non-blocking, with the Vendor monitoring the occurrence of "busy" calls being rejected by the network, and expanding the service (ports) as necessary to maintain a P.02 grade of service under actual operating parameters. Blocking will not be more than 2% of the calls for any point in time, based upon service parameters of 20% busy hour, 20 minutes of access per user per day, and three minutes of storage per call. Describe your compliance and abilities to provide this service.	**17.2.1.4**

17.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Transfer/ Answer Time	Voice messaging shall answer calls within the first two rings or 12 seconds of the occurrence of an attempt to connect to the voice messaging system through circuit signaling. Describe your compliance and abilities to provide this service.	**17.2.1.5**
Notification of Messages	System shall provide message notification to users within three minutes of receipt of voice mail or fax messages. Notification shall continue until user reviews all unheard messages. Describe your compliance and abilities to provide this service.	**17.2.1.6**
Storage	The Vendor must maintain adequate memory in the system to meet all message storage requirements noted within. If for any reason system memory is exceeded, the Vendor shall expand memory capability within 10 business days of report, and restore operation per specifications defined herein. Describe your compliance and abilities to provide this service.	**17.2.1.7**
TDD	The system shall support Telecommunications devices for the deaf. Describe your compliance and abilities to provide this service.	**17.2.1.8**
Multilingual Prompting	The system shall support Multilingual Prompting. Describe your compliance and abilities to provide this service.	**17.2.1.9**
Global Message Redundancy	The system should be provided with Global Message Redundancy. Describe your compliance and abilities to provide this service.	**17.2.1.10**
Redundant Power Supplies	The system should be provided with redundant power supplies. Describe your compliance and abilities to provide this service.	**17.2.1.11**
Call Detail Recording	The system must have Call Detail Recording. Describe your compliance and abilities to provide this service.	**17.2.1.12**

17.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
System Backup and Restore Tape Drive	The system should be provided with System backup and restore tape drive. Describe your compliance and abilities to provide this service.	**17.2.1.13**
Billing	Please list types of all the billable data that can be captured. For examples, mailbox quantity, mailbox usage, port and message space utilization, and specific applications such as Enhanced Call processing, local and long distance out calls, etc. Describe how these data interface with the State's billing system. The billing system uses MicroFocus Cobol version 3.2.27-Be, and SCO UNIX version 5.0.5eb. It runs on a Dell PowerEdge 6300. Some files are ASCII text files and CISAM index data files.	**17.2.1.14**

17.3 SOFTWARE

Vendor must propose services with, at a minimum, the following feature requirements for an integrated Voice/Fax Messaging system that shall be inclusive of the basic monthly line cost. No additional charges shall be assessed lines utilizing any or all of these features. The Vendor must note in their response, any features that are conflicting, and the reason for such conflict. The Vendor must retain all feature assignments whenever any line is modified or relocated. All feature capabilities must be programmable, allowing assignments to lines on a line-by-line basis. A feature must be available to all devices used for audible communications on the Vendor network, inclusive of ISDN or other convergence technology offered or used by the Vendor.

The software features below are minimum requirements for Voice Messaging Services. Review each service feature and succinctly describe your compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

17.3.1 Table – "Software Features [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Mailbox Users' Abilities	• Record, send, forward, locate, skip, replay, reply, increase/decrease volume, save and delete a voice or fax message. • Schedule to receive Outcall Notification to phones, pagers, or mobile phones. • Record Multiple Greetings for ring-no-answer or busy conditions. • Record Extended Absence Greeting. • Create, edit, or delete Personal Group List. • Create, edit, or delete Guest Mailboxes. • Change Caller prompt level and speed. • Date and time playback. • Send copies of a message with Removed Introduction option. • Option to resave a message when prompted with notification that a message is about to be deleted. (Message Deletion notification). • Option to auto-connect to the calling party's extension after reviewing a message on the same server. (Call Sender) • Receive message notification, via message waiting lamp being lit, integrated to the phone instrument verses added on lamp or stutter dial tone. • Option to be routed back to the main system greeting during a message review session. (Restart allowed). Please describe additional, if any, features. Describe your compliance and abilities to provide this service.	**17.3.1.1**

17.3.1 Table – "Software Features [Functional] Requirements"		
Software Feature	**Description**	**Proposal Paragraph #**
Mailbox Parameters	• Greeting length (minimum 2 minutes, up to 30 minutes) • Message length (minimum 5 minutes, up to 30 minutes) • Messages Total (minimum 30 msg., up to 135 msg.) • Days new messages kept (minimum 30 days, up to 365 days or never expired) • Days saved messages kept (minimum 30 days, up to 365 days or never expired) • Message retention days (minimum 30 days, up to 365 days or never expired) • Future Delivery (up to 365 days) • Number of Fax pages (up to 250 pages) • Group Distribution List (up to 25 msg. per list, and up to 15 list per group list) Describe your compliance and abilities to provide this service.	**17.3.1.2**

17.3.2 Table – "System Common Features Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Notification	• User shall receive Message Notification within 3 minutes of receipt of message(s). • User shall receive Message Deletion Warning notification with message resave option. • User shall receive Outcall failure notification. • User shall receive Network Message failure notification. Describe your compliance and abilities to provide this service.	**17.3.2.1**

17.3.2 Table – "System Common Features Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Message Greeting	• The system should be able to inform caller of extended absence status, before that sender sends or networks a message. • The system should have the ability to block messages for Extended Absence Greeting. Describe your compliance and abilities to provide this service.	**17.3.2.2**
Passwords	• Mailbox shall be password protected by a minimum of 6 digits. • Force password change will be a selectable option by voice mail system administrator. • Mailbox password reset option should be available for system administration. Describe your compliance and abilities to provide this service.	**17.3.2.3**
Call Coverage	• The system should have Alias Address as an option to allow messages from two separate (public number) extensions sent to the same mailbox. • Attendant schedules must be available for time of day and holiday call routing. • Callers who press 0 to transfer an extension, the attendant console, or a remote location. Describe your compliance and abilities to provide this service.	**17.3.2.4**

17.3.2 Table – "System Common Features Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Message Session	• Callers and users shall be notified if a mailbox is full. • Users shall be able to address a message • The system should play the recipient's name for verification after an address is entered. • The system shall have the ability, if applied, to prompt users through the process of recording and sending a message. • Users shall have the ability to pause and resume recording a message. • Users shall have the ability to review messages before being sent. • User must be able to listen to unheard messages first. • User must be able to locate sent or received messages. • All messages must be date and time stamped. • Reply message must be available for any message received from the same server or from a networked message server. • The system should be able to verify the name of the person receiving a copy message. The copy message should be able to remove prior header information or introduction message from the previous sender • The system shall have the ability to auto-connect to the calling party's extension after reviewing a message sent from the same server. • Messages should have the ability to be identified to the recipient as urgent, private or normal, while being queued appropriately. Describe your compliance and abilities to provide this service.	**17.3.2.5**

17.3.2 Table – "System Common Features Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Distribution List	• Users shall have the ability to create and modify their own distribution list, and send messages to networked locations. • System distribution list must be password protected for sending messages. • System distribution list administration shall be from a touch-tone telephone and/or from the System Managers Terminal. • The system should purge all references in a distribution list when a mailbox is deleted. Describe your compliance and abilities to provide this service.	**17.3.2.6**
Segmentation	• The system should support segmentation for groups of users, such as different divisions or agencies in the State Government. • Message sending between groups should be administratively controllable. • Users in a segmented group should have the ability to use an abbreviated number of digits to address each other. Describe your compliance and abilities to provide this service.	**17.3.2.7**

17.3.2 Table – "System Common Features Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Networking	• The system must be able to support current Octelnet networking. • Any type of networking must comply to accepted standards, such as AMIS, or VPIM, and interface with existing messaging servers seamlessly. • Analog and digital networking shall be available, including SNMP network management support. • If digital networking is deployed, the system should have the ability to support analog backup. • The sender should hear name confirmation of the network node location and/or the recipient's name when sending a network message. • There should be no maximum number of systems of which can be networked together. Describe your compliance and abilities to provide this service.	**17.3.2.8**

17.3.2 Table – "System Common Features Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Fax Messaging	• The system shall have the ability to send, receive, and forward a combined voice/fax message. • The command interface should be consistent between the voice and fax message. • The system should have the option provide header information for a fax message. • The user shall have the same extension number for both fax and voice messages. • Callers or Users should be able to attach a fax to a voice message. • The system should notify users that a given fax has a voice annotation. • Faxes should be stored and accessed using the same user mailbox password. • User should be able to print out a fax to any fax machine. • The system should support fax broadcast capabilities. • The system should support fax-on-demand capabilities. Describe your compliance and abilities to provide this service.	**17.3.2.9**
Automated Attendant	• The system shall have the ability to act as an Auto Attendant. • The Automated attendant should be able to transfer callers to any destination within the dialing plan by entering an extension number or by spelling a user's name. It also should have time of day analysis capabilities. Describe your compliance and abilities to provide this service.	**17.3.2.10**

17.3.2 Table – "System Common Features Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Enhanced Call Processing	• The system shall support single digit routing in call processing applications. • The system shall support call routing menus with dial-by-name as an option. • The system shall support multiple call routing menus that transfer callers to different destinations based on the time of day and holiday schedule tables. • Call routing and transfers should have the selectable capability of either a blind transfer or a supervised transfer. • The system manager shall have the ability to restrict transfers and outcalls to remote or long distance locations. Describe your compliance and abilities to provide this service.	**17.3.2.11**
Extension Mailbox	• The system should support up to nine subscribers who share a single telephone number. Describe your compliance and abilities to provide this service.	**17.3.2.12**
Information Center Mailbox (ICMBs)	• The system should support listen-only, listen-and-reply, and greeting rotation information center mailbox for announcements. • These ICMBs must have the options to allow open-access or password-protected. • Describe your compliance and abilities to provide this service.	**17.3.2.13**
Voice Forms Mailboxes	• The system should support Forms mailbox and Transcriber mailbox features to allow information collection, transcription, and Forms management. Describe your compliance and abilities to provide this service.	**17.3.2.14**

17.4 EMERGING TECHNOLOGIES

The State desires Integrated Voice Response (IVR) services that allow verbal and Dual Tone Multi-Frequency (DTMF) requests from callers and automated responses. System will interface to different and numerous State databases to allow information lookup and responses. Vendor offering must address the following items.

17.4.1 Table – "Emerging Tech. Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Integrated Voice Response System	Describe Systems offered including make, model and manufacturer hardware and software.	**17.4.1.1**
	Explain hardware and software data interfaces.	**17.4.1.2**
	Describe design and development of custom interface with State equipment.	**17.4.1.3**
	Describe remote server services.	**17.4.1.4**
	Describe allowable database formats.	**17.4.1.5**
	Describe development support being proposed.	**17.4.1.6**
	Explain installation processes and support for IVR to include Vendor expectations of State responsibilities.	**17.4.1.7**
	Describe maintenance procedure.	**17.4.1.8**
	Describe how documentation is supplied.	**17.4.1.9**
	Describe performance monitoring and management reports being offered.	**17.4.1.10**
	Provide minimum capacity (number or ports; call capacity per month, number of system interfaces, etc.)	**17.4.1.11**
	Describe expandability.	**17.4.1.12**
	Describe system recovery features and backup capabilities and methodologies.	**17.4.1.13**
	Provide security features.	**17.4.1.14**
	Describe internet IVR access and compatibility.	**17.4.1.15**
	Describe real time update capabilities.	**17.4.1.16**
	Describe scripting capabilities.	**17.4.1.17**
Integrated Voice	Describe voice normalization capabilities.	**17.4.1.18**

17.4.1 Table – "Emerging Tech. Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Response System Continued	Describe testing procedure and development environment.	**17.4.1.19**
	Describe user interfaces and methodology.	**17.4.1.20**
Unified Messaging / Integrated Messaging Solution	• Unified messaging allows the release of voice mail, e-mail and fax content via transportable services. This may include listening to written e-mail and fax headings and content over a dial-up voice mail access number, viewing faxes via e-mail accounts and seeing written text interpretation of voice mail messages through e-mail access. • The Vendor shall describe the operation of their offering including accuracy of text to voice and voice to text conversion. It is desirable that a sample site be provided for the State to witness accuracy and operation.	**17.4.1.21**

Training

This will be inclusive of all voice messaging services.

17.4.2 Table – "Training Requirements"		
Type	**Description**	**Proposal Paragraph #**
Administrator Training	The Vendor must be prepared to train State representatives regarding ordering, system operation from a user perspective, backup and restore procedure, and troubleshooting of user errors. Describe your compliance and abilities to provide this service.	**17.4.2.1**
	The Vendor shall continue training throughout the duration of the contract, any service users requesting assistance, or receiving Vendor service for the first time. Describe your compliance and abilities to provide this service.	**17.4.2.2**
	Vendor will be responsible to provide additional training when any technology refresh has occurred. Describe your compliance and abilities to provide this service.	**17.4.2.3**
	Training shall occur at a State location as defined by the State. • Training shall take place during State business hours as designated by the State. • Training must take place within 30 days prior to service Cutover, with a one-day (6 hour) refresher course 30 days thereafter. • A minimum of two six (6) hour sessions will be held. • Topics with written documentation must include all Vendor used codes, processes, operations, interfaces and software programs as each relates to the State. • Additional days of training may be provided per Vendor recommendation or if equipment and processes fail to operate as defined. Describe your compliance and abilities to provide this service.	**17.4.2.4**

17.4.2 Table – "Training Requirements"		
Type	**Description**	**Proposal Paragraph #**
On-Site User Training	The Vendor shall provide monthly training sessions when new mailboxes are installed at the rate of 20 or less per month. • A single class, approximately 30 minutes in length, will be provided at a State site. • Training shall occur at a State location as defined by the State. • Multiple same day classes will be provided with class size not to exceed 20 individuals when monthly mailbox installation exceeds 20 per month. • The State will provide the training facility. Describe your compliance and abilities to provide this service.	**17.4.2.5**
Training Materials	Training materials including pamphlets, guides and sample operation shall be provided for all State users. Describe your compliance and abilities to provide this service.	**17.4.2.6**

17.5 SERVICE LEVEL REQUIREMENTS

The service level requirements below are minimum requirements for voice mail services. Review each SLA and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

17.5.1 Table – "Service Level Requirements"		
SLA	**Description**	**Proposal Paragraph #**
Maintenance	Any scheduled system effected change or outage for maintenance must have the approval of the authorized State contact and should be given a minimum of 24 hours advanced notice to subscribers. Describe your compliance and abilities to provide this service.	**17.5.1.1**
Advance Notice	Any scheduled system effected change or outage for major upgrade or conversion must have the approval of the authorized State contact and should be given a minimum of 7 days advanced notice to subscribers. Describe your compliance and abilities to provide this service.	**17.5.1.2**
Unscheduled Changes	Any unscheduled system effected change resulting an outage occurred should be notified immediately to State contacts, followed with a status update every 2 hours until the system resumes its normal operation. The Vendor will follow up with written documentation containing trouble ticket number, system serial number, date and time occurred, date and time resolved, personnel at site, cause of the incident, impacts, trouble resolution, and any expense that's not covered in the contract. Describe your compliance and abilities to provide this service.	**17.5.1.3**
Outages	All system outage events should be documented and provided to State agencies quarterly or at the request of the State. Describe your compliance and abilities to provide this service.	**17.5.1.4**
Toll Free Support	Vendor shall provide a toll free support line with human personnel available to assist callers anytime during the State workday. Describe your compliance and abilities to provide this service.	**17.5.1.5**

17.5.1 Table – "Service Level Requirements"		
SLA	**Description**	**Proposal Paragraph #**
Escalation	Escalation to the next tier 2,3,4 level support on a 24x7x365 basis must be available for escalated problem and resolution. Describe your compliance and abilities to provide this service.	**17.5.1.6**
Dialing Plan Updates	The dialing plan of all network nodes defined in the voice messaging server must be kept up to date to allow successful network messages. The network nodes should be updated or reviewed quarterly or as needed. Describe your compliance and abilities to provide this service.	**17.5.1.7**
Security	The Vendor shall provide State a list of State authorized name contacts programmed in the Vendor database for State's security validation, on quarterly or as needed basis. Describe your compliance and abilities to provide this service.	**17.5.1.8**
Access	The Vendor shall provide State a list of name contacts of authorized Vendor personnel, including authorized third party Subcontractors, who have access to the State's system servers, on quarterly or as needed basis. Describe your compliance and abilities to provide this service.	**17.5.1.9**
Service Repair	The Vendor shall provide service reports to the State on a monthly basis, verifying such operation, and changes to the service to ensure future operations within these parameters. Describe your compliance and abilities to provide this service.	**17.5.1.10**

17.5.2 Table – "Reporting Requirements"		
Reporting Requirements	**Description**	**Proposal Paragraph #**
Please describe how each of your reports is formatted, sorted, and/or filtered.	• Mailbox Usage detailed in connect calls and minutes, total by mailboxes on a daily or monthly basis. • Subscriber usage detailed in fax, out calls, and message storage activities. • Group usage (Short form) report entails all or selectable individual subscribers usage by day and by month. • Traffic statistic by port or port group summary. • Traffic statistic by system connected minutes and connected counts. • Message disk space usage. • Fax activity detail or summary by mailbox. • Last login. • Mailbox List by Box number, Class of Service, Department, Name, or by type. • Attendant coverage. • Message aging by mailbox. • Un-initialized mailboxes. • System distribution list and activity. • System list members. • CDR call activities. • MWI Activity. • MWI Failures. • Mailbox profile. • Incoming Automatic Number Identification call activities by mailbox. • Network node profile. • Network traffic totals.	**17.5.2.1**

17.5.2 Table – "Reporting Requirements"		
Reporting Requirements	**Description**	**Proposal Paragraph #**
Please describe how each of your reports are formatted, sorted, and/or filtered. CONTINUED	• Network message failure activities. • Outcall Activities. • Outcall failures. • Single Digit Menu call summary. • System log events summary. • Trees normal summary. • Unassigned Mailbox numbers. • Message total by mailbox. • Zero message Activity • Traffic statistic reports should be formatted to provide totals at the end of the report rows. • Ad-hoc reporting capability should be available. • All such reports must be on electronic PC CD media compatible with MS Excel, MS word format, provided in unalterable electronic format in version to be agreed upon. • Make report available via web interface. • Describe your compliance and abilities to provide this service.	

17.5.3 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**17.5.3.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**17.5.3.2**
Describe how your company will provide cost efficient and effective network solution(s) in connecting all (State) voice messaging systems?	**17.5.3.3**
If your company plans to introduce a new platform to State's Enterprise Voice Messaging System, how will your company bridge the new platform technology with the existing platform technology? What will the transition process and the time frame be for user training?	**17.5.3.4**
Describe your Change management Process	**17.5.3.5**

17.5.3 Table – "Technical Questions"	Proposal Paragraph #
Enhanced features such as Visual Message, Fax-on-Demand, Mailbox Manager, or Octel Designer software applications currently are deployed in a few Lansing area Servers, describe how these features will be implemented statewide.	**17.5.3.6**
How will edge equipment pertaining to voice messaging area be managed?	**17.5.3.7**
Voice Messaging is diversified to Multi-media Messaging direction. Describe how your company will keep the current Voice Messaging configuration and equipment at the most current revisions.	**17.5.3.8**
Describe your company's future direction in the voice messaging or Multi-media messaging area?	**17.5.3.9**
How will the security be maintained? How frequently do you do the security audit?	**17.5.3.10**
Please provide a complete security checklist starting from the end user level to the administrative level, from the Vendor end and the third party Vendor that's contracted through the Vendor.	**17.5.3.11**
How does your company keep track of the State's voice messaging systems passwords administratively? When someone (For example, a technician at your Technical Support line who frequently troubleshoots State's systems) left the company, what security action is taken?	**17.5.3.12**
Please explain how the Voice Messaging servers and their applications will be designed / managed to accommodate future initiatives that may be relevant to the State's business.	**17.5.3.13**
Please list demand maintenance service rates.	**17.5.3.14**
Please explain how quickly your company provides services on demand. (E.g., an application is added with unexpected large volume of traffic usage and blockage occurs, and the server is already at its maximum capacity.) List the exceptions that will precede the normal ordering process.	**17.5.3.15**
Please explain how your company will compensate State for not meeting the level of service demanded. (For example, equipment ordered arrives 5 business days late causing a project delay, and possible monetary loss.)	**17.5.3.16**
What's the ratio for a certified field engineer's coverage to the number of servers in a region?	**17.5.3.17**
The Helpdesk Center to support the State must be located within the State. Describe your compliance and abilities to provide this service.	**17.5.3.18**

17.5.4 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the Voice Messaging Services described above.	**17.5.4.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**17.5.4.2**
Provide a detailed technical service description for the alternative proposed Voice Messaging Services as attachment to your response.	**17.5.4.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**17.5.4.4**

17.5.5 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage Voice Messaging services for the State.	**17.5.5.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**17.5.5.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**17.5.5.3**
Resources	Provide a detail schedule for staffing associated with Voice Messaging. Schedule must include related labor charges, broken out by skill levels.	**17.5.5.4**

18.0 NETWORK REPORTING SERVICES

18.1 CURRENT STATE ENVIRONMENT

The State's current environment supports ad hoc reporting. State reports include data metrics in the areas of network health and performance, produced through network monitoring systems. Inventory control (for network devices other than workstations) is accomplished through the network monitoring system. Circuit add/move/change orders are tracked through a trouble ticketing system, allowing for both tracking and trouble shooting capabilities. Billing is accomplished through the states own proprietary system. Internet usage monitoring is in the pilot stage of development. MS SQL 2000 (Enterprise) and MS Excel are the interfaces to various sources of data in an inter-connected reporting system. Data feeds for the reporting system come from different operating systems, mainly (but not limited to) Solaris UNIX and Windows 2000.

18.2 SERVICE/SUPPORT (REPORTING) REQUIREMENTS

The service features below are minimum requirements for Network Reporting services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

18.2.1 Table – "Service / Support [Reporting] Requirements"

Service Feature	Description	Proposal Paragraph #
Technology and Service Specifications	The Vendor must provide complete management reports defining circuit locations, programming, capabilities, and operation. Reports shall be provided in PC based electronic, printable files using MS Office Suite products compatible with Microsoft database format import/export requirements. All reports require one (1) electronic, printable, and modifiable copy posted to a secure Web site for easy downloading by authorized state employees only. Items to be included shall be circuit number designation, locations, type, speed, programming, related Vendor equipment and ports, and any and all related information. Describe your plans to provide this requirement.	**18.2.1.1**

18.2.1 Table – "Service / Support [Reporting] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Circuit Add/Move/ Change Tracking Reports	The Vendor shall describe their operational reporting capabilities in, at a minimum, the following areas: • Weekly work-in-process reporting (status, circuit, location, department, ticket number.) • Monthly reporting for number, type and circuits affected for adds/moves/changes (includes disconnects), effective date. • Monthly list of active circuits and types, locations, department (when single department at location), contacts.	**18.2.1.2**
Historical Metrics Reporting On Data Network Performance and Health	The Vendor shall describe their operational reporting capabilities in, at a minimum, the following areas: • Weekly and monthly: Mean Time to Repair (MTTR.) • Percent (%) of problems greater than the MTTR. • Weekly and monthly: Error rates & number of problems per port. • Monthly and weekly: service affecting outage (times, DNS names, length of outage, problem cause.) • Weekly and monthly: Service Request On Time Completion (SROTC.) • Weekly and monthly: Network availability (uptime and downtime.) • Daily and weekly: Bandwith usage to the device level. Ability to drill to 15 minute interval level. • Daily and weekly: CPU usage to the device level. Ability to drill to hourly level. • Daily and weekly: CRC and dropped packet error rates to the device level. Ability to drill to hourly level. • Customized Reports.	**18.2.1.3**

18.2.1 Table – "Service / Support [Reporting] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Ability To Aggregate Metrics To Quarterly, Semi-Annual And Annual Reporting Levels For Trending For 5-7 Years	• The Vendor shall describe their operational reporting capabilities in, at a minimum, the following areas: • Bandwidth utilization to the device level. • Router to router latency. • Mean Time to Repair (MTTR.) • Network availability. • Service Request On Time Completion (SROTC.) • Cost per location.	**18.2.1.4**
Inventory Control Reporting – Network Devices Other Than Workstations	• The Vendor shall describe their operational reporting capabilities in, at a minimum, the following areas: • Weekly Adds, moves, changes to network devices (DNS name, IP address, type of activity, circuit.) • Monthly Device type, location, IP addresses, DNS name, contact name, Department, circuit. • Quarterly and Annually: number of adds/ moves/changes by activity type.	**18.2.1.5**
Interface With Existing STATE Reporting Systems	The Vendor shall describe their operational reporting capabilities in, at a minimum, the following areas: MS SQL 2000 data warehouse and databases – data feeds are Solaris Unix, SCO Unix, NT and W2K based.	**18.2.1.6**
Internet Usage Reports	The Vendor shall describe their operational reporting capabilities in, at a minimum, the following areas: • Daily and weekly reporting: Source, destination, protocol, total bytes in/out, initiation time, and duration. • Weekly, monthly: top 10% of sites visited, number of visitors, average duration, average total bytes in/out per visitor.	**18.2.1.7**

18.2.1 Table – "Service / Support [Reporting] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Cost Reports	The Vendor shall describe their operational reporting capabilities in, at a minimum, the following areas: • Monthly IP utilization billing. • Monthly per circuit, type of circuit, service request, megabytes transferred, department.	**18.2.1.8**
Chronic Problems Reports	The Vendor shall describe their operational reporting capabilities in, at a minimum, the following areas: Three problems on any device/circuit that occur during any 30 day period will be reported within 2 hours of 3rd occurrence to designated State personnel via an e-mail notification.	**18.2.1.9**
Network Report Monitoring	The Vendor shall describe their usage management capabilities in, at a minimum, the following areas: • Consistent Vendor representation (familiar with the State typical order and provisioning activities.) • Review usage patterns to identify potential abuses and poor practices. • Provide suggestions to monitor and improve usage practices. • Provide real-time thresholds, alarms, and exception reporting to actively control usage patterns.	**18.2.1.10**
Service Levels	The State expects contractual service level guarantees to ensure the technical, provisioning, billing, and operational performance of networking services bid in response to this RFP. Guarantees shall be structured on a "per circuit" or "per channel" basis with measurement over a monthly interval. Respondent shall submit a draft service level guarantee for each offered service, including financial penalties in the form of service credits or rebates for non-compliance. Describe your compliance and abilities to provide this service.	**18.2.1.11**

18.2.2 Table – "Technical Questions"	**Proposal Paragraph #**

18.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**18.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**18.2.2.2**
The Vendor will describe any software tools it will use to administer these functions.	**18.2.2.3**
What is your annual revenue for and estimated market share of data networking services in the geographic areas you are proposing?	**18.2.2.4**

18.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**18.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**18.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**18.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**18.2.3.4**

18.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage network reporting services for the State.	**18.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**18.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**18.2.4.3**
Resources	Provide a detail schedule for staffing associated with network reporting. Schedule must include related labor charges, broken out by skill levels.	**18.2.4.4**

19.0 WAN MANAGEMENT, MONITOR, AND MAINTENANCE:

19.1 CURRENT STATE ENVIRONMENT:

The State's Enterprise Data Network is the integrated vehicle for carrying all forms of the State business traffic, including formal applications (both mainframe and client/server); shared file space on Unix, NetWare or Microsoft OS servers; and the web-based corporate Intranet. Data protocols have been consolidated to TCP/IP by converting legacy (SNA-like) traffic to encapsulation over TCP/IP; IPX is also expected to phase out of local LANs as the enterprise completes the migration to a pure IP infrastructure. The State TCP/IP address space falls within NIC-registered public address blocks and RFC1918 compliant private address blocks.

The State will consolidate the TCP/IP infrastructure, and continue to evolve the ATM, SONET, and IP backbones that interconnect the routers. The State would like to leverage its backbone investment by moving all voice, video, streaming media, and data into a single network, managed for optimal quality of service to the various media, and maximum available bandwidth and reliability.

The business demands of the State require that the data network have predictable, and adaptable, characteristics. Changes to data paths must be completed in a matter of hours, or at most days, where physical construction is not required (such as for PVC or VPN changes).

For application design purposes, the State considers there to be three classes of data paths:

1. Inter-LATA Primary Core and Distribution Connections – typically a link between two high-density State sites in the same State-wide theatre (– e.g., the Detroit Cadillac Place State office building and Lansing's Metro-Area Network) – or between two Core Network LATA Nodes. Steady State capacity must be in the range of 155Mb – 622Mb or greater. For packet-switched services, bursting is expected to +200% of nominal bit rate without packet discards. Latency on these links is required to be less than 50 ms.

2. Large Site and Inter-Campus Connections – typically connections between Metropolitan Campuses, or between a large site and a core site. Bit rate needs to be in the range of 100Mb to 10Gb; latency needs to be less than 35ms. The same comments about bursting apply; packet discards cannot be tolerated.

3. Peripheral Site Connections – typically branch office connections to distribution sites. Bit rates are needed in the range of 1.5Mb to 45Mb with latency less than 75ms. Extremely low levels of packet discards can be tolerated, but even these will create operational problems. Services must be rapidly re-configurable (e.g., increasing CIR or changing VPN via software), in a matter of hours or, in extreme cases, one or two days.

There are four primary traffic streams from any site:

1. To the Enterprise Data Center – for mainframe applications, centralized client/server, and centralized Intra-net web services.

2. To a regional application, mail or proxy hub, shared with several locations within a LATA, for up-stream forwarding and redistribution or application software distribution and desktop management.

3. To various small, office-oriented internal web sites and shared file and print servers.

4. To the Internet, currently through one of the State's major ISP connections.

There are several Virtual Private Networks (VPNs) provisioned within the WAN architecture. The Michigan State Police use a VPN with a separate head-end in Lansing. The Local Government Network (LGNet) is a Extranet VPN with a separate head-end in Lansing, secured from the Intra-Net by its own set of firewalls. The LGNet VPN is used to manage unsecured connections to all units of local government accessing state applications.

In addition to this internal topology, the State maintains an Enterprise DMZ LAN for provisioning the State's presence on the World Wide Web, and an Enterprise Extranet to support specific business activities of clients and suppliers. While the State is eager to explore other options of servicing Internet activities – both outbound and inbound – the State will require a continuing ability to impose restrictions and controls on traffic paths, so that the internal State networks can be treated as a secure environment.

For reference, see Attachment A at the end of this section. This figure details the current managed access ports in the Wide Area Network, by location (city, LATA).

19.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for WAN services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

19.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Speeds	Describe in your proposal in which LATAs the Vendor will supply the required service at the required network speeds.	**19.2.1.1**
ATM Network Speeds	Access port bit rates available from DS3 to OC12.	**19.2.1.2**
SONET Speeds	Access port bit rates available from DS1 to OC12.	**19.2.1.3**
Frame Relay Committed Information Rates	CIR available from 56kb to 45Mb.	**19.2.1.4**
Private Line	Circuit speeds available from Nx64K to fractional T1/T3.	**19.2.1.5**
Wave Division Multiplexing	Wave Division channel access speeds available from OC3 to OC192.	**19.2.1.6**
Incident Management	An incident is any event which is not part of the standard operation of the State server and which causes, or may cause, an interruption to, or a reduction in the quality of WAN service for State employees and/or State customers. Includes: • Incident detection & recording. • Classification of incidents & initial support. • Investigating & diagnosis of incidents. • Incident resolution & recovery. • Incident Closure. • Incident ownership, monitoring, tracking and communication.	**19.2.1.7**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
WAN Incident Detection & Recording	Show how the Vendor will detect a WAN incident and record the incident within 15 minutes from the time of a WAN network outage or degradation of WAN network services.	**19.2.1.8**
Classification Of All WAN Incident and Initial Support	Show how the Vendor will classify WAN incidents using the current State problem management practices.	**19.2.1.9**
Investigating & Diagnosis Of All WAN Incidents	Show how the Vendor will provide status to State on all WAN incidents once every hour.	**19.2.1.10**
WAN Incident Resolution & Recovery	Show how the Vendor will resolve 90% of all incidents within 2 hours after the initial outage or degradation of WAN service.	**19.2.1.11**
WAN Incident Closure	Show how the Vendor will insure that the incident tracking ticket will not be closed until State agrees WAN incident is resolved.	**19.2.1.12**
WAN Incident Ownership, Monitoring, Tracking And Communication	Show how the Vendor will provide the State visibility into their problem management system for entering tickets and inquiry.	**19.2.1.13**
WAN Monitoring	Show how the Vendor will provide the State visibility into your network including, but not limited to the SNMP read capability.	**19.2.1.14**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Problem Management	WAN Problem management is required to minimize the adverse effect on the State Network incidents and problems caused by errors in the WAN network infrastructure and to proactively prevent the occurrence of incidents problems or errors. Includes: • Problem Control. • Error Control. • Assistance with the handling of major incidents. • Proactive prevention of problems. • Obtaining management information from Problem data. • Completing major Problem reviews. Describe your compliance and abilities to provide this service.	**19.2.1.15**
Problem Control	**S**how how the Vendor will provide to the State a Chronic Problem Report that cover a rolling 30 day window for circuits or nodes that have an WAN incident 3 or more times in the 30 day period.	**19.2.1.16**
Configuration Management	Show how the Vendor will provide the State with a logical model of the Wide Area Network Infrastructure by identifying, controlling, maintaining, and verifying the versions of all configuration items in the network. WAN Configuration Management includes: • Identification • Control • Status Accounting • Verification and audit Describe your compliance and abilities to provide this service.	**19.2.1.17**
Identification	Show how the Vendor will make the inventory database of all network nodes and circuit information accessible to State.	**19.2.1.18**
Control	Show how the Vendor will control hardware upgrades, releases and patches.	**19.2.1.19**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Status Accounting	Show how the Vendor will provide the State with a monthly inventory of all WAN nodes and circuit information.	**19.2.1.20**
Verification and Audit	Show how the Vendor will perform a yearly audit that verifies the physical existence of all configuration items that make up the WAN.	**19.2.1.21**
Change Management	Show how the Vendor will ensure WAN Change management ensures that standardized methods and procedures are used for efficient and prompt handling of all changes, in order to minimize the impact of any related incidents on State WAN service. Includes: • Raising and recording changes • Accessing the impact, cost, benefit, and risk of proposed changes • Developing business justification and obtaining approval • Managing and coordinating Change implementation • Reviewing and closing Requests for Change (RFCs) • Show how the Vendor will incorporate the State's notification requirements into the Vendor's internal change management process. • Show how the Vendor will implement an emergency change management process for emergency changes, patches, etc. Describe your compliance and abilities to provide this service.	**19.2.1.22**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Release Management	WAN Release Management should take a holistic view of a change to a WAN network service and ensure that all aspects of a release, both technical and non-technical, are considered together. WAN Release Management requirements include: • Planning & overseeing. • Liaison with Change Management to agree to the exact content and rollout plan for the release. • Ensuring all items being rolled out or changed are secure and traceable. • Managing State expectations of Release and roll-outs. Describe your compliance and abilities to provide this service.	**19.2.1.23**
Planning & overseeing	Show how the Vendor will Manage large releases using your change management system.	**19.2.1.24**
Liaison with Change Management	Show how the Vendor will provide a liaison with the State in order to agree on release content and roll out plan.	**19.2.1.25**
Software/ Hardware Releases	Describe how the Vendor will incorporate a 30-day notification to State for software/hardware releases and software/hardware upgrade rollouts.	**19.2.1.26**
Emergency Exception Process	Describe the Vendor's emergency exception process.	**19.2.1.27**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Capacity Management	WAN Capacity Management is required and will allow the understanding of this future business requirements (the required service delivery), the State operation (the current service delivery), the network infrastructure (the means of service delivery) and ensure that all current aspects of the business requirements are provided cost effectively to the State. WAN Capacity Management includes: • Monitoring the performance and the throughput of the WAN network and supporting IT components, including Core, Distribution, and access components and circuits. • Tuning activities to make efficient use of network. Describe your compliance and abilities to provide this service.	**19.2.1.28**
Performance Monitoring	Describe the Vendor's performance monitoring procedures and the procedures for initiating changes based on performance monitoring results.	**19.2.1.29**
Tuning Activities	Describe the Vendor's network tuning processes and capabilities for providing policy-based Quality of Service throughout the network.	**19.2.1.30**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Service Continuity Management	WAN Service Continuity Management is needed to support the overall Business Continuity Management process by ensuring that the required WAN technical and services facilities can be recovered within the agreed business time-scales. Includes: • The available service continuity options must be understood and the most appropriate solution chosen in support of the State business requirements. • Roles and responsibilities must be identified, and endorsed and communicated from a senior level to ensure respect and commitment for the process. • WAN managing, monitoring and maintenance recovery plans and Business Continuity Plans should be aligned, and regularly reviewed, revised and tested. Describe your compliance and abilities to provide this service.	**19.2.1.31**
Service Continuity Options	Vendor must be understand and use the most appropriate solution chosen in support of the business requirements. Show how the Vendor will perform a risk assessment and analysis on the WAN managing, monitoring and maintenance.	**19.2.1.32**
Commitment	Roles and responsibilities need to be identified, and endorsed and communicated from a senior level to ensure respect and commitment for the process. Show how the Vendor will prove that there is a commitment by the communication, teamwork and influence between the Vendor and the Critical service providers such as power, water, post, etc.	**19.2.1.33**
WAN Monitoring	WAN Monitoring recovery plans and Business Continuity Plans should be aligned, and regularly reviewed, revised and tested. Show how the Vendor will be prepared for a major natural or manmade disaster that eliminates the WAN management, monitoring and maintenance facility.	**19.2.1.34**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
WAN Availability Management	WAN Availability Management is required to optimize the capability of the vender to deliver a cost effective and sustained level of availability that enables the State to satisfy it's objectives. Includes: • Optimize availability by monitoring and reporting on all key elements of availability. • Determining availability in business terms. • Predicting and designing for expected levels of availability and security. • Producing the Availability Plan. • Collecting, analyzing and maintaining availability data and reporting on that data. • Ensuring service levels are met by monitoring service availability levels against SLAs, and monitoring OLA target and external supplier • Serviceability achievements. • Continuously reviewing and improving availability. Describe your compliance and abilities to provide this service.	**19.2.1.35**
SLAs	Vendor must ensure service levels are met by monitoring service availability levels against SLAs, and monitoring OLA target and external supplier. Show how the Vendor will give credits to State for failure to perform according to agreed upon SLA.	**19.2.1.36**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Traffic Reporting (Please provide sample reports as attachments to your response)	The Vendor shall describe their implementation of the following monthly reports including, at a minimum: • Service level compliance (Availability, MTTR (Mean Time To Repair), MTBF (Mean Time Between Failures), etc…) • SONET, ATM and Frame Relay port and Virtual Circuit statistics. • Customized reports. • Electronic format, transmission, and real-time access. • Usage-based service capacity reports with exception reporting against the State provided thresholds.	**19.2.1.37**
Provisioning Support	The Vendor shall describe their provisioning support in (at a minimum) the following areas: • Consistent Vendor representation (familiar with the State typical order and provisioning activities.) • Electronic order submission. • Customer configuration of SONET, ATM, and Frame Relay virtual circuits. • Standard provisioning interval (within five days for software changes, within twenty days for new physical circuits/services.) • Service Acceptance interval on turn-up to the State. • Weekly work-in-process reporting.	**19.2.1.38**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Operational Support	The Vendor shall describe their operational support capabilities in, at a minimum, the following areas: • 24x7x365 service monitoring and trouble reporting hotline. • On-line electronic access for trouble ticket submission and status inquiry. • Rapid response service restoration with formal trouble escalation process and contacts. • Monthly service affecting outage report. • Formal root cause analysis reports for extended outages or provisioning failures • Centralized technician dispatch. • Problem and resolution notification to the State network control center. • Support coordination of third party access providers.	**19.2.1.39**
Usage Management (Applicable to all usage priced services)	The Vendor shall describe their usage management capabilities in, at a minimum, the following areas: • Review usage patterns to identify potential abuses and poor practices. • Provide suggestions to monitor and improve usage practices. • Provide real-time thresholds, alarms, and exception reporting to actively control usage patterns.	**19.2.1.40**
IP Adoption	The State views IP as the emerging technology of choice for the next generation of commercial use, wide area, high speed (T1-OC12+) networks including data, voice, and video services. Vendor shall describe plans for IP adoption/expansion that illustrate compatibility with the State vision.	**19.2.1.41**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
IP Over Sonet	OC12+ SONET or multi-Gigabit port speed is the preferred data service for large sites including: Corporate Headquarters, Subsidiary Headquarters, Data Centers, and Network Hubs. OC12 SONET pricing must be financially competitive with a three-site network based on IP Over SONET technology using multi-Gigabit circuit rates. The Vendor shall provide an example that illustrates your IP Over SONET pricing model.	**19.2.1.42**
Virtual Circuits	Virtual circuit pricing is expected to be highly competitive with postalized pricing for all circuits within the LATA. The Vendor shall provide an example of various situations illustrating this model.	**19.2.1.43**
Service Integration	Service Integration – The State expects carriers to offer ATM cell access gateways to traditional voice VPN, PSTN, Internet IP, and narrowband ISDN networks. The Vendor shall identify their to gateway customer ATM cell streams onto other traditional networking services.	**19.2.1.44**
Access Integration	Access Integration – ATM provides an opportunity to merge discrete physical T1 access circuits (using CBR circuit emulation). The Vendor shall describe any opportunities (present or planned) for integrating access via ATM circuit emulation.	**19.2.1.45**
Broadband Inter-Carrier Interface (B-ICI)	Interconnection of ATM networks (based on the B-ICI standard. The Vendor shall identify plans to implement Broadband Inter-Carrier Interface (B-ICI) network interconnections to third party carriers.	**19.2.1.46**
Frame Relay Port Speeds	Frame Relay NxT1, T1, Nx64k, and 56/64K ports are required. The Vendor shall describe their various port speed options for Frame Relay service.	**19.2.1.47**

19.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
ATM	ATM Internetworking – VCs between Frame Relay and ATM ports are expected to interface seamlessly without performance degradation or increased cost. The Vendor shall discuss their ATM to Frame Relay internetworking capability and service performance.	**19.2.1.48**
Private Line	Private line circuits are a less desirable alternative to OSI Layer 2 frame and cell switching technologies. The Vendor shall describe their private line service offering. Focus on price per Mbps, flexibility, and manageability.	**19.2.1.49**
Fractional T1	Nx64k Fractional T1 services are used extensively in areas where circuit costs are typically very high. The Vendor shall discuss their Nx64k Fractional T1 service including the pricing components and shared access.	**19.2.1.50**
ISDN	ISDN-PRI and BRI technology is used for critical site dial backup and overflow (between the State routers). The Vendor shall describe any ISDN and non-ISDN alternatives for backup and overflow available in their service offerings. Small offices have used ISDN narrowband as their primary access method. The Vendor shall describe the availability of network-based ISDN dial-up as the primary access method.	**19.2.1.51**
Additional Info.	See Appendix B	**19.2.1.52**

19.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**19.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**19.2.2.2**
For each type of data service, indicate the network access methods available (by geographic region as defined in this RFP). Specify and distinguish between access methods presently deployed and those planned for deployment, annually, thru the end if this contract. In particular, the Vendor should identify existing and planned statewide backbone and distribution layer routes, dates of service availability, segments of new construction, segments of leased fiber, description of physical facility, initial lit bandwidth by segment, points of interface (POI), bandwidths available for each POI, and transmission technology to be deployed. Explain the process and timeline for capacity increases at POIs and along backbone segments. Provide a statement on how much spare bandwidth will be available at each POI for future State initiatives or private connections and the proposed rate structures for these connections.	**19.2.2.3**
What network level gateways are presently supported between the services you provide (i.e.: Ethernet internetworking with ATM)? What protocol conversion standards are supported on these gateways?	**19.2.2.4**
Detail your plans for SONET and ATM customer interfaces to other traditional networking services.	**19.2.2.5**
Discuss your currently active projects/representation with the following standards bodies: the ATM Forum, the Frame Relay Forum, ITU-T, IEEE, IETF, and ANSI.	**19.2.2.6**
Discuss the methods for provisioning and managing various secured VPN's within the WAN topology (e.g. a criminal justice VPN, a Local Government VPN.)	**19.2.2.7**

19.2.2 Table – "Technical Questions"	Proposal Paragraph #
For each of the State defined geographic regions in which you are offering service to The State, indicate: • Number and port availability of POP's and major facilities • POP resiliency features. • Support center location(s) • Whether you own or resell the network infrastructure bid in your response. • Partnering agreements in place with Telecommunications Authorities, PTOs, other commercial carriers, or business units within The State.	**19.2.2.8**
What is your annual revenue for and estimated market share of data networking services in the geographic areas you are proposing?	**19.2.2.9**
Detail your customer problem reporting, analysis, and resolution procedures. Indicate how "partner" network participation is handled, including trouble ticket systems. What is the State visibility to problem resolution involving partner networks?	**19.2.2.10**
To what extent is the State expected to participate in problem resolution?	**19.2.2.11**
Describe how you will monitor the offered network services to ensure compliance with service level guarantees.	**19.2.2.12**

19.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**19.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**19.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**19.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**19.2.3.4**

19.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage Wide Area Network services for the State.	**19.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**19.2.4.2**
References	Provide at least three, no more than five, organizations comparable to the size and scope of the State in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**19.2.4.3**
Resources	Provide a detail schedule for staffing associated with WAN services. Schedule must include related labor charges, broken out by skill levels.	**19.2.4.4**

20.0 WAN DESIGN INSTALLATION, AND MOVES/ADDS/CHANGES (MACS)

20.1 CURRENT STATE ENVIRONMENT:

Business demands of the State require that the data network be available at all times, and have predictable, and adaptable, characteristics. Any changes to the network must be completed in a matter of hours, or at most days, where physical construction is not required (such as for PVC or VPN changes).

- Most State agencies have offices throughout the State, approximately 2400 locations.
- Out-State sites are a part of a managed Frame Relay network consisting of T1 and 56 KB circuits.
- The Managed network contract is with SBC DataComm and expires in February, 2004.
- The WAN currently utilizes a SONET backbone between LATAs.
- Some sites have ISDN or Point-to-Point backup capabilities.
- Most sites require 24x7x365 availability.

20.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for WAN services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

20.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Service Availability	The State requires that any location within the State have access to the WAN at T-1 speed. Other speeds may be offered at agency request. 10/100 MB Ethernet and Token Ring will be provided on the LAN segment. Describe how the Vendor will provide this service.	**20.2.1.1**
Protocols Supported	Describe networking protocols that may be provided by the Vendor, and at what bandwidth rates, geographical availability, and service level. (TCP/IP is preferred but not exclusive.) Explain how pricing will be done – by site, by circuit, or other.	**20.2.1.2**

20.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Security	Vendor's service must be secure from any access outside the State's network unless authorization is given and the State's security protocols are followed. Describe how the Vendor will secure the State's network.	**20.2.1.3**
Service Uptime	Describe what methods the Vendor will employ to maintain a minimum 99.99% availability at all edge locations as measured per calendar month.	**20.2.1.4**
Maintenance	Describe how the Vendor shall be able to provide maintenance on a priority schedule developed by the State and when least intrusive on Agency's business.	**20.2.1.5**
Equipment Management	Describe the Vendor's processes for managing all edge, distribution, and backbone equipment.	**20.2.1.6**
Installation Timeframe	Describe what processes the Vendor will have that will enable the State to have a new site operational within 30 business days of order receipt. Describe the Vendor's process for accelerated, priority installations.	**20.2.1.7**
Network Edge Performance	Describe the design of the Vendor's proposed network that will insure an average 30ms latency and <2.5% packet loss at the edge/access layer.	**20.2.1.8**
Network Backbone Performance	Describe the design of the Vendor's proposed backbone network that will maintain 10ms latency and 0% packet loss, and 99.999% uptime.	**20.2.1.9**
VPN (Virtual Private Network)	Describe the Vendor's proposed network capabilities to provide edge-to-edge VPNs within the WAN and back to the State's network.	**20.2.1.10**
Change Management	Describe the Vendor's monthly reporting capability for detailing: Move, Add, and Change activity. These reports should cross-reference any State Service Request or Problem Management tracking number.	**20.2.1.11**
Escalation Process	Describe the Vendor's process to escalate MAC's and trouble tickets that do not meet the Service Level Agreement.	**20.2.1.12**

20.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Minimum Service Requirements	Review the minimum service requirement specifications in Figure 20.2.2 below relative to your services and State your corresponding specifications in the proposal paragraph indicated	**20.2.1.13**

20.2.2 Figure – "Minimum Service Requirements"			
Service	**Element**	**Parameter**	**Minimum Requirement**
ATM	Backbone and Access Networking	Availability	Yes
ATM	Circuit	Bit rates	DS3-OC12
ATM	PVC, CBR	Latency	0ms Backbone 30ms Access
SONET	Backbone Networking	Availability	Yes
SONET	Circuit	Bit rates	DS3-OC12
SONET	PVC	Latency	0ms Backbone 30ms Access
FR	Backbone and Access Networking	Availability	Yes
FR	CIR	Bit Rates	56k-45mb
FR	CIR	Latency	30ms
FR	Circuit type	VPN	Yes
FR	QOS	Availability	Yes

20.2.3 Table –"Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**20.2.3.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**20.2.3.2**
Describe how you will connect the WAN to the State's existing metropolitan networks.	**20.2.3.3**

20.2.3 Table –"Technical Questions"	Proposal Paragraph #
Describe the Vendor's Change Management Process.	**20.2.3.4**
What methods and tools will the Vendor use to manage and maintain WAN network equipment?	**20.2.3.5**
Explain how you will keep the network configuration and equipment at the most current revisions.	**20.2.3.6**
How will edge network security be maintained?	**20.2.3.7**
If a backbone network is proposed, explain its redundancy and diversity.	**20.2.3.8**
How will the proposed network provide future scalability to the State?	**20.2.3.9**
Describe and explain any additional features of the proposed WAN network.	**20.2.3.10**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**20.2.3.11**
Explain the Vendor's problem and work order escalation process.	**20.2.3.12**
Explain how the WAN will be designed/managed to accommodate future network initiatives that may be relevant to the State's business.	**20.2.3.13**
How will Quality of Service (QOS) be provided for converging voice, data, and video traffic on the WAN?	**20.2.3.14**

20.2.4 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**20.2.4.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**20.2.4.2**
Provide a detailed technical service description for the alternative proposed.	**20.2.4.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**20.2.4.4**

20.2.5 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage WAN Design Installation/MAC services for the State.	**20.2.5.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**20.2.5.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**20.2.5.3**
Resources	Provide a detail schedule for staffing associated with WAN Installation/MAC services. Schedule must include related labor charges, broken out by skill levels.	**20.2.5.4**

21.0 NETWORK NODE MONITORING

21.1 CURRENT STATE ENVIRONMENT:

The State Enterprise Networks must be monitored continuously for availability and performance. Restoration of service must occur within hours. The business demands of the State require that the data networks have predictable, and adaptable, characteristics.

21.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for Wide Area Network services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

21.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Incident Management	An incident is any event which is not part of the standard operation of the State server and which causes, or may cause, an interruption to, or a reduction in the quality of WAN service for State employees and/or State customers Includes: • Incident detection & recording • Classification of incidents & initial support • Investigating & diagnosis of incidents • Incident resolution & recovery • Incident Closure • Incident ownership, monitoring, tracking and communication Describe your compliance and abilities to provide this service.	**21.2.1.1**
WAN Incident Detection & Recording	Show how the Vendor will: Detect a WAN incident and record the incident within 15 minutes from the time of a WAN network outage or degradation of WAN network services.	**21.2.1.2**
Classification of All WAN Incident and Initial Support	WAN incidents will be classified as Urgent, High, Medium, or Low using the current State problem management practices.	**21.2.1.3**

21.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Investigating & Diagnosis of All WAN Incidents	Show how the Vendor will: Provide status to State on all WAN incidents once every hour.	**21.2.1.4**
WAN Incident Resolution & Recovery	Show how the Vendor will: 90% of all incidents will be resolved within 2 hours after the initial outage or degradation of WAN service.	**21.2.1.5**
WAN Incident Closure	Show how the Vendor will: Insure that the incident tracking ticket will not be closed until State agrees that the WAN incident is resolved.	**21.2.1.6**
WAN Incident Ownership, Monitoring, Tracking and Communication	Show how the Vendor will: Provide the State visibility into the Vendor's problem management system for new ticket entry and inquiry.	**21.2.1.7**
WAN Monitoring	Show how the Vendor will: Provide the State visibility into network management activities including, but not limited to the SNMP read capability.	**21.2.1.8**
Problem Management	WAN Problem management is required to minimize the adverse effect on the State Network incidents and problems caused by errors in the WAN network infrastructure and to proactively prevent the occurrence of incidents problems or errors. Includes: • Problem Control • Error Control • Assistance with the handling of major incidents • Proactive prevention of problems • Obtaining management information from Problem data • Completing major Problem reviews	**21.2.1.9**

21.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Problem Control	Show how the Vendor will: Provide to the State a Chronic Problem Report that covers a rolling 30-day window for circuits or nodes that have a WAN incident 3 or more times in the 30-day period.	**21.2.1.10**
Error Control	Show how the Vendor will: Provide the State a real-time view of network component errors, of any type and a periodic summary report of network component errors and component error trends.	**21.2.1.11**
Configuration Management	Provide the State with a logical model of the Wide Area Network Infrastructure by identifying, controlling, maintaining, and verifying the versions of all configurations items in the network. WAN Configuration Management includes: • Identification • Control • Status Accounting • Verification and audit	**21.2.1.12**
Identification	Show how the Vendor will: Make the inventory database of all network nodes and circuit information accessible to State.	**21.2.1.13**
Status Accounting	Show how the Vendor will: Provide the State with a monthly inventory of all WAN nodes and circuit information.	**21.2.1.14**
Verification and Audit	Show how the Vendor will: Perform a yearly audit that verifies the physical existence of all configuration items that make up the WAN.	**21.2.1.15**

21.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Capacity Management	WAN Capacity Management is required and will allow the understanding of this future business requirements (the required service delivery), the State operation (the current service delivery), the network infrastructure (the means of service delivery) and ensure that all current aspects of the business requirements are provided cost effectively to the State. WAN Capacity Management includes: • Monitoring the performance and the throughput of the WAN network and supporting IT components. • Tuning activities to make efficient use of network .	**21.2.1.16**
Monitoring the Performance and the Throughput of The WAN Network and Supporting IT Components	Describe the Vendor 's performance monitoring procedures and the procedures for initiating changes based on performance monitoring results.	**21.2.1.17**
Tuning Activities to Make Efficient Use of Network	Describe the Vendor's network tuning processes and capabilities for providing policy-based Quality of Service throughout the network.	**21.2.1.18**

21.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Service Continuity Management	WAN Service Continuity Management is needed to support the overall Business Continuity Management process by ensuring that the required WAN technical and services facilities can be recovered within the agreed business time-scales. Includes: • The available service continuity options must be understood and the most appropriate solution chosen in support of the State business requirements. • Roles and responsibilities must be identified, and endorsed and communicated from a senior level to ensure respect and commitment for the process. • WAN managing, monitoring and maintenance recovery plans and Business Continuity Plans should be aligned, and regularly reviewed, revised and tested.	**21.2.1.19**
Service Continuity Options	Options must be understood and the most appropriate solution chosen in support of the business requirements. Show how the Vendor will: Perform a risk assessment and analysis on WAN managing, monitoring and maintenance.	**21.2.1.20**
Commitment	Roles and responsibilities need to be identified, endorsed and communicated from a senior level to ensure respect and commitment for the process. Describe the commitment by the Vendor and the Critical service providers for such responsibilities as power, water, post, etc.	**21.2.1.21**
Monitoring	WAN Monitoring recovery plans and Business Continuity Plans should be aligned, and regularly reviewed, revised and tested. Describe how the Vendor will be prepared for a major natural or man-made disaster that eliminates the WAN management, monitoring and maintenance facility.	**21.2.1.22**

21.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
WAN Availability Management	WAN Availability Management is required to optimize the capability of the vender to deliver a cost effective and sustained level of availability that enables the State to satisfy its objectives. Includes: • Optimize availability by monitoring and reporting on all key elements of availability. • Determining availability in business terms. • Predicting and designing for expected levels of availability and security. • Producing the Availability Plan. • Collecting, analyzing and maintaining availability data and reporting on that data. • Ensuring service levels are met by monitoring service availability levels against SLAs, and monitoring OLA target and external supplier. • Serviceability achievements. • Continuously reviewing and improving availability.	**21.2.1.23**
Optimize Availability	Show how the Vendor will: Monitor and report on all availability elements and make this data available to the State, as a real-time data stream and as a set of periodic summary reports.	**21.2.1.24**
Predicting Levels of Availability	Show how the Vendor will: Use the Network Node Monitoring data to predict usage and bandwidth trends.	**21.2.1.25**
Collect, Analyze, and Maintain Availability Data	Show how the Vendor will: Collect Network Node Monitoring data into appropriate repositories for useful and detailed analysis, and make these repositories available to the State.	**21.2.1.26**

21.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Traffic Reporting (Please provide sample reports as attachments to your response)	The Vendor shall describe their implementation of the following monthly reports including, at a minimum: • Service level compliance (Availability, MTTR, MTBF.) • SONET, ATM and Frame Relay port and Virtual Circuit statistics. • Customized reports. • Electronic format, transmission, and real-time access. • Usage-based service consumption reports with exception reporting against the State provided thresholds.	**21.2.1.27**
Provisioning Support	The Vendor shall describe their provisioning support in (at a minimum) the following areas: • Consistent Vendor representation (familiar with the State typical order and provisioning activities.) • Electronic order submission. • Customer configuration of SONET, ATM, and Frame Relay virtual circuits. • Standard provisioning interval (within five days for software changes, within twenty days for new physical circuits/services.) • Service Acceptance interval on turn-up to the State. • Weekly work-in-process reporting.	**21.2.1.28**

21.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Operational Support	The Vendor shall describe their operational support capabilities in, at a minimum, the following areas: • 24x7x365 service monitoring and trouble reporting hotline. • On-line electronic access for trouble ticket submission and status inquiry. • Rapid response service restoration with formal trouble escalation process and contacts. • Monthly service affecting outage report. • Formal root cause analysis reports for extended outages or provisioning failures. • Centralized technician dispatch. • Problem and resolution notification to the State network control center. • Support coordination of third party access providers.	**21.2.1.29**
Usage Management (Applicable to all usage priced services)	The Vendor shall describe their usage management capabilities in, at a minimum, the following areas: • Review usage patterns to identify potential abuses and poor practices. • Provide suggestions to monitor and improve usage practices. • Provide real-time thresholds, alarms, and exception reporting to actively control usage patterns.	**21.2.1.30**

21.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**21.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**21.2.2.2**
Describe the Vendor's current and proposed Network Node Management technologies, processes, and reporting practices.	**21.2.2.3**

21.2.2 Table – "Technical Questions"	Proposal Paragraph #
Where is the Vendor's Network Node Monitoring facility? Is there a backup facility, and where is that located?	**21.2.2.4**
Detail your customer problem reporting, analysis, and resolution procedures. Indicate how "partner" network participation is handled, including trouble ticket systems.	**21.2.2.5**
What is the State visibility to network node monitoring data and problem resolution involving partner networks?	**21.2.2.6**
To what extent is the State expected to participate in problem resolution?	**21.2.2.7**
Describe how you will monitor the offered network services to ensure compliance with service level guarantees.	**21.2.2.8**

21.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**21.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**21.2.3.2**
Provide a detailed technical service description for the alternative proposed response.	**21.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**21.2.3.4**

21.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage Wide Area Network services for the State.	**21.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**21.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**21.2.4.3**
Resources	Provide a detail schedule for staffing associated with Wide Area Network services. Schedule must include related labor charges, broken out by skill levels.	**21.2.4.4**

22.0 ISP SERVICES

22.1 CURRENT STATE ENVIRONMENT:

The State currently provides Internet access service to its Intranet users via a dedicated OC3 circuit to Sprint and a dedicated 100Mb circuit to Merit. Historically, agencies have been free to select any geographically appropriate dial-up ISP (Internet Service Provider) Vendor for mobile users and small offices that are not connected to the Intranet.

The State is looking for a flexible solution that minimizes the dial-up charges through the collective pooling of minutes across all the State users, and by maximizing the local number dial-up access (avoiding toll charges) by providing higher POP density, especially throughout the State. The State is also interested in broadband Internet access options such as xDSL (Digital Subscriber Line), ISDN (Integrated Services Digital Network), and cable modems.

The State's dedicated Internet access bandwidth has grown at a rate of about 1.5% per month over the past five years. The current combined average Internet utilization is approximately 60Mb/sec averaged over a 24 hour period. There is no indication that this growth will slow in the near future. The Sprint OC3 circuit is a dedicated connection to Sprint's NAP (Network Access Point) in Chicago. The Merit 100Mb circuit connects to the Merit backbone in Lansing and is a metered service, billed at the average peak usage per month.

The State currently manages the BGP (Border Gateway Protocol) routers, Internet security firewalls, and DNS services in-house. However, the State is also interested in learning about the value added Internet services that the Vendor may propose along with dedicated broadband Internet access. Please note that the State reserves the right to use alternate Internet service provider(s) for the purposes of diverse routing and disaster recovery should the Vendor not provide this capability at a reasonable rate.

22.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for ISP services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

22.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Dial Access	The Vendor shall propose a national dial-up Internet access solution. The Vendor shall provide local dial (i.e., non-toll call) access and toll-free dial access on V.34, V.90, and V.120 (i.e., ISDN) compatible ports. The Vendor shall provide the list of NPA-NXX and the city names for all domestic access nodes.	**22.2.1.1**
Client Dialer Software	The Vendor shall describe the Internet dialer product/software to be loaded on the State's client devices: The Dialer, desktop compatibility features, scripting features, "smart dialing" features (to choose the least cost or closest dial port), automatic update features, security features, software release and distribution methods, trouble reporting and user assistance processes and capabilities, and authentication/authorization features.	**22.2.1.2**
Reporting	Describe any periodic utilization and error reports that can be delivered to the State.	**22.2.1.3**
Pricing	The Vendor shall propose the solution pricing structure (e.g., flat monthly rate, usage based pricing, etc.) built on a "pooling of minutes" concept that is based on the total of the State's usage, and not on each individual's usage. The billing detail must itemize usage by active user accounts.	**22.2.1.4**
Account Passwords	The Vendor shall describe the ability to support automated password expiration on all accounts.	**22.2.1.5**

22.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Dedicated ISP Services	The Vendor shall describe the architecture, features and capabilities of its commercial Internet access service offering. The Vendor must address the following in its description: • NPA-NXX for the available Internet POPs and the available port speeds in the State and the adjoining States. • Vendor's ability to provide dedicated Internet access from T1 access speed to OC48 access speed. • Redundancy in the Vendor's network between the Vendor's Internet access POPs and the Internet NAPs. • Primary and Secondary DNS services. • Network Address Translation (NAT) services. • Border Gateway Protocol (BGP) routing services. • Domestic public and private peering locations and the providers. • Average and peak network utilization for the Vendor Internet backbone, peering points, and the Network Access Points (NAPs.) • Average percentage Internet backbone availability. • Average and variance in end-to-end round trip delay on the Vendor Internet backbone. • Firewall protection support, and content filtering. • The Vendor's ability to route the State's IP addresses, the ability to supply IP addresses, and the smallest address space the Vendor shall route on its backbone. The State expects that the Vendor's Internet service shall be available at all Vendor POPs. The State shall not be liable for any charges associated with the backhaul between the Vendor's POPs and the Internet NAPs. The State reserves the right to order Internet access on "full service" basis.	**22.2.1.6**

22.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Fraud Detection	The Vendor shall describe its mechanisms for detecting and eliminating fraudulent and/or unauthorized use of the services provided to the State.	**22.2.1.7**
DSL Services	The Vendor shall describe the technology, bandwidth, methods, procedures and equipment used to provide any and all Digital Subscriber Loop (DSL) services.	**22.2.1.8**
Cable Services	The Vendor shall describe closed circuit services provided via cable TV or similar services, with routing connectivity provided between end users and/or internet service providers.	**22.2.1.9**

22.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**22.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**22.2.2.2**

22.2.3 Table – Proposed Alternatives	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**22.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**22.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**22.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**22.2.3.4**

22.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage ISP services for the State.	**22.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**22.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**22.2.4.3**
Resources	Provide a detail schedule for staffing associated with ISP services. Schedule must include related labor charges, broken out by skill levels.	**22.2.4.4**

23.0 HELP DESK

23.1 CURRENT STATE ENVIRONMENT

All State agencies offer some type of helpdesk services with the exception of the Department of Lottery. Most of these services are provided with in-house staff, often augmented with contractors and students, with the exception of Career Development, which utilizes EDS for these services. Most helpdesks provide services during their normal department business hours. The hours range from 7:00a.m. – 6:00 p.m. with the exception of Secretary of State, which also provides service until 7:30 p.m. on Wednesdays. Off-hour support is limited and, with a few exceptions, is restricted to network-type problems. The Attorney General, Secretary of State, and Department of Information Technology (DIT) Telecommunications staff provides some application support after normal work hours.

The Department of State Police and the DIT Enterprise Helpdesk provide 24x7x365 helpdesk support. The State Police is a full service helpdesk 24x7x365 while the DMB Enterprise Helpdesk offers Tier 1 support.

The State will require the Vendor to establish a call center (HelpDesk) with tiered communication strategies and systems to accept trouble calls from, and provide restore or change status to the various agency, program office, and centralized IT helpdesks.

The call center should be capable of supporting all functional areas of this RFP for all State agencies; providing a single point of contact capable of; call handling (receipt and routing), and problem logging, tracking, resolution, root cause analysis, trending, and reporting.

The Vendor's call and problem management process must facilitate problem resolution in the shortest time possible. It must be flexible and facilitate a high degree of coordination and communication across groups, locations and agencies. Clear problem ownership must be maintained throughout the resolution process, with progress updates communicated back to the Authorized Users.

The Vendor's approach to this responsibility will reflect a client service focus. In particular, the Vendor will implement and maintain processes that encourage timely responses and end-to-end responsibility and ownership of each problem.

There is a separate initiative within the State researching possibilities of consolidating various Help Desks to achieve an economy of scale. The Telecommunications help desk (servicing most offerings in this RFP) has the potential to become part of that initiative. It is considerable that in the future the Vendor chosen under this RFP may be required to interface and support the Vendor chosen under the separate initiatives.

23.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for help desk services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

23.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Single Point Of Contact	Describe how a single point of contact for calls for Services and other information technology functions, including calls for the State's Data Center and applications shall be provided.	**23.2.1.1**
First Level Help Desk	Provide a first level Help Desk on a 24x7x365 basis and coordination with Authorized Users and points of escalation for all problem resolution activities when a solution cannot be achieved at the first level. Describe your compliance and abilities to provide this service.	**23.2.1.2**
Toll Free	Provide a single toll-free telephone number with adequate capacity for call volume. Describe your compliance and abilities to provide this service.	**23.2.1.3**
Network Access	Provide a secure, network-accessible channel to the Help Desk information systems to allow Authorized Users to place requests. Describe your compliance and abilities to provide this service.	**23.2.1.4**
Location of Help Desk	The Help Desk center to support the State must be located within the State. Describe your compliance and abilities to provide this service.	**23.2.1.5**
Formal Plan	With The State's input and approval, describe the development and implementation of a formal plan for coordination of Services between State agencies and Vendor and to ensure its documentation in the Procedures Manual.	**23.2.1.6**

23.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Reporting of Problems	Describe the acceptance of call requests for Services, and reports of problems from Authorized Users via multiple means (e.g., telephone, fax, secure, network-accessible channel, and e-mail). Describe the assistance for Authorized User problems or requests, acting as the initial point-of-contact and coordinating problem resolution and request fulfillment.	**23.2.1.7**
Procedures Manual	Describe your plan to document call and problem handling processes within a Policies and Procedures Manual.	**23.2.1.8**

23.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Management Tools	Describe the provision of a call and problem management tool that: • Is linked to a central database and an asset inventory system. • Can automatically page and send e-mails to appropriate support groups. • Provides a call and problem exception report in the State's approved formats. • Is accessible via a secure network channel for record viewing and updating by Designated Users. Maintains Site histories and has the ability to automatically trigger notification to Help Desk staff of repeat problems by Site. • Can be accessed by Authorized Users through a secure, network-accessible channel to view status for the problems they have reported. • Includes security features so that only Designated Users can view, update, but not delete those records to which they have been assigned or to which they have been given authorization to access. Access rights and archiving record retention rules will be determined by the State. • Includes contact and location information for Authorized Users. • Is capable of automatic escalations based on problem category, severity level and solver group to assure the appropriate response as defined by the appropriate Service Level. • Supports the ability to designate certain Authorized Users as having a high priority.	**23.2.1.9**
Licenses	Describe the process for providing Designated Users licenses as necessary to access the call and problem tool.	**23.2.1.10**
Recurring Problems	Describe the implementation of methodologies to prevent problem recurrence.	**23.2.1.11**
Analysis	Describe performance of root cause analysis and make recommendations to fix root causes.	**23.2.1.12**

23.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Problem Resolution	Describe conducting, at the State's request, meetings to address Vendor's problem resolution activities in the event that there is a recurrent problem.	**23.2.1.13**
Escalation Procedures	Describe the development of escalation procedures with the State's input and approval that would: • Include definitions of the elapsed time before a problem is escalated to the next levels of involvement (and notification) of various levels of Vendor and the State management. • Automatically prioritize State-identified high-impact systems (as defined by the State based on the potential impact the problem will have on the State's ability to fulfill its mission) and Equipment such that, when outages occur, they are treated with the highest priority and problems are escalated appropriately. • For all classes of problems, such escalation procedures should reflect: • The severity of the problem • The complexity of the environment. • Include provisions for progress updates to Designated Users after a problem ticket reaches a certain escalation level.	**23.2.1.14**
Outage Notification	Describe the process of immediate notification to Designated Users of system outages on critical systems, and providing progress updates as agreed to in the escalation procedures. Documentation of escalation processes is to be included in the Procedures Manual.	**23.2.1.15**
Non-Resolvable Problems	Provide notification to Authorized Users and his/her agency initiating the call when an issue proves to be a non-resolvable problem and gaining concurrence from the State's Project Executive (or its designee) that such problems cannot be resolved before closing such problems.	**23.2.1.16**
Status	Provide "Push" call status back to the affected Authorized Users.	**23.2.1.17**

23.2.1 Table – "Service/Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Database	Provide an on-line knowledge database to share Help Desk policies, procedures, tools, best practices and methods among agency personnel that is continuously updated and populated over the Term. Describe your compliance and abilities to provide this service.	**23.2.1.18**
Help Desk Tours	Describe coordinating tours of the Help Desk for Designated Users, provided that such tours will be reasonable in frequency and subject to reasonable prior notice.	**23.2.1.19**
System Training	Provide an on-line Vendor problem call and problem management system training for Designated Users. Describe your compliance and abilities to provide this service.	**23.2.1.20**
Status of Problems	Describe your method of taking appropriate action to communicate status of broad scope problems to Authorized Users upon receipt of notification from support groups of Services (e.g., status message, e-mail notification).	**23.2.1.21**
Trends	Provide proactive identification of trends in reported problems, and notification of appropriate support groups. Describe your compliance and abilities to provide this service.	**23.2.1.22**

23.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**23.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**23.2.2.2**
The Vendor will describe how it plans to implement tools, procedures and best practices in support of The State's goal of delivering consistent, coordinated, event-oriented Services through multiple channels.	**23.2.2.3**
The Vendor will provide an overview for how it will operate a Single-Point-of-Contact, first level Help Desk for all Services that coordinates Authorized User support for the State, including call and problem logging, tracking, resolution, root cause analysis, and trending.	**23.2.2.4**

23.2.2 Table – "Technical Questions"	Proposal Paragraph #
The Vendor will describe how it delivers these functions in environments similar to the State.	**23.2.2.5**
The Vendor will describe any software tools it will use to administer these functions.	**23.2.2.6**
The Vendor will describe how it will employ procedures for problem escalation; establish severity levels with the State and how it will implement measures to avoid recurrence of problems.	**23.2.2.7**
The Vendor will describe the flexibility and availability of reports related to Help Desk activities.	**23.2.2.8**
What is your proposal to meet customer service requirements?	**23.2.2.9**
Provide details of security and fraud protection plans.	**23.2.2.10**
The Vendor will provide an overview for how it will provide this service throughout the State.	**23.2.2.11**
The Vendor will describe how the provisioning of these services will interrelate with the provisioning of other Services as identified in this RFP.	**23.2.2.12**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**23.2.2.13**

23.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**23.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**23.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**23.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**23.2.3.4**

23.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage help desk services for the State.	**23.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**23.2.4.2**
References	Provide at least three no more than five organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**23.2.4.3**
Resources	Provide a detail schedule for staffing associated with help desk services. Schedule must include related labor charges, broken out by skill levels.	**23.2.4.4**

24.0 CABLE DESIGN AND ENGINEERING

24.1 CURRENT STATE ENVIRONMENT:

The State has staff devoted to the full breadth of infrastructure maintenance, but primarily devoted to activities in and around Lansing, Detroit, Grand Rapids and Saginaw. Cable maintenance for locations scattered across the LATAs is performed under contract with Western Tel-Com, which expires October 1, 2002. In the event that a remote office needs cabling assistance, and Western Tel-Com is not available, arrangements are made with a provider that is local to that office.

The Department of Information Technology (DIT) requires communication infrastructure engineering, design, project management and quality assurance services for various projects across the State. The communication infrastructure may include, but is not limited to, structured cable systems, data, voice, and video horizontal distribution systems, riser systems (both copper and fiber), antennas and Outside Plant (OSP).

The State desires to have a telecommunication design team to include a Registered Communication Distribution Designer (RCDD) with current Building Industry Consulting Service International (BICSI) certification on staff. The team should be capable of performing engineering, design, project management and quality assurance services for communication infrastructure throughout the State. The DIT will provide the State's needs and the Vendor is to fulfill these needs in a reasonable and timely manner.

It is desired that the Vendor would have a RCDD with active certification on staff. The Vendor is to provide, but not limited to, voice, data and video design services along with quality assurance services. All of these services are to be based on, but not limited to, TIA/EIA, National Electric Code and BICSI standards.

It is the State's requirement that the Vendor perform services as required on individual requests. The Vendor may be required to contact and meet with various agencies of the State. It is also possible that total, partial or no Vendor services will be requested. The State will make determination of which services are required on a job-by-job basis. Written reports of all meetings attended and/or quality audits performed by the Vendor must be turned over to the State's contract manager.

24.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for cable design and engineering services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

24.2.1 Table – "Service / Support Functional Requirements"

Service Feature	Description	Proposal Paragraph #
RCDD	The selected Vendor must be staffed with at least one Registered Communication Distribution Designer (RCDD). The RCDD must have been an RCDD for a minimum of five (5) years. Provide BICSI RCDD certification numbers. The RCDD must, at a minimum, review approve and certify with valid RCDD stamp, all designs, specifications and as-built drawings. It is preferred that the RCDD have a hands-on role in all design processes. Describe your compliance and abilities to provide this service.	**24.2.1.1**
QA	The Vendor must have in place a quality assurance organization which audits the vendors work for, but not limited to, accuracy, application of standards and clarity. The QA organization should review the vendors designs for clarity and following appropriate standards as identified in this section. QA should also review the subsequent installed product (the cable network created for the State) for product quality (according to State standards) and installation quality. Describe the relationship between you and the QA organization and its experience performing QA projects.	**24.2.1.2**
Experience (1)	The Vendor must have verifiable experience on projects in which the client was initiating a standard operating environment. Describe your compliance and abilities to provide this service.	**24.2.1.3**

24.2.1 Table – "Service / Support Functional Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Experience (2)	The Vendor must have verifiable experience in projects that required a significant amount of rehab work within existing buildings. Describe your compliance and abilities to provide this service.	**24.2.1.4**
Experience (3)	Describe your experience with leading edge technologies including, but not limited to: • Centrex/PBX • ISDN • Fast Ethernet • ATM • Broadband and Compressed Digital Video	**24.2.1.5**
Experience (4)	Describe Vendor's capability to develop detailed work prints and as-builts. All work prints and as-builts will be in digital format (CAD). Certified work prints are required to be included as part of all specifications. Examples are to be included as part of your response.	**24.2.1.6**
Experience (5)	The Vendor should have Outside Plant Engineers on staff as the project may include the review of some campus/Outside Plant (OSP) facilities. Describe your compliance and abilities to provide this service.	**24.2.1.7**
Experience (6)	Describe similar type services that you have been supplying during the last five (5) years.	**24.2.1.8**
Review with Agency and/or DIT	The Vendor may be required to discuss the voice/data/video needs and requirements with the user agency's representative and review this detail with the appropriate DIT management. Describe your compliance and abilities to provide this service.	**24.2.1.9**
Site Visit (1)	The Vendor may be required to make arrangements with the appropriate State contact people for the purpose of a site visit. Describe your compliance and abilities to provide this service.	**24.2.1.10**

24.2.1 Table – "Service / Support Functional Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Site Visit (2)	The Vendor may be required to conduct a site visit to gather information required to perform design and engineering services. Describe your compliance and abilities to provide this service.	**24.2.1.11**
Design Tasks	The Vendor may be required to perform design, engineering, quality assurance, and project management functions. Describe your compliance and abilities to provide this service.	**24.2.1.12**
Documentation	The Vendor may be required to submit design documents, drawings, specifications and recommendations to the proper State staff. Describe your compliance and abilities to provide this service.	**24.2.1.13**
Quality Assurance	The Vendor will be required to provide quality assurance inspection reports on any auditable work performed by Vendor. Describe your compliance and abilities to provide this service.	**24.2.1.14**
Drawings (1)	Design documents such as specs., CAD drawings, as-builts and any other pertinent documentation will include, but not limited to, work station locations, cable routes, cable type, length of cable runs and connecting hardware. Documents containing similar information are required for any riser system and/or horizontal tie cables, antenna systems, outside plant, etc. Describe your compliance and abilities to provide this service.	**24.2.1.15**
Drawings (2)	Vendor specifications must be written in such a manner that the State approved issue of the documents can be used directly for material and installation bids. No changes and/or editing is to be required by the State or any other persons. Describe your compliance and abilities to provide this service.	**24.2.1.16**

24.2.1 Table – "Service / Support Functional Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Drawings (3)	Vendor is to present specifications, drawings and all pertinent information to the responsible State staff for review and agreement on design, language and documents. Describe your compliance and abilities to provide this service.	**24.2.1.17**
Walk-thorough	Vendor may be required to provide assistance at cable Vendor bid walk through by showing Vendors the requirements of the design and answering Vendor's questions. This will include a written record of all questions and answers being provided to the State contract administrator. Describe your compliance and abilities to provide this service.	**24.2.1.18**
Right of Way (1)	The Vendor will be required to assess the requirement for right of way and to assist the State is securing right of way. This may involve research on property ownership, filling out the necessary documents and negotiating with property owners. Describe your compliance and abilities to provide this service.	**24.2.1.19**
Right of Way (2)	The Vendor will be required to assist the State in securing easements when necessary. This will involve research on property ownership, filling out the necessary documents and negotiating with property owners. Describe your compliance and abilities to provide this service.	**24.2.1.20**
Right of Way (3)	Vendor will be required to file and negotiate pole attachment locations and any make ready necessitated by outside plant construction, with the appropriate utilities. Pole attachment and make ready agreements will be prepared by the Vendor in conjunction with the appropriate utility and approved by the State. Describe your compliance and abilities to provide this service.	**24.2.1.21**

24.2.1 Table – "Service / Support Functional Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Quality Inspections	The Vendor may be requested to perform quality inspections on work performed by the cable Vendor. The State will determine which projects and at what time interval the quality audits are required. This may be during the cable installation process and/or upon completion of the cable installation process. Quality results are to be provided to the State upon completion of the inspections. Describe your compliance and abilities to provide this service.	**24.2.1.22**
As-builts	Upon completion of the installation, the engineering Vendor shall review and/or provide certified as-built drawings and as-built specifications. Copies of the review results and/or engineering Vendor generated as-built drawings and as-built specifications are to be turned over to the STATE management representative. Describe your compliance and abilities to provide this service.	**24.2.1.23**
Standards and Practices	All work performed by the Vendor will conform to the latest State adopted Edition of the National Electric Code, the Building Code and all local codes and ordinances, as applicable. EIA/TIA Documents shall be adhered to during design activities. Methodologies outlined in the latest edition of the BICSI Telecommunications Distribution Methods Manual shall also be used during all design activities. Should conflicts exist with the foregoing, the authority having jurisdiction for enforcement will have the responsibility for making interpretation. Describe your compliance and abilities to provide this service.	**24.2.1.24**
Project Control (1)	The Vendor will carry out this project under the direction and control of the Department of Information Technology or their duly assigned representative. Describe your compliance and abilities to provide this service.	**24.2.1.25**

24.2.1 Table – "Service / Support Functional Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Project Control (2)	The State will meet, as deemed necessary, with the Vendor's project manager for the purpose of reviewing progress and providing necessary guidance to the Vendor in solving problems which arise. Describe your compliance and abilities to provide this service.	**24.2.1.26**
Project Control (3)	The Vendor will submit brief written summaries of progress which outline the work accomplished during the reporting period; work to be accomplished during the subsequent reporting period; problems, real or anticipated, which should be brought to the attention of the State; and notification of any significant deviation from previously agreed-upon work plans. The frequency of the written summaries will depend upon the project particulars. The State will determine the frequency at which the summaries are necessary. Describe your compliance and abilities to provide this service.	**24.2.1.27**
Project Organization	Describe the Vendor's project organizational structure.	**24.2.1.28**
Staffing (1)	The Vendor must provide a staffing table with names and titles of personnel assigned to the project. Necessary substitutions may only be made with prior approval of the State. Describe your compliance and abilities to provide this service.	**24.2.1.29**
Staffing (2)	Provide a sample project breakdown showing sub-projects, activities and tasks, and required and allocated to each staff manager. Describe your compliance and abilities to provide this service.	**24.2.1.30**
Staffing (3)	Provide a sample time-phased plan in the form of a graphic display (GAANT chart), showing each event, task, and decision point in your work plan.	**24.2.1.31**

24.2.1 Table – "Service / Support Functional Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Reports	Progress reports showing the status of the project in respect to the planned schedule are to be generated. The frequency of these reports is up to the State. In-process and/or final quality verification reports covering the tasks performed on a particular project are to be submitted to the State. The contents and design of the quality reports will be mutually agreed upon by the Vendor and the State. Describe your compliance and abilities to provide this service.	**24.2.1.32**
Business Organization	State the full name and address of your organization and, if applicable, the branch office or other subordinates element that will perform, or assist in performing, the work hereunder. Indicate whether it operates as an individual, partnership, or corporation; if as a corporation, include the State in which it is incorporated. If appropriate, State whether it is licensed to operate in the State. List all Subcontractors; include firm name and address, contact person, complete description of work to be subcontracted. Include descriptive information concerning Subcontractor's organization and abilities. Include descriptive information regarding your organization's quality assurance program. Indicate quality inspection procedures and reporting methods.	**24.2.1.33**
Management Summary	Include a narrative summary description of the proposed effort and of the product(s) that will be delivered. Provide a technical plan for accomplishing the work. Indicate the number of person-hours allocated each task. Include a PERT-type display, time related, showing each event, task, and decision point in your work plan.	**24.2.1.34**

24.2.1 Table – "Service / Support Functional Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Project Staffing	The engineering firm must be able to staff a project team which possesses talent and expertise in the fields of communication infrastructure. Include the number of executive and professional personnel by skill and qualification that will be employed in the work. Show where these personnel will be physically located during the time they are engaged in the work. Indicate which of these individuals you consider key to the successful completion of the study or project. Indicate the amount of dedicated management time for the Vendors' project manager and other key individuals. Identify key individuals by name and title. Resumes of qualifications should be supplied for proposed project personnel. For RCDD certified staff, please include certification numbers.	**24.2.1.35**
Model A	Vendor shall provide pricing in the format provided for Model A	**24.2.1.36**
Model B	Vendor shall provide pricing in the format provided for Model B	**24.2.1.37**
Model C	Vendor shall provide pricing in the format provided for Model C	**24.2.1.38**
Model D	Vendor shall provide pricing in the format provided for Model D	**24.2.1.39**

24.3 COST MODEL OVERVIEW / INSTRUCTIONS

- In order for the State to fairly evaluate the total anticipated costs for potential jobs, four system models have been developed.
- Vendors must identify all steps/process for the completion of design and project management of each model.
- Identify the skill sets that will be require for each model.
- Identify the hours for each skill set.

24.3.1 Model A – Requested Information

Description: This location involves an existing building that requires a building addition. The building now houses about one hundred forty (140) staff and will ultimately house two hundred fifty (250) staff. The building is a typical single floor office building, with a suspended ceiling. The suspended ceiling is used as an air plenum. All workstations are modular furniture. There is one existing telephone/data closet equipped with 110-type hardware. There are no drawings showing the existing cable plant and/or IDF voice and data layout. The dimensions and the location of the telephone closet are such that no cable runs will exceed the ninety (90) meter limit. Each of the new workstations requires one cat III and two cat V information outlets. All information outlets will be mounted in the modular furniture. The Vendor is to provide a full engineering package. This package is to include, but not limited to, cad drawings of cables, floor plans, IDF layout, generic material list for added equipment, and a cost estimate for materials and installation materials. It is also necessary for the engineering Vendor to perform a post installation quality inspection with results being forwarded to the State. Upon completion of the installation, the State will send copies of the as-built drawings to the engineering Vendor to update the original cad drawings with two (2) copies of the final prints being sent to the State.

Include description of staff roles for each task involved. Unit price by labor category, showing the number of units for each category. List all work items and quantity of each item to perform all tasks associated with model.

MODEL "A" DESIGN DESCRIPTION:

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24.3.2 Model B – Requested Information

Description: This location is a new building that will house about sixty (60) staff. The requirement is for eighty (80) cable runs of three (3) Cat 5E four (4) pair UTP cable. Two (2) of the four (4) pair are to terminate on Cat 5E patch panels, wall mounted and one Cat 5E four (4) pair is to terminate on wall mounted 110 type hardware. The engineering Vendor is to provide a full engineering package, to include project management and quality verification of the installed system.

Include description of staff roles for each task involved. Unit price by labor category showing the number of units for each category. List all work items and quantity of each item to perform all tasks associated with model.

MODEL "B" DESIGN DESCRIPTION:

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24.3.3 Model C – Requested Information

Description: This location is a new construction six (6) story office building. Each floor will house two hundred (200) staff. The configuration of the building is such that the ninety (90) meter distance limit will be exceeded if only one communication closet is provided. Therefore, two (2) communication closets per floor will be provided. A local PBX switch will also be installed in this building. The PBX switch will have one thousand five hundred (1500) line appearances. Each information outlet is to have one cat 3 four (4) pair and three (3) cat 5E four (4) pair cables. In addition, an additional outlet location is required for every ten (10) staff members. This outlet is to be used for printers. The State requires copper cable for voice risers and fiber cable for data risers. Tie cables between communication closets are also copper for voice and fiber for data. The State requires a complete engineering package for this project. State personnel will perform project management, quality reviews on the design and quality inspections on the installation. The engineering Vendor is required to attend four (4) planning sessions at the site location. Each session will last two (2) hours.

Include description of staff roles for each task involved. Provide unit price by labor category showing the number of units for each category. List all work items and quantity of each item to perform all tasks associated with model.

MODEL "C" DESIGN DESCRIPTION:

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24.3.4 Model D – Requested Information

Description: This location is an existing two (2) story building with one hundred (100) staff in place. There are no records or drawings for the cabling within this building. The State requires a complete evaluation of the existing cabling. The engineering Vendor is to provide an information package including, but not limited to, IDF and MDF layouts, riser cable system, and floor plans. The engineering Vendor is also to recommend a totally new structured cable system for this location.

Include description of staff roles for each task involved. Unit price by labor category showing the number of units for each category. List all work items and quantity of each item to perform all tasks associated with model.

MODEL "D" DESIGN DESCRIPTION:

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24.4 DESIGN MASTER UNIT PRICE MATRIX

- Provide the cost/rate/price information below for all firms/persons and/or job titles named in your technical proposal as well as any support personnel to demonstrate the reasonableness of your price proposal.
- Name of Unit, e.g. job title such as Engineer, RCDD, CAD Operator, Clerical, Quality Inspector, etc. and definition of basis for price, e.g. cost per hour.
- Independent Price Determination.
- Include a statement substantially as follows:

24.5 DESIGN MODELS PRICING - OVERVIEW/INSTRUCTIONS

- Vendors must utilize the unit prices quoted in the Design Unit Price Matrix for the calculation of the total cost for each System Cost Model.
- Vendors must enter the total cost quotation for each System Model in the space provided and include work sheets and all pages in their response.
- The Vendor must provide an itemized statement of each Cost Model to demonstrate they have utilized the Unit Prices and/or Labor Rates quoted in the Design Unit Price Matrix.
- Vendors must then complete the Price Analysis/Evaluation page and include it in their response.
- Vendors must enter the appropriate unit price in the Options Cost Matrix and then utilize these costs for any options that are purchased.
- Vendors must develop a price for each model.

24.5.1 PRICING FOR MODEL A

NAME OF UNIT	EST. QTY.	PRICE/UNIT	TOTAL PRICE
TOTAL BID USING EST. QTY.			

24.5.2 PRICING FOR MODEL B

NAME OF UNIT	EST. QTY.	PRICE/UNIT	TOTAL PRICE
TOTAL BID USING EST. QTY.			

24.5.3 PRICING FOR MODEL C

NAME OF UNIT	EST. QTY.	PRICE/UNIT	TOTAL PRICE
TOTAL BID USING EST. QTY.			

24.5.4 PRICING FOR MODEL D

NAME OF UNIT	EST. QTY.	PRICE/UNIT	TOTAL PRICE
TOTAL BID USING EST. QTY.			

24.5.5 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding sections or do you have an alternative to meet the objectives?	**24.5.5.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**24.5.5.2**
Describe any software tools you will use to administer these functions.	**24.5.5.3**
What is your annual revenue for and estimated market share of data networking services in the geographic areas you are proposing?	**24.5.5.4**

24.5.6 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**24.5.6.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**24.5.6.2**
Provide a detailed technical service description for the alternative proposed.	**24.5.6.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**24.5.6.4**

24.5.7 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage cable design and engineering services for the State.	**24.5.7.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**24.5.7.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**24.5.7.3**
Resources	Provide a detail schedule for staffing associated with cable design and engineering. Schedule must include related labor charges, broken out by skill levels.	**24.5.7.4**

25.0 CABLE SERVICES, INSTALL/MAC

25.1 CURRENT STATE ENVIRONMENT:

The State has established inside plant and outside plant cabling standards that meet or exceed standards established by ANSI, EIA/TIA, BICSI, NEC, BOCA, NFPA, Master Format proposed Division 17, State, Local standards, and codes. State technicians follow these standards in the design and installation of all cabling in State owned or leased buildings in most metropolitan areas. In those areas where it is difficult to reach, the workload is too high, or the job too large to use State technicians, the State has a contract with Western Tel-Com which expires October 1, 2002.

For purposes of this RFP, Telecommunication Cable Services include engineer, furnish and install (EF&I) infrastructure transmission media. Transmission media includes but is not limited to, copper cable, fiber optic cable and wireless technologies. This media is to be installed in outside and inside plant environments, in State owned and leased facilities as well as on private and public campuses throughout the State. The Vendor will also provide cable locating and protection services for all State owned cable facilities in private and public right of way and on State owned private and public campuses All materials and labor must meet or exceed ANSI, EIA/TIA, BICSI, NEC, BOCA, NFPA, Master Format proposed Division 17 and State and Local standards and codes.

The services listed below are minimum requirements for installation, moves, adds, and changes to our existing transmission media plant. Please review each service and succinctly describe compliance or material differences in your proposal document within the specific paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

This section refers to the following group of standards and specifications: Table 25.2.1 and 25.2.2 contains the current State standard for how we perform installations, and do moves adds and changes; and contains the physical, electrical, and optical specifications that the State uses to purchase commodities and perform quality assurance testing on the commodities purchased. After installation, further testing is performed to assure that the resulting composite network containing wiring (or optical fiber) and all its terminators and cross connections measure up to the specifications we adhere to.

25.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for cable services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

25.2.1 Table – "Technical and Service/Support Requirement"

Service Feature	Description	Proposal Paragraph #
Cabling	• All copper cabling products – both cable and supporting apparatus (jacks, cords and patch panels), must be manufactured by a single Vendor with a tuned system. Describe the vendors products that you will be providing including name of the single manufacturer. • The channel solution must equal Category 5E or better as outlined in the channel performance section in Figure 25.2.4 and 25.2.5. Provide the Channel Performance of the single-manufacturer's solution that you are proposing. • The copper channel must come with a 20-year warranty, from a single manufacturer that covers product, labor and have an application assurance. The warranty must be transferable. • Provide a copy of the warranty document provided by the manufacturer. Describe the application assurance component of the warranty. • Category 5E performance is needed for cable, jacks, cords and panels must also meet specific performance criteria as outlined in the component in Figure 25.2.3. • Provide the individual product spec sheets for cable, cords, jacks and patch panels.	**25.2.1.1**
Maintenance/ Repair	Describe your firm's ability to meet the requirements of 4-hour response time on all maintenance and repair calls on inside plant facilities.	**25.2.1.2**

25.2.1 Table – "Technical and Service/Support Requirement"		
Service Feature	**Description**	**Proposal Paragraph #**
Engineering Support	Engineer infrastructure transmission media for building and/or campus wide communication network. The Vendor shall describe their engineering support in (at a minimum) the following areas: • Consistent Vendor representation (familiar with the State voice and data networking and infrastructure environments). • Number of personnel in engineering/design capacity • State whether or not the engineering/design personnel are RCDD certified.	**25.2.1.3**
Installation Support	The Vendor shall describe their installation support in the following areas: • Describe the number of personnel and their level of certification with respect to transmission media installation. • Describe the products in which your firm is certified to install and offer 20 year warranties. • Identify the locations in which you have offices that field installation personnel reside. • The State will be requiring 2-hour response to major system outages. Describe your firms ability to respond in this timeframe with a qualified technician.	**25.2.1.4**
Quality Assurance	Describe any quality assurance programs that you have currently in place or have utilized on projects of this magnitude.	**25.2.1.5**
Moves, Adds and Changes	The selected Vendor will be required to perform MAC work for the State facilities statewide. In narrative format, describe your current staffing levels that would enable you to support this type of workload. Describe the anticipated time interval for completion of MAC work from date of request.	**25.2.1.6**

25.2.1 Table – "Technical and Service/Support Requirement"		
Service Feature	**Description**	**Proposal Paragraph #**
Outside Plant Support	The Vendor shall describe their outside plant installation/maintenance support in the following areas: Describe your firms ability to respond to an outage within the two hour time frame with the necessary personnel and equipment to restore service to a copper or fiber outage in the outside plant List or identify the number and types of vehicles you firms has that are dedicated to outside plant installation and maintenance activities Describe your firm's ability to warehouse outside plant components to ensure timely restoration of OSP outages.	**25.2.1.7**
Audio and Video System Design	In addition to the voice and data infrastructure components, occasionally the State has a requirement for video and audio system design and installation. Describe your firm's capabilities in the areas of CATV distribution, audio system design and installation, digital video system design and video teleconferencing system design and installation.	**25.2.1.8**

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Data Grade Cable	• All copper cable and apparatus shall exceed the Category 5/class E Channel Performance Specification. • The Data Grade Horizontal, 4 pair UTP channel shall consist of all cable and components with up to four connections that comprise the full 100 meter (328 feet) length circuit from the Hub/Server/LAN Electronics port located in the Telecommunications Room or the main data administration location to the voice/data/video/imaging device port located at the User Work Station. The data grade horizontal, 4 pair UTP channel shall be capable of providing stable and continual performance up to 155.5MHz. • The copper cable and apparatus channel performance shall be measured over the full 100 meters (328 feet) length and include 4 connection points. • A single manufacturer shall manufacture the Enhanced Power Sum cable and Enhanced Power Sum channel components. The manufacturer shall warrant the Enhanced Power Sum channel cable, components, and applications for a period of 20 years. • The 20-year warranty shall be a transferable warranty and include all labor to replace any defective components as well as the component replacement. Data grade cables shall extend between the station location and its associated Telecommunication Room (TR) and consists of 4 pair, 24 gauge UTP, and shall terminate on 8 pin modular jacks provided at each outlet. Cable jacket shall comply with Article 800 NEC for use as a plenum or non-plenum cable. The 4 pair UTP cable shall be UL and CSA Listed Type CMP (plenum) or CM (non-plenum).

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Data Grade Cable Continued	• All 4 pair data grade cables shall conform to TIA/EIA 568-B Commercial Building Telecommunications Cabling Standard, Horizontal Cable Section, and be part of the UL LAN Certification and Follow-up Program. • Data grade cables shall be blue in color.
Voice Grade Cable	• Voice grade cables shall extend between the station location and its associated Telecommunication Room (TR) and consist of 4 pair, 24 gauge UTP, and shall terminate on 8 pin modular jacks provided at each outlet. Cable jacket shall comply with Article 800 NEC for use as a plenum or non-plenum cable. The 4 pair UTP cable shall be UL and CSA Listed Type CMP (plenum) or CM (non-plenum). • All 4 pair voice grade cables shall conform to TIA/EIA 568-B Commercial Building Telecommunications Cabling Standard, Horizontal Cable Section. • In all other respects, the voice grade horizontal cable shall meet the electrical and performance specifications of Category 5 cabling. • The Voice Grade Horizontal, 4 pair UTP channel shall consist of all cable and components with up to four connections that comprise the full 100-meter (328 feet) length circuit from the port located in the Telecommunications Room to the voice/fax device port located at the User Work Station. The voice grade horizontal, 4 pair UTP channel shall be capable of providing stable and continual performance up to 16MHz. The voice grade horizontal will only b e required to support analog and digital voice services.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Voice Grade Cable Continued	• All copper cable and apparatus shall meet the Category 5 Channel Performance Specification. • The copper cable and apparatus channel performance shall be measured over the full 100 meters (328 feet) length and include 4 connection points. • A single manufacturer shall manufacture the cable and channel components. The manufacturer shall warrant the channel cable, components, and applications for a period of 20 years. • The 20-year warranty shall be a transferable warranty and include all labor to replace any defective components as well as the component replacement. • Voice grade cables shall be white in color.
Outlets - General Specifications	• Meets or exceeds the mechanical, electrical, and clearance specifications in FCC Rules and Regulations, Part 68, Subpart F. • Meet or exceed the Category 5E requirements in ISO/IEC 11801, CENELEC EN 50173, and EIA/TIA 568B. • UL Listed. • CSA Certified
Outlets—Data Grade	• All data grade outlets shall meet or exceed Power Sum NEXT and Category 5E transmission requirements for connecting hardware, as specified in ANSI/TIA/EIA 568-B Commercial Building Telecommunications Cabling Standard, Horizontal Cable Section, and be part of the UL LAN Certification and Follow-up Program.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Outlets-Data Grade Continued	• The data grade outlets shall be capable of being in a modular patching situation or as a modular telecommunication outlet (TO) supporting current and evolving high-speed, high-bandwidth applications, including Ethernet, 1000BASE-T, Token Ring, 100 Mbps TP-PMD, 155 Mbps ATM, 622 Mbps ATM using parallel transmission schemes. • The data grade outlets shall be capable of being installed at either a 45 or a 90-degree angle in any M-series modular faceplate, frame, or surface-mounted box avoiding the need for special faceplates. • Snap-on icons shall identify the outlet as data grade to distinguish it from other M-Series outlets.
Outlets – Voice Grade	• All voice grade outlets shall meet Category 3 transmission requirements for connecting hardware, as specified in ANSI/TIA/EIA 568-B Commercial Building Telecommunications Cabling Standard, Horizontal Cable Section. • The data grade outlets shall be capable of being in a modular patching situation or as a modular telecommunication outlet (TO) supporting current voice grade services. • The voice grade outlets shall be capable of being installed at either a 45 or a 90 degree angle in any M-series modular faceplate, frame, or surface-mounted box avoiding the need for special faceplates. • Snap-on icons shall identify the outlet as voice grade to distinguish it from other M-Series outlets.
Data Grade Patch Panels	• The modular jack panels shall meet or exceed Category 5E requirements in ISO/IEC 11801, CENLEC EN 50173 and TIA/EIA-568B and shall be UL Listed. • The jack panels shall be either wall or 19-inch rack mountable. • 24 and 48 port patch panels with front patch cord retainer & rear cable retainer.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Voice Grade -110 Wiring Blocks	• The wiring block shall support the channel specifications appropriate for the applications and facilitate cross connection and interconnection using either cross connect wire (voice only) or the appropriate category patch cords.
Voice Grade -110 Wiring Blocks Continued	• The wiring blocks shall be fire retardant, molded plastic consisting of horizontal index strips for terminating 25 pairs of conductors each. These index strips shall be marked with five colors on the high teeth, separating the tip and ring of each pair, to establish pair location. A series of fanning strips shall be located on each side of the block for dressing the cable pairs terminated on the adjacent index strips. • The wiring block shall accommodate 22- through 26-AWG conductors and shall be able to mount directly on wall surfaces with backboards or on a 24" freestanding frame. • Clear label holders with the appropriate colored inserts shall be provided with the wiring blocks. The insert labels shall contain vertical lines spaced on the basis of circuit size (3-, 4-, or 5-pair) and shall not interfere with running, tracing or removing jumper wire/patch cords. • The wiring blocks shall be available in 25, 50, 100, and 300 pair sizes. The 100 and 300 pair wiring blocks shall be available with or without legs. The legs allow the cables to pass behind the wiring block and fan out to each side. The space created by the feet, on each side of the block, allows it to be used as a vertical jumper trough. • The 25 and 50 pair sizes are not available with legs and shall be utilized for low pair count and/or depth restrictive situations. • The wiring block shall be able to accommodate over 500 repeated insertions without incurring permanent deformation and it shall pass the reliability test of no more than one contact failure in 10000 connections.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
110 Block Height Specifications:	• 25-, 50-Pair – 1.75 in. (4.45 cm) • 100-Pair – 3.59 in. (9.12 cm) • 300-Pair, 10.79 in. (27.41 cm)
Data Grade Patch Cords	• All data patch cords shall conform to the requirements of EIA/TIA 568-B Commercial Building Telecommunications Cabling Standard, Horizontal Cabling Section, and be part of the UL LAN Certification and Follow-up Program. Backward compatible with Category 5 systems
Voice Grade Patch Cords	• Voice patch cable shall be Category 3 compliant and conform to the requirements of EIA/TIA 568-B Commercial Building Telecommunications Cabling Standard, Horizontal Cabling Section. • Voice patch cords shall be white in color and data patch cables shall be blue in color.
Voice Grade Patch Cords Continued	• Patch cords shall vary in length.
Fiber Optic Cables – 62.5 MM and 8.3 SM	• Fiber optic cabling shall be provided between TRs and furnished with the quantity of fibers as identified in the design phase and approved by the State. • All fiber in a cable run shall be from the same manufacturer and shall be the same type. A mix of fibers from different manufacturers may not be used without written permission

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Multimode Fiber Specifications	• All fiber optic cables within the premises that are designated as multimode shall use graded-index fibers with 62.5-micron cores. • Fibers must comply with EIA/TIA 492 specifications and IEC60793 standards. • Fibers will have dual wavelength capability; transmitting at 850 and 1300nm ranges. • 200/500 MHz km overfilled bandwidth • All fibers shall be color coded to facilitate individual fiber identification. Fibers will have D-LUX ® coating or approved equivalent to ensure color retention, minimize micro-bending losses and improve handling. The coating shall be mechanically strippable.
Single Mode Fiber specifications	• Fiber must comply with EIA/TIA 455 and IEC 793 test methods for required attributes. • All fiber shall be color coded to facilitate individual fiber identification.
Sheath Construction	• Outside Plant Cables: Dielectric (DNX, DDX or equivalent); Metallic Express Entry (DSX or equivalent)

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Fiber Patch Panels	• The fiber patch panel must provide space for circuit identification. • The fiber patch panel shall provide cross-connect, inter-connect, and splicing capabilities and include support hardware to properly terminate and ground the cables, rout the fibers and jumpers and mount splices. • The fiber patch panel shall have connector panels that snap into the side of the module and accommodate ST, FDDI, SMA, FC, D4 or SC connectors. • The fiber patch panel shall provide terminating, cross connecting or interconnecting capability of 12, 24 or 48 fibers. The units may be stacked to provide additional fiber termination capacity. • The fiber patch panel shall be made of lightweight polycarbonate and have a lockable hasp for additional security. • The fiber patch panel shall be UL® approved.
Multimode Fiber Optic Connectors	• Provide a field installable multimode connector to terminate fiber optic cables • The connector must be field installable. • The connector must be capable of mounting on either 0.9 mm buffered fiber. • The connector must utilize a PC polishing on the tip to provide high yield during installation. • The connector must meet EIA and IEC standards for repeatability. • The connector must have a locking feature to the coupler and assure non-optical disconnect.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Single-mode Fiber Optic Connectors	• Provide field installable, single-mode ST type connectors to terminate fiber optic cables. • Connectors shall be ceramic tipped and UV curable. • The connector must be capable of mounting on either 0.9 mm buffered fiber or 8.3. µm raw fiber. • The connector must meet EIA and IEC standards for repeatability. • The connector must have a locking feature to the coupler and assure non-optical disconnect.
Fiber Patch Cords	• The fiber patch cord shall consist of buffered, graded-index fiber with a 62.5 micron core and a 125 micron cladding for multimode • The fiber patch cord shall consist of buffered, stepped-index 8.3-micron core with a 125-micron cladding for single mode. • The fiber cladding shall be covered by aramid yarn and a jacket of flame-retardant PVC. • Multimode patch cords shall be orange in color; single mode patch cords shall be yellow in color.
Copper Riser	• The riser copper plant is designed to allow multi-pair terminations in each telecommunication room in the building. • All copper cables shall be 24 AWG solid copper conductors meeting EIA/TIA Category 3 specifications. • Riser cables sheath construction shall be CMR rated.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Copper Tie Cables	• Copper tie cables may be required to meet Category 5 or 5E specifications. These locations will be identified in individual projects and the Vendors Designer will specify accordingly in the project prints. All components connected to this special Cat5 or 5E application must conform to all specifications for cabling, terminations, patch cords and patch panels previously established. • All copper riser/tie cables will terminate on 110 mounting blocks. See 2.4.2. for 110 wiring block specifications. • Tie cables shall be CMP rated. • Outside plant copper cables shall be shielded, filled cables appropriate for outside plant conditions.
Equipment Racks	• The Main Distribution Frames and Telecommunication Rooms shall be equipped with a 19" Aluminum Rack System to house owner-provided equipment and Vendor provided termination bays for the multiple cable types.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
19" Aluminum Rack System	• The rack shall be able to support and organize electronic equipment, cross-connection and/or termination hardware for fiber optic cabling, station cabling, riser cabling, or building entrance cabling as may be required by design • The rack face shall have a conventional equipment mounting width of 19". • The rack must be designed for cable and jumper management and have hardware to organize and support cabling and patch cords in the vertical and horizontal planes. • The rack system shall be equipped for electrical grounding to meet EIA/TIA 606 Standards. • The fastening system for the equipment shall facilitate easy installation with roll-formed threads in the screw holes for greater strength and durability and the mounting screws shall have pilot points. • All rack components shall be charcoal black in color and made of lightweight 6061-T6 extruded aluminum. The rack shall be shipped with all necessary hardware to assemble the frame included. It shall be packed in cartons with suitable shipping insulation.
Self Supported Rack Framework	• The self-supporting equipment rack shall be between six (6) and nine (9) feet tall with 3" wide channels at each side and with extruded aluminum top angles and base angles providing support. Standard (Universal) grade frames shall be capable of supporting 700 lbs. (1000 lbs.), with uniform distribution of weight.
Self Supported Rack Framework	• Standard frames must provide a .19" thick channel flange and .13" web thickness. Standard base angles shall be .3125" thick, and top angles shall be .1875" thick. • Universal frames must provide a .25" thick channel flange and .17" web thickness. Universal base angles shall be .375" thick, and top angles shall be .25" thick. • Racks must be able to be mounted side by side and be secured to adjacent racks in a line-up.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Wall Mount Rack Frameworks	• The wall mount rack frames shall be used where components do not require a full size rack or for restricted space installations. The wall-mounted racks must meet the applicable requirements noted above.
Fixed Wall Mount Rack	• The Fixed Wall Mount Rack shall be capable of supporting at least 200 lbs., with uniform distribution of weight when securely mounted to a backboard with 8 leg-mounting attachments. • Channel flanges shall have mounting holes on the front side only. Channel uprights shall be .125" thick and mounting flange shall be .1875" thick. • Racks will be between three (3) and six (6) feet in height
Wall Mount Swing Gate Rack	• The Wall Mount Swing Gate Rack shall be capable of supporting 150 lbs., with uniform distribution of weight when securely mounted to a backboard using eleven provided mounting holes. • Channel flanges shall have mounting holes in flanges on both sides of the channel. The swing gate must open a full 180 degrees for maximum access. • To prevent undesired movement, the rack must provide flexible latch straps that can be secured to anchor pins. These latches shall be located at the top and bottom of the rack. • Nine pass through port openings shall be provided for cable access and six reusable straps or grips shall be provided to secure cables to the framework.
Mounting Details	• Floor mounted racks shall be secured at the top to a length of cable ladder track style runway to prevent movement and provide a cable placement path.
Cable Tray/Ladder	• To varying degrees, the State will require the placement of cable support systems by the Telecom Vendor. The cable support systems shall be of a ladder type and will be specified in 4 to 24 in. widths.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Cable Tray/Ladder Continued	• Pricing for these items will be based on the per foot cost and must include all ancillary components required to install the complete system. This includes all bonding and grounding material.
Cable Installation	• All cable shall be installed using conduit and cable tray where provided. In areas where these are not provided, cables shall be supported using hardware and fasteners of the type and design for the intended use (size and weight distribution). • Cable will not be allowed to lie on ceiling tile, or be fastened to electrical conduits, steam pipes, sprinkler pipes, or insulated pipes. • Cable shall be routed in such a fashion as not to obstruct access panels, hatches, or doors. • Cables shall be routed a minimum of 4" from all fluorescent lighting fixtures or other sources of electromagnetic interference. • In all cases, installation practices should be governed by EIA/TIA, NEC, NFPA and BICSI guidelines.
Wire management	• One wire management panel shall be provided above and below each 48 ports or for every 24 ports of patch panel space to provide routing of patch cables. • All wire management panels shall mount directly to the industry standard 19" racks located in each of the closets. • All wire management panels shall be 3.5" high and have slots or rings on both sides to provide cable routing for both the front and back of the rack, as well as rings for vertical cable management.
Testing	• All cables, copper and fiber, will be tested and will comply with ANSI EIA/TIA standards for the particular type cable being tested. • All copper cables, including terminating hardware, will be tested using an "Ideal LanTek" or equivalent test set.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Copper Testing, Minimum Results Documented:	• Site Name • Circuit ID • Technician • Date • Cable Category (Type) • Length • Capacitance (pf/ft) • Attenuation and Frequency (Mhz and db) • Resistance (Ohms) • Signal to Noise Ratio • Noise • Impedance (Ohms) • Near End Crosstalk • Power Sum testing for Category 5E or higher Pass/Fail • Copper cable test results are required to be turned over to the State as a hard paper copy and/or a computer diskette (3 1/2") in an MS OFFICE compatible format. • Vendors test equipment must be calibrated in unison with the State's test equipment and must meet the State and industry standards.
Data Grade Copper	• All data grade cable shall be tested to Category 5E specifications. At the State's discretion, a random sampling of data locations will be tested to validate that the installed product actually exceeds the Category 5E specification.
Voice Grade Copper	• All backbone voice links shall be tested and documented to Category 5 specifications (16MHz) in full compliance with the EIA/TIA TSB-67 channel test.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Fiber Cable Testing	• All fiber cable will be tested using an Optical Time Domain Reflectometer (OTDR). • Test results for each strand and terminating hardware will be turned over to the State as part of the final job papers. • Fiber cable will be tested in both directions at 850 and 1300 NM (mm) and 1300 and 1510 NM (sm). • Test results are to be recorded on a summary sheet. The sheet is to be provided as a hard paper copy and/or a floppy (3 1/2") disk.
Fiber Testing, Minimum Results Documented	• Site Name • Circuit ID • Circuit ID • Technician • Date • Cable Type (Multi or Single Mode) • DB Loss • Length of Strand • Outside plant fiber optic cable will be tested using an OTDR and all traces and attenuation statistics will be provided in hard copy and/or a computer diskette (3 1/2") in an MS OFFICE compatible format to the State. • Cables not meeting the specifications, against which they are measured, will be replaced at no cost to the State.
Firestopping	• All conduits, sleeves and floor/wall penetrations for telecommunication use, shall be firestopped, by the Vendor, according to NFPA guidelines and in compliance with all electrical, building and fire safety codes.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Bonding and Grounding	• The electrical Vendor will provide a grounding busbar in each telecommunications room and MDF. The Vendor will be required to provide all bonding and grounding for installed cable and termination hardware • The shields and any metallic sheath members of all copper cables shall be bonded and grounded to the approved ground at each end and at each opening of the cable sheath. • Bonding and grounding shall be performed according to the manufacturers instructions utilizing a 6-AWG stranded insulated copper conductor and approved bonding connectors. • All telecommunication racks shall have a grounding busbar placed at the top of the rack. The busbar shall be 1 inch wide and .25 inch thick. • Each rack mounted busbar – or group of bonded busbars - shall be connected to the approved ground
Outside Plant Maintenance	• The State owns a significant amount of outside plant cable facilities that will require periodic maintenance and emergency restore. • A pricing structure is required for those instances when the Vendor is called upon to repair, move, replace or increase cable counts on existing cable facilities. Pricing is based on the linear foot under a given construction method (i.e. aerial, buried or underground) and will include all labor and materials need to perform the requested task. • In those instances where conduit, manholes or State owned telephone poles are required, they will be priced as separate line items.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
On Call Service	• The Vendor is to provide 24 hour on call service for damage reports. • Upon receipt of a damage report, the Vendor shall be on site within two (2) hours within the Lansing, Michigan metropolitan area • If the damage is located outside of the Lansing, Michigan metropolitan area, the Vendor is to have crews mobilized within one (1) hour of receiving the request for service. • Upon arriving at site, Vendor personnel will begin evaluating the situation, troubleshooting procedures if required and site preparation for corrective action, i.e. splice preparation, equipment mobilization, etc. • The Vendor is to have immediate access to, but not limited to, backhoes, trenchers, splice trucks, directional boring machines, bucket trucks, aerial vans, splicing vans, etc. • Vendor is to have underground, buried and aerial cable construction and splicing crews, trained on both fiber-optic and copper cable maintenance on staff and on call 24x7x365.
Inventory Requirements	• Vendor is required to have on hand a partial stock of fiber-optic and copper cable materials to be available for at customer's request. • Upon issuance of a contract, the State will collaborate with the Vendor and decide what materials are required to be stocked at the Vendor's site.
Inventory Requirements Continued	• The State, as part of this contract, will pay for the cost of these materials. • Payment for such materials shall be made upon verification of materials at Vendor's site.
Single point of contact	• The Vendor must establish a single point of contact for all order placement and maintenance/repair calls. For order issuance, the center is to be available from 8am – 5pm. Repair calls must be taken 24x7x365.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Maintenance	• The Vendor will be required to perform all maintenance activities on existing telecommunications infrastructure. • From receipt of a repair/maintenance call, the Vendor must be on-site ready to make the repair with the appropriate tools and material within 4 hours. The Vendor must be capable of handling repair calls on a 24x7x365 basis. The State will work with the Vendor to identify which calls and/or facilities will warrant 24x7x365 treatment.
Certifications required	• The selected Vendor must be a current BICSI member and must maintain this membership for the life of the contract. The Vendor must have a minimum of five (5) years in the building communication cable system installation industry. • The selected Vendor must be staffed with at least one Registered Communication Distribution Designer (RCDD). The RCDD must have been an RCDD for a minimum of two (2) years. The RCDD must, at a minimum, review, approve and certify with valid RCDD stamp, all designs, quality inspection reports, and as-built drawings • Cable installation technicians shall be certified in the products (cable, termination hardware, etc.) that they will be responsible for installing. This certification must be provided through the manufacturer or BICSI Installer Certification program.
Quality Assurance	• The Vendor must have in place a quality assurance organization, which audits the Vendor's work for adherence to applicable codes and standards. It is the Vendor's responsibility to research and meet all applicable standards and codes. It is the Vendor's responsibility to make certain the latest issue of codes and standards are incorporated in the end product.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Experience	• The Vendor must have verifiable experience on projects in which the State is initiating a standard cabling environment. • The Vendor must have verifiable experience in projects that required a significant amount of re-hab work within existing buildings. • The Vendor must have the capability of developing detailed designs, work plans, schedules and as-built drawings. • The selected Vendor shall have been actively engaged in supplying similar type products and services for a period of not less than five (5) years.
Contracted vs. in house employees	• It is preferred that all Vendor personnel be in-house, full time employees. If the Vendor will be utilizing contract employees and/or Subcontractors, identify such and services they will be providing. The State retains the right to refuse Subcontractor participation on State jobs.
Work Plans	• The Vendor will develop work plans, schedules and as-built drawings. Work plans must be agreed upon by the State prior to start of job. A copy of the approved work plans along with State provided specifications and drawings will be on the job site at all times during installation. Any change in the work plan, equipment location, project schedule or any other item, which may or may not have a material effect on the project, must be agreed to by the State prior to any change. All changes must be approved in <u>writing</u> <u>prior</u> to change. In rare circumstances, the Vendor may contact the State by telephone and explain the requested changes. At that point in time, the State Project Manager may fax to the Vendor the authority for the change. • The Vendor's installation crew will be completely familiar with and understanding of the work plans and contract requirements.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Work Plans Continued	• The Vendor will provide a technical plan for accomplishing the work. Indicate the number of person hours allocated for each task. Include a PERT type display, time related, showing each event, task, and decision point in your work plan. The plan must also be submitted to the State in electronic form compatible with MS Project 2000.
As-built drawings	• Upon completion of the installation, the Vendor shall provide RCDD certified as-built drawings and as-built specifications to the State project manager. The RCDD must have first hand knowledge concerning the accuracy of the as- built drawings and as-built specifications.
Cable Footage Markings	• The Vendor will provide cable footage markings as stamped at each end of at least one voice and one data cable run per closet in which the Vendor has installed cable. The Vendor will identify the cable run designation for which the footage markings have been provided.
Installation Codes and Standards	• All work performed by the Vendor will conform to the latest adopted Edition of the National Electric Code, the Building Code and all local codes and ordinances, as applicable at project start date. EIA/TIA Documents shall be adhered to during installation activities. Methodologies outlined in the latest edition of the BICSI Telecommunications Distribution Methods Manual shall also be used during all installation activities. Should conflicts exist with the foregoing, the authority having jurisdiction for enforcement will have the responsibility for making interpretation.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Site Requirements	• The Vendor will maintain a work area free of debris, trash, empty cable reels, scrap cable, etc. and dispose of such items on a schedule that maintains a neat, orderly, non-interfering work place. • The Vendor is to provide, install and remove building protection for walls and floors as required to maintain startup condition of building. • The Vendor is responsible to repair any damage caused to the facility because of Vendor activity. The restoration will be equal to or better than facility condition at startup. • The Vendor is responsible for, but not limited to, removing and replacing all ceiling tiles, duct covers, computer floor tiles, junction box covers and power pole covers required for the installation of the items identified in the specifications and/or scope of work. • The Vendor will identify to the State project manager any work that requires building structural modifications. This is to include, but not limited to, core bores, conduits, electrical outlets, floor reinforcement, etc.
Permits	• The Vendor is responsible to obtain any required permits for the work completed by the Vendor.
Materials and Labor	• The Vendor is responsible for providing all supervision, labor, tools, test sets, equipment, hardware, cabling materials, transportation, hauling and hoisting and miscellaneous materials as part of any resulting contract/contracts. • All materials are to be new and 100% free of defects.
Safety Standards	• The Vendor and his representatives will follow and adhere to all OSHA and MIOSHA requirements and standards. • The Vendor will not compromise safe work techniques nor a safe work environment during any portion of work associated with any resulting contract/contracts. Safety to life and property are of the utmost importance.

25.2.2 Figure – "Structured Cabling System Functional Specifications"	
Service Feature	**Description**
Scope of Work	• Will be identified and negotiated with the State at project onset.
Project Plan	• Identifying all project timelines, personnel, responsibilities and escalation procedures. To be signed off by the State prior to project start.
Design/ Construction Prints	• Prints and plans will be provided in AutoCad 2000 format. All designs will be approved and signed off on by the State Project Manager. Vendor will be required to provide a complete telecommunications infrastructure design based on all applicable standards, and when necessary, communicate and coordinate with architects and construction trades.
As Built CAD Drawings	• As part of the hardware and services to be delivered, the Vendor will furnish two (2) complete hard copy sets and 1 electronic copy (on 3 ¼ diskette) of as-built drawings and as-built specifications to the State project manager. The as-built drawings will be generated on building drawings furnished to the Vendor by the State project manager. The as-built drawings will include jack location including identification numbers. Associated test records will show detailed length of cable runs and type of cable and hardware.
Cable Test Results	• Shall be provided in hard copy at the completion of the test. Testing results should be compiled from all copper and fiber installations and should include the termination hardware.

Technical electrical, physical and optical specifications for all cabling systems existing in State facilities.

25.2.3 Figure – "Copper Specifications"	
Voice Grade Outlet Mechanical Performance	
Plug/Jack Contact Force	100 grams minimum per contact using FCC approved plug
Plug Retention Force	30 lb. (133 N) minimum

25.2.3 Figure – "Copper Specifications"		
Temperature Range	-40□ to 150□ F (-40□ C to 66□ C)	
Plug Insertion Life:	750 insertions	
IDC Terminations:	200 terminations	
Voice Grade Outlet Physical Characteristics		
Dimensions	0.8" (20 mm) W x 0.8" (20 mm) H x 1.2" (31 mm) D	
Plastic	High-Impact, flame-retardant. UL-rated 94V-0 thermoplastic	
Outlet Wires	Copper alloy, 1.27 µm lubricated gold plating over 2.54 µm nickel underplate	
Connector	Insulation displacement connectors (IDC) accept 22 & 24 AWG wire	
Voice Grade cable EIA/TIA Category 3 specifications		
Frequency MHz	Attenuation dB/100m	Power Sum Near End Crosstalk dB
0.772	2.2	43
1	2.6	41
4	5.6	32
8	8.5	28
10	9.8	26
16	13.1	23
Data Grade Modular Jack Physical Specifications		
Modular Jack: 750 Min. Insertions (without retainer): H:8.9 cm(2u) W:48.3 cm D:3.2 cm		
48 Port Panel (without retainer): H:17.78 cm(4u) W: 48.3 cm D: 12.7cm		
Operating Temperature Range: -10 to 70˚C		
Storage Temperature Range: -40 to 60˚C		
Humidity: 95% (non condensing)		
Exceeds EIA/TIA Category: 5E (except PM2250 and DM2250)		

25.2.3 Figure – "Copper Specifications"	
Nom. Solid Conductor Diam: 0.4 to 0.64 mm (22 to 24 AWG)	
Nom. Stranded Conductor Diam: 0.4 to 0.64 mm (22 to 26 AWG)	
Data Grade Outlet Electrical Performance	
Dielectric Withstand Voltage	1000 VAC RMS, 60 Hz minimum, contact-to-contact
Insulation Resistance	500 M ohms minimum
Contact Resistance	20 M ohms maximum
Current Rating	1.5A at 68□ F (20□ C) per IEC Publication 512-3, Test 5b
Transmission Performance	NEXT, FEXT, ELFEXT, and Attenuation measurements were made per ANSI/EIA/TIA 568-B
Data Grade Outlet Mechanical Performance	
Plug/Jack Contact Force	100 grams minimum per contact using FCC approved plug
Plug Retention Force	30 lb. (133 N) minimum
Temperature Range	-40□ to 150□ F (-40□ C to 66□ C)
Plug Insertion Life:	750 insertions
IDC Terminations:	200 terminations
Data Grade outlet Physical Characteristics	
Dimensions	0.8" (20 mm) W x 0.8" (20 mm) H x 1.2" (31 mm) D
Plastic	High-Impact, flame-retardant. UL-rated 94V-0 thermoplastic
Outlet Wires	Copper alloy, 1.27 µm lubricated gold plating over 2.54 µm nickel under-plate
Connector	Insulation displacement connectors (IDC) accept 22 & 24 AWG wire

Data grade cables must meet a guaranteed performance to 350 MHz over Swept Frequency as outlined in the following tables:

25.2.4 Figure – "Cable Performance Specifications"

Freq MHz	Atten dB/100m	CAT 5E	Power Sum Near End Crosstalk dB	CAT 5E	Pair to Pair Near End Crosstalk dB	CAT 5E	Atten to Crosstalk Ratio dB/100m	CAT 5E	Pr-to-Pr ELFEXT db/100m	CAT 5E	Power Sum ELFEXT DB/100m	CAT 5E	Return Loss dB/100m	CAT 5E	Delay Skew ns	CAT 5E
0.772	1.7	≤ 1.8	67.0	64.0	70.0	67.0	68.3	n/a	70.0	66.0	68.0	63.0	n/a	n/a	25.0	≤ 45
1	2.0	≤ 2.0	65.3	62.3	68.3	65.3	66.3	n/a	67.8	63.8	65.8	60.8	20.0	20.0	25.0	≤ 45
4	3.9	≤ 4.1	56.3	53.3	59.3	56.3	55.4	n/a	55.7	51.7	53.7	48.7	23.0	23.0	25.0	≤ 45
8	5.6	≤ 5.8	51.8	48.8	54.8	51.8	49.2	n/a	49.7	45.7	47.7	42.7	24.5	24.5	25.0	≤ 45
10	6.3	≤ 6.5	50.3	47.3	53.3	50.3	47.0	n/a	47.8	43.8	45.8	40.8	25.0	25.0	25.0	≤ 45
16	8.0	≤ 8.2	47.3	44.3	50.3	47.3	42.3	n/a	43.7	39.7	41.7	36.7	25.0	25.0	25.0	≤ 45
20	9.0	≤ 9.3	45.8	42.8	48.8	45.8	39.8	n/a	41.7	37.7	39.7	34.7	25.0	25.0	25.0	≤ 45
25	10.1	≤ 10.4	44.3	41.3	47.3	44.3	37.2	n/a	39.8	35.8	37.8	32.8	24.3	24.3	25.0	≤ 45
31.25	11.4	≤ 11.7	42.9	39.9	45.9	42.9	34.5	n/a	37.9	33.9	35.9	30.9	23.6	23.6	25.0	≤ 45
62.5	16.5	≤ 17.0	38.4	35.4	41.4	38.4	24.9	n/a	31.8	27.8	29.8	24.8	23.0	21.5	25.0	≤ 45
100	21.3	≤ 22.0	35.3	32.3	38.3	35.3	17.0	n/a	27.8	23.8	25.8	20.8	23.0	20.1	25.0	≤ 45
155	27.2	n/a	32.5	n/a	35.5	n/a	8.2	n/a	23.9	n/a	21.9	n/a	18.8	n/a	25.0	n/a
200	31.4	n/a	30.8	n/a	33.8	n/a	2.4	n/a	21.7	n/a	19.7	n/a	18.0	n/a	25.0	n/a
220	33.2	n/a	30.2	n/a	33.2	n/a	0.0	n/a	20.9	n/a	18.9	n/a	17.7	n/a	25.0	n/a
300	39.7	n/a	28.2	n/a	31.2	n/a	n/a	n/a	18.2	n/a	16.2	n/a	16.8	n/a	25.0	n/a
350	43.5	n/a	27.2	n/a	30.2	n/a	n/a	n/a	16.9	n/a	14.9	n/a	16.3	n/a	25.0	n/a

25.2.5 Figure – "Power Sum Guaranteed Channel Performance Specs"										
Power Sum Guaranteed Channel Performance Specifications										
Freq (MHz)	Atten (dB)	pr-pr NEXT (dB)	ACR (dB)	PS NEXT (dB)	PS ACR (dB)	pr-pr ELFEXT (dB)	PS ELFEXT (dB)	Return Loss (dB)	Phase Delay (ns)	Delay Skew (ns)
1	2.1	66.3	64.2	66.1	64.0	61.8	59.8	18.0	580	30
4	4.2	56.6	54.4	56.2	52.0	49.8	47.8	18.0	562	30
8	6.0	51.6	45.6	51.2	45.2	43.8	41.8	18.0	557	30
10	6.7	50.0	43.3	49.6	42.9	41.8	39.8	18.0	555	30
16	8.6	46.6	38.0	46.2	37.6	37.8	35.8	18.0	553	30
20	9.6	45.0	35.4	44.6	35.0	35.8	33.8	18.0	552	30
25	10.4	43.4	33.0	42.9	32.5	33.9	31.9	17.0	551	30
31.25	12.2	41.7	29.5	41.2	29.0	31.9	29.9	16.0	550	30
62.5	17.6	36.6	19.0	36.1	18.5	25.9	23.9	13.1	549	30
100	22.8	33.1	10.3	32.6	9.8	21.9	19.9	11.0	548	30
125	25.8	31.5	5.7	30.9	5.1	19.9	17.9	10.1	547	30
155.5	29.1	29.8	0.7	29.2	0.1	18.0	16.0	9.1	547	30

25.2.6 Figure – "Data Grade Cable Electrical Characteristics"	
Mutual Capacitance	Nominal: 14pF/ft. (46pF/m)
Characteristic Impedance	100 (□ 6) Ohms 1-100 MHz
DC Resistance Max	28.6 Ohms/1000 Ft. (9.4 Ohms/100m)

25.2.7 Figure – "Optical Fiber Specifications"
Multi-mode Fiber Physical Specifications:
Core Diameter: 62 .5 μm ± 3 μm
Core Non-Circularity: 6% max. (typical <2%)
Core/Cladding Concentricity Error: <3.0 μm
Cladding diameter: 125 μm ± 2.0 μm
Cladding Non-Circularity: ≤2.0%
Coating Diameter (uncolored): 245 ± 10 μm
Coating/Cladding Concentricity Error: ≤12 μm

25.2.7 Figure – "Optical Fiber Specifications"	
Proof Test Levels: 0.7Gpa minimum	
Fiber Curl: ≥ 2 m	
Operating Temperature Range: -60 to 85°C	
Colored Fiber Diameter: 250 μm ± 15 μm	
Buffering Diameter: 890 mm ± 50 mm	
Minimum Tensile Strength: 100,000 psi	
Fiber Minimum Bending Radius: .75 in. (1.91 cm)	
Cable Minimum Bending Radius: During Installation: 20 times cable diameter After Installation: 10 times cable diameter	
Operating Temp. Range: 32°F to 122°F (0°C to 50°C)	
Storage Temp. Range: -40°F to 149°F (-40°C to 65°C)	
Multi-mode Fiber Optical l Specifications	
Maximum Fiber Loss @ 850 nm: 3.4 dB/km at 850 NM (typical range 2.8 to 3.4 dB/km)	
Maximum Fiber Loss @ 1300 nm: 1.0 dB/km at 1300 NM (typical range 0.5 to 0.8 dB/km)	
Minimum Bandwidth @ 850 nm: 200 MHz /km	
Minimum Bandwidth @ 1300 nm: 500 MHz/km	
Numerical Aperture: 0.275 ± 0.015	
Numerical Refraction Index Difference btw Peak of Core and Cladding: 2.0%	
Effective Group Index of Refraction @ 850 nm: 1.496	
Effective Group Index of Refraction @ 1300 nm: 1.491	
Point Discontinuities @ 850 and 1300 nm: <0.2 dB	
Multi Mode Fiber Material and Performance Specifications	
Specification	ST® mm
Loss (dB)	= 0.3 σ = 0.2
Fiber OD	125 μm
Cable OD	2.4 / 3.0 mm
Loss Repeat	<0.2 dB

25.2.7 Figure – "Optical Fiber Specifications"	
(per 1,000 reconnects)	
Axial Load, min.	35 lb. (15.9 kg)
Temperature. Stability	-40°C to 85°C
Tip Material	Ceramic
Cap Material	Zamak #5
Body Material	Zamak #5
Multi Mode Fiber Patch Cord Specifications	
Mated Connector Loss	μ = 0.3 dB, σ = 0.2 dB
Operating temperature	-4° to 158° F (-20 to 70° C)
Cable Retention	50 lb. (220 N) minimum
Connection Repeatability	0.20 dB maximum change per 100 reconnects
Operating temperature	-4° to 158° F (-20 to 70° C)
Single Mode Fiber Physical Specifications	
Fiber Attribute (Depressed Cladding)	
CLADDING DIAMETER: 125.0 ± 1.0 μm	
Cladding Non-Circularity: ≤ 1.0%	
Colored Fiber Diameter: 250 ± 15 μm	
Core Diameter: 8.3 μm	
CORE/CLADDING CONCENTRICITY: ≤0.8 μm	
Minimum Proof Strength: 70 Gpa (100 kpsi)	
Fiber Curl: >2m	
Fiber Macrobend (100 turns @ 32 mm diameter) ≥0.05 dB @ 1310 NM, ≥0.10 dB @ 1550 NM	
FIBER MACROBEND (1 TURN @ 32 MM DIAMETER) 0.5dB @ 1550NM	
COATING STRIP FORCE: 1.3 N ≤ F ≤ 8.9 N	
DYNAMIC TENSILE STRENGTH (UNAGED):>55KPSI (3.8 GPA)	

25.2.7 Figure – "Optical Fiber Specifications"	
DYNAMIC TENSILE STRENGTH (AGED):>440KPSI (3.0 GPA)	
DYNAMIC FATIGUE: >20	
STATIC FATIGUE: >20	
Single Mode Fiber Optical Specifications	
Index of Refraction: 0.37%	
Mode Field Diameter: 8.8 ± 0.5 μm @ 1310 NM	
Attenuation: 0.4 dB/km @ 1310 NM; 0.3 dB/km @ 1550 nm	
Attenuation at Water Peak: 2.0 dB/km @ 1350nm	
Point Discontinuities: 0.1 dB	
Zero-Dispersion Wavelength: 1310 ± 10 nm	
Zero-Dispersion Slope: 0.092 ps/m2-km	
Maximum Dispersion: 2.8 ps/NM-km, 1285 to 1330 NM	
Polarization Mode Dispersion Coefficient : 0.5 ps/km @ 1310	
Fiber Cutoff Wavelength: ≥1150 NM. ≥1300 NM	
Cable Cutoff Wavelength: < 1260 nm	
Single Mode Fiber Material and Performance Specifications	
Specification	**ST® sm**
Loss (dB)	= 0.35 σ = 0.2
Fiber OD	125 μm
Cable OD	2.4 / 3.0 mm
Loss Repeat (per 1,000 reconnects)	<0.2 dB
Axial Load, min.	35 lb. (15.9 kg)
Temperature. Stability	-40°C to 85°C
Tip Material	Ceramic
Cap Material	Zinc, Ni plated
Body Material	Zinc, Ni plated
Single Mode Fiber Patch Cord Specifications	

25.2.7 Figure – "Optical Fiber Specifications"	
Return Loss	-50 dB maximum
Operating temperature	-4° to 158° F (-20 to 70° C)
Mated connector loss	μ = 0.35 dB, σ = 0.2 dB
Cable Retention	50 lb. (220 N) minimum
Connection Repeatability	0.20 dB maximum change per 200 reconnects

25.2.8 Figure – "Cabling System Racks"	
Racks	
All racks shall be grounded to the isolated ground bar using an approved ground lug and #6 AWG jacketed green ground wire.	
Floor mount Rack physical specifications	
Base Footprint	20.25 inches (width) x 15 inches (depth)
Hole pattern	EIA310-D 5/8"-5/8"-1/2" alternating
Mounting Screws	#12-24 thread combination Phillips/straight heads and pilot points.
Materials	6061-T6 high strength aluminum
Flanges	Flange edge to edge internal measurement is 17.75"
Wall Mount Rack Physical specifications	
Dimensions	38.5-72"H x 19"W x 12" D
Hole pattern	EIA310-D 5/8"-5/8"-1/2" alternating
RMU's	Minimum of 20 Rack Mounting Units
Mounting Screws	#12-24 mounting screws w/combination Phillips-straight heads and pilot points.
Materials	6061-T6 high strength aluminum
Flanges	Flange edge to edge internal measurement is 17.75"
Wall mount swing gate rack physical requirements	
Dimensions	38.5-72"H x 19"W x 12" D
Hole pattern	EIA310-D 5/8"-5/8"-1/2" alternating
RMU's	Minimum of 20 Rack Mounting Units

25.2.8 Figure – "Cabling System Racks"	
Mounting Screws	#12-24 mounting screws w/combination Phillips-straight heads and pilot points.
Materials	6061-T6 high strength aluminum
Flanges	Flange edge to edge internal measurement is 17.75"

PRICE PROPOSAL

INSTRUCTIONS

- The Vendor is to provide a total price for each Cost Model. The total price must include any and all required materials and labor not specifically listed in the Cost Model.
- The Vendor must provide an itemized statement of all parts and labor including nomenclatures, quantities, part numbers and costs for each Cost Model.
- All Cost Models must be in compliance with the specifications included in 25.0.
- All Cost Models are for evaluation purposes only and do not constitute an order.

Cabling Models

Most facilities will have one Telecommunications Closet (TC), but some will require separate TC's for voice and data due to facility restrictions. All cost quotes should treat any location that has separate TC's as having one TC in their pricing (i.e. each Cable Run will be considered the "same pull"). The Contractor will be expected to apply their cost based upon the average length of each Cable Run. For example, System A Model requires Cable Runs of three (3) four pair Category 5 Cable. If the length from the voice closet is 100 feet and the length from the data closet is 200 feet, the average length for the Cable Run is 167 feet (1*100+2*200/3 = 167). Prices for models in each of the LATA areas are required.

System Cost Models

System A Model

Description: This location involves an existing building that requires a building addition and houses about 140 staff. For bidding purposes, the requirement is for 180 Cable Runes of three (3) four pair Cat 5 Cable (same pull). Lengths; 25 runs are 74 feet (or less); 85 runs are between 75 feet and 148 feet; 45 runs are between 149 feet and 221 feet; 20 runs between 222 feet and 295 feet and 5 runs are between 298 feet and 369 feet. Cat 5/110P Path Panels are used for all runs. Pricing used in Models must be consistent with pricing in Appendix E.

Quotation: $_____

System B Model

Description: This location is a new or renovated building that will house about 60 staff. The requirement is for 80 Cable Runs of three (3) four pair Cat 5 Cable (same pull). Lengths: 15 runs are 74 feet (or less); 50 runs are between 75 feet and 148 feet; and 15 runs are between 149 feet and 221 feet. Cat 5/110A Cross Connect Hardware is used for all runs. Pricing used in Models must be consistent with pricing in Appendix E.

Quotation: $_____

System C Model

Description: This location is for a building under renovation that houses about 100 staff. The requirement is for 130 Cable Runs of two (2) four pair Cat 5 Cable and one (1) four pair Cat 3 Cable (same pull). Lengths: 15 runs are 74 feet (or less); 50 runs between 75 feet and 148 feet; 50 runs between 149 feet and 221 feet; and 15 runs between 222 feet and 295 feet. Cat 5/110P Patch Panels are used for the Cat 5 runs and category 3/110P for the Cat 3 runs. Pricing used in Models must be consistent with pricing in Appendix E.

Quotation: $_____

System D Model

Description: This location is for a building under renovation that houses about 60 staff. The requirement is for 80 Cable Runs of two (2) four pair Cat 5 Cable and one (1) four pair Cat 3 Cable (same pull). Lengths: 15 runs are 74 feet (or less); 50 runs between 75 feet and 148 feet; and 15 runs between 149 feet and 221 feet. Category 5/110A Cross Connect Hardware is used for the Cat 5 runs and Cat 3/110A for the Cat 3 runs. Pricing used in Models must be consistent with pricing in Appendix E.

Quotation: $_____

System E Model

Description: This location is for a building under renovation that houses about 100 staff. The requirement is for 130 Cable Runs of three (3) four pair Cat 3 Cable (same pull). Lengths: 15 runs are 74 feet (or less); 50 runs between 75 feet and 148 feet; 50 runs between 149 feet and 221 feet; and 15 runs between 222 feet and 295 feet. Cat 3/110A Cross Connect Hardware is used for all runs. Pricing used in Models must be consistent with pricing in Appendix E.

Quotation: $_____

System F Model

Description: This location is for a building under renovation that will house about 60 staff. The requirement is for 80 Cable Runs of two (2) four pair Cat 5 Cable (same pull). Lengths: 15 runs are 74 feet (or less); 50 runs between 75 feet and 148 feet; and 15 runs between 149 feet and 221 feet. Cat 5/110P Patch Panels are used for all runs. Pricing used in Models must be consistent with pricing in Appendix E.

Quotation: $_____

System G Model

Description: This location is for a building under renovation that will house about 60 staff. The requirement is for 80 Cable Runs of two (2) four pair Cat 5 Cable (same pull). Lengths: 15 runs are 74 feet (or less); 50 runs between 75 feet and 148 feet; and 15 runs between 149 feet and 221 feet. Cat 5/110A Cross Connect Hardware is used for all runs. Pricing used in Models must be consistent with pricing in Appendix E.

Quotation: $_____

System H Model

Description: This location is for a building under renovation that houses about 100 staff. The requirement is for 130 Cable Runs of two (2) four pair Cat 3 Cable (same pull). Lengths: 15 runs are 74 feet (or less); 50 runs between 75 feet and 148 feet; 50 runs between 149 feet and 221 feet; and 15 runs between 222 feet and 295 feet. Cat 3/110A Cross Connect Hardware is used for all runs. Pricing used in Models must be consistent with pricing in Appendix E.

Quotation: $_____

System I Model

Description: This location is for a building under renovation that houses about 120 staff. The requirement is for 50 Cable Runs of one (1) four pair Cat 5 Cable. Lengths: 10 runs are 74 feet (or less); 30 runs are between 75 feet and 148 feet; and 10 runs are between 149 feet and 221 feet. Cat 5/110A Cross Connect Hardware is used for all runs. Pricing used in Models must be consistent with pricing in Appendix E.

Quotation: $_____

System J Model

Description: This location is for a building under renovation that houses about 100 staff. The requirement is for 50 Cable Runs of one (1) four pair Cat 3 Cable. Lengths: 5 runs of 74 feet (or less); 30 runs between 75 feet and 148 feet; 10 runs between 149 feet and 221 feet; and 5 runs between 222 feet and 295 feet. Cat 3/110A Cross Connect Hardware is used for all runs. Pricing used in Models must be consistent with pricing in Appendix E.

Quotation: $_____

System K Model

The intent of this Cost Model is to utilize labor rates and other billable items from the Time and Materials Cost Sheet.

Repair service is needed for damage of one floor jack (Cat 5) at locations near the center of each LATA.

Assume that this damage occurs after installation of the Cabling Distribution System, but within the first year of the contract.

Quotation: $_____

Price Analysis/Evaluation

System A Model Quotation A. $_____

System B Model Quotation B. $_____

System C Model Quotation C. $_____

System D Model Quotation D. $_____

System E Model Quotation E. $_____

System F Model Quotation F. $_____

System G Model Quotation G. $_____

System H Model Quotation H. $_____

System I Model Quotation I. $_____

System J Model Quotation J. $_____

System K Model Quotation K. $_____

Vendor's Price:

313 LATA (Detroit Area)
A + B + C + D + E + F + G + H + I + J + K = L1 1. $

616 LATA (Grand Rapids Area)
A + B + C + D + E + F + G + H + I + J + K = L2 2. $

517 (North) LATA (Saginaw Area)
A + B + C + D + E + F + G + H + I + J + K = L3 3. $
517 (South) LATA (Lansing Area)
A + B + C + D + E + F + G + H + I + J + K = L4 4. $

906 LATA (Upper Peninsula)
A + B + C + D + E + F + G + H + I + J + K = L5 5. $

All LATAs Statewide
A + B + C + D + E + F + G + H + I + J + K = L6 6. $

25.2.9 Table – "Technical Questions"	**Proposal Paragraph #**
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**25.2.9.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**25.2.9.2**
Describe any software tools you will use to administer these functions.	**25.2.9.3**
What is your annual revenue for and estimated market share of data networking services in the geographic areas you are proposing?	**25.2.9.4**

25.2.10Table – "Proposed Alternatives"	**Proposal Paragraph #**
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**25.2.10.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**25.2.10.2**
Provide a detailed technical service description for the alternative proposed.	**25.2.10.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**25.2.10.4**

25.2.11Table – "Managed Services"		**Proposal Paragraph #**
Managed Services	Describe proposed ability, capabilities, and experience to manage cable services for the State.	**25.2.11.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**25.2.11.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**25.2.11.3**
Resources	Provide a detail schedule for staffing associated with cable services. Schedule must include related labor charges, broken out by skill levels.	**25.2.11.4**

26.0 TRANSITION PLANNING AND EXIT STRATEGIES

26.1 TRANSITION AND TRANSFORMATION PLAN FUNCTIONAL REQUIREMENTS

The Vendor must provide transition services with a minimal interruption of day-to-day service to the State. All replacement services must be tested as fully functional prior to the Cutover date. A gradual, progressive transition from legacy Vendor to awarded services must be provided. All service transitions shall be coordinated with existing vendors and State contacts. The Vendor shall provide and maintain throughout the installation process, and any updates and changes thereafter, detailed, updated plans and records for service conversion. All plans must be approved by the State prior to implementation. Plans shall be provided to the State 30 days prior to each individual service implementation, for each site scheduled for service. Approval of final installation dates shall be at the sole determination of the State. Any implementation that may result in "down" time for service users, shall be scheduled for non-work days and non-peak times. All ported numbers must be coordinated and verified during non-working hours. Areas with 24 hour coverage such as the Department of Corrections prison system and the Department of State Police may require gradual service implementation over a period of several days in order to ensure continued and uninterrupted service.

The Vendor's Transition and Transformation Plan shall include, among other things, the manner in which the Vendor will assume responsibility after the effective date of the agreement for: the provision of all services and requirements within the scope of this RFP, including, but not limited to the following: assumption of major projects; management, maintenance and/or refresh of current assets and ; communication with the State and the State's current third-party Vendors; assignment and assumption of existing contracts and licenses, subcontracting or cancellation of contracts, to the extent practicable; and Subcontractor relationships and arrangements. As such, on the effective date of the agreement, the Vendor will assume responsibility for, and begin transitioning all contracted current services, maintain all current systems, meet current levels of service received by the agencies; begin service level monitoring, assume all applicable legal obligations for all assigned contracts and managed contracts, including all payment.

On the Cutover date, the State's payment obligations will cease, and the Vendor will begin billing to authorized procuring agencies; and begin service level monitoring; assume legal responsibility, including all payment obligations for all assigned contracts; and will be fully responsible for the delivery of services. Payment for any services not transitioned within 180 days after the acceptance of the contract will become the responsibility of Vendor. The selected Vendor will be required to submit separate detailed Transition and Transformation Plans. The Vendor will be required to submit the detailed Transition Plan prior to the effective date; and the detailed Transformation Plan within ninety (90) days after the effective date that are acceptable to the State.

26.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for transition and exit services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

26.2.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Plan & Associated Tasks	Vendor will provide a detailed Transition and Transformation Plan. This plan must include sections that identify the tasks, timeframes for the tasks, milestones, roles and responsibilities for the State and Vendor personnel, and any major task contingencies. For all tasks identified in the Transition and Transformation Plan, provide a responsibility matrix that identifies the key party responsible for the task and the supporting party, if any. For all tasks where the State responsibilities are identified (including support), provide a description of the task and the estimated level of effort, based on your organization's experience in performing similar transitions.	**26.2.1.1**
Managed Transition	Describe how your organization proposes to manage the transition of In-scope Services from the State to your organization according to the proposed timeline.	**26.2.1.2**
SLAs	Describe how your organization proposes to implement the service levels as required in this RFP during the Transformation Period.	**26.2.1.3**
Experience	Describe in detail your organization's experience in managing complicated transitions and transformations involving dispersed, decentralized telecommunications and IT environments.	**26.2.1.4**

26.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Impact	Describe the anticipated impact that the Transition and Transformation will have on "normal" State business operations. Identify the anticipated disruption that Vendor tasks will have on the State's normal work environment and how the organization will minimize and manage any disruption.	**26.2.1.5**
Security	The State recognizes that during the Transition Period, there will be considerable activity, including new employees being brought in by the Vendor's organization. The State feels particularly vulnerable to breaches in security and the omission of normal tasks that could have serious impact on the State's operations. Describe the process your organization will implement during the Transition period to ensure the integrity and security of the State's operations.	**26.2.1.6**
Stated Owned Assets	Detail how the Vendor will handle the management and maintenance of State-owned equipment, software, and technology assets including any relocation of equipment during transition.	**26.2.1.7**
Cutover	Specify your organizations anticipated Cutover date including addressing the availability of service level monitoring and reporting, billing, as well as any issues or assumptions related to the assignment of any State contracts.	**26.2.1.8**
Plan Due Date	The comprehensive transition and transformation plan shall be submitted as a major deliverable not later than 90 days after award of this contract.	**26.2.1.9**
Troubleshoot Service Problems	Currently troubleshooting is handled across many platforms depending on the area of service in trouble. Describe how you would coordinate troubleshooting that crosses platforms, networks, LATAs, etc.	**26.2.1.10**

26.3 EXIT STRATEGIES

The State expects full, complete, and timely cooperation in disengaging the relationship in the event that the Agreement expires or terminates. In the event of expiration or termination, The State expects that the Vendor shall, among other things: return all State data and documentation to the State; and allow the State or the replacement provider access to any selected systems, infrastructure, or processes that have been employed in servicing the State, in accordance with methods and procedures to be agreed upon and established in the Agreement.

26.4 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for transition and exit services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

26.4.1 Table – "Service / Support [Functional] Requirements"

Service Feature	Description	Proposal Paragraph #
Exit Plan	Provide the State a detailed exit strategy to include all service offerings identified with this RFP.	**26.4.1.1**
Cooperation	Agree to cooperate and collaborate for a maximum of one year with the State or the replacement provider and otherwise take all reasonable steps to assist the State in effecting a smooth disengagement upon the expiration or termination of the Agreement. Describe your compliance and ability to provide this service.	**26.4.1.2**
Interruption Service	Agree not to interrupt the provision of services to the agencies or any obligations related to disengagement, disable any hardware used to provide Services, or perform any other action that prevents, slows down, or reduces in any way the provision of Services or the agency's ability to conduct its activities, unless the State agrees that a satisfactory disengagement has occurred. Describe your compliance and ability to provide this service.	**26.4.1.3**

26.4.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Agreements	Agree to waive any contractual agreements made with Vendor employees involved with providing in-scope services that may be hired by the State or the replacement provider. Describe your compliance and ability to provide this service.	**26.4.1.4**
Assets	Agree that the State or a replacement provider shall have the right to acquire all Assets used to provide the Services. Describe your compliance and ability to provide this service.	**26.4.1.5**

26.4.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**26.4.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**26.4.2.2**
Describe the Vendor's approach to ensuring an orderly transition of licenses and leases upon disengagement. Is the Vendor able to obtain advance consents from its licensors and lessors to the transfer of licenses and leases to the State or the replacement Vendor upon disengagement of the State's relationship with the Vendor? Explain.	**26.4.2.3**
Describe your organization's specific approach to the Exit strategy process. Specifically, State your plan for Disengagement, including key milestones and The State/Vendor roles and responsibilities.	**26.4.2.4**
Provide no less than three (3) references of projects, which demonstrate your Disengagement process. Each reference should include: the date upon which the project started and ended, a client contact point, address, and a telephone number.	**26.4.2.5**

26.4.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**26.4.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**26.4.3.2**
Provide a detailed technical service description for the alternative proposed.	**26.4.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**26.4.3.4**

26.4.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage transition and exit services for the State.	**26.4.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**26.4.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**26.4.4.3**
Resources	Provide a detail schedule for staffing associated with transition and exit services. Schedule must include related labor charges, broken out by skill levels.	**26.4.4.4**

27.0 BILLING/RATE STRUCTURE

27.1 CURRENT STATE ENVIRONMENT:

The State currently contracts with several major vendors to provide voice and data services of various types to all State offices within the State. The majority of State users utilize services from one or more of these contracts. In some cases, local service may be provided by a local telephone company that is not under one of these contracts. Where contracts exist, vendors meet specific requirements in the provision of billing information and invoicing methodologies.

The Department of Information Technology (DIT) negotiates the above-mentioned contractual services on behalf of State departments and offices. Certain centralized locations that include the cities of Detroit, Lansing, Grand Rapids and Saginaw are directly managed by DIT. However, the State has offices in all 83 counties with various state authorities and jurisdictions. Invoices for services provided to these locations are typically received centrally by the Information Technology Budget and Finance Division (ITB&F).

When received and noted, the invoices are assigned to individual technicians for analysis and reconciliation to Vendor orders and contracts. Once reconciled and billing errors are corrected, approved payments are reviewed by Accounting where these charges are monitored and reconciled to other processes. At the same time, payment approvals are processed and passed to the administrative section for payment warrants to be issued. Each Vendor provides a Windows based management analysis application for in depth invoice analysis.

Agencies such as the Family Independence Agency (FIA) and the Department of Environmental Quality (DEQ) maintain decentralized out-State locations and telecommunications support services. To a great extent, these locations operate independently but within the contractual obligations of State contracts except where those contractual services may not be available. Many of these locations may be invoiced directly.

Payments may or may not be made centrally. In some cases, duplicate invoices may be required at several locations. Only call detail is required at some locations with detail and other charges also being supplied to a more central location.

It is imperative that Vendor billing and invoicing to the State is timely and accurate upon issue. The State requires each Vendor to provide specialized individuals or teams specifically knowledgeable of its billing processes to the State. Among other responsibilities these assignees must quickly and efficiently resolve errors and or disputes in billing and invoicing and efficiently and effectively communicate other issues and concerns to Vendor upper management.

27.2 BILLING REQUIREMENTS

The service features below are minimum requirements for billing services. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

27.2.1 Table – "Billing Requirements"

Service Feature	Description	Proposal Paragraph #
Required Components	The Vendor's billing system must provide the State with the following: (1) Invoices for various services with individual account codes for individual State agencies or offices. (2) Call Detail (3) Vendor Support, Reports and Alternative Media • These components are described below. Each should identify the associated billing by department, account numbers and address as required.	**27.2.1.1**
Invoice	• The bill. An itemized monthly statement of correct amounts owed Vendor for all products and services provided during the previous month. These will be required by specific types of service, department, account numbers and address or as otherwise required by the State. Invoices must contain all information required for billing and bill-back of services. Describe your compliance and capabilities to provide this service.	**27.2.1.2**

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Billing Period	The State will be billed on a monthly basis. All billing will be inclusive of the first day of the calendar month through the last day of the calendar month. Describe your compliance and capabilities to provide this service.	**27.2.1.3**
Delivery Requirements	Vendor must deliver call detail and invoices to one or multiple locations, as required by the State. In some instances, call detail may be required at an agency/location level while the invoice is required at the district/office or departmental level. This may require one invoice per call detail location as requested by the State or one invoice for multiple call detail locations. In other instances, call detail and invoices are to be delivered together to the same level. When call detail and invoices are required at the same address, these must be appropriately collated and arrive together in same container. Describe your compliance and capabilities to provide this service.	**27.2.1.4**
Sort Details	• Vendor must sort call detail by line identification code, charge card number, and calling station (extension). The State has the option of beginning a new page of call detail for each line, identification code or charge card number on a bill. Within each category, call detail must be sorted by date and time of call. • At the State's discretion, invoices may be requested with various sorts on each medium identified by the State and requested. Describe your compliance and capabilities to provide this service.	**27.2.1.5**
Receipt	Invoices and call detail must be received within 1 week of billing date. Describe your compliance and capabilities to provide this service.	**27.2.1.6**

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Discount	• For rate of discount determination purposes, the total switched access, dedicated access and charge card usage of all State agencies covered by the resulting contract are to be counted towards the State's calling volume. The Vendor must provide monthly summary sorted by Agency. • Invoice discounts will be applied on the current month's charges. Invoice detail must include standard rate, discounted rate and final charge for each line item. Describe your compliance and capabilities to provide this service.	**27.2.1.7**
Completed Calls Only	The State will only be billed for completed calls. Describe your compliance and capabilities to provide this service.	**27.2.1.8**
Billing Errors	Identified billing errors must be corrected within 45 days of notification to the Vendor. Describe your compliance and capabilities to provide this service.	**27.2.1.9**
Service Charges	Service charges: Detail must include the associated order ID numbers as identified by the State and authorization date, physical location of service (desktop, switch, circuit, etc.) that it will affect. Describe your compliance and capabilities to provide this service.	**27.2.1.10**
Feature Costs	There shall be no billing to the State for either monthly recurring or one-time installation for system features or individual features (these include: reporting capabilities, billing copies and charges for calling involving rotary phone(s).) Describe your compliance and capabilities to provide this service.	**27.2.1.11**
Toll Billing Increment – Calls	Toll Billing increments will be 6 second increments. Describe your compliance and capabilities to provide this service.	**27.2.1.12**

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Format	All invoices and reports will be available to the State on a secure Vendor website, in a viewable and downloadable format. Vendor must describe in their response all features and functions of the offering. The Vendor must provide samples of all available media and paper invoices and reports with its response. • Itemized detailed paper printed invoice, sorted in sequential order of telephone number or data circuit number per account. Bills will include any and all costs, itemized per line or circuit. Service definitions (voice, 56K date, 1.544M frame relay, etc.) must be included in the record for each line or circuit. Circuit costs must be accurately listed including fixed monthly costs and usage costs. • Electronic – See Section 27.2.1.20 Describe your compliance and capabilities to provide this service.	**27.2.1.13**
Itemization	Invoicing will consist of the costing of all Vendor-provided services. It is the responsibility of the Vendor to present detailed itemized invoices for each service performed on a per job basis. Vendor invoices will not be accepted without the appropriate itemizations including hours worked, equipment implemented and time/day on site. Work authorization information including name, purchase order, or other identifying information as defined by the State are also required. Bulked charges will be rejected by the State. Describe your compliance and capabilities to provide this service.	**27.2.1.14**

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Retention	The Vendor will maintain documentation for all charges against the State under this contract. The books, records, and documents of the Vendor, insofar as they relate to work performed or money received under this contract, will be maintained for a period of three (3) full years from the date of service, and will be subject to audit at any reasonable time and upon reasonable notice, by the State or any appropriate federal agency, or their duly appointed representatives. The records will be maintained in accordance with Generally Accepted Accounting Principles (GAAP). Describe your compliance and capabilities to provide this service.	**27.2.1.15**

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Other Detail	• The Vendor must provide the following level of detail for all data services including, but not limited to, private line, frame relay, ATM, and remote access. 1) Supply unique account numbers for each agency's circuits and carryover balances from month to month within a unique Billing ID/Account Number; 2) Every order must reference an AR# and a State Network Operations Center (NOC) Internal Control Number; 3) Display the charges on the bill in Circuit Order; and 4) Each circuit must be accompanied by the following information on the bill: a) Circuit ID b) Location Name c) Location Address d) Order Number that installed it e) Type of service (Frame Relay, etc.) f) Itemize each piece of equipment on the circuit that has an additional rate associated with it (list type of equipment, unit price and total amount due) • Information To Be Included In The Data Services Specific Summary Invoice:	**27.2.1.16**

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Other Detail CONTINUED	Private Line Total number of circuits and charges; Total number of point-to-point circuits and charges; Total number of multi-point circuits and drops and charges; Total access and network component charges; Total Interoffice Channel charges; and Other charges/adjustments. Frame Relay and ATM Total data circuit count and charges; Total PVC count and charges; Total Customer Premise Equipment (CPE) charges; Total usage volumes and total charges by PVC/Port; and Other charges/adjustments. Remote Access Number of active accounts/users; Total number of calls; Total number of calls to local #; Total number of calls to inbound toll free numbers; Minutes of use by call type; and Miscellaneous adjustment charges.	

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Call Detail	• A monthly report showing all outgoing and incoming calls, including calling and called party, calling number and number called, time of day and duration of all calls billed to State office lines or accounts. Detail must also include third party or collect calls, calling card calls and data circuit origination and termination locations. "$0" billed calls and local calls will be included in a "Non-Billed" record file (database). Services such as 911, 555, 800, 888, 877 must be included. The following service/call records require information as listed below: • **Direct Dial Calls** a) Date of call including calendar month, day and year; b) Time of call based on a 24-hour clock; c) Length of call based on minutes and seconds; d) Originating telephone number; e) Terminating telephone number, number dialed; f) Terminating city or town and State or province and country; g) Cost of call in dollars and cents; h) Call type definition codes.	**27.2.1.17**

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Call Detail CONTINUED	• **FX Calls** a) Date of call including calendar month, day and year; b) Time of call based on a 24-hour clock; c) Length of call based on minutes and seconds; d) Originating telephone number; e) Terminating telephone number, number dialed; f) Terminating city or town and State or province and country; g) Cost of call in dollars and cents; h) Call type definition codes. • **Mobile Calls** a) Date of call including calendar month, day and year; b) Time of call based on a 24-hour clock; c) Length of call based on minutes and seconds; d) Originating telephone number; e) Terminating telephone number, number dialed; f) Terminating city or town and State or province and country; g) Cost of call in dollars and cents; h) Call type definition codes.	

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Call Detail CONTINUED	• **Called Party Pays Calls** a) Date of call including calendar month, day and year; b) Time of call based on a 24-hour clock; c) Length of call based on minutes and seconds; d) Originating telephone number; e) Terminating telephone number, number dialed; f) Terminating city or town and State or province and country; g) Cost of call in dollars and cents; h) Call type definition codes. • **Paging Calls** a) Date of call including calendar month, day and year; b) Time of call based on a 24-hour clock; c) Length of call based on minutes and seconds; d) Originating telephone number; e) Terminating telephone number, number dialed; f) Terminating city or town and State or province and country; g) Cost of call in dollars and cents; h) Call type definition codes. • **Directory Assistance** a) Date of call including calendar month, day and year; b) Time of call based on a 24-hour clock; c) Originating telephone number; d) Terminating telephone number, number dialed; e) Cost of call in dollars and cents; f) Call type definition codes. • **Third Number (Third Party) or Collect Billed Calls** a) Date of call including calendar month, day and	

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Retention	The State must have access to hard call detail for a minimum of 3 months past the receipt of billing, and access to call detail in some fashion usable to the State for up to 6 months (e.g. Compact Disk (CD) in relational database format, microfiche, by FTP, and optical, or magnetic media formats). The Vendor will provide samples and formats of each medium. Describe your compliance and capabilities to provide this service.	**27.2.1.18**
Reports	The Vendor will provide the State with summary invoices on paper that will include, at a minimum, the following information: **A.) <u>Remittance Page</u>** for processing payment to include: 1) Master or Lead Account #; 2) Invoice Number & Date; 3) Federal Employee ID No. or FEIN; 4) Service Dates; 5) New / Current Charges that includes: 6) Usage Charges; 7) Monthly Recurring Charges; 8) One-time & Prorated Charges/Credits; 9) Taxes & Surcharges (not allowable); 10) Regulatory Fees (not allowable); 11) Balance Brought Forward; 12) Payment(s) Received; 13) Debit and Credit Adjustments to previous invoices (with detailed explanation for all adjustments shown separately); 14) Balance Due; and 15) Single Remittance Address for payment.	**27.2.1.19**

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Reports CONTINUED	**B.) <u>Summary Level Reports for Usage</u>;** For all inbound, outbound, calling card, conferencing, and other voice services, Vendors must provide the number of calls, number of minutes, rate/min, and total charge by call type broken down by: 1) Interstate/Intrastate; 2) Inter-LATA/Intra-LATA; 3) International; 4) Directory Assistance; 5) Dedicated/Switched; 6) Switched/Switched; 7) Dedicated/Dedicated; and 8) When applicable, the Vendor must also include the Peak/Off-Peak breakdown of the calls. Note: For all other advanced calling features (call waiting, call forwarding, etc.) the Vendor must provide the number of calls, number of minutes, fixed charge, usage charge and total charge. **C.) <u>Total Fixed Recurring Charges by Service Type</u>;** • Invoicing will be composed of fixed monthly costs, with new installations being prorated for days of operation within a calendar month. • The State will not be assessed taxes, additional monthly fees or late payment fees. All taxes, fees and other charges mandated by government regulatory agencies must be inclusive of contracted charges. This includes Universal Service Fees, Access Fees, Contract Fees, deaf relay, property tax recovery, and any and all other fees. Taxes will not be billed nor included in any charge to the state.	

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Reports CONTINUED	• The Vendor will not invoice the State for any new or additional charges (recurring or non-recurring) other than those costs proposed in response to this document request. This includes any new charges mandated by regulatory bodies, new surcharges instituted by the Vendor after regulatory approval, and new internal Vendor policies or agreements. • Universal Service Fund, taxes, charge allocation surcharges or any and all such charges not actually specified within this document will be strictly forbidden. The fixed basic monthly fee will be the only fee other than toll or feature charges, as identified elsewhere in this document, that will be assessed the State. • Detailed voice call records will be provided to the State on PC compatible CD media. No additional charges beyond those quoted above will apply. No per record, media or other charges will apply. Included data must be readable by application defined in Sect. 27.2.1.20 and allow ODBC compliance. • Invoices for installation services will be detailed to include each item and/or service provided and made available on PC compatible media and paper invoices. No additional charges other than those noted above will apply. • No charges for Vendor equipment repair will be assessed the State. All equipment must be installed, serviced and maintained by the Vendor without additional charges other than those noted above. • The Vendor will not invoice the State for third party charges. Collect calls, conference calls, relay calls, calling card calls or station calls may be allowed.	

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Reports CONTINUED	**D.)** **<u>An Activity Report</u>** that provides data for the One-Time & Prorated Charges/Credits, for example: 1) Partial period charges for the billing period (including explanation for the partial period charges); 2) One time non-recurring charges for MAC's (services, locations); 3) One time non-recurring charges for equipment; and 4) State Purchase Order Numbers must be included. **E.)** **<u>Other Reports</u>,** i.e.; 1) Discounts – Vendor must show gross charges, applicable discounts, and net charges to the State. Description and Amounts Per Number/Account (with sufficient accompanying usage/inventory information for the State to validate the discount calculations; 2) Identification of any minimum commitments (if any), contribution to meeting commitments, amount of commitment remaining, and number of months remaining to meet commitment; and 3) Under-utilization charges (if any). Summary Invoices must match the total amount in the detailed invoices provided on the agreed upon electronic media.	

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Administrative Support Reporting and Alternative Media	• The Vendor will assign a dedicated financial team to the State account who will cooperate with the State to resolve billing, payment or report and invoice accuracy problems that may occur during the course of the contract. • The Vendor will provide within five (5) working days, any corrective data requested by the State. This is inclusive of itemized balances and credits owed the State. The Vendor will provide daily reports indicating the completion or continuation of each job by State TSR number or State repair order number. Such will be E-mailed to the State on a daily basis. Vendor will provide cut sheets for all active equipment supplied to the State. The Vendor will provide passive material cut sheets as requested by the State. Unless specified otherwise, all reports required within will be due on the day of the period specified (Monday following week for weekly reports, first day of the month for monthly reports). • A Windows PC based application must be provided by the Vendor for management analyses and reporting. The application must be menu-driven using relational database formats. All requested invoice and CSR data must be included in this application. User selectable sorts, views, standard and ad-hoc reporting must also be included in the application. Actual data must be stored on PC Compatible Compact Disk. There must be no additional charges for providing the application or associated data on any medium. The Vendor license for this application must be unlimited and work with all presented invoices. • Monthly billing on PC Compatible Compact Disk format with all files in Open DataBase Compliant (ODBC) non-restricted ASCII files, inclusive of all information presented on the paper copy.	

27.2.1 Table – "Billing Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Administrative Support Reporting and Alternative Media CONTINUED	Describe your compliance and capabilities to provide this service.	
Monthly Services Audit Reports	The Vendor will provide monthly reports. These reports will be due on the 20th day of each month following the monthly service period. They will define all services including circuit or telephone numbers, account numbers, service type, responsible State offices, physical location of circuit end points, programming, features, summary usage (toll costs), itemized monthly service costs inclusive of voice mail or features, and other peripheral uses. Describe your compliance and capabilities to provide this service.	**27.2.1.20**
Electronic Payments	The Vendor will be capable of receiving electronic payments from the State.	**27.2.1.21**
Monthly Balance Reports	The Vendor is required to provide a master account balance report to the State. Reports will be continually updated on a monthly basis, reflecting all the account invoices, payments and balances for each State account by agency and by location.	**27.2.1.22**
Customer Service Record (CSR)	Customer Service Record (CSR) – The State will require a detailed printout of all monthly equipment and service charges billed by the Vendor using uniform service order codes. The CSR must be provided in various sorts on any medium requested. The CSR must be shipped within three business days of the actual invoice being shipped.	**27.2.1.23**

27.2.2 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**27.2.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**27.2.2.2**

27.2.3 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**27.2.3.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in corresponding price schedule.	**27.2.3.2**
Provide a detailed technical service description for the alternative proposed.	**27.2.3.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**27.2.3.4**

27.2.4 Table – "Managed Services"		Proposal Paragraph #
Managed Services	Describe proposed ability, capabilities, and experience to manage billing services for the State.	**27.2.4.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**27.2.4.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**27.2.4.3**
Resources	Provide a detail schedule for staffing associated with billing. Schedule must include related labor charges, broken out by skill levels.	**27.2.4.4**

28.0 KEY SYSTEM EQUIPMENT

28.1 CURRENT STATE ENVIRONMENT:

The State currently has a statewide contract with Ameritech for key systems, which expires in October of 2004. The State has locations with outdated keys systems from a variety of manufacturers (See Appendix F). The State also has a contract with Octel Communications for voice messaging systems. Any Key system proposed by the Vendor must offer and integrated voice mail platform and be capable of complete integration with Octel's voice messaging equipment platform for those locations currently being served by an Octel system.

Complete integration means that the following conditions must be adhered to:

- forward call to mailbox personal greeting
- return to operator
- message notification at the message waiting light of the set

28.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for the Key Systems.

All costs to provide integration must be included in the cost model unit pricing forms.

The service features below are minimum requirements for key systems. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

28.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Standards	The infrastructure materials and labor shall meet ANSI, EIA/TIA and BICSI standards. All applicable National Electrical Codes, Building Codes and jurisdictional requirements are to be met. All materials must be UL listed. Describe your compliance and abilities to provide this service.	**28.2.1.1**
Jumper and Cross Connect Work	The key system Vendor will be responsible for running all cross connect jumpers and the installation of station equipment from the station jacks to the desk top. Describe your compliance and abilities to provide this service.	**28.2.1.2**
Right of Ownership	All data, materials, documentation and other products prepared or acquired by the Vendor shall belong exclusively to the State. The State shall also own and retain intellectual property rights covering technology developed as part of the services described herein and paid for by the State. Describe your compliance and abilities to provide this service.	**28.2.1.3**
Deployment of Systems	State agencies need the ability to deploy, in a timely manner, new key systems of various sizes, adjunct systems, parts and station equipment. Describe your compliance and abilities to provide this service.	**28.2.1.4**
Provision of New Systems	The Vendor must be able to provide fully operational new key systems to meet the needs of a diverse assortment of State agencies. Describe your compliance and abilities to provide this service.	**28.2.1.5**
Maintenance and MAC work	The Vendor must be able to fully support the new key system's maintenance and MAC work. Describe your compliance and abilities to provide this service.	**28.2.1.6**

28.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
New Equipment	All equipment must be new and at the highest manufacturer's issue and revision levels agreed to by the State. Describe your compliance and abilities to provide this service.	**28.2.1.7**
Software Releases	All software must be at the highest manufacturers release and revision levels agreed to by the State. Describe your compliance and abilities to provide this service.	**28.2.1.8**
Network Interfaces	The Vendor must provide, install, test and insure the proper operation of all required interfaces to the States private network, Ameritech Centrex, GTE Centranet, any inter-exchange carriers and the public switch networks. Describe your qualifications for complying with this requirement.	**28.2.1.9**
Consultation	The Vendor must help the various State agencies to analyze their telecommunications needs and configure and program the key systems and associated station/trunk equipment to fill those needs. Explain how you will accomplish this requirement.	**28.2.1.10**
Software Translations	The Vendor must provide all software translations on the key systems as required and/or requested by the State agencies during the installation and acceptance period at no additional cost to the State. Describe your compliance and abilities to provide this service.	**28.2.1.11**
Training	The Vendor must train, on site, all site personnel on the use and operation of their telephones and system features during or before the acceptance period at no additional cost to the State. The State will require training on technology updates. Describe what will be included to meet these training needs. Include additional costs, if any, for refresher training. Describe your compliance and abilities to provide this service.	**28.2.1.12**

28.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Turn-key Implementation	The State recognizes that each Vendor may approach Key system's design and implementation in different ways. Therefore, the bid quotes for the cost models must include all equipment, hardware, software, programming, additional cabling if needed, training, etc. for the Key system to operate in conformance with the requirements of the cost models even if the specific items, features or labor required for the proper operation of the Key system has not been individually addressed in the cost models. Explain how the Vendor will provide this type of "turn-key" implementation.	**28.2.1.13**
Installation	The Vendor must insure that the installation team is completely familiar with and understands the work plan and contract requirements prior to the installation of any Key system. Explain how that will be accomplished.	**28.2.1.14**
Technical Work Plan	The Vendor must work with the State to provide the State with a technical work plan for the entire project prior to the start of each installation. This plan must include a Gantt type display showing each event, task and decision point. All technical work plans must meet with the approval of the State agency that is purchasing the Key system-. The work plan must provide for minimal disruption of existing telephone service. Provide a detailed over view of the events, task and decision points and describe how you will implement the new system with a minimum disruption of existing telephone service.	**28.2.1.15**

28.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Building Structure Modifications and Restoration	• The Vendor will maintain a clean work area free of debris and trash. • The Vendor is responsible for the repair of any damage caused to the facility as a result of the Vendor's activities. Restoration will be equal to or better than the condition of the facility prior to the project. • The Vendor is responsible for removing and replacing all ceiling tiles, duct covers, and power pole covers as required for the installation. • The Vendor will need prior approval from the State's project manager for any work that requires modification of the building structure or design. Describe your compliance and abilities to provide this service.	**28.2.1.16**
Permits	The Vendor is responsible for obtaining all required permits prior to the start of each project. Describe the plans to accomplish this requirement.	**28.2.1.17**
Labor Equipment Requirements	The Vendor is responsible for providing all supervision, labor, tools test sets, equipment, hardware, cabling materials, transportation, hauling and hoisting and miscellaneous materials as part of any contract issued by the State. Describe your compliance and abilities to provide this service.	**28.2.1.18**
Standards	The Vendor and their representatives will follow and adhere to all OSHA and MIOSHA requirements and standards. Describe your compliance and abilities to provide this service.	**28.2.1.19**
Working Conditions	The Vendor will not compromise safe working techniques and/or environments during any portion of the work associated with any contracts issued by the State. Provide documentation to support this requirement.	**28.2.1.20**

28.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
New Materials Requirement	All materials are to be new and 100% free of defects. Describe your compliance and abilities to provide this service.	**28.2.1.21**
Environmental Requirements	The Vendor is responsible for providing to the State project manager all space, environmental and electrical requirements for the switch room immediately after the receipt of a purchase order from the State for the project. Describe the plans to accomplish this requirement.	**28.2.1.22**
Connectivity	The Vendor is responsible for interfacing, connecting and testing existing ancillary telephone equipment such as paging systems, answering machines, auxiliary bells, elevator phones, etc. with their key system. Describe the plans to accomplish this requirement.	**28.2.1.23**
Engineering and Design Costs	The Vendor is required to absorb all programming, engineering and design costs for any new key systems or adjuncts or additions/upgrades to existing Key systems or adjuncts. Provide documentation to support this requirement.	**28.2.1.24**
Ordering Time Frames	It will be necessary to purchase additional parts and equipment to support existing key systems and adjuncts. Explain the process and time intervals for ordering additional equipment.	**28.2.1.25**
Engineering Costs	The Vendor is required to absorb all engineering and design costs for all upgrades or additions to existing Key systems or adjuncts. Describe your compliance and abilities to provide this service.	**28.2.1.26**
Pricing	Provide a current price sheet including item pricing and installation for all new adjuncts, parts and features associated with new key systems. This pricing will be included in the contract and used to purchase equipment at the State's discretion. Please submit this pricing information electronically. Pricing information for ALL parts will be evaluated along with the Cost Models in Table **28.2.5.**	**28.2.1.27**

28.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Asset Management	As the need for additional telephone service increases on the State owned key systems, it will be necessary to obtain additional telephone equipment. These needs may include such items as circuit packs, telephone sets, and adjuncts. Explain how the Vendor will handle adding to the existing State owned equipment. How does the Vendor propose to track their assets in a lease/purchase or lease arrangement?	**28.2.1.28**
Engineering Requirement	Some equipment additions will require engineering. Explain how the Vendor will handle the required engineering. Explain the qualifications of those who will be involved in the engineering process.	**28.2.1.29**
Ownership of Equipment	In the event that the Vendor gains ownership of the new equipment, propose options for the transfer of ownership of the equipment or other alternatives at the end or termination of the contract.	**28.2.1.30**
Order Time Frames	The State is in constant need of additional telephone equipment. This equipment must be put into service in a timely manner. What is the expected time from ordering the equipment to deployment of the equipment?	**28.2.1.31**
Ordering Process	It will be necessary to purchase new key systems and adjuncts. Please explain the process for ordering additional equipment.	**28.2.1.32**
Engineering Costs	The Vendor is required to absorb all engineering and design costs for new key systems or adjuncts. Explain the process. Explain the process and describe your compliance and abilities to provide this service.	**28.2.1.33**
Needs Assessments	As the need for additional telephone service increases, it will be necessary to obtain additional key systems and adjunct equipment. The Vendor will be expected to work with the various State agencies that will be using the new equipment to determine their needs and service requirements. Please explain how the Vendor will handle the needs assessment of the various State agencies. How does the Vendor propose to track their assets?	**28.2.1.34**

28.2.2 Table – "Technical Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Diagrams	Provide complete diagrams and descriptions of all equipment proposed, including technical manuals.	**28.2.2.1**
Digital Architecture	All key systems must be completely digital. Provide compliance documentation.	**28.2.2.2**
New Equipment	Only new equipment will be considered. The equipment offered shall be of the latest design and in current production by the manufacturer, and shall conform to FCC regulation, Part 68. Please state the date the product was introduced to the market.	**28.2.2.3**
Certified Hardware	All hardware must be certified for ongoing maintenance. Provide compliance documentation.	**28.2.2.4**
Certified Software	All software must be certified as the most current release supported by the manufacturer. Any new software released by the manufacturer during the life of this contract shall be incorporated as new systems are purchased throughout the life of this contract at no additional cost to the State. Provide compliance documentation.	**28.2.2.5**
Nonvolatile Programs	The electronic key system microprocessor shall be controlled with nonvolatile programs requiring no start-up time when there is a condition such as a commercial power failure. Provide compliance documentation.	**28.2.2.6**
Power	Primary power shall be 120 VAC, 60 Hz. Battery backup shall be supplied to power telephone system for a period of <u>not less than one hour</u> and to protect the common control equipment from power surges during short term power outages present before the building emergency power supply is activated. Provide compliance documentation.	**28.2.2.7**
Battery Backup	Main memory and all system programmed features shall have battery backup for <u>at least 24 hours</u>. Provide compliance documentation.	**28.2.2.8**

28.2.2 Table – "Technical Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Protection	Protection - Electrical Surge Protection. The system shall include a power line surge protection device, and gas tube telephone line protector assemblies to protect user personnel and prevent system damage or total loss resulting from voltage and current surges superimposed upon the commercial power line and all telephone line circuits by lightning strikes, commercial power faults, and power line to telephone line faults. Provide compliance documentation.	**28.2.2.9**
Modular Design	All sets must be of modular design allowing the replacement or extension of handset cords and line cords. Provide compliance documentation.	**28.2.2.10**
Compatibility	All sets must be compatible to all system sizes bid. Provide compliance documentation.	**28.2.2.11**
Ringer Volume	All sets must have ringer volume control. Provide compliance documentation.	**28.2.2.12**
Handsets	All handsets must be hearing aid compatible. Provide compliance documentation.	**28.2.2.13**
Last Number Redial	All sets must have last number redial. Provide compliance documentation.	**28.2.2.14**
Message Waiting Lights	All sets must have message waiting indicators. Provide compliance documentation.	**28.2.2.15**
Digital Requirements	All single line sets must be digital and should be proprietary with speaker and microphone for paging and intercom capabilities. Provide compliance documentation.	**28.2.2.16**
Hands-free Capability	All sets (except single line sets) must have hands free capability. Provide compliance documentation.	**28.2.2.17**
DSS and BLF	All sets (except single line sets) must be able to be equipped with direct station selection (DSS) and busy lamp field (BLF) modules for central answering functions to accommodate all instruments in the associated user number group with not less than 36 buttons for individual programming. Provide compliance documentation.	**28.2.2.18**

28.2.2 Table – "Technical Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Cords	All systems must be priced to include 12 foot coil cords and 14 foot station cords as standard. Provide compliance documentation.	**28.2.2.19**
Standard	The KSU must be of connecterized modular design. Provide compliance documentation.	**28.2.2.20**
Standard	The KSU must be designed for wall mounting. Provide compliance documentation.	**28.2.2.21**

28.2.3 Table – "System Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Account Codes	Account codes - requires that the system allows the caller to input billing information when placing a call including forced and verified codes. Provide compliance documentation.	**28.2.3.1**
Automatic Call Distribution	Automatic Call Distribution – The system must be capable of providing integrated ACD software for incoming call management. The system must be capable of providing reports on a daily basis. Provide compliance documentation.	**28.2.3.2**
Automatic Route Selection	Automatic Route Selection - Automatic routing of outgoing calls over alternative customer facilities. Automatically selects the pre-programmed long-distance carrier based on the dialed digits, time of day and day of week. Order of facility preference is determined by the using agency. Provide compliance documentation.	**28.2.3.3**
Centrex Compatibility	Centrex Compatibility - the system bid must be able to access Centrex features with one button and without the use of access codes. Provide compliance documentation.	**28.2.3.4**
Caller I.D.	Caller I.D. Capability – must include name and number display, individual set log, system log, and system capacity. Provide compliance documentation.	**28.2.3.5**

28.2.3 Table – "System Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Conference	Conference - System feature that allows calls to be established by a minimum of 3 parties at the same time and allows any party to disconnect without interrupting the other 2 parties' conversation. Provide compliance documentation.	**28.2.3.6**
DID	The system must be capable of allowing for the connection of DID trunks which gives the capability to bypass the system's attendant and call a station directly. Provide compliance documentation.	**28.2.3.7**
Disconnect Supervision	Disconnect Supervision - After an external call disconnects, the system must drop the line immediately. Provide compliance documentation.	**28.2.3.8**
Night Answer	Night Answer - System feature that enables incoming calls to be answered by any station user after hours. Provide compliance documentation.	**28.2.3.9**
Remote Maintenance and Administration	Remote Maintenance and Administration – The system must provide a means for a user to diagnose and monitor the condition of a system and do programming changes from a remote location. Provide compliance documentation.	**28.2.3.10**
SMDR	SMDR – Systems must provide station message detail recording to track calling activity. Provides on-site reporting of traffic through the system. The processor prints out vital call records. The SMDR shall interface with the RS 232C port on the switching system, if it is a stand-alone system. If it is not a stand-alone system, the printer shall interface with a RS 232C port. The SMDR shall minimally capture and print out calls for individual stations showing time (within one hour), dates, destinations by NPA and/or NXX, call duration, and trunk group. Vendor is to itemize a compatible printer. Provide compliance documentation.	**28.2.3.11**
Speed Dial	Speed Dial System Level - System feature that allows users to program at least 50 telephone number with the push of a button or by entering an access code. Provide compliance documentation.	**28.2.3.12**

28.2.3 Table – "System Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Program Reload	Program Automatic Reload - The system program must be automatically reloaded after a power failure. Provide compliance documentation.	**28.2.3.13**
Toll Restrictions	Toll Restrictions - Required feature that blocks individual station access to toll facilities. Feature must be forced and verified. Provide compliance documentation.	**28.2.3.14**
Paging Interface	Paging Interface - The system must provide an interface to connect to an external paging system. Provide compliance documentation.	**28.2.3.15**
Automatic Callback	Automatic Callback - When an internal station is busy, this feature allows station users to dial a code and hang up. When both parties are free, the system automatically rings each party's extension and connects the parties. Provide compliance documentation.	**28.2.3.16**
Automatic Line Selection	Automatic Line Selection - Allows the telephone (except single line sets) to be programmed to access a specific line whenever it goes off the hook. Provide compliance documentation.	**28.2.3.17**
Call Hold	Call Hold - Allows for electronically suspending a call. The feature is released through operation of the switchhook, a second operation of the hold button. Provide compliance documentation.	**28.2.3.18**
Call Forward	Call Forward Busy/No Answer - This feature allows a call to be routed to a station other than the one dialed during busy or no answer conditions. Provide compliance documentation.	**28.2.3.19**
Call Pickup	Call pickup - allows a station user to dial an access code to answer a call directed to another station within a given pickup group. Provide compliance documentation.	**28.2.3.20**
Call Transfer	Call Transfer - This feature provides each station to transfer a terminating or origination call to another station or to the attendant. Provide compliance documentation.	**28.2.3.21**

28.2.3 Table – "System Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Distinctive Ringing	Distinctive Ringing - Different ringing tones and cadences indicate whether an incoming call is internal to the system or external to the system. Provide compliance documentation.	**28.2.3.22**
Do-Not-Disturb	Do-Not-Disturb - Allows a user to cancel all ringing at the station. Provide compliance documentation.	**28.2.3.23**
Exclusive Hold	Exclusive Hold - Allows only the station that has placed a live circuit on hold to be capable of breaking the hold condition and reestablishing conversation. Provide compliance documentation.	**28.2.3.24**
Off-Premise Call Forward	Off-Premise Call Forward - Allows users within the system to forward calls to telephone numbers outside of the system. Provide compliance documentation.	**28.2.3.25**
Privacy	Privacy - This feature ensures that other system users cannot enter a call in progress. Provide compliance documentation.	**28.2.3.26**
Station Speed Dial	Station Speed Dial - Allows users to program frequently dialed numbers with the push of a button or by dialing a maximum 2-digit access code. Provide compliance documentation.	**28.2.3.27**

28.2.4 Table – "Voice Mail Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Voice Mail Integration	Key system must be integrated with the voice messaging system whereas incoming calls to an individual extension reach the called party's personal voice mailbox greeting. Provide compliance documentation.	**28.2.4.1**
A.M.I.S.	Certification to comply with A.M.I.S (Audio Messaging Interchange Specification.) Provide compliance documentation.	**28.2.4.2**

28.2.4 Table – "Voice Mail Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Octel Integration	Vendors must provide documentation that guarantee's the Vendor's key system equipment and/or voice mail interface equipment can provide seamless integration with Octel's equipment and software. Provide compliance documentation.	**28.2.4.3**
Backup	Backup and restore capability. Provide compliance documentation.	**28.2.4.4**
DTMF Recognition	Administer DTMF recognition from a RS232 terminal and a station set. Provide compliance documentation.	**28.2.4.5**
Message Waiting	Ability to provide message waiting notification on individual phone sets. Provide compliance documentation.	**28.2.4.6**
Return to Operator	Ability to prompt the caller to return to the operator by pressing a key on the set or by default by staying on the lines. Provide compliance documentation.	**28.2.4.7**
Password Protection	All mailboxes must be password protected. Provide compliance documentation.	**28.2.4.8**
Attendant Capabilities	Automated attendant capabilities including custom call routing and flexible business hour greeting. Provide compliance documentation.	**28.2.4.9**
Capacity	Capacity for at least 350 mailboxes. Provide compliance documentation.	**28.2.4.10**
Classes of Service	Provisions for at least 12 classes of service. Provide compliance documentation.	**28.2.4.11**
Message Save	Message save ability (archive messages). Provide compliance documentation.	**28.2.4.12**
Broadcast Messages	Provisions for system broadcast messages to all subscribers. Provide compliance documentation.	**28.2.4.13**
Delivery Options	Message delivery options (e.g., urgent, private). Provide compliance documentation.	**28.2.4.14**

28.2.4 Table – "Voice Mail Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Classes of Service	Provide user agency the ability of administering classes of service.	**28.2.4.15**
Group Lists	Capacity for programming a minimum of 50 group lists with a minimum of 100 members in a group list. Provide compliance documentation.	**28.2.4.16**
Reports	Capability of printing subscriber and mailbox information reports. Mailbox informational reports must include, at a minimum, the mailbox number, daily incoming call counts, outcalling call counts, and minutes/seconds of individual mailboxes connect time per day. Provide compliance documentation.	**28.2.4.17**
System Capacity	System capacity to be expandable up to 8 ports or equivalent while retaining original hardware. Provide compliance documentation.	**28.2.4.18**
Urgent Message	Urgent Message Notification Feature. Provide compliance documentation.	**28.2.4.19**
Check System	System must provide ability for user agent's system manager to check system diagnostics, error logs and system performance. Provide compliance documentation.	**28.2.4.20**
Outcall Notification	System must provide the ability to restrict outcall notification to certain area code(s). Provide compliance documentation.	**28.2.4.21**
Class of Service	Class of Service to include: • No. of maximum messages per mailbox • No. of minutes per voice message • No. of days new messages can be retained • No. of days archived messages can be retained Provide compliance documentation.	**28.2.4.22**
Outcall Paging	Outcall paging capability. Provide compliance documentation. Provide compliance documentation.	**28.2.4.23**

28.2.4 Table – "Voice Mail Features [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Service Observing	Service Observing - Allows privileged users to listen to conversations in progress. Usually a tone sounds to indicate that the conversation is being observed. The system must have the capability of making the tone silent. Provide compliance documentation.	**28.2.4.24**

PRICE PROPOSAL

INSTRUCTIONS

- The Vendor is to provide a total price for each Key system shown in the Cost Models. The total price must include any and all required materials and labor not specifically listed in the Cost Model. The Cost Model is intended to provide Key system sizing, option and feature information for the Vendor. The Vendor is required to provide complete Key systems and installation including all hardware and software.

- The Vendor must provide an itemized statement of all parts and labor including nomenclatures, quantities, part numbers and costs for each Cost Model.

- All systems proposed in the Cost Model must be in compliance with the specifications included in 28.0.

- All systems proposed in the Cost Model are for evaluation purposes only and do not constitute an order.

28.2.5 Table – "Cost Models"		
Service Feature	**Description**	**Proposal Paragraph #**
Site 1	• A digital electronic key system with a capacity for 6 lines and 16 stations • A 2 port voice mail system • 3 Central Office lines • Six electronic key sets with the ability to display 6 or more C.O. lines • Training on Key system • Training on Voice mail system • Maintenance for years 2 and 3 are to be included on a per station and per line basis for the key system , and per card basis for the voice messaging system. • Vendor is to also provide an hourly time and materials rate for years 2 though 5. At the request of the successful Vendor, this rate may be reviewed on the anniversary of the contract. It will be the Vendor's responsibility to prove to the State that a modification to this rate is justified.	**28.2.5.1**

28.2.5 Table – "Cost Models"		
Service Feature	**Description**	**Proposal Paragraph #**
Site 2	• A digital electronic key system with a capacity for 16 lines and 48 stations • A 4 port voice mail system • 8 Central Office lines • Six electronic key sets with the ability to display 6 or more C.O. lines • Four electronic key sets with the ability to display 10 ormore C.O. lines • Four electronic key sets with the ability to display 20 or more C.O. lines • One Busy Lamp Fields (BLF) • Two Display sets • Training on Key system • Training on Voice mail system • Maintenance for years 2 and 3 are to be included on a per station and per line basis for the key system, and per card basis for the voice messaging system. • Vendor is to also provide an hourly time and materials rate for years 2 though 5. At the request of the successful Vendor, this rate may be reviewed on the anniversary of the contract. It will be the Vendor's responsibility to prove to the State that a modification to this rate is justified.	**28.2.5.2**

28.2.5 Table – "Cost Models"		
Service Feature	**Description**	**Proposal Paragraph #**
Site 3	• A digital electronic key system with a capacity for 30 lines and 150 stations • A 6 port voice mail system with capacity for 8ports • 8 DID trunks • 8 Caller-ID lines • 4 loop start C.O. lines • Ten single line digital proprietary sets • Ten electronic key sets with the ability to display 10 ormore C.O. lines • Ten electronic key sets with the ability to display 20 or more C.O. lines • Five Display sets • Training on Key system • Training on Voice mail system • Six Busy Lamp Fields (BLF) • SMDR with a printer • Paging interface • Maintenance for years 2 and 3 are to be included on a per station and per line basis for the key system , and per card basis for the voice messaging system. • Vendor is to also provide an hourly time and materials rate for years 2 though 5. At the request of the successful Vendor, this rate may be reviewed on the anniversary of the contract. It will be the Vendor's responsibility to prove to the State that a modification to this rate is justified.	**28.2.5.3**

28.2.6 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**28.2.6.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**28.2.6.2**
For each of the State defined geographic regions in which you are offering service indicate: • Number of service/support dispatch facilities • Number of installation and repair technicians • Whether you own or resell the support services bid in your response. • Location of the service/support dispatch facilities	**28.2.6.3**
What is your annual revenue for and estimated market share of Key system's provisioning services in the geographic areas you are proposing?	**28.2.6.4**
Detail your customer problem reporting, analysis, and resolution procedures. Indicate how "partner" service center participation is handled, including trouble ticket systems. What is the State visibility to problem resolution involving partner service centers?	**28.2.6.5**
To what extent is the State expected to participate in problem resolution?	**28.2.6.6**
Describe how you will monitor the offered services to ensure compliance with service level guarantees.	**28.2.6.7**

28.2.7 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**28.2.7.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**28.2.7.2**
Provide a detailed technical service description for the alternative proposed.	**28.2.7.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**28.2.7.4**

28.2.8 Table – "Managed Services"		**Proposal Paragraph #**
Managed Services	Describe proposed ability, capabilities, and experience to manage Key system services for the State. What is included in this service?	**28.2.8.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**28.2.8.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**28.2.8.3**
Resources	Provide a detail schedule for staffing associated with Key systems. Schedule must include related labor charges, broken out by skill levels.	**28.2.8.4**

29.0 PBX EQUIPMENT

29.1 CURRENT ENVIRONMENT

The purpose of this section is to obtain quotations for the deployment of new PBX systems, adjuncts, parts and associated station equipment. These systems will be installed in various State owned and/or leased buildings throughout the State. The State does not anticipate and/or desire wholesale replacement of the current environment, but will entertain and give serious consideration to innovative proposals that demonstrates a reduction in cost associated with increased capabilities and advancement in technology.

29.2 SERVICE/SUPPORT REQUIREMENTS

The service features below are minimum requirements for the PBXs. Review each service feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

29.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Standards	The infrastructure materials and labor shall meet ANSI, EIA/TIA and BICSI standards. All applicable National Electrical Codes, Building Codes and jurisdictional requirements are to be met. All materials must be UL listed. Describe your compliance and abilities to provide this service.	**29.2.1.1**
Jumper and Cross Connect Work	The PBX Vendor will be responsible for running all cross connect jumpers and the installation of station equipment from the station jacks to the desk top. Describe your compliance and abilities to provide this service.	**29.2.1.2**
Right of Ownership	All data, materials, documentation and other products prepared or acquired by the Vendor shall belong exclusively to the State. The State shall also own and retain intellectual property rights covering technology developed as part of the services described herein and paid for by the State. Describe your compliance and abilities to provide this service.	**29.2.1.3**
Deployment of Systems	State agencies need the ability to deploy, in a timely manner, new PBX systems of various sizes, adjunct systems, parts and station equipment. Describe your compliance and abilities to provide this service.	**29.2.1.4**
Provision of New Systems	The Vendor must be able to provide fully operational new PBX systems to meet the needs of a diverse assortment of State agencies. Describe your compliance and abilities to provide this service.	**29.2.1.5**
Maintenance and MAC work	The Vendor must be able to fully support the new PBX's maintenance and MAC work. Describe your compliance and abilities to provide this service.	**29.2.1.6**
New Equipment	All equipment must be new and at the highest manufacturer's issue and revision levels agreed to by the State. Describe your compliance and abilities to provide this service.	**29.2.1.7**

29.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Software Releases	All software must be at the highest manufacturers release and revision levels agreed to by the State. Describe your compliance and abilities to provide this service.	**29.2.1.8**
Network Interfaces	The Vendor must provide, install, test and insure the proper operation of all required interfaces to the States private network, Ameritech Centrex, GTE Centranet, any inter-exchange carriers and the public switch networks. Describe your qualifications for complying with this requirement.	**29.2.1.9**
Consultation	The Vendor must help the various State agencies to analyze their telecommunications needs and configure and program the PBX systems and associated station/trunk equipment to fill those needs. Explain how you will accomplish this requirement.	**29.2.1.10**
Software Translations	The Vendor must provide all software translations on the PBX systems as required and/or requested by the State agencies during the installation and acceptance period at no additional cost to the State. Describe your compliance and abilities to provide this service.	**29.2.1.11**
Training	The Vendor must train, on site, all site personnel on the use and operation of their telephones and system features during or before the acceptance period at no additional cost to the State. The State will require training on technology updates. Describe what will be included to meet these training needs. Include additional costs, if any, for refresher training. Describe your compliance and abilities to provide this service.	**29.2.1.12**

29.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Turn-key Implementation	The State recognizes that each Vendor may approach PBX design and implementation in different ways. Therefore, the bid quotes for the cost models must include all equipment, hardware, software, programming, additional cabling if needed, training, etc. for the PBX to operate in conformance with the requirements of the cost models even if the specific items, features or labor required for the proper operation of the PBX system has not been individually addressed in the cost models. Explain how the Vendor will provide this type of "turn-key" implementation.	**29.2.1.13**
Installation	The Vendor must insure that the installation team is completely familiar with and understands the work plan and contract requirements prior to the installation of any PBX. Explain how that will be accomplished.	**29.2.1.14**
Technical Work Plan	The Vendor must work with the State to provide the State with a technical work plan for the entire project prior to the start of each installation. This plan must include a Gantt type display showing each event, task and decision point. All technical work plans must meet with the approval of the State agency that is purchasing the PBX. The work plan must provide for minimal disruption of existing telephone service. Provide a detailed over view of the events, task and decision points and describe how you will implement the new system with a minimum disruption of existing telephone service.	**29.2.1.15**

29.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Building Structure Modifications and Restoration	• The Vendor will maintain a clean work area free of debris and trash. • The Vendor is responsible for the repair of any damage caused to the facility as a result of the Vendor's activities. Restoration will be equal to or better than the condition of the facility prior to the project. • The Vendor is responsible for removing and replacing all ceiling tiles, duct covers, and power pole covers as required for the installation. • The Vendor will need prior approval from the State's project manager for any work that requires modification of the building structure or design. • Describe your compliance and abilities to provide this service.	**29.2.1.16**
Permits	The Vendor is responsible for obtaining all required permits prior to the start of each project. Describe the plans to accomplish this requirement.	**29.2.1.17**
Labor Equipment Requirements	The Vendor is responsible for providing all supervision, labor, tools test sets, equipment, hardware, cabling materials, transportation, hauling and hoisting and miscellaneous materials as part of any contract issued by the State. Describe your compliance and abilities to provide this service.	**29.2.1.18**
Standards	The Vendor and their representatives will follow and adhere to all OSHA and MIOSHA requirements and standards. Describe your compliance and abilities to provide this service.	**29.2.1.19**
Working Conditions	The Vendor will not compromise safe working techniques and/or environments during any portion of the work associated with any contracts issued by the State. Provide documentation to support this requirement.	**29.2.1.20**
New Materials Requirement	All materials are to be new and 100% free of defects. Describe your compliance and abilities to provide this service.	**29.2.1.21**

29.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Environmental Requirements	The Vendor is responsible for providing to the State project manager all space, environmental and electrical requirements for the switch room immediately after the receipt of a purchase order from the State for the project. Describe the plans to accomplish this requirement.	**29.2.1.22**
Connectivity	The Vendor is responsible for interfacing, connecting and testing existing ancillary telephone equipment such as paging systems, answering machines, auxiliary bells, elevator phones, etc. with their PBX. Describe the plans to accomplish this requirement.	**29.2.1.23**
Engineering and Design Costs	The Vendor is required to absorb all programming, engineering and design costs for any new PBX systems or adjuncts or additions/upgrades to existing PBX systems or adjuncts. Provide documentation to support this requirement.	**29.2.1.24**
Ordering Time Frames	It will be necessary to purchase additional parts and equipment to support existing PBX systems and adjuncts. Explain the process and time intervals for ordering additional equipment.	**29.2.1.25**
Engineering Costs	The Vendor is required to absorb all engineering and design costs for all upgrades or additions to existing PBX systems or adjuncts. Describe your compliance and abilities to provide this service.	**29.2.1.26**
Pricing	Provide a current price sheet including item pricing and installation for all new adjuncts, parts and features associated with new PBX systems. This pricing will be included in the contract and used to purchase equipment at the State's discretion. Please submit this pricing information electronically. Pricing information for ALL parts will be evaluated along with the Cost Models.	**29.2.1.27**
Asset Management	As the need for additional telephone service increases on the State owned PBXs, it will be necessary to obtain additional telephone equipment. These needs may include such items as circuit packs, carriers, adjuncts and EPNs. Explain how the Vendor will handle adding to the existing State owned equipment. How does the Vendor propose to track their assets in a lease/purchase or lease arrangement.	**29.2.1.28**

29.2.1 Table – "Service / Support [Functional] Requirements"		
Service Feature	**Description**	**Proposal Paragraph #**
Engineering Requirement	Some equipment additions will require engineering. Explain how the Vendor will handle the required engineering. Explain the qualifications of those who will be involved in the engineering process.	**29.2.1.29**
Ownership of Equipment	In the event that the Vendor gains ownership of the new equipment, propose options for the transfer of ownership of the equipment or other alternatives at the end or termination of the contract.	**29.2.1.30**
Order Time Frames	The State is in constant need of additional telephone equipment. This equipment must be put into service in a timely manner. What is the expected time from ordering the equipment to deployment of the equipment?	**29.2.1.31**
Ordering Process	It will be necessary to purchase new PBX systems and adjuncts. Please explain the process for ordering additional equipment.	**29.2.1.32**
Engineering Costs	The Vendor is required to absorb all engineering and design costs for new PBX systems or adjuncts. Explain the process. Explain the process and describe your compliance and abilities to provide this service.	**29.2.1.33**
Needs Assessments	As the need for additional telephone service increases, it will be necessary to obtain additional PBXs and adjunct equipment. The Vendor will be expected to work with the various State agencies that will be using the new equipment to determine their needs and service requirements. Please explain how the Vendor will handle the needs assessment of the various State agencies. How does the Vendor propose to track their assets?	**29.2.1.34**

29.3 SYSTEM FEATURE REQUIREMENTS

The system features below are minimum requirements for the PBXs. Review each feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
AAR/ARS Partitioning	The AAR/ARS services shall have a minimum of 8 separate group partitions. Each AAR/ARS partition shall have its own separate routing tables. Each of the AAR/ARS partitions shall be accessible by any of the tenant partitions. Provide compliance documentation.	**29.3.1.1**
Abandoned Call Search	The system must be able to check the queue for abandoned calls and remove all abandoned calls prior to ringing the ACD split agent or hunt group agent.	**29.3.1.2**
Account Codes	The system must be able to allow for the optional use of account codes. The system must be able to allow account codes, which are 15 digits in length. The system must be able to allow the use of forced account codes on a system wide basis. The system must be able to allow the use of forced account codes on a per station basis. The system must be able to allow the use of forced account codes when using specified trunks. The system must be able to allow the use of forced account codes when dialing specified toll calls. The system must be able to allow access to the attendant without the use of account codes. The system must be able to provide, in the billing record, the account code used for a given call. The system must be able to allow the use of account codes by entering the feature access code followed by the account code.	**29.3.1.3**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Administered Call Connection	The system must be able to provide an automatic call connection between two local access endpoints. The system must be able to provide an automatic call connection between two remote access end points. The system must be able to provide an automatic call connection between a local and remote access end point. The system must be able to provide an automatic call connection between two voice endpoints. The system must be able to provide an automatic call connection between two data end points. The system must be able to provide a permanent automatic call connection, which is established immediately. The system must be able to provide a scheduled automatic call connection, which is established at the scheduled time. The system must be able to continuously attempt to restore the call connection at specified intervals in the event of a connection failure. The system must be able to provide an adjustable retry interval of 1 - 60 minutes for re-establishing automatic call connections.	**29.3.1.4**
Administrable Language Displays	The system must be able to provide station display information and attendant console display information in English. The system must be able to provide station display information and attendant console display information in French. The system must be able to provide station display information and attendant console display information in Spanish. The system must be able to provide station display information and attendant console display information in Italian. The system must be able to allow the language selection on a per station basis. The system must be able to allow the language selection on a per attendant console basis.	**29.3.1.5**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Answer Detection	The system must be able to determine that an outgoing call has been answered by analyzing the voice patterns of the call. The system must be able to ignore SITs when analyzing the voice patterns of the call. The system must be able to determine that an outgoing call has been answered by recognizing network answer supervision. The system must be able to mark a call as " answered" after the call has exceeded a set time duration as defined by the trunk group.	**29.3.1.6**
Attendant - Auto Manual Splitting	System must be able to allow the attendant to announce a call or consult privately with the called party without being heard by the other party on the call. This feature must be activated automatically when the attendant presses the Start button, or a Trunk Group Select button. The system must be able to reestablished the connection when the attendant presses the Cancel, Split or Release buttons.	**29.3.1.7**
Attendant Control of Trunk Group Access	The system must be able to allow the attendant to prevent voice terminal users from directly accessing a controlled trunk group when this feature is activated. The system must be able to allow the attendant to control the access to 10 trunk groups. The system must be able to allow the attendant to activate/deactivate this feature on a per trunk group basis. The system must be able to route all calls for the restricted trunk group to the attendant when this feature is activated. The system must be able to allow for the completion of the call if the attendant allows the call to access the controlled trunk group.	**29.3.1.8**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Attendant Direct Trunk Group Selection	The system must be able to allow the attendant direct access to an outgoing trunk group by pressing the console button assigned to that trunk group. The system must be able to support a minimum of 10 direct trunk group access buttons.	**29.3.1.9**
Attendant Intrusion	The system must be able to allow the attendant to enter into an existing call. The system must be able to restrict the attendant from entering into a call with data protection.	**29.3.1.10**
Attendant Override	The system must be able to allow the attendant to override any call forwarding features of a station when calling that station.	**29.3.1.11**
Attendant Recall	The system must be able to allow voice terminal users on a two-party call to recall the attendant for assistance.	**29.3.1.12**
Attendant Release Loop Operation	The system must be able to allow the attendant to release the console from any call extended by the console even if the call has not been answered.	**29.3.1.13**
Attendant Serial Calling	The system must be able to allow an incoming call to return to the attendant after the called station hangs up. The system must be able to allow the attendant to activate serial calling for any incoming call. The system must be able to allow the attendant to de-activate serial calling on an incoming call. The system must be able to allow any serial call to be re-extended after it returns to the attendant. The system must be able to allow serial calling to remain in effect for an outside call until the outside caller hangs up or the attendant de-activates the serial calling feature for that particular call.	**29.3.1.14**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Authorization Codes	The system must be able to allow for a minimum of 5,000 authorization codes. The system must be expandable to allow for 90,000 authorization codes. The system must be able to allow authorization codes of 7 digits in length. The system must be able to allow authorization codes to override the facilities restriction level assigned to the originating station or trunk. The system must be able to allow the assignment of any facilities restriction level to any authorization code. The system must be able to allow the assignment of any class of service to any authorization code. The system must be able to allow the billing record to reflect the authorization code used for a given call.	**29.3.1.15**
Automated Attendant	The system must be able to automatically answer incoming calls. The system must be able to allow the assignment of the automated attendant feature on a per trunk group basis. The system must be able to provide voice prompting requesting the caller to enter the requested extension using their touch tone keypad. The system must be able to recognize the touch tone digits entered by the caller and connect the caller to the requested extension.	**29.3.1.16**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Automatic Alternate Routing (AAR)	The system must be able to route calls between PBXs over private network facilities. The system must be able to provide 250 different AAR patterns. The system must be able to have 400 different digit conversion patterns. The system must be able to delete 1 - 28 digits from a dialed digit string. The system must be able to insert 1-18 digits into a dialed digit string. The system must be able to insert 1,200 different digit strings. The system must be able to allow access the AAR feature by using a single digit feature access code. The system must be able to provide or suppress a second dial tone after the AAR access code is dialed. The system must be able to observe all calling restrictions applied to the originating station for all AAR calls. The system must be able to modify or replace any or all of the digits in a dialed string prior to sending the digit string to the network.	**29.3.1.17**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Automatic Callback	The system shall provide an automatic callback feature. Access to the automatic callback feature shall be allowed on a per extension basis. The automatic callback feature shall be activated or deactivated on a given call by use of a feature button or a feature access code no longer than three digits in length. The system shall allow for a minimum of 200 automatic callback feature activations at any given time. The activation of the automatic callback shall be canceled if the called party is not available within 30 minutes. The activation of the automatic callback shall be canceled if the calling party does not answer the callback call within the administered time level.	**29.3.1.18**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Automatic Call Distribution (ACD)	The system must be able to allow a station or individual attendant extension to be an ACD agent. The system must be able to allow the assignment of a split supervisor for each split. The system must be able to allow the split supervisor to listen-in on agent calls via the supervisor's station. The system must be able to allow the split supervisor to monitor the split queue status via queue warning buttons. The system must be able to allow the split supervisor to assist agents on ACD calls. The system must be able to allow an agent to staff-in to an ACD split by using a feature code. The system must be able to allow an agent to have concurrent logins to multiple ACD splits. The system must be able to allow an agent to staff-out of an ACD split by using a feature code. The system must be able to allow calls presented to ACD agents to be answered automatically. The system must be able to allow calls presented to ACD agents to be answered manually. The system must be able to allow agents to manually removing themselves from receiving calls while remaining in the ACD split. The system must be able to, on a per ACD basis, automatically redirect a call from one ACD agent position to another if an ACD agent position does not answer the call after a predetermined number of rings.	**29.3.1.19**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Automatic Call Distribution (ACD) Continued	The system must be able to allow the number of rings before a call is automatically redirected to another ACD position to be adjustable from 1 to 20 rings on a per ACD basis. The system must be able to automatically remove from service any ACD agent position that fails to answer a call after a predetermined number of rings. The system must be able to notify the ACD supervisor of any ACD agents that have been automatically removed from service. System must be able to allow an agent to automatically return to active call reception after completing the previous call. System must be able to allow an agent to manually return to active call reception after completing the previous call. System must be able to allow an agent to request assistance from the ACD split supervisor while on an active ACD call by pressing a feature button. The system must be able to allow the distribution of ACD calls by using the first idle agent method. The system must be able to allow the distribution of ACD calls by using the most idle agent method. The system must be able to allow the method of ACD call distribution to be assignable for each ACD split. The system must be able to allow call queues for each ACD split. The system must be able to play a recorded announcement for each ACD split prior to sending a call to that split.	

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Automatic Call Distribution (ACD) Continued	The system must be able to allow all ACDs to share the same announcements. The system must be able to allow unique announcements for all ACDs. The system must be able to allow all ACDs to have multiple announcements. The system must be able to allow the time duration that a call remains in queue prior to receiving the first ACD announcement to be adjustable from 0 - 60 seconds. The system must be able to allow calls to intra-flow to another split under don't answer conditions. The system must be able to allow calls to intra-flow to another split under busy conditions. The system must be able to allow calls to intra-flow to another split under "call forward all" conditions. The system must be able to allow calls to inter-flow to another split on another system under "call forward all" conditions The system must be able to provide the caller with ring back from the time that the call enters the ACD queue until the first ACD announcement is played. The system must be able to provide the caller with silence after the first ACD announcement. The system must be able to provide the caller with music after the first ACD announcement.	
Automatic Hold	The system must be able to allow multi-line terminals to automatically place an existing call on hold by answering another line. The system must be able to allow the attendant consoles to automatically place an existing call on hold by answering another line.	**29.3.1.20**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Automatic Route Selection	The system must be able to route calls to CO trunks, WATS trunks, FX trunks, ISDN-PRI trunks and tie trunks. The system must be able to analyze digits and route calls for 7 digit numbers, 10 digit numbers, IDDD, 0, 0+, 01+, x11 and IXC numbers. The system must be able to allow a single digit access code for the automatic route selection feature. The system must be able to allow IXC access including 10xxx, 101xxxx, 950-0xxx and nxx-xxxx. The system must be able to convert any or all digits in a dialed string to a different number string as defined in a digit conversion table. The system must be able to provide 400 different digit conversion patterns. The system must be able to allow for call routing according to the time of day. The system must be able to allow for call routing to successive trunks. The system must be able to allow for a minimum of 250 route patterns. The system must be able to select route patterns according to a digit analysis. The system must be able to delete 1 - 28 digits in a dialed string. The system must be able to delete or insert an NPA. The system must be able to insert 1 - 18 digits in a dialed string. The system must be able to insert 1,200 different digit strings. The system must be able to allow for a minimum of 2,000 entries in the digit analysis tables.	**29.3.1.21**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Automatic Set Relocation	The system must be able to allow the user of a digital telephone to transport their telephone and software from one system port to another. The system must be able to allow the user to deactivate their telephone software by entering a feature code and a password. The system must be able to allow a deactivated port to remain dormant until reactivated. The system must be able to allow the user to plug their telephone into a dormant port and reactivate their telephone software by entering a feature code and a password.	**29.3.1.22**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Automatic Trunk Monitoring	The system must be able to identify trunks with "short call" duration's. The system must be able to identify trunks with "long call" duration's. The system must be able to allow for the adjustment of the "short call" timing parameter from 0 - 120 seconds minimum. The system must be able to allow for the adjustment of the "long call" timing parameter from 0 - 10 hours minimum. The system must be able to allow for the adjustment of 0 - 30 hits minimum for the reporting threshold counter for long and short call duration's. The system must be able to report any trunks with long or short call duration's, which exceed the reporting threshold, to the attendant console. The system must be able to report any trunks with long or short call duration's, which exceed the reporting threshold, to a voice terminal with a display. The system must be able to report any trunks with long or short call duration's, which exceed the reporting threshold, to a maintenance terminal. The system must be able to report the trunk group number, trunk group member and the type of duration for trunks with long or short call duration's. The system must be able to allow the manual activation or deactivation of the automatic trunk monitoring feature.	**29.3.1.23**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Appearances	The system must be able to allow any existing station number to appear on any multi-line voice terminal. The system must be able to allow any existing station number to appear on 25 different multi-line voice terminals. The system must be able to allow a multi-line voice terminal to have 10 appearances of the same station number. The system must be able to allow a multi-line voice terminal to have 50 different station numbers appear on it. The system must be able to immediately cease the ring of all appearances of a station when a call for that station has been answered. The system must be able to allow 25 multi-line voice terminals to have identical button configurations of a given multi-line voice terminal. The system must be able to allow the option of ringing for any call appearance of a station on a multi-line voice terminal. The system must be able to allow the call appearances of a station to have the same features and functionality of the station.	**29.3.1.24**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Real Time ACD Split	The system must be able to allow for the access of real time ACD split reports through a PC. The system must be able to report on 99 ACD splits. The system must be able to display real time ACD split information on a single ACD split. The system must be able to display real time ACD split information on selectable multiple ACD splits. The system must be able to display real time ACD split information on all ACD splits. Real time ACD split reports must contain the ACD split number. Real time ACD split reports must contain the number of calls in queue. Real time ACD split reports must contain the time duration in minutes and seconds of the oldest call in queue. Real time ACD split reports must contain the number of staffed ACD agents. Real time ACD split reports must contain the number of available ACD agents. Real time ACD split reports must contain the number of ACD agents active on calls. Real time ACD split reports must contain the name of each staffed-in ACD agent. Real time ACD split reports must contain the telephone number of each staffed-in ACD agent. Real time ACD split reports must contain the status of each staffed-in ACD agent. Real time ACD split reports must contain the staffed-in time of each staffed-in ACD agent. Real time ACD split reports must contain number of ACD calls handled by each staffed-in ACD agent.	**29.3.1.25**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Real Time VDN	The system must be able to allow for the access of real time VDN reports through a PC. The system must be able to allow real time VDN status reports for 99 VDNs simultaneously. Real time VDN status reports must contain the VDN name. Real time VDN status reports must contain the number of calls in queue. Real time VDN status reports must contain the duration in minutes and seconds of the oldest call in queue. Real time VDN status reports must contain the average answering speed in minutes and seconds. Real time VDN status reports must contain the number of ACD calls. Real time VDN status reports must contain the number of calls abandoned. Real time VDN status reports must contain the average abandoned time in minutes and seconds. Real time VDN status reports must contain the average talk time in minutes and seconds.	**29.3.1.26**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Hourly Historic ACD Agent	The system must allow access to historical ACD reports through a PC. Hourly historic ACD agent reports must provide hourly information each hour for the previous 24 hours. Hourly historic ACD agent reports must be able to provide information on 200 agents. Hourly historic ACD agent reports must contain the ACD agent's name. Hourly historic ACD agent reports must contain the measured hour for each hour for the previous 24 hours. Hourly historic ACD agent reports must contain the number of ACD calls handled by the ACD agent for each hour for the previous 24 hours. Hourly historic ACD agent reports must contain the average talk time for the ACD agent in minutes and seconds for each hour for the previous 24 hours. Hourly historic ACD agent reports must contain the total time that the ACD agent was available in minutes and seconds for each hour for the previous 24 hours. Hourly historic ACD agent reports must contain the total time in minutes and seconds that the ACD agent was staffed-in for each hour for the previous 24 hours.	**29.3.1.27**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Daily Historic ACD Agent	The system must allow access to the daily historic ACD agent reports through a PC. Daily historic ACD agent reports must be able to report on 200 agents. The system must be able to provide historical ACD agent reports by the day. Daily historic ACD agent reports must provide daily information for the current day and the previous 6 day period. Daily historic ACD agent reports must contain the ACD agent's name. Daily historic ACD agent reports must contain the date of the measured day. Daily historic ACD agent reports must contain the number of ACD calls handled by the ACD agent for that day. Daily historic ACD agent reports must contain the average talk time for the ACD agent in minutes and seconds for that day. Daily historic ACD agent reports must contain the total time that the ACD agent was available in minutes and seconds for that day. Daily historic ACD agent reports must contain the total time in minutes and seconds that the ACD agent was staffed-in for that day.	**29.3.1.28**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Hourly Historic ACD Split	The system must allow access to hourly historical reports through a PC. The system must be able to provide hourly historical ACD reports on 99 ACD splits. Hourly historic ACD split reports must provide hourly information for each hour for the previous 24hour period. Hourly historic ACD split reports must contain the ACD split's name. Hourly historic ACD split reports must contain the measured hour for each hour for the previous 24 hours. Hourly historic ACD split reports must contain the number of ACD calls handled by the ACD split for each hour for the previous 24 hours. Hourly historic ACD split reports must contain the average answer speed by the ACD split for each hour for the previous 24 hours. Hourly historic ACD split reports must contain the number of abandoned calls for each hour for the previous 24 hours. Hourly historic ACD split reports must contain the average abandoned time in minutes and seconds for each hour for the previous 24 hours. Hourly historic ACD split reports must contain the average talk time for the ACD split in minutes and second for each hour for the previous 24 hours.	**29.3.1.29**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Daily Historic ACD Split	The system must be able to provide historical ACD split reports by the day. The system must be able to allow access to the daily historic ACD reports through a PC. Daily historic ACD split reports must be able to report on 99 ACD splits. Daily historic ACD split reports must provide daily information for the current day and the previous 6day period. Daily historic ACD split reports must contain the ACD split's name. Daily historic ACD split reports must contain the date of the measured day. Daily historic ACD split reports must contain the number of ACD calls handled by the ACD split for that day. Daily historic ACD split reports must contain the average answer speed by the ACD split for that day. Daily historic ACD split reports must contain the number of abandoned calls for that day. Daily historic ACD split reports must contain the average abandoned time in minutes and seconds for that day. Daily historic ACD split reports must contain the average talk time for the ACD split in minutes and seconds during that day.	**29.3.1.30**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Hourly Historic VDN	The system must be able to allow access to the hourly historic VDN reports through a PC. The system must be able to report on 99 VDNs. Hourly historic VDN reports must provide hourly information each hour for the previous 24hour period. Hourly historic VDN reports must contain the VDN's name. Hourly historic VDN reports must contain the measured hour for each hour for the previous 24 hours. Hourly historic VDN reports must contain the number of calls handled by the VDN for each hour for the previous 24 hours. Hourly historic VDN reports must contain the average answer speed of the ACD split for each hour for the previous 24 hours. Hourly historic VDN reports must contain the number of abandoned calls for each hour for the previous 24 hours. Hourly historic VDN reports must contain the average abandoned time in minutes and seconds for each hour for the previous 24 hours. Hourly historic VDN reports must contain the average talk time for the ACD split in minutes and seconds for each hour for the previous 24 hours.	**29.3.1.31**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Daily Historic VDN	The system must be able to allow access to the daily historic VDN reports through a PC. The system must be able to provide historic VDN reports by the day. The system must be able to report on 99 VDNs. Daily historic VDN reports must provide daily information for the previous 6 day period. Daily historic VDN reports must contain the VDN's name. Daily historic VDN reports must contain the date of the measured day. Daily historic VDN reports must contain the number of ACD calls handled by the ACD split for that day. Daily historic VDN reports must contain the average answer speed by the ACD split for that day. Daily historic VDN reports must contain the number of abandoned calls for that day. Daily historic VDN reports must contain the average abandoned time in minutes and seconds for that day. Daily historic VDN reports must contain the average talk time for the ACD split in minutes and seconds during that day.	**29.3.1.32**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Hourly Historic Trunk Group	Hourly historic trunk group reports must provide hourly information each hour for the previous 24hour period. The system must be able to allow access to the hourly historic trunk group reports through a PC. The system must be able to report on 30 trunk groups. Hourly historic trunk group reports must contain the trunk group's name. Hourly historic trunk group reports must contain the measured hour for each hour for the previous 24 hours. Hourly historic trunk group reports must contain the number of incoming calls handled by the trunk group for each hour for the previous 24 hours. Hourly historic trunk group reports must contain the average incoming holding time in minutes and seconds for the trunk group for each hour for the previous 24 hours. Hourly historic trunk group reports must contain the total incoming holding time in CCSs for the trunk group for each hour for the previous 24 hours. Hourly historic trunk group reports must contain the number of abandoned calls for the trunk group for each hour for the previous 24 hours. Hourly historic trunk group reports must contain the number of outgoing calls handled by the trunk group for each hour for the previous 24 hours. Hourly historic trunk group reports must contain the average outgoing holding time in minutes and seconds for the trunk group for each hour for the previous 24 hours. Hourly historic trunk group reports must contain the total outgoing holding time in CCSs for the trunk group for each hour for the previous 24 hours. Hourly historic trunk group reports must contain the number of completed calls for the trunk group for each hour for the previous 24 hours.	**29.3.1.33**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Daily Historic Trunk Group	The system must be able to allow access to daily historic trunk group reports through a PC. The system must be able to report on 30 trunk groups. The system must provide daily historic trunk group reports. Daily historic trunk group reports must contain the previous days trunk group information. Daily historic trunk group reports must contain the trunk group's name. Daily historic trunk group reports must contain the date of the measured day. Daily historic trunk group reports must contain the number of incoming calls handled by the trunk group for that day. Daily historic trunk group reports must contain the average incoming call holding time in minutes and seconds for the trunk group for that day. Daily historic trunk group reports must contain the number of abandoned incoming calls for that day. Daily historic trunk group reports must contain the number of outgoing calls handled by the trunk group for that day. Daily historic trunk group reports must contain the average outgoing call holding time in minutes and seconds for the trunk group for that day. Daily historic trunk group reports must contain the total outgoing call holding time in CCSs for the trunk group for that day. Daily historic trunk group reports must contain the number of completed calls for the trunk group for that day.	**29.3.1.34**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Hourly Historic Attendant Group	Hourly historic attendant group reports must provide hourly information each hour for the previous 24 hour period. The system must be able to allow access to the hourly historic attendant group reports through a PC. The hourly historic attendant group report must provide the total number of calls answered during the peak hour. The hourly historic attendant group report must provide the hour, which the peak occurred. The hourly historic attendant group report must provide the total number of calls abandoned during the peak hour. The hourly historic attendant group report must provide the total number of calls queued for the attendant during the peak hour. The hourly historic attendant group report must provide the total time duration in CCS that the attendants were available but idle during the peak hour. The hourly historic attendant group report must provide the total time duration in CCS that the attendants were active on calls during the peak hour. The hourly historic attendant group report must provide the average abandoned time duration in CCS during the peak hour. The hourly historic attendant group report must provide the average speed of answer time duration in seconds during the peak hour. The hourly historic attendant group report must provide the number of calls placed on hold during the peak hour. The hourly historic attendant group report must provide the total time duration in seconds of calls on hold during the peak hour.	**29.3.1.35**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Management Information-Hourly Historic Attendant Position	Hourly historic attendant position reports must provide hourly information each hour for the previous 24hour period. The system must be able to allow access to the hourly historic attendant position reports through a PC. The hourly historic attendant position report must provide the total number of calls answered during the peak hour for each attendant position. The hourly historic attendant position report must provide the total time duration in CCS that the attendants were active on calls during the peak hour for each attendant position. The hourly historic attendant position report must provide the total time duration in CCS that the attendants were available but idle during the peak hour for each attendant position. The hourly historic attendant position report must provide the total time duration in seconds that calls were on hold during the peak hour. The hourly historic attendant position report must provide the total number of calls answered during the last hour for each attendant position. The hourly historic attendant position report must provide the total time duration in CCS that the attendants were active on calls during the last hour for each attendant position. The hourly historic attendant position report must provide the total time duration in CCS that the attendants were available but idle during the last hour for each attendant position. The hourly historic attendant position report must provide the hold time duration, in seconds of calls on hold, by each attendant position during the last hour.	**29.3.1.36**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Coverage	The system must be able to provide calling party information and called party information to the recipient of a call, which has been redirected by the call coverage feature. The system must be able to assign the call coverage feature on a per extension basis. The destination voice terminals for redirected calls must be assignable on a per extension basis. The system must be able to allow a call to a voice terminal to be redirected to a minimum of 6 successive voice terminals. The number of rings before a redirected call is sent to its next successive voice terminal must be adjustable for 0 - 20 rings and assignable on a per extension basis. The criteria for redirecting a call must be assignable on a per extension basis. The system must be able to allow all calls placed to a busy extension to be automatically redirected. The system must be able to allow the automatic redirection of all calls placed to an extension, which does not answer after a predetermined numbers of rings. The number of rings before a call is redirected from the called extension must be selectable on an extension basis. The system must be able to allow the redirection of all calls to an extension by the activation of the redirection feature for the extension. The system must be able to redirect a call to a telephone on the PSTN. The system must be able to retain control of a call redirected to a telephone on the PSTN and redirect the call to the next point of coverage in the event that the call is not answered. The system must be able to redirect a call based on the time of day.	**29.3.1.37**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Detail Recording	The system must be able to provide a call record for any call placed over a trunk. The generation of a call record must be an option for each trunk group. The call record must contain the call completion time in hours and minutes. The call record must contain the call duration in hours, minutes and tenths of minutes. The call record must contain the dialed trunk access code. The call record must contain the used trunk access code. The call record must contain the dialed number. The call record must contain the calling numbering including incoming ISDN calls. The call record must contain the dialed account code. The call record must contain the dialed authorization code. The call record must contain the IXC code.	**29.3.1.38**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Forwarding All Calls	Access to call forwarding all must be assignable on a per extension basis. The system must be able to allow any extension to forward its calls to any other number on the system. The system must be able to allow any extension to forward its calls to an attendant group. The system must be able to allow any extension to forward its calls to any VDN on the system. The system must be able to allow any extension to forward its calls to any number off the system including inter-LATA long distance, as allowed by the extensions Facilities Restriction Level. The system must be able to allow any extension to activate or deactivate call forwarding on a station by entering the feature access code on the station or by pressing a feature button on the station. The system must be able to allow the attendant to activate or deactivate call forwarding all calls on an extension by entering the feature access code or by pressing a feature button on the attendant console.	**29.3.1.39**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Forward Busy/Don't Answer	Access to call forwarding busy/don't answer must be assignable on a per extension basis. The system must be able to allow any extension to forward its calls, if it is busy or does not answer, to any other number on the system. The number of rings before a call is forwarded on a no answer condition must be adjustable from 0 - 20 rings and assignable on an extension basis. The system must be able to allow any extension to use call forward busy/don't answer to send its calls to an attendant group. The system must be able to allow any extension to use call forward busy/don't answer to send its calls to any VDN on the system. The system must be able to allow any extension to use call forward busy/don't answer to send its calls to any number off the system including inter-lata long distance. The system must be able to allow any extension to activate or deactivate call forwarding busy/don't answer on a station by entering the feature access code on the station or by pressing a feature button on the station. The system must be able to allow the attendant to activate or deactivate call forwarding busy/don't answer on an extension by entering the feature access code or by pressing a feature button on the attendant console.	**29.3.1.40**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Park	The system must be able to allow any extension to park a call by dialing the feature access code or by pressing the feature access button. The system must be able to allow any extension to retrieve a parked call from any extension by dialing the feature access code plus the extension number of the parked call or by pressing the feature access button and dialing the extension number of the parked call. The system must be able to allow the attendant console to park a call on any extension by dialing the feature access code and the extension number or by pressing the feature access button and dialing the extension number. The system must be able to allow the attendant consoles to have a common group of 80 shared numbers exclusively used for page park. The system must be able to allow for 700 concurrently parked calls. The system must be able to allow the use of call park on a three party conference call. The system must be able to allow any parked call, which has not been answered during a system wide defined interval of time, to re-ring the extension number or attendant console that parked the call.	**29.3.1.41**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Pickup	The system must be able to allow for 800 call pickup groups. The system must be able to allow for a call pickup group to contain 50 extensions. The system must be able to allow for 2400 call pickup group members system wide. The system must be able to allow any member of a call pickup group to answer any incoming call to any extension in that group by dialing the feature access code on their station or by pressing the feature access button on their station. The system must be able to allow the call pickup answering point to act as a bridged appearance of the called extension. The system must be able to allow the called extension to bridge on to the call when it has been answered using the call pickup feature.	**29.3.1.42**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Vectoring	The system must be able to process calls sent to vector directory numbers (VDN) according to a programmed set of call vectoring instructions. The system must allow for 256 call vectoring programs. The system must allow for 30 instruction steps per program. The system must be able to retain control of the call until the call is successfully terminated or disconnected. The system must be able to provide an "announcement" command that will route a call to a recorded announcement and then return the call to the next programmed step once the announcement is finished. The system must immediately transfer a call from an announcement to an available agent if the call was waiting for an available agent and an agent becomes available. If a call requires an announcement and the announcement is in use, the system must hold the call in queue until the announcement is finished. The system must be able to provide a "busy" command which returns a busy signal to the call. The system must be able to provide a "check split" command which will send a call to an ACD split queue unconditionally. The system must be able to provide a "check split" command which will send a call to an ACD split queue if the number of available agents, as programmed in the instruction step, is met. The system must be able to provide a "check split" command which will send a call to an ACD split queue if the number of staffed agents, as programmed in the instruction step, is met.	**29.3.1.43**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Vectoring Continued	The system must be able to provide a "check split" command which will send a call to an ACD split queue if the number of queued calls at a given priority level, as programmed in the instruction step, is not exceeded. The system must be able to provide a "check split" command which will send a call to an ACD split queue if the duration of the oldest call in queue, as programmed in the instruction step, is not exceeded. The system must be able to provide a "check split" command which will send a call to an ACD split queue if the average answer time, as programmed in the instruction step, is not exceeded. The system must be able to provide a "digit collection" command which will collect 15 touch-tone digits. The system must be able to provide a "voice response unit" command which will send the call to a VRU. The system must be able to provide a "disconnect" command which will disconnect the call. The disconnect command must allow the option of playing an announcement prior to disconnecting the call. The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command unconditionally. The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command if the number of idle agents, as specified in the command, is met.	

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Vectoring Continued	The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command if the number of staffed agents, as specified in the command, is met. The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command if the number of calls at a given priority level, as specified in the command, is met. The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command if the duration of the oldest call in queue, as specified by the command, is met. The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command if the time of day, start time and end time, as specified in the command, is met. The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command if the rolling average speed of answer time, as specified in the command, is met. The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command if the expected wait time, as specified in the command, is met. The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command if the number of digits collected, as specified in the command, is met. The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command if the number of calls active in the VDN, as specified in the command, is met.	

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Vectoring Continued	The system must be able to provide a "GO TO step" command which will move the call to the program step specified by the command if the ANI of the call, as specified in the command, is met. The system must be able to provide a "voice Messaging" command which will connect the call to a voice Messaging unit. The system must be able to provide a "queue to main split" command which will move the call to another ACD split and assign a priority level to the call, as specified in the command, if all of the agents in the ACD are busy. The system must be able to concurrently queue a call to three ACD splits. The system must be able to provide a "route to number" command which will route the call to the digit string specified in the command including 10 digit external calls. The system must be able to provide a "route to digits" command which will route the call according to the digits received from the digit collection command. The system must be able to provide a "stop" command which will stop the call from processing any further program steps. The system must be able to provide a "wait time" command which will determine the length of time that a call will remain in the split queue as specified by the command. The system must be able to provide a choice of ring back, silence, music on hold or an alternative music source for each ACD queue. The system must be able to assign four priority levels for every call in queue. The system must be able to change the priority level for every call in queue.	

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Call Vectoring Continued	The system must be able to route calls according to received ANI. The system must be able to route calls according to received CINFO. The system must be able to route calls according to received II-digits. The system must be able to route calls according to a holiday schedule table. The holiday schedule table must be able to accept a minimum of 15 different dates or date ranges. The system must be able to provide 10 different holiday schedule tables. The system must be able to route calls to an agent based on the skills of that agent. The system must be able to route calls to multiple call centers based on the call volume of the call centers. The system must be able to route calls to call centers on other PBXs. The system must be able to route calls to multiple call centers on multiple PBXs based on the call volume of the call centers on the other PBXs.	
Centralized Attendant Service	The system must be able to operate as a main PBX in a centralized attendant service arrangement. The system must be able to operate as a branch PBX in a centralized attendant service arrangement.	**29.3.1.44**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Class of Service	The system must be able to provide 90 Classes of Service. The system must be able to assign a Class of Service to individual attendant consoles. The system must be able to assign a Class of Service to a group of attendant consoles. The system must be able to assign a Class of Service to individual authorization codes. The system must be able to assign a Class of Service to individual ACD splits. The system must be able to assign a Class of Service to individual loudspeaker paging zones. The system must be able to assign a Class of Service to individual remote access barrier codes. The system must be able to assign a Class of Service to individual terminating extension groups. The system must be able to assign a Class of Service to individual trunk groups. The system must be able to assign a Class of Service to individual UCD groups. The system must be able to assign a Class of Service to individual voice terminals. The Class of Service must be able to restrict an extension from access the public network. The Class of Service must be able to restrict an extension from originating a call. The Class of Service must be able to restrict an extension from accessing certain toll areas. The Class of Service must be able to restrict an extension from accessing any toll areas. The Class of Service must be able to restrict an extension from dialing certain digit strings as defined by the system.	**29.3.1.45**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Class of Service Continued	The Class of Service must be able to allow an extension to dial specified digit strings for the public network even if the extension is restricted from accessing the public network. The Class of Service must be able to restrict an extension from receiving any calls from the public network. The Class of Service must be able to restrict an extension from receiving any calls except calls from an attendant position. The Class of Service must be able to restrict an extension from receiving any calls. The Class of Service must be able to require the use of forced account codes on a per extension basis. The Class of Service must be able to assign an extension to a tenant group. The Class of Service must be able to assign service observing to an extension. The Class of Service must be able to assign queuing priorities to an extension. The Class of Service must be able to assign facility test functions to an extension. The Class of Service must be able to assign a facility restriction level to a trunk group. The Class of Service must be able to allow or restrict calls to any or all other classes of services. The Class of Service must be able to prohibit the use of authorization codes for over riding the restriction on a station.	

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Conference Calling	The system must be able to allow a 6 party conference call originated by the attendant. The system must be able to allow a 6 party conference call originated by multi-line terminal. The system must be able to allow 5 outside callers on an attendant originated or multi-line terminal originated conference call. The system must be able to allow a three party conference call originated by a single line terminal. The system must be able to allow 2 outside callers on a conference call originated by a single line terminal. The system must be able to allow 200 simultaneous 6 party conference calls. The system must be able to allow 400 simultaneous 3 party conference calls.	**29.3.1.46**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Controlled Restriction	The system must be able to allow the attendant to apply restrictions to any extension by accessing the restriction feature and dialing the extension number. The system must be able to allow the attendant to apply restrictions to any class of service by accessing the restriction feature and dialing the class of service number. The system must be able to allow the attendant to restrict any extension from accessing the public network. The system must be able to allow the attendant to restrict any class of service from accessing the public network. The system must be able to allow the attendant to restrict any extension from receiving any calls. The system must be able to allow the attendant to restrict any class of service from receiving any calls. The system must be able to allow the attendant to restrict any extension from receiving or placing station to station calls. The system must be able to allow the attendant to restrict any class of service from receiving or placing station to station calls. The system must be able to allow a designated station to apply restrictions to any extension by accessing the restriction feature and dialing the extension or class of service number. The system must be able to allow a designated station to apply restrictions to any class of service by accessing the restriction feature and dialing the extension or class of service number. The system must be able to allow a designated station to restrict any extension from accessing the public network.	**29.3.1.47**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Controlled Restriction Continued	The system must be able to allow a designated station to restrict any class of service from accessing the public network. The system must be able to allow a designated station to restrict any extension from receiving any calls. The system must be able to allow a designated station to restrict any class of service from receiving any calls. The system must be able to allow a designated station to restrict any extension from receiving or placing station to station calls. The system must be able to allow a designated station to restrict any class of service from receiving or placing station to station calls. The system must be able to allow a designated station to restrict any extension from receiving or placing any calls. The system must be able to allow a designated station to restrict any class of service from receiving or placing any calls.	
Crisis Alert	Whenever a telephone on the system places a call to 911, the system must send calling the calling telephone's number and display information to the attendant console. Whenever emergency call information is sent to the attendant console, the system must busy out the console so that no new calls can be accepted. Whenever a telephone on the system places a call to 911, the system must activate a visual alarm. Whenever a telephone on the system places a call to 911, the system must activate an audible indicator. Whenever a telephone on the system places a call to 911, the system must send the calling number, display information, time and date to a specially designated printer.	**29.3.1.48**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Data Protection	Data protection must be assignable on a per extension basis. Data protection must block all attendant busy verifications of the extension. Data protection must remove any distinctive ringing to the extension. Data protection must remove the music on hold feature for the extension. Data protection must block any call waiting indications to the extension.	**29.3.1.49**
Dial Plan	The system must be able to have 1 through 9 as the first digit of an extension. The system must be able to have 3 digit extension numbers. The system must be able to have 4 digit extension numbers. The system must be able to have 5 digit extension numbers. The system must allow access to the attendant by dialing the digit 0. The system must be able to have 1 through 9,* or # as the first digit of a trunk access code. The system must be able to have 3 digit trunk access codes. The system must be able to have 4 digit trunk access codes. The system must be able to have 3 digit feature access codes. The system must be able to have 4 digit feature access codes. The system must be able to use * and # as the first digit in the feature access codes.	**29.3.1.50**
Display of Incoming Calls	The system must provide display equipped voice terminals with the display information of incoming calls to the terminal even if the voice terminal is active on an existing call.	**29.3.1.51**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Distinctive Ringing	The system must provide distinctive ringing to extension for internal calls, external calls and priority calls.	**29.3.1.52**
DS1 Trunk Service	The DS1 must be able to operate as an ETN tie trunk. The DS1 must be able to operate as a TTTN tie trunk. The DS1 must be able to operate as a main/satellite tie trunk. The DS1 must be able to operate as a RLT trunk. The DS1 must be able to operate as an access trunk. The DS1 must be able to operate as AVD trunk. The DS1 must be able to operate as a DMI trunk. The DS1 must be able to operate as a CO trunk. The DS1 must be able to operate as a FX trunk. The DS1 must be able to operate as a DID trunk. The DS1 must be able to operate as a WATS trunk. The DS1 must be able to operate as a remote access trunk. The DS1 must be able to operate as an off premise station. The DS1 must be able to operate as an administered connection.	**29.3.1.53**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Emergency Access to the Attendant	The system must be able to provide a button on the attendant console for receiving emergency calls placed to the attendant. The system must be able to provide a separate emergency alert tone at the attendant console for emergency calls placed to the attendant. The system must be able to provide a separate queue for emergency calls to the attendant consoles. The system must be able to allow a station, on a per station basis, to automatically initiate an emergency call to the attendant if an off-hook time out should occur on that station. The system must be able to allow a station to dial an emergency attendant access code to place an emergency attendant call. The system must be able to provide an audit trail, consisting of the time, calling number and the console number of the answering position of all emergency calls placed to the attendant. The system must be able to print the audit trail of emergency calls to the attendant as calls occur. The system must be able to provide a report of the audit trail of all emergency calls to the attendant.	**29.3.1.54**
End-to-End Signaling	The system must be able to provide end-to-end signaling on all calls.	**29.3.1.55**
External Alarm Equipment – Outputs	The system must provide dry contacts for outputting system alarms to external customer supplied alarm equipment. The system must separate dry contacts for major, minor and warning alarms	**29.3.1.56**
External Alarm Equipment – Inputs	The system must be able to accept 30 external alarm inputs. The system must be able to recognize an external contact closure as an alarm. The system must be able to allow each alarm input to be designated as major, minor or warning. The system must be able to allow external alarm to report to the system maintenance terminal.	**29.3.1.57**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Facility Busy Indication	The system must be able to allow a multi-line terminal to have a light indicating the ringing/busy/idle status of an extension. The system must be able to allow a multi-line terminal to have a light indication the ringing/busy/idle status of a trunk group. The system must be able to allow a multi-line terminal to have an access button for the facility, which is monitored by the facility indicator light. The system must be able to allow up to 100 terminal busy indicators for a monitored facility. The system must be able to allow up to 3600 monitored facilities.	**29.3.1.58**
Facility Restriction Levels	The system must be able to assign Facility Restriction Levels on a per extension basis. The system must be able to assign Facility Restriction Levels on a per trunk group basis. The system must be able to provide eight Facility Restriction Levels. The system must require that the FRL of the extension be equal to or greater than the FRL of the trunk group it is trying to access. The system must require that the FRL of the originating trunk group be equal to or greater than the FRL of the tandem trunk group. The system must be able to send the FRL of the originating station along with the dialed number when tandem trunks are used.	**29.3.1.59**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Facility Test Calls	The system must be able to assign Facility Test Call capabilities on a per extension basis. The system must allow facility test calls to be made by dial the access code for the facility. The system must allow facility test calls to be made to specific trunks. The system must allow facility test calls to be made to specific DTMF receivers. The system must allow facility test calls to be made to specific time slots. The system must allow facility test calls to be made to specific system tones.	**29.3.1.60**
Hot Line Service	The system must be able to allow any single line set to operate as a hot line. The system must be able to allow a hot line set to automatically dial a pre-assigned number by going off-hook on the set. The system must be able to allow a hot line set to automatically dial any local extension. The system must be able to allow a hot line set to automatically dial the attendant. The system must be able to allow a hot line set to automatically dial any number on the public switched network. The system must be able to allow a hot line set to automatically dial any feature access code.	**29.3.1.61**
Hunt Groups	The system must be able to provide circular hunt groups. The system must be able to provide hunt groups using the "most idle agent" distribution method.	**29.3.1.62**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Individual Attendant Access	The system must be able to allow the assignment of a personal extension number button to each attendant console. The system must be able to allow the personal extension number button to be in-service even if the position busy button on the console is active. The system must be able to allow the personal extension number button to receive and place calls as a regular extension.	**29.3.1.63**
ISDN-BRI	The system must be able to accept non-vendor specific ISDN-BRI terminal equipment. The system must be able provide a 2B+D format. The system must be able to allow 2 simultaneous voice calls. The system must be able to allow 2 simultaneous data calls. The system must be able to allow a simultaneous voice and data call.	**29.3.1.64**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
ISDN-PRI	The system must comply with the NI-2 protocol and standards. The system must be able to restrict the transmission of the callers name and number on outgoing calls. The system must be able to transmit an alternate name and number on outgoing calls. The system must be able to transmit and receive a 15-digit number. The system must be able to transmit and receive a 15-character name. The system must be able to transmit the calling number information to an ISDN gateway. The system must be able to transmit electronic tandem network (ETN) information over the D channel in an ETN configuration. The system must be able to provide wide band switching at HO rates. The system must be able to provide wide band switching at H11 rates. The system must be able to provide wide band switching at H12 rates. The system must be able to allow facility associated signaling on ISDN-PRI calls. The system must be able to allow non-facility associated signaling on ISDN-PRI calls. The system must be able to allow for the use of a back-up D channel on an ISDN-PRI trunk group. The system must be able to automatically activate the back up D channel if the primary D channel should fail. The system must be able to manually switch between the primary D channel and the secondary D channel by means of the maintenance terminal.	**29.3.1.65**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
ISDN-PRI Continued	The system must be able to maintain all existing calls when switching between D channels. The system must be able to allow ISDN-PRI trunks to be used for various types of call services on a call by call basis. The system must be able to allow conventional two-way voice service over call by call ISDN-PRI. The system must be able to allow conventional banded out-WATS over call by call ISDN-PRI. The system must be able to allow conventional in-WATS over call by call ISDN-PRI. The system must be able to allow 700 number services over call by call ISDN-PRI. The system must be able to allow switched 56K data services over call be call ISDN-PRI. The system must be able to allow T-1 based incoming 800 service over call by call ISDN-PRI. The system must be able to allow virtual private network calls over call by call ISDN-PRI. The system must be able to support FAS. The system must be able to support NFAS.	
Intercept Treatment	The system must be able to provide intercept tone to calls, which cannot be completed as dialed. The system must be able to provide intercept tone to voice terminals, which have been off-hook without dialing for more than ten seconds. The system must be able to provide intercept tone to voice terminals, which have exceeded an administered duration after loudspeaker paging. The system must be able to provide an intercept recording for DID calls which cannot be completed. The system must be able to allow an intercept to the attendant for all calls placed to non-working numbers on the system. The system must be able to allow a specific voice terminal to receive calls that cannot be completed because of station restrictions.	**29.3.1.66**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Intercom	The system must be able to provide an intercom feature for multi-line voice terminals. The system must be able to provide 32 different intercom groups. The system must be able to allow 32 members in an intercom group. The system must be able to allow members of an intercom group to press the intercom button on their multi-line voice terminal and dial each other using a 1 or 2 digit code. The system must be able to allow members of an intercom group to have an auto-intercom button, which automatically calls a pre-assigned member of the intercom group.	**29.3.1.67**
Last Number Redial	The system must be able to allow an extension to access the last number redial feature by either pressing the feature button or by dialing the feature access code. The system must be able to redial a string of 20 digits.	**29.3.1.68**
Line Lockout	The system must be able to automatically remove an analog station from service if the station is off-hook for a predetermined length of time without originating a call. The system must be able to automatically remove an analog station from service if the station does not complete its dialing sequence during a predetermined length of time. The system must be able to automatically remove an analog station from service if the station does not go on-hook for a predetermined amount of time after completing a call. The system must automatically restore service to the station once the station goes on-hook.	**29.3.1.69**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Listed Directory Numbers	The system must be able to accept 8 LDNs. The system must be able to use Fx trunks for LDNs. The system must be able to use CO trunks for LDNs. The system must be able to use DID numbers for LDNs. The system must be able to route LDNs to the attendant consoles. The system must be able to route LDNs to ACD groups.	**29.3.1.70**
Loudspeaker Paging Access	The system must be able to provide 9 separate paging zones. The system must be able to page all 9 zones simultaneously. The system must be able to allow dial access to each paging zone. The system must be able to allow dial access to the all zone paging. The system must be able to allow paging from any extension.	**29.3.1.71**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Message Waiting	The system must be able to provide "stutter dial tone" as a message waiting indicator for all stations on the system. The system must be able to allow the assignment of stutter dial tone on a per station basis. The system must be able to provide visual message waiting indicators for all stations on the system. The system must be able to allow the assignment of visual message waiting indicators on a per station basis. The system must be able to allow a multi-line set to have multiple visual message waiting indicators for the different numbers on the set. The system must be able to allow the activation of any message waiting indicator from a designated station. The system must be able to allow the deactivation of any message waiting indicator from a designated station. The system must be able to restrict the activation and deactivation of message waiting indicators to only certain predefined stations.	**29.3.1.72**
Multi-Line Selection	The system must be able to allow the automatic selection a ringing line when the voice terminal goes off-hook. The system must be able to allow the manual selection of a ringing line when the voice terminal goes off-hook. The system must be able to allow the automatic selection of an idle line when the voice terminal goes off-hook. The system must be able to allow the manual selection of an idle line when the voice terminal goes off-hook.	**29.3.1.73**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Music-on-Hold	The system must be able to supply music-on-hold to a caller when the attendant places a call on hold. The system must be able to supply music-on-hold to a caller when an extension places a call on hold. The system must be able to supply music-on-hold to a caller when the call is in a queue. The system must be able to supply music-on-hold to a caller when the call is parked. The system must be able to suppress the music when a call is being transferred. The system must be able to suppress the music when a party on a conference calls goes on hold. The system must be able to have unlimited access to music-on-hold. The system must be able to accept an external music-on-hold source for each tenant partition in the switch.	**29.3.1.74**
Personal Central Office Trunks	The system must be able to allow a multi-line set to have personal CO trunks as call appearances on that set. The system must be able to allow a multi-line set to access the personal CO line by pressing the call appearance button of the CO trunk on the multi-line set. The system must be able to allow a multi-line set to ring when an incoming call occurs on the personal CO trunk. The system must be able to allow a multi-line set to answer an incoming call on the personal CO line. The system must be able to allow a multi-line set to place an outgoing call on the personal CO line. The system must be able to allow a personal CO line to appear on multiple sets. The system must be able to allow a call on a personal CO line to be transferred to another extension. The system must be able to allow a call on a personal CO line to be placed on hold.	**29.3.1.75**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Personalized Ringing	The system must be able to allow the user of a multi-line set to select and change their own ringing pattern. The system must be able to allow the user of a multi-line set the choice of eight ringing patterns. The system must be able to allow different ringing frequencies in a ringing pattern.	**29.3.1.76**
Privacy	The system must be able to allow multi-line set users to activate or deactivate the privacy feature by pressing the privacy feature button on their set. The system must deactivate privacy when a call is completed. When an extension activates privacy for a call, all other appearances of that extension must be denied access to the call. When an extension activates privacy for a call, privacy must drop any party that has accessed the conversation through an appearance of the extension.	**29.3.1.77**
Recorded Announcements-External	The system must be able to provide multiple 2W E&M interfaces for external announcement devices. The system must be able to allow announcements to be played to 150 different calls simultaneously. The system must be able to provide E&M start/stop controls for playing announcements. Once an announcement has started, the system must be able to queue, with ring back, all new calls destined for that announcement until the announcement has completed it's cycle.	**29.3.1.78**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Recorded Announcements-Internal	The system must be able to provide 80 internal digital announcements. The system must be able to provide 32Kb sampling rate for all internal announcements. The system must be able to provide 64Kb sampling rate for all internal announcements. The system must be able to allow for remote recording of internal digital announcements by a designated telephone. The system must be able to allow announcements to be played to 50 different calls simultaneously. Once an announcement has started, the system must be able to queue, with ring back, all new calls destined for that announcement until the announcement has completed it's cycle.	**29.3.1.79**
Reports	The system must be able to print reports on demand to the system printer. The system must be able to scheduled reports to be printed on the system printer. The system must be able to schedule reports to be printed weekly, daily, hourly or in 15 minute intervals. The system must be able to schedule 50 reports.	**29.3.1.80**
Restricted/Unrestricted Call Lists	The system must be able to provide 10 lists of unrestricted numbers. The system must be able to allow any station that is associated with a particular unrestricted call list to call any number on that unrestricted call list. The system must be able to provide a list of restricted numbers. The system must be able to prevent any station that is associated with the restricted call list from calling any number on the restricted call list.	**29.3.1.81**
Ringer Cutoff	The system must be able to allow a multi-line set to deactivate the ringer on their set by pressing the ringer cutoff feature button on their set. -The system must be able to allow a multi-line set with ringer cutoff activated to still receive ringing on priority calls, intercom calls and manual signaling.	**29.3.1.82**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Service Observing	The system must be able to allow service observing of an extension by pressing the service observing feature button and dialing the extension number. The system must be able to allow service observing of an attendant position by pressing the service observing feature button and dialing the attendant position number. The system must be able to allow service observing of an ACD agent by pressing the service observing feature button and dialing the ACD agent number. The system must be able to provide a two second warning tone on the line being observed when service observing is activated. The system must be able to provide a ½ second reminder tone every 12 seconds on the line being observed. The system must be able to allow the service observer to enter into a call in a listen-only mode. The system must be able to allow the service observer to toggle between listen-only and listen-and-talk by pressing the service observing button. The system must be able to allow only agents with observable permissions to be service observed. The system must be able to allow only agents with observing permissions to service observe. The system must be able to restrict service observers and service observed users to a specific service observing interest group. The system must be able to allow multiple service observing interest groups. The system must be able to prohibit service observing between different service observing interest groups.	**29.3.1.83**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Speed Dialing	Each entry in the speed dial list must have a minimum of 20 characters per entry. Each speed dial entry must be capable of having a pause of 1-2 seconds inserted in the dialing string. Each speed dial entry must be capable of converting the dial string from pulse to touch tone within the dial string. Each speed dial entry must be capable of inserting a "wait for dial tone" command in the dial string. Each speed dial entry must be capable of suppressing the display of the dial string on a display phone. The system must have a minimum of 3 types of speed dial lists: personal, group, system. Each user must have access to all list types in any combination up to 3. Personal speed dial lists must be accessed using a maximum of a 3-digit access code. Personal speed dial list entries must be accessed using a maximum of 2 digits. Personal speed dial lists must be able to contain 100 entries There shall be a minimum of 2000 personal speed dial lists per system. Group speed dial lists must be accessed using a maximum of a 3-digit access code. Group speed dial lists entries must be accessed using a maximum of 2 digits. Group speed dial lists must be able to contain 100 entries. Group speed dial lists must have the capability of a toll override designation.	**29.3.1.84**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Speed Dialing Ccontinued	There shall be a minimum of 100 different group lists. System speed dial list must be accessed using a maximum of a 3-digit access code. System speed dial list entries must be accessed using a maximum of 2 digits. System speed dial list must be able to contain 100 entries. System speed dial list must have the capability of a toll override designation	
Station Administration Without Hardware	System must be able to allow for the software administration of all features and attributes for a station on the PBX without actually assigning a physical equipment location for that station on the PBX. A station administered without hardware must be able to act as a template for the duplication of the station. Call coverage must be fully functional for any station administered without hardware.	**29.3.1.85**
Station Dialing	The system must be able to allow for the use of rotary dial telephone sets and ancillary equipment. The system must be able to allow for the use of DTMF dial telephone sets and ancillary equipment. The system must be able to accept DTMF digits 0-9, *,#.	**29.3.1.86**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Tenant Service	The system must be able to provide 50 tenant partitions. The system must be able to restrict all tenant partitions from calling other tenant partitions. The system must be able to allow partitions to call specified partitions while restricting calls to other partitions. The system must be able to allow all partitions to call any other partition. The system must be able to allow each tenant partition to have its own attendant group. The system must be able to allow attendant groups to serve multiple tenant partitions. The system must be able to allow an attendant group to serve all tenant partitions. The system must be able to provide night-answer service for each attendant group. The system must be able to allow each tenant partition to have its own music-on-hold source. The system must be able to allow a music-on-hold source to serve multiple tenant partitions. The system must be able to allow a music-on-hold source to serve all tenant partitions. The system must be able to allow each tenant partition to have its own trunk groups. The system must be able to allow a trunk group to serve multiple tenant partitions. The system must be able to allow a trunk group to serve all tenant partitions. The system must be able to allow each tenant partition to have its own routing patterns. The system must be able to allow a routing pattern to serve multiple tenant partitions. The system must be able to allow a routing pattern to serve all tenant partitions.	**29.3.1.87**

29.3.1 Table – "System Features"		
Feature	**Description**	**Proposal Paragraph #**
Voice Mail	The system must be able to interface with the Octel Overture voice mail product line.	**29.3.1.88**
Year 2000	The system must be year 2000 compliant.	**29.3.1.89**

29.4 SYSTEM HARDWARE REQUIREMENTS

The system hardware features below are minimum requirements for the PBXs. Review each feature and succinctly describe compliance or material differences in your Proposal document within the specific proposal paragraph number. Specifically identify those functions and offerings that are fee-based options to the basic service.

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
Main Distribution Frame	The system must be able to utilize Western Electric 110 connecting blocks for the main distribution frame.	**29.4.1.1**
Environment	The system must be able to continuously in a temperature range of 40-100 degrees F. The system must have a normal operating relative humidity range of 20% - 60%.	**29.4.1.2**
AC Operation	The system must have EMI filters on all AC power feeds. The system must be able to operate with 60Hz single phase 4 wire 120/240 VAC power. The system must be able to operate with 60Hz three phase 4 wire 120/208 VAC power. The system must have a 10 minute integral battery back-up system with automatic charger.	**29.4.1.3**
DC Operation	The system must be able to operate continuously with an external -45 to -55 VDC power plant.	**29.4.1.4**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
External DC Power Plant	The DC power plant must be able to support multiple parallel rectifiers. The DC power plant must be able to have 1- N redundancy for its rectifiers. The DC power plant must have hot swappable rectifiers. The DC power plant must be expandable to accommodate the system at full load at the maximum system configuration and still maintain 1- N redundancy. The DC power plant must able to be expanded without an interruption to the existing service. The DC power plant must be able to provide 8 hours of battery backup at full load at the maximum system configuration The DC power plant must utilize sealed lead acid batteries. The DC power plant must be able to equalize and float the batteries. The DC power plant must have test jacks for measuring the output voltage of the power plant. The DC power plant must have an indicator light for any failure or abnormality in the power plant. The DC power plant must be able to operate using 60 Hz 4 wire single phase 120/240 VAC. Each rectifier in the DC power plant must be able to sense it's own output voltage and automatically shut down if it's output voltage exceeds a preset level. Each rectifier in the DC power plant must be able to be manually turned off. Each rectifier in the DC power plant must have an output power circuit breaker.	**29.4.1.5**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
External DC Power Plant Continued	Each rectifier in the DC power plant must have remote sensing leads for regulating the power plant. Each rectifier in the DC power plant must have an automatic output current limiter. Each rectifier in the DC power plant must have an indicator light for normal operation. Each rectifier in the DC power plant must have an indicator light for any failure in the rectifier.	
Redundancy	The system must be able to have redundant processors. The system must be able to have redundant processor memories The system must be able to have redundant system databases. The system must be able to have redundant backup storage devices for the common control. The system must be able to have redundant power supplies for the common control. The system must be able to have redundant power feeds to the common control. The system must be able to automatically switch between the on-line common control and the off-line common control in the event of a failure in the on-line common control. The system must be able to manually switch between the common controls. The system must be able to switch between the common controls by issuing a software command from the maintenance terminal. The system must be able to automatically apply system programming changes to both databases. The system must be able to automatically audit and report any discrepancies between the two databases.	**29.4.1.6**
System Interfaces	The system must be able to accept either a 10 base-T or a 100 base-T LAN connection for TSAPI operation.	**29.4.1.7**
CAMA 911	The system must be able to provide an analog trunk for a CAMA 911 interface.	**29.4.1.8**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
DS1 Interface	The DS1 interface must operate in compliance with the North American standards. The DS1 interface must be able to operate as a DID trunk. The DS1 interface must be able to operate as a CO trunk. The DS1 interface must be able to operate as a Tie trunk. The DS1 interface must be able to operate as a RLT trunk. The DS1 interface must be able to operate as an ISDN-PRI trunk. The DS1 interface must be able to operate as an off premise station. The DS1 interface must be able to operate using robbed bit signaling. The DS1 interface must be able to operate using 24th channel signaling. The DS1 interface must be able to operate using D-channel signaling. The DS1 interface must be able to operate using D4 framing. The DS1 interface must be able to operate using ESF. The DS1 interface must be able to operate using AMI. The DS1 interface must be able to operate using B8ZS. The DS1 interface must be able to operate using ZCS. The DS1 interface must be able to operate at a distance of up to 100 feet without the use of an external repeater. The DS1 interface must be able to operate according to E-1 standards.	**29.4.1.9**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
CO Trunk	The CO trunk interface must operate in compliance with the North American standards. The CO trunk interface must be able to operate using loop start. The CO trunk interface must be able to operate using ground start. The CO trunk interface must be able to provide reverse battery signaling.	**29.4.1.10**
E&M 4-Wire Trunk	The E&M trunk interface must operate in compliance with the North American standards. The E&M trunk interface must be able to operate using the Type 1 standard unprotected format. The E&M trunk interface must be able to operate using the Type 1 compatible unprotected format. The E&M trunk interface must be able to operate using the Type 1 compatible protected format. The E&M trunk interface must be able to operate using the Type 5 simplex format. The E&M trunk interface must be able to operate using wink start signaling. The E&M trunk interface must be able to operate using immediate start signaling. The E&M trunk interface must be able to operate using delay dial signaling. The E&M trunk interface must be able to operate using automatic start signaling.	**29.4.1.11**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
Auxiliary Trunk	The auxiliary trunk must operate in compliance with the North American standards. The system must be able to provide an auxiliary trunk for connecting external audio devices. The auxiliary trunk must provide a dry audio pair. The auxiliary trunk must provide two control pairs. The auxiliary trunk must be able to accept external music-on-hold sources. The auxiliary trunk must be able to interface with external paging systems. The auxiliary trunk must be able to interface with external announcement devices. The auxiliary trunk must be able to operate start/stop controls on external announcement devices.	**29.4.1.12**
DID Trunk	The system must be able to provide analog DID trunks. The DID trunks must operate in compliance with the North American standards.	**29.4.1.13**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
Analog Telephone Interface	The analog telephone interface must be able to support 500 type sets. The analog telephone interface must be able to support 2500 type sets. The analog telephone interface must be able to support modems. The analog telephone interface must be able to support fax machines. The analog telephone interface must be able to support answering machines. The analog telephone interface must be able to support amplified handsets. The analog telephone interface must be able to support LED message waiting indicators. The analog telephone interface must be able to support neon message waiting indicators. The analog telephone interface must be able to support stutter dial tone for a message waiting indicator. The analog telephone interface must be able to support 2500 type sets for a distance of 20,000 on a single pair of 24 AWG wire. The analog telephone interface must be able to supply -48VDC feed voltage to the sets.	**29.4.1.14**
Digital Telephone Interface	The digital telephone interface must be able to support a digital telephone using a single pair of wires. The digital telephone interface must be able to support a digital telephone at a distance of 10,000 feet using a single pair of 24 AWG wire.	**29.4.1.15**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
System Capacities	The system must be able to provide a minimum of 1,500 time slots. The system must be expandable to provide 22,000 time slots. The system must be able to handle 700 simultaneous conversations. The system must be expandable to handle 7,000 simultaneous conversations. The system must be able to provide a minimum of 30 DS-1 circuits. The system must be expandable to handle 150 DS-1 circuits. The system must be able to provide a minimum of 30 ISDN-PRI circuits. The system must be expandable to handle 150 ISDN-PRI circuits. The system must be able to provide a minimum of 90 trunk groups. The system must be expandable to provide 600 trunk groups. The system must be able to provide a minimum of 400 trunks. The system must be expandable to provide 4,000 trunks. The system must be able to provide a minimum 90 trunks in a single trunk group. The system must be expandable to provide 250 trunk in a single trunk group. The system must be able to provide a minimum of 2,400 analog stations. The system must be expandable to provide 25,000 analog stations. The system must be able to provide a minimum 2,400 digital stations.	**29.4.1.16**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
System Capacities Continued	The system must be expandable to provide 25,000 digital stations. The system must be able to process 40,000 calls per hour. The system must be expandable to process 100,000 calls per hour.	

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
Maintenance	The system must be able to allow on site maintenance for all system testing and problem resolution. The system must be able to allow for remote maintenance for all system testing and problem resolution. The system must be able to use a PC as a terminal for all system maintenance tests. The system must be able to automatically perform routine maintenance tests every 24 hours. The system must be able to perform automatic demand maintenance tests when it detects a circuit malfunction. The system must be able to perform demand maintenance tests by issuing a command from the system terminal. The system must be able to automatically report alarms to remote locations when alarms occur. The system must be able to automatically dial two separate numbers for reporting system alarms. The system must be able to automatically down load alarm information when reporting alarms to remote locations. The system must contain a log of unresolved alarms and errors. The system must contain a history log of all alarms and errors. The system must be able to automatically reboot any processor that has failed. The system must be able to reboot in less than 15 minutes. The system must be able to automatically back up the system software at regular intervals. The system must be able to automatically switch on-line processors at regular intervals.	**29.4.1.17**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
Programming	The system must be able to allow on site programming of all system software, applications and features. The system must be able to allow for remote programming of all system software, applications and features. The system must be able to allow for user programming of all system software, applications and features. The system must be able to use a PC as a terminal for all system programming. The system must require the use of a logon id and a password or accessing all system programming. The system must be able to allow 7 concurrent programming sessions. The system must be able to restrict user logins to read only permissions	**29.4.1.18**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
Digital Sets	All digital sets must be able to operate on a single pair of category 3 wire. All digital sets must have modular plugs on their handset cords. All digital sets must be equipped with 12 foot handset cords. All digital sets must have modular plugs on their mount cords. All digital sets must have hearing aid compatible handsets. All digital sets must be able to have a one way speaker for listening to conversations. All digital sets must have a separate volume control for the speaker. All digital sets must have a separate volume control for the ringer. All digital sets must have a user selectable ring pattern. All digital sets must have a permanently defined hold button. All digital sets must have a permanently defined transfer button. All digital sets must have a permanently defined message waiting indicator. All digital sets must have a permanently defined drop button. All digital sets must have a permanently defined conference button. All digital sets must be able to be either desk or wall mounted. The system must be able to support a 5 line digital set. The system must be able to support a 5 line digital set with a display.	**29.4.1.19**

29.4.1 Table – "System Hardware"		
Service Feature	**Description**	**Proposal Paragraph #**
Digital Sets Continued	The system must be able to support a 5 line digital set with a two way speakerphone. The system must be able to support a 5 line digital set with a display and a two way speakerphone. The system must be able to support a 10 line digital set. The system must be able to support a 10 line digital set with a display. The system must be able to support a 10 line digital set with a two way speakerphone. The system must be able to support a 10 line digital set with a display and a two way speaker phone. The system must be able to support a 30 line digital set. The system must be able to support a 30 line digital set with a display. The system must be able to support a 30 line digital set with a two way speakerphone. The system must be able to support a 30 line digital set with a display and a two way speakerphone.	
Analog Sets	All analog sets must be able to operate on a single pair of category 3 wire. All analog sets must have hearing aid compatible handsets. All analog sets must have modular jacks on their handset cords. All analog sets must have 12 foot handset cords. All analog sets must have modular jacks on their mount cords. All analog sets must be able to be either desk or wall mounted. All analog sets must have an integrated message waiting light. All analog sets must have a call transfer button. All analog sets must have a hold button.	**29.4.1.20**

PRICE PROPOSAL

INSTRUCTIONS

- The Vendor is to provide a total price for each PBX shown in the Cost Models. The total price must include any and all required materials and labor not specifically listed in the Cost Model. The Cost Model is intended to provide PBX system sizing, option and feature information for the Vendor. The Vendor is required to provide complete PBX systems and installation including all hardware and software.

- The Vendor must provide an itemized statement of all parts and labor including nomenclatures, quantities, part numbers and costs for each Cost Model.

- All systems proposed in the Cost Model must be in compliance with the specifications included in 10.0.

- All systems proposed in the Cost Model are for evaluation purposes only and do not constitute an order.

29.4.2 Table – "Cost Models"		
Service Feature	**Description**	**Proposal Paragraph #**
Site 1	• 3 phase 208 VAC power system • Fully redundant system common control equipment • Avaya Elite feature package or equivalent • (210) Avaya 6402 sets or equivalent • (10) Avaya 6424 sets with displays and two-way speakerphones or equivalent • (80) Avaya 6408 sets with displays and two-way speakerphones or equivalent • (1) Attendant console with display • (3) ISDN-PRI T-1s • (4) Analog CO trunks • Maintenance for years 2 and 3 are to be included on a per port basis for the PBX system. • Vendor is to also provide an hourly time and materials rate for years 2 through 5. At the request of the successful Vendor, this rate may be reviewed on the anniversary of the contract. It will be the Vendor's responsibility to prove to the State that a modification to this rate is justified.	**29.4.2.1**

29.4.2 Table – "Cost Models"		
Service Feature	**Description**	**Proposal Paragraph #**
Site 2	• VDC power plant utilizing 3 phase 208 VAC input voltage with 8 hours of standby battery, one redundant rectifier. • Fully redundant system common control equipment. • Avaya Elite feature package or equivalent • (3) attendant consoles • (600) Avaya 6408 sets with displays or equivalent • (50) Avaya 6416 sets with displays and 2 way speakerphones or equivalent • (50) Avaya 6424 sets with displays and 2-way speakerphones or equivalent • (5) ISDN-PRI T-1s • Maintenance for years 2 and 3 are to be included on a per port basis for the PBX system. • Vendor is to also provide an hourly time and materials rate for years 2 through 5. At the request of the successful Vendor, this rate may be reviewed on the anniversary of the contract. It will be the Vendor's responsibility to prove to the State that a modification to this rate is justified.	**29.4.2.2**

29.4.2 Table – "Cost Models"		
Service Feature	**Description**	**Proposal Paragraph #**
Site 3	• -48 VDC power plant utilizing 3 phase 208 VAC input voltage with 8 hours of standby battery, one redundant rectifier. • Fully redundant system common control equipment. • Avaya Elite feature package or equivalent • (3) attendant consoles • (3000) Avaya 6202 sets or equivalent • (600) Avaya 6408 sets with displays or equivalent • (50) Avaya 6416 sets with displays and 2 way speakerphones or equivalent • (50) Avaya 6424 sets with displays and 2-way speakerphones or equivalent • (15) ISDN-PRI T-1s • Maintenance for years 2 and 3 are to be included on a port basis for the PBX system. • Vendor is to also provide an hourly time and materials rate for years 2 through 5. At the request of the successful Vendor, this rate may be reviewed on the anniversary of the contract. It will be the Vendor's responsibility to prove to the State that a modification to this rate is justified.	**29.4.2.3**

29.4.2 Table – "Cost Models"		
Service Feature	**Description**	**Proposal Paragraph #**
Site 4	• (3) phase 208 VAC power system • Fully redundant system common control equipment. • Avaya Elite feature package or equivalent • (2) attendant consoles • (1300) Avaya 6202 sets or equivalent • (600) Avaya 6408 sets with displays or equivalent • (50) Avaya 6416 sets with displays and 2 way speakerphones or equivalent • (50) Avaya 6424 sets with displays and 2-way speakerphones or equivalent • (10) ISDN-PRI T-1s • Maintenance for years 2 and 3 are to be included on a per port basis for the PBX system. • Vendor is to also provide an hourly time and materials rate for years 2 through 5. At the request of the successful Vendor, this rate may be reviewed on the anniversary of the contract. It will be the Vendor's responsibility to prove to the State that a modification to this rate is justified.	**29.4.2.4**

29.4.3 Table – "Technical Questions"	Proposal Paragraph #
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**29.4.3.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**29.4.3.2**

29.4.3 Table – "Technical Questions"	Proposal Paragraph #
For each of the State defined geographic regions in which you are offering service indicate: • Number of service/support dispatch facilities • Number of installation and repair technicians • Whether you own or resell the support services bid in your response. • Location of the service/support dispatch facilities	**29.4.3.3**
What is your annual revenue for and estimated market share of PBX provisioning services in the geographic areas you are proposing?	**29.4.3.4**
Detail your customer problem reporting, analysis, and resolution procedures. Indicate how "partner" service center participation is handled, including trouble ticket systems. What is the State visibility to problem resolution involving partner service centers?	**29.4.3.5**
To what extent is the State expected to participate in problem resolution?	**29.4.3.6**
Describe how you will monitor the offered services to ensure compliance with service level guarantees.	**29.4.3.7**

29.4.4 Table – "Proposed Alternatives"	Proposal Paragraph #
Provide a brief executive level overview describing your recommendation for an alternative to the services described above.	**29.4.4.1**
Provide a detailed description of how this alternative service would be priced and discounted. A priced "baseline" service should also be provided by applying the alternative service prices to the services described in the corresponding financial schedule.	**29.4.4.2**
Provide a detailed technical service description for the alternative proposed.	**29.4.4.3**
Describe roles, responsibilities, functions, and capabilities of all proposed alternatives.	**29.4.4.4**

29.4.5 Table – "Managed Services"		**Proposal Paragraph #**
Managed Services	Describe proposed ability, capabilities, and experience to manage PBX services for the State. What is included in this service?	**29.4.5.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**29.4.5.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**29.4.5.3**
Resources	Provide a detail schedule for staffing associated with PBX systems. Schedule must include related labor charges, broken out by skill levels.	**29.4.5.4**

30.0 OPTIONAL SERVICES

30.1 INTRODUCTION

In addition to the previous services included in this RFP, the State desires to receive certain information and input from vendors on the service listed below. Specifically, the State will accept and give consideration to Vendor's comments, suggestions, innovative solutions, and recommendations on each individual service listed or on the aggregate of all services in this paragraph. Vendors should not limit comments to only those services listed and are encouraged to address any/ all innovative combinations that would be beneficial to the State.

Responses to the information contained within Table 30.1.1 will not be part of the evaluation criteria or solution process of this RFP. Responses will be treated as an RFI for the services listed, but may be added to a resulting contract at State future date at the option of the State. Identify the amount you will pay the State for the purchase of these assets for each of the services in this RFP, and also include the following additional list of services.

30.1.1 Table - "List of All Other Services"		
Service Feature	**Description**	**Proposal Paragraph #**
Call Centers and Auto Call Distribution	Currently the State configures call centers and auto call distribution on its PBXs in various ways depending on location and type of equipment. Staff people do this work either for their own Agency or in a centralized location with bill back to individual agencies. In relation to existing and proposed responses to State PBX, describe your plans and processes to integrate into existing proposed solutions to PBX. Include your estimate of the value placed on this offering and why the State should consider alternatives to its existing processes?	**30.1.1.1**

30.1.1 Table - "List of All Other Services"		
Service Feature	**Description**	**Proposal Paragraph #**
PBX Systems Administration	Currently the State administers its own large PBX network. Administration includes, but is not limited to, consulting with agencies to determine needs, configuring call groups, hunt patterns, vectoring, moves, adds, changes, and other related services, as well as all system design and engineering, monitoring system capacity, planning for growth, maintaining cabinets, T1 slots, circuit packs, configuration for automatic route selection, trunking, traffic usage, etc. The State also administers numerous small PBX systems at various Agency locations. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering and related assets?	**30.1.1.2**
State Operators	The State currently employs six full time personnel as State Operators. This group of people provides the only live voice service for answering questions about all State offices and functions. They also direct calls from around the world to the many diverse State agencies. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.3**

30.1.1 Table - "List of All Other Services"		
Service Feature	**Description**	**Proposal Paragraph #**
State Telephone Directory	Currently the State produces an updated annual directory (hard copy) listing organizations (to include key management personnel) and an index of approximately thirty percent of State employees. The current directory contains 275 pages and provides an alpha listing and an organizational listing along with other information such as network dialing, maps, and usage instructions. It contains no advertising whatsoever. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.4**
Interactive Voice Response	Currently the State has entered into the IVR arena in numerous ways. State agencies are purchasing equipment and services from integrators, PBX suppliers, and IVR suppliers. Describe how you would provide this equipment and these services, and how they would integrate with existing State systems. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.5**
Call Management System	The State currently has Call Management System (CMS) that provides real time, integrated, and historical reports to Call centers and trunk management reports to multiple PBXs. Describe your plans and process to integrate call reporting system into the existing and/or proposed technology solutions to PBX. Provide the level of detail, of flexibility and availability, in real time and historical, on standard and ad hoc reports to the State. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.6**

30.1.1 Table - "List of All Other Services"		
Service Feature	**Description**	**Proposal Paragraph #**
Metropolitan Fiber Ring	Describe and specify the value (dollar and vision) of a Lansing Metropolitan Fiber Ring Network consisting of approximately 29 miles of fiber serving 5 major geographic nodes in the Lansing metropolitan area.	**30.1.1.7**
Metropolitan Area Network Design	The State currently supports over 100 individual sites in the Lansing metropolitan area with a high-speed metro area network. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.8**
MAN Design (SONET, ATM, and IP)	The State currently manages and maintains a SONET fiber ring in the Lansing metropolitan area as transport for IP, ATM, and channelized T1 services. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.9**
MAN Design (DWDM, Fibre Channel)	The State currently manages and maintains a DWDM Network fiber ring as transport for Fibre Channel, SCSI, and legacy peripheral channel traffic. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.10**

30.1.1 Table - "List of All Other Services"		
Service Feature	**Description**	**Proposal Paragraph #**
E-Mail	The State currently manages and maintains Email communications for all State agencies encompassing over 60,000 users. The email system must have the ability to integrate with all directories at the State including but not limited to: Active Directory, E-directory, I-Planet. Maintain a central address book of the disparate mail systems consisting of Novell GroupWise/MS Exchange5.5/MS Exchange2000 while maintaining unique user ID's. Maintain a secure encrypted web access portal for all State employees to be able to access their email via the web. Provide virus scanning for all incoming and outgoing email. Management and operation of gateways must provide inter-platform calendaring, scheduling, and busy searching. All email systems must be fully redundant, available 24x7x365, and have a separate disaster recovery location at least 5 miles away from the primary location. Helpdesk staffing must be available to service 60,000 users with email issues. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.11**
Directory Services	The State currently manages and maintains multi Vendor Directories (LDAP compliant) that include the following directory platforms: Active Directory, LDAP Protocol, E-Directory, I-Planet. Manage and support Multiple Directory trees for specialized applications across all State agencies, and Integration of Directory Services with the State email systems. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.12**

30.1.1 Table - "List of All Other Services"		
Service Feature	**Description**	**Proposal Paragraph #**
Web Services	Manage and Support the State consolidated web application farm. There are currently 6 web servers providing over 20 applications for State citizens. Implement proxy services for both Internet clients (users of the State consolidated web application servers) and over 60,000 internal State users. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.13**
DNS Domain Management for state.mi.us and michigan.gov	Manage and support the State's external DNS servers providing domain name service to State Internet clients. This would involve the michigan.gov, state.mi.us, and other various domains. This would include managing all host addresses that should be available to Internet clients. Manage and support the State's internal DNS servers providing domain name service to State internal network clients. This would involve the Michigan.gov, State.mi.us, and other various domains. This would include managing all host addresses that should be available to internal network clients. Purchase on behalf of the State and manage new domains as required by State projects. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.14**

30.1.1 Table - "List of All Other Services"		
Service Feature	**Description**	**Proposal Paragraph #**
DNS Server Support	Support and manage various secondary and Active Directory DNS servers within the State. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.15**
SMTP Gateway Management	Provide SMTP management and support for integration of Internet Mail with the State Email System. Management of SMTP Mail for over 40 State mail domains. Virus scanning for all inbound and outbound Internet Mail. Support and Management for LDAP routed email. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.16**
Certificate and PKI Services	Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.17**

30.1.1 Table - "List of All Other Services"		
Service Feature	**Description**	**Proposal Paragraph #**
Firewall Design, Monitoring and Management	The State currently manages and maintains all perimeter firewalls for the State's Internet and Extranet connectivity. There are also a number of firewalls within the Intranet to isolate and control various agency-sensitive networks. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.18**
Legacy Computing Networks (non-IP)	The State continues to support various non-IP legacy networks for Unisys, Bull and IBM mainframes. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering and related assets? nclude your estimate of the value placed on this offering and why the State should consider alternatives to its existing processes?	**30.1.1.19**
Customer Relationship Management Computer Telephony Integration	The State currently has CRM deployed in several State agencies. The configurations include CTI servers interfaced with IVRs, CRM integration to the desktop via State PBX connections. The State will have significant future growth in this area. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.20**

30.1.1 Table - "List of All Other Services"		
Service Feature	**Description**	**Proposal Paragraph #**
Network Operations Center	The State maintains a Network Operations facility and staff for monitoring and operational support of all voice and data networking equipment and nodes. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.21**
The Billing, Record-keeping, and Cable Management System	The State currently utilizes Matsch Systems Inc.'s MOST Telemanagement System to manage Work Order, Trouble Ticket (voice), call detail collection, processing and rating, cable management, invoicing and reporting. Call detail data are captured from all PBXs and Centrex systems remotely. All PBX call detail is collected real time and rated near real-time. Centrex data are also captured and rated near real time. This system has been customized to meet the State's various requirements including interface to the Michigan Administrative Information Network (MAIN) for electronic billing to State agencies. Additionally, substantial customized data capture and reporting has been written into the system. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering?	**30.1.1.22**

30.1.1 Table - "List of All Other Services"		
Service Feature	**Description**	**Proposal Paragraph #**
IP Address Management	The State manages an IP address space for the entire Intranet, metro area networks, WAN, and managed Extranet segments. The State owns and manages 4 registered class-B licenses, 1020 contiguous class-C licenses, 10 non-contiguous class-C licenses, and very structured implementations of RFC1918-compliant private addressing within the class-A, class-B and sub-class-B definitions. Describe individual strengths, weaknesses, opportunities, and threats in allowing vendors to provide this service offering. Include any and all economies of scale the State would achieve. What specific benefits would the State achieve allowing the Vendor to take ownership of this service offering and related assets? Include your estimate of the value placed on this offering and why the State should consider alternatives to its existing processes?	**30.1.1.23**

30.1.2 Table – "Technical Questions"	**Proposal Paragraph #**
Will you meet all functional requirements detailed in the preceding section or do you have an alternative to meet the underlying business objectives?	**30.1.2.1**
The Vendor will describe its experience in delivering these functions in environments similar to the State.	**30.1.2.2**

30.1.3 Table – "Managed Services"		**Proposal Paragraph #**
Managed Services	Describe proposed ability, capabilities, and experience to manage billing services for the State.	**30.1.3.1**
Pricing	Describe proposed pricing methods, structures, and rates.	**30.1.3.2**
References	Provide at least three, but no more than five, organizations comparable to the size and scope of the State, in which you perform the services being proposed. Include the organizations name, address, contact person, and phone number.	**30.1.3.3**
Resources	Provide a detail schedule for staffing associated with billing. Schedule must include related labor charges, broken out by skill levels.	**30.1.3.4**

31.0 LIST OF APPENDICIES

Appendix	Document Name
A	Data Drop Locations
B	ISP Diagram
C	Pricing Sheets
D	Financials
E	Cable Pricing Sheets
F	Out State Equipment Inventory