Request For Proposal

UML - LL030008

Replacement of PBX
For

University of Massachusetts Lowell

April 2003
1.0 STATEMENT OF OBJECTIVES

1.1 Intent

This document is being released to identify the specific direction UMass will take to procure and deploy a switching system to support the strategic directions established at the Senior Executive level within the University, which has been based on and supported by the students, faculty, and staff of UMass. We are confident that responding vendors will be able to identify all technology specifications and develop a response that is both suited to their particular platform and which is clearly able to meet the University’s education and business goals. Vendor proposals must include commitments to design, engineer, configure, install, test, cutover, and maintain all system components defined in this Request For Proposal (RFP). All user, technician, and administrative training will be the vendor’s responsibility. The vendor’s responsibility for performance will continue through the life of the agreement between the vendor and the University.

1.2 Best Value

The RFP is being conducted to identify and accept the solution that represents the Best Value to the University in accordance with the provisions of Section 13 of Chapter 75 of the Massachusetts General Laws, as amended. Initial and continuing costs are very important, but are not the only factors to be considered. Each qualified proposal will be evaluated by the University review team to determine the degree to which the proposal is compliant with defined University technical requirements. Only proposals that attain a minimum of 70% of all established points AND that provide solutions to ALL “mandatory” requirements will be evaluated for pricing.

1.3 Vendor Omissions

1.3.1 Mandatory Responses

Vendors are expected to provide specific, concise responses to all RFP specifications defined as “Mandatory”. The omission of a response to a “Mandatory” specification may be deemed as a material failure by the University and lead to the disqualification of the submitted proposal.

1.3.2 Optional Responses

Vendors are not required to recommend solutions defined as “Optional”. Vendors should be aware, however, that the University has defined a weighting structure that encourages vendor solutions to be aggressive with respect to delivering added value to the campus over the duration of the system’s useful life. Vendors that choose not to respond to an “Optional” specification should check the box entitled “No Response” that is provided with each “Optional” specification.

Vendors are cautioned, however, that all “Optional” items responded to must include pricing for the item in the sealed pricing document.

1.3.3 Equipment and Component Inclusions

The University is presenting what is considered a functional specification for vendor responses. We make no attempt to provide specific technical requirements other than those affiliated with sound telecommunications engineering practices. As such, all design and operational hardware, software, and firmware requirements are the sole responsibility of the vendor. By submitting a response, the vendor assumes full
responsibility for delivering a complete system to the campus, fully compliant with the functional requirements contained in this bid document.

This includes the assurance that the submitted pricing contains all pricing elements that support the proposed design. In the event that the vendor proposes a solution that omits component pricing elements, the University will assume that such pricing omissions represent a deliberate choice by the vendor and that the proposed solution will be implemented at no additional cost to the Campus.

1.3.4 Forms

The University is providing specific forms for vendor use in submitting responses. Where provided, such forms are mandatory and vendors must utilize them in their responses. The use of these forms provides a mechanism to assure the University that vendor submissions are evaluated from a common perspective and therefore, are an essential component of this RFP.
1.4 Qualification for Acceptance

The RFP is established as the procurement vehicle to establish the specific vendor system recommendations. It contains both the technical specifications and the weighting criteria to be used by the University in assessing the vendor compliance with the RFP. Vendors are cautioned to remember that a minimum evaluated point attainment of 70% in the RFP response must be reached in order to qualify to have their bid response accepted for pricing considerations.

Specifications identified within the RFP document that are marked “mandatory” are deemed to be essential to selecting a new system that will meet the requirements of the University. Proposals that do not address defined “mandatory” requirements may be disqualified at the University’s sole discretion.

Vendor responses must provide a separate, sealed pricing proposal in addition to the actual technical proposal itself. The Pricing proposals will be returned to the vendor unopened for those vendors whose proposals failed to reach minimum compliance with technical requirements.

The University is providing specific price sheets that must be used during the RFP. These sheets will provide specific places for specific prices and are deemed to be a “mandatory” submission with each proposal.

This evaluation process is established to ensure the University that the vendor can provide both a sound technology platform and a sound business partnership that will be fully compliant with the intent and the specific requirements of the RFP.

Each vendor response will be rated based on the assigned point value of each identified bid response element. The point assignments are contained in the RFP wherever points will be awarded. Vendors demonstrating a superior understanding of the University’s mission, goals, objectives, and technology concerns, and which provide a definitive, concise solution will be awarded higher scores than vendors with generalized responses. With the exception of points awarded for vendor’s Demonstration Plans, which may be changed as a result of the vendor’s actual performance during the demonstration (if requested by the University), all vendor ratings are considered final and are not subject to any appeal or protest.

Responding vendors will be provided an evaluation of their response if desired.

1.5 Ownership

Ownership of the switching platform, although desirable from an operations and direction perception, is not mandatory. The University’s mission is clearly one that must be supported by a robust technological platform. Such a platform will need to be under the daily supervision of the University personnel accountable for the technology support of the academic mission. We believe, therefore, that accountability for the direction and operation of the technology platform must reside with the University, regardless of the actual ownership of the technology. This accountability should not be interpreted as a desire by the University to develop an internal personnel group to provide technical management of the system. It is expected that the vendor will provide such technical personnel during the contract period, and any University personnel involved with the technical delivery of service related to the switch will be in support of the vendor’s efforts.

1.6 Demonstration
The University may request a demonstration of selected (none, any, or all) vendor’s proposed solutions. The basic demonstration requirements are established by the University in this RFP. The Demonstration Plan provided by the vendor is weighted as a part of the RFP, but the points initially awarded to vendors during the evaluation period may be changed as a result of the execution of their Plan. Demonstrations within New England will be attended at the University’s expense. Demonstrations outside New England will only be attended if the vendor agrees to reimburse the University for the cost of travel and lodging.

1.7 Implementation

The implementation plan included in the vendor’s RFP response will be the basic plan that will drive the overall deployment process. The University expects to be a regular participant in the implementation process, especially in relation to approving details of the plan in terms of schedule, resources, and costs. The University retains the right to review and amend specific building, system, or component implementation plans prior to their execution. Changes in implementation plans that result in cost savings will directly accrue to the University. A change order process will be part of the implementation plan between the University and the vendor.

1.8 Key Success Indicators

To fulfill its mission, the University has defined five primary areas that must be satisfied by the solution to this procurement. These criteria are critical and should be addressed in definitive terms throughout the vendor’s response.

1.8.1 Prime Vendor

The University does not wish to be a systems integrator with the technology solution offered by the vendor. It is mandatory that the vendor solution be a turnkey plan, with all subcontractor relationships directly under the control of the vendor. The vendor will be required to install and/or maintain (or replace at their cost) all proposed components during the life of the contract, even in the event of a subcontractor business dissolution. Should any subcontractor-supplied component be discontinued during the contract resulting in a catastrophic failure (the system is unable to perform the functions based on its design), the prime vendor will be responsible for obtaining replacement parts, maintaining, and/or replacing the system at their cost.

1.8.2 Switching Platform

It is mandatory that the core switching system proposed by a vendor be an all-digital, non-blocking or virtually non-blocking system capable of seamless expansion to approximately 10,000 ports during the life of the contract. Although not mandatory, vendors may opt to propose an IP-PBX solution. Vendors proposing such a solution must adhere to all other requirements in this procurement.

The switching platform must provide a distributed environment with redundant connections to local carrier facilities. The actual design of such a system will be the responsibility of the vendor. The University is specifying a distributed design; the vendor must provide such a design based on the unique characteristics of their products.

In the situation where UMass has remote campus facilities, each vendor must consider the design specifications of their products in responding to the RFP. The University will not define the number or size of remote switches or nodes, however, all such nodes must be capable of establishing trunk connections (requires the addition of appropriate trunk cards or components only, does NOT require additional cabinets or switching components to...
activate) with local carrier facilities. Vendor proposals must clearly define what trunking connections are actually proposed versus what the remote node/switch is capable of.

### 1.8.3 Integration with Existing University Call Accounting System

The University presently utilizes a Call Accounting subsystem that must be considered by responding vendors in this RFP:

The call accounting system used by the University of Massachusetts Lowell is called “Microcall for Windows” from Micro-Tel of Norcross Georgia. It has a GUI similar to Windows. The University upgrades annually which covers all maintenance costs.

It is expected that responding vendors will assure the University that the functionality of the system is compatible with a direct data feed from their proposed solution.

### 1.8.4 VoiceMail

Faculty, Staff and Students use a 48-port PulsePoint voice mail system co-located in the Cumnock Hall switch room. It was installed in 1997 as a Digital Sound system before being purchased by PulsePoint. The voice mail system is supported and maintained by our current PBX supplier under contract. It is connected to the PBX by a T1 trunk. We currently run over 20 departmental menus with the Call Controller feature of this system. We also use Call Controller as our Automated Attendant after hours.

Administrative mailboxes are almost one-to-one with administrative telephone lines.

It is anticipated that responding vendors will address connections with this subsystem in one of two ways, each of which will be solely at the discretion of the vendor. The University will not specify the direction for vendors. Options include:

- The proposal of a new integrated VM system, either as an adjunct OEM application, or as a designed component of their system.
- The proposal of a unified messaging system, providing voice, text, electronic, and video messaging capabilities, including standard voicemail functionality.

Vendors are cautioned to carefully evaluate their proposals for VoiceMail services.

### 1.8.5 Telemanagement Capability

Ongoing management of the system will be a major factor in the final selection of a vendor proposal. The basic functionality must include:

- **Configuration**: Embodies most of what the ISO and other standards bodies categorize as configuration management. This addresses all aspects of getting the system properly set-up and running, ideally via an efficient and intuitive interface, which clearly shows all appropriate set-up options and, for each, provides concise on-line help and/or context-sensitive on-line documentation.

- **Logs And Event Reporting**: Embodies much of what the ISO categorizes as fault management, and is the system’s ability to detect, track and record abnormal or noteworthy “events,” which includes alarms and/or traps. Such events are typically retained in a log or logs, which the administrator needs to be able to readily locate, view and perhaps export. The log needs to capture appropriate events, and will ideally be tailorable or sortable. In all cases, log events need to be decipherable and readily understandable by the administrator.

- **Real-time Monitoring**: A user should be able to check on system activity and the status of key system resources in real time. We include in this category any capabilities for conducting diagnostic tests. Aspects that warrant real-time monitoring include the status of analog and
digital trunks, including their level of utilization, bandwidth utilization and the relative quality of the network transport.

Reports: This category addresses the administrator’s ability to process potentially large volumes of system data collected over a long term, and to produce concise, intelligible summary output. Reports typically address records of utilization, long-term “statistics,” activity and call detail records (CDR).

1.8.6 Implementation

A detailed implementation plan is required. The plan must specify all critical system milestones and be completely feasible. Milestones will be accompanied by distinct “deliverables” (a document or other written statement confirming the occurrence of the event), which must be signed off by the University to signify that the milestone was met satisfactorily. A fully compliant and completed Implementation Plan will be considered essential to accepting the final system.
2.0 Background

The University of Massachusetts Lowell, one of five campuses of the University of Massachusetts, overlooks the Merrimack River in the historic industrial city of Lowell, just 25 miles northwest of Boston. Programs are offered in the arts, humanities, and sciences; education; engineering; health professions; and management. Students may pursue bachelor’s, master’s and doctor’s degrees as well as professional certificates.

UMass Lowell consists of three campuses, located on either side of the Merrimack River in Lowell, a city of 110,000. The North Campus covers 65 acres with 25 buildings and is home to the colleges of Engineering, Management and the science portion of Arts and Sciences. South Campus covers 40 acres and houses the colleges of Health Professions and the arts portion of Arts and Sciences. The Graduate School of Education, currently located on West Campus in Chelmsford, will be moving to South Campus in the spring of 2003.

UMass Lowell athletics is an NCAA Division II program with Division I Ice Hockey. UMass Lowell River Hawks sponsors 17 varsity sports, competes in Hockey East and the Northeast 10 conference.

UMass Lowell was founded in the 1890’s as the Lowell Normal School (1894) and the Lowell Textile School (1895). Over the next 75 years, degrees were added at the Lowell Normal School in health professions, liberal arts, music, and the sciences changing its name to Lowell State College. Lowell Textile School added offerings in engineering, technology and business administration, changing its name to Lowell Technological Institute. The two schools merged in 1975 for the University of Lowell. In 1991, the campus became part of the University of Massachusetts system.

The University’s mission is to provide an affordable education of high quality and conduct programs of research and public service that advance our knowledge and improve the lives of the people of the Commonwealth.

The University of Massachusetts Lowell PBX is an Intecom S80 installed in 1989. It currently has over 5,000 active ports providing dial tone to the campus. The Intecom S80 consists of 19 cabinets in seven locations on three geographically separate campuses in the city of Lowell and neighboring Chelmsford.

Students currently have digital phone sets in their rooms maintained by Intecom under contract. There are 1,151 student phones in the Residence Halls. All Residence Hall phones will be changed to analog with the execution of this RFP.

Almost all phones have voice mailboxes on a PulsePoint (formerly Digital Sound) voice mail system. The 48-port voice mail system is connected to the PBX via a T1. There are over 20 menued systems on the Call Controller portion of the voice mail. The after hours automated attendant is part of Call Controller.

Microcall® for Windows is our Telemanagement Software. We upgrade annually and maintain the software locally.
3.0  Bid Process

3.1  Bidders Responsibilities

3.1.1  Preparation of Bids

All bids must be sealed and submitted to the Procurement Department (See Exhibit I for instructions). Telephone and/or Fax bids will not be accepted. Vendor’s technical proposals and cost proposals may be submitted as one package; however, each must be submitted in a physically separate package that enables the University to hold all cost proposals unopened until technical evaluations have been completed. Only proposals that meet the minimum standards for technical compliance will be considered for pricing evaluation. Vendor proposals not meeting the minimum technical requirements will not be considered for an award.

Bids must be signed in ink and cost typewritten or in ink. Facsimile signatures are unacceptable. Bids that are priced or signed in pencil will be rejected as non-responsive. Bidders are cautioned that the person signing the bid proposal or his/her authorized designee must initial errors, alterations, or corrections on the submitted bid. Failure to do so may result in rejection of the bid for those items erased, altered, or corrected and not initialed.

3.1.2  “Certification of Tax Status – Affidavit of Compliance”

Pursuant to Massachusetts General Law, Chapter 62C, Section 49 A, the bidder certifies under penalties of perjury that to the best of the bidder’s knowledge and belief, they have filed all state tax returns and paid all state taxes required by law (see Exhibit A).

3.1.3  “Commonwealth of Massachusetts Request for Verification of Taxation Reporting Information”

Pursuant to IRS regulation, vendors and customers must furnish their Taxpayer Identification Number (TIN) to the Commonwealth. Vendors must complete, sign and return this form (see Exhibit B).

3.1.4  Bidder’s Representations:

Each bidder by making its bid represents that:

• The bid document and specifications have been read and understood by the bidder,
• The bid is based upon the items described in the bidding documents and specifications without exceptions,
• The bid has been arrived at independently and is submitted without collusion,
• All submitted responses contain appropriate pricing components, and, in the event that such pricing elements are not contained in the proposal, the vendor represents that there are no pricing components for the element in question,
• The contents of the bid have not been disclosed by the bidder nor to the best of its knowledge and belief, by any of its employees or agents, to any person not an employee or agent of the bidder, and will not be disclosed to any such person prior to the opening of the bids, and
• No attempt has been made or will be made to induce any other person or firm not to submit a bid or proposal.
3.1.5 Conflict of Interest:

The University of Massachusetts may, by written notice to the bidder/vendor, terminate the right of the bidder/vendor to proceed under the agreement if UMass determines that gratuities in the form of entertainment, gifts, or otherwise were offered or given by the bidder/vendor, or agency or representative of the bidder/vendor, to any officer or employee of UMass with a view towards securing the agreement or securing favorable treatment with respect to the awarding or amending of the making of any determinations with respect to the agreement and as set forth in M.G.L. c.268A.

3.1.6 Bid Documents:

One (1) original, one diskette or CD (electronic MS Word/Excel 97) and four (4) additional hard copies of the proposal should be submitted in a sealed package to:

University of Massachusetts Lowell  
Procurement Department  
883 Broadway Street, Suite 200  
Lowell, MA 01854-5105  
Attention: M. Jeanne Tremblay, Director of Procurement

Outside of package should be marked with the following information:

Proposal for: UMass, Lowell, PBX Replacement  
Bid Response Date: June 6, 2003  
Proposal Number: UML-LL030008

3.1.7 Bid Opening:

Proposals will be accepted until 11:00 am, Friday, June 6, 2003 at the Procurement Department, at which time there will be a public opening. Proposals received after that date and time will not be considered. It is the bidder’s responsibility to see to it that this condition is met. Receiving at our central mailroom or receiving dock is NOT acceptable. Please allow for possible internal mail delays in getting your bid to Procurement. No award will be made at time of bid opening. If sending proposals via FedEx, UPS etc. please send Direct – Desk-to-Desk delivery.
3.2 "Questions

All questions a bidder may have concerning this “Request for Proposal” document should be directed to M. Jeanne Tremblay, Director of Procurement. All questions should be submitted electronically to Jeannie.Tremblay@uml.edu prior to May 7, 2003. Questions and answers will be posted to the Procurement website (http://www.uml.edu/procurement/index.htm) on May 16, 2003.

The University reserves the right to amend, alter, or cancel the bid at any time prior to the deadline for submissions of bids. If such action is necessary, all potential bidders who have received or requested a copy of the bid will be notified of the changes to be made in writing and whether the bid opening date will be extended.

3.3 "Modifications or Withdrawal of Bids

Any bid may be withdrawn or modified prior to the date and time stated in the bid for the opening of bids. Such withdrawal or modification may be either in writing and signed by an authorized representative of the bidder, or made in person at the Procurement Department provided in the latter case that adequate identification is shown by the bidder or his authorized representative. Telegraphic withdrawals, but not modifications, will be accepted, provided written confirmation by the bidder, is mailed and postmarked on or before the date and time set for the bid opening.

3.4 "Contractual Terms

Enclosed herein please find a copy of the actual Commonwealth of Massachusetts Standard Contract for Services that will be used by UMass to finalize the contract process with the chosen vendor (see Exhibit C). Additional paperwork is included that is required by the bidder in order to do business with the Commonwealth of Massachusetts (see Exhibits). Failure to accept these documents may deem the bidder as non-responsive. The payment terms are net 45 days. Net terms for periods less than 30 days may result in bid rejection. (You may offer cash discounts for prompt payment).

3.5 "Late Bids

Late bids will not be considered. Bids must be in the Procurement Department before the date and time specified. Postmarks are not considered in determining late bids. However, should a late bid be the only response and if the bid is also postmarked prior to the date and time of bid opening, Procurement may choose to make award to the bidder if it is determined that acceptance of the late bid is in the best interest of UMass. When no bids are received, or no qualified bids are received, in urgent circumstances the Procurement Department may make an award based upon informed competition and without advertising. In the event the University is closed due to weather bids will be accepted up until 24 hours later.
3.6 **Award**

Award shall be made to the vendor(s) who most closely meets the needs of the University based upon its selection criteria.

A University review team has been established consisting of administrative personnel who will review all proposals and select the vendor that offers the cost and capabilities that are in the best interest of the University of Massachusetts.

The right is reserved to reject any and all bids, to split bids between vendors, to omit an item or items, or to accept any proposal deemed best for the University of Massachusetts.

The University of Massachusetts reserves the right to waive technicalities, irregularities, and omissions, if in the opinion of the Procurement Department they are insubstantial and to do so will serve the best interest of UMass.

The Procurement Department reserves the right to make an award within one-hundred and twenty (120) calendar days from the date bids are opened, unless otherwise specified in the bid. Bids from vendors must be valid for 120 days.

Generally, notification of award to the successful vendor is accomplished by means of a purchase order. However, the vendor receiving this award will receive written notice and be required to enter into a formal contract.

If the awardee fails to sign the proffered contract after award, the Procurement Department may determine that the awardee has abandoned the contract and shall be free to make an award to another vendor. In such a case, the Procurement Department may also choose to debar the awardee from bidding on future requirements of UMass.

3.7 **Debriefing**

Any Vendor may request a debriefing within one (1) week after receiving notification of award, to discuss the University review team’s evaluation of its bid proposal. Request for debriefing shall be made in writing to the Procurement Director. Debriefing shall not include discussions of any competing bids.

3.8 **Freedom of Information**

All proposals received are subject to Massachusetts General Laws Chapter 4, Section 7, Subsection 26, and Chapter 66, Section 10 regarding public access to such documents. Statements or endorsements inconsistent with those statutes will be disregarded.

3.9 **References**

The University of Massachusetts reserves the right to contact by phone or to arrange a site visit, with any or all of the respondent’s clients, which are of the same size and scope as that of UMass. UMass contact may be made without the assistance of the respondent.

3.10 **Pre-Bid Vendor Meetings**

Vendors should carefully review the RFP to determine what specific additional data they believe they will require to prepare a quality, detailed technical proposal for the University. A complete list of questions should be developed and submitted to the University prior to the execution of on-site visits. Information and/or site visit requests outside the scope of the initial visit will be individually coordinated with the vendor team based on the availability of appropriate UMass staff. In no case will a delay in response date be provided due to vendor requests for additional on-site visits. The University will make a reasonable effort to accommodate all such requests, but cannot assure that all requests will be met.
Vendors may make arrangements independently to visit all existing switch rooms and inspect any pertinent cabling facilities in support of their bid preparation.

### 3.11 Key Dates

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<tr>
<th>Activity/Item</th>
<th>Date</th>
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<tbody>
<tr>
<td>Request For Proposal (RFP) Release</td>
<td>April 24, 2003</td>
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<tr>
<td>Vendor Requests for Additional Information Due</td>
<td>May 7, 2003</td>
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<tr>
<td>Vendor Conference (optional) South Campus, O’Leary Library, Room 222</td>
<td>3:00 P.M. May 12, 2003</td>
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<tr>
<td>Questions and Answers posted to Procurement Website</td>
<td>May 16, 2003</td>
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<tr>
<td>RFP Responses Due</td>
<td>11:00 A.M. June 6, 2003</td>
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<tr>
<td>Selected Vendor Demonstration(s)</td>
<td>June 16-20, 2003</td>
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<tr>
<td>Notice of Intent To Award</td>
<td>June 27, 2003</td>
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<tr>
<td>In-Service Date</td>
<td>January 12, 2004</td>
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<td>Target Acceptance Date</td>
<td>February 12, 2004</td>
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4.0 TERMS AND CONDITIONS

4.1 Contractor's Certification

Contractor certifies that this Contract is in full compliance with all applicable regulations and requirements of law, as set forth herein. Contractor further certifies under the pains and penalties of perjury that pursuant to M.G.L. c.62C, s. 49A, that the Contractor has filed all state tax returns, paid all taxes and complied with all laws of the Commonwealth relating to taxes; and that pursuant to M.G.L. c.151A, s.19A(b), has complied with all laws of the Commonwealth relating to contributions and payment in lieu of contributions to the Employment Security System; and with all laws of the Commonwealth relating to Worker's Compensation, c. 152. The Contractor also represents that (s)he/it is qualified to perform the described service(s) and has obtained all requisite licenses and permits, as may be required, to perform those services.

4.2 Liability

Vendor agrees that UMass will not be held responsible for any loss due to theft or damage to material provided by Vendor pursuant to the agreement.

Vendor shall be responsible for compliance with all safety and security rules and regulations of UMass during the conduct of its performance of the agreement.

Vendor shall be obligated to comply with all federal, state and local laws, rules and regulations that may pertain to the agreement.

4.3 Compliance with Laws and Indemnification of University

The Contractor shall comply with all applicable laws, rules, regulations, ordinances, orders or requirements of the Commonwealth and any governmental authority relating to the delivery of the services specified in this Contract. The University may require the Contractor to pay fines, penalties, and damages that may arise out of or may be imposed because of, the Contractor's breach or failure to comply with the provisions of this Contract. Unless otherwise provided by law, the Contractor shall indemnify and hold harmless the Commonwealth, the University, its agents, officers and employees against any and all liability, loss, damages, penalties, costs or expenses for personal injury or damage to real or tangible personal property which the University may sustain, incur or be required to pay, resulting from, arising out of, or in connection with the services performed or delivered under this Contract by reason of acts, inactions, omissions, negligence, reckless or intentional misconduct of the Contractor, its agent(s), officers, employees or subcontractors; provided that the Contractor is notified of any claim within a reasonable time after the University becomes aware of it, and the Contractor is afforded an opportunity to participate in the defense of such claim. In such event, no negotiated settlement agreement shall be binding on the Contractor without the Contractor's concurrence.

4.4 Term

The term of the initial award will be for thirty-six (36) months, beginning on the date that all formal acceptance tests have been satisfactorily performed and results have been accepted by the University. Renewal terms are possible for a period of twenty-four (24) months each.

A maximum of three (3) renewal terms are possible under this RFP/agreement.

A vendor review will occur quarterly based on the service level agreement. A vendor evaluation will occur annually. A negative evaluation will be sufficient reason for the university to invoke contract termination as described in section 4.5.

4.5 Termination

4.5.1 Conditions and Timing
This agreement will terminate on the date specified in the Period of Performance Section of the contract unless renewed as allowed by applicable regulation or policy, or unless terminated upon any of the events or conditions set forth.

The agreement may be terminated without cause by either party by giving written notice to the other at least three hundred and sixty five (365) calendar days prior to the effective date of termination stated in the notice. If Contractor fails to fulfill his/her obligations, the University may terminate this agreement by giving written notice to the Contractor at least seven (7) calendar days before the effective date of termination stated in the notice. Upon termination of the agreement, as provided herein, UMass shall be obligated only to pay for services rendered up to the date of termination. UMass shall have no other obligations whatsoever under the agreement.

Notwithstanding the foregoing, UMass may terminate the agreement immediately in the event the Vendor engages in any misconduct or neglect of its duties as described herein.

Furthermore, notwithstanding any of the provisions of the agreement, if a receiver, liquidator, or trustee of Vendor shall be appointed by court order or petition to reorganize, shall be filed against vendor under any bankruptcy, reorganization or insolvency law, or Vendor shall file a petition in voluntary bankruptcy or make an assignment for the benefit of creditors, then UMass forthwith may terminate the agreement immediately upon written notice to Vendor.

4.5.2 UMass Options in Event of Termination

Upon termination, all finished or unfinished documents, data, studies, materials, tools, and appliances maintained by the Contractor pursuant to this Contract, shall become the property of UMass.

Upon termination for cause, UMass may take possession of the premises and all materials, tools, and appliances thereon which support the UMass Information Technology System in order to maintain its system. In such case the Contractor shall not be entitled to receive any further payment. The contractor shall pay all expenses incurred by UMass to establish its Information Technology System in another environment.
4.6 **Assignment by Contractor & Subcontracting**

The Contractor shall not assign or in any way transfer any interest in this contract without prior written consent of UMass, nor shall the Contractor subcontract any services without prior written approval of UMass.

4.7 **Notices**

All notices shall be mailed U. S. Mail, postage prepaid.

4.8 **Governing Law**

This agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts.

4.9 **Tax Exemption**

Any material purchased by the University of Massachusetts is to be exempt from Massachusetts Sales Tax (Massachusetts Sales Tax Exemption Number 043-167352).

4.10 **Nondiscrimination in Employment and Affirmative Action**

The Contractor shall not discriminate against any qualified employee or applicant for employment because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Contractor agrees to comply with all applicable Federal and State statutes, rules and regulations prohibiting discrimination in employment including but not limited to: Title VII of the Civil Rights Act of 1964; the Age Discrimination in Employment Act of 1967; Section 504 of the Rehabilitation Act of 1973; the Americans with Disabilities Act of 1990; and M.G.L. c.151B.

4.11 **Record Keeping, Audits, & Inspection of Records**

The Contractor shall maintain books, records, documents, and other compilations of data pertaining to the requirements of the contract to the extent and in such detail as shall properly substantiate claims for payment under the contract. All such records shall be kept for a period of six (6) years. All retention periods start on the first day after final payment under this contract. If any litigation, claim, negotiation, audit or other action involving the records is commenced prior to the expiration of the applicable retention period, all records shall be retained until completion of the action and resolution of all issues resulting therefrom, or until the end of the applicable retention period, whichever is later. The Federal grantor agency, the University, or any of their duly authorized representatives or designees shall have the right at reasonable times and upon reasonable notice, to examine and copy, at reasonable expense, the books, records, and other compilations of data of the Contractor which pertain to the provisions and requirements of this contract.

Such access shall include on-site audits, review, and copying of records. Contractors providing services over $10,000.00 within a twelve (12) month period to the University of Massachusetts hereby consent to grant the Federal Controller General or HHS or their agents access to the Contractor's books, documents or records as per the Omnibus Reconciliation Act of 1980.

4.12 **Confidentiality**

The Contractor shall comply with all laws and regulations relating to confidentiality and privacy as defined by Massachusetts General Law (M.G. L). c66A, including but limited to any rules or regulations of UMass.

4.13 **Publicity, Publication, Reproduction and Use of Contract Products or Materials**
Unless provided otherwise by law or the University, title and possession of all data, reports, programs, software, equipment, furnishings, and any other documentation or product paid for with University funds shall vest with the University at the termination of the Contract. The Contractor shall at all times obtain the prior written approval of the University before it, any of its officers, agents, employees or subcontractors, either during or after termination of the Contract, makes any statement bearing on the work performed or data collected under this Contract to the press or issues any material for publication through any medium of communication. If the Contractor, or any of its subcontractors, publishes a work dealing with any aspect of performance under the Contract, or of the results and accomplishments attained in such performance, the University shall have a royalty-free non-exclusive and irrevocable license to reproduce, publish or otherwise use and to authorize others to use the publication. The Contractor shall use reasonable means to inform the public that the University provides financial support for its operations and services by explicitly stating on publicity material, stationery, posters and other written materials, and on its premises the following: “This program is supported in part (in full) by the Commonwealth of Massachusetts, University of Massachusetts.”

4.14 Political Activity Prohibited, Anti-Boycott Warranty

The Contractor may not use any Contract funds and none of the services to be provided by the Contractor may be used for any partisan political activity or to further the election or defeat of any candidate for public office. During the term of this Contract, neither the Contractor nor any controlled group, within the meaning of s.993 (a) (3) of the Internal Revenue Code, as amended, shall participate in or cooperate with any international boycott, as defined in s.999(b) (3) and (4) of the Internal Revenue Code of 1954, as amended; nor shall either engage in conduct declared to be unlawful by M.G.L. c.151E s.2.

4.15 Protection of Property

The Contractor shall at all times safeguard the University property from injury or loss in connection with this contract and continuously maintain adequate protection of his work from damage.

The contractor shall be responsible for all breakage, and damage to property (real and personal) that may occur as a result of fault, negligence, or nonperformance of duty on the part of its agents, subcontractors, or employees in connection with the performance of the work specified in the contract. Repair or replacement of any such damage shall be commenced by the Contractor within two (2) days of notification of such damage, and shall be completed expeditiously to the satisfaction of the University.

4.16 Insurance

Contractor shall provide insurance in standard amounts to its employees and agents to cover Workman's Compensation, Contractor's Public Liability and Property Damage Insurance, and any other insurance, which may be necessary for the performance of the work under the agreement.
5.0 Evaluation of Proposals

5.1 Methodology

Each proposal will be evaluated by the University review team against the following criteria to determine which vendor(s) are most capable of meeting UMass Lowell requirements.

- Ability to meet listed conditions
- Demonstrated ability and past experience to provide the services requested
- References
- Cost

Each proposal will be evaluated from two perspectives to determine the degree of technical compliance. First, the proposals will be evaluated on their individual merit. There will be no comparisons with other proposals during this phase. Each item submitted in the proposal will be evaluated and the University review team will make an initial assessment of point attainment. Bidders should note that merely responding to an item will not guarantee attainment of all available points. It is solely up to the proposer to assure that answers are clear, and explanations easily understood. Responses that contain complex technical language or that fail to adequately describe how the bidder proposes to satisfy the functional requirement will be awarded less points than those that fully explain the bidder’s proposed solution in a clear, easy to follow format.

Second, the University review team will evaluate the relative value of each proposed solution, item by item, comparing the specific item under consideration across all proposed solutions. The team will then rank the vendor’s proposals based on the ability of the vendor to effectively communicate the strengths of their products and services. Based on these rankings the team will then make a final point assessment for each responding vendor, item by item.

At this point, vendor solutions that failed to reach the minimum point attainment to demonstrate an acceptable level of technical compliance with the University’s RFP will be disqualified, and pricing proposals will be returned unopened.

Those proposals deemed to meet the minimum level of technical compliance may then be asked to arrange for a live demonstration for the University review team. Points attained during the demonstration phase will be added to those attained during the evaluation of the proposal to determine the final points for each vendor.

At this time the University will have a public opening of the cost proposals at date and time to be determined. The “cost per point” calculation will be made at a later time. The vendor that achieves the lowest price per point will be considered as the “best value”, and the University will enter into contract negotiations with that vendor.

Example

The following information provides an example of how this evaluation method will be conducted:
## Point Attainment Evaluation

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Mandatory Points</th>
<th>Optional Points</th>
<th>Total Points Attained</th>
<th>% Total Points Attained</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5000</td>
<td>2900</td>
<td>7900</td>
<td>87</td>
<td>Demonstration</td>
</tr>
<tr>
<td>B</td>
<td>4500</td>
<td>2550</td>
<td>7050</td>
<td>78</td>
<td>Demonstration</td>
</tr>
<tr>
<td>C</td>
<td>3000</td>
<td>1800</td>
<td>4800</td>
<td>53</td>
<td>Disqualified</td>
</tr>
<tr>
<td>D</td>
<td>3550</td>
<td>1950</td>
<td>5500</td>
<td>61</td>
<td>Disqualified</td>
</tr>
<tr>
<td>E</td>
<td>4900</td>
<td>2950</td>
<td>7850</td>
<td>87</td>
<td>Demonstration</td>
</tr>
<tr>
<td>F</td>
<td>4450</td>
<td>1850</td>
<td>6300</td>
<td>70</td>
<td>Demonstration</td>
</tr>
</tbody>
</table>

### Cost per Point Calculation

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Total Points Attained</th>
<th>Proposed Price</th>
<th>Price per Point</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4600</td>
<td>$1,925,000</td>
<td>$418.48</td>
<td>2</td>
</tr>
<tr>
<td>B</td>
<td>4450</td>
<td>$1,800,000</td>
<td>$404.49</td>
<td>1</td>
</tr>
<tr>
<td>E</td>
<td>4850</td>
<td>$2,200,000</td>
<td>$453.61</td>
<td>4</td>
</tr>
<tr>
<td>F</td>
<td>4200</td>
<td>$1,787,500</td>
<td>$425.60</td>
<td>3</td>
</tr>
</tbody>
</table>

In the above example, Vendor B would be the first company to engage in contract/award negotiations with the University. This decision would be based on the following conclusions:

1. The total point attainment assures the University that the proposed solution is compliant with the defined technical requirements.
2. The system was successfully demonstrated.
3. The cost offered the “best value” to the University, i.e., the greatest amount of technology for the least cost.

In this example, vendors should notice:

- The proposal with the highest degree of technical compliance (Vendor E) attained that level at a high cost, and was therefore the least cost effective in providing an acceptable solution to the University.
- The proposal with the least cost (Vendor F), attained that level at a low technical performance, and was therefore unable to provide the best value.

### 5.2 Definitions

#### 5.2.1 Mandatory

Items in this procurement that are deemed essential and non-optional to its success are specified to be “Mandatory”. Such items may be Administrative and/or Technical in nature. A failure to comply with a mandatory requirement may be considered adequate reason to disqualify a vendor from further participation in this procurement. Statements such as “(Vendor name) has read and understands this requirement and is in compliance” are considered inadequate in responding to technical specifications. **It is the vendor’s sole responsibility to demonstrate compliance in the response through clearly stated and easily understood written documentation, not to simply state that compliance is provided or attained. This cannot be overemphasized.**

Mandatory items are expected to be ordered by the University in fulfillment of our responsibility to implement the recommended design.
5.2.2 Optional

The University recognizes that in some cases, specifications will provide benefit, but are not critical to the final system’s operation or acceptance. These items are classified as “Optional”. Individual vendors may identify areas defined “optional” that may deliver significant benefit to the University at little or no cost that they (vendors) chose to include to improve their overall point attainment while keeping their expected costs down. The University encourages creativity in the system design to achieve such benefit. The weighting of such specifications does not exceed 10% of the total assigned to the RFP. The merit of each such item as it pertains to an award and/or order by the University is the sole right of the University. All vendor-submitted costs will be evaluated during the RFP, whether or not the final award includes these items in the contract or Statement Of Work executed.

5.3 Weighting

The University has defined a method for communicating its expectations to potential bidders. The weighting matrix is provided as Exhibit F. Using this matrix as a guide, vendors can ascertain the relative importance of various functional requirements and develop a proposal strategy uniquely suited to the strengths of their systems. The University review team will conduct evaluations of the vendor’s proposals, and their findings regarding the point attainment are final and not subject to appeal or change.

Vendors are cautioned to pay careful attention to the weighting matrix and assure themselves that their proposals provide an optimum mix of equipment and services in order to be competitive during the cost evaluation.
6.0 Vendor Information

6.1 Vendor Overview

Please provide the following:

- The name and location of your company, both corporate and local branches.
- A brief general description of your business.
- How many years has your company been in business?
- Is your company a subsidiary of another corporation? If so, what is the name of the parent company? How long has this relationship been in effect?
- Please explain your strategy for developing new products and product enhancement, including information on the current status of your product, upcoming planned enhancements and release dates for future releases.
- How many personnel does your company employ? Please describe the breakdown by functional areas in your company, both corporately and for the branch location directly serving UMass Lowell.
  - Sales:
  - Software Support:
  - Software Development:
  - Operations and maintenance:
  - Installation and on-site technical support:
  - Back up technical support:
  - Trouble reporting and response:
  - Other:
- Please provide any professional certifications relevant to this RFP.
7.0 CLIENT BASE

Provide specific reference information for three organizations currently using a configuration similar to the one being proposed to include:

- Organization name and location
- Starting date of service
- Relevant volume statistics
- Contact name, title and telephone number
- List specific sales made in the last 36 months for systems similar in nature to that being proposed to serve UMass in this proposal, identify the number and name of higher education clients, and purchase date.
8.0 SCOPE OF PROJECT

8.1 General Requirements

The basic telecommunications platform defined in this procurement must provide up to 10,000 nonblocking voice or circuit switched data ports in its final configuration. The initial system must provide for 5,500 station ports (3,250 digital ports and 2,250 analog ports), with trunking to the Public Switched Telephone Network (PSTN) not to exceed a blocking rate greater than 5 calls out of 100 attempts during the busy hour of the average day. For purposes of estimating the “busy hour” traffic load, vendors should assume that 18% of the University’s total traffic is carried during the busy hour of the business day. Vendors will be expected to specify the quantity, type and node connections for all recommended trunks in their proposal, and to provide the calculations that resulted in their specific trunking recommendations.

A high degree of distributed switching capability is desired to utilize the fiber optic cable infrastructure in place at UMass. Off-campus applications may be distributed using digital trunking facilities, fiber optic cable, wireless, or single-line services, with the inherent services available in the core switch being transparently available to the user, whether on or off-campus.

The core switching system must be all digital. It must be supported by international software standards for both information processing and distribution. The infrastructure must carry digital voice, data and video signals transparently throughout the system. System functions and features must be uniformly available to all users based on class of service restrictions. Generally, the University does not have an existing requirement for high quality video conferencing using the PBX as a transport system. The inclusion of “video” is intended to convey that Video over IP applications should be readily accommodated within the vendor’s basic solution and not require sophisticated adjunct equipment or processors.

Station equipment must be equally available to analog, digital, or ISDN users with no special conditioning other than a change in port cards at the shelf level.

The system must be capable of supporting remote nodes that can act as stand-alone service points in the event of a central node failure.

All new switching equipment will be required. All vendors must contractually implement new software releases at no cost to the University during the initial 15 months of the contract period.

The primary switching node, (regardless of its location) must have a minimum of two (2) hours reserve power. Node services provided at Cumnock Hall will require a backup power system to allow for two (2) hours of continuous operation in the event of a commercial power failure. The University has emergency generator services at the building identified above, and although the vendor system will receive power from such alternative sources, the requirement for two hours reserve power is independent of the backup power supplied at these locations with connection to the University’s own emergency power source. Distributed switch nodes must also be supported by a minimum of two hours reserve power. All reserve power must be provided from a commercially available Uninterruptible Power Source (UPS) or by an acceptable alternative.

Both North American and International dialing standards capability must be demonstrable.

Vendors will be expected to provide a simple single-line block drawing of their proposed system as well as detailed working schematics for each primary node in their design. The detailed design must include the proposed physical layout of each primary node, including the specific number of cabinets, racks, power supplies, UPS (or alternative reserve power), and all cross-connect backboard spaces.
System redundancy (see narrative below) is required to assure system reliability and availability. Alarms must be simultaneously displayed at the switching system, the campus management office, and at the vendor’s primary operations center.

The University recognizes that different vendors will interpret the terms “redundant or redundancy” in the context of their own system capabilities. From the University’s perspective, the issue of redundancy is simple. Vendor solutions must demonstrate the capability to provide full service (no, or only marginal change in the call carrying capacity) down to at least the shelf level in any configuration if a redundant component is placed in service because of a failed primary component. The University is not interested in defining redundancy in terms of busses, power cards, or system components used in vendor solutions. Rather, we are focused on maintaining service level capabilities using redundant components that essentially provide the University a service level that does not degrade with primary component failure. We recognize, and accept, that occasional failures at the port level will occur which may result in service degradation at the station or trunk level. We do not expect that such failures need to be covered by a redundant component.

Vendors may see the issue as one of survivability as opposed to redundancy. Such a view is clearly consistent with the University position that our concern is with the service level of the solution rather than the components that provide such assurance. The University evaluation of vendor solutions will favor vendors that provide greater service level assurances through the technical components of their proposed system.

Vendors will be required to provide a fully functional integrated E911 system that delivers originating caller telephone number and geographical location data to BOTH the PSAP and the Campus police department simultaneously. All costs for the system, including trunking and any ancillary system components must be included in the response.

Training for all users, whether administrative, student, staff, or technical must be a part of the vendor proposal.

Although the central reason for this RFP is the procurement and implementation of a current generation PBX, vendors may identify additional products and/or services (such as Call Center systems) that they feel may add value to their overall proposal. Vendors are cautioned however, NOT to include pricing for components that do not have any associated weighting points, AND to clearly submit such information as a separate submission to eliminate any concern that the proposed components would be “included” in their proposal and pricing for the PBX itself.

8.2 Core Switching System Requirements

8.2.1 Base Switching System

- Describe the base switching system technology proposed.
- Assure that all client issues in Section 8.1 are addressed.
- Include appropriate descriptions of the platform proposed
- Provide a schematic of the proposed switching platform in sufficient detail to allow the University to determine what components are provided within the system itself and where such components will be located
- Identify how the proposed platform will support the primary University mission.

Response Required: Mandatory

Points Assigned: 600
8.2.2 Standards

Vendors are expected to demonstrate a high degree of knowledge regarding applicable telecommunications standards supported by their system. Vendors should identify at a minimum all installation standards (i.e., grounding and termination) as well as transmission (voice, VoIP, Video, and various data standards) supported.

- List and describe all software and/or switching standards supported by the switching solution recommended.
- List and describe all transmission standards supported by the system
- List and describe all installation standards supported by the system and/or proposal

Response Required: Mandatory
Points Assigned: 250

8.2.3 Class of Service

“Class of service” capability enables the University to establish various service level options to assure that their constituents receive services appropriate to their needs. A class of service is a designation assigned to describe the service treatment and privileges given to a particular terminal or group of terminals with similar usage requirements.

- Describe the level of feature discrimination/provision possible through the use of class of service definitions.
- Define the number of classes of service provided with the proposed system

Response Required: Mandatory
Points Assigned: 75

8.2.4 Switching system status

Manufacture date

- Identify the year of product manufacture.

Generic software release proposed

- Identify the software release proposed.
- Identify the dates of the current and prior two software releases

Generic Software Updates

- Describe the process for assuring the University that manufacturer’s current generic software releases are incorporated into the base switching system. (If cost factors are to be included in the proposal, the University prefers that such costs be prorated monthly over the life of the contract).
- The vendor must address the method for implementing software releases which occur between the time the contract is awarded, but before the system is implemented, and within the first fifteen months of system operation after acceptance by the University.

Response Required: Mandatory
8.2.5 Reserve Power

- Describe the reserve power support recommended for both the central switching system and all remote switch components.
- If the University must provide additional reserve power capability, provide the specifications for such support:

  Response Required: Mandatory
  Points Assigned: 150

8.2.6 Standard Dialing Plan Compatibility

- Describe the methods in place to assure that both the North American, and International Dialing Plans are accommodated in the recommendation.

- Specifically, vendors must assure the University that their proposed solution is programmable to accommodate the International Telecommunications Union change from 12 to 15 digits used in an international call, and that such programmability is provided in the architecture proposed. The University cannot accept proposals that do not address this capability. Failure to provide a clear solution to this issue will result in the vendor assuming liability for all required dialing plan changes through the life of the contract with the University.

- Vendors should also address specific dialing plan issues for the following non-switch services:
  - Fax machines; modems
  - VoiceMail
  - speed call lists
  - cellular telephones
  - radio pagers
  - dial-up alarm circuits
  - automatic dialers
  - off-premises call forwarding
  - customer-owned pay phones

  Response Required: Mandatory
  Points Assigned: 50
8.2.7 Non-blocking switching

- Describe the non-blocking capability of the switching system.

- Explain in detail what the basis is for defining your solution as either non-blocking or virtually non-blocking.

- Identify any known engineering or technical requirements that may impact the non-blocking capability

  Response Required: Mandatory
  Points Assigned: 400

8.2.8 Distributed switching capability

- Describe the remote switching capability recommended. Vendors must be aware that the University is not providing a specific design for vendor use. Vendors assume all responsibility for designing a system that meets the Campus’ functional requirements.

- Describe the process of using a remote node as a stand-alone switching entity in the event of a primary node failure.

- Discuss the capability of a remote node to switch traffic to and from another node that has experienced a trunking failure.

  Response Required: Mandatory
  Points Assigned: 200

8.2.9 System Design and Configuration

The University has provided a table (Exhibit E) that identifies all known station requirements by building. Vendors are instructed to provide a block diagram, showing which buildings are nodes, where those nodes will hub to, what distribution mode (single or multi-mode fiber or copper) is recommended, and how non-node service requirements will be met. In a summary document, describe the distribution level recommended including the number and location of all nodes, shelves, and/or cards in the proposed system. Campus distribution maps should be included in an Appendix.

- Provide a block diagram of the campus showing the geographical system design proposed referring to primary and secondary switching nodes only.

- Provide a block diagram of the campus showing each proposed switching node and which buildings are proposed to connect to each node.

- Provide a summary table of all switching components included at each node. Include cabinets, racks, shelves, power supplies, UPS, and all cards proposed.

  o For station and trunk cards, provide detail regarding the actual usage and capacity (i.e., digital or analog station card, handling up to 32 individual terminals, or DID trunk handling up to 8 trunk terminations)

  Response Required: Mandatory
  Points Assigned: 200
8.2.10 System Size

On-Campus Basic Switching System

The system specifications for initial size are provided in Exhibit E. Vendors should estimate the five-year growth requirements as follows:

On-campus administrative lines and services = 3% annual growth

On-campus Dormitory lines and services = 1% annual growth

- Provide a table showing proposed switching system capacity at installation, and for each of the following five years

Maximum Switching Capacity

- Vendors must describe the maximum port capacity of their proposed solution.
- Discuss the engineering requirements that will allow any given node to reach the maximum capacity (include discussions concerning additional distributed systems, nodes, processors, space, etc.).
- Define what equipment components would have to be added to the campus system to expand beyond the engineered capacity defined in this proposal.

Response Required: Mandatory
Points Assigned: 100

8.2.11 Engineered Capacity

- Describe the switch configuration designed to accommodate on-campus growth through years 1 - 5.
  - The “engineered capacity” is defined as the maximum port capability attainable without the addition of new cabinets or switching nodes. The addition of shelves must be the only major equipment needed to reach the maximum designed capacity of the proposed system. This capacity must be presented in one of two views:
    - If vendors propose a single switch node architecture, only the capacity of the single node need be presented.
    - If vendors propose a distributed architecture, both a consolidated view (looking at all nodes as a single system), and an individual node view must be presented.
- Provide the engineered capacity of your solution
- Define the break points at the switch level that will require major additions (switching cabinets, and/or nodes and/or processors).
- Specify the proposed level of engineered capacity for the total core switching system.

Response Required: Mandatory
Points Assigned: 75
8.2.12 Wired Capacity

- Define the wired capacity requirements engineered for the basic on-campus switching system. The definition for “wired capacity” is that capability of the switching system to grow with the addition of only port cards in a system cabinet.

- Vendors must identify the total port capacity of the switch available by adding only port cards. For a single switch node solution, vendors should address the system as a whole. For a distributed system, vendors must define the wired capacity both at the node, and the system level.

- Provide a block diagram of switching nodes and define what the “wired capacity” is by node.

  Response Required: Mandatory  
  Points Assigned: 75

8.2.13 Equipped and Working Capacity

- Define the equipped and working capacity of the switching system proposed. The definition of “equipped and working” is that capability of the system to grow through the addition of no hardware components. This is the maximum capacity of the switch with no additional equipment installations.

- Vendors should size the equipped and wired capacity to assure that no hardware components will be required within the first two years of operation after acceptance.

  Response Required: Mandatory  
  Points Assigned: 125

8.3 System Trunking

8.3.1 Alternate Trunk Routing

The University desires that the vendor system design provide a resilient capability to assure that the Campus will not be isolated from the PSTN during a single route failure.

- Describe the alternate trunk routing recommended to assure that any single cable failure will not isolate the University from the public switched network.

- Provide a simple block diagram identifying the alternate trunking system proposed.

  Response Required: Mandatory  
  Points Assigned: 100

8.3.2 System Trunking

Vendors should utilize the data in Exhibit D to engineer the proposed trunking requirements for their solution.
• Provide a simple block diagram showing all primary switching nodes, and the recommended trunking configuration proposed. Show the number and types of all proposed off-campus trunk connections.

• **Central Office solutions** must address the methodology of assuring the University that a virtual non-blocking capability, i.e. all stations could theoretically be on-line simultaneously, is provided. This capability can be refined to demonstrate that 15% of the total stations could be completing public network calls, while 85% would be completing internal intercom calls. This is the basic ratio defined for University calling patterns at any given time.

• PBX proposals must specify the type and quantity of trunks required to provide a trunk blocking potential of no more than 5 calls out of 100 (P.05). Specify the trunk quantities and types by node.

All associated trunking costs will be borne directly by the University when the system is implemented, however, these costs will be computed based on the filed or contracted costs for such services and added to the vendor’s proposals as a cost to be evaluated in the final solution.

Response Required: **Mandatory**
Points Assigned: **100**

### 8.3.3 Trunking Failure

The University has a high desire to maintain its connectivity with the public network. We expect vendor responses to address this issue in both the proposed system and the trunking configurations. The trunking capability of the switching system itself should allow for dynamic rerouting of trunk connections in the event of a cable failure, however, alternate routing, and dedicated power failure connections may be viable options for vendor considerations.

• Please discuss the proposed method to assure the University that connection to the public network is provided as a primary consideration.

• Discuss the switching system capability to dynamically reroute traffic to an open trunk in the event of a failure affecting a primary group of PSTN trunks.

• Identify probable service affecting impacts should a failure disable any single trunk group accessing the PSTN.

Response Required: **Mandatory**
Points Assigned: **100**
8.4 **System Features**

8.4.1 **Standard System Features**

- List and define the standard system features available in the base switching system recommended.

- List and define any standard class(es) of service provided:

<table>
<thead>
<tr>
<th>Response Required:</th>
<th>Mandatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points Assigned:</td>
<td>200</td>
</tr>
</tbody>
</table>

8.4.2 **Optional System Features**

Vendors may provide additional system features that are not part of the basic service package offered. If all system features are included in the offering proposed, a statement such as: “All system features are provided as part of the proposal” is sufficient. If additional features are available at additional cost, and the vendor believes they offer additional benefit to the University, define the features and explain their benefit to the campus.

- List and define optional system features (common to all users)
  - List and define the features
  - Specify for each whether it is included in the proposed system cost or is available at an additional charge. If available at additional charge, unit prices must be provided in the sealed bid.

<table>
<thead>
<tr>
<th>Response Required:</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points Assigned:</td>
<td>200</td>
</tr>
<tr>
<td>No Response Submitted</td>
<td>☐</td>
</tr>
</tbody>
</table>

8.5 **Failure and Recovery**

8.5.1 **Disaster Recovery**

**Overview**

The University requires vendors demonstrate their commitment to service integrity through a comprehensive disaster recovery plan. Disaster recovery may include a variety of options, but must address how the vendor will act to protect the University’s investment in the specific areas defined below.

**General Plan**

- Address the scope of disaster recovery services proposed. Include specific areas in which you will provide extraordinary response to extraordinary events such as fire, earthquake, and flood.

- Describe what disaster recovery services you provide which are outside the scope of your proposal to the University, and **define the process** of establishing costs for such services. Vendors are again cautioned NOT TO INCLUDE actual pricing in this response. Any pricing provided should be clearly stated as illustrative only.
• Address the level of disaster recovery response (1 = highest response of the company, i.e., public safety and/or national security, 2 = response given to critical local public areas where life and safety concerns are an issue, 3 = priority business establishments are at risk, or 4 = general public restoration).

• If your company categorizes response levels in another manner, explain in detail that matrix for the University, and define where our position in the disaster recovery matrix would be.

  Response Required: Mandatory
  Points Assigned: 150

8.5.2 Switch Failure

• Define the levels of disaster response you propose to support the switching system recommended.

• Identify what conditions of failure drive what response.

• Include a specific statement about system replacement in the event of localized, but complete and irreparable system damage as from a fire to the switching center building.

• Provide historic (actual) and designed Mean Time Between Failure (MTBF) and Mean Time To Repair (MTTR) for the primary switching components.

  Response Required: Mandatory
  Points Assigned: 150
8.6   **Emergency Services - E911 Compatibility**

The University requires that Enhanced 911 (E911) capability be provided with the system. The proposed switching system must be connected to the public switched network in a manner that calls to 911 result in the delivery of originating telephone number and location identification. This means when a 911 call is processed, the public safety answering point (“PSAP”) or local 911 Center, will receive Automatic Number Identification (“ANI”), Automatic Location Identification (“ALI”) and, if required, Distinct Location Identification (“DLI”).

The University further requires that the Campus Police Department receive simultaneous notification of a Campus-originated E911 call.

The ALI is the building street address provided to the PSAP.

Today, in a non-E911 environment, ALI is based on the billing address of the ANI. The DLI provides specific identification on building, floor number, wing name/number, room number, etc., and can be as specific as cable/wire X/Y termination coordinates.

Vendor solutions must address the capability of being fully compliant with industry standard E911 systems. Vendors must address the integration of the proposed switching system with public emergency reporting capability and appropriately route E911 calls to the local government E911 office. Proposals that provide location information from the station location will be rated higher than those that provide trunk number locating.

It is expected that vendors will provide a complete E911 solution for installation with the proposed switching systems and that the vendor will assume full responsibility for assuring that the E911 system is installed, tested, and accepted as part of their Master Plan.

- Describe the E911 capability proposed
- Include a block diagram showing the basic flow of emergency information upon origination of a 911 call.
- Identify sub-contractor components required to achieve the required E911 functionality

**Response Required:**  
**Mandatory**

**Points Assigned:**  
300
8.7 **System Management**

The proposed system must provide a management system that is Microsoft compatible, intuitive to the user, and provides extensive control, interrogation, and reporting capabilities.

Basic functionality should include the ability to:

- Execute MAC on demand
- Execute ad hoc traffic studies
- Run system inventory reports on demand
- Execute batch work orders
- Monitor line and trunk card utilization
- Activate and deactivate ports on the switch
- Change class of service of a telephone and/or authorization code
- Program all functions assignable to buttons on telephone sets
- Download the switch database information for audit purposes
- Assign and alter Auto Attendant functions
- Deactivate phone without removing it from operation.

- Schedule MAC at a future date for automatic execution (batch and online)
- Monitor system performance on demand
- Work with Microsoft Windows applications
- Provide a history of troubles and/or alarms
- Identify failed components
- Activate and deactivate authorization codes
- Assign hunt groups to telephones
- Delete all information pertaining to a telephone and remove it from operation
- Establish an ACD group from any extensions assigned within the system
- Provide a single point of entry that automatically updates all related files
- Query system alarm status
- Schedule system performance reports and run reports automatically
- Produce graphic representations of data in report format
- Export data to Microsoft applications
- Store alarm and performance data when the management system is off line
- Activate and deactivate paging codes
- Activate call pickup groups to telephones
- Produce an audit trail of all transactions that have been uploaded to the switch
- Dynamically reconfigure ACD splits
- Dynamically access an entire record by any one piece of information from that record

Please provide a summary sheet identifying all management functions and features. Specifically identify the core capabilities requested and state whether or not the identical or functionally equivalent feature is provided.

**Response Required:** Mandatory

**Points Assigned:** 250
8.8 VoiceMail/Unified Messaging

The University is anxious to provide updated VoiceMail functionality to its constituents. To do so, vendors may opt to provide either a standard VoiceMail OR a Unified Messaging system that includes all VoiceMail functionality. The RFP contains a description of the functions of each system, and appropriately adjusted weighting.

8.8.1 Provision of a new integrated VoiceMail solution

Vendors must provide a VoiceMail solution that includes industry-standard voice messaging services, automated attendant capabilities, and advanced user-friendly system administration. It is anticipated that the University may opt to provide VoiceMail capability to its constituents on a stand-alone basis, which will require a system that is not only flexible, but has a robust growth to accommodate a potential of 3,000+ users.

Integration with the Switching system

The proposed system operation must be transparent to the operations of the switching system itself. All interactions with the switch must be accomplished without operator intervention at any time.

Size/Capacity, and Features

Size

The system must be able to accommodate a minimum of 3,000 mailboxes at cutover, and seamlessly grow to a potential of 5,000 within five years.

Features

- Auto Attendant

The system should provide a variety of Auto Attendant options, including, but not limited to: Automatic Call Distribution; variable announcement options; variable number of operating auto attendant groups; default transfer; variable length call queuing; flexible (on and off-campus) call forwarding options; name or number dialing; message/advertising on hold options; and transfer to paging.

- VoiceMail

The system should provide a variety of VoiceMail feature options, including, but not limited to: user-friendly and easy to understand voice prompts; single-digit Touch-Tone command codes; variable level password protection; multiple personal greetings; variable personal controls i.e., maximum message length to be stored, maximum retention time, etc., and transfer out of mailbox capability. The system must provide standard user codes for record, listen, send, reply, save, delete, forward, redirect, skip, rewind, pause and end functions.

- Switching System Station Interaction

The system must be capable of operating with the vendor’s recommended switching system and must activate message waiting lights or tomes and connect to any standard telephone line, i.e., PBX or Centrex line or trunk.

- Management/Administration

The system should provide a range of administrative options, including, but not limited to: menu-driven programming; system message broadcasts; on-line mailbox configuration;
multiple account partitioning; multiple user languages; various printing capabilities; and automatic message deletions with operator override capability.

Remote access for maintenance must be protected to assure the University that no unauthorized dial access to the administrative functions is possible.

- Reports

The system must provide a variety of report options, including, but not limited to: mailbox, disk, and port usage; average message length and connect time; line usage by attendant, and account; number of callers per line, group, or account; caller and message logs; excessive failures in outdial attempts; excessive after-hour logon attempts; excessive logon attempts; system traffic summaries; inactive users; high storage by user; and user directory. All reporting capability should be either scheduled or on-demand. Data must be presented to a file, a screen, or a printer at the operator’s discretion.

- Options

Various options should be proposed, including fax-on-demand capability; fax-mail operations; AMIS transferring; E-Mail integration; Touch-Tone Q & A processing; and Dial-pulse digit detection.

Please describe the proposed system, define the capabilities and critical VM capacity/capability. Define the number of mailboxes to be provided, and the method proposed to assist the University in converting from the existing to the proposed solution.

Response Required: Mandatory
Progress Points Assigned: 500

8.8.2 Provision of a Unified Messaging System

Vendors may choose to propose a Unified Messaging System to the University. This system would provide a single system for distribution of voice, fax, and electronic messages. The vendor must provide details regarding the capabilities, design, size, operation, maintenance, training, and deployment of the proposed system. It is expected that this functionality will be in addition to the standard Voicemail capability described above, therefore, additional points are provided to vendors opting to include a unified messaging system. Vendors must carefully describe the different functionality to assure that the University evaluation team can validate that true unified messaging is being proposed.

Unified messaging provides a single point of access to all three message types voice, fax, and email from virtually any communications device telephone, personal computer or Web browser through the Internet. In the user’s familiar email inbox, a unique icon identifies each message type.

When out of the office or on the road, users can access and manage all their messages through the Telephone User Interface (TUI). Using the TUI, an employee can dial into their unified messaging system from any telephone and be able to quickly and efficiently listen to and respond to any message waiting in their inbox. They will be able to access and manage all three message types voice, fax, and email with just one phone call. The user can listen to their email messages using text-to-speech technology and respond to that email message with a voice message. The user can listen to the header of their fax message, forward that message to someone else, or even print it to the closest fax machine.
When in the office or on the road with a laptop, the Graphical User Interface (GUI) allows users to view all their messages, voice, fax, and email from their desktop computer or by dialing into the network using an Internet connection.

The University is migrating to MS Exchange utilizing Outlook and Outlook Express as the clients. The proposed solution must work with this software.

- Provide a complete description of your proposed solution, identifying the following end user features/functions. The description should be in sufficient detail to allow the University evaluation team to understand how the end user will apply this functionality.
  - Common GUI front end
  - Web access front end
  - Ability to send/forward messages to people not on the system
  - Ability to receive private faxes
  - Telephone User Interface (TUI)
  - Flexible message notification

- Provide a complete description of your proposed solution, identifying the following System Administrator features/functions. The description should be in sufficient detail to allow the University evaluation team to understand how the administrator will apply this functionality.
  - Replication - the system automatically replicates user directory entries and changes to remote and networked messaging servers
  - Centralized management tools from a single GUI
  - One user directory - maintaining one directory entry for all mailbox message types
  - Integral security - the ability to set password security by message types
  - Intuitive GUI
  - Scalable architecture

- While video messaging has yet to reach any level of “critical mass” for wide adoption, the University is interested in the method the proposed system would use to accommodate this application. Describe any proposed video messaging functionality.

Response Required: Optional
Points Assigned: 500
No Response Submitted
8.9 Integration with University Call Detail Recording (CDR) System

The University currently uses a third-party CDR system to accumulate and manipulate switching system call records.

- Please provide the design and proposed operation required to assure proper installation, testing, and acceptance of the proposed delivery of near-real time CDR data from the proposed switching system.

Response Required: Mandatory

Points Assigned: 200
8.10 Campus Distribution and Facility Utilization

General

As part of the continuing plan to use state of the art transmission capabilities in the campus infrastructure, the University will make its fiber distribution plant available for vendors to use in distributing their architecture to the various building sites on campus. Vendors should be aware, however, that the campus fiber is a finite asset and the University review team will carefully appraise vendor efficiency in the use of this in-place asset. Vendors are encouraged to carefully review their plans for use of the existing fiber plant when considering the University’s cost recovery plan, and to propose alternate fiber routing, including additional hubs and home runs, where such additions would result in a lower cost for distribution to the campus.

The presence of substantial amounts of copper in the underground ducts is cause for some concern. To avoid a potential future augment resulting from duct congestion, vendors are asked to develop a plan for removing any abandoned copper plant (Category 3 or less) as part of their responses.

Minimum Point Of Entry (MPOE)

For the purposes of establishing a primary Minimum Point Of Entry for this RFP, vendors are advised that the Main Distribution Frame (MDF) will be located at the Cumnock Hall, and a second MPOE will be provided at Dugan Hall. All required interconnections between vendor’s services and local, regional, or InterExchange service providers will be provided at these locations.

Intra-building Distribution

Although the campus is in the process of re-wiring all buildings to meet the Category 6 specification, this project will likely not be completed before the final system deployment date. Vendors are advised that telephone station wiring (intra-building) must be used based on the in-place status in each building. The minimum cabling standard in place is assumed to be Category 3 at all locations, although on a case-by-case basis, Category 6 may be available. If a vendor response requires intra-building station wiring that requires Category 5, 5E, or 6 specification, they are advised to state that requirement in the proposal. Should a vendor require the use of Category 5, 5E, or 6 cabling, and fail to identify that fact in their proposal, the University will assume the vendor has calculated the cost of providing such cabling in their proposal. The vendor awarded the final contract will be expected to define a building implementation plan on a building-by-building basis. At that time, the campus will supply a report showing the status of the University conversion project.

Vendors should be aware that the University has insufficient cable count within the buildings to accommodate a parallel service cutover. It is expected that vendors will consider the cost of a flash cut in their pricing and implementation decisions.

Inter-building Distribution - Copper

As stated earlier, the campus is concerned about the potential for blockage due to the level of copper plant deployment. Vendors are asked to define a plan to remove copper cabling abandoned as part of their proposed design and utilization of fiber plant.

8.10.1 Intra-Building Distribution

- Define your intra-building station wire requirements.
- If in-place wiring cannot be used, the vendor must state that fact in this response.
- Bidders must identify any proprietary station cabling required to support their proposals.
8.10.2 Inter-Building Distribution

The University has made a substantial investment in inter-building fiber optic cabling. Vendors are encouraged to define a campus distribution plan that utilizes this physical asset. Specific fiber availability is identified in Exhibit E.

- Define the inter-building distribution plan proposed. A general discussion should be provided here, with additional distribution maps provided in an Appendix. The general discussion should include identification of the level of distribution provided, identification of remote locations to be served with copper, and any new fiber hubs, and/or fiber pairs recommended. A table is provided as Exhibit E for vendor use that provides the essential data for response to this item.

- Provide a block diagram showing the proposed inter-building distribution plan

- If University fiber facilities are insufficient to meet the vendor’s design criteria, the vendor must identify the building(s) with access difficulties and specify what additional facilities are required. The University will assess the viability of the vendor plan and recommend alternatives or develop a cost proposal to support that specific need. The vendor must provide all multiplexing and/or fiber termination equipment needed to support the proposed solution.

- Provide a block diagram showing cable routes that need augmentation to meet the needs of your system design (if additional facilities are required).

Response Required: Mandatory
Points Assigned: 400

8.10.3 Copper Removal

In the course of implementing the proposed system, vendors may discover copper cabling that is no longer required. Although vendors are not required to remove this plant, the University DOES desire the submission of a plan to do so that provides assurances that such removal is consistent with good planning and can be accomplished with minimal impact on the University’s telephony services.

If a response to this RFP component is submitted, the Campus may consider the response binding if the vendor’s proposal is accepted.

The University recognizes that some infrastructure may not be conducive to the actual removal of abandoned copper plant, and is primarily interested in the vendor’s methods and plans to do so.

- Define the plan for removing abandoned University copper plant.
- Identify the process for removal, the method for establishing salvage value, and the probable schedule for removal.
8.11 System Operation

The University expects the vendor to provide on-site technical support during the life of the contract. While the initial port size may not justify a full-time maintenance technician, the University would entertain a proposal to allow the vendor technician to act in support of other on-site technical responsibilities, including installation and maintenance of station equipment and the execution of MAC functions. The vendor technician would be primarily responsible for all issues related to the maintenance of all systems provided under the umbrella of this procurement. As part of the technician’s ongoing responsibility, a knowledge transfer will be expected such that University technical personnel would be able to provide emergency coverage for the vendor technician. Additional technical training for University technical personnel should be part of the vendor’s proposal.

8.11.1 Basic vendor technical responsibilities

- Identify all responsibilities (including day-to-day operations oversight, trouble response and resolution, hardware and software installation and testing, and service activations/deactivations at a minimum) that will be fulfilled by the vendor’s on-site technical support staff. Include both system operation and ancillary duties.
- Identify the management structure proposed in support of fulfilling basic service support.
- Provide a list of technical support backup services and locations that are to be available to the University during the life of the contract as part of the basic service commitment.

8.11.2 Required Service Commitment (on-site technical support)

UMass expects to engage in a multi-year support contract with the vendor to assure technical support for the duration of the useful life of the system.

- Identify the initial warranty period (in months or years)
  - Identify specific terms and conditions that would void the warranty
  - In general, identify the warranty components
- Identify the proposed initial service level contract
  - Identify the initial contract term (in years)
  - Identify specified terms and conditions associated with the contract
  - Identify exceptions that may result in added “per unit” costs to the University
- Identify the proposed contract renewal term (in years)
o Identify any terms and conditions that the vendor may change with contract renewal

The University will award more points for terms and conditions favoring extended contractual time and responsibility

Response Required: Mandatory
Points Assigned: 100

8.11.3 Training and experience of vendor technical staff

The University requires that vendors provide qualified technical staff to support the system during the life of both the initial warranty period and any subsequent maintenance contracts executed.

- Identify the training provided to vendor technical staff that qualifies them to be “fully trained”. Include course content, duration, and instructional media (classroom, on-the-job, computer aided, etc.).

- Identify the commitment of the vendor to provide a fully trained on-site technician for University support. Identify any work, job description, union, or management restrictions related to ancillary (not switch-related) functions that the on-site technician could be asked to perform to support University operations.

- Identify the location, training level, and number of off-site technicians available to support the on-site staff.

Response Required: Mandatory
Points Assigned: 50

8.11.4 Campus Administrator Training Plan

The University will have responsibility for managing the move, add, and change (MAC) process on behalf of the campus constituents. To assure that the Campus telecommunications staff will be proficient in working with the vendor’s system, vendors are required to provide a training package for the Campus administrator. While it is expected that vendor personnel will generally be available to the administrator, the training should be of sufficient depth to allow the administrator to activate or deactivate lines, trunks, ports, features, and run system diagnostics without the assistance of vendor personnel.

Vendors are expected to provide pricing (in the sealed bid) for this curriculum only, and not include any costs for travel or lodging related to the course(s).

- Specify the technical curriculum recommended and included as part of this proposal that will enable the University to improve its administrative utilization of the system’s features and functions.

- Identify and describe course(s) content, name, duration, and location of such training.

- For each course recommended, define the expected knowledge to be gained.

Response Required: Mandatory
Points Assigned: 100
8.11.5 University Senior Manager Familiarization Plan

The University expects its senior Information Technology personnel to be familiar with the overall capabilities of the proposed system. Vendors should provide a senior level overview of the proposed system.

Vendors are expected to provide pricing (in the sealed bid) for this curriculum only, and not include any costs for travel or lodging related to the course(s).

- Specify the training courses recommended for University management personnel that will enable them to provide direction to the campus regarding utilization of the features and functions of the system.
- Identify course(s) content, name, duration, and location.
- For each course recommended, define the expected knowledge to be gained.

Response Required: Optional
Points Assigned: 100

8.11.6 End-User Training Plan

The vendor must address training requirements for end-users that will assure they are technically competent to utilize the features and functions of the proposed services.

All training must be on-site. The University will provide adequate space to conduct such training.

Vendors that provide a web-based supplemental training package for refresher training will receive higher point scores.

- Identify the type of vendor-conducted training (lecture, hands-on, etc.) recommended.
- Identify the scope and duration of the recommended training
- Provide a sample of the training materials to be used (samples may be provided in the appendix and referenced in the vendor response)
- Describe the web-based training, if proposed

Response Required: Mandatory
Points Assigned: 150
8.12 **Station Equipment**

The University’s telephone station equipment is generally unsuitable for using newer digital switching technologies. **Vendors must plan on a complete station replacement program.** The basis for design will be a single line display telephone instrument for digital applications, a single line analog telephone set for standard analog applications. In all cases tone dialing will be required. Emergency services will be an automatic ring down, or automatic one-number dial type set provided on a one-for-one replacement basis where the existing equipment is associated with the Intecom PBX.

For cost purposes, vendors should expect the University to deploy 100 analog sets, and 3,000 digital sets for administrative use, and 1,200 analog sets with message waiting lamps for residence/dormitory use during the installation and subsequent operation of the system.

8.12.1 **Basic Digital Station Equipment**

The University expects vendors to provide a basic digital display set for use in areas where digital services offer advantages to the Campus. The “basic” digital set will be recommended by the vendor, however, due to the variation of digital instruments among vendors, more feature and capability rich basic instruments will receive higher ratings by the University evaluation team.

- Describe the basic digital display telephone set offered for use with the switching system proposed. Include:
  - Model and make
  - Physical characteristics
  - Operational limitations
  - List of features available in the standard model
  - Statement concerning the proprietary nature of such telephone station equipment.
    - If digital station equipment is proprietary, the vendor must include all necessary diagnostic tools required to support such equipment.

**Response Required:** Mandatory

**Points Assigned:** 100
8.12.2 Optional Digital Station Equipment

The University expects vendors to offer a wide variety of station equipment for Campus use. Although we have specified a digital single line display telephone as the basic instrument for use in this system, there may be occasion to deploy additional sets, including multi-line, hands free speakerphone type, and ACD Agent sets, and at some point, a “soft phone”.

- Describe all digital instruments you expect to offer under contracted rates to the University. All proposed instruments must be available in quantities of one.

- Define the diagnostic tools required to support instruments recommended.

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8.12.3 Analog Station Equipment

It is expected that vendor solutions will allow for non-proprietary analog instruments to be used with their system.

- Describe the basic single line analog telephone set offered for use with the switching system proposed. Include:
  - Model and make
  - Physical characteristics
  - Operational limitations
  - List of features available in the standard model

- If the recommended analog station equipment is proprietary, the vendor must include all necessary diagnostic tools required to support such equipment.

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</table>
8.12.4 Other Station Equipment
Describe other station equipment that you believe offers the potential to deliver improvement to University operations. Equipment should include emergency elevator sets, strobe light emergency instruments, outdoor instruments, single-number dialers, etc.
Include:
- Model and make
- Physical characteristics
- Operational limitations
- List of features available in the standard model.

Response Required: Optional
Points Assigned: 50
No Response Submitted □

8.13 Technical Implementation Plan
General
Responding vendors are expected to develop and provide a comprehensive implementation plan which will assure the University that the vendor has the technical, managerial, and project capability to successfully install the entire system. The Master Plan will be broken into distinct elements that can be managed and modified individually. All major milestones and deliverables should be identified. Given the timeframe in which the University expects to implement the system, strong project management will be needed to ensure dates are met and deliverables are completed.

The University has deployed Microsoft Project™ project management software, and prefers that vendors use the same system.

The University recognizes that some component plans will require additional details that are appropriate to a post-award time frame. We will accommodate such variables, however, vendors presenting highly detailed, attainable plans that demonstrate a quality Project Management capability will be awarded higher scores by the evaluators during this phase of the procurement. Vendors presenting boilerplate plans will not be rated as high as those who understand all the University’s constraints and work within them.

Post Award Note:
After the award, the vendor must prepare and present each component plan in sufficient detail to assure that all deliverables, tasks, and responsibilities are defined. Tasks must include the name of the entity responsible (for University responsibilities, use the term “UMass”, for all vendor responsibilities provide the name of the individual personally responsible for performance). Tasks must be defined in terms of a “twenty hour” effort, meaning that the definition of a single task is something that can be performed in twenty (20) hours or less. A task requiring more than 20 hours to complete must be broken into two or more tasks, based on the estimated hours to complete.

All plans identified in this section must be provided in the appendix to the proposal and appropriately referenced. Vendors are reminded to specify the exact location where the referenced plan details are located.
8.13.1 Project Team

The University recognizes that implementation team members cannot be absolutely specified to support this project during the proposal phase. Our intent is not to require the identification of a proposed team that will be used; rather, it is to assure that the vendor can define a specific team, by individual name, which has the requisite skills and knowledge to deliver the proposed system within the budget and timeframes proposed. After award, vendors must agree not to change team personnel without University approval, unless such changes are mandated by personal reasons, changes in the individual’s work responsibilities, or separation from the company.

- Provide a list of all team members, by function and/or title. Provide a summary of the functions provided by each position.
- Identify the names of vendor project team members. Provide descriptions of the functions they will fill and their qualifications to perform such functions.
- For team members with specific Project Management responsibilities, provide the level of project management certification/expertise brought to the team.

Response Required: Mandatory
Points Assigned: 250

8.13.2 Project Management Tools

The Campus has deployed Microsoft Project™ and desires that vendors utilize this PM software.

- Describe the PM tools and processes used by the vendor to provide assurance of a quality implementation.

Response Required: Mandatory
Points Assigned: 100

8.13.3 Demonstration Plan

Vendors are expected to provide a comprehensive demonstration Plan. This plan must include specific demonstrations related to the integration and operation of all components identified in Section 8. Station telephone equipment need not be demonstrated except to the degree that some functionality within the specified section range uses station equipment i.e., programming telephone set buttons from the management system. If station telephone equipment is used in any demonstration phase, it should be the telephone set you are proposing for use with this procurement.

Vendor proposals are likely to include various discussions regarding the redundancy/resiliency of the proposed system. Vendors should consider demonstration sites that allow them to demonstrate their system’s ability to recover from service outages.

Vendors should plan to accommodate up to seven (7) University personnel during the demonstration.

The plan should include:
• Location of the demonstration
• A complete list of the functionality to be demonstrated
• The criteria used to demonstrate the function
• The length of time for the entire demonstration; and
• Dates the demonstration could be made available to the University.

Vendors should consider demonstration of the following options in the proposed Demonstration Plan:
• Primary features and functions of the switching platform
• Integration of the management system with the switching platform proposed
• Integration of the system with other ancillary systems/services, including VoiceMail
• Importing billing data from various media and sources
• Developing and displaying reports from the various TMS modules

A failure to demonstrate the features and functionality required in this procurement may result in the disqualification of the vendor regardless of the evaluated points attained during the evaluation period.

Prepare and present the Demonstration Plan

Response Required: Mandatory
Points Assigned: 400
8.13.4 Master Project Plan

The Master Project Plan should contain the start and end dates, the major milestones, and the deliverables associated with each planned activity in the vendors deployment plan.

The University must have the right to review and amend each part of the vendor’s plan after an award is made. Negotiations concerning the plan’s applicable steps, and the costs associated with each step will be carefully reviewed prior to their deployment. The University agrees that such review must be timely. The time allocated for University review and comment will be established with each plan. Changes in vendor cost resulting from University changes to the Master Plan and its related schedule will either be added to the contract value when they result in an increase in vendor costs, or subtracted when they result in lower vendor costs. The response to this section must include a statement of agreement with this requirement.

Prepare and present a high level Master Project Plan, including:

- All key milestones
- A proposed project timeline
- All key tasks and functions associated with the Plan
- All University requirements clearly specified

Response Required: Mandatory
Points Assigned: 150

8.13.5 Switch Implementation Plan

The Switch Implementation Plan may be a subset of the Master Project Plan during the installation of the system; however, vendors should define all aspects of successfully implementing the recommended switch platform for the University in this section.

The switch implementation process should include proposed dates for ordering, manufacturing, delivery, and for performing testing and acceptance functions after the system is on site.

Prepare and present the Switch Implementation Plan.

Response Required: Mandatory
Points Assigned: 75

8.13.6 Building Implementation Plan

The University recognizes the scope of work involved to prepare a detailed building implementation plan. Such a plan is not required for conformity to this procurement.

Prepare and present the Building Implementation Plan, including:

- A building grouping plan, identifying the physical cutover schedule for each group of buildings that are served from the proposed nodes.
- A list of primary functions that will be performed in each building prior to and during cutover
8.13.7 Cutover Plan
The vendor must specify all main tasks, milestones, and deliverables that will result in a completely satisfactory in-service date no later than November 30, 2003.
Prepare and present the Cutover Plan, including:
- Proposed start date and time
- Key activities to be performed during the cutover
- Identification of any vendor support requirements necessitating University personnel and/or services
In addition to the above discussion of plan elements, vendors should discuss the method to restore service to the present switching system in the event that the planned cutover cannot be completed due to a switching system or component failure.

8.13.8 Help Desk Plan
It is anticipated that the vendor will provide coverage for the technical aspects of a Help Desk during the cutover period. The University will provide management staff to resolve any required moves, adds, or changes, or to clarify University policies and procedures. The vendor should provide a narrative of the plan as well as a scheduled plan.
Vendors should specify:
- The length of time they will provide such technical assistance
- How many individuals will staff the center
- What the help desk personnel responsibilities will be.
Prepare and present the Help Desk Plan.

8.13.9 Test Plan
The vendor must provide a complete test plan. The University expects that test plans are a basic part of the vendor’s operating procedures, therefore, the standard vendor test plan will be an acceptable response for this proposal. Additional test plan items may be incorporated after the award, based on specific University criteria. To the degree that such additional items may add cost to the vendor’s proposal, the University will adjust the final payment schedule. Proposed vendor test plans that reflect the integrated system recommended will score higher.
during the evaluation than those that are general, and reflect only a testing of individual technical components.

Prepare and present the Test Plan, including:

- A discussion of what the testing philosophy of the vendor/manufacturer is
- A discussion regarding how the vendor responds to a component that fails during testing
- A proposed test schedule

Response Required: Mandatory
Points Assigned: 75

8.13.10 Acceptance Plan

Vendors must identify all items in their acceptance plan. Each item must be defined with both a planned timeframe for performance and a narrative that states what the acceptance or test item is, how it is performed, and what the acceptance criteria is. It is expected that the acceptance criteria will be formally signed off by the University at their completion.

The Acceptance Plan must include, but not be limited to, the following key issues:

- Factory Testing - Standard factory designed and conducted switching (including all ancillary and support components), including VoiceMail and/or integrated messaging system tests. The University requires written documentation (includes both the acceptance specification and the results of the testing) of all such tests specified and performed during the manufacture and implementation of the system.

- Installation Testing - Standard field conducted switching (including all ancillary and support components), including VoiceMail and/or integrated messaging system tests. The University requires written documentation (includes both the acceptance specification and the results of the testing) of all such tests specified and performed during the delivery and implementation of the system.

- Pre-Cutover Testing - Standard and optional field testing, observed and/or approved by the University. Must include operational and functional load testing of all proposed components, including the integration of the systems.

- Cutover Criteria - Provide recommended measurable criteria for acceptance of all proposed system components. Include specific criteria for operational testing.

Prepare and present the Acceptance Plan.

Response Required: Mandatory
Points Assigned: 75

8.14 Purchase of Existing Equipment Inventory

At the completion of the installation, the University will need to remove the existing core switching components (abandoned cabinets, racks, shelves, etc.). Vendors are not required to remove the equipment or to respond to this RFP item. Vendors should be aware that the University is not asking for firm buyout commitments, rather we are asking vendors to commit to a specific process that would result in the removal of the equipment and possibly a
transfer of some monetary value to the University as a result of the removal. If a response to this RFP component is submitted, the Campus may consider the response binding if the vendor’s proposal is accepted.

At the sole option of the vendor, a proposal may be submitted that provides a credit for used equipment to be applied against the total purchase price of the new system, with the vendor thereby agreeing to the removal and disposal of the abandoned equipment components.

Vendors are reminded NOT to include any specific pricing components in their response to this RFP item in the technical response. **ALL actual costs and/or pricing adjustments are to be included in the sealed bid.** If vendors choose to define all the processes and conditions they will use in determining the residual value of equipment, SAMPLE pricing illustrations may be used for clarification in the response, but these prices will be considered explanatory, not actual.

Vendors may:

- Define all processes and conditions related to the vendor buying all abandoned switching components after the installation of the new system is complete.

OR

- Provide a credit for the existing equipment against the purchase price of the system proposed

OR

- Not respond

Response Required: **Optional**
Points Assigned: **200**

No Response Submitted ☐
9.0 Exhibits

This section contains numerous documents. Vendors are cautioned to pay close attention to each document to assure they submit proposals that are compliant with Commonwealth procurement law and University bid specifications.

<table>
<thead>
<tr>
<th>Exhibit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhibit A</td>
<td>Certification of Tax Status – Affidavit of Compliance</td>
</tr>
<tr>
<td>Exhibit B</td>
<td>W9 – Request for taxpayer Identification Number and Certification</td>
</tr>
<tr>
<td>Exhibit C</td>
<td>Commonwealth of Massachusetts Standard Contract for Services</td>
</tr>
<tr>
<td>Exhibit D</td>
<td>Traffic studies</td>
</tr>
<tr>
<td>Exhibit E</td>
<td>Known station requirements</td>
</tr>
<tr>
<td>Exhibit F</td>
<td>Weighting matrix</td>
</tr>
<tr>
<td>Exhibit G</td>
<td>Pricing response sheets</td>
</tr>
<tr>
<td>Exhibit H</td>
<td>Vendor acknowledgement of proposal</td>
</tr>
<tr>
<td>Exhibit I</td>
<td>Bidder’s check list</td>
</tr>
</tbody>
</table>
Exhibit A: Certification of Tax Status – Affidavit of Compliance

AFFIDAVIT OF COMPLIANCE

I/WE certify under the penalties of perjury that I/WE, to the best of my/our knowledge and belief, have filed all state tax returns and paid all state taxes under laws of the Commonwealth of Massachusetts.

______________________  ____________________________
Signature of Individual or Corporate  Corporate Officer Signature
Name (Mandatory)    (Mandatory, if applicable)

Social Security Number or
Federal Identification Number

As per Massachusetts General Laws Chapter 62C, Section 49A, as amended.
Exhibit B: W9 – Request for taxpayer Identification Number and Certification (Separate file or if hardcopy a separate sheet)
Exhibit C: Commonwealth of Massachusetts Standard Contract for Services (Separate file or if hardcopy a separate sheet)
Exhibit D: Traffic studies

University of Massachusetts Lowell

Traffic Info

<table>
<thead>
<tr>
<th>Date of report for previous 24 hrs.</th>
<th>Incoming</th>
<th>Ave Dur seconds</th>
<th>Outgoing</th>
<th>Avg Dur seconds</th>
<th>Total calls/day</th>
</tr>
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<tbody>
<tr>
<td>11/20/2002</td>
<td>9770</td>
<td>192</td>
<td>20145</td>
<td>167</td>
<td>29915</td>
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<tr>
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<td>9745</td>
<td>189</td>
<td>10141</td>
<td>162</td>
<td>19886</td>
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<tr>
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<td>9996</td>
<td>187</td>
<td>10429</td>
<td>167</td>
<td>20425</td>
</tr>
<tr>
<td>11/23/2002</td>
<td>9026</td>
<td>134</td>
<td>7268</td>
<td>167</td>
<td>16294</td>
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<td>4040</td>
<td>155</td>
<td>1855</td>
<td>202</td>
<td>5895</td>
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<td>11/25/2002</td>
<td>3768</td>
<td>261</td>
<td>5735</td>
<td>126</td>
<td>9503</td>
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<td>188</td>
<td>11465</td>
<td>144</td>
<td>21630</td>
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<td>11098</td>
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<td>6260</td>
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<td>11429</td>
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<td>10976</td>
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<td>9596</td>
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<td>213</td>
<td>7372</td>
<td>88</td>
<td>11796</td>
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<tr>
<td>12/10/2002</td>
<td>10806</td>
<td>181</td>
<td>11212</td>
<td>154</td>
<td>22018</td>
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<td>12/11/2002</td>
<td>10324</td>
<td>194</td>
<td>11577</td>
<td>155</td>
<td>21901</td>
</tr>
<tr>
<td>12/12/2002</td>
<td>11514</td>
<td>164</td>
<td>3019</td>
<td>182</td>
<td>14533</td>
</tr>
<tr>
<td>12/13/2002</td>
<td>13158</td>
<td>144</td>
<td>10241</td>
<td>166</td>
<td>23399</td>
</tr>
<tr>
<td>Date</td>
<td>RFP UML</td>
<td>Exhibits</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td>----------</td>
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<td></td>
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<tr>
<td>12/14/2002</td>
<td>10178</td>
<td>140 7313</td>
<td>168 17491</td>
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<td></td>
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<tr>
<td>12/15/2002</td>
<td>4632</td>
<td>152 2070</td>
<td>176 6702</td>
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<td></td>
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<tr>
<td>12/16/2002</td>
<td>4594</td>
<td>182 2707</td>
<td>180 7301</td>
<td></td>
<td></td>
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<tr>
<td>12/17/2002</td>
<td>12226</td>
<td>152 7848</td>
<td>183 20074</td>
<td></td>
<td></td>
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<tr>
<td>12/18/2002</td>
<td>11987</td>
<td>167 8536</td>
<td>177 20523</td>
<td></td>
<td></td>
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<tr>
<td>12/19/2002</td>
<td>12426</td>
<td>160 7977</td>
<td>192 20403</td>
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</table>

Average calls per day: 8654.4 7433 16087.4
### Exhibit E: Voice Configuration

#### University of Massachusetts Lowell

<table>
<thead>
<tr>
<th>20 Cabinets in seven locations:</th>
<th>Serving</th>
<th>Residence Halls</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cabinets</strong></td>
<td><strong>Location</strong></td>
<td><strong>North Campus except Lydon/Alumni</strong></td>
<td><strong>Smith, Eames</strong></td>
</tr>
<tr>
<td>0-7</td>
<td>Cumnock Hall basement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Lydon Library</td>
<td>Lydon/Alumni</td>
<td></td>
</tr>
<tr>
<td>9,10</td>
<td>Dugan Hall</td>
<td>Mahoney, Dugan, Coburn</td>
<td>none</td>
</tr>
<tr>
<td>11,12,13,14</td>
<td>Fox Hall</td>
<td>Recreation Center</td>
<td>Fox, Donahue, Bourgeois, Leitch</td>
</tr>
<tr>
<td>15,16,17</td>
<td>Weed Hall</td>
<td>McGauvran, O’Leary, Dining Hall</td>
<td>Sheehy, Concordia</td>
</tr>
<tr>
<td>18</td>
<td>Not in service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Reed Hall</td>
<td>West Campus</td>
<td>none</td>
</tr>
<tr>
<td>20</td>
<td>Wannalancit</td>
<td></td>
<td></td>
</tr>
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#### Installed:

<table>
<thead>
<tr>
<th>Cards</th>
<th>Ports</th>
<th>Total Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Cards</td>
<td>125</td>
<td>32</td>
</tr>
<tr>
<td>Analog Cards</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td>OPX Cards</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>T1 Driver Cards</td>
<td>10</td>
<td>16</td>
</tr>
</tbody>
</table>

#### Services:

- ATT T1 toll free traffic
- Verizon T1 admin l.d.
- Verizon 8 analog back-up lines back-up
- Verizon 6 flexpaths incoming, local outgoing

#### New Service:

- Lawrence Mills future Graduate School of Education
- Tsongas Arena Hockey Office
- East Meadow Lane Married Student Housing
- Mogan Center Part of Library
- Boot Mill Complex Tsongas Center for Lowell History

<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
<th>Installation Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>all services currently come in/out of Cumnock. Want to diversity, possibly Dugan</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>350 phones to be installed in McQuade Building of Lawrence Mills complex in 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 OPX connections</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>48 apartments</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 OPX connections</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11 people, voice not currently connected through PBX</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Exhibit E: PBX Capacity

### University of Massachusetts Lowell

#### PBX Capacity by Cabinet

<table>
<thead>
<tr>
<th>Location</th>
<th>Cabinet</th>
<th>Type</th>
<th>Slots</th>
<th>CARDS</th>
<th>Buildings</th>
<th>Residence Halls</th>
<th>Rooms</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Analog</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Digital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fiber</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>EMPTY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumnock</td>
<td>0</td>
<td>Classic</td>
<td>16</td>
<td>4</td>
<td>8</td>
<td>0</td>
<td>4</td>
<td>trunking, controllers, OPX, etc.</td>
</tr>
<tr>
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<td>1</td>
<td>Classic</td>
<td>16</td>
<td>0</td>
<td>12</td>
<td>0</td>
<td>4</td>
<td>Cumnock, Falmouth, Southwick, Kitson, Pasteur, Pinanski, Costello, Olsen, Engineering, Ball, Olney, Power Plant North, Riverside Lot, Cushing Field</td>
</tr>
<tr>
<td>Cumnock</td>
<td>2</td>
<td>Classic</td>
<td>16</td>
<td>10</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Cumnock</td>
<td>3</td>
<td>Flex</td>
<td>16</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Cumnock</td>
<td>4</td>
<td>Flex</td>
<td>16</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>10</td>
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</tr>
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<td>Flex</td>
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<td>0</td>
<td>4</td>
<td>0</td>
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</tr>
<tr>
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<td>Flex</td>
<td>16</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>4</td>
<td></td>
</tr>
<tr>
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<td>7</td>
<td>Flex</td>
<td>16</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Lydon</td>
<td>8</td>
<td>Flex</td>
<td>16</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>Lydon &amp; Alumni Library</td>
</tr>
<tr>
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<td>9</td>
<td>Flex</td>
<td>16</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>12</td>
<td>Dugan, Mahoney, Coburn, Power Plant South, Riverview Lot and Field</td>
</tr>
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<td>10</td>
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</tr>
<tr>
<td>Fox</td>
<td>11</td>
<td>Flex</td>
<td>16</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>8</td>
<td>Campus Recreation Center, Ames, Scopus</td>
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<td>Flex</td>
<td>16</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>8</td>
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</tr>
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<td>13</td>
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</tr>
<tr>
<td>Weed</td>
<td>15</td>
<td>Flex</td>
<td>16</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>5</td>
<td>Weed, McGauvran, Durgin, O'Leary, Lovejoy Lot, Dining Hall</td>
</tr>
<tr>
<td>Weed</td>
<td>16</td>
<td>Flex</td>
<td>16</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Weed</td>
<td>17</td>
<td>Flex</td>
<td>16</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Not in Service</td>
<td>18</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
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<td>19</td>
<td>Flex</td>
<td>16</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>11</td>
<td>all of west campus is being removed</td>
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<td>20</td>
<td>Flex</td>
<td>16</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>7</td>
<td>Wannalancit</td>
</tr>
</tbody>
</table>

**NOTE:** All cards have 32 port capacity

**Totals:** 1151 2308
Exhibit E: Fiber Types

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Single Mode</th>
<th>Multi-mode</th>
<th>Distance (meters)</th>
<th>strands currently used by PBX</th>
<th>2 additional strands available</th>
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<tbody>
<tr>
<td>Cumnock Hall</td>
<td>Dugan Hall</td>
<td></td>
<td>X</td>
<td>2.5Km</td>
<td>2</td>
<td>yes</td>
</tr>
<tr>
<td>Cumnock Hall</td>
<td>Fox Hall</td>
<td></td>
<td>X</td>
<td>2.5Km</td>
<td>2</td>
<td>yes</td>
</tr>
<tr>
<td>Cumnock Hall</td>
<td>Lydon Library</td>
<td></td>
<td>X</td>
<td>650M</td>
<td>2</td>
<td>yes</td>
</tr>
<tr>
<td>Dugan Hall</td>
<td>Fox Hall</td>
<td></td>
<td>X</td>
<td>2.4Km</td>
<td>2</td>
<td>see note 2</td>
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<tr>
<td>Dugan Hall</td>
<td>Read Hall</td>
<td></td>
<td>X</td>
<td>4Km</td>
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<td>see note 3</td>
</tr>
<tr>
<td>Dugan Hall</td>
<td>Weed Hall</td>
<td></td>
<td>X</td>
<td>175M</td>
<td>2</td>
<td>yes</td>
</tr>
<tr>
<td>Fox Hall</td>
<td>Ames Textile</td>
<td></td>
<td>X</td>
<td>&gt;10K</td>
<td>2</td>
<td>see note 1</td>
</tr>
<tr>
<td>Fox Hall</td>
<td>Scopus</td>
<td></td>
<td>X</td>
<td>&gt;10K</td>
<td>2</td>
<td>see note 1</td>
</tr>
<tr>
<td>Fox Hall</td>
<td>Wannalancit</td>
<td></td>
<td>X</td>
<td>&gt;1Km</td>
<td>2</td>
<td>see note 1</td>
</tr>
<tr>
<td>Fox Hall</td>
<td>McQuade</td>
<td></td>
<td>&gt;1Km</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

note 1: fiber needs to be re-configured into Fox to open up more strands unless fibers
note 2: Yes in the basement, fiber in Fox needs to be run to bring it upstairs
note 3: only the pair of fiber the phone system is running on now
note 4: fiber to be installed as part of renovation to be completed 2005
## Exhibit F: Weighting matrix

<table>
<thead>
<tr>
<th>Section #</th>
<th>Title</th>
<th>Description</th>
<th>Response Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2</td>
<td>Core Switching System Requirements</td>
<td>Summary</td>
<td>2400</td>
</tr>
<tr>
<td></td>
<td>8.2.1 Base Switching System</td>
<td>Describe the base switching system technology proposed. Assure that all client issues in the “general intent” are addressed. Include appropriate descriptions of the platform proposed, and identify how that platform will support the primary University mission.</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td>8.2.2 Standards</td>
<td>List and describe all software and/or switching standards supported by the switching solution recommended. Define how each identified standard supports the switching platform, and where possible, relate the importance of these standards to the University’s business goals.</td>
<td>250</td>
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<tr>
<td></td>
<td>8.2.3 Class of service</td>
<td>Describe the level of feature discrimination/provision possible through the use of class of service definitions.</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>8.2.4 Switching system status</td>
<td>Manufacture date; Generic software release proposed; Date of proposed software; Generic software updates</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>8.2.5 Reserve Power</td>
<td>Describe the reserve power support recommended for both the central switching system and all remote switch components. If the University must provide additional reserve power capability, provide the specifications for such support</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>8.2.6 Standard Dialing Plan Compatibility</td>
<td>Describe the methods in place to assure that both the North American, and International Dialing Plans are accommodated in the recommendation</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>8.2.7 Non-blocking switching</td>
<td>Describe the non-blocking capability of the switching system. Define what the basis is for defining your solution as either non-blocking or virtually non-blocking.</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>8.2.8 Distributed switching capability</td>
<td>Describe the remote switching capability recommended. Describe the process of using a remote node as a stand-alone switching entity in the event of a primary node failure.</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>8.2.9 System Design &amp; Configuration</td>
<td>Describe the design with appropriate detail</td>
<td>200</td>
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<tr>
<td></td>
<td>8.2.10 System Size</td>
<td>Vendors must describe the maximum port capacity of their proposed solution. Discuss the engineering requirements that will allow any given node to reach the maximum capacity</td>
<td>100</td>
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<tr>
<td></td>
<td>8.2.11 Engineered Capacity</td>
<td>Describe the switch configuration designed to accommodate on-campus growth</td>
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<tr>
<td>Section</td>
<td>Feature</td>
<td>Description</td>
<td>Score</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>-------------</td>
<td>-------</td>
</tr>
<tr>
<td>8.2.12</td>
<td>Wired Capacity</td>
<td>Define the wired capacity requirements engineered for the basic on-campus switching system</td>
<td>75</td>
</tr>
<tr>
<td>8.2.13</td>
<td>Equipped and Working Capacity</td>
<td>Define the equipped and working capacity of the switching system proposed.</td>
<td>125</td>
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<tr>
<td>8.3</td>
<td>System Trunking</td>
<td><strong>Summary</strong></td>
<td>300</td>
</tr>
<tr>
<td>8.3.1</td>
<td>Alternate Trunk Routing</td>
<td>Describe the alternate trunk routing recommended to assure that any single cable failure will not isolate the University from the public switched network.</td>
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</tr>
<tr>
<td>8.3.2</td>
<td>System Trunking</td>
<td>Vendors should engineer the proposed trunking requirements for their solution.</td>
<td>100</td>
</tr>
<tr>
<td>8.3.3</td>
<td>Trunking Failure</td>
<td>The University has a high desire to maintain its connectivity with the public network. We expect vendor responses to address this issue in both the proposed system and the trunking configurations. The trunking capability of the switching system itself should allow for dynamic rerouting of trunk connections in the event of a cable failure, however, alternate routing, and dedicated power failure connections may be viable options for vendor considerations.</td>
<td>100</td>
</tr>
<tr>
<td>8.4</td>
<td>System Features</td>
<td><strong>Summary</strong></td>
<td>200</td>
</tr>
<tr>
<td>8.4.1</td>
<td>Standard Features</td>
<td>List and describe the standard system features available in the base switching system recommended.</td>
<td>200</td>
</tr>
<tr>
<td>8.4.2</td>
<td>Optional Features</td>
<td>If additional features are available at additional cost, and the vendor believes they offer additional benefit to the University, define the features and explain their benefit to the campus</td>
<td>200</td>
</tr>
<tr>
<td>8.5</td>
<td>Failure &amp; Recovery</td>
<td><strong>Summary</strong></td>
<td>300</td>
</tr>
<tr>
<td>8.5.1</td>
<td>Disaster Recovery</td>
<td>Address the scope of disaster recovery services proposed. Include specific areas in which you will provide extraordinary response to extraordinary events such as fire, earthquake, and flood. Describe what disaster recovery services you provide which are outside the scope of your proposal to the University, and define the process of defining costs for such services.</td>
<td>150</td>
</tr>
<tr>
<td>8.5.2</td>
<td>Switch Failure</td>
<td>Define the levels of disaster response you propose to support the switching system recommended.</td>
<td>150</td>
</tr>
<tr>
<td>8.6</td>
<td>Emergency Services E911</td>
<td>Vendor solutions must address the capability of being fully compliant with industry standard E911 systems. Vendors must address the integration of the proposed switching system with public emergency reporting capability and appropriately route E911 calls to the local government E911 office</td>
<td>300</td>
</tr>
<tr>
<td>8.7</td>
<td>System Management</td>
<td>The proposed system must provide a management system that is Microsoft compatible, intuitive to the user, and provides extensive control, interrogation, and reporting capabilities.</td>
<td>250</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
<td>Summary</td>
<td>Score 1</td>
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<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>8.8</td>
<td>VoiceMail System</td>
<td><strong>Summary</strong></td>
<td>500</td>
</tr>
<tr>
<td>8.8.1</td>
<td>New integrated system</td>
<td>Under this option, the vendor is expected to provide a design that provides an integrated VM solution optimized to be directly compatible with their proposed switching solution</td>
<td>500</td>
</tr>
<tr>
<td>8.8.2</td>
<td>Unified Messaging</td>
<td>Vendors may choose to propose a Unified Messaging System to the University. This system would provide a single system for distribution of voice, fax, and electronic messages. The vendor must provide details regarding the capabilities, design, size, operation, maintenance, training, and deployment of the proposed system</td>
<td></td>
</tr>
<tr>
<td>8.9</td>
<td>Integration with University Call Detail Recording (CDR) System</td>
<td>Provide the design and proposed operation required to assure proper installation, testing, and acceptance of the proposed delivery of near-real time CDR data from the proposed switching system</td>
<td>200</td>
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<tr>
<td>8.10</td>
<td>Campus Distribution and Facility Utilization</td>
<td><strong>Summary</strong></td>
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<tr>
<td>8.10.1</td>
<td>Intra-Building Distribution</td>
<td>Define your intra-building station wire requirements</td>
<td>400</td>
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<tr>
<td>8.10.2</td>
<td>Inter-Building Distribution</td>
<td>Define the inter-building distribution plan proposed</td>
<td>200</td>
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<tr>
<td>8.10.3</td>
<td>Copper Removal</td>
<td>Define the plan for removing abandoned University copper plant</td>
<td>100</td>
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<tr>
<td>8.11</td>
<td>System Operation</td>
<td><strong>Summary</strong></td>
<td>600</td>
</tr>
<tr>
<td>8.11.1</td>
<td>Basic vendor technical responsibilities</td>
<td>Identify all responsibilities that will be fulfilled by the vendor’s on-site technical support staff</td>
<td>200</td>
</tr>
<tr>
<td>8.11.2</td>
<td>Required Service Commitment</td>
<td>Identify the proposed initial service level contract</td>
<td>100</td>
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<tr>
<td>8.11.3</td>
<td>Training and experience of vendor technical staff</td>
<td>Identify the commitment of the vendor to provide a fully trained on-site technician for University support</td>
<td>50</td>
</tr>
<tr>
<td>8.11.4</td>
<td>Administrative Technical Training Plan</td>
<td>Specify the technical curriculum recommended and included as part of this proposal that will enable the University to improve its administrative utilization of the systems features and functions</td>
<td>100</td>
</tr>
<tr>
<td>8.11.5</td>
<td>System Management Training Plan</td>
<td>Specify the training courses recommended for University management personnel that will enable them to provide direction to the campus regarding utilization of the features and functions of the system</td>
<td></td>
</tr>
<tr>
<td>8.11.6</td>
<td>End-User Training Plan</td>
<td>The vendor must address training requirements for end-users that will assure they are technically competent to utilize the features and functions of the proposed services</td>
<td></td>
</tr>
<tr>
<td>8.12</td>
<td>Station Equipment</td>
<td><strong>Summary</strong></td>
<td>150</td>
</tr>
<tr>
<td>8.12.1</td>
<td>Basic Digital Station Equipment</td>
<td>Describe the basic single line digital display telephone set offered for use with the switching</td>
<td>100</td>
</tr>
</tbody>
</table>
8.12.2 Optional Digital Station Equipment
Please describe all digital instruments you expect to offer under contracted rates to the University

200

8.12.3 Analog Station Equipment
Describe the basic single line analog telephone set offered for use with the switching system proposed

50

8.12.4 Other Station Equipment
Describe other station equipment that you believe offers the potential to deliver improvement to University operations

50

8.13 Technical Implementation Plan

Summary

1350 0

8.13.1 Project Team
Identify the names and responsibilities of all vendor project team members

250

8.13.2 Project Management Tools
Describe the tools and processes used by the vendor to provide assurance of a quality implementation.

100

8.13.3 Demonstration Plan
Vendors are expected to provide a comprehensive demonstration plan

400

8.13.4 Master Project Plan
The Master Plan should contain the start and end dates, the major milestones, and the deliverables associated with each planned activity in the vendor's deployment plan

150

8.13.5 Switch Implementation Plan
The Switch Implementation Plan should define all aspects of successfully implementing the recommended switch platform for the University

75

8.13.6 Building Implementation Plan
For the purpose of meeting this specification, vendors must provide two building views: 1. A sample Master Building Implementation Plan that includes all the tasks the vendor will perform in developing a plan for all buildings; and 2. An implementation plan that identifies the vendor’s grouping of buildings for implementation, and specifies the major milestones and activities that must be met for each group.

75

8.13.7 Cutover Plan
The vendor must specify the main tasks, milestones, and deliverables that will result in a completely satisfactory in service date no later than June 27, 2003

75

8.13.8 Help Desk Plan
It is anticipated that the vendor will provide coverage for the technical aspects of a Help Desk during the cutover period. Vendors should specify the length of time they will provide such technical assistance, how many individuals will staff the center, and what their responsibilities will be. The University will provide management staff to resolve any required moves, adds, or changes, or to clarify University policies and procedures. The vendor should provide a narrative of the plan as well as a scheduled plan.

75
### 8.13.9 Test Plan

The vendor must provide a complete test plan. The University expects that test plans are a basic part of the vendor’s operating procedures, therefore, the standard vendor test plan will be an acceptable response for this proposal. Additional test plan items may be incorporated after the award, based on specific University criteria. To the degree that such additional items may add cost to the vendor’s proposal, the University will adjust the final payment schedule. Proposed vendor test plans that reflect the integrated system recommended will score higher during the evaluation than those that are general, and reflect only a testing of individual technical components.

### 8.13.10 Acceptance Plan

Vendors must identify all items in their acceptance plan. Each item must be defined with both a planned timeframe for performance and a narrative that states what the acceptance or test item is, how it is performed, and what the acceptance criteria is. It is expected that the acceptance criteria will be formally signed off by the University at their completion.

### 8.14. Purchase of Existing Equipment Inventory

The University has an existing inventory of equipment that will be available for resale after the system is replaced. Vendors may propose to buy this inventory or not. Vendors should define the terms of such a purchase in this response.

<table>
<thead>
<tr>
<th>Total</th>
<th>7150</th>
<th>1850</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage Distribution</td>
<td>79%</td>
<td>21%</td>
</tr>
</tbody>
</table>
Exhibit G: Pricing response sheets

Bidder’s Note: These pricing sheets constitute the only document that the University will use for calculating the final pricing for each proposal. Vendors are encouraged to provide a complete ordering document from their own design/ordering software (include such documentation in the pricing package – not the technical proposal), however the provided pricing sheets themselves will be the only document recognized by the University for submitting official prices. Where the bidder’s design incorporates the necessary equipment into the core switching system (as may be the case to deliver E911 functionality, simply enter $0 in the appropriate column and explain where the charges are included in the “Comment” section).

Bidders are not expected to fill in the “Points Attained” column. This will be filled in after the University review team completes the evaluations of qualified vendor proposals.

The University has included the pricing sheets for your use to enable you to comply with the requirement to separate all pricing documentation. **Please use the sheets to create both the written and electronic responses and submit them in a separate package** (include the electronic pricing submission on a separate disk from the proposal).
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Price</th>
<th>Points Available</th>
<th>Points Attained</th>
<th>Comments</th>
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<tbody>
<tr>
<td>1</td>
<td>Hardware and Equipment</td>
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<tr>
<td>2</td>
<td>8.2 - 8.5, 8.13 - 8.14 System Equipment Purchase</td>
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<tr>
<td>3</td>
<td>Mandatory Components</td>
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<tr>
<td>4</td>
<td>Optional Components</td>
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<tr>
<td>5</td>
<td>Total Calculated Price</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>8.6 Emergency Services E911</td>
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<tr>
<td>7</td>
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</tr>
<tr>
<td>8</td>
<td>Optional Components</td>
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<td>9</td>
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<td>8.7 System Management</td>
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<td>8.8 Integration with University VoiceMail System</td>
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<td>8.9 Integration with University Call Detail Recording (CDR) System</td>
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<td>8.10 Campus Distribution and Facility Utilization</td>
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<td>24</td>
<td>Optional Components</td>
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<tr>
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<tr>
<td>27</td>
<td>Support and Services</td>
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<td>28</td>
<td>8.11 System Operation</td>
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<td>8.11.1 Basic vendor technical responsibilities (Mandatory)</td>
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<td>8.11.2 Required Service Commitment (Mandatory)</td>
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<td>8.11.4 Administrative Technical Training Plan (Mandatory)</td>
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<td>8.11.5 System Management Training Plan (Optional)</td>
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<td>Total Price, Optional Components</td>
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**Total Price, Support and Services**

ADD LINES 29,34,35,36,38

LINE 37

ADD LINES 39,40
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<td>Basic Digital Sets (3,000)</td>
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<td>Unit Price</td>
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<tr>
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<td>Optional Digital Sets</td>
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<tr>
<td></td>
<td>Optional Digital Sets</td>
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<td>44</td>
<td>Basic Analog set with msg waiting lamp (1200)</td>
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<td>Unit Price</td>
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<td>Optional Analog Sets</td>
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<td>Installation, Non-recurring and Other One-time Charges</td>
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<td>Hardware and Equipment</td>
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<td>Support and Services</td>
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<td>Other (explain in comments)</td>
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</tr>
<tr>
<td>51</td>
<td>Summary Pricing</td>
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<tr>
<td>52</td>
<td>Hardware and Equipment Purchase</td>
<td>FROM LINE 26</td>
<td></td>
<td></td>
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<tr>
<td>53</td>
<td>Support and Services</td>
<td>FROM LINE 41</td>
<td></td>
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<tr>
<td>54</td>
<td>Non-Recurring</td>
<td>FROM LINE 50</td>
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<tr>
<td>55</td>
<td>Procurement Cost</td>
<td>ADD LINES 52-54</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>56</td>
<td>Less Credits, Discounts, and/or Adjustments</td>
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<tr>
<td>57</td>
<td>Proposed System Cost</td>
<td>SUBTRACT LINE 56 FROM LINE 55</td>
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<td></td>
</tr>
<tr>
<td>58</td>
<td>Applicable Taxes and Surcharges (Specify)</td>
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<tr>
<td>59</td>
<td>#1</td>
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<td>60</td>
<td>#2</td>
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<td>62</td>
<td>#4</td>
<td></td>
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<tr>
<td>63</td>
<td>Total Taxes and Surcharges</td>
<td>ADD LINES 59-62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>Final Cost (Procurement, Taxes, Surcharges)</td>
<td></td>
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</tr>
</tbody>
</table>

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Exhibit H: Vendor acknowledgement of proposal

RETURN THIS FORM IMMEDIATELY!

Acknowledgement: Receipt of Request-For-Proposal Documents

Bid Number: UML-LL030008
Title: PBX Replacement

Please take a moment to acknowledge receipt of the attached bid documents. Your compliance with this request will help us to maintain proper bid follow-up procedures while ensuring that all vendors have the opportunity to bid.

Date Issued: ____________ Date bid received? ___/___/____
Do you plan to attend the Bidders Meeting to be held on May 12, 2003 Yes____ No____
Please indicate who will be attending:

Do you plan to submit a proposal? Yes____ No____
Print or type the following information:
Company name: _______________________________________________
Address: ______________________________________________________
City or Town: __________________________________________________
Contact Name: ________________________________________________
Phone: ______________ Fax: ______________________
Received by: __________________________________________________

Note: Faxed acknowledgements are requested! FAX (978)934-3004
A cover sheet is NOT necessary.
IMPORTANT: DO NOT FAX BIDS.
BIDS MUST BE SUBMITTED IN SEALED PACKAGES!
Exhibit I:  Bidder’s check list

University of Massachusetts Lowell
Procurement Department
883 Broadway Street, Suite 200
Lowell, MA  01854-5105

BIDDER’S CHECK LIST
This form need not be returned with your bid. It is suggested that you review and check off each action as you complete it.

____ 1. The bid has been signed in ink by a duly authorized representative of the company (unsigned bids are automatically rejected).

____ 2. The bid prices you have offered have been reviewed and verified and are in a separate envelope and a separate electronic file.

____ 3. The price extensions and totals have been checked. (In case of discrepancy between unit prices and total prices, the unit price will govern the bid evaluation).

____ 4. Any errors, alterations, corrections or erasures to unit prices, total prices, et cetera are initialed by the person who signs the proposal or his designee. Such changes made and not initialed will automatically reject the bid.

____ 5. The payment terms are net 45 days. Net terms for periods less than 30 days may result in bid rejection. (You may offer cash discounts for prompt payment).

____ 6. Any technical or descriptive literature, drawings or bid samples that are required have been included with the bid.

____ 7. The package has been addressed to:  RFP –  LL030008
University of Massachusetts Lowell
Procurement Department
883 Broadway Street, Suite 200
Lowell, MA  01854-5105
8. The package has been clearly marked with the bid number and bid opening date.

9. If additional copies are required as part of your response, make sure the original is clearly marked.

10. The bid is mailed or hand-delivered in time to be received no later than the designated opening date and time (11:00 AM, June 6, 2003). Late bids are NOT accepted. Faxed responses are not accepted. Please allow enough time if mailing or delivering your proposal.