UMBC
AN HONORS UNIVERSITY IN MARYLAND

UNIVERSITY OF MARYLAND BALTIMORE COUNTY

REQUEST FOR PROPOSAL # BC-20616-Q

FOR

SNACK VENDING CONTRACT

ISSUE DATE: MAY 6, 2009

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<th>SIGNIFICANT MILESTONES</th>
<th>TIME:</th>
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<tr>
<td>Issue Date</td>
<td>4:00 PM</td>
<td>Wednesday, April 6, 2009</td>
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<tr>
<td>Pre-Proposal Conference</td>
<td>10:00 AM</td>
<td>Thursday, May 14, 2009</td>
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<td>Deadline for Questions</td>
<td>5:00 PM</td>
<td>Wednesday, May 27, 2009</td>
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<td>Proposals Due Date</td>
<td>2:00 PM</td>
<td>Tuesday, June 2, 2009</td>
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**WARNING:** Prospective bidders who have received this document from a source other than the Issuing Office should immediately contact the Issuing Office and provide their name and mailing address in order that amendments to the Request for Proposal or other communications can be sent to them. Any Prospective Proposer who fails to notify the Issuing Office with this information assumes complete responsibility in the event that they do not receive communications from the Issuing Office prior to the closing date.

UNIVERSITY OF MARYLAND BALTIMORE COUNTY
1000 Hilltop Circle
Baltimore, Maryland 21250
www.umbc.edu
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SNACK VENDING CONTRACT  
RFP # BC-20616-Q  

SECTION I: SUMMARY INFORMATION  

A. SUMMARY STATEMENT  
The University of Maryland Baltimore County (also called the University or UMBC) intends to contract for the Campus-Wide Sale of Snack/Food and hot beverages.

B. ISSUING OFFICE  
Sharon Quinn  
University of Maryland Baltimore County  
Department of Procurement  
Administration Building, Room 301,  
1000 Hilltop Circle, Admin 923  
Baltimore, MD 21250  
Voice: (410)-455-2540  
FAX: (410) 455-1009  
E-mail: squinn@umbc.edu  

The sole point of contact in the University for the purpose of this RFP is the issuing office. Any questions with regard to any aspect of this proposal must be directed to Sharon Quinn in writing.

C. QUESTIONS AND INQUIRIES  
Questions and inquiries should be directed to the individual referenced with the Issuing Office above. All such questions and inquiries must be received by 5:00 p.m. Wednesday, May 27, 2009. Inquiries will receive a written reply. Copies of replies will also be sent to all other proposers, but without identification of the inquirer.

D. DELIVERY OF PROPOSALS  
Proposals must be delivered to:

University of Maryland Baltimore County  
Department of Procurement  
1000 Hilltop Circle, Administration Building, Room 301  
Baltimore, MD 21250  
Attention: Sharon Quinn
E. PROPOSAL CLOSING DATE

In order to be considered, the original and ten (10) copies [for a total of eleven (11) sets] of the Technical Proposal and the original and five (5) copies [for a total of six (6) sets] of the Financial Proposal must arrive at the issuing office by Tuesday, June 2, 2009, no later than 2:00 p.m.

NOTE: All UMBC mail goes through the UMBC mailroom, so please leave sufficient time for the mail distribution. A mailed (via US Post Office) proposal is not considered "received" until the document reaches the above room at UMBC. Proposals delivered to the campus central mail facility or to locations other than Room 301 in the UMBC Administration Building will not be considered "received" by UMBC until they arrive at Room 301 in the Administration Building and are clocked in. The University will not waive delay in delivery resulting from the need to transport a proposal from another campus location to Room 301, or error or delay on the part of the carrier.

Proposals received after the established closing date and time cannot be considered. Proposers are advised that a proposal is not considered "received" until it is delivered to the specific location; that is, a proposal must be received in Room 301 by the due date in order to be considered. Proposers must allow sufficient time, therefore, to insure that their proposal is "received" in accordance with this paragraph.

F. PRE-PROPOSAL CONFERENCE

There will be a Pre-Proposal Conference held in conjunction with the RFP. Attendance at the Pre-Proposal conference is not mandatory. The conference will be held on Thursday, May 14, 2009 at 10:00 a.m. at the University Center, in Room 310. Please refer to the Campus Website for directions and parking: http://www.umbc.edu/aboutumbc/campusmap/. In conjunction with the RFP, there will be a Site Visit to the various vending locations following this meeting. All firms interested in the site visit will remain in the room following the meeting. Vendors should allow three (3) hours for this site visit, and wear comfortable shoes.

While attendance at the Pre-Proposal Conference is not mandatory, information presented may be very informative; therefore, all interested vendors are encouraged to attend in order to be able to better prepare acceptable proposals. If your firm plans to send representatives, please call the issuing office by Monday, May 11, 2009. We ask that a maximum of two (2) representatives from each company attend this meeting. Appropriate auxiliary aids and services for qualified individuals with disabilities will be provided upon request. Please call Sharon Quinn (at 410-455-2540) with specific requests at least five (5) business days prior to conference.
G. **DURATION OF PROPOSAL OFFER**

Proposals are to be held valid for 120 days following the closing date for this RFP. This period may be extended by mutual agreement between the vendor and the University.

H. **TERM OF CONTRACT**

The contract shall be for a period of **three (3) years beginning August 1, 2009 and ending July 31, 2012.**

The University shall have the option to renew the contract for **five (5) additional one-year terms**, said option(s) to be exercised at the sole discretion of the University.

I. **EVALUATION OF OFFERS**

A contract award will be made to the responsible proposer(s) whose proposal best meets the needs of the University as determined by the Procurement Officer. All proposals will be evaluated by an University evaluation committee. After considering the factors set forth in this RFP, the committee will make recommendations for the award of the contract to the vendor(s) whose proposal is/are determined to be the most advantageous to the University.

J. **PROPOSAL ACCEPTANCE**

The University reserves the right to accept or reject any and all proposals, in whole or in part, received as a result of this RFP, to waive minor irregularities, to negotiate in any manner necessary to best serve the interest of the University. Further, the University reserves the right to make a whole award, multiple awards, a partial award or no award at all. Proposers judged by the procurement officer not to be responsible or proposers whose proposals are classified as not reasonably susceptible of being selected for award shall be so notified. The University reserves the right to increase or decrease the quantities of any materials, equipment, supplies or services.

K. **FORMATION OF AGREEMENT/CONTRACT OR ISSUANCE OF PURCHASE ORDER**

The Contract to be entered into as a result of this RFP (the “Contract”) shall be by and between the proposer as contractor and the University in the form of a University Contract and shall contain the provisions included herein as Appendix C (Service Contract), as well as, any additional terms required by UMBC or the State of Maryland. By submitting an offer, the Contractor warrants that they have reviewed Appendix C (Services) and will execute a contract on that form upon request by UMBC. Proposers must understand and acknowledge that UMBC, as an agency of the State of Maryland, cannot indemnify the Contractor, submit to binding arbitration, or agree to pay the Contractor’s attorney’s fee.
The Contract to be entered into as a result of this RFP (the “Contract”) shall be by and between the Proposer as contractor and the University and shall consist of (1) the terms, conditions and specifications of this RFP and any appendices, amendments, additions or changes thereto; (2) the Standard Contract found in Appendix C, and (3) the Proposer’s response to the RFP and any amendments or changes thereto.

Other University System of Maryland institutions (within a 50-mile radius) not specifically named in this solicitation document may participate in the contract resulting from this solicitation under the same pricing, terms and conditions of the awarded contract.

L. ORDER OF PRECEDENCE

The contract between the parties will be embodied in the contract documents, which will consist of those items named in “K” above, listed in their order of precedence. Modifications to the Order of Precedence of those items will not be accepted in order to protect the University against obscure, unrecognized conflicts between the solicitation and a Proposer’s proposal. In the event of a conflict, the terms of the University Contract shall prevail.

M. PROPOSAL AFFIDAVIT AND CERTIFICATIONS

State procurement regulations require that proposals contain certifications regarding non-collusion, debarment, cost and price, etc. The affidavit form, which should be completed by all respondents and returned with their respective responses, is included in Appendix A of the RFP.

END OF SECTION I
A. **PURPOSE**

The overall purpose of this RFP is to provide information to vendors interested in preparing and submitting proposals to meet the requirements for campus-wide sales of snack/food and hot beverages as described herein. Proposals will be received for the items/services specified herein or attached hereto under the terms, conditions and general specifications of this proposal.

B. **GENERAL INFORMATION FOR VENDORS**

1. Proposals must be made in the official name of the firm or individual under whom business is conducted (showing official business address) and must be signed by a duly authorized person.

2. Each proposer must furnish all information required by the proposal request. Erasures or other changes must be initialed by the person signing the proposal. Proposals signed by an agent of the corporation must be accompanied by evidence of their authority.

3. At the Pre-Proposal conference, potential proposers will have an opportunity to: (1) ask and receive answers to all questions regarding the specifications and general conditions, and (2) receive any additional information relating to this contract. **A Site Visit is scheduled for an inspection of the vending areas.**

4. This Request for Proposals creates no obligation on the part of the University to award the contract or to compensate proposers for proposal preparation expenses.

5. The University reserves the right to award a contract based upon the proposals received without further negotiations. Vendors should therefore not rely on having a chance during negotiations to change their offer.

6. Before the award of a contract, UMBC may require the proposer to submit evidence of any information related to the financial, technical, and other qualifications and abilities of the proposer.

C. **ADDENDA TO THE RFP**

Any additional information not addressed in this RFP in response to an inquiry received by the Procurement Officer will be answered in writing as an addendum to the RFP. Copies of the addenda will be posted to the eBid Board at
It is the responsibility of the vendor to check the website frequently until the opening date for addendums, amendments and changes. Reasonable efforts will be made to avoid the identification of Proposers in any addenda. For purposes of this RFP, there shall be no other communication between UMBC and Proposers other than as described in this paragraph.

RECEIPT OF THE ADDENDA, AMENDMENT AND/OR CHANGE ISSUED MUST BE ACKNOWLEDGED IN WRITING BY PROSPECTIVE PROPOSERS AND EACH INCLUDED IN THE TECHNICAL PROPOSAL. An “Acknowledgement of the Receipt” Form (found in Appendix A) for all amendments, addenda, and changes issued shall be required from all vendors submitting a proposal.

D. CANCELLATION OF THE RFP

The University may cancel this RFP, in whole or in part, at any time.

E. ORAL PRESENTATION

Vendors who submit proposals will be required to make individual presentations to University representatives in order to discuss their proposals. (See Section IV, Item C-2, for further details.).

F. INCURRED EXPENSES

The University will not be responsible for any costs incurred by any vendor in preparing and submitting a proposal, delivery of or return of representative samples (if applicable).

G. ECONOMY OF PREPARATION

Proposals should be prepared simply and economically, providing a straightforward, concise description of the vendor’s offer to meet the requirements of the RFP.

H. ACCEPTANCE OF TERMS AND CONDITIONS

By submitting a proposal in response to this RFP, the firm accepts the terms and conditions set forth in this RFP.

I. PROCUREMENT REGULATIONS

This RFP and any resulting contract shall be governed by the USM Procurement Policies and Procedures and the State Finance and Procurement Article of the Annotated Code of Maryland and by State Procurement Regulations, Code of Maryland Regulations Title 21, as applicable.
J. **MULTIPLE PROPOSALS**

Vendors may **not** submit more than one proposal.

K. **ALTERNATE SOLUTION PROPOSALS**

Vendors may **not** submit an alternate to the solution given in this RFP.

L. **TELEGRAPHIC/FACSIMILE PROPOSAL MODIFICATIONS**

Vendors may modify their proposals by telegraphic or facsimile communication at any time prior to the due date and time set to receive proposals provided such communication is received by the University prior to such time and, provided further, the University is satisfied that a written confirmation of the modification with the signature of the proposer was mailed prior to the time and date set to receive proposals. The communication should not reveal the proposal price but should provide the addition or subtraction or other modification so that the final prices, percent or terms will not be known to the University until the sealed proposal is opened. If written confirmation is not received within two (2) days from the scheduled proposal opening time, no consideration will be given to the modification communication. No telephone, telegraphic, or facsimile price proposals will be accepted.

M. **CONTRACTOR RESPONSIBILITIES**

The University shall enter into contractual agreement with the selected offering vendor(s) only. The selected vendor(s) shall be responsible for all products and/or services required by this RFP. Subcontractors, if any, shall be identified and a complete description of their role relative to the proposal shall be included. The University’s intent is not to direct the use of any particular vendor, however, the vendor will not contract with any such proposed person or entity to whom the University has a reasonable objection. Notification of such objection will be made by the University within 15 days of contract. The vendor shall be fully responsible for the acts and omissions of its subcontractors and of persons directly or indirectly employed by them.

N. **PUBLIC INFORMATION ACT**

Proposers must specifically identify those portions of their proposals, if any, which they deem to contain confidential, proprietary information or trade secrets and must provide justification why such material should not, upon request, be disclosed by the University under the Public Information Act, Part III, Title 10, State Government Article, Annotated Code of Maryland.
Vendors must clearly indicate each and every section that is deemed to be confidential, proprietary or a trade secret (it IS NOT sufficient to preface your proposal with a proprietary statement). Failure to comply may result in rejection of your proposal.

**O. MINORITY BUSINESS ENTERPRISE NOTICES**

Minority Business Enterprises (MBE) are encouraged to respond to this solicitation notice.

**P. ARREARAGES**

By submitting a response to this solicitation, a vendor shall be deemed to represent that it is not in arrears in the payment of any obligation due and owing the State of Maryland, including the payment of taxes and employee benefits and that it shall not become so in arrears during the term of the contract if selected for contract award.

**Q. TAXES**

The UMBC is exempt from Federal Excise Taxes, Maryland Sales and Use Taxes, and the District of Columbia Sales Taxes and Transportation Taxes, except as noted in applicable sections of COMAR. Exemption Certificates shall be provided upon request. Where a Contractor is required to furnish and install material in the construction or improvement of real property in performance of a contract, Contractor shall pay the Maryland Sales tax and the exemption does not apply.

**R. RFP RESPONSE MATERIALS**

All written materials submitted in response to this RFP become the property of the University and may be appended to any formal documentation, which would further define or expand the contractual relationship between the University and the successful vendor(s).

**S. PROPOSAL SECURITY**  - NOT APPLICABLE - [Refer to Section V, item C-4.1 “Performance Bond”]

**T. DEBRIEFING OF UNSUCCESSFUL PROPOSERS**

Unsuccessful proposers may request a debriefing. If the proposer chooses to do so, the request must be submitted in writing to the Procurement Officer within ten days after the proposer knew, or should have known its proposal was unsuccessful. Debriefings shall be limited to discussion of the specific proposer’s proposal only and not include a discussion of a competing proposer’s proposal. Debriefings shall be conducted at the earliest feasible time.
The debriefing may include information on areas in which the unsuccessful proposer’s proposal was deemed weak or insufficient. The debriefing may NOT include discussion or dissemination of the thoughts, notes or ranking from an individual evaluation committee member. A summarization of the procurement officer’s rationale for the selection may be given.

U. MARYLAND PUBLIC ETHICS LAW, TITLE 15

The Maryland Public Ethics Law prohibits, among other things: State employees or officials (and in some cases, former employees) and businesses in which such an individual is employed or holds a financial interest from (i) submitting a bid or proposal, (ii) negotiating a contract, and (iii) entering into a contract with the governmental unit with which the individual is affiliated per the Maryland Code, State Government Article, SS 15-502.

If the bidder/proposer has any questions concerning application of the State Ethics law to the bidder/proposer’s participation in this procurement, it is incumbent upon the bidder/proposer to see advice from the State Ethics Commission; Office of the Executive Director, 9 State Circle, Suite 200, Annapolis, MD 21401, 410-974-2068 or toll free 1-877-669-6085.

The procurement officer may refer any issue raised by a bid or proposal to the State Ethics Commission. The procurement officer may require the bidder/proposer to obtain advice from the State Ethics Commission and may reject a bid or proposal that would result in a violation of the Ethics Law.

The resulting contract is cancelable in the event of a violation of the Maryland Public Ethics Law by the vendor or any State of Maryland employee in connection with this procurement.

V. Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, ("HIPAA") and Maryland Confidentiality of Medical Records Act (Annotated Code of Maryland, Health – General Article '4-301 et seq. ("the Act"). – NOT APPLICABLE

W. JOINT VENTURE PROPOSERS

If the Proposer is a joint venture firm, the Proposer must provide all identification information for all parties and all requirements for all parties (i.e., licenses, insurance, etc.) as requested. As part of the initial technical proposal submission, the proposer must identify the percentage partnership for each joint venture party, the responsibilities of each joint venture party with respect to the scope of services/work inclusive of the requirements for each entity based on such services as described in this RFP document.
NOTE: All joint venture parties will be held responsible for the contract obligations jointly and severally.

X. MINORITY BUSINESS ENTERPRISES

State-certified Minority Business Enterprises (MBE) are strongly encouraged to respond to this solicitation. Minority participation is very important to UMBC and to the State of Maryland. For more information on the State’s MBE program, please see the MDOT website, at http://www.mdot.state.md.us/mb/mb/index.html.

Minority Business Enterprise (“MBE”) involvement will be considered in the analysis of the technical portion of this RFP. It is the intent of the University to maximize minority business opportunities. Certified Minority Business Enterprise firms and non-minority business enterprise firms, who utilize certified MBE vendors, as subcontractors are eligible to receive additional consideration during the technical evaluation process for MBE participation. A minimum MBE subcontract participation goal of 25% of the total amount of the contract has been established for this procurement. This goal applies to all firms regardless of whether the prime contractor is or is not a MBE firm. All proposals must include, in the technical proposal, a statement as to the expected level of MBE participation (prime contractor and subcontractor) that will be involved in this contract. Proposers may propose percentages that exceed the minimum stated. Consideration will be given on the basis of a percentage/value of MBE contract participation. The “Certified MBE Utilization and Fair Solicitation” form along with the “MBE Participation Schedule” (found in Appendix A) must be completed and returned with the Technical Proposal certifying the Proposer’s intent to provide the required MBE participation.

Within ten (10) days of notification of award, the successful Proposer must provide: (1) an Outreach Efforts Compliance Statement; and (2) an MBE Subcontractor Project Participation Statement.

END OF SECTION II
SECTION III

TECHNICAL REQUIREMENTS & SPECIFICATIONS

A. BACKGROUND

The University of Maryland Baltimore County (UMBC) is a dynamic public research university integrating teaching, research and service to benefit the citizens of Maryland. As an Honors University, the campus offers academically talented students a strong undergraduate liberal arts foundation that prepares them for graduate and professional study, entry into the workforce, and community service and leadership. UMBC emphasizes science, engineering, information technology, human services and public policy at the graduate level. As part of the University System of Maryland (USM), UMBC is located on 500 acres to the southwest of Baltimore, in proximity to the Baltimore Beltway (695) and I-95. Campus infrastructure consists of 47 buildings and residential complexes in three locations: the Main Campus, the South Campus (bwtech@UMBC Incubator and Accelerator) and the Research Park (bwtech@UMBC Research and Technology Park). Additional information concerning UMBC may be obtained through the UMBC home page, www.umbc.edu.

FALL 2008 POPULATION FIGURES

Faculty and Staff: 1,610*
Students: 12,268**

* Full, Part-time and Contingent
** Full and Part-time

STUDENT BREAKDOWN

Undergraduate: 9,612
Graduate: 2,656

Full-time 10,052
Part-time 2,216

Commuters: 8,768
Residents: 3,500

B. GOALS OF THE UNIVERSITY

UMBC seeks to establish a contract meeting the following objectives:

1. Provides a snack/food/hot beverage vending environment that supports the needs of the UMBC community, particularly with respect to after hours.
2. Works in concert with the UMBC Dining Services contract, currently held by Chartwells Compass Group, and UMBC’s Beverage and Pouring Rights contract, currently held by Coca-Cola Enterprises.

3. Integrates with, and fosters the use of, the UMBC Campus Card program through the provision of card readers in each machine.

4. Uses a vendor that will support the goals of the UMBC Wellness in the Workplace Initiative (and all similar initiatives) by providing a greater percentage of nutritious/healthy snack/food and hot beverages than is normally found in the vending marketplace. Information on the UMBC Wellness in the Workplace Initiative may be found at www.umbc.edu/wellness/vision.

5. Uses a vendor that will embrace the UMBC Campus Climate Initiative (and similar initiatives) by contributing to the sustainability effort of the campus through the provision of energy efficient machines.

6. Employees a vendor that has a proven track record of refilling machines and responding to customer requests in a timely and professional fashion.

7. Selects a vendor who will effectively market the snack/food and hot beverage vending program to the campus community.

It is anticipated that the University shall make an award for this procurement on or about July 23, 2009, and will that the Vendor will have this program in place and fully operational before Fall 2009 move-in, August 28, 2009. These dates may be changed at the University’s option.

C. SPECIFICATIONS

All equipment, supplies or services shall conform to all applicable Federal and State laws and regulations and to the specifications contained in the solicitation. Unless specifically stated/named in this document, the proposer may offer any brand/equipment which meets or exceeds the specification for any item(s). If required to substantiate compliance with any specification in this proposal, the proposer shall submit with his/her proposal cuts, sketches, descriptive literature and/or complete specifications detailing the required level of compliance. The University reserves the right to determine final acceptance of item(s) based on the submitted documentation. Proposals, which do not comply with these requirements, are subject to rejection.

D. Current and Projected Volumes:

The 5-year sales volume of the Snack Vending Contract is located in Appendix F of the RFP Documents and is for vending machine sales only.
The University is interested in optimizing value back to the University in the form of revenue. The University has high expectations that the successful bidder, in cooperation with the UMBC Department of Campus Card, will utilize promotions, incentives and consumer oriented practices that will encourage increased sales volume over the term of the contract.

E. **Scope of Work/Requirements for Sale of Snack/Food and Hot Beverages:**

Proposals must address the following mandatory (M) and desired (D) services relative to the scope of contract requirements. In addition, vendors must also address all issues in this section as to whether they will abide with the issue or not. The successful contractor shall:

(M) 1. Provide the University Community with a varied selection of quality, nationally recognized, brand name snacks/foods and hot beverages that include a significant percentage recognized as primarily healthy, nutritious and having low sugar/salt content. Product selection in each machine must support the goals of the UMBC Wellness in the Workplace Initiative (and all similar initiatives) by providing a greater percentage of nutritious/healthy snack/food and hot beverages than is normally found in the vending market place. Information on the UMBC Wellness in the Workplace Initiative may be found at www.umbc.edu/wellness/vision. The Vendor must also include a variety of chocolate products, the selection and placement of which may vary in accordance with standard industry practices during hotter months to assure product quality and appearance. Vendor must provide the Campus Card Office with a complete list of snacks/foods and their nutritional information that will be stocked in their machines prior to the first day of sales. The same information must be provided prior to the introduction of any new product offered for sale.

(M) 1a. Coordinate with the Campus Card Office restocking schedules that properly align with the University schedule of events and activities. The University reserves the right to request expedited restocking of specific machines at times of pending activities expected to significantly increase sales volume.

(M) 1b. Work with the Campus Card Office to periodically evaluate product mix, offerings and sales. A Vendor customer service representative shall meet monthly with the Campus Card Office to discuss these and any current issues that may be pertinent.

(D) 1c. It is anticipated that the Vendor will take an active role in promoting vending sales on campus. Possible approaches could involve free samples, incentives, rewards programs and new product awareness campaigns. It is highly desired that a periodic promotional
program will be developed to foster use of the Campus Card to purchase vended product.

(M) 2. Provide clean, attractive, new and/or well maintained glass-front machines in all currently listed locations, as well as, any determined future locations. Provide machines to vend a variety of quality nationally recognized, brand name snack/food and hot beverages. In locations dispensing product that require warming/heating, the vendor must supply and maintain microwaves in proximity to the machine(s). The capacity of each vending machine must be ample to satisfy customer’s demands in the particular location between times of regular servicing. All equipment must conform to State and Federal guidelines, regulations, and/or codes.

(D) 2a. Machines should have current state-of-the-art “Energy Star” Certification. It is anticipated that a majority of machines placed on day one of the contract will meet this requirement. Per Section III, Item C, “Specification” above, cut-sheets of the machines must be provided. Machines placed after day one of the contract, as replacements, upgrades or new locations, must comply with the “Energy Star” Certification.

(D) 2b. It is highly desirable that the 24-hour study area in the Library be developed into a premier vending site with special attention to appearance and product offering as this is a unique space supporting extended hour and late night occupancy.

(M) 3. Provide quality products and packaging, variety and completeness, recognized national brands, service and customer satisfaction at the locations and related services at the locations listed for term of the contract. (See Appendix D for a list of existing and new vending machine locations.)

(M) 4. Equip all vending machines with dollar bill acceptors, coin acceptors and Campus Card swipe readers. The machines must be programmed to return funds, in kind, to the Customer when their selection doesn’t vend. Machines cannot be programmed to force vend.

UMBC Campus Card utilizes the CBORD CSGold platform. Card readers provided by the vendor on all machines must be able to interface with the campus system (refer to Appendix G for details on the Debit Card Reader). The vending card readers must be securely mounted to the vending machines in accordance with ADA compliance standards uniformly on all vending machines. UMBC will be responsible for costs associated with bringing connectivity to the
vending readers and providing reasonable and customary technical support in establishing final connectivity to the UMBC network. The Vendor shall be responsible for providing the vending card readers, an accessible interface port on the machine and the interface cable between that port and the UMBC provided interface.

5. Place, at a minimum, equipment dispensing the same type of product in current vending locations. The list of the locations of existing and required new vending machines is included as Appendix D. The required new vending locations must be equipped in an analogous manner to similar locations on campus. The proposer must state in their proposal whether they intend to add equipment, clearly stating the exact nature of such additions. The operator shall agree to add, remove, and/or change machines in each existing or future location as the business increases or decreases. All additions, removals, and/or changes must be approved in writing by the University prior to any changes being made.

5a. The University requires the placement of hot dog vending machines -LHD VENDING SYSTEMS, MODEL HD3000 www.lhdvending.com/products - in the stated locations. These machines shall dispense three variety of product as approved by the University.

5b. It is highly desirable that a quality “veggie dog” be included as one of the selections in the hot dog vending machine.

6. Maintain all equipment in first class repair. The contractor shall be solely responsible for prompt maintenance and repair of its equipment and shall replace and supplement such equipment to the extent necessary to insure an efficient, sanitary, and satisfactory operation.

7. Provide repair service within twenty-four (24) hours of a reported problem, based on a standard Monday through Friday work week. The responding technician must report his arrival on campus and the corrective action taken prior to leaving campus to the Campus Card Office.

7a. The University reserves the right to request expedited repair services, seven (7) days a week, under certain conditions. The exercise of this right shall be limited to special campus events expected to generate high sales volume.

7b. Failure to respond to a repair service request within the specified time frame shall result in a penalty assessment of one-hundred dollars ($100.00) per day, payable to the University, for the out-of-service
period, based on a seven (7) day week cycle. A monthly report will be provided to the University with a list of all repairs completed for the month.

(M) 8. Equip all machines with coin mechanisms which are able to pick up slugs or foreign coins without rendering the machine inoperable.

(M) 9. Removal of all trash and debris associated with the installation, set-up, repair and/or vendor related activities is the responsibility of the vendor.

(M) 10. Assume full responsibility for all transportation and installation costs, with the exception of electrical and water outlets, incurred in making all vending machines fully operational.

(M) 11. Assume full responsibility for obtaining all required licenses, and proper display of them, in compliance with all Federal, State, and local codes, rules, and laws.

(M) 12. Assume full responsibility for the payment of all Federal, State and Local taxes resulting from such operations.

(M) 13. Notify Campus Card Office within 2 hours of Vendor awareness of any announced voluntary or mandatory product(s) recall. Vendor shall dispatch service personnel within 24 hours of any recall announcement to remove the noted product(s) from campus machines. UMBC reserves the right to immediately shut down any machine containing suspect product.

(M) 14. Assure that service personnel representing the vendor on campus reflect, at all times, a professional appearance and act in a professional manner. The vendor’s identification emblem must appear in a conspicuous place on uniforms. The vendor’s service personnel must observe all University traffic and other regulations while on University premises. The University shall have the authority to remove from the campus any employee of the vendor whose presence shall be deemed in any way detrimental to the interests of the University.

14a. All vendor service personnel must prominently display a UMBC Campus Identification Card while on campus. The vendor is responsible for securing these cards from the Campus Card Office and is required to pay the regular and customary fees in place at the time of card issuance. The current fee for new/replacement cards is $20.00. Service personnel must appear in person at the Campus Card Office, University Center, first floor, for imaging and card fabrication. The
University shall have the authority to detain/question any employee of the vendor not displaying/having proper University identification.

(M) 15. Conduct proper background checks on all employees who will be sent to the campus to affirm the safety of the campus community and property. The Campus Card Office shall maintain an active file of Vendor service staff, based on the issued Campus Identification Cards. It is the Vendor’s responsibility to immediately notify the Campus Card Office of any new/temporary personnel assigned to the campus account and to see that they have the proper identification prior to performing tasks on campus.

(M) 16. Assumes full risk and responsibility for any loss, destruction or damage occurring to the vending machines, machine components, or containers, including any vendor placed microwaves, except such loss or damage as may be attributable to the facility by reason of the negligence of its employees while acting within the scope of their employment. The contractor shall not be relieved of liability for its negligence or for the negligence of its employees. The contractor assumes the risk of any loss resulting from mechanical defects whereby the vending machines vend merchandise without the deposit of a coin, including “Jack Potting”, and whereby the vending machines discharge coins or return excessive amounts of cash.

16a. The contractor will supply the University with an ample amount of Petty Cash funds for customer reimbursements. The petty cash fund must be kept at a minimum of $50.00 at all times through regularly scheduled visits by the Vendor’s personnel.

(M) 17. Submit the selling price of all products sold through the vending machines to the University for prior approval. Adjustment to sales price may be granted with prior approval of the University. The Consumer Price Index of food served away from home is published by the Bureau of Labor Standards and will be used by the University for evaluation of sale price adjustments. Request for adjustments must be made prior to March 1 of each successive year of this contract. All adjustments will be effective July 1 of each year.

F. Financial Terms and Conditions:

(M) 1. Each proposer shall submit a projected budget or revenue projection for total sales during the first operating year commencing August 28, 2009 and ending July 31, 2010. Based upon the projections each proposer shall submit a minimum guarantee and commission percentage that will be paid to the University based upon generated gross sales.
If gross sales are below budget and commission paid to the University is below the minimum guarantee, the contractor shall be responsible to the University for the amount quoted in the proposal equal to the minimum guarantee. A reconciliation of the minimum guarantee shall be made within five working days at the end of each annual period (July 31st). If gross sales and commission are above the prepared minimum guarantee, the University shall receive full benefit of the amount equal to the quoted commission percentage reconciled on a monthly basis.

2. The contractor shall pay to the University, as a fee, the designated percentage of the gross revenue received from the operation under the contract. The term “GROSS REVENUE” as used herein is defined as the total receipts from any source, including receipts from the sale of services and supplies, and commissions received from operation under this contract, but the contractor shall be excluded from all sales, use or other taxes collected directly from patrons of the operation conducted hereunder.

3. The contractor shall submit a profit and loss statement monthly to the designated University representative showing dollar amounts and expense percentage of gross income. The contractor agrees to supply the University with complete and true records of sales by location.

4. The University shall pay the contractor on all sales purchased with the UMBC Campus Card less a 3% processing fee. Reconciliation of debit card sales will occur monthly.

5. The contractor agrees to provide the designated University Representative monthly sales and commission reports by location and machine and a copy of the monthly Sales Tax Report to the State.

6. All commissions shall be paid to the University no later than 10 days after the month end close. Vending commissions due for the month and coinciding with the close of the University’s fiscal year must be paid no later then 5 days after the close of the month. Sales and commissions shall be reported by product, location and machine number.

7. All payments, sales and commission reports shall be reported to the University. Payments shall be made by company check or U.S. Postal Money Order made payable to the University of Maryland Baltimore County.
8. Contractor must provide a copy of their latest annual financial report (preferred) and/or Dun and Bradstreet Report. (See Section V, Item C-4 for further information.)

G. SITE INFORMATION

It shall be the responsibility of the vendor to inspect the installation site and to be familiar with any condition that may affect delivery and/or installation. See Appendix D for a list of existing and new equipment locations.

H. DELIVERY/SHIPMENT

The selected vendor will be required to provide the specified equipment/services prior to the beginning of the Fall 2009 move-in, August 28, 2009.

Vendor must state the number of weeks lead-time required to deliver the equipment/services, after receipt of the Contract. (Refer to Section V, Item C-1.5, “Implementation Schedule”).

Vendor(s) shall coordinate with the designated University Representative for the installation of all vending equipment. It is anticipated this will be phased and coordinated with the current contractor, so as to minimize interruption to the service.

I. CAMPUS IDENTIFICATION CARDS:

All vendor service personnel must prominently display a UMBC Campus Identification Card while on campus. The vendor is responsible for securing these cards from the Campus Card Office and is required to pay the regular and customary fees in place at the time of card issuance. The current fee for new/replacement cards is $20.00. Service personnel must appear in person at the Campus Card Office, University Center, first floor, for imaging and card fabrication. The University shall have the authority to detain/question any employee of the vendor not displaying/having proper University identification.

All vehicles and mobile equipment shall be identified with the Vendor's name displayed in a highly visible manner. The Vendor assumes full responsibility for compliance with University vehicular and parking regulations. It is the Vendor’s responsibility to meet with, review all appropriate regulations and complete any required paperwork required by UMBC Parking Services (http://www.umbc.edu/aboutumbc/campusmap/).

J. PERIOD FOR ACCEPTANCE

The selected vendor must agree to an acceptance trial period of performance of NOT LESS THAN thirty (30) consecutive calendar days. The period will begin on the first full 24 hour work day after vendor and the University of Maryland Baltimore County agree and declare the equipment/contract to be operational.
During the 30 day period, the equipment/vendor must perform at a rate consistent with the performance specifications contained in the selected vendor's specifications and/or proposal. Failure to satisfy the "acceptance trial period of performance" may result in specified performance contract termination.

In the event that the selected vendor fails to meet all requirements, the University of Maryland Baltimore County shall have the right to declare the vendor's product(s)/service(s) unacceptable and the vendor in default and to terminate all agreements, written or verbal, without penalty or obligation to the University of Maryland Baltimore County consistent with the provisions of the termination for default clause required in the contract.

K. INSURANCE
The successful vendor will be required to document proof of insurance for Commercial General Liability, Worker's Compensation, and Automobile insurance. The University of Maryland Baltimore County and the State of Maryland are to be named as an "additional insured" on all but Worker's Compensation.

NOTE: INSURANCE MUST BE ON A PRIMARY BASIS. CONTRACTUAL REQUIREMENTS MUST BE CLEARLY INDICATED ON CERTIFICATE OR BY ENDORSEMENTS.

1. The following conditions for insurance must be met by the Vendor:

a. The Contractor shall not start work under this contract until the Contractor has obtained at its own expense all of the insurance called for hereunder and such insurance has been approved by the procurement officer; nor shall the Contractor allow any subcontractor to start work on any subcontract until all insurance required by the subcontract has been obtained and approved by the contractor and University of Maryland Baltimore County. Approval of insurance required of the contractor and subcontractors for the University will be granted only after submission to the University of original certificates of insurance signed by an authorized representative of the insurers or, alternately, at the University's request, certified copies of the required insurance policies.

b. The Contractor shall require all subcontractors to maintain during the term of this agreement, Commercial General Liability insurance, Business Automobile Liability insurance, and Workers Compensation, in the same manner, including the additional insured requirements in this paragraph J., i.e., as specified for the Contractor. The Contractor shall furnish subcontractors' certificates of insurance to the University immediately upon request.
c. All insurance policies required hereunder shall be endorsed to include the following provision; "It is agreed that this policy is not subject to cancellation, non-renewal, material change, or reduction in coverage until forty-five (45) days prior written notice has been given to the University of Maryland Baltimore County".

d. No acceptance and/or approval of any insurance by the University of Maryland Baltimore County shall be construed as relieving or excusing the Contractor, or the surety or bond, if any, from any liability or obligating imposed upon either or both of them by the provision of the Contract Documents.

e. **NAMED ADDITIONAL INSURED** - The University of Maryland Baltimore County and the State of Maryland (including their elected or appointed officials, agents and employees) are to be named as additional insured under all coverage **except Workers Compensation**, and the certificates of insurance (or the certified policies, if requested), must so indicate through inclusion of appropriate endorsement. **Coverage afforded under this paragraph shall be primary to any other insurance of self-insurance, whether or not such other insurance or self-insurance is stated as primary, excess or contingent, as respects the above additional insured, their elected and appointed officials, agents and employees.**

f. Insurance coverage required in these specifications shall be in force throughout the Contract Term. Should the Contractor fail to provide acceptable evidence of current insurance within ten (10) days of receipt of written notice at any time during the contract term, the University shall have the absolute right to terminate the Contract without any further obligation to the Contractor, and the Contractor shall be liable to the University for the entire additional cost of procuring substitute performance and the cost of performing the incomplete portion of the Contract at time of termination.

g. Contractual and other liability insurance provided under this Contract shall not contain a supervision, inspection or engineering service exclusion that would preclude University of Maryland Baltimore County or participation institutions from supervising or inspecting the operations of the contractors as the end result.

h. The Contractor shall assume all on-the-job responsibilities as to the control of persons directly employed by it and of agents or subcontractors and anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.
Contractor shall be as fully responsible to University of Maryland Baltimore County for the acts and omissions of the subcontractors and of persons employed by them as it is for acts and omissions of persons directly employed by Contractor.

i. All required insurance coverage must be acquired from insurers allowed to do business in the State of Maryland and acceptable to University of Maryland Baltimore County. The insurers must have a policyholders' rating of "A-" or better, and a financial size of "Class VII" or better in the latest edition of Best's Insurance Reports.

j. The University of Maryland Baltimore County will consider deductibles or self-insured retention as part of its review of the financial stability of the bidder. Any deductibles or self-insured retention shall be disclosed in the Contractor's proposal and shall be assumed by the Contractor.

2. The Contractor shall purchase the following insurance coverage:

a. **Commercial General Liability Insurance** or its equivalent, for bodily injury, personal injury and property damage, including loss of use. It is preferred that coverage be provided on an "occurrence" basis. If "claims made" forms are submitted, the requirements noted after section "G" must be met. Such Commercial General Liability policy shall include the following extensions:

i. It is preferred that the General Aggregate Limit applies separately to this project:

ii. Premises/Operations:

iii. Actions of Independent Contractors:

iv. Products/completed Operations to be maintained for two (2) years after completion of the contract.

v. Contractual Liability including protection for the Contractor for claims arising out of liability assumed under this contract.

vi. Personal injury liability including coverage for offenses related to employment, and for offenses assumed under this contract (delete any standard employment and contractual exclusions if contained in the personal injury coverage section):
b. **Business Automobile Liability** which will pay for liabilities arising out of accidents involving the ownership, operation, maintenance or use of any owned, hired, or non-owned motor vehicles, uninsured motorists’ insurance and automobile contractual liability.

**NOTE:** INSURANCE MUST BE ON A PRIMARY BASIS. CONTRACTUAL REQUIREMENTS MUST BE CLEARLY INDICATED ON CERTIFICATE OR BY ENDORSEMENTS

c. **Workers Compensation** - statutory benefits are required by Maryland law or other laws as required by labor union agreements, including standard Other States coverage; Employers Liability coverage.

3. The coverage listed in Section III, K-2 above shall be written for not less than the following limits of liability. **Limits can be furnished by a combination of primary and excess (umbrella) policies.**

a. Commercial General Liability Insurance including all extensions - $2,000,000 each occurrence; $2,000,000 personal injury; $2,000,000 products liability; $2,000,000 general aggregate

b. Business Automobile Liability - $2,000,000 each accident

c. Workers Compensation insurance - statutory requirements. Employers liability insurance - $1,000,000 each accidental injury; and $1,000,000 each employee, $1,000,000 policy limit for disease.

4. **Tort-Claim Act** - It is agreed that the contractor and its insurers will not raise or use, in the adjustment of claims or in the defense of suits against any participating USM institution, any immunity of the insured from tort liability, (including Maryland Tort Claim Act), including any limitation of liability, unless requested by any participating institution.

**NOTE:** If insurance required in terms 2.a.iv and v above has been issued on a "claims made" basis, the Contractor must comply with the following additional conditions. The limits of liability and the extensions to be included as described above remain the same. The Contractor must either:

1. Agree to provide certificates of insurance evidencing the above coverage for period of three (3) years after final payment for the contract. Such certificates shall evidence a retroactive date no later than the beginning of the Contractor's or subcontractor's work under this contract,
2. Purchase an extended (minimum three (3) years) reporting period endorsement for the policy or policies in force during the term of this contract and evidence the purchase of this extended reporting period endorsement by means of a certificate of insurance or a copy of the endorsement itself.

3. The "retroactive date" must be effective prior to the inception of the work under this contract.

4. No "sunset" clauses shall apply.

A CERTIFICATION LETTER FROM AN AUTHORIZED BROKER OR AGENT THAT ALL REQUESTED COVERAGES ARE AVAILABLE AND WILL BE PROVIDED TO THE CONTRACTOR UPON AWARD OF THIS CONTRACT SHOULD BE PROVIDED WITH ANY PROPOSAL.

END OF SECTION III
SECTION IV:

EVALUATION AND SELECTION PROCEDURES

A. EVALUATION AND SELECTION COMMITTEE

All vendors’ proposals received by the closing deadline will be evaluated. The Procurement Officer shall establish an Evaluation and Selection Committee to review and rate the proposals. The Committee shall be composed of the Procurement Officer and any other individuals that the Procurement Officer may appoint. The Committee may request additional technical assistance from any source.

B. EVALUATION PROCEDURE

Qualifying Proposals – The Committee shall first review each proposal for compliance with the mandatory requirements of this RFP. Failure to comply with any mandatory requirement will disqualify a vendor’s proposal. The University reserves the right to waive a mandatory requirement when it is in its best interest to do so. The vendor must assume responsibility for addressing all necessary technical and operational issues in meeting the objectives of the RFP.

C. EVALUATION OF PROPOSALS

1. **Initial Technical Evaluation:** Technical Proposals will be evaluated by the University's Evaluation and Selection Committee before Financial Proposals are reviewed. Those proposals not achieving at least 70% of the technical points available for Phase I will not continue or advance further in the procurement process. Proposers’ whose technical proposal achieves the required, minimum technical score of 70% or better of the available technical points will continue in the procurement process and be asked to participate in an Oral Presentation Session at the University.

   Technical scoring will be based upon information provided in response to the desirable items in this RFP.

   Upon completion of the initial technical evaluation, all proposers will be notified as to the results of the initial technical evaluation of its firm's technical proposal.

2. **Oral Presentations:**

   Those Proposers whose Technical Proposals achieve the required 70% minimum or better technical score will be requested to participate in an Oral Presentation at the University.
The due date and time of the Oral Presentation will be set by the University upon completion of the initial evaluation of the Technical Proposals. It is anticipated, however, that Oral Presentations will be conducted on or about **MONDAY, JUNE 29, 2009**. The date will be verified by addendum sent to the applicable proposers at the time it is requested. **All proposers are requested to set this date aside for these sessions on the Account Representative's and his/her immediate Supervisor's calendars so as to avoid any conflicts.**

The purposes of the presentation are as follows:

(i) To allow the University to meet the Proposer's Key Personnel;

(ii) To allow the University to review and discuss aspects of selected areas of the Proposer's Technical Proposal (see 3.1 below); and

(iii) To provide an opportunity to clarify the University's scope of services to be provided by the successful vendor.

At this time, it is anticipated that each proposer will be requested to have the following personnel attend the oral presentation: the **Account Representative**, and his/her **immediate Supervisor**, as well as, any individuals who are needed to assist in the description of any part of the products and services proposed for this RFP.

At the time the Oral Presentations are scheduled, the University will confirm in writing with each Proposer the specifics of these sessions inclusive of the topics, time periods, and requested personnel.

Following the Oral Presentations, the University will conduct the Second Phase Technical Evaluation as described below.

3. **Second Phase Technical Evaluation:**

3.1 Following the Oral Presentations, a second technical evaluation will be conducted in which all categories of the technical proposal will be re-evaluated based on the Oral Presentation Session. Key Personnel and Firm References will be incorporated during this evaluation. The order of importance of the technical criteria will remain the same.

3.2 Proposers **must** maintain a minimum technical score of 70% of the available technical points in the Second Phase Technical Evaluation in order to advance in the procurement. Upon
completion of the Second Phase Technical Evaluation, all Proposers will be notified as to the results this evaluation.

D. MINIMUM TECHNICAL SCORE

Vendors must achieve a minimum technical score of 70% of the total points available for the technical evaluation in order to be considered for further evaluation. Vendors not achieving this minimum technical score will not be considered for the award, and will have their Financial Proposals returned to them unopened.

E. FINANCIAL EVALUATION

The separate financial volume of each qualified proposal will be evaluated following the completion of the technical evaluation. Financial Proposals will not be opened publicly. The total revenues to be realized by the University in each of the proposals will be ordered to establish a financial ranking of the proposals, from highest to lowest total revenues. The highest total revenue will receive 100% of the points awarded to the financial portion with subsequently lower proposals receiving proportionally lower points.

F. FINAL RANKING AND SELECTION

The resulting scores from the technical and financial evaluation of proposals will be used as a guide in determining the successful proposer(s). The Evaluation and Selection Committee will choose from among the highest rated proposals which will best serve the interests of the University in accordance with the University System of Maryland Procurement Policies and Procedures. Technical merit will be given equal consideration to the financial return to the University.

G. CRITERIA FOR TECHNICAL EVALUATION

The criteria that will be used by the committee for the technical evaluation of the proposals for this specific procurement are listed below in order from most important to least. Each committee member will score the proposals on each major criterion.

TECHNICAL PROPOSAL

Evaluation Criteria:

1. Statement of Approach - [Refer to Section V, Item C-1]
2. Documentation - [Refer to Section V, Item C-2 and 3]
   Firm Experience / References
Key Personnel / References

3. Financial Stability of the Company - [Refer to Section V, Item C-4]
4. MBE Participation - [Refer to Section V, Item C-5]
5. Economic Benefit / Impact - [Refer to Section V, Item C-6]

END OF SECTION IV
SECTION V:
INFORMATION REQUIRED IN VENDOR PROPOSALS

A. TRANSMITTAL LETTER

A transmittal letter prepared on the vendor’s business stationery should accompany the proposal. The purpose of this letter is to transmit the proposal; therefore, it should be brief. The letter must be signed by an individual who is authorized to bind the firm to all statements, including services and financial offers, contained in the proposal.

B. TWO VOLUME SUBMISSION

The selection procedure for this procurement requires that the technical evaluation of the proposals is to be conducted before the financial data are distributed to the Evaluation and Selection Committee. Consequently, each proposal must be submitted as two separate volumes as indicated below. Failure to do so may constitute disqualification of a vendor’s proposal.

C. VOLUME I – TECHNICAL PROPOSAL

This volume should be prepared in a clear and precise manner. It should address all appropriate points of this RFP except financial information. This volume consists of and must contain the following sections:

2. Completed Forms from Appendix A
3. Financial Stability of the Company
4. MBE Participation
5. Economic Benefit / Impact
6. Certification to provide insurance as required
7. Bid/Proposal Affidavit

Items # 1 through # 5 listed below are considered “Desirable” (D) for purposes of evaluation

1. (D) Statement of Approach to Management of the Contract: The proposer is to define who they are, what they do and what they can do for the University with respect to the objectives of this project.

The proposer must indicate how their firm/team would approach this account, and also include the method(s) and procedure(s) to be followed in the transition of their firm assuming this contract arrangement. The purpose of this narrative is not only to outline the tasks to be accomplished in a logical manner, but also to display full comprehension of the services to be provided including, but not limited
to, those mandatory items noted in Section III, Item E, “Scope of Work” for this RFP.

This plan should be in sufficient detail to permit proper evaluation by the University and should include specific information pertaining to quality of products, merchandising, quality control, staffing, cash, and retail accounting.

1.1 **Equipment for Vending Operation:** Vendor is to provide all snack/food and hot beverage vending equipment as required herein. Provide a description of all equipment proposed for use in performance of the sale of snacks/foods and hot beverages.

1.2 **Service and Preventative Maintenance:** Provide a description of the procedures that will be implemented to ensure proper vending equipment maintenance. This must include, at a minimum, a statement pertaining to the firm's preventative maintenance plan as well as those procedures recommended to ensure back-up equipment if needed.

1.3 **Product Mix:** Provide a detailed recommendation relating to snack/food and hot beverage variety, price, and portion as well as any other additional services or innovations that will be provided to the University. All snack/food and hot beverage products to be sold are to be submitted in a list format (item, size, and selling price). **Identify subcontractors, if any,** who will be supplying and servicing certain snacks/foods and hot beverages products.

1.4 **Accounting System and Controls:** Submit a sample set of standard operating procedures demonstrating the management controls and accounting systems to be implemented along with related operating statements documenting all cash collected from the snack/food and hot beverage vending equipment. Submit examples in the format to be used and ultimately submitted to the University during the contract period to allow a proper evaluation of your proposal.

1.5 **Implementation Schedule:** Provide an implementation schedule which outlines both the time frame needed for your firm to become fully operational with respect to this account, and the steps which will be taken to have the services **fully operational by August 28, 2009.** Contract award is anticipated to be made on or about July 23, 2009. A transition period of 30 days is anticipated to install the equipment. The installation will need to be phased and coordinated with the current service provider so as to minimize interruption of services.
2. (D) Firm Experience:

2.1 Complete an "Experience Form" (found in Appendix A) for three (3) locations presently managed under contract and provide the dollar value of each contract. At least two of the three locations, and preferably all three, must be in academic environments and similar in size and scope to The University of Maryland Baltimore County.

List the following on each:

Name and address of location;
Number of years contract has been in place;
Owner's name, address, telephone and contact person;
Brief description of the scope of the contract and any prominent results for which your firm is responsible;
Name(s) of responsible Account Representative within your organization who manages the contract.

2.2 References: Provide at least four (4) references (references may be inclusive of those from the experience list above) of locations which are presently serviced by your company. Provide contact name, address, telephone number and account name and location for each reference. It is imperative that accurate contact names and phone numbers be given for the contracts listed. All references should include a contact person who can comment on the firm's ability to handle an account of this type.

All references for the Firms will be checked during the Second Technical Evaluation Phase. Only the firms who achieve the minimum required score or better will move forward to the Second Technical Evaluation Phase. However, all firms responding must provide this information within their Technical Proposals due on Tuesday, June 2, 2009 by 2:00 PM. The University reserves the right to verify all information given if it so chooses, as well as, to check any other sources available including itself even if not provided as a reference by the Proposer. Such references will be held in the strictest confidence.

3. (D) Personnel: List the names of (1) the Account Representative and (2) his/her back-up for extended absences. The Account Representative is defined as the University's primary point of contact and the person who will manage the account for the vendor.

3.1 Complete a "Key Personnel Form" (found in Appendix A) on the person inclusive of their qualifications, number of years with the firm, and prior experience inclusive of the role the person played on
other accounts. Please note the estimated percentage of time they will commit to this account.

3.2 Provide three (3) references (preferably those provided in 3.1. above) on the Account Representative. Such references must be able to comment on the person's performance in the role assigned in this proposal. All references will be held in the strictest confidence.

All references for the Account Representative and the Firms will be checked during the Second Technical Evaluation Phase. Only the firms who achieve the minimum required score will move forward to the Second Technical Evaluation Phase. However, all firms responding must supply this information within their Technical Proposals submitted on **Tuesday, June 2, 2009 by 2:00 PM.**

4. (D) **Financial Stability of the Company:** Submit a statement indicating the financial stability and ability to finance and manage this account. Such a statement may consist of one of the following: a current Financial Report (preferred) or a Dun and Bradstreet Report with D&B rating noted; or, a narrative of the past five years' business profile; etc. Statements shall be current. All information will be kept confidential.

4.1 **Performance Bond:** The successful Contractor shall furnish a Performance Bond in the amount of one hundred (100%) of the total estimated first year Contract price. At the effective date of any renewal term, the contractor shall furnish a Performance Bond applicable to the next 12-month period of the term, increased or decreased by the percentage that the estimated first year cost would be adjusted over the proceeding year.

5. (D) **Minority Business Enterprise (MBE):** Proposer must include in the Technical Proposal submittal the following documents: (1) a completed **Certified MBE Utilization and Fair Solicitation Affidavit** (found in Appendix A) whereby the Proposer acknowledges the certified MBE participation goal or requests a waiver, commits to make a good faith effort to achieve the goal, and affirms that MBE subcontractors were treated fairly in the solicitation process; and (2) a completed **MBE Participation Schedule** (found in Appendix A) whereby the Proposer sets forth the expected degree of Minority Business Enterprise participation as stated in the solicitation, by identifying the specific commitment of certified MBEs at the time of the submission, and specifies the price and/or the percentage of contract value associated with each MBE subcontractor identified on the MBE Participation Schedule. **Failure to comply with this requirement will result in the Proposal being deemed non-responsive and rejected from consideration.**
6. (D) **Economic Benefit/Impact:** Provide a general overall description as to how the award of this contract will benefit the economy of the State of Maryland if your firm is the successful Contractor. Such items include, but are not limited to, (i) contract dollars to be recycled into Maryland's economy in support of this contract, through the use of Maryland subcontractors, suppliers, and/or joint venture partners; (ii) the number and type of jobs for Maryland residents resulting from the contract; (iii) tax revenues to be generated for Maryland and its political subdivisions; and (iv) subcontract dollars committed to Maryland small businesses and MBE's.

7. **Completed Bid/Proposal Affidavit with Addendum** (found in Appendix A)

8. **Insurance:** Provide a Certificate of Insurance verifying your firm's coverage for comprehensive general liability, worker's compensation, and automobile liability. The Contractor and all its subcontractors must provide and maintain comprehensive liability insurance naming the University of Maryland Baltimore County and the State of Maryland, and its officers and agents, as additionally insured. The Contractor shall furnish the University with a certificate showing that such insurance is in effect and that the protection afforded under the policy will not be cancelled or reduced until at least forty-five (45) days' prior notice is sent the University of Maryland Baltimore County by the insurance company or agent, such notice being sent by registered mail.

8.1. **Workers Compensation Insurance** - in accordance with Maryland statues.

8.2. **Commercial General Liability Insurance** - Comprehensive basis, including Contingent Liability, in an amount not less than $2,000,000 combined single limit for bodily injury and property damage. This must include **Product Liability** coverage in an amount of not less than $2,000,000. Additional coverage that should be included in CGL are Contractual Liability and Fire Legal Liability.

8.3. **Automobile Liability insurance** - comprehensive liability insurance that covers all vehicles utilized in conjunction with this contract with limits for bodily injury of $2,000,000 each occurrence and $2,000,000 each person with property damage of $2,000,000 each occurrence.

9. **Acknowledgement of Receipt of Addenda Form:** (found in Appendix A) In the event addenda to the solicitation documents are issued prior to the due date and time for proposals, this form is to be completed and enclosed with the proposal.
Any other information that may be relevant but does not fall in the above format should be provided as an appendix to this volume. Minor irregularities in the proposals, which are immaterial or inconsequential in nature, may be waived whenever it is determined to be in the best interest of the University.

If company literature or other publications are included and intended to respond to an RFP requirement, the response in this volume should include reference to the document name and page.

Technical volumes containing no such citations will be considered complete and without need to refer to other documents, i.e., the Evaluation and Selection Committee will not be required to refer to any additional documents for the vendor responses to RFP requirements during the evaluation process.

D. VOLUME II – FINANCIAL PROPOSAL

This volume must be submitted in a sealed envelope separate and apart from the technical volume. It must contain the following:

1. (D) Financial Incentive: Each proposer shall submit a projected budget or revenue projection for the first operating year commencing August 28, 2009 and ending June 30, 2010, for snack/food/hot beverage vending. Based upon these projection(s), the Contractor shall pay to the University, as a fee, a designated percentage of the gross revenue received from the operation under the contract. The term "gross revenue" as used is defined as the total receipts from any source, including receipts from the sale of services and supplies, and commissions received from operations under this contract, but these shall be excluded from all sales, use or other taxes collected directly from patrons of the operation conducted hereunder. (Also, refer the Section III - E: “Scope of Work/Requirements for the Sale of Snack/Food and Hot Beverages” for further information pertaining to the mandatory requirements for financial incentives for this contract.) A Financial Proposal Form is provided in Appendix B.

2. (D) Financial Proposal Form: Complete the Form in Appendix B.

E. SUBMISSION

Vendors must submit the required number of copies of his/her proposal by the closing time and date specified in Section I, Item E of the RFP.

END OF SECTION V
VI. APPENDICES

APPENDIX A - Technical Proposal Forms
APPENDIX B - Financial Proposal Form
APPENDIX C - Contract Forms
APPENDIX D - Current Vending Machine Locations
APPENDIX E - Products & Prices
APPENDIX F - 5-Year Sales Figures
APPENDIX G - Machine Card Reader Information
APPENDIX H - Campus Map
APPENDIX A

TECHNICAL PROPOSAL FORMS

TECHNICAL FORMS

Experience/Reference Form
Key Personnel/Reference Form
MBE Utilization & Fair Solicitation Affidavit
MBE Participation Schedule
Acknowledgement of Receipt of Addenda Form
Bid Proposal Affidavit
PROPOSER'S NAME: ____________________________

CLIENT'S NAME: ____________________________

CLIENT'S ADDRESS: ____________________________

CLIENT CONTACT PERSON'S NAME: ____________________________

CLIENT'S TELEPHONE NUMBER: ____________________________

NUMBER OF VENDING MACHINE LOCATIONS: __________

_TYPE OF CLIENT: (Check all that apply)

___ Academic/Higher Education (2 of the 3 must be academic environments)

___ Urban Location

___ Other: ____________________________________

TOTAL NUMBER OF VENDING MACHINES: __________

TOTAL NUMBER OF BUILDINGS BEING SERVICED: __________

OTHER SERVICES PROVIDED (I.E. SNACK BAR, CAFES, ETC):

CONTRACT DOLLAR SIZE: ____________________________

CONTRACT TERM: FROM: ____________________________

TO: ________

NAME OF PROPOSING FIRM'S ACCOUNT REPRESENTATIVE WHO SERVICES THIS CLIENT: ____________________________

TYPE OF MACHINES BEING SERVICED/PROVIDED: (CHECK ALL THAT APPLY)

___ Hot/Cold Food

___ Ice Cream

___ Hot Beverage

___ Snack; List types provided: ____________________________

___ Condiment Stand

___ Bill Changer

___ Microwave

___ Other: __________

___ Other: ____________________________________

IS DEBIT CARD SYSTEM BEING USED?

IF SO, WERE DEBIT CARD ACCESSORIES PROVIDED BY: VENDOR________ CLIENT: ________

IS PARKING PROVIDED TO YOU BY THE CLIENT: ________ IF NOT, DESCRIBE HOW YOU HANDLE PARKING TO ACCESS THE MACHINES FOR SERVICE: ____________________________

PROVIDE A BRIEF, BUT DETAILED, DESCRIPTION OF SIMILARITIES OF YOUR CONTRACT SCOPE TO REQUIREMENTS FOR THIS CONTRACT SCOPE FOR SNACK SALES

________________________________________________

________________________________________________

________________________________________________
PAGE INTENTIONALLY LEFT BLANK
APPENDIX A
SNACK VENDING CONTRACT
KEY PERSONNEL FORM – RFP # BC-20616-Q

1. **PERSON'S NAME:** _____________________________________________

2. **POSITION TO BE ASSIGNED:** __ Primary Account Representative
   __ Back-up to Account Representative

3. **EDUCATIONAL BACKGROUND:**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Degree/Diploma/Certificates</th>
<th>Major (if any)</th>
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</tbody>
</table>

4. **EMPLOYMENT HISTORY**: (*NOTE: If a person has more than three (3) employers in his/her employment history, please provide complete employment history via supplemental page(s) attached to this form.)

4.1 **CURRENT EMPLOYER'S NAME:** ____________________________________

   **DATES OF EMPLOYMENT:** ________________________________________

   **POSITION HELD**                           **DURATION BY DATE**

   __________________________________         ____________________

   __________________________________         ____________________

4.2 **PRIOR EMPLOYER'S NAME:** _____________________________________

   **DATES OF EMPLOYMENT:** ________________________________

   **POSITION HELD**                           **DURATION BY DATE**

   __________________________________         ____________________

   __________________________________         ____________________
4.3 PRIOR EMPLOYER'S NAME: _____________________________________

DATES OF EMPLOYMENT: ________________________________________

POSITION HELD DURATION BY DATE
_________________________________ ____________________
_________________________________ ____________________

5. ROLE: Describe the role of this person in this contract, including services to be provided directly and services to be supervised as provided by others.


6. SIMILAR PROJECT EXPERIENCE/REFERENCES: (Note: It is preferable that these references be from the contract experience provided as an attachment to this "Key Personnel Form"; if this is the case, you need only indicate "see attached" under the Description of Contract item.)

6.1 CONTACT PERSON: _________________________ TELEPHONE #: _______

COMPANY NAME: _______________________________________________

PROJECT/CONTRACT NAME DOLLAR VALUE HOW MANY YEARS?

_________________________________ $ ___________ _______

DESCRIPTION OF CONTRACT SERVICED: ___________________________


6.2 CONTACT PERSON: _________________________ TELEPHONE #: _______

COMPANY NAME: _______________________________________________

PROJECT/CONTRACT NAME DOLLAR VALUE HOW MANY YEARS?

_________________________________ $ ___________ _______

DESCRIPTION OF ACCOUNT SERVICED: ___________________________
6.3 CONTACT PERSON: _________________________ TELEPHONE #: ______

COMPANY NAME: _______________________________________________

PROJECT/CONTRACT NAME       DOLLAR VALUE       HOW MANY
YEARS?

__________________________________________ $_________________   ______

DESCRIPTION OF ACCOUNT SERVICED: ________________________________
____________________________________________________________
____________________________________________________________

7. ACHIEVEMENTS/OTHER NOTATIONS (NOT REQUIRED):

____________________________________________________________
____________________________________________________________
____________________________________________________________

NOTE: If a Proposer finds the space provided to be insufficient, he/she can attach additional pages to this form as he/she finds appropriate and just indicate on the this form to see “attached pages”.

END OF FORM
Attachment A

CERTIFIED MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT

This document must be included with the bid or offer. If the bidder or offeror fails to submit this form with the bid or offer as required, the Procurement Officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award.

In conjunction with the bid or offer submitted in response to Solicitation No. which includes Schedule MBE, I affirm the following:

1. I acknowledge the overall certified Minority Business Enterprise (MBE) participation goal of ________ percent and, if specified in the solicitation, sub goals of ________ percent for MBEs classified as African American-owned and ________ percent for MBEs classified as women-owned. I have made a good faith effort to achieve this goal.

OR

After having made a good faith effort to achieve the MBE participation goal, I conclude I am unable to achieve it. Instead, I intend to achieve MBE participation of ________ percent and request a waiver of the remainder of the goal. Within 10 business days of receiving notice that our firm is the apparent low bidder or the apparent awardee (competitive sealed proposal), I will submit a written waiver request that complies with COMAR 21.11.03.11. I acknowledge that the MBE subcontractors/suppliers listed in the MBE Participation Schedule will be used to accomplish the percentage of MBE participation that I intend to achieve.

2. I have identified the specific commitment of certified MBEs by completing and submitting an MBE Participation Schedule (Attachment B) with the bid or proposal.

3. I understand that if I am notified that I am the apparent awardee, I must submit the following documentation within 10 working days of receiving notice of the potential award or from the date of conditional award (per COMAR 21.11.03.10), whichever is earlier.

(a) Outreach Efforts Compliance Statement (Attachment C)
(b) Subcontractor Project Participation Statement (Attachment D)
(c) MBE Waiver Request per COMAR 21.11.03.11 (if applicable)
(d) Any other documentation required by the Procurement Officer to ascertain bidder or offeror responsibility in connection with the certified MBE participation goal.

I acknowledge that if I fail to return each completed document within the required time, the Procurement Officer shall determine that I am non-responsive and therefore not eligible for contract award. If the contract has already been awarded, the award is voidable.
4. In the solicitation of subcontract quotations or offers, MBE subcontractors were provided not less than the same information and amount of time to respond as were non-MBE subcontractors.

I solemnly affirm under the penalties of perjury that the contents of this paper are true to the best of my knowledge, information and belief.

Bidder/Offeror Name

Address

Signature of Affiant

Printed Name, Title

Date

SUBMIT THIS AFFIDAVIT WITH BID/PROPOSAL
Attachment B

MBE Participation Schedule

This document must be included with the bid or offer. If the bidder or offeror fails to submit this form with the bid or offer as required, the Procurement Officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award.

<table>
<thead>
<tr>
<th>Prime Contractor ( Firm Name, Address, Phone)</th>
<th>Project Description</th>
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<tbody>
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<table>
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<tr>
<th>Project Number</th>
<th>Total Contract Amount</th>
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</tbody>
</table>

List Information to each certified MBE Subcontractor/Supplier on this Project

<table>
<thead>
<tr>
<th>Minority Firm Name</th>
<th>MBE Certification Number</th>
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<tbody>
<tr>
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<tr>
<td>Work to be Performed</td>
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<tr>
<th>Dollar Amount or Percentage of Total Contract</th>
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</table>

**USE ATTACHMENT B CONTINUATION PAGE AS NEEDED**

**SUMMARY**

TOTAL MBE PARTICIPATION: $__________

%________

Document Prepared by: (please print or type)

Name: _____________________________
Name/Title: ________________________
(Signature) ______________________
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</table>

Submit this Schedule with Bid Proposal
RFP NO.: BC-20616-Q

TECHNICAL & FINANCIAL PROPOSALS
DUE DATE: TUESDAY, JUNE 2, 2009 AT 2:00 P.M.

RFP FOR: SNACK VENDING CONTRACT

NAME OF PROPOSER: ________________________________

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA

The undersigned, hereby acknowledges the receipt of the following addenda:

Addendum No. ____  dated ________
Addendum No. ____  dated ________
Addendum No. ____  dated ________
Addendum No. ____  dated ________
Addendum No. ____  dated ________
Addendum No. ____  dated ________

As stated in the solicitation documents, this form is included in our Technical Proposal.

__________________________________________________________________________
Signature

__________________________________________________________________________
Printed Name

__________________________________________________________________________
Title

__________________________________________________________________________
Date

END OF FORM
BID/PROPOSAL AFFIDAVIT

A. AUTHORIZED REPRESENTATIVE

I HEREBY AFFIRM THAT: I am the ______________________ (title) and the duly authorized representative of ______________________ (business) and that I possess the legal authority to make this Affidavit on behalf of myself and the Business for which I am acting.

B. AFFIRMATION REGARDING BRIBERY CONDITIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies has:

(1) Been convicted under state or federal statute of:
   (a) a criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or
   (b) fraud, embezzlement, theft, forgery, falsification or destruction of records, or receiving stolen property;

(2) Been convicted of any criminal violation of a state or federal antitrust statute;

(3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. 1961 et seq., or the Mail Fraud Act, 18 U.S.C. 1341 et seq., for acts in connection with the submission of bids or proposals for a public or private contract;

(4) Been convicted of a violation of the State Minority Business Enterprise Law, SS 14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(5) Been convicted of a violation of the SS11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(6) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsection (1) - (5) above;

(7) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of bids or proposals for a public or private contract; or

(8) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described in SSB and C (1) - (7) above, except as follows (indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the business) (use attachments as necessary):

____________________________________________________________________________________________________________

C. AFFIRMATION REGARDING OTHER CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies, has:

(1) Been convicted under state or federal statute of:
   (a) a criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or
   (b) fraud, embezzlement, theft, forgery, falsification or destruction of records, or receiving stolen property;

(2) Been convicted of any criminal violation of a state or federal antitrust statute;

(3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. 1961 et seq., or the Mail Fraud Act, 18 U.S.C. 1341 et seq., for acts in connection with the submission of bids or proposals for a public or private contract;

(4) Been convicted of a violation of the State Minority Business Enterprise Law, SS 14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(5) Been convicted of a violation of the SS11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(6) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsection (1) - (5) above;

(7) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of bids or proposals for a public or private contract; or

(8) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described in SSB and C (1) - (7) above, except as follows (indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the business, and the status of any debarment) (use attachments as necessary):

____________________________________________________________________________________________________________

D. AFFIRMATION REGARDING DEBARMENT

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities, including obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited denial of participation) by any public entity, except as follows (list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceedings, the name(s) of the person(s) involved and their current positions and responsibilities with the business, the grounds of the debarment or suspension, and the details of each person's involvement in any activity that formed the grounds of the debarment or suspension) (use attachments as necessary):

____________________________________________________________________________________________________________
E. AFFIRMATION REGARDING DEBARMENT OF RELATED ENTITIES

I FURTHER AFFIRM THAT:

(1) The business was not established and it does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Section 16-101, et seq., of the State Finance and Procurement Article of the Annotated Codes of Maryland; and

(2) The business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows (you must indicate the reasons why the affirmations cannot be given without qualification) (use attachments as necessary):

F. SUB-CONTRACT AFFIRMATION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, has knowingly entered into a Contract with a public body under which a person debarred or suspended under Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

G. AFFIRMATION REGARDING COLLUSION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business has:

(1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying bid or offer that is being submitted;

(2) In any manner, directly or indirectly, entered into any agreement of any kind to fix the bid price or price proposal of the bidder or proposer or of any competitor, or otherwise taken any action in restraint of free competitive bidding in connection with the contract for which the accompanying bid or offer is submitted.

H. FINANCIAL DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, the provisions of Section 13-221 of the State Finance and Procurement Article of the Annotated Code of Maryland, which require that every business that enters into contracts, leases, or other agreements with the State of Maryland or its agencies during a calendar year under which the business is to receive in the aggregate $100,000 or more shall, within 30 days of the time when the aggregate value of the contracts, leases, or other agreements reaches $100,000, file with the Secretary of State of Maryland certain specified information to include disclosure of beneficial ownership of the business.

I. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, Election Law Article, SS 14-101 through 14-108, Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State of Maryland, including its agencies or a political subdivision of the State, during a calendar year in which the person receives in the aggregate $100,000 or more shall, file with the State Board of Elections a statement disclosing contributions in excess of $500 made during the reporting period to a candidate for elective office in any primary or general election.

J. DRUG AND ALCOHOL FREE WORKPLACE

(Applicable to all contracts unless the contract is for a law enforcement agency and the agency head or the agency head's designee has determined that application of COMAR 21.11.08 and this certification would be inappropriate in connection with the law enforcement agency's undercover operations.)

I CERTIFY THAT:

(1) Terms defined in COMAR 21.11.08 shall have the same meaning when used in this certification.

(2) By submission of its bid or offer, the business, if other than an individual, certifies and agrees that, with respect to its employees to be employed under a contract resulting from this solicitation, the business shall:

(a) Maintain a workplace free of drug and alcohol abuse during the term of the contract;

(b) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of drugs, and the abuse of drugs or alcohol is prohibited in the business' workplace and specifying the actions that will be taken against employees for violation of these prohibitions;

(c) Prohibit its employees from working under the influence of drugs or alcohol;

(d) Not hire or assign to work on the contract anyone whom the business knows, or in the exercise of due diligence should know, currently abuses drugs or alcohol and is not actively engaged in a bona fide drug or alcohol abuse assistance or rehabilitation program;

(e) Promptly inform the appropriate law enforcement agency of every drug-related crime that occurs in its workplace if the business has observed the violation or otherwise has reliable information that a violation has occurred;

(f) Establish drug and alcohol abuse awareness program to inform its employees about:
I DO SOLEMNLY DECLARE AND AFFIRM UNDER PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE
true and correct to the best of my knowledge, information, and belief.

Date: _______________________________ EIN or SS#: _______________________________
END OF FORM

END OF APPENDIX-A
APPENDIX B

FINANCIAL PROPOSAL FORMS

Financial Proposal Form
Performance Bond
Ms. Sharon Quinn
Department of Procurement Services
University of Maryland Baltimore County
Administration Building, Room 301
1000 Hilltop Circle
Baltimore, MD  21250

Dear Ms. Quinn:

The undersigned hereby submits the Financial Proposal as set forth in RFP # BC-20616-Q dated 05/06/09 and the following subsequent addenda:

Addendum _____ dated _____
Addendum _____ dated _____
Addendum _____ dated _____

Having received clarification on all matters upon which any doubt arose, the undersigned proposes to complete the work as described in the RFP and subsequent Addenda as noted above. By signing and submitting this response, undersigned hereby agrees to all the terms and conditions of the RFP including any issued addenda.

1. Financial Proposal for the Sale of Snacks/Foods and Hot Beverages Campus-Wide:

   a. A commission of _____% shall be paid to the University on all snack/food and hot beverage vended products.

      Minimum guarantee is:

      | (written in words) | (written in dollars) |
      |___________________|____________________|

      Commission for the campus-wide sale of snacks/foods and hot beverages shall be based on Gross Revenue herein defined as total receipts from any source excluding sales or use taxes collected directly from patrons of the operations.

      Commissions for the sale of snacks/foods and hot beverages shall be paid on a monthly basis - to be paid no later than 10 days after the month end close.
2. **Additional Financial Incentives:** We are offering the University incentives such as sponsorships, scholarships, infrastructure support monies for the vending program, guaranteed marketing promotions, etc.: (These may be listed below, or provided in an attachment to this Financial Proposal Form.)

We understand that by submitting a proposal we are agreeing to all of the terms and conditions included in the RFP documents.

We understand that the evaluation and subsequent final ranking of proposals will be in accordance with the RFP documents.

We understand that the University reserves the right to award a contract (or contracts) for all items, or any parts thereof, as set forth in detail under the information furnished in the RFP document.

We further confirm that the Primary Account Representative named within our Technical Proposal will be assigned to the University for the duration of this contract.

The undersigned hereby certifies that he/she is a duly authorized officer of the Proposing Firm and can bind the Proposer to the prices quoted herein.

______________________________________________
Proposer (Company Name)

______________________________________________
Authorized Signature

______________________________________________
Print Name

______________________________________________
Title

END OF PRICE PROPOSAL FORM
PERFORMANCE BOND

Principal Business Address of Principal

Surety Obligee
STATE OF MARYLAND

a corporation of the State of ________________________________ By and through the following

and authorized to do business in the State of Maryland Administration ________________________________

Penal Sum of Bond (express in words and figures) Date of Contract

______________________________ , 20 ________________

Description of Contract Date Bond Executed

______________________________ , 20 ________________

Contract Number: ________________________________

KNOW ALL MEN BY THESE PRESENTS, That we, the Principal named above and Surety named above, being authorized to do business in Maryland, and having business addresses as shown above, are held and firmly bound unto the Obligee named above in Penal Sum of this Performance Bond stated above, for the payment of which Penal Sum we bind ourselves, our heirs, executors, administrators, personal representatives, successors, and assigns, jointly and severally, firmly by these presents.

However, where Surety is composed of corporations acting as co-sureties, we, the co-sureties, bind ourselves, our successors and assigns, in such Penal Sum jointly and severally as well as severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each co-surety binds itself, jointly and severally with the Principal, for the payment of such sum as appears above its name below, but if no limit of liability is indicated, the limit of such liability shall be the full amount of the Penal Sum.

WHEREAS, Principal has entered into or will enter into a contract with the State of Maryland, by and through the Administration named above acting for the State of Maryland, which contract is described and dated as shown above, and incorporated herein by reference. The contract and all items incorporated into the contract, together with any and all changes, extensions of time, alterations, modifications, or additions to the contract or to the work to be performed thereunder or to the Plans, Specifications, and Special Provisions, or any of them, or to any other items incorporated into the contract shall hereinafter be referred to as “the Contract.”

WHEREAS, it is one of the conditions precedent to the final award of the Contract that these presents be executed.

NOW, THEREFORE, during the original term of said Contract, during any extensions thereto that may be granted by the Administration, and during the guarantee and warranty period, if any, required under the Contract, unless otherwise stated therein, this Performance Bond shall remain in full force and effect unless and until the following terms and conditions are met:

1. Principal shall well and truly perform the Contract; and

2. Principal and Surety shall comply with the terms and conditions contained in this Performance Bond.

Whenever Principal shall be declared by the Administration to be in default under the Contract, the Surety may, within 15 days after notice of default from the Administration, notify the Administration of its election to either promptly proceed to remedy the default or promptly proceed to complete the contract in accordance with and subject to its terms and conditions. In the event the Surety does not elect to exercise either of the above stated options, then the Administration thereupon shall have the remaining contract work completed, Surety to remain liable hereunder for all expenses of completion up to but not exceeding the penal sum stated above.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or to the Specifications accompanying the same shall in any way affect its obligations on this Performance Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Specifications.

This Performance Bond shall be governed by and construed in accordance with the laws of the State of Maryland and any reference herein to Principal or Surety in the singular shall include all entities in the plural who or which are signatories under the Principal or Surety heading below.

IN WITNESS WHEREOF, Principal and Surety have set their hands and seals to this Performance Bond. If any individual is a signatory under the Principal heading below, then each such individual has signed below on his or her own behalf, has set forth
below the name of the firm, if any, in whose name he or she is doing business, and has set forth below his or her title as a sole proprietor. If any partnership or joint venture is a signatory under the Principal heading below, then all members of each such partnership or joint venture have signed below, each member has set forth below his or her title as a general partner, limited partner, or member of joint venture, whichever is applicable. If any corporation is a signatory under the Principal or Surety heading below, then each such corporation has caused the following: the corporation’s name to be set forth below, a duly authorized representative of the corporation to affix below the corporation’s seal and to attach hereto a notarized corporate resolution or power of attorney authorizing such action, and each such duly authorized representative to sign below and to set forth below his or her title as a representative of the corporation. If any individual acts as a witness to any signature below, then each such individual has signed below and has set forth below his or her title as a witness. All of the above has been done as of the Date of Bond shown above.

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<th>Individual Principal</th>
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<td>(Name of Co-Partnership)</td>
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<tr>
<th>Agent’s Address</th>
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(Contractor shall fill in all blank spaces above this line)

Approved as to legal form and sufficiency

this _________ day of ________________________ 20__________

__________________________________________
Attorney
APPENDIX C

CONTRACT FORMS

Service Contract
Contract Affidavit
MBE Outreach Efforts Compliance Statement
MBE Subcontractor Project Participation Affidavit
SERVICE CONTRACT

Contract No. __________

UNIVERSITY OF MARYLAND BALTIMORE COUNTY (UMBC)

This Contract is entered into between ____________________________ (hereinafter referred to as Contractor) and the University of Maryland Baltimore County (hereinafter referred to as the “University” or “UMBC”).

1. SCOPE:

2. TERM: The term of this contract shall begin on __________ and terminate on __________.

3. COMPENSATION AND METHOD OF PAYMENT: As compensation for satisfactory performance of the work described herein, the University will pay the Contractor an amount not to exceed __________.

The Contractor’s Taxpayer Identification Number consisting of the Social Security Number for individuals and sole proprietors or the Federal Employer Identification Number for all other types of organization is: _______________.

The Contractor shall be paid only for items or services that are specifically named in this contract. No additional costs for items or services will be paid by the University without its prior express written consent.

4. INVOICING: Invoices shall be rendered __________ to the satisfaction of the University’s designated representative and shall be payable as provided. The work shall be delivered free from all claims, liens, and charges whatsoever.

5. PAYMENT OF UNIVERSITY OBLIGATIONS: Payments to the Contractor pursuant to this contract shall be made no later than 30 days after the University’s receipt of a proper invoice from the Contractor. Charges for late payment of invoices, other than as prescribed by Title 15, Subtitle 1, of the State Finance and Procurement Article, Annotated Code of Maryland, or by Public Service Commission of Maryland with respect to regulated public utilities, as applicable are prohibited.

6. LIABILITY: All persons furnished by Contractor shall be considered solely its employees or agents and Contractor shall be responsible for payment of all unemployment, social security and other payroll taxes, including contributions from employees when required by law.

Contractor agrees to indemnify and save the University harmless from any claims or demands (including the costs, expenses, and reasonable attorney’s fees on account thereof) that may be made: (1) by anyone for injuries to persons or damage to property resulting from Contractor’s acts or omissions or those of persons furnished by Contractor or (2) by persons furnished by Contractor or Contractor’s subcontractors under Workmen’s Compensation or similar acts. Contractor also agrees to defend the University at its request, against any such claim or demand. The University agrees to notify Contractor promptly of any known written claims or demands against the University for which Contractor is responsible hereunder.
The University shall not assume any obligation to defend, indemnify, hold harmless, or pay Attorney’s fees that may arise from or in any way be associated with the performance or operation of this agreement.

Contractor shall maintain, during the term thereof, Workmen’s Compensation Insurance, Public Liability Insurance, and if the use of automobiles is required, Automobile Public Liability Insurance. Contractor shall also require its subcontractors, if any, who may enter upon University premises to maintain such insurance. Contractor and its subcontractors shall furnish the University, when requested, with copies of policies or other satisfactory proof of insurance.

7. COMPLIANCE WITH LAWS: The Contractor hereby represents and warrants that:

A. It is qualified to do business in the State of Maryland and that it will take such action as, from time to time hereafter, may be necessary to remain so qualified;

B. It is not in arrears with respect to the payment of any monies due and owing the State of Maryland, or any department or unit thereof, including but not limited to the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of this Contract;

C. It shall comply with all Federal, State and local laws, regulations, and ordinances applicable to its activities and obligations under this Contract; and

D. It shall obtain, at its expense, all licenses, permits, insurance, and governmental approvals, if any, necessary to the performance of its obligations under this Contract.

8. UNIVERSITY WORK RULES: Employees and agents of Contractor and any subcontractors shall while on the premises of the University, comply with all University rules and regulations including, where required by Government Regulations, submission of satisfactory clearance from the U.S. Department of Defense or other Federal Authority concerned.

Contractor shall acquaint itself with conditions governing the delivery, receiving and storage of materials at the work site if applicable to this work, as not to interfere with University operations. Contractor shall not stop, delay or interfere with University work schedule without the prior approval of the University’s specified representative. Contractor shall provide and maintain sufficient covering to protect stock and equipment from the action of its work, if applicable.

9. HARMONY: Contractor shall be entirely responsible for working in harmony with all others on the work site when Contractor is working on University premises.

10. WARRANTY: Contractor warrants that material and/or services furnished hereunder will be fit for the purposes intended and will be free from defects in material and workmanship where applicable.

11. MODIFICATIONS IN THE WORK: This Contract may be amended with the consent of both parties. Amendments may not change significantly the scope of the Contract.
12. **NON-HIRING OF EMPLOYEES:** No official or employee of the State of Maryland, as defined under State Government Article, SS 15-102, Annotated Code of Maryland, whose duties as such official or employee include matter relating to or affecting the subject matter of this contract, shall, during the pendancy or term of this contract and while serving as an official or employee of the State become or be an employee of the contractor or any entity that is a subcontractor on this contract.

13. **DISPUTES:** This contract shall be subject to the USM Procurement Policies and Procedures pending resolution of a claim, the Contractor shall proceed diligently with the performance of the contract in accordance with the procurement officer’s decision.

14. **MARYLAND LAW PREVAILS:** The laws of the State of Maryland shall govern the interpretation and enforcement of this Contract.

15. **NON-DISCRIMINATION IN EMPLOYMENT:** the Contractor agrees: (a) not to discriminate in any manner against an employee or applicant for employment because of race, color, religion, creed, age, sex, marital status, national origin, ancestry, or disability of a qualified individual with a disability; (b) to include a provision similar to that contained in subsection (a), above, in any subcontract except a subcontract for standard commercial supplies or raw materials; and (c) to post and to cause subcontractors to post in conspicuous places available to employees and applicants for employment, notices setting forth the substance of this clause.

16. **SUSPENSION OF WORK:** The procurement officer unilaterally may order the Contractor in writing to suspend, delay or interrupt all or any part of the work for such period of time as he may determine to be appropriate for the convenience of the University.

17. **PRE-EXISTING REGULATIONS:** In accordance with the provisions of Section 11-206 of the State Finance and Procurement Article, Annotated Code of Maryland, the regulations set forth in USM Procurement Policies and Procedures in effect on the date of execution of this contract are applicable to this contract.

18. **DELAYS AND EXTENSIONS OF TIME:** The Contractor agrees to perform the work continuously and diligently and no charges or claims for damages shall be made by it for any delays or hindrances from any cause whatsoever, during the progress of any portion of the work specified in this contract.

Time extensions will be granted only for excusable delays that arise from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of the public enemy, acts of the State of Maryland in either its sovereign or contractual capacity, acts of another contractor in the performance of a contract with the State, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of either the Contractor or the subcontractors or suppliers.

19. **COST AND PRICE CERTIFICATION:**
A. The Contractor by submitting cost or price information certifies that, to the best of its knowledge, the information submitted is accurate, complete, and current as of a mutually determined specified date prior to the conclusion of any price discussions or negotiations for:
(1) A negotiated contract, if the total contract price is expected to exceed $100,000, or a smaller amount set by the procurement officer; or (2) a change order or contract modification expected to exceed $100,000, or smaller amount set by the procurement officer.

B. The price under this contract and any change order or modification hereunder, including profit or fee, shall be adjusted to exclude any significant price increases occurring because the Contractor furnished cost or price information which, as of the date agreed upon between the parties, was inaccurate, incomplete, or not current.

20. TERMINATION FOR DEFAULT: If the Contractor fails to fulfill its obligations under this contract properly and on time, or otherwise violates any provision of the contract, the University may terminate the contract by written notice to the Contractor. The notice shall specify the acts of omissions relied on as cause for termination. All finished or unfinished supplies and services provided by the Contractor, shall at the University’s option, become the University’s property. The University shall pay the Contractor fair and equitable compensation for satisfactory performance prior to receipt of notice of termination, less the amount of damages caused by Contractor’s breach. If the damages are more than the compensation payable to the Contractor, the Contractor will remain liable after termination and the State can affirmatively collect damages. Termination hereunder, including the determination of the rights and obligations of the parties, shall be governed by the provisions of USM Procurement Policies and Procedures.

21. TERMINATION FOR CONVENIENCE: The performance of work under this contract may be terminated by the University in accordance with this clause in whole, or from time to time in part, whenever the University shall determine that such termination is in the best interest of the University. The University will pay all reasonable costs associated with this contract that the Contractor has incurred up to the date of termination and all reasonable costs associated with termination of the Contract. However, the Contractor shall not be reimbursed for any anticipatory profits which have not been earned up to the date of termination. Termination hereunder, including the determination of the rights and obligations of the parties, shall be governed by the provisions of the USM Procurement Policies and Procedures.

22. FINANCIAL DISCLOSURE: The Contractor shall comply with the provisions of Section 13-221 of the State Finance and Procurement Article of the Annotated Code of Maryland, which requires that every business that enters into contracts, leases or other agreements with the State of Maryland or its agencies during a calendar year under which the business is to receive in the aggregate $100,000 or more, shall within 30 days of the time when the aggregate value of these contracts, leases or other agreements reaches $100,000, file with the Secretary of the State of Maryland certain specified information to include disclosure of beneficial ownership of the businesses.

23. POLITICAL CONTRIBUTION DISCLOSURE: The Contractor shall comply with the provisions of Article 33, SS 14-101 – 14-104, of the Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State, a county, or an incorporated municipality, or their agencies, during a calendar year in which the person receives in the aggregate $100,000 or more, shall file with the State Administrative Board of Election Laws a statement disclosing contributions in excess of $500 to a candidate for elective office in any primary or general election. The statement shall be filed with the State Administrative Board of Election Laws: (1) before a purchase or execution of a lease or contract by the State, a county, an incorporated municipality or their agencies, and shall cover the
preceding two calendar years; and (2) if the contribution is made after the execution of a lease or contract, then twice a year, throughout the contract term, on: (a) February 5, to cover the 6-month period ending January 31; and (b) August 5, to cover the 6-month period ending July 31.

24. **CONTINGENT FEE PROHIBITION:** The Contractor, architect, or engineer (as applicable) warrants that it has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee or agent working for the Contractor, architect or engineer, to solicit or secure this agreement, and that it has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee or agent, any fee or any other consideration contingent on the making of this agreement.

25. **RETENTION OF RECORDS:** The Contractor shall retain and maintain all records and documents relating to this Contract for three years after final payment by the University hereunder or any applicable statute of limitations, whichever is longer, and shall make them available for inspection and audit by authorized representatives of the University, including the procurement officer or designee, at all reasonable times.

26. **MULTI-YEAR CONTRACTS CONTINGENT UPON APPROPRIATIONS:** If the General Assembly fails to appropriate funds or if funds are not otherwise made available for continued performance for any fiscal period of this Contract succeeding the first fiscal period, this Contract shall be cancelled automatically as of the beginning of the fiscal year for which funds were not appropriated or otherwise made available; provided, however, that this will not affect either the University’s rights or the Contractor’s rights under any termination clause in this Contract. The effect of termination of the Contract hereunder will be to discharge both the Contractor and the University from future performance of the Contract, but not from their rights and obligations existing at the time of termination. The Contractor shall be reimbursed for the reasonable value of any nonrecurring costs incurred but not amortized in the price of the Contract. The University shall notify the Contractor as soon as it has knowledge that funds may not be available for the continuation of this Contract for each succeeding fiscal period beyond the first.

27. **LIQUIDATED DAMAGES:** Time is an essential element of the Contract and it is important that the work be vigorously prosecuted until completion. For each day that any work shall remain uncompleted beyond the time(s) specified elsewhere in the contract, the Contractor shall be liable for liquidated damages in the amount(s) provided for in the solicitation, provided, however, that the due account shall be taken of any adjustment of the specified completion time(s) for completion of work as granted by approved change orders.

28. **VARIATIONS IN ESTIMATED QUANTITIES:** Where the quantity of a pay item in this Contract is an estimated quantity and where the actual quantity of such pay item varies more than twenty-five percent (25%) above or below the estimated quantity stated in this Contract, an equitable adjustment in the Contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above one hundred twenty-five percent (125%) or below seventy-five percent (75%) of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the procurement officer shall, upon receipt of a written request for an extension of time within ten (10) days from the beginning of the delay, or within a further period of time which may be granted by the procurement officer before the final settlement of the Contract, ascertain the facts and make adjustment for extending the completion date as in his judgment the findings justify.
29. **TRUTH-IN-NEGOTIATION CERTIFICATION**: (Mandatory for architectural services or engineering services contracts over $100,000.) The Contractor by submitting cost or price information, including wage rates or other factual unit costs, certifies to the best of its knowledge, information and belief, that:

A. The wage rates and other factual unit cost supporting the firm’s compensation, as set forth in the proposal, are accurate, complete and current as of the contract date;

B. If any of the items of compensation were increased due to the furnishing of inaccurate, incomplete or non-current wages or other units of cost, the State is entitled to an adjustment in all appropriate items of compensation, including profit or fee, to exclude any significant sum by which the price was increased because of the defective data. The University’s right to adjustment includes the right to a price adjustment for defects in costs or pricing data submitted by a prospective or actual subcontractor; and

C. If additions are made to the original price of the Contract, such additions may be adjusted to include any significant sums where it is determined the price has been increased due to inaccurate, incomplete or non-current wage rates and other factual costs.

30. **ETHICS**: The vendor is responsible to assure compliance with the Maryland Public Ethics Law, Title 15, State Government Article, Annotated Code of Maryland. In the event a violation of the Ethics Law occurs in connection with the Vendor’s response of this solicitation or a resulting contract award to the vendor, the University reserves the right to (1) reject the Vendor’s bid or proposal or (2) declare an event of default under the contract.

31. **RIGHTS IN INVENTIONS**: For the consideration payable under this Contract, Contractor agrees to report any invention arising out of the Work required by this Contract to UMBC. UMBC shall have sole right and authority to seek statutory patent protection under United States and foreign patent laws and to enjoy the benefits of ownership of the invention, whether or not the invention was required of the Vendor as part of the performance of Work. Contractor hereby assigns all right, title and interest in and to inventions made in the course of the Work to UMBC and agrees to execute and deliver all documents and do any and all things necessary and proper to effect such assignment.

32. **COPYRIGHTS**: For the consideration payable under this Contract, the work product required by this Contract shall be considered a work made for hire within the meaning of that term under the copyright laws of the United States, applicable common law and corresponding laws of other countries. UMBC shall have sole right and authority to seek statutory copyright protection and to enjoy the benefits of ownership of the work. The party performing the work hereby assigns all right, title and interest in and to the work to the UMBC.

33. **CONTRACT AFFIDAVIT**: The attached Contract Affidavit must be executed by an authorized representative of the Contractor and is incorporated by reference into this Contract.

34. **SPECIFICATIONS**: All materials, equipment, supplies or services shall conform to federal and State laws and regulations and to the specifications contained in the solicitation.
35. **TAX EXEMPTION:** UMB is generally exempt from federal excise taxes, Maryland sales and use taxes, District of Columbia sales taxes, and transportation taxes. Exemption certificates shall be completed upon request. Where a contractor is required to furnish and install material in the construction or improvement of real property in performance of a contract, the Contractor shall pay the Maryland Sales Tax and the exemption does not apply.

36. **ANTI-BRIBERY:** The Contractor warrants that neither it nor any of its officers, directors or partners, nor any employees who are directly involved in obtaining or performing contracts with any public body has been convicted of bribery, attempted bribery, or conspiracy to bribe, under the laws of any state or of the federal government or has engaged in conduct since July 1, 1997, which would constitute bribery, attempted bribery or conspiracy to bribe under the laws of any state or the federal government.

37. **EPA:** Materials, supplies, equipment, or services shall comply in all respects with the Federal Noise Control Act of 1972, where applicable.

38. **OSHA; MSDS:** All materials, supplies, equipment, or services supplied as a result of this Contract shall comply with the applicable U.S. and Maryland Occupational Safety and Health Act Standards. Pursuant to 29 CFR part 1910, where applicable, an MSDS for the products supplied or used in carrying out this Contract must be sent to:
   UMBC
   Director for EHS
   1000 Hilltop Circle
   Baltimore, MD  21250

39. **INTELLECTUAL PROPERTY:** Contractor agrees to defend upon request and indemnify and save harmless UMB, its officers, agents and employees with respect to any claim, action, cost or judgment for patent infringement, or trademark or copyright violation arising out of purchase or use of materials, supplies, equipment or services covered by this Contract.

40. **DRUG AND ALCOHOL FREE WORKPLACE:** The Contractor warrants that the Contractor shall comply with COMAR 21.11.08 Drug and Alcohol Free Workplace, and that the Contractor shall remain in compliance throughout the term of this Contract.

41. **ENTIRE CONTRACT:** This Contract represents, in its entirety, the mutual understanding of the parties. This Contract supersedes any and all prior understandings and agreements, either written or oral, between the Agency and Contractor. No subsequent agreements or modifications hereof, whether expressed or implied, shall bind the parties unless the same be in writing and signed by the parties.
CONTRACT AFFIDAVIT

A. AUTHORIZED REPRESENTATIVE
I HEREBY AFFIRM THAT:

I am the (title) _____________________________ and the duly authorized representative of (business) __________________________________ and that I possess the legal authority to make this Affidavit on behalf of myself and the business for which I am acting.

B. CERTIFICATION OF CORPORATION REGISTRATION AND TAX PAYMENT
I FURTHER AFFIRM THAT:

(1) The business named above is a (__domestic) (___foreign) corporation registered in accordance with the Corporations and Associations Article, Annotated Code of Maryland, and that is in good standing and has filed all of its annual reports, together with filing fees, with the Maryland State Department of Assessments and Taxation, and that the name and address of its current resident agent is filed with the State Department of Assessments and Taxation is:

Name:              _______________________________________________________

Address:             _______________________________________________________

City, State, Zip:  _______________________________________________________

(2) Except as validly contested, the business had paid, or has arranged for payment of, all taxes due the State of Maryland and has filed all required returns and reports with the Comptroller of the Treasury, the State Department of Assessments and Taxation, and the Department of Labor, Licensing, and Regulation, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

C. CERTAIN AFFIRMATIONS VALID
I FURTHER AFFIRM THAT:

To the best of my knowledge, information and belief, each of the affirmations, certifications, or acknowledgements contained in that certain Bid/Proposal Affidavit dated __________,20_____, and executed by me or for the purpose of obtaining the contract to which this Exhibit is attached remains true and correct in all respects as if made as of the date of this Contract Affidavit and as if fully set forth herein.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: _______________________________  By:  __________________________________

(Authorized Representative & Affiant)

END OF FORM
ATTACHMENT C

OUTREACH EFFORTS COMPLIANCE STATEMENT

This document must be submitted within 10 working days of receiving notice of potential award or date of conditional award (per COMAR 21.11.03.10), whichever is earlier.

In conjunction with the bid or offer submitted in response to Solicitation No.

I state the following:

1. Bidder/Offeror identified opportunities to subcontract in these specific work categories:

2. Attached to this form are copies of written solicitations (with bidding instructions) used to solicit certified MBEs for these subcontract opportunities.

3. Bidder/Offeror made the following attempts to contact personally the solicited MBEs:

4. □ Bidder/Offeror assisted MBEs to fulfill or to seek waiver of bonding requirements. (Describe efforts)
   □ This project does not involve bonding requirements.

5. □ Bidder/Offeror did/did not attend the pre-bid conference
   □ No pre-bid conference was held.

By:______________________________________________________________________________________
Bidder/Offeror Name________________________________________________________________________

Signature

Name, Title (Print)

Date

Address

Attachment D

SUBCONTRACTOR PROJECT PARTICIPATION AFFIDAVIT

This document must be submitted within 10 working days of receiving notice of potential award or date of conditional award (per CONAR 21.11.03.10), whichever is earlier.

Submit one form for each certified MBE listed in the MBE Participation Schedule (Attachment B).

Provided that _________________ is awarded the State contract in conjunction with Solicitation No. _________________, it and _________________, MBE Subcontractor Name

MDOT Certification No. _________________, intend to enter into a contract by which Subcontractor shall: {describe work}

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

☐ No bonds are required of Subcontractor

☐ The following amount and type of bonds are required of Subcontractor:

MBE Subcontractor Contract Amount

Prime Contractor Signature
Subcontractor Signature

By: ____________________________
Name, Title (Print)

Date ____________________________

MBE

By: ____________________________
Name, Title (Print)

Date ____________________________
APPENDIX D

CURRENT VENDING MACHINE LOCATIONS
APPENDIX  D

VENDING – UMBC Machine Locations

Administration – UMBC
Chesapeake Dorm – UMBC
Chincoteague – UMBC
Commons Area – UMBC
Computer Science – UMBC
Continuing Ed. S. Campus – UMBC
Elk Laundry area - UMBC
Erickson Dorm – UMBC
Fieldhouse – UMBC
Fine Arts – UMBC
Hilltop Plant – UMBC
ITE Bldg – UMBC
ITE Bldg – UMBC
Lecture Hall – UMBC
Lecture Hall #2 – UMBC
Library Lounge – UMBC
Library Lounge – UMBC
Math/Physics – UMBC
Math/Physics – UMBC
Math/Physics – UMBC
Math/Physics – UMBC
New Hall – UMBC
Patapsco Dorm – UMBC
Physical Plant – UMBC
Potomac Hall – UMBC
Public Policy 2nd Flr – UMBC
S. Campus Bldg 1224 – UMBC
Science – UMBC
Social Science – UMBC
Susquehanna Dorm – UMBC
Tech Center – UMBC
University Center – UMBC
University Center – UMBC
University Center – UMBC
Walker Ave. Apts. – UMBC
Walker Ave. Apts. – UMBC
West Hills Apts. – UMBC
APPENDIX E

PRODUCTS & PRICES
APPENDIX E

University of Maryland, Baltimore County

UMBC Procurement Department

Price categories and range of pricing for machine vending on campus:

Baked Goods, Pastry type products – 85 cents to a dollar

Bagged Salted Snacks (chips, pretzels) – 75 cents to a dollar

Chocolate Confections (bars) – 80 cents to a dollar

6 pack Crackers and Cookies – 60 cents to 85 cents

Specialty Snacks – (trail mixes, large cookies, snack mixes) – 80 cents to a dollar

Concession size products – 1 dollar to 1 dollar 25 cents

Ice Cream (Dip n Dots) – 3 dollars 50 cents

Hot Dogs (variety) – 2 dollars, 2 dollars 50 cents, 3 dollars

Hot Beverages (due to opening of Starbucks price negotiable)
APPENDIX F

5-YEAR SALES FIGURES
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<th>CAMPUS CARD SALES</th>
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<td>$22,647.36</td>
<td>$144,741.64</td>
<td>$167,389.00</td>
<td>$37,662.48</td>
<td>22.50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Year Average</td>
<td>$21,320.58</td>
<td>$144,438.86</td>
<td>$165,759.44</td>
<td>$38,279.13</td>
<td>23.10%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX G

MACHINE CARD READER INFORMATION
CS Gold® Vending Interface Reader
Installation Guide

TP-830128-001B PD 7128
<table>
<thead>
<tr>
<th>Document Number</th>
<th>Date</th>
<th>Remarks</th>
</tr>
</thead>
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<tr>
<td>TP-830128-001B</td>
<td>9/2008</td>
<td>Added HID Prox and iCLASS support information.</td>
</tr>
</tbody>
</table>

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TP-830128 (Ed. B)
Section 1
Introduction

CAUTION

This manual contains sensitive material that could, in the wrong hands, compromise the operations of the vending reader and be detrimental to your facility.

The information in this document is for the use of authorized operators and administrators of the vending reader. CBORD strongly recommends that you store this document in a secure place and limit its use to those individuals with proper permissions.

1.1 Communications Overview

When a card is swiped, the reader requests balance information from CS Gold. The patron's full account balance is displayed on the vending reader and the vending machine is enabled if the account has enough money for a sale. After a selection is made, the amount of the sale is displayed on the reader and the transaction posts to the CS Gold system.

1.2 General Information

The reader is available in the following models:

- Magnetic Stripe Insert card reader
- Magnetic Stripe Swipe card reader
- iCLASS®
- Prox (125 kHz)

The MDB vending machine type is supported. A kit is available for use with MicroMech® vending machines.
1.3 Training

CBORD offers training courses at the Customer Education facility in Farmington, New York:

Customer Education  
The CBORD Group, Inc.  
1133 Corporate Drive  
Farmington, NY 14425

For additional information on training courses and prerequisites, contact your Account Manager.

1.4 Customer Support

CBORD is committed to providing full support to both customers and suppliers through either person-to-person or online support options.

Address:

Customer Support Center  
The CBORD Group, Inc.  
4505 Stephen Circle NW, Suite 103  
Canton, Ohio 44718

Phone number:

1-866-789-2977

E-mail address:

CS_Support@CBORD.com

1.5 Software Requirements

The following version of CS Gold software is required:

CS Gold version 5.0.14 or later
1.6 Hardware Requirements

The following hardware is available:

Table 1-1 CS Gold Vending Interface Reader Hardware

<table>
<thead>
<tr>
<th>Hardware Item</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP-MDB Vending Interface Reader-Insert 10/100</td>
<td>4VEN0220</td>
</tr>
<tr>
<td>IP-MDB Vending Interface Reader Programming Keypad with Meter Cards (required)</td>
<td>4VEN0203</td>
</tr>
<tr>
<td>IP Vending Report Printer with Cable and Battery (optional)</td>
<td>4VEN0209</td>
</tr>
<tr>
<td>Package of three spare Meter Cards (optional)</td>
<td>4VEN0226</td>
</tr>
<tr>
<td>IP-MDB Vending Interface Reader-HID iCLASS 10/100</td>
<td>4VEN0227</td>
</tr>
<tr>
<td>IP-MDB Vending Interface Reader with Mag Swipe 10/100</td>
<td>4VEN0228</td>
</tr>
<tr>
<td>MicroMech Kit</td>
<td>4VEN0234</td>
</tr>
<tr>
<td>IP-MDB Vending Interface Reader-HID Prox 10/100</td>
<td>4VEN0235</td>
</tr>
<tr>
<td>CS Gold Vending Interface Reader External Power Supply</td>
<td>--</td>
</tr>
</tbody>
</table>
Section 2
Installation

2.1 Installing the Vending Reader

Use the following procedure to install the reader (see Figure 2-1):

![Vending Reader](image)

Figure 2-1  Vending Reader

1. Disconnect power from the vending machine.

> **CAUTION**

Failure to disconnect the power can result in permanent damage to the vending interface reader and/or to the vending machine’s electronics.

To ensure reliable operation, this procedure should be performed by a trained technician.

To prevent potential injury or fatal electric shock, always disconnect electrical power sources before installing, replacing, or adjusting components or cables.

Discharge static electricity from your body while installing cables or devices. You can do this by touching the device’s unpainted metal surface from time to time until your work is completed. Refer to the Electrostatic Discharge Association for additional information (http://www.esda.org/aboutESD.html).
2. The device fits into a bill validator slot. Remove the cover from the spare bill validator position. If the vending machine does not have an available mounting position, remove the existing bill validator or cut the appropriate hole in the vending machine door to accommodate the reader. (See Figure 2-1.)

3. Insert the reader into the cutout and install the appropriate hardware to hold it in place. A trim ring can be provided if a hole must be cut to install the reader. (See Figure 2-2.)

4. Mate the MDB 6-pin connector from the card reader with any available MDB connector in the vending machine.

5. Reconnect the power to the vending machine.

Figure 2-2 Vending Machine Cutout

Typical Vending Machine Cutout for MDB Devices

Note: Not to scale
2.2 Keypad Functions

The following table lists the keypad functions available for configuring the reader:

Table 2-1 Keypad Functions

<table>
<thead>
<tr>
<th>Key</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;A&gt;</td>
<td>Use the &lt;A&gt; key to scroll through menus, select options or settings, and select alphanumeric or punctuation characters. The key changes the current selection up one level. When selecting characters, press the &lt;A&gt; key until the correct character displays, and then press &lt;ENT&gt; to select the character.</td>
</tr>
<tr>
<td>&lt;B&gt;</td>
<td>Use the &lt;B&gt; key to scroll through menus, select options or settings, and select alphanumeric or punctuation characters. The key changes the current selection down one level. When selecting characters, press the &lt;B&gt; key until the correct character displays, and then press &lt;ENT&gt; to select the character.</td>
</tr>
<tr>
<td>&lt;D&gt;</td>
<td>Use the &lt;D&gt; key to enter a decimal (.) character.</td>
</tr>
<tr>
<td>&lt;CLR&gt;</td>
<td>Use the &lt;CLR&gt; key to move through menus and to clear values when setting options or settings. The key clears the current value or steps back one menu item.</td>
</tr>
<tr>
<td>&lt;ENT&gt;</td>
<td>Use the &lt;ENT&gt; key to move through menus and to save options or settings to memory. The key selects the current selection or option.</td>
</tr>
</tbody>
</table>

2.3 Command Mode Programming

Connect the programming keypad to the keypad connector J2, which is located at the rear of the reader on the top of the PC board.

To enter the programming mode, press the following keys in succession:<D> <9> <5> <1> <ENT>. At the password prompt, enter the command mode password and press <ENT>. The default command mode password is 7020.
Section 3
Reader Setup

This section provides the minimum required settings to configure the reader to operate correctly and communicate with CS Gold. Other configuration parameters are described in Section 6.2 Location Configuration.

3.1 Menu: Terminal Setup

When the reader displays Terminal Setup, press <ENT> to access the following menu options. Press the <A> or <B> keys to navigate forward or backward through the menus. Press <CLR> to exit the Terminal Setup menu.

The date and time for the reader are updated automatically by the CS Gold TPS server when the reader connects to the server.

NOTE
Make sure that all logs are turned off. If a log is turned on, the reader will go offline when the log is full.

3.1.1 Use Default Messages

Press <B> to select Off to disable the Use default msgs option. Press <ENT> to save the setting. The Use default msgs setting must be set to Off to correctly display messages that have been modified by the CS Gold server. (See Table 4-1.)

3.1.2 Set Date

Do not set the date; the date for the reader is updated automatically by the CS Gold TPS server when the reader connects to the server.

3.1.3 Set Time

Do not set the time; the time for the reader is updated automatically by the CS Gold TPS server when the reader connects to the server.

3.1.4 Terminal ID

Enter the terminal ID number using the keypad. This number will be used to identify the reader when reports are printed from the reader. Press <ENT> to save the setting.

NOTE
You can enter a terminal ID of up to four digits.
3.1.5 Command Mode Password

Changing the default command mode password is optional. Once you enter a new password, the default password no longer works. If you forget the new password, you must send the reader to CBORD to be fixed.

NOTE

You can enter a password of up to four digits.

For the **Cmd Password** option, enter the password in the following format:

```
####
```

Press <ENT>. The new password you entered overwrites the default password (7020).

3.1.6 Service Mode Password

Changing the default service mode password is optional. Once you enter a new password, the default password no longer works. If you forget the new password, you must send the reader to CBORD to be fixed.

NOTE

You can enter a password of up to four digits.

For the **Serv Password** option, enter the password in the following format:

```
####
```

Press <ENT>. The new password you entered overwrites the default password (7021).

3.1.7 Account Transaction Log

The **Accnt Trans Log** option is set to **Off** by default and should be kept off. If the log is turned on, the reader will go offline when the log is full.

3.1.8 Cash Transaction Log

The **Cash Trans Log** option is set to **Off** by default and should be kept off. If the log is turned on, the reader will go offline when the log is full.

3.1.9 Failed Transaction Log

The **Failed Trans Log** option is set to **Off** by default and should be kept off. If the log is turned on, the reader will go offline when the log is full.
3.1.10 Admin Transaction Log

The Admin Trans Log option is set to Off by default and should be kept off. If the log is turned on, the reader will go offline when the log is full.

3.1.11 Overwrite Log

The Overwrite Log option is set to Off by default and should be kept off. If the log is turned on, the reader will go offline when the log is full.

3.1.12 Swipe Reader

Press <A> to select On to enable the Swipe Reader option. Press <ENT> to save the setting. The Swipe Reader setting should be set to On in the CBORD standard reader.

3.1.13 Barcode Reader

Press <B> to select Off to disable the Barcode Reader option. Press <ENT> to save the setting. The Barcode Reader setting should be set to Off in the CBORD standard reader.

3.1.14 HID iClass Reader

This option setting enables or disables the HID iCLASS reader connected to serial port J7. The available option settings are:

- None (default setting)
- 26bit=fac+cardID
- Corp 1000Generic (35-bit format)

NOTE

The width of output for the 26bit=fac+cardID and Corp 1000Generic settings is controlled by the Card ID Width and Corp ID Width option settings (refer to Section 3.1.15 and Section 3.1.16).
3.1.15 Card ID Width

Enter the field width of the Card ID number. The value range for this field is 1-16. The default value is 16. The field entry will be left padded with 0s.

EXAMPLE

CardId=12003, CorpId=1835 CorpId width=5 CardId width=16
Output=018350000000012003

3.1.16 Corp ID Width

Enter the field width of the Corp ID (facility code) number. The value range for this field is 0-16. The default value is 0. The field entry will be left padded with 0s.

EXAMPLE

CardId=12003, CorpId=1835 CorpId width=0 CardId width=16
Output=0000000000012003

3.1.17 HID Prox Reader

This option setting enables or disables the HID Prox reader attached to a swipe port. Press <A> to select On or <B> to select Off. Press <ENT> to save the setting. The default setting is Off.

NOTE

The output format is controlled by the Card ID Width and Corp ID Width option settings (refer to Section 3.1.15 and Section 3.1.16).

3.1.18 Mask Account

The Mask Accnt option setting determines whether the card number of a swiped card will display on the reader. Press <A> to select On or <B> to select Off. Press <ENT> to save the setting.

3.1.19 Display Account Balance

To enable the display of account balances, press <A> to select On. Press <B> to disable this option. Press <ENT> to save the setting.

3.1.20 Meter Shortcuts

Press <A> to select On. Press <ENT> to save the setting. The Meter Shortcuts setting should be set to On in the CBORD standard reader.
3.1.21 OK Response Beeps

To enable a beep when an action completes successfully, press <A> to select On. Press <B> to disable this option. Press <ENT> to save the setting.

3.1.22 Failed Response Beeps

To enable a beep when an action fails, press <A> to select On. Press <B> to disable this option. Press <ENT> to save the setting.

3.2 Menu: Network Setup

After initial logon, you can access the Network Setup menu by pressing <B> three times. When the reader displays Network Setup, press <ENT> to access the following menu options. Press the <A> or <B> key to navigate forward and backward through the menus. Press <CLR> to exit the Network Setup menu.

3.2.1 Use DHCP for IP

Press <B> to select Off to disable the Use DHCP for IP option. Press <ENT> to save the setting.

NOTE

If you set the Use DHCP for IP option to Off (disabled) as recommended by CBORD, the reader must be rebooted (power cycle) after the configuration procedure. Otherwise, DHCP will not be disabled and the reader will not come online.

3.2.2 Terminal IP

The terminal IP address must match the setting in the Physical Address field in TPS Node Configuration for the reader node (refer to Section 6.1 TPS Configuration). Enter the terminal IP address (the address of the reader) in the following format:

###.###.###.###

Use the <D> key to enter a decimal (.). Press <ENT> to save the setting.

3.2.3 Server IP

Enter the IP address of the CS Gold TPS server in the following format:

###.###.###.###

Press <ENT> to save the setting.
3.2.4 Gateway IP

Enter the Gateway IP address in the following format:

###.###.###.###

Press <ENT> to save the setting.

3.2.5 Netmask

Enter the netmask address in the following format:

###.###.###.###

Press <ENT> to save the setting.

3.2.6 Server Protocol

Using the <A> or <B> key to scroll through the options, locate, and select Protocol 4. Press <ENT> to save the setting.

3.2.7 TCP Port #

The TCP port # must match the setting in the Port Device Name field in TPS Node Configuration for the line driver node (refer to Section 6.1 TPS Configuration). Enter the appropriate port number in the following format:

#####

Press <ENT> to save the setting.

NOTE

The default port is 03780.

3.2.8 EnableEncrypt 4

ARC4 encryption with diversified keys is used. Encryption is enabled by default. CBORD recommends that you accept the default setting of On (enabled). To disable encryption, press <B> to select Off. Press <ENT> to save the setting.

NOTE

If encryption is disabled on the reader, it must also be disabled in CS Gold by setting the Location Configuration parameter RDR_Encryption_Enable to 0. If the reader and CS Gold encryption settings do not match, the reader will not come online.
3.3 Menu: Vending Application Setup

The following applicable Vending Application Setup options are configured in CS Gold:

- Approval Multiple
- Max Vend Price
- Min Vend Price
- Account Length
- End Session Timer
- Offline Timeout
Section 4
Reader Messages

4.1 Default Values

The configurable messages supported by the reader can be changed from the default values by using the Message Editor utility in CS Gold to add location or site-specific values. (See Table 4-1.)

You may want to change default values to create site-specific messages in the idle and offline messages. For example, idle messages can be used for special promotions ("Save 5% by using your Campus Card") or personalizations ("Welcome to the Student Center"). In the offline message, you could include a phone number to call to report an offline reader.

<table>
<thead>
<tr>
<th>Message #</th>
<th>Length</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>700000003</td>
<td>16</td>
<td>Make Selection</td>
<td>Vend Mess Part1</td>
</tr>
<tr>
<td>700000004</td>
<td>16</td>
<td>-</td>
<td>Vend Mess Part2</td>
</tr>
<tr>
<td>700000005</td>
<td>16</td>
<td>Press Cancel</td>
<td>Vend Mess Part3</td>
</tr>
<tr>
<td>700000006</td>
<td>16</td>
<td>To Cancel</td>
<td>Vend Mess Part4</td>
</tr>
<tr>
<td>700000009</td>
<td>40</td>
<td>Thank You</td>
<td>Transaction Complete Message</td>
</tr>
<tr>
<td>700000013</td>
<td>16</td>
<td>Authorizing...</td>
<td>Sending Message</td>
</tr>
<tr>
<td>700000014</td>
<td>80</td>
<td>Insert Card</td>
<td>Idle Mess part 1</td>
</tr>
<tr>
<td>700000015</td>
<td>80</td>
<td>To purchase item</td>
<td>Idle Mess part 2</td>
</tr>
<tr>
<td>700000016</td>
<td>80</td>
<td>-</td>
<td>Idle Mess part 3</td>
</tr>
<tr>
<td>700000017</td>
<td>80</td>
<td>-</td>
<td>Idle Mess part 4</td>
</tr>
<tr>
<td>700000018</td>
<td>80</td>
<td>-</td>
<td>Idle Mess part 5</td>
</tr>
<tr>
<td>700000019</td>
<td>80</td>
<td>-</td>
<td>Idle Mess part 6</td>
</tr>
<tr>
<td>700000020</td>
<td>16</td>
<td>Cancelling...</td>
<td>Cancelling Message</td>
</tr>
<tr>
<td>700000021</td>
<td>16</td>
<td>Cash Only</td>
<td>Off Line part 1</td>
</tr>
<tr>
<td>700000022</td>
<td>16</td>
<td>-</td>
<td>Off Line part 2</td>
</tr>
<tr>
<td>700000023</td>
<td>16</td>
<td>No Response</td>
<td>No host response part 1</td>
</tr>
<tr>
<td>700000024</td>
<td>16</td>
<td>Cancelling...</td>
<td>No host response part 2</td>
</tr>
<tr>
<td>700000030</td>
<td>16</td>
<td>Opening</td>
<td>Connecting part 1</td>
</tr>
<tr>
<td>700000031</td>
<td>16</td>
<td>Connection...</td>
<td>Connecting part 2</td>
</tr>
<tr>
<td>700000032</td>
<td>16</td>
<td>Please re-insert</td>
<td>unable to read card data line 1</td>
</tr>
<tr>
<td>700000033</td>
<td>16</td>
<td>card</td>
<td>unable to read card data line 2</td>
</tr>
<tr>
<td>700000034</td>
<td>16</td>
<td>Vending</td>
<td>Vend in progress</td>
</tr>
<tr>
<td>700000035</td>
<td>16</td>
<td>No Vend</td>
<td>Vend timed out</td>
</tr>
</tbody>
</table>
4.2 New Message

Use the following procedure to create a new reader message:

NOTE

In Message Editor, the range of numbers starting with 700000000 are reserved for downloaded reader messages.

1. Access the Message Editor utility in CS Gold.

2. Select one of the following options, depending on whether the message is location-specific or device-specific:
   - Location
   - Location Groups
   - Device

3. Select a location or device from the drop-down list.

4. Select the Reader Messages check box and click Refresh. The Messages table is populated with data. (See Figure 4-1.)

Figure 4-1 Message Editor
5. Click the **Rdr Msg** button to create a new message. The *Reader Message Editor* screen displays. (See Figure 4-2.)

![Reader Message Editor](image)

**Figure 4-2  Reader Message Editor**

6. Enter the number of the message you want to create in the **Message Number** field. (Refer to Table 4-1.) For example, if you want to modify the default *Insert Card* message, enter 700000014.

7. You can optionally enter a message description in the **Description** field (for example, *Idle Mess part 1*).

8. Enter the message in the **Message Text** field (for example, enter *Insert Your Card* to change the message from *Insert Card*).
9. Enter a number in the **Priority** field.

Your entries will resemble the entries in Figure 4-3.

![Reader Message Editor - New Message](image)

**Figure 4-3** Reader Message Editor - New Message

10. Click **Save**.

11. Restart the MGR that the vending reader connects through to load the new message into the reader. The change will take effect the next time the reader connects to the CS Gold server.
Section 5
Meters

5.1 Using Meter Shortcut Cards

Once you enable Meter Shortcuts, you can use the View, Send, and Clear Meter cards. To use a card, insert the card and remove it as you would a standard ID card. You can also view meter information using Service Mode. Refer to Section 5.2 Menu: Meters and Log Management.

5.1.1 View Meters

The meters listed in the following table are displayed when you use the View Meters card. Use the `<A>` and `<B>` keys to scroll through the meters. Press `<CLR>` to exit.

<table>
<thead>
<tr>
<th>Meter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td># of card sales</td>
<td>Number of vends (purchases) made with cards</td>
</tr>
<tr>
<td># of cash sales</td>
<td>Number of vends made with cash</td>
</tr>
<tr>
<td>Total card sales</td>
<td>Value of vends made with cards</td>
</tr>
<tr>
<td>Total cash sales</td>
<td>Value of vends made with cash</td>
</tr>
<tr>
<td># offline sales</td>
<td>Number of card vends made in offline mode</td>
</tr>
<tr>
<td># host sales</td>
<td>Number of card vends made while connected</td>
</tr>
<tr>
<td></td>
<td>to the host</td>
</tr>
<tr>
<td># meter clrs</td>
<td>Number of times the meters were cleared</td>
</tr>
<tr>
<td>Grand Total Card sales</td>
<td>Total value of vends made with cards</td>
</tr>
<tr>
<td>Grand Total Cash sales</td>
<td>Total value of vends made with cash</td>
</tr>
<tr>
<td>Grand Total Vends</td>
<td>Total value of vends</td>
</tr>
</tbody>
</table>
5.1.2 Print Meters

Attach the portable printer to the 9-pin COM port. The COM port hangs from the back of the reader on a short cable. Enable the printer and then use the Print Meters card to send the following report:

**Vending Reader Meters Report Sample**

for Unit # 1  
Total # of Card transactions 0  
Total # of Cash transactions 0  
Total Card sales $ 00.00  
Total Cash sales $ 0.00  
Total # of Offline transactions 0  
Total # of Host transactions 0  
Grand Total # Clear meters 0  
Grand Total Card sales $ 00.00  
Grand Total Cash sales $ 0.00  
Grand Total Vends $ 00.00  
End of report

5.1.3 Clear Meters

To clear the meters, use the Clear Meters card and press and hold the <CANCEL> key until the reader displays Meters Cleared. If, after using the Clear Meters card, you decide not to clear the meters, quickly press and release the <CANCEL> key.

5.2 Menu: Meters and Log Management

Service Mode allows access to the same meters as the Meters Cards.

Connect the programming keypad to the keypad connector J2 using the keypad cable. J2 is located at the rear of the reader on the top of the PC board.

To enter Service Mode, press the following keys in succession: <D> <9> <5> <1> <ENT>. At the password prompt, enter the Service Mode password and press <ENT>. The default Service Mode password is 7021.

When the reader displays the Service menu, Meters and Log Management, use the <A> and <B> keys to scroll through the menu options and press <ENT> to select an option.

5.2.1 View Meters

The meters are displayed when you select the View Meters option. Use the <A> and <B> keys to scroll through the meters. Press <CLR> to exit. Refer to Table 5-1: View Meters Card for a list of meters.
5.2.2 Print Meters

Attach the portable printer to the 9-pin COM port. The COM port hangs from the back of the reader on a short cable. Enable the printer and press [Enter] to send the report. Refer to Section 5.1.2: Print Meters for a sample Vending Reader Meters Report.

5.2.3 Send Meters

Attach a serial capture device such as a PC with HyperTerminal running to the 9-pin serial port located on the back of the reader. Enable the PC application and press [Enter] to send the comma-separated report displayed below.

**NOTE**

There are no decimals in the values.

<table>
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<tr>
<td>A, B, C, D, E, F, G, H, I, J</td>
</tr>
<tr>
<td>Where</td>
</tr>
<tr>
<td>A = Total # of card transactions</td>
</tr>
<tr>
<td>B = Total # of cash transactions</td>
</tr>
<tr>
<td>C = Total card sales</td>
</tr>
<tr>
<td>D = Total cash sales</td>
</tr>
<tr>
<td>E = Total # of offline transactions</td>
</tr>
<tr>
<td>F = Total # of host transactions</td>
</tr>
<tr>
<td>G = Grand total # clear meters</td>
</tr>
<tr>
<td>H = Grand total card sales</td>
</tr>
<tr>
<td>I = Grand total cash sales</td>
</tr>
<tr>
<td>J = Grand total vends</td>
</tr>
</tbody>
</table>

5.2.4 Clear Meters

To clear the meters, press the <C> key to select Yes. Press any other key to select No.

5.2.5 View Meters Card

To use the View Meters shortcut card to view the meters, press <A> or <B> to select On and then press <ENT> to save the setting. If you do not want to use the card, press <A> or <B> to select Off and then press <ENT> to save the setting. Refer to Section 5.1.1 View Meters for a list of meter descriptions.

5.2.6 View Meters Card=

This option allows you to configure a new View Meters card. After selecting the menu, swipe the new meters card. Confirm the View Meters code and press <ENT> to save the new card setting. Press <CLR> to cancel the process.
5.2.7 Print Meters Card

To use the Print Meters shortcut card to print the meters to an attached printer, press <A> or <B> to select On and then press <ENT> to save the setting. If you do not want to use the card, press <A> or <B> to select Off and then press <ENT>.

5.2.8 Print Meters Card=

This option allows you to configure a new Print Meters card to print the meters to an attached printer. After selecting the menu, swipe the new meters card. Confirm the Send Meters code and press <ENT> to save the new card setting. Press <CLR> to cancel the process.

5.2.9 Clear Meters Card

To use the Clear Meters shortcut card to clear the meters, press <A> or <B> to select On and then press <ENT> to save the setting. If you do not want to use the card, press <A> or <B> to select Off and then press <ENT>.

5.2.10 Clear Meters Card=

This option allows you to configure a new Clear Meters card to clear the meters. After selecting the menu, swipe the new meters card. Confirm the Clear Meters code and press <ENT> to save the new card setting. Press <CLR> to cancel the process.
Section 6
CS Gold Setup

6.1 TPS Configuration

Use the following procedure to configure TPS for CS Gold vending interface readers:

NOTE

For detailed TPS Configuration procedures, refer to the CS Gold Administration Guide Book 3 - Location Administration (TP-820774-001).

1. From the CS Gold Menu screen, click System Configuration>TPS Configuration. The Node Management - TPS Configuration screen displays.

2. Select File/New Process to create a new MGR for the reader. The Edit Process screen displays. (See Figure 6-1.)

3. Click OK.
4. Right-click the newly added MGR on the Node Management - TPS Configuration screen and click Add to create a line driver as a child of the MGR. The Edit Line Driver screen displays. (See Figure 6-2.)

**NOTE**

The entry in the Port Device Name field must match the TCP Port # setting on the reader.

![Edit Line Driver](image)

5. Click OK.
6. Right-click the newly added line driver on the Node Management - TPS Configuration screen to create a terminal as a child of the line driver. The Edit Terminal screen displays. (See Figure 6-3.)

**NOTE**

The entry in the **Physical Address** field must match the **Terminal IP** address setting on the reader.

![Figure 6-3 Edit Terminal](image)

7. Click **OK**.

8. Click the **Save** icon on the Node Management - TPS Configuration screen.
6.2 Location Configuration

Use the Location Configuration option (CS Gold Menu/System Configuration/Location Configuration) to change parameter settings for the reader, if necessary. (See Figure 6-4.)

Figure 6-4 Location Configuration
The following table provides a list of reader parameters and the corresponding CS Gold parameters. All of the CS Gold parameter settings, with the exception of \texttt{RDR\_Encryption\_Enable}, overwrite the reader parameter settings.

\textbf{NOTE}

Offline transactions are not supported. However, if the reader goes offline in the middle of a transaction, that transaction (and only that transaction) will be logged.

\begin{table}[h]
\centering
\begin{tabular}{|l|l|l|l|l|}
\hline
\textbf{Vending Reader Parameter} & \textbf{CS Gold Parameter} & \textbf{CS Gold Setting(s)} & \textbf{CS Gold Default} & \textbf{Parameter Description} \\
\hline
Enable Encrypt 4 & RDR\_Encryption\_Enable & 0 - Disabled 1 - Enabled & 1 & This setting must correlate with the Enable Encrypt 4 reader setting. \\
Max Vend Price & RDR\_VEND\_AMOUNT & Tenths of a cent & 0 & Leaving this setting at the default allows the reader to use the price specified by the vending machine. If this parameter must be changed, it should be set to match the most expensive product in the machine. \\
Min Vend Price & RDR\_Min\_Vend\_Amount & Tenths of a cent & 0 & Leaving this setting at the default allows the reader to use the price specified by the vending machine. If this parameter must be changed, it should be set to match the least expensive product in the machine. \\
End Session Timer & RDR\_Selection\_Timeout & Seconds & 15 & Amount of time to wait for the patron to make a selection. \\
Approval Multipl & RDR\_Enable\_Multiple\_Vends & False True & \text{FALSE} & Are multiple vends allowed for a single transaction? \\
Offln Acct Limit & RDR\_Offline\_Vend\_Amount & Tenths of a cent & 5000 & Maximum offline vend amount allowed. \\
Account Length & RDR\_MEDIALENGTH & Integer Units & 9 & Length of card data for offline transactions. \\
Offline Timeout & RDR\_RECV\_TIMEOUT & Milliseconds & 30000 & Complete packet value timeout. \\
Issuer Code & RDR\_InstCode & -- & 1 & Institution code reader expects on offline, card-based transactions. (Not currently supported.) \\
\hline
\end{tabular}
\caption{Parameters}
\end{table}
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<thead>
<tr>
<th>Vending Reader Parameter</th>
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<th>CS Gold Setting(s)</th>
<th>CS Gold Default</th>
<th>Parameter Description</th>
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</thead>
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<tr>
<td>Overwrite Log?</td>
<td>RDR_AllowLogOverflow</td>
<td>False True</td>
<td>TRUE</td>
<td>If set to True, old offline log records will be overwritten with new records when the reader’s buffer is full.</td>
</tr>
<tr>
<td>Keypad Acct?</td>
<td>RDR_Allow_Handentry</td>
<td>False True</td>
<td>FALSE</td>
<td>Are hand-entered media values permitted? (Not currently supported.)</td>
</tr>
<tr>
<td>PIN Prompt?</td>
<td>RDR_REQUIRE_PIN</td>
<td>0 - No PIN Required 1 - PIN Required</td>
<td>0</td>
<td>Determines whether a PIN is required to complete a transaction. (Not currently supported.)</td>
</tr>
<tr>
<td>Key press beeps?</td>
<td>RDR_Keypress_Beep</td>
<td>False True</td>
<td>FALSE</td>
<td>Should the reader make an audible tone when keys are pressed? (Not currently supported.)</td>
</tr>
<tr>
<td>OK response beep</td>
<td>RDR_Success_Beep</td>
<td>Integer</td>
<td>1</td>
<td>Number of audible tones the reader produces when transaction succeeds.</td>
</tr>
<tr>
<td>Fail resp.beeps</td>
<td>RDR_Fail_Beep</td>
<td>Integer</td>
<td>3</td>
<td>Number of audible tones the reader produces when transaction fails.</td>
</tr>
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## Document History

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<td>2-26</td>
</tr>
<tr>
<td>Table C-1</td>
<td>Reader to Converter Box Connections</td>
<td>C-2</td>
</tr>
<tr>
<td>Table D-1</td>
<td>DIP Switch 1 Settings</td>
<td>D-4</td>
</tr>
<tr>
<td>Table D-2</td>
<td>DIP Switch 2 Settings</td>
<td>D-4</td>
</tr>
<tr>
<td>Table E-1</td>
<td>Coin Drop Interface Signals</td>
<td>E-1</td>
</tr>
<tr>
<td>Table E-2</td>
<td>DIP Switch 1 Settings</td>
<td>E-6</td>
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<tr>
<td>Table E-3</td>
<td>DIP Switch 2 Settings</td>
<td>E-7</td>
</tr>
<tr>
<td>Table E-4</td>
<td>Coin Drop Adapter Piano DIP Switch Settings</td>
<td>E-8</td>
</tr>
<tr>
<td>Table F-1</td>
<td>Server Level Configuration</td>
<td>F-2</td>
</tr>
<tr>
<td>Table F-2</td>
<td>Subnet Mask Table: Set According to Local Subnet Mask requirements</td>
<td>F-2</td>
</tr>
<tr>
<td>Table F-3</td>
<td>Port configuration, channel 1</td>
<td>F-2</td>
</tr>
</tbody>
</table>
PREFACE TO FCC NOTICE

CBORD requires each of its products to undergo complete testing before shipment. Each product must pass stringent requirements of quality control. In addition, much effort and consideration has been devoted to assure the utmost in reliable operation.

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user is required to correct the interference at his or her own expense.

⚠️ CAUTION

Changes or modifications of this product not expressly approved by CBORD could void the user’s authority to operate the equipment.
Section 1  
Introduction

CAUTION

This manual contains sensitive material, which could, in the wrong hands, compromise the operations of the D500 Series Vending Reader and be detrimental to your facility.

The information in this document is for the use of authorized operators and administrators of the D500 Series Vending Reader. CBORD strongly recommends that you store this document in a secure place and limit its use to those with proper permissions.

1.1 General Information

The CBORD online D500 Vending Readers come in the following two models:

- D-500 (Single Price, MicroMech, Coin Drop)
- D-500MDB (IMDB)

Both models are available with the following card reader or display arrangements:

- Insert card reader with integral display for vending machines with EVA Maxi Card Reader Mount or spare Bill Validator mount position.
- Swipe card reader and separate surface mount display for surface mounting requirements.

1.1.1 Vending Machine Types

The majority of vending machines fall into one of the following classes:

- Single-price
- MicroMech
- International Multi-drop Bus (IMDB)
- Coin Drop

1.1.2 Identifying the Machine Type

Refer to Table 1-1 to determine the vending machine type. Use this table to identify which D500 interface cable to use with your machine.
Table 1-1  Identifying Vending Machine Types

<table>
<thead>
<tr>
<th>Vending Machine Type</th>
<th>Cable from the Coin Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>MicroMech</td>
<td>12-pin Jones interface cable</td>
</tr>
<tr>
<td>Single-price</td>
<td>8-pin Jones interface cable</td>
</tr>
<tr>
<td>IMDB</td>
<td>6-pin Molex connector</td>
</tr>
<tr>
<td>Coin Drop</td>
<td>4-pin Molex connector</td>
</tr>
</tbody>
</table>

NOTE

For information on IMDB machines, refer to Appendix D. For information on Coin Drop machines, refer to Appendix E.

1.2 Unpacking and Inspecting the Equipment

Check the Packing list

Compare the contents of the vending kit against the packing list to make sure the kit is complete. You should have the following:

Table 1-2  Kit Items

<table>
<thead>
<tr>
<th>Kit Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation manual</td>
<td>* D500 Series Installation Manual (AA-000460-000)</td>
</tr>
<tr>
<td>Control module, as appropriate</td>
<td>* MDB, Swipe, Multi-Drop (31-018681-000B)</td>
</tr>
<tr>
<td></td>
<td>* MDB, Insert, Multi-Drop (GR-673-0014-000)</td>
</tr>
<tr>
<td></td>
<td>* 1P/MicroMech, Swipe, Multi-Drop (31-018207-000D)</td>
</tr>
<tr>
<td></td>
<td>* 1P/MicroMech, Insert, Multi-Drop (GR-673-0015-000)</td>
</tr>
<tr>
<td></td>
<td>* Coin Drop, Swipe, Multi-Drop (GR-673-0017-000)</td>
</tr>
<tr>
<td></td>
<td>* Coin Drop, Insert, Multi-Drop (GR-673-0018-000)</td>
</tr>
<tr>
<td></td>
<td>* MDB, Swipe, Direct IP (GR-673-0023-000)</td>
</tr>
<tr>
<td></td>
<td>* MDB, Insert, Direct IP (GR-673-0024-000)</td>
</tr>
<tr>
<td></td>
<td>* 1P/MicroMech, Swipe, Direct IP (GR-673-0019-000)</td>
</tr>
<tr>
<td></td>
<td>* 1P/MicroMech, Insert, Direct IP (GR-673-0020-000)</td>
</tr>
<tr>
<td></td>
<td>* Coin Drop, Swipe, Direct IP (GR-673-0021-000)</td>
</tr>
<tr>
<td></td>
<td>* Coin Drop, Insert, Direct IP (GR-673-0022-000)</td>
</tr>
<tr>
<td>Insert Reader Kit (We need the new kit information)</td>
<td>* Insert Reader/Display Module (GR-674-1563-000)</td>
</tr>
<tr>
<td>Card reader and display modules, as appropriate</td>
<td>* Insert Reader with integral display (GR-674-1563-000)</td>
</tr>
<tr>
<td></td>
<td>* Swipe Reader plus surface-mount display</td>
</tr>
<tr>
<td></td>
<td>- Swipe Reader (31-018205-000A)</td>
</tr>
<tr>
<td></td>
<td>- Display Module (GR-673-1174-001)</td>
</tr>
<tr>
<td>Reader/Display cable</td>
<td>* Universal Reader/Display cable (31-018380-000B)</td>
</tr>
<tr>
<td>Vending Machine Interface cable</td>
<td>* MDB Interface cable (31-018616-000A)</td>
</tr>
<tr>
<td></td>
<td>* Price Interface cable (31-018388-000C)</td>
</tr>
<tr>
<td></td>
<td>* MicroMech Interface cable (31-018387-000C)</td>
</tr>
<tr>
<td></td>
<td>* Coin Drop Interface cable, generic (GR-674-0021-000)</td>
</tr>
<tr>
<td>Optional Bill Validator Adaptor Cables (used with</td>
<td>* 12-pin Dixie-Narco adaptor cable (31-018383-000B)</td>
</tr>
<tr>
<td>non-Mars validators)</td>
<td>* 6-pin Maka, Dixie-Narco adaptor cable (31-018385-000B)</td>
</tr>
<tr>
<td></td>
<td>* Rowe 548 adaptor cable (31-018384-000A)</td>
</tr>
<tr>
<td></td>
<td>* Rowe 5900 adaptor cable (31-018382-000B)</td>
</tr>
</tbody>
</table>
Inspect for Damage
Remove and inspect each item and immediately report any discrepancy on the Proof of Performance (POP) form.

1.3 Required Tools and Materials

To install the Vending Reader, make sure you have the following tools and material on hand:

- Variable speed power hand drill
- 3/4-inch or larger step drill bit
- 11/64, 3/32, and 7/64-inch diameter drill bits
- 5/16-inch nut driver
- Flat blade and Phillips head screwdrivers
- Center punch
- Rubber cement or tape
- Four #6 (or #8) x 1/4-inch sheet metal screws
- Double sided foam tape
- Round file

1.4 Training

CBORD offers training courses at the Customer Education facility in Farmington, New York:

Customer Education
The CBORD Group, Inc.
1133 Corporate Drive
Farmington, NY 14425

For additional on training courses and prerequisites, contact your Account Manager.
1.5 Customer Support

CBORD is committed to providing full support to both customers and suppliers through either person-to-person or online support options.

Address:

Customer Support Center
The CBORD Group, Inc.
4505 Stephen Circle NW
Canton, Ohio 44718

Phone number:

1-866-789-2977

E-mail address:

CS_Support@CBORD.com
2.1 Mounting Location Requirements

This section describes the mounting requirements for the Control Module, Card Reader, and Display.

2.1.1 Control Module

**CAUTION**

To prevent damage to the Control Module, select a mounting location where the Control Module will not be subjected to condensation.

Refer to the following list for the Control Module mounting requirements:

- A space of 9 x 5 x 3 inches (23 x 13 x 8 cm)
- Can be mounted inside the vending machine on a metal surface
- Smaller vending machines might not have room inside to mount the control module. In this case, a sidecar can be used.

*Avoid placing the control module close to the compressor or florescent lights.*

2.1.2 Card Reader and Display

Refer to the following list for the Card Reader and Display mounting requirements:

**NOTE**

To meet Americans with Disability Act (ADA) requirements, select a reader mounting where the top of the reader is not more than 48 inches (1.2 m) from the floor.

- Place the Swipe Card Reader and Display on the front of the machine at a convenient operating height. The insert version is mounted in an existing Bill Validator or EVA Maxi Card Reader opening.

- Place the Swipe Card Reader so that it has approximately 4 inches (10 cm) clearance at each end to allow for card movement through the reader.
• Make sure there is enough clearance behind the mounting areas so that the 1/2 inch (1.3 cm) mounting studs (swipe version) or reader body (insert version) do not interfere with the vending machine internal components.

• Smaller vending machines or vendors without adequate front panel space might not have room on the front panel to mount the reader and display. In this case, the reader and display can be mounted on the Plexiglass™ or on a sidecar.

2.2 Installation Instructions

Thoroughly read all the installation instructions before continuing with this installation.

⚠️ WARNING

To avoid personal injury or death, disconnect all power from the vending machine before proceeding with this installation.

Do not attempt to perform this procedure unless you are experienced in the repair and installation of complex electrical equipment.

2.2.1 Mounting Instructions

This section covers the mounting instructions for the following D500 equipment:

- Insert Reader/Display Module
- Swipe Card Reader (optional)
- Display Module (optional)
- Control Module

⚠️ CAUTION

Before drilling any holes in the vending machine, remove the coin mechanism and bill validator. This action prevents metal fillings from entering and damaging these mechanisms.

Be careful not to damage any wiring when cutting or drilling the component openings.

To prevent damage to components, make sure you remove the metal shavings when you are finished drilling.
WARNING

To avoid personal injury, wear proper eye protection when drilling holes.

NOTE

The paper mounting templates for the Swipe Card Reader, Control Module, and Display Module are located in Appendix A of this manual.

Insert Reader/Display Module
Install the Reader/Display Module into the mounting hole using the appropriate hardware. (See Figure 2-1 and Figure 2-2)

Figure 2-1 Insert Reader/Display Module: Side View

Make sure the cable is inserted into the cable clamp. (See Figure 2-2)
If your machine does not have a standard card reader mounting hole or a spare bill validator mounting hole, use the dimensions in Figure 2-3 to cut a mounting hole. If you cut your own mounting hole, an optional Trim Bezel with studs (GR676-0028-000) is available to provide a finished appearance.

Figure 2-2  Insert Reader/Display Module: Rear View

Figure 2-3  Insert Reader/Display Module: Dimensions
**Swipe Card Reader**

If you install the Swipe Card Reader instead of the Insert Reader, perform the following procedure: (See Figure 2-4)

1. Refer to Section 2.1.2 and determine the best location on the vending machine to install the Swipe Card Reader.

2. Remove the Swipe Card Reader template (Figure A-1) and use rubber cement or tape to secure the template onto the vending machine.

3. If the Swipe Card Reader is being mounted on a metal surface, use a center punch and punch the hole centers.

   If the Swipe Card Reader is being mounted on a Plexiglass™ surface, use a 3/32-inch drill bit and drill the hole centers.

4. Use a 11/64-inch drill bit and drill the four mounting holes.

5. Use a 1/2-inch drill bit and drill the cable hole. Smooth the hole with a round file.

6. Remove the template and secure the Swipe Card Reader in place with the four 6-32 nuts (provided).

![Figure 2-4 Swipe Card Reader](image)

**Display Module**

The D500 Display Module (GR673-1174-0001) is 5 1/2 inches long and 2 inches high. To install the Display, you need six 8-32 x 3/4 Allen screws, six 8-32 Keps nuts, and a short interface cable (31-018380-000B). These are supplied with the GR673-1174-001 Display Module as part of a complete vending kit. Use Template A-2 to make the mounting holes. A metal template (GR525-1331-000) is also available to mark the hole centers.
If you install the Display Module instead of the Insert Reader/Display Module, perform the following procedure:

1. Determine the best location on the vending machine to install the Display Module. When selecting a location, consider the following factors:
   
   • Eye level or higher is recommended.
   
   • Ensure that components and wires inside the vending machine behind the Display Module location will not interfere with the installation.
   
   • Ensure that the Display Module cable can be routed safely from the mounting location to the Control Module.
   
   • Whenever possible, mount the Display Module on the control panel containing the selection buttons and the bill validator or coin mechanism.

   **NOTE**

   If you are replacing an old Display Module with the new version, try to position the new module over the old cutout in such a way that one or more of the old holes can be used.

   If the Display Module must be mounted on the curved plexiglass portion of the vending machine, it is recommended that you fabricate a metal backing plate to attach to the module from behind the plexiglass. This will decrease the chances of cracking or damaging the plexiglass when the module is tightened.

2. Use rubber cement or tape to secure the Display Module template (GR525-1331-000) to the vending machine (see Figure 2-5).

   **NOTE**

   You can use the paper template in Figure A-2 in place of the metal template to perform the procedure in Step 2.

3. If the Display is being mounted on a metal surface, use an awl or center punch to mark and punch the hole centers. If the Display is being mounted on a plexiglass surface, use a 3/32-inch drill bit and drill the hole centers.
4. After the hole centers have been marked and either punched or drilled, remove the installation template from the vending machine.

5. Use a 3/16-inch drill to drill six holes for the #8-32 screws that attach the Display to the vending machine.

6. Use a 3/4-inch drill bit or 3/4-inch hole or chassis punch to make the hole for the Display cable. Smooth the hole with a round file.

7. Insert the interface cable (31-018380-000B) through the 3/4-inch hole from inside the vending machine and attach it to the connector on the Display Module.

8. Mount the six 8-32 X 3/4 Allen screws into the holes on the back of the Display Module enclosure. Place the Display Module over the holes you have drilled and secure it to the vending machine with the six 8-32 Keps nuts provided (see Figure 2-6). If you are mounting the Display onto a plexiglass surface, it is recommended that you fabricate a metal backing plate to attach to the Display from behind the plexiglass. This will decrease the chances of cracking or damaging the plexiglass when the Keps nuts are tightened.
NOTE

To orient the Display properly while mounting it, make sure the commas visible on the Display screen are located at the bottom, and that the printing on the circuit board on the back of the Display is right side up.

Old Module
The old 10-digit vending display is obsolete and is no longer available. The new display is GR-673-1174-001.

To upgrade an older installation to the new display, you must have the following installation adapters:

- Cable adapter/mounting hardware kit (GR-676-1309-000): Required.
- Hole cover kit (GR-676-1371-000): If needed, covers holes from the old display.

The reader might have to be updated for the new display to work.

- ICAM MDB reader requires EPROM update to v1.19 (GR-152-1052-000) or later. Update on site.
- ICAM 1P/MM reader with Main Board Rev. D or later, requires EPROM update to v1.25 (GR-152-1073-000) or later. Update on site.
- ICAM 1P/MM reader with Main Board Rev. C or earlier. Must be sent in for update because of the component changes.

Control Module
Perform the following procedure to install the Control Module (Figure 2-7).

NOTE

To make installing the Control Module easier, do not mount the Control Module until you set the jumpers and switches to their proper positions. (See Section 2.3)

1. Refer to Section 2.1.1 and determine the best location on the vending machine to install the Control Module.

2. Remove the Control Module template (Figure A-3) and use rubber cement or tape to secure the template onto the vending machine.

3. Use a center punch and punch the hole centers.
4. Use a 9/64-inch drill bit and drill the four mounting holes.

**WARNING**

*Severe damage to the equipment and possible personal injury may result if the operating voltage is not set correctly before applying AC power.*

5. Refer to Section 2.3 and set the jumpers and switches to their proper positions.

6. Remove the template and secure the Control Module in place with the four sheet metal screws and the four toothed washers provided.

7. Ensure that the controller chassis makes connection with the earth ground by measuring the resistance from the chassis to the ground (third prong of the vending machine AC plug). The resistance should measure less than 1 ohm.

---

**Figure 2-7 Single-price/MicroMech**
2.2.2 Interconnecting the D500 Vending Components

Perform the following component interconnection procedure to complete the vending machine installation. See Figure 2-12, View A, if you are using the single-price cable, and Figure 2-12, View B, if you are using the MicroMech cable. See Appendix D if you install an IMDB Reader or Appendix E if you install a Coin Drop Reader.

1. Clean any metal filings from the vending machine.

2. Re-install the bill validator and coin mechanism that you removed in the mounting instructions, but do not plug them back into the vending machine wiring harness.

   **NOTE**

   The 18-pin connectors in Step 3 are keyed so that one connector fits into the J7 connector and the other fits into the J2 connector on the Control Module.

3. Locate the single-priced or MicroMech cable (Figure 2-12) and perform the following steps:

   a. Plug one of the cable’s 18-pin connectors into the J7 connector on the Control Module.
   
   b. Plug the cable’s other 18-pin connector into the J2 connector on the Control Module (MicroMech cable only).
   
   c. Loosen the sheet metal mounting screw closest to the J2 connector (Figure 2-7).
   
   d. Slide the grounding ring connector under the screw and above the washer and tighten the screw.
   
   e. Secure the anchor tie mount (included in kit) to one of the top chassis screws.
   
   f. Using a wire-tie, strain relief the cable to the anchor tip mount.

   **NOTE**

   Position and secure all cables so they are clear of mechanical linkages, and parts, such as: motors, compressors, refrigerant lines, and product dispensing pathways. Avoid restricting the door movement and routing cables over sharp edges. If the cables must pass over sharp edges, file the edges smooth and secure the cables with wire-ties to prevent movement.

4. Plug the coin mechanism cable into the Jones plug of the cable (Figure 2-12).
5. Plug the other Jones plug into the vending machine connector (Figure 2-12).

6. Plug the bill validator cable into the 9-pin connector of the cable (Figure 2-12).

7. Plug the other 9-pin connector into the vending machine connector (Figure 2-12).

8. Connect the Display Module and Card Reader connectors to the display/reader interface cable. See Figure 2-12.

9. Perform the following steps to connect the 15-pin connector of the display/reader interface cable to the J3 connector on the Control Module (Figure 2-12):
   a. Loosen the sheet metal mounting screw closest to the J3 connector (Figure 2-7).
   b. Slide the grounding spade connector under the screw and above the washer. Tighten the screw.

10. Determine which reader you want to install and then use one of the following procedures:
   a. If you install 10 Base T Readers, see Appendix F for additional information.
   b. If you install RS422 Readers, proceed to Section 2.2.3.

11. Route all wiring away from reset buttons, test switches, or similar components which are operated during routine servicing. Secure the wiring at intervals to minimize the chance of service personnel accidentally snagging a slack wire.
2.2.3 Connecting the RS422 Data Line

RS422 Readers ship with data cables that are compatible with standard 10Base-T wiring plants and terminal servers. Readers shipped before the new standard can be converted easily using the cables and adapters described below.

The new cables have the following pin connections on the RJ45 terminal server:

<table>
<thead>
<tr>
<th>Signal from Reader</th>
<th>RJ45 Pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>R+</td>
<td>5</td>
</tr>
<tr>
<td>R-</td>
<td>4</td>
</tr>
<tr>
<td>T+</td>
<td>6</td>
</tr>
<tr>
<td>T-</td>
<td>3</td>
</tr>
</tbody>
</table>

The following cables and accessories are available:

<table>
<thead>
<tr>
<th>Description</th>
<th>CBORD Part Number</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-ft RJ45 Vending Data cable</td>
<td>GR-674-1518-000</td>
<td>RS422 Vending Controller to T568-B Data Jack</td>
</tr>
<tr>
<td>7-ft RJ45 10Base-T Patch cable</td>
<td>GR-674-1228-018</td>
<td>Terminal Server to T568-B Data Jack</td>
</tr>
<tr>
<td>RJ45 Adapter for UDS-10</td>
<td>GR-674-1524-000</td>
<td>RJ45 Adapter for UDS-10 Terminal Server</td>
</tr>
<tr>
<td>RJ45 Wall Jack, Surface Mount</td>
<td>GR-131-1099-000</td>
<td>Wall jack with screw terminal connections</td>
</tr>
<tr>
<td>RJ45 Wall Jack, Flush Mount</td>
<td>GR-131-1743-000</td>
<td>Wall jack with screw terminal connections</td>
</tr>
<tr>
<td>150-Ohm RJ45 Terminator</td>
<td>GR-674-1519-00</td>
<td>For end of line termination of R+/R- pair, Reader End</td>
</tr>
<tr>
<td>150-Ohm RJ45 Terminator</td>
<td>GR-674-1520-000</td>
<td>For end of line termination of R+/R- pair, Terminal Server End</td>
</tr>
<tr>
<td>RJ11 to RJ45 Adapter</td>
<td>GR-674-1522-000</td>
<td>To convert from the old standard to the new standard</td>
</tr>
<tr>
<td>RJ45 to RJ11 Adapter</td>
<td>GR-674-1509-000</td>
<td>To convert from the new standard to the old standard</td>
</tr>
<tr>
<td>150-Ohm Resistor</td>
<td>GR-300-1503-000</td>
<td>For end of line termination wired within Data Jack</td>
</tr>
</tbody>
</table>
Readers can be multi-dropped by installing additional RJ45 jacks near each reader and near the live T568-B jack.

- Wiring between each of the additional jacks must follow the T568-B wiring scheme, connected from jack to jack in a daisy-chain fashion. (See Figure 2-10)

**NOTE**

Do not branch.

- The maximum wire length from the farthest jack to the T568-B to the wiring closest to the jack at the terminal server location must not exceed the following:
  - 4,000 feet for 24 AWG Cat-5 cable conductor size
  - 2,500 feet for 26 AWG cable conductor size

- Use a conventional 10Base-T Patch cable to connect the near end of the multi-drop network to the T568-B jack.
Use a Data Cable (GR-674-1518-000) to connect from each multi-dropped reader to its respective jack on the multi-drop network.

- Make sure the line termination is disabled in each reader.
- Make sure each reader is configured with a unique multi-drop address.

The last reader and only the last reader on each line must be terminated with an end-of-line terminating resistor across the R+/R- pair. This is required on individual lines as well as on multi-drop lines. A terminating resistor must be used at the terminal server end across the R+/R- pair.

- The last reader’s internal termination resistor can be enabled.

- A 150-Ohm termination resistor can be wired across R+/R- in each far end T568-B jack.
• You can also plug a 150-Ohm terminator into each far end jack. (See Figure 2-11)

When using this or the previous method, make sure that the reader’s internal line termination is disabled in the last reader. This or the previous method is recommended. You can move readers from one location to another without changing the internal reader termination setting. The R+/R- pair uses different pins at each end of the line.

- Use a GR-674-1519-000 terminator at the Reader End (resistor across pins 4-5).

- Use a GR-674-1520-000 terminator at the terminal server end (resistor across pins 3-6).

• Consider the following at the terminal server end:

- Do not use external terminating resistors on terminal servers that have built-in terminating resistors enabled.

- Some terminal servers have internal terminating resistors that cannot be disabled. To test for this, power-down the terminal server, disconnect all external cables, and then measure the resistance across the R+/R- pins of the RS422 jacks (pins 3 and 6 on Specialix and IOLAN+ terminal servers). A resistance reading between 100-Ohms to 200-Ohms indicates the presence of an internal line termination.

- If internal line termination is not present, external termination can be added by installing a 3-jack multi-drop network (similar to the reader-end arrangement) for each channel of the terminal server. (See Figure 2-11).

- Use a conventional 10Base-T Patch cable to connect the first jack to the terminal server port.

- Plug a GR-674-1520-000 terminator into the middle jack.

- Use a conventional 10Base-T Patch cable to connect the last jack to the outgoing T568-B jack.

Figure 2-11 Mount Additional RJ45 Jacks Near T568-B Wall Jack for Local Multi-drop and/or Line Termination Connections
View A  Single-price

Figure 2-12  Vending Reader Interconnect Block Diagram (sheet 1 of 2)
View B  MicroMech

Figure 2-12  Vending Reader Interconnect Block Diagram (sheet 2 of 2)
2.3 Setting the Control Module Switches

This section explains how to correctly set the communications mode, Control Module power switch, and DIP switches.

2.3.1 Setting the Communication Mode

The Control Module communicates to the LAN in one of three modes: Point-to-point (Figure 2-13, View A), Multi-drop (Figure 2-13, View B), or 10 Base T.

NOTE

See Figure C-2 for point-to-point connections to the terminal server.

Multi-drop (422 Interface)
The Multi-drop configuration is used to communicate with up to six Control Modules (vending machines).

Set Jumper header JP9 to the 422 position as follows:

![JP9 Jumpers](image)

Set line termination jumpers JP1 and JP3 only on the controller on the end of the LAN. JP7 is open (Figure 2-13, View B).

Point-to-point (423 Interface)

NOTE

When operating in 423 interface mode, the total cable length used to connect one controller to the server must be less than 300 feet.

The Point-to-point configuration is used to communicate with one Control Module (vending machine).

Set jumper header JP9 to 423 as follows:

![JP9 Jumpers](image)

JP1, JP3, and JP7 are open (Figure 2-13, View A).
10 Base T Interface
When installing a 10 Base T Reader, JP9 must be removed. See Appendix F for additional information.

View A  Point-to-point

NOTE
A TOTAL 300 FT (91.44M) OF CABLE MAY BE USED TO CONVERT ONE CONTROLLER.

View B  Multi-drop

NOTE
Using RS422, up to six control modules may be connected to one server with a total cable length of 3000 feet (914.4M).

Figure 2-13 Vending Reader Network Hook-up
The terminal server connections from Figure 2-13 are described in detail in Table 2-3.

### Table 2-3  Terminal Server Connections

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CAT5 Patch cable (GR-674-1228-000)</td>
</tr>
<tr>
<td>2</td>
<td>If UDS-10, IOLAN, or MSS4, use Terminal Server</td>
</tr>
<tr>
<td>3</td>
<td>If UDS-10, use adapter GR-674-1524-000. If MSS4, use adapter GR-674-1551-000.</td>
</tr>
<tr>
<td>4</td>
<td>Vending COMM cable (GR-674-1518-000)</td>
</tr>
<tr>
<td>5</td>
<td>Daisy-chained RJ45 Wall Jacket or Modular T Adapters (GR-674-1567-000)</td>
</tr>
<tr>
<td>6</td>
<td>If #5 is a Daisy-chained RJ45 Wall Jacket, use CAT5 cable If #5 is a Modular T Adapter, use CAT5 Patch cable</td>
</tr>
</tbody>
</table>

**NOTE**

Refer to Appendix C for RS232/RS422 connections.

### 2.3.2 Setting the Operating Voltage

**CAUTION**

Setting the Control Module to 24 VAC on vending machines that require 110 VAC may damage the Control Module and the vending machine. The fuse will need replacement.

Set the Control Module to 110 VAC if you are not sure of the vending machine’s operating voltage.

The Control Module operates on either 24 VAC or 110 VAC. Power is supplied from the vending machine through its coin or bill interface cables. Set the Power Selector Switch (Figure 2-14) to one of the following settings:

- **MicroMech vending machines** - Refer to the bill validator operating voltage specification (found on the bill validator Serial Number label) and set the Power Selector Switch to the same setting.

- **Single-price vending machines** - Refer to the coin acceptor operating voltage specification (found on the bill validator Serial Number label) and set the Power Selector Switch to the same setting.

- **Coin drop machines** - Unit is configured for 110 VAC and is not selectable.
2.3.3 Setting the MicroMech Machine for NAMA I or NAMA II

NOTE

If you are installing a single-price machine, the NAMA I/NAMA II switch settings (SW2-3) can be set to either on or off with no effect.

NAMA I/NAMA II Settings
MicroMech machines are categorized by the protocol used to communicate to the coin mechanism. The two types of MicroMech machines are NAMA I and NAMA II, NAMA I being the older machines.

The Control Module is default configured for NAMA II protocol (Table 2-4). *When the controller is set to NAMA II, it will not work with a NAMA I machine.*

Perform the following procedure to determine if the vending machine is NAMA I or NAMA II and to set the Control Module appropriately.

1. Install the Control Module in the MicroMech machine (Section 2.2.1).

2. Test the unit by swiping a card through the swipe reader.

   If the card swipe is accepted and money is credited to the machine, then the machine is NAMA II and the Control Module setting is correct. Proceed to Section 2.3.4.

   If the card swipe fails to credit the machine, switch the setting on the Control Module to NAMA I (Table 2-4) and retest the machine. If the card swipe is accepted and money is credited to the machine, then the machine is NAMA I and the Control Module setting is now correct.
NOTE

If the Control Module is set to NAMA I, it will work with NAMA II machines. However, this configuration is not recommended. Configuring the system in this way may cause an error that will shortchange users when the coin mechanism is depleted of coins.

Table 2-4  MicroMech NAMA Type SW2 Switch Settings

<table>
<thead>
<tr>
<th>Machine Type</th>
<th>Switch Position 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAMA II</td>
<td>ON</td>
</tr>
<tr>
<td>NAMA I</td>
<td>OFF</td>
</tr>
</tbody>
</table>

[1] Default setting

2.3.4 Setting the Machine for Single- or MicroMech

Locate the bank of SW1 DIP switches (Figure 2-14) on the side of the Control Module. Refer to Table 2-5 and set switch SW1 (position 3) to either a single or MicroMech setting. Refer to Section 1.1.2 to identify the machine type.

Table 2-5  Single- or MicroMech Machine Type SW1 Switch Settings

<table>
<thead>
<tr>
<th>Machine Type</th>
<th>Switch Position 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>MicroMech</td>
<td>OFF</td>
</tr>
<tr>
<td>Single-price</td>
<td>ON</td>
</tr>
</tbody>
</table>

[1] Default setting

2.3.5 Setting the Coin Transfer Mode

2.3.5.1 $1 Coin Transfer (NAMA I Machines Only)

The Control Module SW2-4 (Figure 2-14) controls single- and MicroMech coin transfers.

NOTE

The vast majority of vending machines do not support $1.00 coins. When in doubt, keep SW2-4 in the default state (off).

Refer to Section 2.3.3 for an explanation of NAMA I and NAMA II machines.
Setting Normal Operation (MicroMech NAMA I Machines Only)  
Default Setting  
Perform the following procedure to program the machine for $0.25, $0.10, and $0.05 coin transfers.

1. Place the vending machine controller in the MicroMech mode (DIP switch SW1 position 3 OFF).

2. Place the vending machine controller in the NAMA I mode (DIP switch SW2 position 3 OFF).

3. Place SW2 position 4 in the off position (default).

Setting $1 Coin Transfers (MicroMech NAMA I Machines Only)  
Perform the following procedure to program the machine for $1.00, $0.25, $0.10 and $0.05 coin transfers.

1. Place the vending machine controller in the MicroMech mode (DIP switch SW1 position 3 OFF).

2. Place the vending machine controller in the NAMA I mode (DIP switch SW2 position 3 OFF).

3. Place SW2-4 in the on position.

2.3.5.2 Setting Single-price Escrow (Single-price Machines Only)  

NOTE  
Make sure the Control Module and the vending machine are configured the same (escrow to select or vend mode). Ask the vending machine technician for help.

The majority of single-priced vending machines are escrow to vend. When in doubt, keep SW2-4 in the default state.

NOTE  
In the single-price mode, the NAMA I/NAMA II switch settings (SW2-3) can be either on or off with no effect. Refer to Section 2.3.3 for more information.

Enabling the Escrow to Vend Mode (Single-price Machines Only)  
Default Setting  
The Escrow to Vend mode enables the vending machine for a predetermined period of time. When this time period elapses the machine is disabled. Perform the following procedure to program the machine for Escrow to Vend mode.

1. Place the vending machine controller in the Single-price mode (DIP switch SW1 position 3 ON).

2. Place SW2-4 in the off position (default).
Enabling the Escrow to Select Mode (Single-price Machines Only)
The Escrow to Select Mode enables the vending machine until a selection is made. Perform the following procedure to program the machine for Escrow to Select mode.

1. Place the vending machine controller in the Single-price mode (DIP switch SW1 position 3 ON).

2. Place SW2-4 in the on position.

2.3.5.3 Setting Coin Transfers (NAMA II Machines Only)
Perform the following procedure to program the machine to enable .25, .10, and .05 coin transfers.

1. Place the vending machine controller in the MicroMech NAMA II mode (DIP switch SW1 position 3 OFF, and DIP switch SW2 position 3 ON).

2. Set SW2-4 OFF.

Perform the following procedure to enable .01 coin transfers.

NOTE
In most situations, there are no applications for one cent transfers. When in doubt, keep SW2-4 in the default state.

1. Place the vending machine controller in the MicroMech NAMA II mode (DIP switch SW1 position 3 OFF, and DIP switch SW2 position 3 ON).

2. Set SW2-4 ON.

2.3.6 Setting the Communications Format
The Control Module communicates with the LAN in an asynchronous format. The communication speed is controlled by the DIP switch SW1 (switch positions 1 and 2). Locate the bank of SW1 DIP switches (Figure 2-14) and refer to Table 2-6 for the baud rate (communication speed) switch settings.

<table>
<thead>
<tr>
<th>Baud Rate</th>
<th>Switch Position 1</th>
<th>Switch Position 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.2K BPS</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>9600 BPS[1]</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>2400 BPS</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>1200 BPS</td>
<td>OFF</td>
<td>OFF</td>
</tr>
</tbody>
</table>

[1] Default setting
2.3.7 Jumper Settings

Refer to Table 2-7 for the Control Module jumper settings.

<table>
<thead>
<tr>
<th>Jumper</th>
<th>Description</th>
<th>Default setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP1</td>
<td>TX termination shunt</td>
<td>Open</td>
</tr>
<tr>
<td>JP3</td>
<td>RX termination shunt</td>
<td>Open</td>
</tr>
<tr>
<td>JP7</td>
<td>Reserved</td>
<td>Open</td>
</tr>
<tr>
<td>JP9</td>
<td>Communication header</td>
<td>422</td>
</tr>
</tbody>
</table>

2.3.8 Switch Settings

Refer to Table 2-8 for the Control Module switch settings.

<table>
<thead>
<tr>
<th>Position</th>
<th>Description</th>
<th>Default setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not used</td>
<td>Off</td>
</tr>
<tr>
<td>2</td>
<td>Not used</td>
<td>Off</td>
</tr>
<tr>
<td>3</td>
<td>NAMA I/NAMA II</td>
<td>On</td>
</tr>
<tr>
<td>4</td>
<td>Escrow select/$1 accept/.01 transfers</td>
<td>Off</td>
</tr>
<tr>
<td>5</td>
<td>Reserved</td>
<td>Off</td>
</tr>
<tr>
<td>6</td>
<td>Reserved</td>
<td>On</td>
</tr>
<tr>
<td>7</td>
<td>Not used</td>
<td>Off</td>
</tr>
<tr>
<td>8</td>
<td>Not used</td>
<td>Off</td>
</tr>
</tbody>
</table>

2.3.9 Setting the Communication Address

Each Control Module must be assigned its own unique communication address, on its particular communications channel. The address range extends from decimal 10 to decimal 41.

See Figure 2-14 and locate the bank of DIP switches (SW1) on the side of the Control Module. Use Table 2-9 to set Control Module switch SW1 (positions 4 through 8) to the desired address.
### Table 2-9  Control Module Address SW1 Switch Settings

<table>
<thead>
<tr>
<th>Control Module Address</th>
<th>Switch Position 4 (Bit 0)</th>
<th>Switch Position 5 (Bit 1)</th>
<th>Switch Position 6 (Bit 2)</th>
<th>Switch Position 7 (Bit 3)</th>
<th>Switch Position 8 (Bit 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>11</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>12[1]</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>13</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>14</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>15</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>16</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>17</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>18</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>19</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>20</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>21</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>22</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>23</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>24</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>25</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>26</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>27</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>28</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>29</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>30</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>31</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>32</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>33</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>34</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>35</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>36</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>37</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>38</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>39</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>40</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>41</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
</tbody>
</table>

[1] Default setting
2.4 Special Instructions for Specific Machines

This section contains special instructions for Crane National machines and certain MicroMech machines.

Crane National Machines
Crane National machines often contain a debounce circuit for the bill-pulse interface. When used in conjunction with the Controller, this combination will cause the bill validator to accept bills without giving credit to the machine. If this occurs, perform the following procedure.

1. Locate the 1μF capacitor C11 on the power supply board. This can be found near the middle of the right edge of the power supply board.

2. Remove C11.

3. Test the machine thoroughly with dollar bill transactions.

Micro Mech Machines
Following the installation of the Controller, certain MicroMech vending machines may display the message Exact Change (or something similar) despite having an adequate amount of coins in the coin mechanism. If this occurs, perform the following procedure.

1. Close the vending machine.

2. Make a purchase with coins. This will cause the message to disappear.

2.5 Checking the Installation

Perform the following procedure to check the vending machine for proper operation.

1. Operate and test the vending machine using coins, bills, and magnetic cards to check for proper operation. If the vending machine operates properly, proceed to Step 2. If it does not, perform the following steps.

   a. If the vending machine fails with coins or bills, do one or both of the following actions:

      • Check the interface cabling and connections.
      • Contact the vending machine representative for help.
b. If coins and bills work but using the D500 card causes NO ANSWER to display, there is a possible communication or host Computer problem. Perform one or both of the following actions:

- Contact the Host Computer manager to verify proper host setup.
- Call the CBORD Support Center (DSC) for assistance.

c. If the cards do not show credit on the machine, refer to Section 2.3.3 to double-check the switch settings.

2. Clean up and close the vending machine to resume normal operation.

2.6 Configuration Instructions

Information about setting the SVC_POST_OLD_ENCUMBERS parameter and defining a rule to disallow high-value transactions from vending is provided in this section.

2.6.1 Setting the SVC_POST_OLD_ENCUMBERS Parameter

If the terminal server version of the D500 vending reader loses power during a transaction, the transaction is lost because the device does not have battery backup. This issue does not occur if the device goes offline for reasons other than losing power (for example, losing the network connection), and does not occur with the building controller version of the device.

In addition to securing the power and data lines so that patrons cannot access them, the following options are available:

- Access CS Gold Location Configuration and enable the SVC_POST_OLD_ENCUMBERS parameter; if power is lost during a transaction, the patron is charged the full encumbered amount (typically, the highest price in the machine).

- Disable the SVC_POST_OLD_ENCUMBERS parameter; if power is lost during a transaction, the encumbered amount is reversed so that the patron is not charged anything.

**NOTE**

Either option requires that you evaluate your logs to identify patrons who experience the issue. It is up to your institution to decide whether you want to take action.

For more information about setting parameters, refer to the *CS Gold Administration Guide Book 3 - Location Administration* (TP-820774-001).
2.6.2 Disallowing High-Value Transactions

Although a rare occurrence, a system issue has caused erroneous refund transactions to be sent from the D500 controller to CS Gold. To ensure that your system does not experience this issue, a rule to disallow high-value transactions from vending must be defined using CS Gold Entitlements. (See Figure 2-15.)

![CS Gold Entitlements - Disallow High-Value Transactions](image)

Figure 2-15 Sample: CS Gold Entitlements - Disallow High-Value Transactions

For more information about defining rules, refer to the *CS Gold Entitlements Operations and Administration Guide* (TP-820728-001).
This appendix contains the installation templates for the following vending equipment:

- Swipe Card Reader (Figure A-1)
- Display Module (Figure A-2)
- Control Module (Figure A-3)

**NOTE**

Verify that the template below matches the reader before you mark and drill the holes.

---

Figure A-1  Swipe Card Reader Template
NOTE

Verify that the template below matches the reader before you mark and drill the holes.

Figure A-2 Display Module Template

NOTE

Verify that the template on the following page matches the reader before you mark and drill the holes.
Figure A-3  Control Module Template
Appendix B  
Cable Adaptor Installation

NOTE

Vending machines with Mars bill validators do not need cable adaptors.

Cable adapters are used to interface the Vending Controller with non-Mars bill validators and provide the power to the controller. Single-price machines without bill validators do not need cable adaptors because the controller receives power from the 8-pin Jones connector.

B.1 Cable Adaptor (31-018383-000B)

This 12-pin adaptor is used on the CBA-2 bill validator with a 12-pin connector. This bill validator is sometimes found on the Dixie-Narco 501 vending machine. See Figure B-1 for the connection diagram.

B.2 Cable Adaptor (31-018385-000B)

This 6-pin adaptor is used on the following bill validators and vending machines:

- Validator, Ardac USA-15 - Vending Machine, Dixie-Narco 440
- Validator, none - Vending Machine, Crane National 147
- Validator, CBA-2 - Vending Machine, Vendo single price machines
- Validator, Maka - Vending Machine, Cavalier single price machines
- Validator, Ardac USA-15 - Vending Machine, Dixie Narco 600
- Validator, Maka - Vending Machine, Dixie Narco 630
- Validator, Maka - Vending Machine, National 145

See Figure B-2 for the connection diagram.

There are two 4-pin connectors on this cable for AC power, but only one pair of connectors are used. Find the 4-pin connector that mates with the machine’s 4-pin connector and plug them together. Connect the unused 4-pin connectors together.

NOTE

When interfacing with CBA-2 bill validators, test the bill validator to ensure that it works properly. If the bill is accepted, but credit is not granted, the polarization cable needs to be changed. Unplug the two one-pin mate-n-lok connectors near the P17 connector, and plug them back in on the opposite wires.

Interfacing with the CBA-2 Bill Validator

When interfacing with the CBA-2 bill validator, the polarization on the six-pin Maka, Dixie-Narco adaptor cable may need to be changed. To determine if the polarization requires changing, finish the installation and insert a dollar bill in the bill validator. If the bill is accepted but not credited (you cannot purchase anything), you have to change the polarization of the adaptor cable.
To change the polarization of the adaptor cable, perform the following.

1. Unplug the two one-pin mate-n-lok connectors near the P17 connector on the six-pin Maka, Dixie-Narco adaptor cable.

2. Plug the one-pin mate-n-lok connectors back in on opposite wires.

3. Insert a dollar bill and ensure that the machine credits the dollar (you can purchase an item).

Figure B-1  Cable Adaptor (31-018383-000B)
Figure B-2  Cable Adaptor (31-018385-000B)
B.3 Cable Adaptor (31-018384-000A)

This cable adaptor is used only on the Rowe™ 548 machine (firmware Revision E or higher).

**NOTE**

Do not keep this vending machine open and off for more than 15 minutes at a time. This machine senses the internal temperature rising and shuts-down at a pre-set temperature to prevent the sale of spoiled product.

Reboot the vending machine and the revision level appears on the LED display.

**Connection Procedure**

Perform the following procedure and see Figure B-3 to connect the cable adaptor.

1. Turn off power to the machine.
2. Disconnect the 3-pin connector for the AC power (Figure B-3).
3. Disconnect the JST 8-pin (P3) connector from the unit (Figure B-3).
4. Remove the bill validator from the unit.
5. Set the DIP switch (located on the bottom of bill validator) positions 1 through 4 to the ON position.
6. Re-install the bill validator into the machine.
7. Connect the small 8-pin connector of the cable adaptor (31-018384-000A) into P3 on the bill validator.
8. Connect the 3-pin connectors of the cable adaptor (31-018384-000A) into the 3-pin connectors on the bill validator.
9. Disconnect the 16-pin connector (P5) from the vending machine control panel.
10. Connect the 16-pin connector of the cable adaptor (31-018384-000A) to connector P5.
11. Connect the two 9-pin connectors of the cable adaptor (31-018384-000A) to connectors on the MicroMech cable (31-018387-000C).
12. Turn the power back on.
B.4 Cable Adaptor (31-018382-000B)

This cable adaptor is used only on the Rowe 5900 machine.

Connections with this cable adaptor are identical to the 31-018385-000B. Refer to Appendix B.2 for more information.

Figure B-3  Cable Adaptor (31-018384-000A)
Appendix C
Use of the 232/422 Converter Box

This appendix describes how to use the 232/422 converter box. This box is needed for multi-drop communications to the 90TL, the 90M, and the 90L+ terminal servers from DEC. Refer to Figure C-1, View A and Figure C-1, View B for terminal server connections.

NOTE

The 90TL terminal server outputs are wired the same as the 90M terminal server.

The part numbers needed to connect by multi-drop are as follows:

- 232/422 converter box (49-006047-000A/B)
- 422 interface cable (39-008875-000A)

When connecting to a 90TL or 90M terminal server, one null modem adaptor and one RJ45 cable is required; when connecting to a 90+ terminal server, one null modem adaptor and one MMJ6 cable is required. The various cable options used to connect the 232/422 converter box to the host computer are as follows:

- Interconnect cables (90TL or 90M [RJ45] converter box to host):
  - Null modem RJ45 to DB25 male adaptor (31-018301-000A)
  - RJ45 7 foot (2 m) cable (31-018255-000A)
  - RJ45 14 foot (4 m) cable (31-018255-000B)
  - RJ45 25 foot (7.6 m) cable (31-018255-000C)

- Interconnect cables (90L+ [MMJ6] converter box to host):
  - Null modem MMJ6 to DB25 male adaptor (31-018303-000A)
  - MMJ6 DEC, 7 (2 m) foot cable (31-018305-000A)
  - MMJ6 DEC, 14 (4.3 m) foot cable (31-018305-000B)
  - MMJ6 DEC, 25 (7.6 m) foot cable (31-018305-000C)

C.1 Selecting the Correct Adaptor

You need the following to connect the Vending Reader to a DEC 90TL terminal server:

- Null-modem RJ45 to DB25 male adaptor (31-018301-000A)
- RJ45 cable (31-018255-000A/B/C)

These are required items for connecting to a DEC 90L+ Terminal Server. You need the following to connect the Vending Reader to a DEC 90L+ terminal server:

- Null-modem MMJ6 to DB25 male adaptor (31-018303-000A)
- MMJ6 cable (31-018305-000A/B/C)
C.2 Converter Box Configuration

Perform the following procedure to configure the converter box.

1. Locate the four screws on the bottom of the converter box and unscrew them (49-006047-000B only).

2. Remove the top.

3. Set the following jumpers:
   - XW1B
   - XW2B
   - XW3B
   - XW4A
   - XW5A

4. Set switch S1 to ON (49-006047-000B only).

5. Close the top and reinstall screws.

C.3 Reader Connections to the Converter Box

Perform the following procedure to connect the readers to the converter box.

1. Attach interface cable to the converter box.

2. Cut interface cable to length.

3. Remove a sufficient length of the cable jacket and strip the individual conductors.

4. Refer to Table C-1 and splice conductors into the communication bus.

<table>
<thead>
<tr>
<th>From Vending Reader</th>
<th>Color on Interface Cable</th>
<th>Pin on J1 of the Converter Box</th>
<th>Signal Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin 2</td>
<td>Black 1</td>
<td>Pin 6</td>
<td>RX-</td>
</tr>
<tr>
<td>Pin 3</td>
<td>Red 1</td>
<td>Pin 24</td>
<td>RX+</td>
</tr>
<tr>
<td>Pin 4</td>
<td>Red 2</td>
<td>Pin 22</td>
<td>TX+</td>
</tr>
<tr>
<td>Pin 5</td>
<td>Black 2</td>
<td>Pin 4</td>
<td>TX-</td>
</tr>
</tbody>
</table>
Host End Connections
Perform the following procedure to connect the Null Modem to the RS232 terminal server (Figure C-1).

1. Attach the proper cable to the null-modem male adaptor and attach this adaptor to the DB25 female connector (J2) on the back of the converter box.

2. Attach the other cable end to the terminal server.

3. Plug in power supply into the 232/422 converter.

4. Plug in power supply into an AC outlet.

Figure C-1 Terminal Server Connections
View A  90TL or 90M Terminal Server

View B  90L+ Terminal Server

Figure C-2  Point-to-point Terminal Server Connections
Appendix D
IMDB Controller

The D-500MDB Swipe IMDB Card Reader is for use with International Multi-drop Bus (IMDB) vending machines. To identify an IMDB vending machine, refer to Section 1.1.2.

D.1 Pre-installation

Perform the procedures in this section prior to installing the IMDB Controller, Card Reader, and Display.

Check the Packing list

Compare the contents of the vending kit against the packing list to make sure the kit is complete. You should have the following:

<table>
<thead>
<tr>
<th>Kit Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation manual</td>
<td><em>D500 Series Installation Manual (AA-000460-000)</em></td>
</tr>
</tbody>
</table>
| Control module, as appropriate | *MDB, Swipe, Multi-Drop (31-018681-000B)*  
*MDB, Insert, Multi-Drop (GR-673-0014-000)*  
*MDB, Swipe, Direct IP (GR-673-0023-000)*  
*MDB, Insert, Direct IP (GR-673-0024-000)* |
| Insert Reader Kit (We need the new kit information) | *Insert Reader/Display Module (GR-674-1563-000)* |
| Card reader and display modules, as appropriate | *Insert Reader with integral display (GR-674-1563-000)*  
*Swipe Reader plus surface-mount display*  
- *Swipe Reader (31-018205-000A)*  
- *Display Module (GR-673-1174-001)* |
| Reader/Display cable | *Universal Reader/Display cable (31-018380-000B)* |
| Vending Machine Interface cable | *MDB Interface cable (31-018616-000A)*  
*Price Interface cable (31-018388-000C)*  
*MicroMech Interface cable (31-018387-000C)* |
| Optional Bill Validator Adaptor Cables (used with non-Mars validators) | *12-pin Dixie-Narco adaptor cable (31-018383-000B)*  
*6-pin Maka, Dixie-Narco adaptor cable (31-018385-000B)*  
*Rowe 548 adaptor cable (31-018384-000A)*  
*Rowe 5900 adaptor cable (31-018382-000B)* |

**NOTE**
The IMDB controller does not need optional bill validator cables.

Inspect for Damage

Remove and inspect each item and immediately report any discrepancy on the Proof of Performance (POP) form.
**Required Tools and Materials**

To properly install the Vending Reader, make sure you have the following tools and material on hand:

- Variable speed power hand drill
- 3/4-inch or larger step drill bit
- 11/64, 3/32, and 7/64-inch diameter drill bits
- 5/16-inch nut driver
- Flat blade and Phillips head screwdrivers
- Center punch
- Rubber cement or tape
- Four #6 (or #8) x 1/4-inch sheet metal screws
- Double sided foam tape
- Round file

**D.2 Installation Procedure**

The mounting of the IMDB Controller, Card Reader, and Display is identical to the mounting of the single and Micro Mech Controller, Card Reader, and Display. Refer to Section 2.1 and Section 2.2 for mounting procedures.

**D.2.1 Interconnecting the ICAM Vending Components**

Perform the following component interconnection procedure to complete the vending machine installation (Figure D-1).

1. Clean any metal filings from the vending machine.

2. Re-install the bill validator and coin mechanism that you removed in the mounting instructions. Plug-in the bill validator, but do not plug-in the coin mechanism.

3. Locate the IMDB interface cable (Figure D-1) and perform the following steps:
   a. Plug the 6-pin inline connector into the J2 connector on the control module.
   b. Loosen the sheet metal mounting screw closest to the J2 connector (Figure D-2).
   c. Slide the grounding spade connector under the screw and above the washer, then tighten the screw.
   d. Secure the anchor tie mount (included in the kit) to one of the top chassis screws.
   e. Using a wire-tie, strain relief the IMDB interface cable to the anchor tie mount.
NOTE

- Position and secure all cables so that they are clear of mechanical linkages, and parts such as motors, compressors, refrigerant lines, and product dispensing pathways. Avoid restricting the door movement and routing cables over sharp edges. If the cables must pass over sharp edges, file the edges until smooth and secure the cables with wire-ties to prevent movement.

- The J7 connector is reserved and is not used during installation.

4. Plug the coin mechanism cable into the 6-pin Molex plug of the IMDB cable (Figure D-1).

5. Plug the other 6-pin Molex connector into the vending machine connector (Figure D-1).

6. Connect the display module and card reader connectors to the display/reader interface cable (Figure D-1).

7. Connect the 15-pin connector of the display/reader interface cable to the J3 connector on the control module (Figure D-1) as follows:
   a. Loosen the sheet metal mounting screw closest to the J3 connector (Figure D-2).
   b. Slide the grounding spade connector under the screw, then tighten the screw.

8. Plug the RJ11 cable from the communication RJ11 Splitter Adaptor Kit into J6 (Figure D-1 and Figure D-2). Refer to section 2.2.3 to install the RJ11 splitter adaptor kit.

9. Route all wiring away from reset buttons, test switches, or similar components that are operated during routine servicing.

10. Secure the wiring at intervals to minimize the chance of service personnel accidentally snagging a slack wire.

11. Restore AC power.
D.2.2 Setting the Control Module Switches

Setting Communications
Setting the communications for the IMDB Controller is identical to setting the communications for the single or Micro Mech Control Module. Refer to Section 2.3.1 for more information.

Switch Settings
Refer to Table D-1 for the settings for DIP switch 1; refer to Table D-2 for the settings for DIP switch 2.

NOTE
The IMDB Controller does not have a power selector switch, and many of the DIP switch positions do not have functions.

| Table D-1  DIP Switch 1 Settings |
|----------------|-----------------|----------------|
| Position | Description | Default |
| 1, 2 | Baud rate setting | 9600 Baud (See Table 2-6) |
| 3 | Not used (ignored by controller) | Off |
| 4 through 8 | Address settings | 12 (See Table 2-9) |

| Table D-2  DIP Switch 2 Settings |
|----------------|-----------------|----------------|
| Position | Description | Default |
| 1 through 4 | Not used (ignored by controller) | Off |
| 5 | Reserved | Off |
| 6 | Reserved | On |
| 7, 8 | Not used (ignored by controller) | Off |

Baud rate settings and address settings are identical to setting the baud rate and address of the single or Micro Mech controller. Refer to Section 2.3.5 and Section 2.3.8.
D.3 Checking the Installation

Refer to Section 2.5 to check the installation.

Figure D-1 Vending Reader Interconnect Block Diagram for IMDB Control Module
Figure D-2  IMDB Control Module Switches, Jumper and Interconnection Location
Appendix E
D500 Coin Drop Interface: Installation Procedure

Mount the Coin Drop Controller, Card Reader, and Display as described in Section 2.1 and Section 2.2. An AC Power outlet must be provided within the vending machine. Do not apply power until all protective covers are installed and when requested. (See Appendix E.4.)

NOTE
The D500 power cord is only for internal connection. Do not connect the power cord outside of the vending machine.

E.1 Interconnecting the Coin Drop Vending Components

The Coin Drop Interface utilizes a 4-pin header accessible at the front of the D500 Vend Control Module. The externally supplied Enable/Disable Debiting signal is used to allow card transactions to initiate vend cycles. A vend cycle will complete as one to 16 simulated coin drop signals are generated switching the Coin C Input at pin-1 to coin C Return at pin 4.

Table E-1 Coin Drop Interface Signals

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Wire Color</th>
<th>Signal Name</th>
<th>Signal specifications</th>
<th>Signal Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WHT/BRN</td>
<td>Coin C Input</td>
<td>Contact closure to Common Pulse Duration: 100 milliseconds Pulse to Pulse Delay: 400 milliseconds 1A, 30 VDC Resistive Load (maximum)</td>
<td>D500 to Vending Machine</td>
</tr>
<tr>
<td>2</td>
<td>WHT/RED</td>
<td>Enb/Dsb Debiting</td>
<td>5V logic driver sourcing 2 milliamps (maximum) into an optical isolator to enable debiting</td>
<td>Vending Machine to D500</td>
</tr>
<tr>
<td>3</td>
<td>WHT</td>
<td>Enb/Dsb return</td>
<td>return line for the Debit End/Dsb signal (Electrically isolated from D500 circuitry)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>WHT/BLK</td>
<td>Coin C Return</td>
<td>Return line for the Coin A Input Signal (Electrically isolated from D500 circuitry)</td>
<td></td>
</tr>
</tbody>
</table>

The Coin Drop Interface utilizes a 4-pin header accessible at the front of the D500 Vend Control Module. The externally supplied Enable/Disable Debiting signal is used to allow card transactions to initiate vend cycles. A vend cycle will complete as one to 16 simulated coin drop signals are generated switching the Coin A Input at pin-1 to coin A Return at pin 4.
NOTE

The generic cable is short and should be spliced to the cable that comes from the vending machine.

Custom cables plug directly into existing vending machine models. These cables are recommended when you install the same model for multiple machines. Contact your CBORD Sales Representative for part numbers.

Figure E-1  Coin Drop Interface Schematic

Installing the Reader

The Generic Coin Drop Control Cable Assembly (GR-674-0021-000) has 4 wires that allow connections to be made to the cabling that comes from the Vending Machine. Refer to the appropriate Vending Machine documentation to determine the necessary connections to be made for proper machine operation. (See Table E-1 and Figure E-1)
Perform the following component interconnection procedure to complete the vending machine installation:

1. Remove any metal filings from the vending machine.

2. Install the interface cable.
   - If using a custom cable, refer to custom cable installation instructions.
   - If using the generic cable, solder the pigtails and add sleeving as needed to complete the preparation of the D500 to Vending Machine interface cable.

   **NOTE**
   The signal return lines may be connected together if the Vending machine allows for a single common return.

3. Connect the cabling to the D500 and Vending machine.
   - Position and secure all cables so that they are clear of mechanical linkages, and parts such as motors, compressors, refrigerant lines, and product dispensing pathways. Avoid restricting door movement and routing cables over sharp edges. If the cables must pass over sharp edges, file the edges until smooth and secure the cables with wire-ties to prevent movement.
   - The D500 J7 connector is reserved and is not used during installation.

4. Connect the display module and card reader connectors to the display/reader interface cable. (See Figure E-1)
   a. Loosen the sheet metal mounting screw closest to the J3 connector. (See Figure E-2)
   b. Slide the grounding spade connector under the screw, then tighten the screw.

5. For Direct IP units, connect the RJ45 network cable to the jack above J1. for multi-drop units, plug the RJ11 cable from the communications RJ11 Splitter Adaptor Kit into J6. (See Figure E-2 and Figure E-3)

   Refer to Section 2.2.3 to connect to the RS422 data line.
Figure E-2  SinglePrice/MicroMech Control Module View A: Exterior Views
6. Route all wiring away from reset buttons, test switches, or similar components that are operated during routine servicing.

7. Secure the wiring at intervals to minimize the chance of service personnel accidentally snagging a slack wire.
E.2 Setting the Operating Voltage

You do not have to set the operating voltage.

![Diagram](image)

Figure E-4 View B with Cover Removed

E.3 Setting the Control Module Switches

Setting the communications for the Coin Drop Controller is identical to setting the communications for the single or multi-price Control module. Refer to Section 2.3.1 for additional information.

**Switch Settings**

Refer to Table E-2 for the settings for DIP switch 1, refer to Table E-3 for the settings for DIP switch 2. Refer to Figure E-5 and Table E-4 for the settings for the Coin Drop Adapter DIP switch.

**NOTE**

The Coin Drop Controller does not have a power selector switch, and many of the DIP switch positions do not have functions.

<table>
<thead>
<tr>
<th>Position</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 and 2</td>
<td>Baud rate setting</td>
<td>9600 Baud (See Table 2-6)</td>
</tr>
<tr>
<td>3</td>
<td>Multi-Price</td>
<td>Off</td>
</tr>
<tr>
<td>4 through 8</td>
<td>address settings</td>
<td>12 (See Table 2-9)</td>
</tr>
<tr>
<td>Position</td>
<td>Description</td>
<td>Default</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>1 and 2</td>
<td>Not used (ignored by controller)</td>
<td>Off</td>
</tr>
<tr>
<td>3</td>
<td>NAMA 1</td>
<td>Off</td>
</tr>
<tr>
<td>4</td>
<td>$1 coin transfer</td>
<td>Off</td>
</tr>
<tr>
<td>5</td>
<td>Reserved</td>
<td>Off</td>
</tr>
<tr>
<td>6</td>
<td>Reserved</td>
<td>Off</td>
</tr>
<tr>
<td>7 and 8</td>
<td>Not used (ignored by controller)</td>
<td>Off</td>
</tr>
</tbody>
</table>

Baud rate settings and address settings are identical to setting the baud rate and address of the single or multi-price controller. (See Section 2.3.5 and Section 2.3.8)

### E.4 Checking the Installation

Perform the following steps to check the installation: (See Section 2.5)

1. From the host system, set the maximum price in the CS Gold setup for the amount to be credited for a given card swipe. The credit amount must include an extra five cents which will be refunded in the communications exchange.

2. From the D500 set, the DIP switch on the Coin Drop Adapter PCA for the desired number of pulses to be generated after credit is received. (See Figure E-5 and Table E-4)

![Figure E-5 Coin Drop Adapter PCS](image)
NOTE

The pulse-count dip switches must be set for no more than one pulse per 25 cents deducted, not counting the added 5 cents. (See Table E-4)

EXAMPLE

If CS Gold is set to deduct 55 cents, then the dip switches must be set to send no more than two pulses. Otherwise, no pulses will be sent.

### Table E-4  Coin Drop Adapter Piano DIP Switch Settings

<table>
<thead>
<tr>
<th>S1-4</th>
<th>S1-3</th>
<th>S1-2</th>
<th>S1-1</th>
<th>Coin Pulse Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>1</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>2</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>3</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>4</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>5</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>6</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>7</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>8</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>9</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>10</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>11</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>12</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>13</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>14</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>15</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>16</td>
</tr>
</tbody>
</table>

3. Replace and secure all protective covers. Restore power by plugging the AC Power Cord into the AC Power Outlet within the vending machine.

As the D500 comes online, the message "SWIPE CARD" or "INSERT CARD" displays.

4. Perform any necessary steps to establish the correct coin value for each pulse that is sent to the Vending Machine so that the maximum price (less the refunded five cents) matches the number of pulses times the coin value setting per pulse.
Appendix F
10 BaseT Communications

NOTE

For the ARP command to work on Windows, the ARP table on the PC must have at least one IP address defined other than its own.

Network Port Login

1. From a DOS box on a Windows™ host, type the following:

```plaintext
arp -s a.b.c.d aa-bb-cc-dd-ee-ff
```

- a.b.c.d: The IP address you want for the Cobox Micro.
- aa-bb-cc-dd-ee-ff: The Ethernet address of Cobox Micro. The address is located on the bottom of the unit or on the associated label.

2. Connect the Cobox Micro to your network using a standard Cat-5 Patch cable and then power up the unit.

3. From the command prompt, type the following:

```plaintext
telnet a.b.c.d 1
```

The connection will fail quickly but the Cobox Micro will temporarily change its IP address to the one designated in this step.

4. Open a telnet connection to port 9999 and set the following parameters:

```plaintext
telnet a.b.c.d 9999
```

5. When prompted, press Enter to select the configuration mode.

6. Select option 7 to reset the unit to the factory defaults.

7. Follow on-screen instructions and set the parameters according to the tables below.

8. Select 9 to save the configuration and exit the Setup Mode.
### Table F-1 Server Level Configuration

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Settings</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set IP Address</td>
<td>a.b.c.d</td>
<td>Device Internet Address (IP Address for A1000 Panel)</td>
</tr>
<tr>
<td>Set Gateway IP Address</td>
<td>w.x.y.z</td>
<td>Gateway Host (set to local gateway IP address)</td>
</tr>
<tr>
<td>Net Mask</td>
<td>m</td>
<td>Server subnet (See Table F-2)</td>
</tr>
<tr>
<td>Change Telnet password</td>
<td>n</td>
<td>Default</td>
</tr>
</tbody>
</table>

### Table F-2 Subnet Mask Table: Set According to Local Subnet Mask requirements

<table>
<thead>
<tr>
<th>Net mask (m)</th>
<th>Resulting Net Mask</th>
<th>Net mask (m)</th>
<th>Resulting Net Mask</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>255.255.255.252</td>
<td>14</td>
<td>255.255.192.0</td>
</tr>
<tr>
<td>3</td>
<td>255.255.255.248</td>
<td>15</td>
<td>255.255.128.0</td>
</tr>
<tr>
<td>4</td>
<td>255.255.255.240</td>
<td>16</td>
<td>255.255.0.0</td>
</tr>
<tr>
<td>5</td>
<td>255.255.255.224</td>
<td>17</td>
<td>255.254.0.0</td>
</tr>
<tr>
<td>6</td>
<td>255.255.255.192</td>
<td>18</td>
<td>255.252.0.0</td>
</tr>
<tr>
<td>7</td>
<td>255.255.255.128</td>
<td>19</td>
<td>255.248.0.0</td>
</tr>
<tr>
<td>8</td>
<td>255.255.255.0</td>
<td>20</td>
<td>255.240.0.0</td>
</tr>
<tr>
<td>9</td>
<td>255.255.254.0</td>
<td>21</td>
<td>255.224.0.0</td>
</tr>
<tr>
<td>10</td>
<td>255.255.252.0</td>
<td>22</td>
<td>255.192.0.0</td>
</tr>
<tr>
<td>11</td>
<td>255.255.248.0</td>
<td>23</td>
<td>255.128.0.0</td>
</tr>
<tr>
<td>12</td>
<td>255.255.240.0</td>
<td>24</td>
<td>255.0.0.0</td>
</tr>
<tr>
<td>13</td>
<td>255.255.224.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table F-3 Port configuration, channel 1

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Settings</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud Rate</td>
<td>9600</td>
<td>9600 bps</td>
</tr>
<tr>
<td>Interface Mode</td>
<td>4D</td>
<td>RS422, 8 Bits, No Parity, 1 Stop Bit</td>
</tr>
<tr>
<td>Flow Control</td>
<td>00</td>
<td>No flow control</td>
</tr>
<tr>
<td>Port No.</td>
<td>901</td>
<td>Typical port used by CS Gold</td>
</tr>
<tr>
<td>Connect Mode</td>
<td>C0</td>
<td>Incoming connection accept unconditional. Response: Nothing, no active startup.</td>
</tr>
<tr>
<td>Remote IP Address</td>
<td>0.0.0.0</td>
<td>Normally not used.</td>
</tr>
<tr>
<td>Remote Port</td>
<td>0000</td>
<td>normally not used.</td>
</tr>
<tr>
<td>Disconnect Mode</td>
<td>00</td>
<td>Ignore DTR</td>
</tr>
<tr>
<td>Buffer Flushing</td>
<td>00</td>
<td>Disabled</td>
</tr>
<tr>
<td>Inactivity Timeout</td>
<td>5:00</td>
<td>Timeout 5 minutes</td>
</tr>
<tr>
<td>SendChar1</td>
<td>00</td>
<td>N/A</td>
</tr>
<tr>
<td>SendChar1</td>
<td>00</td>
<td>N/A</td>
</tr>
</tbody>
</table>
APPENDIX H

UMBC – WEBSITE / CAMPUS MAP

1. UMBC’s Website: www.umbc.edu

2. UMBC’s Campus Map: http://www.umbc.edu/aboutumbc/campusmap