RQ00A
University of Maryland Medical System

R Adams Cowley Shock Trauma Center (Baltimore City)

<table>
<thead>
<tr>
<th>GO Bonds</th>
<th>$13,500,000</th>
<th>Recommendation: Approve RQ00A.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonbudgeted</td>
<td>$12,400,000</td>
<td>Deauthorize $15 million in fiscal 2010 allowance. Add a new project in the amount of $10 million for the Shock Trauma Center addition.</td>
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</tbody>
</table>

**Bill Text:** Provide a grant to the University of Maryland Medical System to assist in the design, renovation and equipping of the R Adams Cowley Shock Trauma Center.

**Program Description:** The University of Maryland Medical System (UMMS), a private nonprofit corporation, provides tertiary care to the State and surrounding areas and serves as the primary site for health care education and research for the University System of Maryland. The system includes the R Adams Cowley Shock Trauma Center (Shock Trauma), the core element of the State’s Emergency Medical System. Shock Trauma serves as the State’s primary adult trauma medical resource center and accepts statewide referrals for the treatment of head, spinal, and multiple trauma injuries. Improved on-site protocols were developed in collaboration with the Maryland Institute for Emergency Medical Services System to identify and direct patients most in need of level one trauma care to Shock Trauma. This process has resulted in only the most severely injured patients being treated at Shock Trauma.

The fiscal 2010 request of $13.5 million in State general obligation (GO) bonds will support the construction of 12 intensive care beds on the third floor of Shock Trauma. The request amount is $3.5 million higher than originally planned, due to the replacement of the Maryland Emergency Medical Systems Operation Fund (MEMSOF) capital subsidy in the operating budget with GO bonds in the capital budget. The change was made in fiscal 2009 and will add $3.5 million in GO bonds in fiscal 2010 and 2011.

**Comments:** Due to the high level of trauma and specialty care offered at the Shock Trauma Center, annual admissions have doubled since it was opened 18 years ago. One of the factors contributing to the increase in demand for services at Shock Trauma is the increase in interhospital transfers. A decline in the availability of specialized physicians as well as a decline in the capability of providing trauma care to critically injured patients in other local hospitals has caused an influx of patients being transferred to the Shock Trauma Center.

The building that houses Shock Trauma was built in 1989 and designed to accommodate 3,500 patients annually. By fiscal 2011, UMMS projects that Shock Trauma will serve 8,800 patients, a 14% increase from current levels.
UMMS expects the increased demand to continue at the Shock Trauma Center, and the facility renewal and technology project is aimed at expanding current facility capacity to accommodate the growth. As Exhibit 1 demonstrates, the capital project for Shock Trauma began in fiscal 2007 and is projected to continue through fiscal 2011. Operating cash from UMMS, a Federal Homeland Security Grant, funds from MEMSOF, and State GO bonds will be used to fund the expansion and renovation at the Shock Trauma Center.

<table>
<thead>
<tr>
<th>Exhibit 1</th>
<th>Capital Funding Sources and Uses</th>
<th>Fiscal 2007-2011</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>Total</th>
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<tbody>
<tr>
<td>Uses</td>
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<td>2.8</td>
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<td>1.0</td>
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<tr>
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<td>$25.9</td>
<td>$20.3</td>
<td>$83.4</td>
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<tr>
<td>Sources</td>
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<td>$6.8</td>
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<td>$10.4</td>
<td>$13.8</td>
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<td>0</td>
<td>2.0</td>
<td>3.0</td>
<td>5.0</td>
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<tr>
<td></td>
<td>MEMSOF</td>
<td>3.5</td>
<td>3.5</td>
<td>0</td>
<td>0</td>
<td>3.5</td>
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<td>13.5</td>
<td>13.5</td>
<td>3.5</td>
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<td>$10.3</td>
<td>$15.0</td>
<td>$25.9</td>
<td>$20.3</td>
<td>$83.4</td>
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</tr>
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</table>

GO: general obligation
MEMSOF: Maryland Emergency Medical System Operations Fund
UMMS: University of Maryland Medical System

*Funding associated with the Federal Homeland Security Grant has not yet been secured.

Source: University of Maryland Medical System

The Shock Trauma Center facility renewal and technology plan includes:

- $65.9 million for planning, design, construction, and building infrastructure improvements. Specifically, the projects include constructing a new 12-bed intensive care unit on the third floor of Shock Trauma, adding 24 new acute care beds, relocating and expanding a new...
trauma outpatient clinic, converting the sixth floor acute care beds into intensive/intermediate care beds, renovating operating room infrastructure, and modernizing the heating, air conditioning, and electrical systems;

• $10.6 million for patient care equipment including full body CT scanners, digital radiography equipment, hyperbaric chamber infrastructure, as well as emergency preparedness equipment; and

• $6.9 million to renew and upgrade technology including installing integrated clinical information systems.

The $30.5 million in GO bonds will support the construction and building infrastructure improvements including the construction of the new 12-bed intensive care unit, the expansion of acute care beds in adjacent buildings, and the conversion of the sixth floor acute care beds. Specifically in fiscal 2010, UMMS plans to create 12 intensive care beds on the third floor of the Shock Trauma building currently utilized as administrative space.

Exhibit 2 provides a timetable for the ongoing projects at Shock Trauma.

There are additional projects that UMMS hopes to initiate with assistance from a Homeland Security Grant, although funding from the federal government has not yet been secured. The projects relating to homeland security which may be undertaken include an advanced communication and information technology center as well as decontamination and isolation capabilities. These projects have not yet been scheduled.

UMMS should comment on the status of the federal Homeland Security Grant and whether the scope of the project will change based on the availability of the grant funding. UMMS should comment on whether the federal grant will be replaced with funding from UMMS for the project in fiscal 2010 and 2011 if the grant is not obtained or is delayed.
Exhibit 2
Shock Trauma Major Projects – Timetable
Fiscal 2007-2011

Fiscal 2007  Upgrade and expansion of existing sixth floor ICU/IMC bed capacity completed
Relocation and expansion of outpatient clinic completed
Design and planning for remaining projects including construction of third floor ICU beds
Upgrade major mechanical systems – ongoing
Clinical equipment replacement – ongoing

Fiscal 2008  Renovation of adjacent space in University Hospital for acute care beds initiated
Major mechanical system upgrades – ongoing
Clinical equipment replacement – ongoing

Fiscal 2009  Construction of 12 new ICU beds on third floor of Shock Trauma initiated
Renovation of adjacent space in University Hospital for acute care beds continued
Roof and helicopter deck renewal
Major mechanical system upgrades – ongoing
Clinical equipment replacement – ongoing

Fiscal 2010  Construction of 12 new ICU beds on third floor continued
CT scanner and diagnostic imaging upgrades
Major mechanical system upgrades – ongoing

Fiscal 2011  Construction of 12 new ICU beds on third floor completed
Renovation of adjacent space in University Hospital for acute care beds completed
Operating room suite renovation completed
Electrical system renewal and upgrades completed

ICU: Intensive Care Unit
IMC: Intermediate Care

Source: University of Maryland Medical System

Issues

1. UMMS Requests Deferral of New Ambulatory Care Center Project – Alternative Project Proposed

The State is in the midst of a multi-year financial contribution to UMMS for the construction of a new Ambulatory Care Center estimated to cost $350.0 million. Through fiscal 2009, the State has authorized a total of $27.5 million of GO bonds as a grant to UMMS to assist in the acquisition of a site, design, construction, and equipping of an ambulatory care building. The 2008 Capital Improvement Program scheduled the State’s total commitment at $62.5 million for a project estimated to cost approximately $350.0 million.

Analysis of the FY 2010 Maryland Executive Budget, 2009 4
The scope of the project included the acquisition of properties then owned by the University of Maryland, Baltimore (UMB). The total acquisition costs included costs incurred to construct a replacement building for UMB. The site was purchased and, as part of the project scope, a three-story parking garage has been constructed. The design for the project entailed placing the ambulatory care building atop the parking structure.

UMMS recently made the decision to postpone the construction of the ambulatory care center in favor of a different capital project that would focus on addressing the systems projected shortfall in inpatient capacity and operating rooms at the R Adams Cowley Shock Trauma Center and the University of Maryland Medical Center. The revised Phase IV renewal project will connect the Weinberg Building and the Shock Trauma Center to create additional operating rooms and patient care beds.

**Revised Phase IV Capital Project**

Of the original $27.5 million in GO bonds authorized for the ambulatory care building, only $12.5 million was used for acquiring the site. The 2009 capital budget includes language that would repurpose the remaining $15.0 million currently authorized for the construction of the ambulatory care building and direct those funds to be used for the revised Phase IV project to expand capacity at the Shock Trauma Center.

The Phase IV project is a new building at the corner of Penn and Lombard Streets that will connect the Shock Trauma and Weinberg Buildings. The structure will be a 125,000 square foot building that will have capacity for an additional 48-56 surgical critical care beds and trauma intensive care beds, 10 operating rooms and procedure suites, expanded emergency room capacity, and space dedicated to the Shock Trauma National Training and Simulation Center.

The total cost of the project is projected to be $150 million between fiscal 2009 and 2014, of which the State’s contribution is expected to be $50 million. **Exhibit 3** shows the sources and uses of the funds included for this project.

According to projected estimates provided by UMMS, the project will require $18 million in fiscal 2010 – $7 million for planning, $8 million for construction, and $3 million for contract deposits. Using these projections, the funds allocated in Exhibit 3 represent $5 million more than the project will require.

For that reason, the Department of Legislative Services recommends the project receive a State grant in the amount of $10 million as a separate line item in House Bill 102/Senate Bill 167. The funding included in the 2009 capital budget for the Shock Trauma Center addition, in the amount of $15 million from prior authorizations, should be deauthorized in order to create a new project for the University of Maryland Medical System.
### Exhibit 3

**Capital Funding Sources and Uses**  
**Fiscal 2009-2014**  
($ in Thousands)

<table>
<thead>
<tr>
<th>Uses of Funds</th>
<th>2009</th>
<th>2010</th>
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<th>2012</th>
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<th>2014</th>
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<td>and Telecom</td>
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<tr>
<td><strong>Total</strong></td>
<td>$1,000</td>
<td>$23,000</td>
<td>$29,530</td>
<td>$40,350</td>
<td>$34,120</td>
<td>$22,000</td>
<td>$150,000</td>
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<table>
<thead>
<tr>
<th>Sources</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<tr>
<td>Federal Grants</td>
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<td>State Grants</td>
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<td><strong>Total</strong></td>
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<td>$23,000</td>
<td>$150,000</td>
</tr>
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Source: University of Maryland Medical System

### Timeframe

Planning and design for the project is already underway, according to UMMS, and will continue through the end of calendar 2009. Design costs are estimated to be $7 million as referenced by Exhibit 3. Construction is expected to begin in April 2010 and last through December 2013.

### Certificate of Need

Before capital projects for hospitals are approved, the hospital must receive a certificate of need (CON) from the Maryland Health Resources Planning Commission and the Health Services Cost Review Commission. The CON process is in place to properly plan for health care expansion and to ensure that health care facilities remain economically viable. UMMS does not yet have a CON for this project but is expected to apply in August 2009. Although there is a demonstrated need for this expansion, the approval process may take as long as six months.

The timeframe for this project may be delayed due to the CON process. If the project is delayed, UMMS will not require the full $18 million in fiscal 2010.
Recommended Actions

1. Approve capital project RQ00A.

2. Deauthorize $15 million from the Governor’s proposed budget dedicated to design, construction, and equipping of an addition to the Shock Trauma Center. Create a new project under the University of Maryland Medical System for the Shock Trauma Center addition, in the amount of $10 million. The remaining $5 million should be included in subsequent fiscal years, keeping the State’s commitment to the project at $50 million.

RQ00(B)  R Adams Cowley Shock Trauma Center Addition............... $10,000,000

Explanation: This action replaces the repurposed funds from the back of the bill in order to establish a new project for the University of Maryland Medical System. The new project is an addition that will connect the Shock Trauma Center and Weinberg Building in Baltimore.

Add the following language:

(A)  [New Ambulatory Care Center. Provide a grant to the University of Maryland Medical System to assist in the acquisition of a site, including reimbursement of prior acquisition costs, site preparation, design, construction and equipping of an ambulatory care facility] R ADAMS COWLEY SHOCK TRAUMA CENTER ADDITION. PROVIDE FUNDS FOR THE DESIGN, CONSTRUCTION, AND EQUIPPING OF AN ADDITION TO THE SHOCK TRAUMA CENTER IN BALTIMORE .......................... 5,000,000

Explanation: This language strikes the proposed repurposing of a prior authorization made for the purpose of providing a grant to the University of Maryland Medical System (UMMS) for the design, construction, and equipping of an ambulatory care facility and deauthorizes the authorization. A separate action would establish a new UMMS project at the R Adams Cowley Shock Trauma Center rather then repurposing prior authorizations for this purpose.
Add the following language:

(A) [New Ambulatory Care Center. Provide a grant to the University of Maryland Medical System to assist in site preparation, design, construction, and equipping of an ambulatory care facility] R–ADAMS–COWLEY–SHOCK TRAUMA CENTER ADDITION. PROVIDE FUNDS FOR THE DESIGN, CONSTRUCTION, AND EQUIPPING OF AN ADDITION TO THE SHOCK TRAUMA CENTER IN BALTIMORE 10,000,000

Explanation: This language strikes the proposed repurposing of a prior authorization made for the purpose of providing a grant to the University of Maryland Medical System (UMMS) for the design, construction, and equipping of an ambulatory care facility and deauthorizes the authorization. A separate action would establish a new UMMS project at the R Adams Cowley Shock Trauma Center rather than repurposing prior authorizations for this purpose.