STATE OF MARYLAND

MARYLAND HEALTH CARE COMMISSION
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MEMORANDUM

To: Commissioners

From: Rebecca Goldman RG
Health Policy Analyst

Date: December 20, 2012

Re: Anne Arundel Medical Center
Docket No. 12-02-2338

Enclosed is a staff report and recommendation for a Certificate of Need ("CON") application filed by Anne Arundel Medical Center ("AAMC"). AAMC proposes to fit out one floor of shell space approved in 2006 as part of a large building addition. The floor will be finished as a 30-bed general medical/surgical nursing unit with all private rooms and will be located on the third floor of the expanded Acute Care Pavilion.

The project is estimated to cost $8.2 million and will be funded through cash generated from operations.

Commission Staff analyzed the proposed project's compliance with the applicable State Health Plan criteria and standards and the other applicable Certificate of Need review criteria at COMAR 10.24.01.08 and recommends that this project be **APPROVED.**

IN THE MATTER OF	*	**BEFORE THE**
	*	
ANNE ARUNDEL MEDICAL	*	**MARYLAND**
	*	
CENTER	*	**HEALTH CARE**
	*	
Docket No. 12-02-2338	*	**COMMISSION**
	*	

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Staff Report and Recommendation

December 20, 2012

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STAFF REPORT AND RECOMMENDATION

I. INTRODUCTION

A. The Applicant

Anne Arundel Medical Center ("AAMC") is a an acute care general hospital on a campus operated by Anne Arundel Health System ("AAHS") in Anne Arundel County. AAHS owns land on Jennifer Road in Annapolis split into four quadrants by the intersection of Jennifer Road and Medical Parkway. The two tracts north of Jennifer Road are known as the east and west campuses, and form the medical campus. The east campus contains the Sajak Pavilion and Health Sciences Pavilion which are both outpatient facilities and private physician offices and includes hospital administrative space.

AAMC is currently licensed for 380 acute care beds. It is a non-profit organization and a subsidiary of the Anne Arundel Health System, Inc. It is located at 2001 Medical Parkway in Annapolis (Anne Arundel County).

The existing campus was fully built out in 2001. In 2006, AAMC was granted a Certificate of Need ("CON") to build a multi-story addition to its Acute Care Pavilion that added 50 medical/surgical/gynecological/addictions ("MSGA") beds (Docket No. 04-02-2153). The Commission authorized a floor of shell space in the approved AAMC project which was anticipated to house an MSGA nursing unit of some type in the future. The CON was modified in 2008 with design changes and a 16 percent increase in project cost. Changes to the CON included construction of two floors as shell space rather than one. In 2010, AAMC was granted a CON to build out one floor of shell space with a 30-bed MSGA nursing unit of 21,750 square feet, with all private rooms, four of which were designed to serve bariatric patients (Docket No. 10-02-2308). AAMC proposes to build out the remaining shell floor in the Hospital Pavilion South Tower on the east campus with 30 additional MSGA beds.

B. The Project

In March 2006, AAMC received a Certificate of Need ("CON") to build a nine-level addition to its acute care tower (Docket Number 04-02-2153) including a Third Floor approved for shell space for future expansion of bed capacity. AAMC is now seeking approval to build out the Third Floor. The hospital's existing service capacities and those of the proposed project are summarized in Table 1:

Table 1: Anne Arundel Medical Center, Current and Proposed Bed Capacity

Service	FY 2013 Licensed Beds	Physical Bed Capacity		
		Existing Beds	Change	Total Beds if Project is Approved
General Medical/Surgical	292	278	30	308
Pediatrics	8	8	-	8
Obstetrics	60	60	-	60
Intensive Care	20	20	-	20
Total Bed Capacity	**380**	**366**	**30**	**396**

Source: AAMC, DI#10, page 1

The proposed project area is 21,536 building gross square feet. The unit will include 30 private patient rooms, four of which are designed to accommodate the special needs of bariatric patients. The rooms are arranged in a racetrack configuration, with direct and indirect support spaces in the core. These spaces include staff work areas; medicine; nourishment, and supply spaces; equipment storage rooms; staff lockers, staff offices, and storage rooms; and housekeeping spaces. At either end of the core area are communication circles, which are work areas designed to facilitate staff teaming and interaction. A family waiting area and staff lounge are located adjacent to the unit.

The total estimated cost of the project is $8,207,342 consisting of $6,105,474 in new construction costs, $1,901,868 in major moveable equipment, and $200,000 in contingencies. AAMC proposes to fund this project with $8,207,342 in cash.

AAMC anticipates an obligation of funds 24 months after the CON approval and initiation of construction within four months of the obligation of funds. This project is anticipated to be available for use within 24 months of the obligation of funds, with full utilization 24 months after first use. While the target dates appear long given the nature of the project and the fact that the source of funds is entirely cash, these targets are consistent with the performance requirements set forth in the Commission's regulations. AAMC has submitted that longer timeframes are planned for several reasons. AAMC plans to provide enough time for full utilization of the recently constructed 30-bed sixth floor unit approved through CON 10-02-2308, which is projected to occur in FY 2016, to avoid incurring additional operational costs until anticipated demand requires additional beds. Second, AAMC wishes to spread out its capital costs in light of anticipated below-inflation rate increases (negative 1.25 percent) over the next several years.

Summary of Staff Recommendation

Staff finds that the proposed project complies with the applicable State Health Plan standards for this project and that consideration of the project in the light of the required review criteria support approval of the project. A summary of the Commission Staff's analysis of the proposed project is provided below.

Need

- AAMC has demonstrated a need for the proposed 30-bed MSGA addition.

Cost-Effectiveness

- This project is deemed limited in scope because it is an expansion of a single service through the finishing of approved shell space. This project represents a step that was anticipated in previous CON applications, as long as demand for beds at AAMC increased.

Construction Cost

- The estimated new construction costs for the project are below the Marshall Valuation Service ("MVS") benchmark costs for a similar project.

Financial Feasibility

- AAMC has documented the availability of resources to implement this project and, based on the financial data reviewed, the proposed project is financially feasible.

Impact

- The project involves the addition of 30 MSGA beds to meet the growth and aging of the population the Hospital currently serves. The limited cost of the project, as well as its location at a proven cost effective provider of inpatient services, is reason to believe the project will not have a negative impact on charges. Full utilization of the proposed MSGA beds does not rely on pulling case volume away from other providers, i.e., increasing AAMC's market share. At this time, AAMC is not seeking a rate increase associated with this project.

II. PROCEDURAL HISTORY

Review of the Record

On June 1, 2012, AAMC filed a letter of intent for the project. MHCC acknowledged receipt of this letter on June 4, 2011 (Docket Item [DI] #1).

On August 1, 2012, AAMC filed a CON application for the project (DI #2). On August 6, 2012 MHCC acknowledged receipt of the application (DI #3). On that same date, MHCC requested publication of a notice of the receipt of the application in *The Capital*, the *Baltimore Sun* (DI #5) and the *Maryland Register* (DI #6).

On August 11, 2012, MHCC received certification of publication of the notice from the *Baltimore Sun* (DI #7). On August 21, MHCC received certification of publication of the notice from *The Capital* (DI #8).

On August 23, 2012, Staff provided the applicant with completeness questions (DI #9).

On September 12, 2012, AAMC provided responses to completeness questions (DI #10).

On October 4, 2012, Commission staff requested that a notice of the docketing of AAMC's CON request be published in the *Maryland Register* on October 19, 2012 (DI #11).

On October 16, 2012, Commission staff notified the Hospital that its application was docketed for review as of October 19, 2012 and that notice of the application's docketing would be published in the *Maryland Register* on that date. Commission staff also requested additional information from the Hospital regarding the proposed project (DI #12).

On November 1, 2012, Commission staff requested publication of a notice of the application's docketing in the next edition of *The Baltimore Sun* (DI #13) and *The Capital* (DI #14). On that same date, a copy of the application was sent to the Anne Arundel County Health Department for review and comment (DI #15).

On October 31, 2012, AAMC requested additional time to respond to Staff's additional information questions. Staff granted this request and extended the deadline for responses to November 5, 2012 (DI #16).

On November 3, 2012, Commission staff received certification of publication of the notice of docketing from *The Baltimore Sun* (DI #17).

On November 5, 2012, AAMC provided responses to additional information questions (DI #18).

On November 7, 2012, Commission staff received certification of publication of the notice of docketing from the *The Capital* (DI #19).

On November 15, 2012, Commission staff requested an opinion on the financial feasibility of the proposed project from The Health Services Costs Review Commission (HSCRC) (DI #20).

On November 16, 2012, Commission staff notified AAMC that HSCRC would be contacting them for any additional information needed in a financial feasibility analysis (DI #21).

On December 4, 2012, AAMC provided additional information to HSCRC for the financial feasibility analysis (DI #22).

On December 7, 2012, HSCRC provided Commission staff with an opinion on the financial feasibility of the proposed project (DI #23).

Local Government Review and Comment

No comments on this project have been received from the Anne Arundel County Department of Health or other local government entities.

Interested Parties in Review

There are no interested parties in this review.

III. STAFF REVIEW AND ANALYSIS

A. STATE HEALTH PLAN

COMAR 10.24.01.08G(3)(a) State Health Plan. An application for a Certificate of Need shall be evaluated according to all relevant State Health Plan standards, policies, and criteria.

The relevant State Health Plan chapter is COMAR 10.24.10, *State Health Plan for Facilities and Services: Acute Inpatient Services*.

COMAR 10.24.10 State Health Plan for Facilities and Services: Acute Inpatient Services

COMAR 10.24.10.04A — General Standards.

(1) Information Regarding Charges.

Information regarding hospital charges shall be available to the public. After July 1, 2010, each hospital shall have a written policy for the provision of information to the public concerning charges for its services. At a minimum, this policy shall include:

(a) Maintenance of a Representative List of Services and Charges that is readily available to the public in written form at the hospital and on the hospital's internet web site;

(b) Procedures for promptly responding to individual requests for current charges for specific services/procedures; and

(c) Requirements for staff training to ensure that inquiries regarding charges for its services are appropriately handled.

The applicant provided the AAMC Collection Financial Services Policy which includes the policy to distribute and update a list of representative services and charges to the public, which is available in written form and on the hospital's web site, and is updated quarterly. The policy includes the procedure to direct patients to the Financial Coordinator (DI #10, Exhibit #1). The Hospital has posted a representative rate sheet on its website, as required, which can be accessed from the home page through the Patients & Families link or through the on-site search. The current copy of the charges listed on the web site, dated September 1, 2012, was provided (DI #10, Exhibit #2). AAMC complies with this standard.

(2) Charity Care Policy.

Each hospital shall have a written policy for the provision of charity care for indigent patients to ensure access to services regardless of an individual's ability to pay.

(a) The policy shall provide:

(i) Determination of Probable Eligibility. Within two business days following a patient's request for charity care services, application for medical assistance, or both, the hospital must make a determination of probable eligibility.

(ii) Minimum Required Notice of Charity Care Policy.

1. Public notice of information regarding the hospital's charity care policy shall be distributed through methods designed to best reach the target population and in a format understandable by the target population on an annual basis;

2. Notices regarding the hospital's charity care policy shall be posted in the admissions office, business office, and emergency department areas within the hospital;

3. Individual notice regarding the hospital's charity care policy shall be provided at the time of preadmission or admission to each person who seeks services in the hospital.

(b) A hospital with a level of charity care, defined as the percentage of total operating expenses that falls within the bottom quartile of all hospitals, as reported in the most recent Health Service Cost Review Commission Community Benefit Report, shall demonstrate that its level of charity care is appropriate to the needs of its service area population.

AAMC's Hospital Charity Care Policy states that determination of eligibility for charity care services will be made within two business days of a patient's initial request or application (DI #10, Exhibit #3). AAMC provides notice of its Charity Care Policy through annual publication in the local newspaper, *The Capital*, notices posted in the admissions office, business office, and emergency department, as well as to each person who seeks services in the hospital.

According to the most recent data available from HSCRC, AAMC's level of charity care falls within the bottom quartile of all hospitals. In FY 2011, AAMC provided $5,896,911 in charity care, which equates to 1.3 percent of the hospital's total operating expenses.

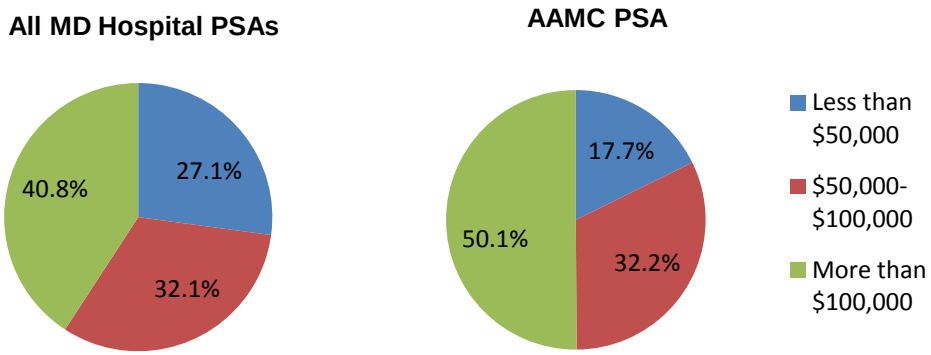
AAMC submits that other community benefits should be considered when discussing the appropriate level of impact of these services – while the all payer system in Maryland protects patients within the hospital setting, it does little for the same patients outside the hospital. Considering this, AAMC states that it provides significant amounts of community benefit other than reimbursed charity care at the hospital. The hospital provided a total of approximately $23.4 million in community benefits, which is approximately $10 million more than the FY 2010 community benefit figure and 5.3 percent of the hospital's total operating expenses. Considering these parameters and including all community benefits, AAMC ranks 40th in percent of total community benefit of total operating expense – which still places it in the bottom quartile of all hospitals.

AAMC states that it reviews several population and socio-economic data sets on a regular basis. Using Nielson Claritas data, AAMC reviews data on zip codes from the service area of Anne Arundel, Prince George's, and Queen Anne's Counties. AAMC reports that its primary service area had a median household income of $86,480, compared to $67,070 in Maryland, and $49,726, across the nation. AAMC used the most recent U.S. Census Bureau data to determine that poverty levels in Anne Arundel, Prince George's, and Queen Anne's Counties are lower than the state's. These comparisons lead AAMC to conclude that AAMC's service area is more affluent and likely to have a greater ability to pay through insurance coverage.

AAMC recognizes that Annapolis and other areas within the service area have a higher degree of poverty, specifically citing Annapolis' 10.7 percent rate of poverty. In order to reach out to communities in greater need, AAMC has operated the Annapolis Outreach Center in the Stanton Community Center and a new Community Health Center, both located in Annapolis. AAMC also partners with local agencies and a coordinated network of providers within AAHS. As a result of a community needs assessment, AAMC opened a bilingual Community Health Center in January 2011 which offers health and wellness services to the underserved and underinsured in Annapolis and surrounding communities. The Center is conveniently located on bus routes and serves a patient population in which more than 40 percent are Spanish-speaking. AAMC also partners with the Anne Arundel County Health Department to provide prenatal care to uninsured and undocumented Latinas within Anne Arundel County at Annapolis and Glen Burnie locations. These programs are not included in the uncompensated care percentage.

Commission staff obtained income data by zip code area from Spatial Insights, Inc., which uses the Applied Geographic Solutions demographic data, to identify primary service area income levels and charity care levels for all hospitals in Maryland. In this analysis, staff sought to better understand the relationship between primary service area income levels and the amount of charity care given by each hospital. Among Maryland hospitals, AAMC's primary service area's average household income is the sixth highest in the state. AAMC's primary service area also has the sixth highest percent of households making more than $100,000 (50 percent of AAMC's primary service area households fit in this category). The applicant's service area also has the fourth lowest percent of households earning less than $50,000 (18 percent) – which is close to 200 percent of the federal poverty level for a family of four for 2011. As shown in Graph 1 below, AAMC's primary service area has 9.4 percent fewer households earning under $50,000 per year in its primary service area than all primary service areas for hospitals in the state. Likewise, 9.3 percent more households in AAMC's PSA earn more than $100,000 per year than the share of all household in all hospital primary services areas in the state.

Graph 1: Comparison of 2010 Income Levels for All Maryland Hospital PSAs and Anne Arundel Medical Center's PSA



Source: MHCC staff analysis of Spatial Insights demographic data

Considering that the applicant's primary service area has the fourth lowest percent of households earning less than $50,000 – close to 200 percent of the poverty guidelines for 2011 and includes the income bracket likely to receive charity care – it is understandable that AAMC also ranks as the fourth lowest charity care provider. Staff also recognizes that AAMC provides services needed by the uninsured, undocumented Latino community in its service area which are not included in the community benefits report.

AAMC has complied with this standard.

(3) Quality of Care.

An acute care hospital shall provide high quality care.

(a) Each hospital shall document that it is:

(i) Licensed, in good standing, by the Maryland Department of Health and Mental Hygiene;

(ii) Accredited by the Joint Commission; and

(iii) In compliance with the conditions of participation of the Medicare and Medicaid programs.

(b) A hospital with a measure value for a Quality Measure included in the most recent update of the Maryland Hospital Performance Evaluation Guide that falls within the bottom quartile of all hospitals' reported performance measured for that Quality Measure and also falls below a 90% level of compliance with the Quality Measure, shall document each action it is taking to improve performance for that Quality Measure.

AAMC is licensed in good standing by the Maryland Department of Health and Mental Hygiene, and the Hospital is accredited by the Joint Commission. The Hospital has submitted documentation of its licensure by DHMH from December 10, 2010 through March 11, 2014, and its most recent accreditation from the Joint Commission for the 36 month period commencing on December 11, 2010. AAMC also reports compliance with the conditions of participation of the Medicare and Medicaid programs.

AAMC is above the 90 percent level of compliance with all of the quality measures included in the Maryland Hospital Performance Evaluation Guide with the exception of "CAC – Home Management Plan of Care". However, this measure is not within the bottom quartile of all hospitals for which this measure is reported.

Table 2: Maryland Hospital Performance Evaluation Guide
Anne Arundel Medical Center: April 2011-March 2012

Quality Measure	Hospital Performance	State Average
Heart Attack – Giving aspirin at arrival	99%	99%
Heart Attack – Giving aspirin at discharge	99%	99%
Heart Attack – ACE Inhibitor or ARBs for LVSD	98%	98%
Heart Attack – Providing advice or counseling on how to stop smoking	100%	99%
Heart Attack – Giving beta blockers when at discharge	100%	99%
Heart Attack – Giving PCI within 90 minutes of arrival	97%	91%
Children's Asthma Care – Relievers for inpatients	100%	100%
Children's Asthma Care – Systemic corticosteroids for inpatients	98%	100%
Children's Asthma Care – Home management plan given	92%	84%
Heart Failure – Giving full instructions at discharge	96%	93%
Heart Failure – Performing LVS assessment	98%	99%
Heart Failure – ACEI for LVSD	96%	97%
Heart Failure – Providing advice or counseling on how to stop smoking	100%	99%
Pneumonia – Vaccination against pneumonia	96%	96%
Pneumonia – Performing Emergency Room blood cultures	97%	96%
Pneumonia – Providing advice or counseling on how to stop smoking	100%	99%
Pneumonia – Given antibiotics within 6 hours	96%	96%
Pneumonia – Given most appropriate initial antibiotic	98%	96%
Pneumonia – Given Flu Vaccine	94%	93%
Received antibiotics 1 hour before incision	98%	97%
Prophylactic Antibiotic Selection	98%	98%
Antibiotic discontinued within 24 hours of surgery	97%	97%
Surgery with controlled 6 am postoperative serum glucose	-	94%
Appropriate hair removal	100%	100%
Urinary Catheter removed on postoperative Day 1 or Day	97%	95%
Perioperative temperature management	98%	100%
Beta-blocker prior to admission, if received during perioperative	93%	96%
Doctor-ordered treatments to prevent blood clots	99%	98%
Blood clot prevention within 24 hours	96%	97%

Source: MHCC Hospital Performance Evaluation Guide, April 2011-March 2012

AAMC is in compliance with this standard.

COMAR 10.24.10.04B — Project Review Standards

(1) Geographic Accessibility

A new acute care general hospital or an acute care general hospital being replaced on a new site shall be located to optimize accessibility in terms of travel time for its likely service area population. Optimal travel time for general medical/surgical, intensive/critical care and pediatric services shall be within 30 minutes under normal driving conditions for 90 percent of the population in its likely service area.

This standard is not applicable. AAMC is not proposing a new acute care general hospital or the replacement of an existing acute care general hospital at a new site.

(2) Identification of Bed Need and Addition of Beds

Only medical/surgical/gynecological/addictions ("MSGA") beds and pediatric beds identified as needed and/or currently licensed shall be developed at acute care general hospitals.

(a) Minimum and maximum need for MSGA and pediatric beds are determined using the need projection methodologies in Regulation .05 of this Chapter.

(b) Projected need for trauma unit, intensive care unit, critical care unit, progressive care unit, and care for AIDS patients is included in the MSGA need projection.

(c) Additional MSGA or pediatric beds may be developed or put into operation only if:

(i) The proposed additional beds will not cause the total bed capacity of the hospital to exceed the most recent annual calculation of licensed bed capacity for the hospital made pursuant to Health-General §19-307.2; or

(ii) The proposed additional beds do not exceed the minimum jurisdictional bed need projection adopted by the Commission and calculated using the bed need projection methodology in Regulation .05 of this Chapter; or

(iii) The proposed additional beds exceed the minimum jurisdictional bed need projection but do not exceed the maximum jurisdictional bed need projection adopted by the Commission and calculated using the bed need projection methodology in Regulation .05 of this Chapter and the applicant can demonstrate need at the applicant hospital for bed capacity that exceeds the minimum jurisdictional bed need projection; or

(iv) The number of proposed additional MSGA or pediatric beds may be derived through application of the projection methodology, assumptions, and targets contained in Regulation .05 of this Chapter, as applied to the service area of the hospital.

The State Health Plan projects a need for, at most, 601 MSGA beds in Anne Arundel County by 2018. As of July 1, 2013, the county's two general hospitals had 577 licensed MSGA beds. AAMC has a total acute care bed license for 380 beds. It has a physical capacity of 366 beds, including the addition of the 30-bed MSGA unit approved in CON 10-02-2308. Baltimore Washington Medical Center has a total acute care bed license for 307 beds and reports physical capacity for 325 beds.

AAMC has developed a bed need analysis based on its service area, as outlined in subsection (c)(iv) of this standard. AAMC is seeking to add 30 MSGA beds. The proposed project will authorize a number of beds at the hospital that will exceed the most recent annual calculation of licensed bed capacity for the hospital made pursuant to Health-General §19-307.2, which is 380 for FY 2013. The project will result in a physical capacity for 396 beds.

AAMC's application states that the hospital's Primary Service Area includes 22 zip code areas – 18 in Anne Arundel County and two each in Prince George's and Queen Anne's Counties (DI #18, page 32). However, the Commission's analysis of AAMC's primary service area zip code areas include 14 in Anne Arundel County, three in Prince George's County, and one in Queen Anne's county. The comparison is shown below.

Table 3: Comparison of Applicant's and Commission's Determination of Anne Arundel Medical Center Service Area Zip Codes

Source: DI #18, page 32 AAMC Primary Service Area	
Zip Code	**County**
20776	Anne Arundel
	-
21401	Anne Arundel
21402	Anne Arundel
21403	Anne Arundel
21404	Anne Arundel
21405	Anne Arundel
21409	Anne Arundel
21012	Anne Arundel
21032	Anne Arundel
21035	Anne Arundel
21037	Anne Arundel
21061	Anne Arundel
21106	Anne Arundel
21113	Anne Arundel
21114	Anne Arundel
21122	Anne Arundel
21140	Anne Arundel
21146	Anne Arundel
20715	Prince George's
20716	Prince George's
	(below)
21666	Queen Anne's
21619	Queen Anne's
Secondary Service Area	
	(above)
20711	Anne Arundel
20733	Anne Arundel
20751	Anne Arundel
	-
	-
	(above)
	-
21060	Anne Arundel
	(above)
21108	Anne Arundel
21144	Anne Arundel
	(above)
	(above)
	(above)
20639	Calvert
20736	Calvert
20754	Calvert
20774	Prince George's
20772	Prince George's
20721	Prince George's
20720	Prince George's
21617	Queen Anne's
21638	Queen Anne's
21658	Queen Anne's
	(above)
21601	Talbot

Source: MHCC discharge database AAMC Primary Service Area	
Zip Code	**County**
	(below)
20779	Anne Arundel
21401	Anne Arundel
21402	Anne Arundel
21403	Anne Arundel
21404	Anne Arundel Point Zip
21405	Anne Arundel
21409	Anne Arundel
21012	Anne Arundel
	(below)
21035	Anne Arundel
21037	Anne Arundel
	(below)
21106	Anne Arundel Point Zip
21113	Anne Arundel
21114	Anne Arundel
	(below)
	(below)
21146	Anne Arundel
20715	Prince George's
20716	Prince George's
20717	Prince George's Point Zip
21666	Queen Anne's
	(below)
Secondary Service Area	
20776	Anne Arundel
20711	Anne Arundel
20733	Anne Arundel
20751	Anne Arundel
20764	Anne Arundel
20778	Anne Arundel
21032	Anne Arundel
21054	Anne Arundel
21060	Anne Arundel
21061	Anne Arundel
	-
21144	Anne Arundel
21113	Anne Arundel
21122	Anne Arundel
21140	Anne Arundel
20639	Calvert
20736	Calvert
20754	Calvert
20774	Prince George's
20772	Prince George's
20721	Prince George's
20720	Prince George's
21617	Queen Anne's
21638	Queen Anne's
21658	Queen Anne's
21619	Queen Anne's
	-

To project bed need through 2021, AAMC developed a service area-level bed need forecast that is based on the State Health Plan's jurisdiction-level bed need projection methodology. This methodology uses recent trends in discharge rates and average length of stay to establish projection trend lines. Age-group specific rates are used to adjust for variation in use by age and adjustments in the discharge rate and ALOS trends to narrow jurisdictional forecast around a statewide mean and to account for case mix are also employed in this methodology. Appendix C displays key data and calculations used by the applicant. Staff believes that this is a reasonable approach to using section (c)(iv) to address this standard.

AAMC's service area analysis yielded a need forecast range of 442 to 647 MSGA beds. As previously noted, the two general hospitals in Anne Arundel County, AAMC and Baltimore Washington Medical Center, have a total of 577 licensed MSGA beds in the current fiscal year, but AAMC reports physical capacity that lags 14 beds below licensed bed capacity.

Staff Analysis

In order to verify that the population projections used in AAMC's application were reasonable, Commission staff obtained zip code area population estimates for 2012 and 2017 from Spatial Insights, Inc., which uses the Applied Geographic Solutions demographic data. Staff compared the average annual growth rate projected for the primary service area zip codes through 2017, and the average annual growth rate for Anne Arundel County, projected by the Maryland Department of Planning through 2020 in five year increments. This comparison is shown below. AAMC's PSA growth rate (1.5 percent) is consistent with the entire county's growth rate (1.6 percent), according to Spatial Insights, as shown in Table 4. The Maryland Department of Planning estimates a slightly more modest rate of growth (0.7 percent) for the county, as shown in Table 5. In AAMC's application for this project, they projected an overall growth rate for the AAMC PSA of 1 to 1.1 percent, with the highest growth rate in ages 65-74 (Table 4).

Table 4: Zip Code and Anne Arundel County Population Projections within Anne Arundel Medical Center's PSA, 2012 & 2017

Jurisdiction/ Age Range	2012	2017	Change	Average Annual Change
AAMC PSA				
Age 15-44	111,669	114,800	2.8%	*0.6%*
Age 45-64	83,580	87,195	4.3%	*0.9%*
Age 65-74	23,809	30,911	29.8%	*6.0%*
Age 75+	17,626	21,416	21.5%	*4.3%*
Total	**236,684**	**254,322**	**7.5%**	***1.5%***
Anne Arundel County				
Age 15-44	209,005	216,768	3.7%	*0.7%*
Age 45-64	150,597	158,351	5.1%	*1.0%*
Age 65-74	40,929	53,992	31.9%	*6.4%*
Age 75+	27,930	34,640	24.0%	*4.8%*
Total	**428,461**	**463,751**	**8.2%**	***1.6%***

Source: Spatial Insights

Table 5: Anne Arundel County Population Projections, 2010, 2015 & 2020

Jurisdiction/ Age Range	2010	2015	2020	5-Year Avg. Annual Growth Rate (2010-15)	5-Year Avg. Annual Growth Rate (2015-2020)	10-Year Avg. Annual Growth Rate (2010-20)
Anne Arundel County						
Age 15-44	217,571	216,413	221,078	*-0.1%*	*0.4%*	*0.2%*
Age 45-64	152,649	155,728	152,582	*0.4%*	*-0.4%*	*0.0%*
Age 65-74	36,853	47,423	54,336	*5.7%*	*2.9%*	*4.7%*
Age 75+	26,811	29,507	35,622	*2.0%*	*4.1%*	*3.3%*
Total	**433,884**	**449,071**	**463,618**	***0.7%***	***0.6%***	***0.7%***

Source: Maryland Department of Planning

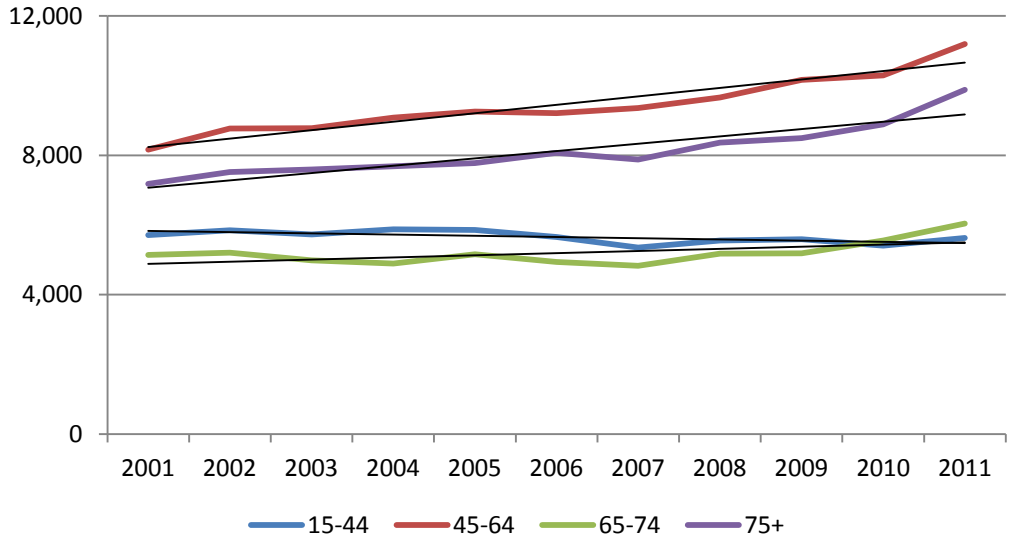
This recommendation should also address the new method of tracking observation cases at Maryland hospitals that began in July 2010, in order to more accurately demonstrate historical MSGA trends for the past five years. (Observation patients most frequently occupancy licensed MSGA beds.) AAMC submitted data based on the first full year of tracking these new metrics. For the period CY 2011, of all cases that would have been classified as MSGA cases in the past, 12.3 percent of these cases were classified as observations cases in CY 2011. Assuming that this would have been the case in the previous years, the table below shows adjusted discharges for AAMC's primary service area, reduced by 12.3 percent, since 2001. The graph below shows a consistent linear growth in the age groups 45-64 and 75 and up, which have provided a consistently larger share (64 percent in 2011) of AAMC discharges in the past ten years.

Table 6: Discharges within Anne Arundel Medical Center's PSA, Reduced by 12.3 Percent for 2001-09 and half of 2010

Calendar Year	15-44	45-64	65-74	75+	Total	Annual Percent Change
2001	5,710	8,161	5,143	7,184	26,198	
2002	5,850	8,766	5,207	7,515	27,338	4.4%
2003	5,727	8,774	4,987	7,590	27,076	-1.0%
2004	5,874	9,080	4,891	7,682	27,527	1.7%
2005	5,857	9,253	5,161	7,779	28,051	1.9%
2006	5,653	9,214	4,937	8,075	27,878	-0.6%
2007	5,352	9,358	4,826	7,875	27,411	-1.7%
2008	5,551	9,663	5,180	8,365	28,759	4.9%
2009	5,587	10,167	5,186	8,488	29,429	2.3%
2010	5,406	10,294	5,550	8,887	30,137	2.4%
2011	5,624	11,196	6,041	9,882	32,743	8.6%

Source: MHCC staff analysis of data provided by AAMC

Graph 2: Discharges within AAMC's PSA, Adjusted for Observation Cases, 2001-2011



Staff also compared these adjusted discharges per 1,000 projected residents in the PSA and found that the use rate growth rates would be higher if this observation tracking change was taken in to account, as shown in the following table.

Table 7: Use Rates for Zip Code Areas within Anne Arundel Medical Center's Service Area

	15-44	45-64	65-74	75+
2001	32.5	82.2	221.5	386.0
2002	33.2	85.0	221.7	392.5
2003	32.6	82.6	209.8	383.4
2004	33.4	83.0	200.7	378.9
2005	33.3	82.6	207.3	374.5
2006	32.4	80.3	192.5	384.2
2007	30.8	80.0	180.7	368.9
2008	32.1	81.1	183.8	380.5
2009	32.4	83.2	175.5	379.2
2010	31.3	82.8	182.0	391.4
2011	32.6	89.6	187.3	425.7
Five-year average annual rate of growth	0.2%	2.3%	-0.5%	2.2%
Ten-year average annual rate of growth	0.1%	0.9%	-1.6%	1.0%
As compared to AAMC's use rates from Table 6:				
Five-year average annual rate of growth	-2.3%	-0.4%	-3.1%	-0.5%
Ten-year average annual rate of growth	-1.2%	-0.4%	-2.9%	-0.3%

Source: Source: MHCC staff analysis of data from AAMC, DI #2, page 33

Finally, an alternative way to analyze average annual growth is to use the change from the base year to a goal year and divide by the number of years. Staff applied this method and

determined that AAMC's projections using their method produced more conservative bed need projections for the zip code areas in AAMC's primary service area.

Table 8: Low and High Bed Need Projection for Anne Arundel Medical Center's PSA

	15-44	45-64	65-74	75+	Total	Avg. Daily Census in PSA	Beds needed in PSA at 80% occupancy rate
2021 Population	174,880	123,420	46,019	31,633	375,952		
Low Use Rate Change	-1.4%	-0.8%	-2.6%	-0.5%			
Low Use Rate	28.4	83.1	144.1	405.4			
Number of Cases	4,961	10,256	6,631	12,824			
Low ALOS Change	1.17%	1.17%	0.56%	0.78%			
ALOS	3.8	4.6	5.0	5.4			
Low Days	18,616	47,444	33,027	68,893	167,980	**460**	**575**
High Use Rate Change	-1.4%	-0.4%	-1.8%	0.2%			
High Use Rate	28.2	86.5	155.9	436.1			
Number of Cases	4,931	10,679	7,176	13,796			
High ALOS Change	1.4%	1.8%	1.5%	1.7%			
ALOS	3.8	4.9	5.5	5.9			
High Days	18,946	52,587	39,252	81,182	191,967	**526**	**657**

Source: MHCC staff analysis of data from AAMC application

Commission staff believes this project meets this standard, despite the current maximum MSGA bed need forecast for Anne Arundel County of 601 beds. AAMC will have a physical bed capacity for 328 MSGA beds if this project is implemented. BWMC has a licensed MSGA bed capacity of 265 beds. If the 18 beds of excess physical capacity reported by BWMC (i.e., in excess of licensed capacity) can be deployed as MSGA beds and BWMC can put all of its licensed MSGA beds into operation, this results in a total physical bed capacity of 611 MSGA beds in the county, if this project is approved and implemented. (328 beds at AAMC + 283 beds at BWMC = 611).

A reasonable case has been made, by focusing on AAMC's service area, that the additional beds, which complete a nursing unit plan already contemplated as part of the last major expansion of AAMC, should be found to be needed and approved. Physical bed capacity at AAMC is below current licensed capacity, because of the growth in bed demand AAMC has already experienced. If census continues to grow, AAMC is likely to need this additional nursing unit to more easily manage the highest crests of medical/surgical patient census it might experience. It makes economic sense to allow AAMC to complete the shell space with 10 more beds rather than rigidly adhering to the SHP's bed need forecast to disallow this project or allow partial completion, which AAMC would have an ability to do without CON authorization to reach its licensed bed capacity.

(3) Minimum Average Daily Census for Establishment of a Pediatric Unit

An acute care general hospital may establish a new pediatric service only if the projected average daily census of pediatric patients to be served by the hospital is at least five patients, unless:

(a) The hospital is located more than 30 minutes travel time under normal driving conditions from a hospital with a pediatric unit; or

(b) The hospital is the sole provider of acute care general hospital services in its jurisdiction.

This standard is not applicable. AAMC is not proposing a new pediatric service.

(4) Adverse Impact.

A capital project undertaken by a hospital shall not have an unwarranted adverse impact on hospital charges, availability of services, or access to services. The Commission will grant a Certificate of Need only if the hospital documents the following:

(a) If the hospital is seeking an increase in rates from the Health Services Cost Review Commission to account for the increase in capital costs associated with the proposed project and the hospital has a fully-adjusted Charge Per Case that exceeds the fully adjusted average Charge Per Case for its peer group, the hospital must document that its Debt to Capitalization ratio is below the average ratio for its peer group. In addition, if the project involves replacement of physical plant assets, the hospital must document that the age of the physical plant assets being replaced exceed the Average Age of Plant for its peer group or otherwise demonstrate why the physical plant assets require replacement in order to achieve the primary objectives of the project; and

(b) If the project reduces the potential availability or accessibility of a facility or service by eliminating, downsizing, or otherwise modifying a facility or service, the applicant shall document that each proposed change will not inappropriately diminish, for the population in the primary service area, the availability or accessibility to care, including access for the indigent and/or uninsured.

This standard is not applicable. AAMC is not seeking a rate increase for this project at this time. This project will not reduce the potential availability or accessibility of a facility or service.

(5) Cost-Effectiveness.

A proposed hospital capital project should represent the most cost effective approach to meeting the needs that the project seeks to address.

(a) To demonstrate cost effectiveness, an applicant shall identify each primary objective of its proposed project and shall identify at least two alternative approaches that it considered for achieving these primary objectives. For each approach, the hospital must:

(i) To the extent possible, quantify the level of effectiveness of each alternative in achieving each primary objective;

(ii) Detail the capital and operational cost estimates and projections developed by the hospital for each alternative; and

(iii) Explain the basis for choosing the proposed project and rejecting alternative approaches to achieving the project's objectives.

(b) An applicant proposing a project involving limited objectives, including, but not limited to, the introduction of a new single service, the expansion of capacity for

a single service, or a project limited to renovation of an existing facility for purposes of modernization, may address the cost-effectiveness of the project without undertaking the analysis outlined in (a) above, by demonstrating that there is only one practical approach to achieving the project's objectives.

(c) An applicant proposing establishment of a new hospital or relocation of an existing hospital to a new site that is not within a Priority Funding Area as defined under Title 5, Subtitle 7B of the State Finance and Procurement Article of the Annotated Code of Maryland shall demonstrate:

(i) That it has considered, at a minimum, an alternative project sites located within a Priority Funding Area that provides the most optimal geographic accessibility to the population in its likely service area, as defined in Project Review Standard (1);

(ii) That it has quantified, to the extent possible, the level of effectiveness, in terms of achieving primary project objectives, of implementing the proposed project at each alternative project site and at the proposed project site;

(iii) That it has detailed the capital and operational costs associated with implementing the project at each alternative project site and at the proposed project site, with a full accounting of the cost associated with transportation system and other public utility infrastructure costs; and

(iv) That the proposed project site is superior, in terms of cost-effectiveness, to the alternative project sites located within a Priority Funding Area.

AAMC is proceeding under subsection (b) of this section. The proposed project involves limited objectives. It involves the expansion of capacity for a single service. The expansion involves finishing shell space constructed with the precise anticipated purpose fulfilled by the project. Thus, it is reasonable to view this as a project in which there is only one practical approach to achieving the project's objectives.

The project complies with this standard.

(6) Burden of Proof Regarding Need.

A hospital project shall be approved only if there is demonstrable need. The burden of demonstrating need for a service not covered by Regulation .05 of this Chapter or by another chapter of the State Health Plan, including a service for which need is not separately projected, rests with the applicant.

AAMC provided an assessment of MSGA bed need at the service-area level, consistent with the MSGA bed need standard of COMAR 10.24.10. Commission staff concludes that AAMC has adequately demonstrated the need for the proposed project based on this assessment.

(7) Construction Cost of Hospital

The proposed cost of a hospital construction project shall be reasonable and consistent with current industry cost experience in Maryland. The projected cost per square foot of a hospital construction project or renovation project shall be compared to the benchmark cost of good quality Class A hospital construction given in the Marshall Valuation Service® guide, updated using Marshall Valuation Service® update

multipliers, and adjusted as shown in the Marshall Valuation Service® guide as necessary for site terrain, number of building levels, geographic locality, and other listed factors. If the projected cost per square foot exceeds the Marshall Valuation Service® benchmark cost, any rate increase proposed by the hospital related to the capital cost of the project shall not include the amount of the projected construction cost that exceeds the Marshall Valuation Service® benchmark and those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the excess construction cost.

This standard requires a comparison of the project's estimated construction cost with an index cost derived from the Marshall Valuation Service ("MVS"). For comparison, an MVS benchmark cost is typically developed for new construction based on the relevant construction characteristics of the proposed project. The MVS cost data includes the base cost per square foot for new construction by type and quality of construction for a wide variety of building uses including hospitals. Separate base costs are specified for basements and mechanical penthouses. The MVS guide also includes a variety of adjustment factors, including adjustments of the base costs to the costs for the latest month, the locality of constructions, as well as factors for the number of stories, height per story, shape of the building (such as the relationship of floor area to perimeter), and department use of space.

While the MVS benchmark for establishing consistency with this standard is typically developed using the MVS calculator method, AAMC also used the segregated cost method and unit-in-place costs to develop its benchmark to account for the building components and miscellaneous items required to fit out the shell space and the quality of the material that AAMC intends to use. AAMC's calculation included costs from MVS for interior construction, plumbing, sprinklers, and electrical from the unit cost section; costs for floor covering and ceiling finish from the unit-in-place cost section; and heating, ventilation, and air conditioning ("HVAC") costs from the calculator cost section. Using this approach AAMC calculated the MVS benchmark costs for this project to be $266.07 per square foot. AAMC's estimated project cost, as adjusted for project costs that are not included in MVS, is $283.50 per square foot – $17.42 more than this MVS benchmark.

However, the MVS benchmark called for in the standard is for Class A good quality hospital construction. While some of the MVS component pricing used by AAMC to develop this benchmark specified costs per square foot for class A or B hospital construction, AAMC used the high cost pricing for this project's plumbing and electrical work that would be more comparable to the excellent quality category in the calculator section than the good quality prescribed by the standard. For the HVAC costs, AAMC used the excellent category for general hospitals from the calculator section. With respect to the costs for the flooring and ceiling, the unit cost section of MVS used by AAMC provides a range of costs not a limited number of choices based on the quality ranking of the construction. AAMC priced the floor components based on its proposed mix of vinyl composition tile ("VCT"), epoxy, and carpeting. AAMC stated that the VCT is higher than the range because of the complex pattern and the carpeting is at the high end of the range because it is extremely high end (DI #18, page 1).

It appears from AAMC's explanation of how it developed its MVS benchmark that much of the proposed construction and finishes are above the good quality construction contemplated by this standard. While these aspects of the approach taken by AAMC would tend to result in a higher benchmark than that contemplated by the standard, other aspects of AAMC's calculation tend to produce a lower benchmark. Specifically, AAMC appears to have used old segregated, unit cost, and calculator cost sections and adjusted all the MVS costs it used to February 2011 and to Anne Arundel County as of January 2011. The applicable segregated cost section was updated in December 2011, the unit cost section in March 2011 and the calculator cost section in November 2011. At the time AAMC submitted this application on August 1, 2012, cost updates and local adjustments to July 2012 were available. Finally, AAMC did not make any adjustment for architect fees, which are not included in the segregated cost and unit cost sections. Given these issues and shortcomings, Commission staff developed a benchmark for this project primarily relying on the segregated cost section to account for the specific building components that this project will involve, but using the above-average square foot costs as opposed to the high costs used by AAMC, to be more consistent with wording of the standard prescribing a comparison to good quality construction. Staff adjusted these costs for architect fees and used the most recent available local cost multiplier for Anne Arundel County (October 2012) and current cost multiplier (November 2012). The result is an MVS benchmark of $301.72 per square foot for the project, as detailed in the following table.

Table 9: Calculation of Marshall Valuation Service Benchmark Cost Per Square Foot for Anne Arundel Medical Center Fit Out of Shell Space for a 30-Bed MSGA Nursing Unit

	MVS Section and Page	**Hospital Shell Space**	**Fit Out of Space As Proposed**
Construction Class/Quality			**Class A/Good**
Number of Stories			1
Square Feet			21,536
Average Floor Areas (SF)			21,536
Average Perimeter (F)			820
Average Floor to Floor Height (F)			14 ft 8 in
Building Component	**MVS Section and Page Number**	**Date of Last Update**	**Cost Per Square Foot**
Floor Covering	Sec. 45, p. 2	December 2011	
Vinyl Composition Tile ($41,265 for 12,736 sq. ft. at $3.24 per sq. ft.)			
Epoxy ($13,800 for 1,500 sq. ft. at $9.20 per sq. ft.)			
Carpeting ($173,010 for 7,300 sq. ft. at $23.70 per sq. ft.)			
Total Floor Covering Cost ($228,075 for 21,536 sq. ft.)			**$10.59**
Acoustical Ceiling tile & suspension system	Sec. 45, p. 2	December 2011	10.50
Interior Construction for Class A & B Hospitals (adjusted for floor to floor height)	Sec. 45, p. 3	December 2011	119.02
Plumbing for Hospitals	Sec. 45, p. 4	December 2011	28.25
Sprinklers	Sec. 45, p. 3	December 2011	3.83
Electrical for Class A & B Hospitals	Sec. 45, p. 4	December 2011	44.50
Hospital Pneumatic Conveyor System	Sec. 45, p. 3	December 2011	4.01
Sub-total Cost Per Sq. Ft. for Fitting Out Class A & B Good Quality Hospital Construction			**$220.70**

Architect Fees at 7.7%	Sec. 99, p. 2	January 2012	$16.99
Sub-total Class A & B Good Quality Hospital Construction Cost Per Sq. Ft. From the Segregated Cost Section as of December 2011 for Fitting Out Space			**$237.69**
HVAC for Class A & B Hospitals Good Quality Construction (adjusted for floor to floor height)	Sec. 15, p. 25	November 2011	38.61
Class A & B Good Quality Hospital Construction Cost Per Sq. Ft. For Fitting Out Space as of December 2011			276.30
Current Multiplier	Sec. 99, p. 3	November 2012	1.04
Location Multiplier (Anne Arundel Co.)	Sec. 99, p. 8	October 2012	1.05
Final Benchmark MVS Cost per Square Foot			**$301.72**

Sources: AAMC September 12, 2012 response to first completeness letter (Exhibit 5), AAMC November 5, 2012 response to additional information questions (pgs. 1-2) and Marshall Valuation Service®, Published by Marshall & Swift/Boeckh, LLC

Staff reviewed the Applicant's costs for comparison to the MVS benchmark as detailed in the following table.

Table 10: Comparison of Anne Arundel Medical Center's Construction Budget to Marshall Valuation Service Benchmark

Project Construction Costs	**Construction**
Building	$5,486,339
Fixed Equipment	$219,000
Professional Fees	$400,000
Permits	$135
Total Construction Costs	$6,105,474
Square Feet ("SF")	21,536
Cost Per SF	**$283.50**
Adj. MVS Cost/SF for finishing the space	**$301.72**
Over(Under)	**($18.22)**

Source: AAMC CON Application, p. 6-7 (Chart 1) and pgs. 8-9 (Project Budget)

AAMC's proposed cost per square foot for finishing the shell space is lower than the MVS benchmark by $18.22 per square foot. Therefore, there would not be any exclusion from any rate request submitted to HSCRC by AAMC for the capital cost of this project.

(8) Construction Cost of Non-Hospital Space

The proposed construction costs of non-hospital space shall be reasonable and in line with current industry cost experience. The projected cost per square foot of non-hospital space shall be compared to the benchmark cost of good quality Class A construction given in the Marshall Valuation Service® guide for the appropriate structure. If the projected cost per square foot exceeds the Marshall Valuation Service® benchmark cost, any rate increase proposed by the hospital related to the capital cost of the non-hospital space shall not include the amount of the projected construction cost that exceeds the Marshall Valuation Service® benchmark and those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the excess construction cost. In general, rate increases authorized for hospitals should not recognize the costs associated with construction of non-hospital space.

This standard is not applicable to this project. AAMC is not proposing construction of non-hospital space.

(9) Inpatient Nursing Unit Space

Space built or renovated for inpatient nursing units that exceeds reasonable space standards per bed for the type of unit being developed shall not be recognized in a rate adjustment. If the Inpatient Unit Program Space per bed of a new or modified inpatient nursing unit exceeds 500 square feet per bed, any rate increase proposed by the hospital related to the capital cost of the project shall not include the amount of the projected construction cost for the space that exceeds the per bed square footage limitation in this standard or those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the excess space.

The Inpatient Unit Program Space per bed proposed is 403 square feet per bed, which does not exceed 500 square feet per bed. AAMC complies with this standard.

Location	Description	Number of Beds	Unit Size	Square feet/bed
3rd Floor	Medical/Surgical	30	12,100 sq. ft.	403

(10) Rate Reduction Agreement

A high-charge hospital will not be granted a Certificate of Need to establish a new acute care service, or to construct, renovate, upgrade, expand, or modernize acute care facilities, including support and ancillary facilities, unless it has first agreed to enter into a rate reduction agreement with the Health Services Cost Review Commission, or the Health Services Cost Review Commission has determined that a rate reduction agreement is not necessary.

AAMC is not a high cost hospital. Under the HSCRC's most recently released Reasonableness of Charges comparison, AAMC was 0.69 percent below the average for Peer Group 2. AAMC states that it believes it will remain below the average of its peer group in the next comparison. Thus, this standard is not applicable.

(11) Efficiency.

A hospital shall be designed to operate efficiently. Hospitals proposing to replace or expand diagnostic or treatment facilities and services shall:

(a) Provide an analysis of each change in operational efficiency projected for each diagnostic or treatment facility and service being replaced or expanded, and document the manner in which the planning and design of the project took efficiency improvements into account; and

(b) Demonstrate that the proposed project will improve operational efficiency when the proposed replacement or expanded diagnostic or treatment facilities and services are projected to experience increases in the volume of services delivered; or

(c) Demonstrate why improvements in operational efficiency cannot be achieved.

With respect to efficiency, AAMC identifies itself as an efficient hospital, based on its lower average length of stay of adult MSGA patients compared to the statewide average length of stay in both the Medicare and non-Medicare categories.

AAMC calculated the number of FTEs per 1,000 admissions (EIPA) and days (EIPD) for the volume projections comparing AAMC's current state of FY 2012 and its manpower projections if the proposed project is approved and becomes utilized in FY 2016. The FTE count would be reduced by 1.8 FTEs per 1,000 patient days and more than six FTEs per 1,000 patient admissions. Table 11 summarizes the comparison, showing that the proposed increase of 77 FTE direct and support staff attributable to the project would result in a decrease in the number of FTEs per 1,000 equivalent inpatient admissions and days, if demand projections are realized.

Table 11: Current and Projected Staffing Efficiency
Anne Arundel Medical Center

	Actual FY2011	With Proposed Project	Percent Change
Total FTEs	2,404	2,481	3.2%
Admissions	28,014	30,132	7.6%
Days	100,431	108,684	8.2%
ALOS	3.59	3.61	0.6%
Gross Revenue	$520,129	$553,689	6.5%
Inpatient Revenue	$309,420	$300,557	-2.9%
Ratio	1.6810	1.8422	9.6%
Adjusted Admissions	47,091	55,510	17.9%
Adjusted Days	168,822	200,219	18.6%
FTEs/1,000 Adjusted Admissions	51.1	44.7	-12.5%
FTEs/1,000 Adjusted Days	14.2	12.4	-12.7%

Source: MHCC staff analysis of data from AAMC, DI #10, page 8

The proposed MSGA nursing unit will be designed like other units in the South Tower completed during calendar year 2011, which will decrease training time for staff and allow staff to more seamlessly work in both areas. AAMC also expects to apply for LEED certification under the new U.S. Green Building LEED for Healthcare Guidelines. This floor is located in the LEED Gold Certified Tower Building completed in 2011.

AAMC complies with this standard.

(12) Patient Safety.

The design of a hospital project shall take patient safety into consideration and shall include design features that enhance and improve patient safety. A hospital proposing to replace or expand its physical plant shall provide an analysis of patient safety features included for each facility or service being replaced or expanded, and document the manner in which the planning and design of the project took patient safety into account.

AAMC submits that it is committed to designing and constructing a new unit that employs all levels of patient safety standards to provide the best and safest care for patients. The

current application submits a very similar list to the one that AAMC submitted in the last CON approved by the Commission to construct an additional 30 MSGA beds. The patient safety features include:

- Visibility of Patients to Staff – Maximizes visibility of patients from caregiver work areas with central corridors and decentralized caregiver space accessible to patients; decentralized supply pods for medications, nourishment, and supplies in immediate vicinity of patient rooms; central corridor allows staff to see each other; communication circles allow patient care secretaries to visualize entire unit.
- Standardization – All patient spaces standardized similar to other inpatient rooms with medications, supplies, and medical gas outlets, furniture, and equipment standardized; patient and staff support spaces designed similar within each unit.
- Automation where possible – EPIC, the system-wide clinical information system, was installed in December 2009; computerized physician order entry is used.
- Immediate Accessibility of Information – Satellite work stations adjacent to patient rooms; internet access in patient rooms; cable television in each patient room with educational programming; computers located between every two patient rooms; wireless laptops available in each unit; patient privacy and confidentiality maintained through comprehensive security policies implemented for compliance with HIPAA (Guardrail software for pediatric population and Hospira for adult population).
- Noise Reduction – Carpet in common areas; partitions around patient rooms finished to the underside of the deck and insulated; sound absorptive panels and electronic white noise; isolation of noisy machines; sound-reducing wheels for rolling equipment; overhead paging minimized in favor of pagers and cellular devices; all patient rooms fully private with solid doors and walls, designed to the Sound Transmission Coefficient required by American Institute of Architects guidelines.
- Design for Vulnerable Patients – Private rooms with adequate space for family, visitors, and equipment; direct bedside access to bathrooms.
- Precarious Events – No use of narrow spaces for emergency exits; private rooms and treatment space provide better infection control; standardized patient rooms and treatment spaces aid in emergencies; reduction of cords, wiring, and tubes that touch the floor reduce tripping hazard.
- Efficient Use of Staff Time – Caregivers and supplies located close to patients; less travel time for staff; elevators and shared functions located in central area.
- Human Factor Review – Routine supplies located close to the patient will create less fatigue-related errors and allows staff to provide more efficient care to patients; central functions are easily accessible to all staff; computerized transport tubes reduce the need for hand delivery.
- Failure Modes and Effects Analysis – Patient rooms are based on a standard structural module to allow for future conversion of rooms to accommodate patients of different acuity and care needs.

The applicant has demonstrated that design of the project took patient safety into consideration and that it has included features that enhance and improve patient safety, consistent

with this standard.

(13) Financial Feasibility

A hospital capital project shall be financially feasible and shall not jeopardize the long-term financial viability of the hospital.

(a) Financial projections filed as part of a hospital Certificate of Need application must be accompanied by a statement containing each assumption used to develop the projections.

(b) Each applicant must document that:

(i) Utilization projections are consistent with observed historic trends in use of the applicable service(s) by the service area population of the hospital or State Health Plan need projections, if relevant;

(ii) Revenue estimates are consistent with utilization projections and are based on current charge levels, rates of reimbursement, contractual adjustments and discounts, bad debt, and charity care provision, as experienced by the applicant hospital or, if a new hospital, the recent experience of other similar hospitals;

(iii) Staffing and overall expense projections are consistent with utilization projections and are based on current expenditure levels and reasonably anticipated future staffing levels as experienced by the applicant hospital, or, if a new hospital, the recent experience of other similar hospitals; and

(iv) The hospital will generate excess revenues over total expenses (including debt service expenses and plant and equipment depreciation), if utilization forecasts are achieved for the specific services affected by the project within five years or less of initiating operations with the exception that a hospital may receive a Certificate of Need for a project that does not generate excess revenues over total expenses even if utilization forecasts are achieved for the services affected by the project when the hospital can demonstrate that overall hospital financial performance will be positive and that the services will benefit the hospital's primary service area population.

With respect to subsection (i), utilization projections are consistent with historic trends in use of the applicable services by the service area population of AAMC. AAMC experienced a 10-year average annual growth rate of 2.6 percent for MSGA discharges in the Hospital's primary service area. In the last five years, this growth rate was 4.1 percent of the primary service area. Total MSGA discharges at AAMC have increased at an average annual rate of 3.8 percent for the last 10 years and 4.8 percent for the last five years. These utilization trends were used to calculate need projections. AAMC provided need projection calculations which are demonstrated in the discussion under COMAR 10.24.01.08G(3)(b).

Revenue estimates are consistent with utilization projections and are based on current charge levels, rates of reimbursement, contractual adjustments and discounts, bad debt, and charity care provision, as experienced by the applicant hospital. Payer mix projections are consistent with AAMC's FY 2012 experience.

Uncompensated care is projected based on AAMC's historical experience. For AAMC,

revenue projections include an assumption of 1.3 percent charity care of gross patient services revenue, consistent with actual performance in 2010 and 2011. AAMC's projections indicate that the amount of projected bad debt, as a percentage of gross patient revenue, will be consistent with the 3.3 percent level experienced in 2011. Contractual allowances, as a percentage of gross patient revenue, range from just under nine percent to under 10 percent and decrease each projected year. Commission staff concludes that the project is consistent with subsection (ii).

With respect to subsection (iii) and staff projections, AAMC projects that a total of 76.8 additional full time equivalent employees (FTEs) will be needed (DI #10, Exhibit 9) to staff the 30 additional MSGA beds. This addition of staff amounts to a 3.2 percent increase in the number of FTEs at AAMC, while the number of MSGA beds will increase 8.2 percent, if the project is approved. Benefits were estimated as a percentage of salaries – total benefits amount to 19.1 percent of total salaries.

With respect to subsection (iv), AAMC projects an income loss in FY 2012 which reflects losses on interest rate swap contracts of $51,601,000. This value fluctuates with interest rate changes. The negative value reflects the current decline in interest rates. AAMC projects revenues to exceed expenses for all other years through FY 2018. However, the level of income projected for FY 2013 and FY 2014 is significantly lower than FY 2010 and FY 2011, and through FY 2018, does not exceed the revenues reported in FY 2012 because AAMC projects a negative rate increase beginning in FY 2013 to be conservative.

HSCRC Staff has reviewed the proposed project and concluded that it is financially feasible (Appendix B). The project has complied with this standard. Financial viability of the project is addressed under the Financial Viability review criterion, COMAR 10.24.01.08G(3).

The proposed project is consistent with this standard.

(14) Emergency Department Treatment Capacity and Space

(a) An applicant proposing a new or expanded emergency department shall classify service as low range or high range based on the parameters in the most recent edition of *Emergency Department Design: A Practical Guide to Planning for the Future* from the American College of Emergency Physicians. The number of emergency department treatment spaces and the departmental space proposed by the applicant shall be consistent with the range set forth in the most recent edition of the American College of Emergency Physicians *Emergency Department Design: A Practical Guide to Planning for the Future*, given the classification of the emergency department as low or high range and the projected emergency department visit volume.

(b) In developing projections of emergency department visit volume, the applicant shall consider, at a minimum:

(i) The existing and projected primary service areas of the hospital, historic trends in emergency department utilization at the hospital, and the number of hospital emergency department service providers in the applicant hospital's primary service areas;

(ii) The number of uninsured, underinsured, indigent, and

otherwise underserved patients in the applicant's primary service area and the impact of these patient groups on emergency department use;

(iii) Any demographic or health service utilization data and/or analyses that support the need for the proposed project;

(iv) The impact of efforts the applicant has made or will make to divert non-emergency cases from its emergency department to more appropriate primary care or urgent care settings; and

(v) Any other relevant information on the unmet need for emergency department or urgent care services in the service area.

This standard is not applicable to this project.

(15) Emergency Department Expansion

A hospital proposing expansion of emergency department treatment capacity shall demonstrate that it has made appropriate efforts, consistent with federal and state law, to maximize effective use of existing capacity for emergent medical needs and has appropriately integrated emergency department planning with planning for bed capacity, and diagnostic and treatment service capacity. At a minimum:

(a) The applicant hospital must demonstrate that, in cooperation with its medical staff, it has attempted to reduce use of its emergency department for non-emergency medical care. This demonstration shall, at a minimum, address the feasibility of reducing or redirecting patients with non-emergent illnesses, injuries, and conditions, to lower cost alternative facilities or programs;

(b) The applicant hospital must demonstrate that it has effectively managed its existing emergency department treatment capacity to maximize use; and

(c) The applicant hospital must demonstrate that it has considered the need for bed and other facility and system capacity that will be affected by greater volumes of emergency department patients.

This standard is not applicable to this project.

(16) Shell Space

(a) Unfinished hospital space for which there is no immediate need or use, known as "shell space," shall not be built unless the applicant can demonstrate that construction of the shell space is cost effective.

(b) If the proposed shell space is not supporting finished building space being constructed above the shell space, the applicant shall provide an analysis demonstrating that constructing the space in the proposed time frame has a positive net present value that

(i) Considers the most likely use identified by the hospital for the unfinished space;

(ii) Considers the time frame projected for finishing the space; and

(iii) Demonstrates that the hospital is likely to need the space for the most likely identified use in the projected time frame.

(c) Shell space being constructed on lower floors of a building addition that supports finished building space on upper floors does not require a net present

value analysis. Applicants shall provide information on the cost, the most likely uses, and the likely time frame for using such shell space.

(d) The cost of shell space included in an approved project and those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the construction cost of the shell space will be excluded from consideration in any rate adjustment by the Health Service Cost Review Commission.

This standard is not applicable to this project.

B. Need

COMAR 10.24.01.08G(3)(b) Need. The Commission shall consider the applicable need analysis in the State Health Plan. If no State Health Plan need analysis is applicable, the Commission shall consider whether the applicant has demonstrated unmet needs of the population to be served, and established that the proposed project meets those needs.

AAMC proposes to add 30 additional MSGA beds to their existing 298 MSGA beds – for a total of 328 MSGA beds, an increase of about 10 percent. The proposed additional MSGA beds will cause the facility to exceed its current licensed MSGA bed capacity effective July 1, 2012, by a total of 16 beds. Currently, Anne Arundel County has 577 licensed and approved MSGA beds. The current licensed bed number exceeds the projected net minimum need but is within the current maximum of 601 beds. Commission staff has concluded that AAMC has demonstrated the need for the proposed additional 30 MSGA beds, consistent with the State Health Plan's need projection methodology, within its primary service area, and observes the consistent growth in MSGA patient census at the hospital.

C. AVAILABILITY OF MORE COST-EFFECTIVE ALTERNATIVES

COMAR 10.24.01.08G(3)(c)Availability of More Cost-Effective Alternatives. The Commission shall compare the cost effectiveness of the proposed project with the cost effectiveness of providing the service through alternative existing facilities, or through an alternative facility that has submitted a competitive application as part of a comparative review.

AAMC has addressed alternatives to this project in this application. This project is an expansion of a single service. The shell space being used in this project was built for the proposed purpose. This proposed project is consistent with a reasonable approach to MSGA bed need projection applied at the AAMC service area-level using the methods and assumptions of the SHP.

In compliance with this section, AAMC included a discussion of the following alternatives and reasons that those alternatives were not as cost-effective or viable as the proposed project to build-out third floor shell space.

- Doing Nothing – rejected because the need for additional services is projected by both AAMC and the State Health Plan.

- Converting Private to Semi-Private Rooms – rejected because the private room design is not large enough to facilitate conversion to semi-private rooms and increased hospital-acquired infection rates associated with semi-private rooms make this an undesirable option. Staff notes that the FGI Guidelines, incorporated by reference in Maryland hospital licensing standards, has recommended all private rooms in hospitals, with limited exceptions, for a number of years.
- Renovation – rejected because there is no space to renovate for a new patient unit.
- Merger/Consolidation – rejected because this would not solve the need for additional bed space at AAMC.
- Closure of Service/Hospital – rejected because of the forecast for the need for additional bed space.
- Delivery of the Services in Another Setting – rejected because the service cannot be provided in another setting other than a hospital and no other applicant has filed for additional beds.

The project complies with this standard. Commission staff finds that the proposed project is the most cost-effective approach to meeting the demonstrated need for additional MSGA beds at AAMC.

D. VIABILITY OF THE PROPOSAL

COMAR 10.24.01.08G(3)(d) Viability of the Proposal. The Commission shall consider the availability of financial and nonfinancial resources, including community support, necessary to implement the project within the time frames set forth in the Commission's performance requirements, as well as the availability of resources necessary to sustain the project.

Availability of Financial Resources

AAMC presented the following project budget estimate to build out a 30-bed MSGA unit.

Table 12: Project Budget Estimate

Uses of Funds	
Building Construction	$5,486,339
Fixed Equipment	$219,000
Architect/Engineering Fees	$400,000
Permits	$135
Subtotal	**$6,105,474**
Major Movable Equipment	**$1,901,868**
Contingencies	**$200,000**
Total Uses of Funds	**$8,207,342**
Sources of Funds	
Cash	$8,207,342

Source: AAMC (DI #2)

AAMC's audited financial statements, for the fiscal years ending June 30, 2011 and June 30, 2010, indicate that the hospital generated excess revenue of $54,911,000 and $27,405,000 for those years, respectively. The 2011 statement indicated a balance of cash and cash equivalents in the amount of $33,378,000 at the end of that fiscal year. These financial statements indicate the availability of funds for this project.

Recent Financial Performance

Recent operational results for AAMC and its HSCRC Peer Group 2 are summarized below:

Table 13: Financial Performance, FY2008-FY2010, Anne Arundel Medical Center

	Fiscal Year Ending		
	Jun-30-2009	Jun-30-2010	Jun-30-2011
REGULATED OPERATIONS ONLY			
Net Operating Revenue	$ 349,124,785	$ 360,830,187	$ 399,181,346
Net Operating Income	$ 25,642,864	$ 22,777,855	$ 27,309,866
Net Operating Margin	7.34%	6.31%	6.84%
REGULATED AND UNREGULATED OPERATIONS			
Net Operating Revenue	$ 377,044,538	$ 391,052,332	$ 424,488,491
Net Operating Income	$ 16,934,538	$ 17,428,569	$ 20,014,188
Net Operating Margin	4.49%	4.46%	4.71%
Operating Margin – Peer Group 2 Regulated			
Average	5.86%	5.96%	7.09%
Median	5.48%	5.97%	6.86%
Average Operating Margin – Peer Group 2 Regulated and Unregulated			
Average	2.06%	1.86%	2.72%
Median	2.11%	1.75%	2.85%
Operating Margin – State Wide Regulated and Unregulated			
State Wide Regulated and Unregulated	2.60%	2.60%	3.52%
State Wide Regulated	5.90%	6.20%	7.44%

Source: Health Services Cost Review Commission, Disclosure of Hospital Financial and Statistical Data

As indicated in the above table, net operating revenues of regulated operations were between $349.1 million and $399.1 million for AAMC between 2009 and 2011. The net operating revenues grew over the three year period outlined. While AAMC's regulated and unregulated net operating margins are above its peer group average, the hospital's regulated net operating margin for 2011 is slightly lower than the Peer Group average.

Table 14: Selected Financial and Operating Indicators (Regulated and Unregulated)

Maryland Hospitals Statewide		
Year	Operating Margin	Excess Margin
2011	3.50%	6.23%
2010	2.60%	3.77%
2009	2.60%	-0.01%
Anne Arundel Medical Center		
Year	Operating Margin	Excess Margin
2011	4.71%	13.12%
2010	4.46%	8.48%
2009	4.49%	-6.39%
HSCRC Target Values		
	2.75%	**4.00%**

Source: HSCRC

The table above profiles the financial performance of the Hospital as reported in audited financial statements. In 2011, AAMC reported a healthy operating margin of 4.71 percent, exceeding the HSCRC target value of 2.75 percent. In the same year the excess margin also exceeded HSCRC's target.

Projected Financial Performance

The applicant has provided projected financial results through 2018 as follows:

Table 15: Projected Financial Performance ($000s)
Anne Arundel Medical Center

	Actual		Current Projected	Projected					
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Inpatient Revenue	$255,613	$274,132	$304,919	$290,077	$289,034	$292,971	$295,404	$297,882	$300,394
Outpatient Revenue	$158,006	$185,221	$210,709	$227,527	$235,919	$244,374	$253,132	$262,205	$271,602
Gross Patient Revenue	$413,619	$459,353	$515,627	$517,604	$524,953	$537,345	$548,536	$560,087	$571,996
Net Operating Revenue	**$391,502**	**$424,489**	**$470,646**	**$475,427**	**$479,928**	**$491,665**	**$502,315**	**$513,293**	**$524,595**
Operating Expenses	**$370,847**	**$406,014**	**$463,451**	**$473,772**	**$477,210**	**$476,904**	**$477,694**	**$478,029**	**$479,546**
Income from Operation	**$20,655**	**$18,475**	**$7,195**	**$1,655**	**$2,718**	**$14,761**	**$24,621**	**$35,264**	**$45,049**
Operating Margin	5.94%	4.60%	1.63%	0.37%	0.60%	3.19%	5.20%	7.28%	9.09%
Admissions	16,872	18,630	21,288	21,532	21,781	22,037	22,299	22,566	22,841
Patient Days	79,736	89,577	100,431	102,098	103,804	105,995	107,907	109,862	111,861
Outpatient Visits	223,675	277,649	307,361	319,655	332,442	345,739	359,569	373,952	388,910

Source: AAMC, DI #18, Exhibit 5

AAMC's operating margins are expected to decrease in 2013 and 2014. There was a significant increase in patient days (12 percent) and outpatient visits (24 percent) in 2011, and a current projection of about half that growth in 2012 has been employed, followed by a leveling off of consistent growth in patient days (2 percent) and outpatient visits (4 percent) in the out years.

HSCRC staff provided an opinion on financial feasibility of this project (Appendix B). HSCRC staff found that the estimated project expenditure is financially feasible and that the Days of Cash on Hand after the cash outlays for the proposed project would be more than adequate relative to the bond covenants included in the Hospital's borrowing documents.

The proposed project is considered to be financially feasible and AAMC is considered financially viable.

E. COMPLIANCE WITH CONDITIONS OF PREVIOUS CERTIFICATES OF NEED

COMAR 10.24.01.08G(3)(e) Compliance with Conditions of Previous Certificates of Need. An applicant shall demonstrate compliance with all terms and conditions of each previous Certificate of Need granted to the applicant, and with all commitments made that earned preferences in obtaining each previous Certificate of Need, or provide the Commission with a written notice and explanation as to why the conditions or commitments were not met.

Since 1990, four Certificates of Need have been issued to AAMC by the Maryland Health Care Commission. All have been completed in good standing and in compliance with all terms and conditions. The Commission denied Docket No. 95-02-1774 in 1995 to establish a 20-bed sub-acute care unit at the hospital.

Docket No. 92-02-1684, modified in November 1996, to construct a Women's Center on Jennifer Road and relocate 16 pediatric beds to the Clanatoff Pavilion.

Docket No. 97-02-1988, approved in November 1997, to establish a Neonatal Intensive Care Service Level III+ to be located at the Clatanoff Pavilion.

Docket No. 04-02-2153, approved in 2005 and modified in March 2008, to construct a new nine-story patient tower with 69 MSGA and ICU beds and the expansion of the emergency department and surgical and recovery areas, support space and ancillary areas of the main hospital campus.

Docket No. 10-02-2308, approved in June 2010, to add 30 MSGA beds by building-out shell space approved in CON 04-02-2153. Notification of First Use filed with MHCC in August 2012.

F. IMPACT ON EXISTING PROVIDERS AND THE HEALTH CARE DELIVERY SYSTEM

COMAR 10.24.01.08G(3)(f)Impact on Existing Providers and the Health Care Delivery System. An applicant shall provide information and analysis with respect to the impact of the proposed project on existing health care providers in the health planning region, including the impact on geographic and demographic access to services, on occupancy, on costs and charges of other providers, and on costs to the health care delivery system.

AAMC does not believe there will be any impact on other providers from this limited project designed to meet growth and aging of the population it serves. The need for inpatient and observation services cannot be met in alternative locations. The limited cost of the project, and its location at a proven cost effective provider of inpatient services, should help control the increase in health care costs in the area, and have a positive effect on the existing health care system.

IV. SUMMARY AND STAFF RECOMMENDATION

Staff has analyzed the proposed project's compliance with the applicable State Health Plan criteria and standards in COMAR 10.24.01.08.05A and B, and with the other Certificate of Need review criteria, COMAR 10.24.01.08G(3)(b)-(f).

Based on these findings, Staff recommends that the project be **APPROVED.**

IN THE MATTER OF	*	**BEFORE THE**
	*	
ANNE ARUNDEL MEDICAL	*	**MARYLAND**
	*	
CENTER	*	**HEALTH CARE**
	*	
Docket No. 12-02-2338	*	**COMMISSION**
	*	

*** ***

FINAL ORDER

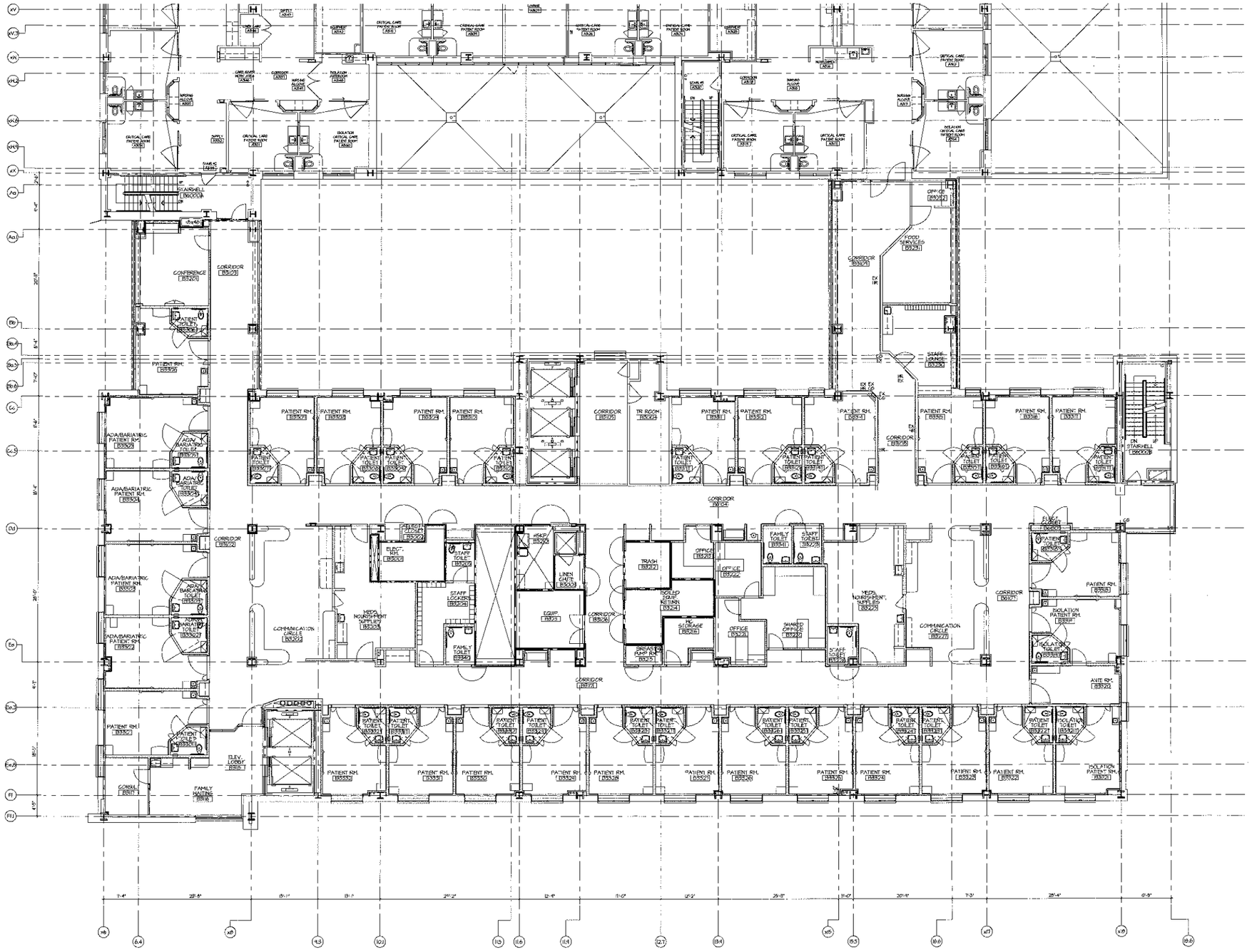
Based on Commission Staff's analysis and findings, it is this 20th day of December 2012, **ORDERED** that the application for a Certificate of Need, submitted by Anne Arundel Medical Center to fit out existing shell space on the Third Floor of the Acute Care Pavilion for a 30-bed MSGA unit, at an estimated cost of $8,207,342, Docket No. 12-02-2338, be **APPROVED.**

MARYLAND HEALTH CARE COMMISSION
December 20, 2012

APPENDIX A

Floor Plan

Exhibit # 2



A1 / A101 NEW WORK – THIRD FLOOR PLAN

SCALE: 1/8" = 1'-0"

Goodman Associates
PLANNING ◇ ARCHITECTURE ◇ INTERIOR DESIGN
912 COMMERCE ROAD V - 410-841-2570
ANNAPOLIS, MD 21401 F - 410-841-2575

SEAL

CONSULTANTS

MECHANICAL & ELECTRICAL ENGINEERING
JAMES POSEY ASSOCIATES
311 E. LORD BALTIMORE DR.
BALTIMORE, MD 21244
PHONE: 410-265-6100
FAX: 410-265-9120

FOODSERVICE FACILITY PLANNING
CULINARY ADVISORS
726 NORTH HENRY STREET
ALEXANDRIA, VA 22314
PHONE: 703.299.5006
FAX: 703.299.4429

NORTH
NEW WORK
PROJECT KEY PLAN

CHANGE BULLETIN

CLIENT
Anne Arundel Health System, Inc.
Annapolis, Maryland

PROJECT TITLE
SOUTH HOSPITAL PAVILION
3rd FLOOR FIT-OUT
AAMC EAST CAMPUS

Date 7-27-12

CRGA PROJECT NUMBER 11,071.A

DRAWING TITLE
THIRD FLOOR NEW WORK PLAN

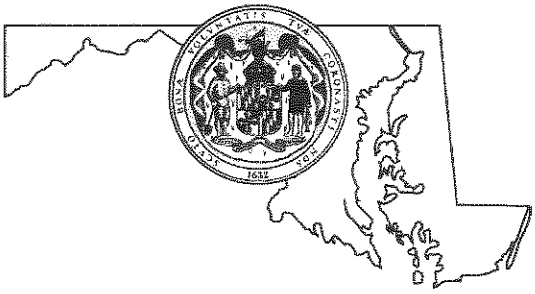
DRAWING NUMBER
A101

APPENDIX B

HSCRC Memorandum

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

23



HEALTH SERVICES COST REVIEW COMMISSION
4160 Patterson Avenue, Baltimore, Maryland 21215
Phone: 410-764-2605 · Fax: 410-358-6217
Toll Free: 1-888-287-3229
hscrc.maryland.gov

CHS-5366

Memo

To: Joel Riklin, MHCC

From: Gerard J. Schmith

Date: December 7, 2012

Subject: Anne Arundel Medical Center ("Hospital," or "AAMC")
Fit Out of Shell Space
Docket No. 12-02-2338

On November 15, 2012, you requested that we review and comment on the financial feasibility of AAMC's proposed capital project. Under this docket number, the Hospital is seeking approval to finish 21,536 square feet of shell space on the third floor of The Hospital Pavilion South Tower ("South Tower"). When completed the South Tower will have 30 additional MSGA units with all private rooms. This construction is consistent with the intended use for this space when originally built. The capital cost of this project is estimated at $8.2 million. The Hospital intends to finance the cost of this project with cash currently on hand.

Data

The Hospital had previously provided a copy of the Audited Financial Statements for Anne Arundel Health System, Inc. ("System"), the parent company of Anne Arundel Medical Center, for the fiscal year ending June 30, 2012. Additionally, the Hospital provided an analysis of Days of Cash on Hand (DCH) for the System, before and after the cash outlay for the Project. The System had 163 DCH as of October 31, 2012 and would have 157 DCH after the financing of this Project. The Maryland Health and Higher Educational Facilities Authority's rate covenant calls for maintaining no less than 90 DCH. Finally, the Hospital pointed out that $43.5

million of the $49.1 million of cash generated on the operating activities of the System was attributable to the Hospital.

Since the Days of Cash on Hand are more than adequate relative to the bond covenants included in the Hospital's borrowing documents, HSCRC Staff believes that the project is financially feasible.

APPENDIX C

AAMC Service-Area Level Bed Need Analysis

Appendix C: Key Information from AAMC's MSGA Bed Need Analysis

Estimated Population for Anne Arundel Medical Center's PSA Zip Codes, 2001-2011

Calendar Year	15-44	45-64	65-74	75+	Total	Percent change from previous year
2001	175,457	99,342	23,215	18,610	316,624	
2002	176,250	103,116	23,487	19,146	321,999	1.7%
2003	175,460	106,228	23,766	19,795	325,249	1.0%
2004	176,044	109,338	24,370	20,276	330,028	1.5%
2005	175,870	112,079	24,891	20,773	333,613	1.1%
2006	174,697	114,710	25,643	21,015	336,065	0.7%
2007	173,649	116,952	26,709	21,346	338,656	0.8%
2008	172,937	119,144	28,191	21,982	342,254	1.1%
2009	172,299	122,234	29,554	22,384	346,471	1.2%
2010	172,757	124,304	30,488	22,707	350,256	1.1%
2011	172,465	124,913	32,250	23,212	352,840	0.7%
Five-year average annual rate of growth	-0.1%	1.4%	4.1%	1.7%	0.8%	
Ten-year average annual rate of growth	-0.2%	2.1%	3.7%	2.1%	1.0%	

Source: AAMC, DI #2, page 33

Discharge Trends for Zip Codes within Anne Arundel Medical Center's PSA, 2001-2011

Calendar Year	15-44	45-64	65-74	75+	Total
2001	10,762	15,594	9,314	12,763	48,433
2002	11,256	16,648	9,545	13,313	50,762
2003	11,112	17,205	9,110	13,329	50,756
2004	11,488	17,862	9,397	13,805	52,552
2005	11,215	18,329	9,795	14,209	53,548
2006	11,166	18,239	9,625	14,618	53,648
2007	10,525	18,630	9,745	14,702	53,602
2008	10,715	19,424	10,373	15,175	55,687
2009	10,909	20,314	10,505	15,364	57,092
2010	10,042	19,289	10,342	15,194	54,867
2011	9,789	19,379	10,689	15,776	55,633
Five-year average annual rate of growth	-2.5%	1.3%	2.2%	1.6%	0.8%
Ten-year average annual rate of growth	-0.9%	2.2%	1.4%	2.2%	1.4%

Source: AAMC, DI #10, Exhibit 6

Use Rates for Zip Codes within
Anne Arundel Medical Center's Service Area

	15-44	45-64	65-74	75+
2001	37.1	93.7	252.6	440.1
2002	37.8	96.9	252.8	447.6
2003	37.2	94.2	239.2	437.2
2004	38.0	94.7	228.8	432.0
2005	38.0	94.1	236.4	427.0
2006	36.9	91.6	219.5	438.1
2007	35.1	91.2	206.0	420.6
2008	36.6	92.5	209.5	433.9
2009	37.0	94.8	200.1	432.4
2010	33.3	88.2	194.0	417.0
2011	32.6	89.6	187.3	425.7
Five-year average annual rate of growth	-2.3%	-0.4%	-3.1%	-0.5%
Ten-year average annual rate of growth	-1.2%	-0.4%	-2.9%	-0.3%

Source: Source: MHCC staff analysis of data from AAMC, DI #2, page 33

Average Length of Stay for Zip Codes within
Anne Arundel Medical Center's Service Area

	15-44	45-64	65-74	75+
2001	3.0	3.7	4.4	5.0
2002	3.0	3.7	4.5	4.6
2003	3.0	3.7	4.4	4.5
2004	3.0	3.8	4.3	4.5
2005	3.1	3.7	4.3	4.4
2006	3.2	3.7	4.3	4.5
2007	3.1	3.8	4.4	4.6
2008	3.2	3.9	4.6	4.6
2009	3.1	3.8	4.8	4.7
2010	3.2	3.9	4.5	4.8
2011	3.3	4.1	4.7	5.0
Five-year average annual rate of growth	1.0%	2.3%	1.8%	2.0%
Ten-year average annual rate of growth	1.1%	1.1%	0.7%	0.1%

Source: MHCC staff analysis of data from AAMC, DI #2, page 33

Total Days in MSGA beds needed for Zip Codes within Anne Arundel Medical Center's Service Area

	15-44	45-64	65-74	75+	Total
2001	19,533	34,525	25,919	40,545	120,523
2002	19,943	36,885	26,479	39,503	122,811
2003	19,590	37,415	25,189	39,289	121,483
2004	20,161	39,242	23,925	39,328	122,656
2005	20,438	39,250	25,188	39,205	124,081
2006	20,498	38,767	24,374	41,432	125,070
2007	19,041	40,333	24,103	41,124	124,601
2008	20,446	43,191	27,172	44,066	134,874
2009	19,750	44,401	28,205	45,201	137,557
2010	18,374	42,889	26,495	45,167	132,925
2011	18,784	46,128	28,453	49,114	142,478
Five-year average annual rate of growth	-1.6%	3.6%	3.4%	3.5%	2.7%
Ten-year average annual rate of growth	-0.3%	3.0%	1.1%	2.0%	1.7%

Source: MHCC staff analysis of data from AAMC, DI #2, page 33

Low and High Bed Need Projection for Anne Arundel Medical Center's PSA

	15-44	45-64	65-74	75+	Total	Avg. Daily Census in PSA	Beds needed in PSA at 80% occupancy rate
2021 Population	174,880	123,420	46,019	31,633	375,952		
Low Use Rate Change	-2.3%	-0.4%	-3.1%	-0.5%			
Low Use Rate	25.8	86.4	136.9	403.7			
Number of Cases	4,509	10,659	6,300	12,770			
Low ALOS Change	1.04%	1.08%	0.69%	0.08%			
ALOS	3.7	4.6	5.0	5.0			
Low Days	**16,708**	**48,899**	**31,794**	**63,995**	**161,396**	**442**	**553**
High Use Rate Change	-1.2%	-0.4%	-2.9%	-0.3%			
High Use Rate	28.9	86.1	139.7	413.0			
Number of Cases	5,050	10,631	6,429	13,065			
High ALOS Change	1.1%	2.3%	1.8%	2.0%			
ALOS	3.7	5.2	5.6	6.1			
High Days	**18,843**	**54,777**	**36,142**	**79,261**	**189,022**	**518**	**647**

Source: MHCC staff analysis of data from AAMC, DI #2, page 33