

**Department of Health and Human Services  
Division of Licensing and Regulatory Services  
State House, Augusta, ME  
Preliminary Analysis**

**Date:** May 22, 2008

**Project:** Proposal by Central Maine Medical Center

**To:** Catherine Cobb, Director of Licensing and Regulatory Services

**Prepared by:** Phyllis Powell, Certificate of Need Manager  
Steven Keaten, Healthcare Financial Analyst  
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**Directly Affected Party:** St. Mary's Regional Medical Center

**Recommendation:** Disapprove

	<b>Proposed Per Applicant</b>	<b>Approved CON</b>
Estimated Capital Expenditure	\$ 44,378,382	\$ 0
Maximum Contingency	\$ 2,109,707	\$ 0
Total Capital Expenditure with Contingency	\$ 46,488,089	\$ 0
Third Year Incremental Operating Costs	\$ 3,649,700	\$ 0
Capital Investment Fund (CIF) Impact:	\$ 3,124,702	\$ 0
CIF debit 2008	\$ 1,562,351	\$ 0
CIF debit 2009	\$ 1,562,351	\$ 0
Bureau of Insurance Impact Estimate	.514%	

## INTRODUCTION

“Central Maine Medical Center (CMMC) is a 250 bed tertiary hospital whose main campus is located at 300 Main Street in Lewiston, Maine. CMMC is a voluntary, non-profit 501 (c) (3) organization and is a subsidiary of Central Maine Healthcare (CMHC), also a non-profit organization. CMMC is licensed by the State of Maine, certified to participate in Medicare, and accredited by JCAHO.”

“The primary service area is Androscoggin and Oxford counties and upper Cumberland County. The secondary service area includes Kennebec, Sagadahoc and Lincoln counties.”

**“The primary, overriding objective of this Emergency Department and Laboratory project is to eliminate threats to public safety inherent in severe space deficiencies.** Overcrowding is a serious problem for the CMMC Emergency Department. The current ED physical space was designed for 25,000 patient visits, but some 52,500 patients received treatment at the CMMC ED in the fiscal year ending June 2007. When too many patients arrive at the CMMC ED, the less acute patients have to wait extended periods of time to be treated, patients already in the ED have to wait extended periods of time before being either admitted or discharged and opportunities for medical errors can arise. Likewise, the Laboratory currently occupies a space less than about one-third the required space according to current best practices standards. As one of only three tertiary medical centers, designated trauma centers, and regional resource centers for emergency preparedness in Maine, CMMC also provides critical surge capacity during times of epidemic or natural disaster for the state’s entire central tier. The ED and clinical Lab are critical components of that function.”

**“The 2006 Maine State Health Plan instructs that when considering Certificate of Need (CON) applications, the Department gives the highest priority to “projects that directly and unambiguously protect the public’s health and safety. CMMC asserts and the Department should conclude that the CMMC ED/LAB project qualifies as a “priority” project as defined by the Public Health Criteria Advisory Committee guidelines.”**

“The new ED will have: increased square footage; 42 private treatment rooms; dedicated trauma resuscitation suites to allow all necessary resources to manage up to 4 trauma patients at a time; a Clinical Decision Unit (CDU); separate patient and staff circulation space; specific rooms designed for behavioral health patients; and updated HVAC and IT systems. The Laboratory will be expanded from the current 5,600 square feet to 19,850 square feet. Other project components include: a.) minor renovations in Radiology which is located adjacent to the Emergency Department; b.) relocation of some services that currently occupy the space to be renovated; and c.) creation of a new first floor space for support services.”

“The project’s estimated capital expenditure is \$47,213,067 which will be funded through bond financing. Construction is anticipated to start in July, 2009 with the occupancy date of May, 2011. Projected incremental annual operating expenses for each of the first three years of operation are:

	FY 2011	FY 2012	FY 2013
Operating Expense	\$3,851,833	\$3,816,843	\$3,780,245”

“The estimated Capital Investment Fund annual debit for this proposed project is \$1,890,123.”\*

“Central Maine Medical Center and Central Maine Healthcare Corporation have been leaders in developing and successfully implementing prevention and chronic care disease management strategies. **A new \$3,000,000 Community Health Initiatives Fund has been created to further expand prevention and chronic disease management efforts with a particular emphasis on child and adult obesity.**”

\* CONU has modified these numbers based upon additional information submitted on April 1, 2008 (on file CONU).

## I. Project Description

### A. From Applicant

“Central Maine Medical Center will redesign, update, and increase the square footage of both the Emergency Department (ED) and the Laboratory (Lab). The project will increase the capacity of both departments, improve patient safety and confidentiality, and result in improved patient care processes and employee efficiencies. The new ED will also result in lower costs per unit.”

“Both the existing Emergency Department and the Laboratory are operating under severe space deficiencies. These space deficiencies and other infrastructure issues create operational issues related to patient safety and confidentiality that are discussed in other sections of this application. The existing ED was designed to accommodate 25,000 patient visits while some 52,500 patients were treated in the ED during FY 2007. The existing ED is roughly one-half the adequate size to treat today’s volume of patients and space issues will only be further exacerbated with future growth. The Laboratory occupies 5,603 NSF in a space designed for efficient work flow in 1972 that is totally inadequate for the volume and scope of laboratory services in 2007. The existing Lab space occupies space that is less than one-third the size required to adequately support the clinical demands of a tertiary medical center.”

“This renovation and expansion entails the relocation of some existing services currently occupying the new space. In addition, a new first floor will be constructed above the expanded Emergency Department which will create new support space and allow for the conversion of existing semi-private patient care rooms to private patient rooms at some future date. The ED, Lab and affected departments are located on the ground, or main, level of the hospital.”

“The project will increase the ability of the hospital to meet current and anticipated needs in emergency medicine and clinical laboratory services. As one of only three tertiary providers, designated trauma centers, and regional resource centers for emergency preparedness in the state, CMMC provides critical surge capacity during times of epidemic or natural disaster for the state’s entire central tier. The ED and clinical Lab are critical components of that function. The consequence of not doing the project will be a negative impact on public safety.”

“The ED/Lab project actually consists of the following components:

- Clinical Laboratory, Memorial building basement, 19,850 DGSF
- Emergency Department, Memorial building ground floor, 34,200 DGSF
- Radiology Department renovations, Ross building ground floor, 4,900 DGSF
- Hospital circulation improvements, various buildings ground floor and new Memorial building elevator core floors B - 2, 4,450 DGSF
- Pastoral Care, Ross building ground floor, 900 DGSF
- Employee Health, Ross building ground floor, 800 DGSF

- Red Cross Blood Donor Center, Center building ground floor, 725 DGSE
- Support Services, Young building basement, 4,000 DGSE
- On-call rooms, Memorial building addition first floor, 3,500 DGSE
- Storage, Memorial building addition first floor, 9,750 DGSE”

“Subsequent improvements supported by the project include dietary services upgrades and expansion, hospital circulation improvements and the patient bed upgrade opportunities mentioned above.”

#### Emergency Department:

“The current and projected volumes and ALOS times for the ED suggest that by 2011, 42 treatment spaces will be required. To accommodate the ALOS goals and reduce waiting time several strategies have been developed. Universal-type rooms are being developed so dedicated rooms are required less allowing greater flexibility to assignment of spaces.”

“Additional planning strategies are described below:

- The walk-in and ambulance entrances are arranged to be identified on the same side of campus but will maintain a separate vehicular circulation pattern.
- No hospital public corridors are within the ED.
- Triage will occur in 3 private triage rooms with a “flow through” layout allowing patients and their families/visitors to enter on the public side and exit directly into the exam corridor.
- Patient and family/visitor circulation is separate from staff/medical provider circulation enhancing patient privacy and care provider efficiency.
- All rooms are private and sized to accommodate family/visitor space supporting patient privacy and infection control initiatives.
- Treatment spaces are arranged to allow for “flexing” up or down in number of rooms “open” avoiding the need to staff separate units when only a few additional rooms are required during shift volume fluctuations.
- A care provider core zone, which accesses the exam rooms separately from patient circulation, allows for increased medical/clinical staff collaboration and observation without interruption by patients or families/visitors.
- Dedicated trauma and behavioral health rooms are provided.
- A four (4) bed Clinical Decision Unit to accommodate treatment of patients requiring extended outpatient evaluation and monitoring rather than admission.”

#### Clinical Laboratory:

“The existing Laboratory is space challenged in its present location. There is a floor level change between the Lab and adjacent hospital spaces limiting the opportunity for expansion. Additionally, the adjacent functions, Dietary Services, are challenged and in need of expansion in the near future. The Laboratory’s proposed location in the Memorial building addition basement floor offers over half the proposed space as new construction affording the opportunity to develop an open, flexible core lab. Effectively, all core functions (Chemistry, Hematology, Microbiology, etc.) of the Lab will be in new

construction. This allows for the most flexibility in designing a versatile state of the art Laboratory facility. All wet and dry Lab areas will be designed for flexibility to change as equipment and testing procedures change.”

“The spaces in the renovated portion of the Memorial building basement are planned for offices, support space, Pathology, and the Blood Donor area. The Blood Donor area is located close to public elevators, maintaining an appropriate separation from the working Clinical Lab. This much needed increase in space, as explained in items 6 & 7 of this section, will allow for new equipment and testing that is not possible in the existing space. The new Lab location in the basement offers a direct connection to the outside service area for the transportation of goods, preventing circulation of flammable/hazardous products in primary hospital corridors.”

Ancillary departments:

“**Radiology** – The development of the ED requires the relocation of several Radiology department functions. The current location of Nuclear Medicine prevents a functional, contiguous plan development of the ED patient care zones and is best relocated to the north end of the Radiology department on the ground floor of the Ross building. In relocating the ambulance entrance to the ED the opportunity to reorient the entrance to the Radiology department to the north side of the department developed. This new orientation is supported by its adjacency to the main hospital entrance, and improves way finding significantly. To strengthen this development, administrative functions are also moved to this portion of the Ross building in spaces previously occupied by the ED, and allowing for a more effective separation of patient treatment spaces and administrative functions within the department.”

“**Pastoral Care** - Currently located on the Memorial building ground floor within the proposed ED footprint. Its location on the ground floor of the hospital is appropriate, and as such is planned for the ground floor of the Ross building in space previously occupied by the ED.”

“**Employee Health** - Currently located on the Memorial building ground floor within the proposed ED footprint. Its location on the ground floor of the hospital is appropriate, and as such is planned for the ground floor of the Ross building in space previously occupied by the ED.”

“**Red Cross Blood Donor Center** - Currently located on the Memorial building ground floor within the proposed ED and new elevator core footprint. Its location on the ground floor of the hospital is appropriate, and as such is planned for the ground floor of the Center building.”

“**Support Services** - Spaces currently occupied on the Memorial building basement floor consist of Security offices and housekeeping services. These spaces are within the proposed Lab footprint and are planned to be relocated to the Young building basement, Memorial building addition first floor and the Center building 5th floor.”

**“On-call Rooms** - Currently located on the Memorial building ground floor within the proposed ED footprint. Its location on the ground floor of the hospital is appropriate, and as such are planned for the Memorial building addition first floor.”

“Protecting public safety is the first priority of the State Health Plan. Severe overcrowding of at hospital Emergency Department, particularly a Trauma Center and a hospital expected to provide “surge” capacity during a public health emergency, is a quantifiable direct threat to public safety. Likewise, a severely undersized Lab can lead to delays in treatment and compromise patient care.”

“This project will also improve patient confidentiality, patient care processes, lower unit costs of care, and improve employee morale.”

“Please refer to Section Eight of this Application for a detailed discussion of how this project is consistent with and satisfies the priorities of the State Health Plan.”

**“New primary care physicians** - Selecting and then following the medical advice of a primary care physician is one of the best strategies for avoiding preventable medical conditions. Many clinical issues can be easily resolved if identified in the early stages of illness. Emergency department visits and hospitalizations can be avoided if patients establish a relationship with a physician, follow well established preventive medicine guidelines and change personal behaviors accordingly.”

**“Central Maine Medical Center has recruited seven (7) family practice physicians and two (2) pediatricians to practice in Lewiston, Auburn, Gray and Mechanic Falls since August 2007.** These physicians were recruited to help meet the existing demand for more access to primary care physicians. All of these physicians are employed by Central Maine Medical Center and accept MaineCare and Medicare patients along with patients covered by other payors.”

“CMMC has publicized the arrival of these new physicians and the increased access they afford. CMMC sponsors DocSearch, a free physician referral service, to direct people to physicians accepting new patients. Emergency Department patients without a physician are also referred to DocSearch referral service.”

“CMMC has also recently added additional adult and pediatric hospitalists who only manage the care for hospital patients. The collateral benefit of employing hospitalists is the creation of additional physician office capacity (meeting more demand) as all of the newly recruited physicians will only practice on an outpatient basis.”

**“Community Health Prevention Fund** – Central Maine Medical Center plans to set aside \$3 million dollars and use the income from this Fund to develop new community health initiatives including new strategies to combat adult and childhood obesity.”

“This Fund will build on both the existing CMMC/CMHC of preventive services (see Attachment #1 and chronic care management initiative (see Attachment #2). Details about this new Fund can be found in Section VIII – Question #1.”

“The cumulative effect of a.) contemporaneous increase in number of primary physicians, mid-level providers; b.) the adult and pediatric hospitalists; c.) existing prevention services and chronic care initiatives; and d.) the Community Health Prevention Fund will mitigate the utilization of the CMMC Emergency Department to the extent that we project **lowering the growth projection for ED visits** from the current growth rate of 7% a year to a projected 4% annual growth rate.”

“The Emergency Department, Laboratory and other departments affected by this CON are all located on the CMMC campus at 300 Main Street, Lewiston, ME 04240.”

“The proposed project is a relocation of existing services which are part of the core infrastructure of the hospital. CMMC has provided patient care in an organized Emergency Department for over 40 years, and in an organized Laboratory for over 100 years.”

“Overall, the proposed project will increase the ability of the hospital to meet current and anticipated needs in emergency medicine and clinical laboratory services. As one of only three tertiary providers, designated trauma centers, and regional resource centers for emergency preparedness in the state, CMMC also provides critical surge capacity during times of epidemic or natural disaster. The Emergency Department and clinical Laboratory are critical components of that function. The specific impact of the project on patient care, and the public’s ability to support the project, are as follow:”

### **Emergency Department (ED)**

“With approximately 52,000 visits annually, the ED at CMMC is the busiest in central, western and coastal Maine. We anticipate the need for emergency care in the region to increase over time, and believe it is essential to improve access to ED services in order to protect public health and safety as CMMC is a “safety net” for the entire central tier region.”

“Overcrowding is also a serious problem for the CMMC Emergency Department. The current ED physical space was designed for 25,000 patient visits, but some 52,500 patients received treatment at the CMMC ED in our fiscal year ending June 2007. When too many patients arrive at the CMMC ED, the less acute patients have to wait extended periods of time to be treated, patients already in the ED have to wait extended periods of time before being either admitted or discharged and opportunities for medical errors can arise. The existing ED is roughly one-half the adequate size to treat today’s volume of patients and space issues will only be exacerbated with future growth.”

“The CMMC ED is approaching maximum capacity, functioning in an outdated and too-small space. Future growth cannot occur in the current physical space, and the future

will be one of overcrowding. The issue of overcrowded EDs is a nationwide concern, studied and reported extensively, including by the Institute of Medicine (IOM), which released three reports on the future of emergency care in 2006 (The Future of Emergency Care in the United States Health System). The negative consequences of ED overcrowding are legion. In their 2006 CON application for expansion of the ED at Maine Medical Center, MMC project planners cited the following:

- ED overcrowding increases the risk of multiple effects including:
- Delays to time-sensitive clinical interventions;
- Poor patient outcome;
- Prolonged patient pain and suffering;
- Medical errors;
- Compromised patient confidentiality;
- Prolonged patient waits and dissatisfaction;
- Ambulance diversions;
- Patients leaving without being served;
- Decreased physician and staff productivity; and
- Frustration and stress among visitors, patients, physicians and hospital staff.”

“These are consequences that CMMC wants to avoid now and in the future.”

“The current Emergency Department/First Care Center is a 31-bed unit located on the ground floor of the hospital. It is separated into multiple geographical areas – 15 acute care beds in the main department, 7 beds in the ED annex and 9 beds in First Care. The proposed ED consolidates these locations to one area, and increases the number and type of exam rooms. The proposed ED project will: (1) improve the quality of care; (2) improve patient privacy and confidentiality; (3) enhance patient safety; (4) provide dedicated space for family members and; (5) lower costs per unit.”

“Improved quality of care: The new ED space will have universal rooms, which will allow for more efficient placement of patients and increase both door-to-provider and door-to-treatment times. The new space will also have dedicated trauma resuscitation suites which will allow all necessary resources to manage up to 4 trauma patients at one time. The four (4) bed Clinical Decision Unit (CDU) will allow extended evaluation and monitoring of patients on an outpatient basis rather than admitting patients to the hospital for short stays. Clinical Decision Units (Observation Units) can improve ED operations by separating patients who need ongoing evaluation/observation for extended timeframes from the general ED patient population. Chest pain patients are one example of an appropriate patient for the CDU.”

“Unlike the current ED space, the new area will have private treatment rooms and separate patient and staff circulation space, thus improving patient privacy and confidentiality.”

“Patient safety enhancement: Aside from the new trauma suites, which will allow rapid access to appropriate treatment, specific rooms will also be designed for behavioral

health patients. These rooms will allow both better staff visibility and adequate separation from other patient populations. The ED's overall design allows better visibility of all patient rooms and increases treatment space capacity. The universal room design will facilitate a decrease in the percentage of those who leave without being seen. The overall design is one that provides a more secure department with secure entryways, and the ambulance and ambulatory entry ways will be in close proximity to avoid public confusion. Individual treatment rooms will be large enough to allow family members to stay at the bedside."

"Lower costs per unit: Flexibility of design will allow consolidation of supply inventory (the main ED and First Care currently have separate supply inventories due to physical separation). The design will also allow for flexibility of staff, ie: a decrease of hours per visit from the current 2.45, to an anticipated 2.34 hours per visit."

"The ED is an existing service, which the public has supported for over 40 years. Regardless of ability to pay, all members of the public have access to this service."

### **Laboratory (LAB)**

"The CMMC Lab processes approximately 753,000 laboratory procedures annually. All of the higher level services at CMMC require support from the Lab, especially those related to critical care, trauma, oncology, surgery, and neonatal intensive care."

"The Laboratory occupies 5,603 NSF in a space designed for efficient work flow in 1972 that is totally inadequate for the volume and scope of laboratory services in 2007. The Lab space is less than one-third the size required to adequately support the clinical demands of a tertiary medical center. (Source: Consultants). The proposed project increases the Lab area to 19,850 square feet, in a configuration that is more efficient and safe."

"It is estimated that Clinical and Anatomical Pathology Services contribute up to 85% of the objective data in a patient's medical record, and leverages 60-70% of all critical decision-making, such as admission, discharge and drug therapy. It is critical that the physical working conditions which have been identified be addressed, as these conditions ultimately have an adverse effect on the quality of patient care."

"Patient safety enhancement: Operational inefficiencies that are a result of inadequate work space impact patient safety. This can manifest in increased turnaround time of test results which may delay patient care or in creating an environment which may be prone to error. These inefficiencies also limit the implementation of improved work practices that would provide additional patient safeguards."

"Improved reporting times: The proposed plan increases the severely inadequate space available for the Lab's current operations. It also allows us space to bring additional laboratory testing in house, testing which is currently being sent out to reference

laboratories. This will reduce department expenditures. More importantly, local testing will improve the timeliness in which results are reported.”

“Improved recruitment and retention: Currently there is both a national and statewide shortage of qualified laboratory professionals. The ability of CMMC to recruit and retain these individuals is adversely impacted by the current working conditions in the department. The proposed plan will provide the minimum improvements necessary to bring the department up to current standards around adequate physical working conditions.”

“Cystic Fibrosis testing: The CMMC lab provides an essential service to the region by providing Sweat Testing to diagnose Cystic Fibrosis, and is one of only three labs in Maine approved by the Cystic Fibrosis Foundation to do so. This requires adequate space to permit access to testing in a timely and safe manner for pediatric and infant patients. The current space is crowded and suboptimal and may also need to be reallocated for other higher volume testing.”

“Regional blood bank service: Currently the Blood Bank at CMMC serves as an overstock for the American Red Cross and fills emergent blood needs for 14 smaller hospitals across central, western and coastal Maine. In addition to staffing resources, this overstock role places additional space demands on the Lab for storage of blood products and their specialized transport containers. A customer survey performed last year indicated that the emergent blood products needs of hospitals being served by this overstock are being met in a timely manner. If the service were no longer offered by CMMC due to space constraints it would have a detrimental effect on the emergent care of patients across the region.”

“The full service Clinical and Anatomic Pathology Laboratory at CMMC is an existing service, which the public has supported for over 100 years. Regardless of ability to pay, all members of the public have access to this service.”

“See Letters of Support for the Lab project - Attachment #3”

“The primary driver of the proposed project is to correct the physical plant and design deficiencies inherent in a 37 year old Emergency Department and a 36 year old Laboratory. There are a number of key problems in the physical plants of both the current ED and Laboratory. How the proposed plan eliminates them, and how measures of efficiency and productivity are measured are as follow:”

### **Emergency Department (ED)**

“Deficiencies: The available square footage and treatment spaces do not meet current / future volume, patient care, patient safety, or patient and family confidentiality needs. The current ED, which has 52,500 visits annually, is 17,600 square feet. The recommended square footage for this volume is 26,000-35,000. The main ED has 15 available acute care treatment beds, of which only 5 are private rooms. The remaining 10

are semi-private with only curtains for privacy. Only one of these 15 rooms has negative air flow capabilities to adequately isolate for airborne particulates. There are only 3 available patient toilets. The First Care Center has 9 exam rooms, none with medical gases.”

“There are no dedicated trauma rooms, no available safe rooms for behavioral health patients, and limited family areas. The medication preparation room is an open area in the nurses’ station. There is limited privacy for triage and in the waiting area, and poor walkway visibility in the entry way. The walk-in entry way to the ED is through a high traffic public corridor.”

“These deficiencies have a direct impact on public safety. The lack of adequate square footage for greater than 50,000 visits means reduced treatment room availability for emergent and urgent care needs, reduced capacity to respond adequately to a mass casualty public health event, and ED overcrowding. ED overcrowding increases the risk of: delays in time sensitive clinical interventions; poor patient outcomes; prolonged patient pain and suffering; medical errors; compromised patient confidentiality; patients leaving without being seen by a provider, and; prolonged patient waits and dissatisfaction.”

“At the present time, the current ED matrix shows: (1) average time to physician is 57 minutes, compared to leading practice of 37 minutes; (2) average length of stay – all patients – is 167 minutes, compared to leading practice of 138 minutes; (3) average length of stay - admitted patients – is 329 minutes, compared to 186 minutes; (4) average length of stay - discharged patients – is 147 minutes, compared to 120 minutes.”

“Our current ‘left without being seen’ rate is 1.4%. Though this rate is lower than the leading practice of 3.4%, ours has increased annually as our total visits have increased. In 2002 our ‘left without being seen’ rate was only 0.8%.”

“The new design increases the square footage to 34,200 square feet, provides private rooms, designated trauma and mental health rooms, upgrades the physical plant systems (HVAC, etc.), improves patient flow and provider efficiency, and improves physical access to the department from the outside.”

“ED measures of efficiency and productivity are:”

Measurement	Reporting Tool
ED nursing staffing hours	ED departmental budget
Patient & family satisfaction	Press Ganey scores
Staff injuries	Employee Health & Wellness Reports

**Laboratory (LAB)**

“Deficiencies: There is inadequate space for safe work practices, which compromises patient safety. Current space constraints do not allow for sufficient room for safe work

practices, such as specimen accessioning and labeling of samples received from other hospitals within the region. The proposed design designates a quiet, adequate space which would provide an opportunity to implement additional safeguards in this process.”

“Egress is often blocked by waste, equipment and supplies, which is a life safety issue. Because of inadequate space, many daily activities (such as delivery of supplies and routine cleaning) are competing for the same limited room. The new floor plan allows for sufficient space in which to perform these various functions without compromising egress.”

“The HVAC system must be improved. Inadequate temperature control is contributing to instrument failures. Current HVAC conditions are suboptimal for adequate cooling and ventilation. The proposed plan provides necessary upgrades for proper functioning of the highly complex laboratory instrumentation, as well as providing a safe work environment for the employees in this area.”

“The current Lab work areas are not acceptable to improved ergonomic advances. The proposed floor plan will utilize modular laboratory furniture which has been designed for optimal ergonomic conditions.”

“Finally, Lab volume for continued growth is projected, but there is no capacity to store supplies or to add instrumentation. Due to suboptimal space, staff members are often required to make temporary workspaces by utilizing the tops of open drawers. There is absolutely no capacity for the increased workload experienced by our Microbiology lab, even though the need for more complex infectious disease testing is on the rise. This area also currently provides Microbiology services for Rumford and Bridgton Hospitals, as well as to CMMC. The proposed project will provide adequate workspace for this critical service and allow for future growth.”

“LAB measures of efficiency and productivity are:”

Measurement	Reporting Tool
Laboratory staffing hours	Laboratory departmental budget
Patient & family satisfaction	Press Ganey scores
Physician & employee satisfaction	Physician & employee surveys
Staff injuries	Employee Health & Wellness Reports

“Clinicians at Central Maine Healthcare (of which the applicant, CMMC, is the largest member organization) already use both an outpatient EMR (Logician) and an inpatient EMR (ERNE). The organization has also moved strongly into other IT-based technologies. The new regional Radiology Information System (RIS) and Picture Archiving and Communications System PACS initiative (RIS-PACS) brings state-of-the-art imaging technology to the region and links the emergency rooms of CMMC, Bridgton and Rumford hospitals. The Portal Suite Project is an innovative, Web-based, single-sign-on and secure messaging system for providers and consumers – a strategic e-Health initiative aimed at using Internet-based technologies to more effectively deliver healthcare information to patients, and to support CMHC’s initiatives for quality and

growth. The Portal Suite is designed to make it easier for providers to access multiple clinical systems, deliver information from those systems, and communicate with patients and other staff members. It will also provide patients with self-service tools that will allow them to manage their healthcare as it fits into their life schedule, and make it easier for them to communicate with their providers. CMMC is also a founding supporter of the statewide RHIO project, HealthInfoNet.”

“We are investing in HL7 interface technology to allow for exchange of information across our various initiatives.”

“Every acute care hospital in CMMC’s primary, secondary and tertiary service areas has an Emergency Department and Laboratory. CMMC provides a range of services that are unique to institutions with Tertiary and Level II Trauma Center designations. We project no change in the scope of services offered, no change in existing physician referral patterns and no significant upswing in patient volume as a result of the approval of this project.”

“Approval of this project will have little or no impact on the costs of rural providers, as regional services such as trauma, cardiology, Cystic Fibrosis and Blood Bank are unique to the applicant. Conversely, if the project is not approved, there may be a negative financial impact on surrounding facilities if access to some of the services currently being provided by the CMMC Laboratory are eliminated due to space restraints.”

“Sustainable and “green” design issues are an increasingly important part of the project design process. The objectives of these concepts – the thoughtful use of limited resources and the creation of a healthy environment – are central to the core values of CMMC. The ED/Lab project offers opportunity to lower the built environment’s energy consumption through the utilization of an integrated approach that includes high performance building envelope components as well as high efficiency energy systems. The design team includes United States Green Building Council (USGBC) LEED™ (Leadership in Environmental Design) accredited professionals, and along with project stakeholders will review green and sustainable objectives and agree to adopt an approach that focuses on project-specific goals that address these concepts in meaningful way.”

“The project design/construction schedule is enclosed. See Attachment #3.”

“The phasing plans described below are enclosed. See Attachment # 4.”

“Construction will be performed in at least five major phases as follows:

1. Temporary relocation of the ED ambulatory entrance, waiting and triage functions to the north portion of the existing ED. This location previously functioned as an entrance/waiting area.) As well, Pastoral Services and Employee Health spaces will be relocated to the Center Building ground floor.
2. New construction:
  - Construction of sitework, foundation and structural components of the addition. This phase will include demolition of approximately 13,380 SF on

floors basement (5,580 SF), ground (6,600 SF), first (600 SF), second (600 SF) of the Memorial building

- New construction of the new addition building envelope, interior fit-out of the core lab, waiting/triage and critical care patient zone of the ED, first floor support spaces and new elevator core floors B through 2.
3. Renovation of Radiology Administration Functions and film files/viewing to the northern portion of the Ross building. Renovate ED fast-track patient zone in the Memorial/Ross buildings. Renovations for relocating Red Cross Blood Bank to Ross building ground floor.
  4. Renovation of the ED observation/surge patient zone in the Memorial building ground floor, and final renovations of all affected departments and hospital circulation.”

“Since both the ED and clinical Lab are existing Departments, there is no “start up” phase for these services.”

“The proposal is an addition/renovation project taking place in an existing building (300 Main Street, Lewiston). Primary targets of the project are the Emergency Department and Laboratory though parts of other departments impacted by the renovation will be relocated on the same campus, and shell space will be established for future expansion needs.”

“The project consists of a multi-story (3) addition to the Memorial building basement, ground and second floors (elevator only) of approximately 40,500 SF. Renovations of approximately 51,000 SF are planned for the Memorial building (basement, ground, second floors), Center building (ground, second), Ross building (ground, first, second) and Young building (basement). The project has a concrete foundation and structural steel super structure with a brick and glass envelope.”

“The current ED consists of 17,600 SF on the Ross and Memorial buildings ground floors. The new ED will comprise approximately 34,200 SF in the same buildings. The Existing Lab consists of approximately 5,600 SF in the Thompson building ground floor. The new lab will comprise approximately 19,850 SF in the Memorial building basement. Other affected departments will be replacement renovations comprising approximately 29,000 SF with little or no increase in their current area. (Storage space made available by the building of the first floor addition to the Memorial building will increase the hospital’s available storage area by approximately 9,000 SF.)”

“Please see Attachment #5 in the Appendix at the end of this section for single line schematic plans drawn to scale.”

“Architect and builder for the project is Morris Switzer~Environments for Health. Morris Switzer is a well-known design firm with a number of Maine and national projects to their credit, including the Young Building at CMMC which houses the Central Maine Heart and Vascular Institute and the new Intensive Care Unit. This firm has incorporated the current design and construction “best practices” as components of this project.”

“Contact information is: Morris Switzer~Environments for Health, 185 Talcott Road, Williston, VT 05495 Phone: 802-878-8844 [www.morrisswitzer.com](http://www.morrisswitzer.com).”

“See Financial Forecast of Property, Plan and Equipment 2004-2007 Section III – Attachment #3 Financial Forecast Module.”

“As the determination of the needs for an expanded Emergency Department and Clinical Laboratory were developed, the facility planning process considered many criteria. The functional space programs of the ED and Lab, which were driven by the operational issues discussed in items 6 and 7 of this section, were central to defining the scope of the project. The larger campus planning, both immediate needs and long-term strategies, must also be considered. This process not only addresses the departments and services directly affected by the ED and Lab (i.e. - those areas displaced or modified due to the current project), but future development of all of the hospital’s services as well.”

“The inevitable need to upgrade patient beds is an important criterion. Location of beds on campus with respect to support services and diagnostic and treatment programs suggests that at least two options exist for future development. The north portion of the campus is a logical zone for development being the “front door” of the hospital, and master plans exist to support this option. The existing bed floors in the Memorial and Thompson buildings maintain a good relationship to the services and programs required to support them, but in their current configurations consist primarily of semi-private rooms and under-sized support areas. Since the ED/Lab project is located on the same side of the hospital campus as these units, it offers the opportunity to create a “platform” on which to upgrade these bed units to private rooms and more effective nursing units in the future. Most importantly, this opportunity gives the hospital the options it needs to be responsive to the changing needs of healthcare facilities in the future.”

“In responding to the functional program the ED/Lab project developed expansion plans to the southeast, locating the Lab on the lowest level of the Memorial building (basement) directly below the current ED entrance (ground floor). The new construction at the basement level creates a flexible, open plan that accommodates the core lab functions well. The ED will expand its walk-in entrance to the east of the current location, and create a new ambulance entrance at the south end of the Memorial building’s ground floor. These reconfigured access points to the ED allow for flexible and secure patient treatment zones.”

“The new construction required for these expansions offers the opportunity to plan for future patient bed upgrading on the Memorial building’s nursing units on floors 1 through 4. In order to plan for this future development it is necessary to design the building structure for the ED/Lab expansion to accommodate the additional floors to be added in the future. As well, it is standard practice in a healthcare setting to construct the first floor of the vertical expansion at this time to allow for future floors to be constructed without disruption to the occupied treatment spaces below. As such, the new construction required for the Lab (basement) and ED (ground floor) presents that opportunity, and the

footprint that has developed with the future patient floor expansion in mind creates an appropriate “platform” for vertical expansion.”

“In order to accommodate the future expansion, support patient circulation from the Ed to the existing surgery department on the 2nd floor, and enhance separation of public and patient/service circulation a new 3-bank elevator has been developed. This elevator core will be initially equipped with two cars serving the Memorial building basement through second floors. One of the elevators will be sized to accommodate trauma patients. This affords the opportunity to designate the existing 3-bank elevator core in the Center/Memorial buildings for public use.”

“The space created on the first floor should be considered soft space, or “transitional” space, until such time that the vertical expansion occurs. The new space created on the first floor is appropriate to utilize for some functions displaced as the ED expands such as on-call rooms and storage since these can be relocated with minimal expense and service impact in the future.”

## **B. CONU Discussion**

Central Maine Medical Center’s (CMMC) hospital campus is composed of several buildings located on the north side of Main Street in Lewiston, Maine. Hammond Street borders the main campus on the west with High Street bordering the main campus on the east and north. The main entrance of the hospital is accessed through 60 High Street while the emergency walk-in entrance is accessed through Main Street. The Life Flight and ambulance entrance to the emergency department are now located off High Street.

The major scope of this project proposes an expansion of the hospital’s emergency department and clinical laboratory space via a construction and renovation project. This project also involves the relocation of some existing services that currently will be displaced as a result of the expansion of the emergency department and clinical laboratory. This project calls for demolishing 13,380 square feet of space of the Memorial building in the basement, ground, first and second floors. The applicant did not provide the square footage of the current Memorial building nor did it provide the proposed square footage of the proposed Memorial building.

### **Emergency Department**

The current emergency department consists of 17,600 square feet and is located on the ground floor of the Ross and current Memorial buildings. It is a 31-bed unit that currently is separated into multiple geographical areas encompassing 15 acute care beds in the main emergency department, 7 beds in the ED annex and 9 beds in First Care. The applicant states the current design of its ED is 37 years old. This project would consolidate the emergency department into one geographic area consisting of renovated and new construction of three zones on the ground floor of the proposed Memorial building. It increases the number of treatment rooms to 44 with available beds of 46 while increasing available space to 34,200 square feet. Critical care (zone 1) would have 2 dedicated trauma rooms (4 beds) and 11 private exam rooms (11 beds); ambulatory care

(zone 2) would have 17 private exam rooms (17 beds) and observation/surge (zone 3) would have 14 private exams rooms. Each zone would have 2 nurse's stations for a total of 6 and contain a total of 10 toilets with one being public. The applicant states the rooms would be of universal design and be sized with room for family space with a 4-bed Clinical Decision Unit (CDU) to accommodate treatment of patients requiring extended evaluation and monitoring rather than admission. In addition, the applicant states some rooms will be "designed for behavioral health patients". The walk-in and ambulance entrances will remain separate but be located on the same side of campus.

The applicant stated the new proposed emergency department would have three triage rooms but the floor plans show 4 rooms for triage. Additionally, the CDU and behavioral health rooms are not depicted in the floor plans. It is also unclear how many negative pressure rooms are planned. The floor plans do not delineate all of the proposed modifications.

The applicant states the ED will comply with space requirements contained in the 2006 AIA Guidelines for Design and Construction of Healthcare Facilities; however, a breakdown of the ED space component was not provided to evaluate this statement.

### **Laboratory**

CMMC's current laboratory consists of 5,603 square feet. It was designed in 1972 and is currently 36 years old. The laboratory is located in the basement of the current Memorial Building. The proposed project would increase the area to 19,850 square feet and it would remain located in the basement of the proposed Memorial Building in renovated and new construction space. The new construction space will include the core functions of Chemistry, Hematology, Microbiology, etc. The renovated space plans are for offices, support space, Pathology and the Blood Donor area. The HVAC system for the lab area will be improved as inadequate temperature control is contributing to instrument failures.

The applicant states the Lab will comply with space requirements contained in the 2006 AIA Guidelines for Design and Construction of Healthcare Facilities; Clinical Laboratory Improvement Act (CLIA); US Dept. of Health and Human Services; College of American Pathologists (CAP); CSLI Lab Design Approved Guideline GP18-A; and relevant Joint Commission and OSHA standards. A breakdown of space for the Lab was provided; however, it is difficult to identify this space from the floor plans presented.

### **Other**

In order for the project to proceed as planned some changes to other ancillary departments are proposed. They include Radiology, Pastoral Care, Employee Health, Red Cross Blood Donor Center, Support Services and On-call Rooms.

Parts of Radiology (4,900 sq. ft.), Pastoral Care (4,450 sq. ft.), and Employee Health (800 sq. ft.) will be relocated on the ground floor of the Ross building. This relocation is in space vacated from the existing ED move to the proposed Memorial building and the relocation of the ambulance entrance off High Street to Main Street. The Red Cross Donor Blood Bank Center (725 sq. ft.) will move from the ground floor of the current

Memorial building to the ground floor of the Young building. It is not clear where the displaced services currently on the ground floor of the Young building are moving to.

Support services (4,000 sq. ft.), consisting of Security offices and housekeeping services, will move from the basement of the current Memorial building to the basement of the Young building, first floor of the proposed Memorial building and 5<sup>th</sup> floor of the Center building. It is not clear what is being displaced in these two areas. On-call Rooms (3,500 sq. ft.) will be relocated from the ground floor of the current Memorial building to the first floor of the proposed Memorial building. Additional storage area (9,750 sq. ft.) will be available on the first floor of the proposed Memorial building.

It appears that the primary reason for adding space for a first floor to the proposed Memorial building, besides relocating some Support Services, On-call Rooms and Storage Space, is because the applicant has planned for the possibility of future vertical expansion for patient bed upgrading. The applicant states that not adding a floor above the proposed ED now would disrupt services to that department should the floor be added in the future. Even though the construction of the first floor on the proposed Memorial building would be used for Support Space, On-call Rooms and Storage, not shell space, the applicant states that this space should be considered “transitional” space that can be relocated with minimal expense and service impact in the future.

This project description/project includes construction that is being planned and financed today in anticipation of future needs. Specifically, a third elevator shaft and construction upgrades are included in anticipation that there will be a need for expansion. The basis for this planned “future” expansion is not provided or how this expansion relates to the estimated growth rate of 4%. Future addition of private rooms or other modifications to this “transitional” space would be subject to CON review based upon statutory requirements.

Although there may be construction cost efficiencies possible by building now for the future, those costs must be weighed against the status of Maine’s health care costs and the high ED utilization rate in Maine. The development of healthcare services must consider the entire healthcare system in the state, particularly when it involves a tertiary facility that provides both localized, HSA and regional services. Based upon the geographic scope presented, a discussion of the relationship of this project to the Maine healthcare system, including other tertiary facilities, would benefit this application.

Finally, the applicant did not provide a breakout of costs between renovations and new construction by department to evaluate the costs of this project by departmental components. Additionally, the applicant cites a number of project benefits such as, but not limited to: “improve patient confidentiality, patient care processes, lower unit costs of care, and improve employee morale” but does not provide supporting details or evidence of these occurrences, or how the improvements will be measured. The applicant also does not state how much lower the cost of care will be with this project or to what that is attributable.

## II. Profile of the Applicant

### A. From Applicant

“Central Maine Medical Center  
300 Main Street  
Lewiston, Maine 04240  
www.cmmc.org”

“CMMC is a 501(c)3 non-profit corporation.”

“Primary Service Area is Androscoggin County.”

“Secondary Service Area includes Oxford, Franklin, Kennebec, Sagadahoc, and northern Cumberland counties.”

“Tertiary Service Center: Patients are also transported to CMMC from other counties in Maine.”

“Methodology/Data Source: Emergency Department and Laboratory patient origin data for the latest three fiscal years (see Section IV. for a detailed description of the methodology and data source for this information).”

“250 licensed beds and 2070 FTE (s).”

“Central Maine Medical Center is a non-profit subsidiary of Central Maine Healthcare Corporation (CMHC). CMHC is an integrated healthcare delivery system that provides a wide range of inpatient, ambulatory and other healthcare services primarily in central and western Maine. Central Maine Medical Center’s (CMMC) principal affiliates and addresses are:”

#### CMHC Affiliated Hospitals

Bridgton Hospital - (Critical Access Hospital)	Bridgton
Rumford Hospital – (Critical Access Hospital)	Rumford

#### Residential and Long Term Care Facilities

Bolster Heights	Auburn
Rumford Community Home	Rumford

#### Professional Education

Family Practice Residency Program	Lewiston
College of Nursing and Health Professions	Lewiston
School of Radiology and Nuclear Medicine	Lewiston

Clinical Pastoral Education Program

Lewiston

**Hospital-Owned Practices**

“Among the three Central Maine Healthcare hospitals (Central Maine Medical Center, Bridgton Hospital and Rumford Hospital, there are a total of 47 hospital-owned practices: CMMC, 34; Bridgton, 8; Rumford, 5). The complete list is included as Attachment #1 in the Appendix at the end of this section.”

“The balance of the affiliated organizations can be found on the CMHC consolidated organizational chart that is included in the Appendix of this section of the application.”

“Central Maine Medical Center accepts patient referrals and transfers from multiple physicians, long term care facilities and other hospitals in Maine and elsewhere so it is very difficult to describe all patient care relationships. However, CMMC’s significant other contractual relationships not shown on the CMHC organization chart would include: Rehab-Care Group (management of CMMC’s inpatient rehabilitation unit) ACS Healthcare Solutions (Information Technology outsource) and Comprehensive Pharmacy Services (Pharmacy management).”

**Licenses, Certifications and Accreditations**

“Please refer to Attachment #2 in the Appendix at the end of this section for complete list. Additional accreditations specific to the ED and LAB are as follow:

**Emergency Department (ED)**

- Maine Department of Licensing - Level II Emergency Department
- American College of Surgeons - Level II Trauma Verification –
- Society of Chest Pain Centers - Accredited Chest Pain Center –

**Laboratory (LAB)**

- College of American Pathologists
- American Association of Blood Banks
- Food and Drug Administration
- Clinical Laboratory Improvement Amendments (CLIA)”

“A full state licensure survey was conducted in 2006. Some deficiencies were cited. A plan of correction was submitted and accepted by the Department. Please refer to Attachment #3 in the Appendix at the end of this section for required copies.”

“The audited financial statement for the most current fiscal year is included in the Appendix at the end of this section as Attachment #4. As of this date the 2007 audited financials are only in draft form, therefore the statement attached is for 2006.”

“The hospital wide performance improvement and safety plan for CMMC outlines the goals for the organization and serves as the Performance Improvement plan for each

department. It is the responsibility of each department to support and focus on meeting these goals.”

“In support of corporate initiatives, departments develop strategies to demonstrate attainment of the top 10th percentile or comparable ranking in key benchmarks as compared to appropriate national quality standards, and demonstrate appropriate implementation and compliance with key national safety practices. These include, for clinical departments providing care to involved inpatients, National Quality Forum Hospital consensus standards and Clinical Quality Core Measures (AMI, HF, PNE, SCIP).”

“For clinical departments providing care to involved outpatients, they include: obtaining NCQA certification for care of patients with diabetes or cardiovascular disease; reducing to no NQF serious reportable events for any IP or OP clinical areas doing invasive procedures; following NQF Safe Practices; and participating in the culture of safety encouragement. Attainment of Joint Commission National Patient Safety Goals – full implementation and monitoring of compliance of applicable goals – is also required.”

“Each department also develops department specific expectations and initiatives to meet the hospital’s corporate quality goals, including regulatory compliance with all federal, state, local and JCAHO standards or regulations. The **Emergency Department and Laboratory performance improvement plans for 2008** are included in the Appendix at the end of this section as Attachment #5 and Attachment #6.”

“The curriculum vitae of the following key individuals are included as Attachment #7 in the Appendix at the end of this section.”

### **Overall Project Leads**

“Douglas F. DiVello, FACHE: Mr. DiVello is Vice President of Clinical Services for CMMC. His responsibilities include management of Laboratory Services, Operating Room, Recovery, Same Day Surgery, Central Sterile, Anesthesiology, Pharmacy, Radiology, CT, Nuclear Medicine, Ultrasound, The Bennette Breast Care Center, the School of Radiology and Nuclear Medicine Technology, Radiation and Medical Oncology, and Rehab Services. A graduate of Western Maryland College (BA, Biology) and Long Island University (MPA, Health Administration), Mr. DiVello has been employed at CMMC since 2002.”

“W. Keith Davis, AIA: Mr. Davis, Principal in Charge of Morris Switzer Environments for Health, is Lead Architect for the project. Mr. Davis has over 15 years of healthcare design experience in providing project management, planning and design. He received his Bachelor of Science and Master of Architecture degrees from the University of Texas at Austin.”

“Dale L. Taglienti: Mr. Taglienti, Associate and Project Architect at Morris Switzer Environments for Health, is Associate Architect for the project. He received an AAS in

Architectural Technologies from the State University of New York at Alfred, and a Bachelor of Architecture from the Boston Architectural Center.”

### **Emergency Department**

“Margaret A. McRae, CCRN, BSN: Ms. McRae is Director of Critical Care and Emergency Services. She oversees the 34 bed Emergency Department (ED), a Level II trauma center and the only accredited Chest Pain Center in Maine. She also oversees the 19 bed Intensive Care Unit and Respiratory Therapy Department. A graduate of St. Mary’s Hospital School of Nursing in Connecticut (RN), Regents College University in New York (BSN) and the Florida Risk Management Institute (Case Management Specialist), Ms. McRae has been employed at CMMC since 2002.”

“Lawrence G. Oliver, MD: Dr. Lawrence is Medical Director of the ED and past President of the CMMC Medical Staff. He is graduate of the College of William and Mary, in Virginia (BS and MA in Biology), and the Medical College of Virginia (MD). He completed his Residency in Emergency Medicine at the University of Florida Health Science Center, in Jacksonville. Dr. Oliver is a member of the American College of Emergency Physicians, and a former Medical Corps Commander with the US Navy.”

### **Laboratory**

“Donna Beaulieu: Ms. Beaulieu is Director of Laboratory Services, responsible for preparing and managing an operating budget for a department that produces an average 750,000 billable tests annually, and for personnel management, point of care and outreach services oversight, regulatory compliance and quality improvement activities. A graduate of the University of Maine (BS, Medical Technology), she has been employed at CMMC since 1998.”

“Cielette Karn, MD: Dr. Karn is Chief Pathologist, Department of Pathology, CMMC. Current affiliations also include Bridgton Hospital in Bridgton (Courtesy Staff), Great Falls Pathology in Lewiston, and Pathology Medical Group, Norway. Dr. Karn received a BS and an MS in Zoology and Physiology from the University of Wyoming at Laramie (1980, 1984), and an MD from the University of New Mexico, Albuquerque (1990). Her pathology training includes: Resident in Pathology, PGY 5, University of NM (1994-1995); Regional Medical Examiner, Chittenden County, VT (1992-1994); Resident in Pathology, PGY 1-3 (1990-1993) and Chief Resident in Pathology, PGY 4, (1993-1994) at the Medical Center of Vermont in Burlington; and Pathology Student Fellowship at the University of NM (1987-1988).”

“Matt Twomey: Mr. Twomey is Laboratory Information System Manager, responsible for overall planning, management and operation of the Cerner Classic PathNet Laboratory Information system for Central Maine Healthcare (CMMC, Bridgton and Rumford Hospitals, and managed practices). A graduate of New England Baptist Hospital & New England Deaconess (Diploma, Medical Laboratory Science) and

Northeastern University (BS, Medical Laboratory Science), he has been employed at CMMC since 1998.”

“Included as Attachment #8 in the Appendix of this section of the application is the organizational chart.”

“Included as Attachment #8 in the Appendix of this section of the application is the consolidated organizational chart.”

**B. CONU Discussion**

**i. Criterion**

Relevant criterion for inclusion in this section are specific to the determination that the applicant is fit, willing and able to provide the proposed services at the proper standard of care as demonstrated by, among other factors, whether the quality of any health care provided in the past by the applicant or a related party under the applicant's control meets industry standards;

**ii. Analysis**

The Medical Facilities Unit of the Division of Licensing and Regulatory Services completed a site survey on February 2, 2006. Central Maine Medical Center’s plan of correction was deemed to be acceptable on March 6, 2006.

Central Maine Medical Center’s current license is valid through September 30, 2008.

**iii. Conclusion**

CONU recommends that the Commissioner find that the applicant is fit, willing and able to provide the proposed services at the proper standard of care as demonstrated by, among other factors, whether the quality of any health care provided in the past by the applicant or a related party under the applicant’s control meets industry standards.

### III. Capital Expenditures & Financing

#### A. From Applicant

The applicant provided the following information in regards to proposed capital expenditures, availability of capital financing, staffing, financial feasibility, economic feasibility and the compliance with rules and regulations of local, State and federal agencies.

“Proposed Capital Expenditures Budget – see Attachment #1

- Architect’s estimate on building costs and related fees
- Fixed Equipment – IT cost estimate from vendor
- ED Moveable Equipment – CMMC Materials Management
- Lab Moveable Equipment – Lab consultant and CMMC Materials Management”

“Schedules for fixed and moveable equipment (including any replacement equipment that may not be subject to review but are related to project), detailing unit cost, total cost, and basis for depreciation expense see Attachment #2.”

“Evidence of availability of capital financing, such as financial statements as evidence of equity or commitment letters from external sources of capital.”

“The plan is bond financing through the Maine Health and Higher Education Finance Authority.

See balance sheet ratios in Attachment #3.”

“Projections of project’s potential impact on applicant’s consolidated operating margin, the applicant’s operating margin, and, in the instance of a hospital, the projected impact of the project on the hospital’s cost per adjusted discharge, in the context of historical cost per adjusted discharge & projected cost per adjusted discharge in the absence of the project (using a formulate supplied by the Dept) refer to Financial Forecast Module – Attachment #3. Project lowers operating margin by 1.2% per year”

“Evidence of availability of working capital refer to Financial Forecast Module – Attachment #3.

See balance sheet ratios – Average current ratio is 2.79”

“Terms of any proposed long term financing is 4.5% for 30 years MHHEFA Bonds.”

“The current staffing plan for the existing ED staffing plan will be the staffing plan for the proposed replacement unit. Please refer to Attachment #1 Plan for the Provision of Patient Care – ED.”

“The current staffing plan for the existing Lab staffing plan will be the staffing plan for the proposed replacement unit. Please refer to Attachment #1 Plan for the Provision of Patient Care – Lab for the staffing plan.”

“Refer to Financial Forecast Module Income Statement – Section III Attachment #3 for total annual costs for 3 years from anticipated start of patient operations.”

“This project involves the renovation and expansion of an existing patient care unit. The ED has been able to recruit staff by implementing ED training program based on the Emergency Nurses Association Core Curriculum and Orientation guidelines. A new ED design will also be a strong recruiting tool for the future.”

“The Lab project is very similar to the ED as training programs are implemented according to national lab standards. A new Lab will also be a strong recruitment tool for the future.”

“The project will have minimal impact on the applicant organization and charge structure.”

“Projection of incremental operating expenses or adjustments to financial requirements for the first three operating years are \$3.8 million consisting of incremental interest and depreciation expenses.”

“The project will not result in cost savings and/or allocations.”

“The project represents renovation of the existing campus for use by existing services, thus will require no new licensure, Medicaid and/or Medicare certifications, and no new applicable certification or accreditation requirements are anticipated.”

“As noted above, the project represents renovation of the existing campus for use by existing services. CMMC will work with all regulatory agencies to obtain necessary permits and reviews. The architectural firm and project manager, Morris Switzer and Associates, Inc., will be responsible for assuring that the renovation conforms to applicable rules, regulations and ordinances.”

“The issue of sprawl is not applicable to the project as it is a renovation of existing space.”

### **Additional**

“As existing services, the ED and Lab already meet or exceed appropriate certification or accreditation standards.”

“CMMC has engaged Morris Switzer and Associates, Inc., Environments for Health as architect and builder for the project. Morris Switzer is a well-known healthcare facility design firm with numerous Maine and national projects to their credit. Contact

information is: Morris Switzer and Associates, Inc., Environments for Health, One Dana Street, Portland, Maine 04101. Phone: 207-773-8841. www.morrisswitzer.com.”

**B. CONU Discussion**

**i. Criterion**

Relevant criterion for inclusion in this section are specific to the determination that the economic feasibility of the proposed services is demonstrated in terms of the:

- a. Capacity of the applicant to support the project financially over its useful life, in light of the rates the applicant expects to be able to charge for the services to be provided by the project; and
- b. The applicant's ability to establish and operate the project in accordance with existing and reasonably anticipated future changes in federal, state and local licensure and other applicable or potentially applicable rules.

**ii. Analysis**

The applicant expects to finance 100% of this project meaning that the hospital will not be contributing any internal funds for this project. This is generally undesirable from a cost containment view because the project involves substantial renovations and changes to existing services and does not add new services.

A \$3,000,000 proposed investment in prevention is part of this proposal. This is estimated to generate \$135,000 in funds for prevention services. In “Section IV: Needs to be Addressed” the applicant believes a combination of this \$3,000,000 endowment, new physicians providing more primary care and other initiatives will reduce a 7% annual increase in patient visits to the ED to 4%. The applicants projections do not reflect this decrease in patients due to the project.

The applicant provided little or no discussion relative to the type of capital expenditures or timing of the project. All written comments provided by the applicant are included in the “From Applicant” section above. A budget narrative was not included in this application.

The original application proposed changes to only depreciation and interest expenses. Additional information was provided by the applicant in response to a written request from CONU as follows:

1. This project calls for the addition of new space to accommodate expansion of emergency room and laboratory but in the financial module you didn’t include any additional costs for staff, house keeping, utilities or supplies. Please explain and correct if necessary?

CONU received a response to its letter on April 1, 2008.

“The financial forecast module (Section III –Attachment #3) of this Application included a projection of increased revenue and increased expenses from the pro-forma 2008 through 2013. Incremental clinical staffing (Nursing and Laboratory) and associated supplies are included in these pro-forma projections.”

“Note that we have added four (4) Environmental Services (ES) staff to clean and maintain the expanded new space. ***The incremental third year operating cost for the ES staff is \$142,000.***”

“Note that we have increased the utilities expense to reflect the new construction. ***The incremental third year operating cost for Utilities is \$216,000.***”

“Note that interest rates have fallen since this Application was submitted in December 2007. We are now assuming a 3.5% interest rate instead of the previous 4.5% interest rate. ***This change in interest rate decreases the third year operating cost by \$507,000.***”

**“A revised financial forecast module is enclosed to reflect these changes. There is a net reduction in third year operating costs of (\$149,000), compared to our original submission (see Attachment A).”**

CONU provided all applicants a financial forecast module in order to ensure that all applicants had access to the same information from CONU. This was done to form a consistent platform regarding the presentation and discussion of financial data from all the applicants. CMMC made some formulaic changes to these worksheets which CONU was not able to duplicate. Due to the lack of a budget narrative, CONU attempted to interpret CMMC’s financial submission. CONU’s interpretation is used in the following discussion.

All applicants were told at the Technical Assistance Meeting held October 19, 2007, that submission of the financial data worksheet module may not be sufficient to determine the accuracy and completeness of the application. The applicant did not submit any internal documents reflecting any of the assumptions used in the forecast.

Differences from the above April submission are as follows with explanations as to the differences.

***CMMC – “The incremental third year operating cost for the ES staff is \$142,000.”***

CONU - Incremental third year operating cost for the ES staff is \$162,078. This includes 8,320 hours at \$14.43 per hour with benefits and taxes of 35%. (The 35% is in the calculated field but the total is not correct. The total wages were adjusted downward from the submission due to rounding.)

***CMMC – “The incremental third year operating cost for Utilities is \$216,000.”***

CONU – Incremental third year operating cost for Utilities is \$214,650. The applicant shows 5.3 Units at \$40,500 per unit. (CONU believes the discrepancy is due to rounding)

***CMMC – “This change in interest rate decreases the third year operating cost by \$507,000.”***

CONU – The change in interest rate from 4.5% to 3.5% decreases third year interest costs by \$489,149. (CONU believes that the difference is related to different time periods being compared in the loan)

***CMMC- “There is a net reduction in third year operating costs of (\$149,000), compared to our original submission (see Attachment A).”***

CONU – There is a net reduction in third year operating costs of (\$130,545). The difference is due to the sum of differences above.

Based upon CONU analysis, there is a change in the Capital Investment Fund obligation for this project, if approved. The original submission had a potential CIF debit of \$3,078,026. The revised potential CIF debit is \$3,124,702. This is an increase of \$46,676.

### **Financial Ratio Analysis**

The following discussion relies on information presented by the applicant. At the technical assistance meeting held in October 2007, the applicant was presented a format with which to complete significant financial projections, including construction timelines and operating expenses. Twenty-three ratios were developed by CONU, based upon the applicant’s submission. These ratios help elucidate the current financial position of the hospital and the impact of the proposed project on its operating and financial feasibility. The applicant provided little detail regarding a construction schedule or cost estimate based on the specific nature of the project that involves a significant amount of renovation and new construction to critical hospital areas.

The years presented are 2004 through 2006 (audited) and 2007 through 2013 (projected). Also, since the third operating year of the proposed project is 2013, that year is presented as modified for the effects of this CON project on hospital operations. A final column related to the difference between the third year with CON compared to third year results without the CON project is also presented. The source for Maine Industry Medians and Northeast Regional Medians is the 2008 Almanac of Hospital Financial and Operating Indicators. We are presenting 2006 reported numbers for comparison to this project.

There are four areas of financial ratio analysis related to the ability of the project to be successful. These ratios are profitability, liquidity, capital structure and activity ratios.

Profitability ratios attempt to show how well the hospital does in achieving an excess of revenues over expenditures or providing a return. Generating revenue in excess of expenditures is important to secure the resources necessary to update plant and equipment, implement strategic plans, or respond to emergent opportunities for investment. Losses, on the other hand, threaten liquidity, drain other investments, and

may threaten the long-term viability of the organization. The profitability ratios reported here include the operating margin, which measures the profitability from operations alone, the net margin (called total margin in some sources), which measures profitability including other sources of income, and the return on total assets.

***Financial Performance Indicators***

<b>Profitability</b>	2006	2007	2008	2010	2013	2006 ME State Median	Northeast Median
Operating Margin	2.80 %	1.18 %	2.32 %	3.52 %	3.12 %	3.80 %	1.83 %
Net Margin	2.87 %	1.60 %	2.66 %	3.84 %	3.41 %	4.68 %	3.00 %
Return on Total Assets	2.95 %	1.73 %	2.93 %	3.57 %	3.22 %	5.26 %	3.48 %

CMMC would remain profitable. In fact, operating margins are projected to increase until 2013. Since the applicant did not propose any new revenues, the project reduces operating margin by 1.16%. The 2007 operating margin is projected at 1.181%. A projected operating margin of 3.28 in 2012 is higher than the margins being achieved in 2006 and 2007. Even without added patients CMMC has the means to take on additional expenses in regards to its excess of revenues over expenditures.

The review of financial indicators is important because they can present a fair and equitable representation of the financial health of an organization and assist in presenting appropriate comparisons. This provides a sound basis for a determination of whether the hospital has the ability to commit the financial resources to develop and sustain the project. While there are a number of indicators that are used in the industry, the ones applied to this review have been selected due to their direct relevance to the financial health of the applicant. One item of terminology needs to be defined. Throughout the analysis a comparison of high-performance and low-performance hospitals is referenced. These groups are based on the uppermost and lowermost quartiles of hospitals based on their return on investments. This analysis chose to not specifically discuss return on investment but decided instead to use that ratio to group all hospitals in regards to making a comparison to the particular project and applicant.

Non-profit hospitals need to perform at financially sustainable levels in order to carry out their public missions. An adequate operating margin is a key indicator of the financial health of a hospital. Of great concern to CONU is the determination of the reasonableness of the methodology the applicant has used in determining the appropriateness of the timing and scope of the project. Over time, capital expenditures can and need to be made in order to meet the goals expressed in the State Health Plan. A great deal of consideration is placed on the evaluation of the applicant's ability to organize and respond to the challenges before it in improving and maintaining the health care system.

Operating margins in the high performing hospital group have seen greater improvements in margins while hospitals in the low performing group are sliding. High performing

hospitals are doing better now than five years ago. Over the same time, lower performing hospitals are generally doing worse than five years ago. There is a widening gap between high and low performing hospitals. Improvement in operating profits for high-performing hospitals drives this widening performance gap. As a comparison, operating margins in the Northeast Region are considerably lower than in other regions.

The Maine State average for operating margin in 2006 was 3.80%. CMMC in 2006 was 2.80, which puts them lower than the median for hospitals in Maine.

The trend for operating margin in the State of Maine has been improving from a low of -1.35 to the present high of 3.8. CMMC for the past four operating years including 2007 averaged 3.09%. 2005 operating margin for CMMC was 7.55% which helped to offset the 0.83% CMMC reported in 2004. Over the course of the projection through 2013 it is projected that the hospital will have an operating margin rising to greater than 4.50% before dropping in 2013 to 4.28% (3.12% if the project is approved).

The effect of this project on operating margins, as projected by the applicant, is a decrease from 4.28 to 3.12. CONU is considering this information as a worse case scenario proposal. This project is not expected to cause a significant impact on the operating margin on the hospital by itself. With the greatly increased floor plan for the ED, we could expect improved efficiencies as generally suggested by the applicant; however, it is reasonable to expect CMMC may experience an increase in Emergency Department visits, both of these outcomes are supported by the literature. Increased surgical cases have not been projected because of this project. No additional patient days were projected.

#### *Financial Performance Indicators*

<b>Profitability</b>	2006	2007	2008	2010	2013
Operating Surplus	\$ 5,843,161	\$ 2,775,527	\$ 5,763,655	\$ 9,632,399	\$ 9,801,848
Total Surplus	\$ 5,983,150	\$ 3,782,865	\$ 6,620,993	\$ 10,509,737	\$ 10,709,186

This table validates that CMMC has the capacity to financially support this project.

*Liquidity:* Current ratios and acid test ratios are indicators of the ability of a hospital to meet its short-term obligations. The acid test ratio is generally considered to be a more stringent measure because it recognizes only the most liquid assets as resources available for short-term debt; the current ratio assumes that inventory and accounts receivable can be liquidated sufficiently to meet short-term obligations. Days in accounts receivable and average payment period also are used to monitor liquidity. Respectively, they indicate the average length of time the hospital takes to collect one dollar of receivables or pay one dollar of commercial credit. Together, they can provide a cursory indication of cash management performance.

**Financial Performance Indicators**

<b>Liquidity</b>	2006	2007	2008	2010	2013	2006 ME State Median	Northeast Median
Current Ratio	3.18	2.69	2.66	2.74	3.02	1.67	1.83
Days in Patient Accounts Receivable	31.85	34.64	34.64	34.64	34.64	56.3 Days	47.7 Days
Days Cash on Hand	60.97	50.37	42.20	49.22	61.31	97.9 Days	67.7 Days
Average Payment Period	40.62	45.60	45.95	46.27	44.54	49.9 days	61.2 Days

In terms of liquidity, CMMC currently has slightly below adequate liquidity, with a payment lag of 8 days between being paid and paying for services. It is interesting to note that days in account receivable was used by the applicant as a baseline for cash and revenues as this ratio remains 34.64 days throughout the projection. The average payment period stays in the 45 days region throughout the projection. Both of these numbers represent significantly better cash management than the Maine Industrial average. Days cash on hand was in a range of 50-60 days historically and is not projected to increase significantly during the course of the project.

Liquidity measures a hospital's ability to manage change and provide for short-term needs for cash. This liquidity alleviates the need for decision making to be focused on short term goals and allows for more efficient planning and operations of a hospital.

Days Cash On Hand is a ratio that is an industry accepted, easily calculated, method to determine a hospital's ability to meet cash demands.

2006 marked a steep decline of cash on hand. Nationally hospitals with revenue of greater than 150M have 77 days cash on hand. CMMC with Net patient service revenue of \$202M and cash on hand of 61 days in 2006 has below the average cash on hand for its peer group. Interestingly, S & P Bond ratings showed no clear distinction between ratings and cash on hand for investment grade ratings. This may mean that high performing hospitals do attempt to control excess levels of on-hand cash.

In 2006 the average days cash on hand for all sources for hospitals in the State of Maine was 97.9 days. Calculated days cash on hand for CMMC in 2006 was approximately 61 days indicating that CMMC was in the 25-50<sup>th</sup> percentile.

According to the same source, between 2000 and 2004 the average days cash on hand remained about 68 days. In 2006 cash on hand reached a five year low. Between 2004 and 2015 average days cash on hand for CMMC is projected to increase by 95 days. In 2004, Maine had 15% less days cash on hand than the Northeast Region at 80 days, 12 days more than the Maine average. In 2006, Maine hospitals had increased their cash on hand by 50% in two years to be 30 days above the regional average.

The impact of the proposed project is calculated to be a decrease of 3 days cash on hand in the third operating year as compared to the non-CON operating projection (with and without this project). This is a minor decrease in days cash on hand. Based upon source information this hospital is projected to be about average for days cash on hand, compared to today's industry averages, with or without the project. Therefore this project will not have a substantial impact on CMMC's operating ability to meet its cash demands. Even if actual cash on hand is lower, based on additional investments in programs and technology, CMMC should be able to adequately support this project. There is a potential strain on the facilities cash reserves should a significant increase in patients occur related to the increased size of the ED.

*Activity and Capital Structure:* Activity ratios indicate the efficiency with which an organization uses its resources, typically in an attempt to generate revenue. Activity ratios can present a complicated picture because they are influenced both by revenues and the value of assets owned by the organization. The total asset turnover ratio compares revenues to total assets. Total assets may rise (or fall) disproportionately in a year of heavy (dis)investment in plant and equipment, or decrease steadily with annual depreciation. Thus, it is helpful to view total asset turnover at the same time as age of plant. Debt service coverage is reviewed in greater detail. Debt Service coverage measures the ability of a hospital to cover its current year interest and balance payments.

#### *Financial Performance Indicators*

<b>Solvency</b>	2006	2007	2008	2010	2013	2006 ME State Median	Northeast Median
Equity Financing	44.1 %	43.7 %	45.3 %	41.3 %	47.8 %	58.0 %	47.4 %
Debt Service Coverage	3.13	3.03	3.25	4.04	4.40	3.48	3.52
Cash Flow to Total Debt	15.7 %	13.3 %	16.4 %	21.4 %	19.6 %	23.8 %	18.2 %
Fixed Asset Financing	91.3 %	87.1 %	83.4 %	54.7 %	73.4 %	52.0 %	65.3 %

Many long term creditors and bond rating agencies evaluate capital structure ratios to determine the hospital's ability to increase its amount of financing. During the past 20 years, the hospital industry has radically increased its percentage of debt financing. This trend makes capital structure ratios important to hospital management because these ratios are widely used by outside creditors. Values for these ratios ultimately determine the amount of financing available for a hospital. Debt service coverage is the most widely used capital structure ratio. Debt service coverage minimums are often seen as loan requirements when obtaining financing. Debt service coverage is the ratio of earnings plus depreciation and interest expense to debt service requirements. In 2006 the median Maine hospital's debt service coverage (DSC) was 3.48x.

CMMC had a DSC in 2006 of 3.13x which places it in the range of 25-50th percentile. The statewide trend for 2002-2006 has been increasing with a low of 2.36x in 2002 and a

high of 3.71x in 2004. The trend for CMMC has been inconsistent for the last 3 years from 1.41x to 5.01x. The trend as projected by CMMC for this project 2008-2013 is that DSC is expected to increase to 5.50x by 2013 with the effect of the project being a decrease to 4.40x. Without the project, the debt service coverage is expected to be 0.90x higher.

CMMC has the capacity and the ability to have adequate debt service coverage. If CMMC were to maintain its debt service coverage at a ratio consistent with its recent history, a change of 0.90x would not significantly impact its ability to service its loans.

*Fixed Asset Financing:* “Low performance hospitals have historically used more debt to finance net fixed assets than high performance hospitals. With the removal of capital cost pass through, long term debt will become most costly relative to equity. High performance hospitals are restructuring their capital positions to reflect this shift in the relative costs of debt and equity capital. However, we expect fixed asset financing ratios to continue to remain stable during the next 5 (five) years as hospitals curtail their growth in new capital expenditures and reduce their reliance on long term debt.”

The Northeast has considerably higher rates in financing fixed assets than other regions. The 2006 average fixed asset financing for hospitals in the State of Maine was 52 percent. In 2006 CMMC was at 91 percent which is the 75<sup>th</sup>-90<sup>th</sup> percentile for the State of Maine. For the years 2002-2006, for hospitals with revenues similar to CMMC, 70 percent is about the average.

The fixed asset financing ratio over the past 5 years has remained relatively consistent in the State of Maine. The proposed project financing will add about 15% to the amount of debt in year three of the project. By 2013 debt at CMMC will double from \$75M in 2004 to \$144M. Due to the lack of a budget narrative, it is not clear if this includes any projects that do not require CON approval.

*Efficiency Ratios:* Efficiency ratios measure various assets and how many times annual revenues exceed these assets.

#### *Financial Performance Indicators*

<b>Efficiency</b>	2006	2007	2008	2010	2013	2006 ME State Median	Northeast Median
Total Asset Turnover	1.03	1.08	1.10	0.93	0.94	1.12	1.13
Fixed Asset Turnover	2.06	2.15	2.17	1.57	1.60	2.74	2.77
Current Asset Turnover	3.08	3.19	3.25	3.18	3.04	4.19	4.15

Total asset turnover (TAT) provides an index of the number of operating revenue dollars generated per dollar of asset investment. Higher values for this ratio imply greater

generation of revenue from the existing investments of assets. Larger hospitals usually have lower values for turnover than smaller hospitals. This can be attributed to two factors. First, larger hospitals are most likely to have newer physical plants. Second, capital intensity is often greater in larger hospitals due to more special services and higher levels of technology. As presented, this project projects no new revenue.

In 2006, according to the source cited above, Maine hospitals had a TAT ratio of 1.12. For 2006 CMMC had a TAT of 1.03 times, this is indicative of the relative age of the hospital actually being lower than most hospitals in Maine and considerable capital expenditures made at the hospital. This is exemplified by the \$22M increase in net fixed assets. CMMC has depreciation expense of \$10M annually which means that CMMC has had \$42M in capital expenditures in the past two operating years. In 2006, CMMC received CON approval for \$7.2 Million in expenditures to relocate their ICU.

In the period of 2002 – 2006 there has been a steady increase in the TAT for Maine hospitals. The expected trend for CMMC is for TAT to lower during the time frame of this project 2009-2013. This is reflective of a hospital planning to spend significant funds for capital improvements or investments in technology. This is a capital intensive project. During the time frame projected, the hospital is expected to increase revenues by \$65M, even though they project no increase in revenue from completing this project.

Operating Costs in the third operating year are expected to increase by \$3,649,700. For the Bureau of Insurance this amount is adjusted to a current value of \$3,073,088. The impact on the CIF is \$3,124,702. The \$3,649,700 includes \$1,724,702 in depreciation and \$1,548,270 in interest expense. Additional costs for staffing and utilities amounts to \$376,728 in 2013 dollars.

In completing this section of the analysis, the CONU concludes that, as proposed, the applicant can financially support the project. Expected demands on liquidity and capital structure are expected to be adequate to support projected operations. Financing and turnover ratios show little impact on the organization as a whole from successfully engaging in this project. The hospital has shown significant current earnings which are not expected to be significantly impacted by this project.

The annual operating costs of this project are driven in large part by interest and depreciation, \$162,078 in salaries and benefits related to the addition of 4.0 full time equivalent housekeeping staff and \$214,650 in additional utilities. A lack of detail provided by the applicant specific to the capital expenditures makes CONU unable to adequately assess costs of the components of this project. It is unclear how CMMC will handle any additional cases without adding nursing or clinical staff.

### **Changing Laws and Regulations**

CONU staff is not aware of any imminent or proposed changes in laws and regulations that would impact the project. CMMC has the organizational strength to adjust to reasonable changes in laws and regulations.

The applicant has not a budget narrative. A budget narrative might have assisted the Certificate of Need Unit in determining what was included and assumed in the financial forecast. A budget narrative is crucial in determining the reasonableness of the assumptions regarding the financial projections for the applicant before discussing the appropriateness of engaging in this project.

Additionally, the applicant has not provided financial forecasts that correspond with stated goals of the project, namely reducing ED visit growth through the inclusion of a preventive component. There are no changes reflected in revenues when comparing years 2011 through 2013 with or without the project. Literature suggests that this type of project will increase volumes in lab, ED, etc. Therefore the applicant has either incorrectly incorporated changes such as “lowering the growth projection for ED visits from the current growth rate of 7% a year to a projected 4% annual growth rate” into the financial forecast without the project or has erroneously not incorporated those changes at all.

The applicant has not developed an acceptable rationale for explaining why this project will not expand utilization of services in the ED and consequently in the OR and inpatient services. Multiple sources indicate that the availability of ED beds impacts utilization. In fact, the applicant points to an increase in patient elopements for a reason for the project, if this is so the financial forecast should show an increase in revenues and expenses for these decreased patient elopements.

Further, the applicant has not provided a financial forecast that corresponds to the stated goals of increasing efficiency and savings in per unit costs. This discrepancy is noteworthy because the applicant contention that the project will increase efficiency and reduce per unit costs is directly contradicted by the financial forecasts that show no efficiencies and increased per unit costs. Therefore it is not possible to determine whether the savings were not included in the forecasts and the forecasts are wrong, or that the savings from this project have not been calculated and incorporated in the financial forecasts, or there are no actual savings from completing this project.

The applicant has not explained how the ED will be able to meet its forecasted 66,000 ED visits in 2013 in its current ED. This ED is “approaching maximum capacity”. This is an increase of 13,000 visits that in the financial forecast it is assumed will be treated in its current physical setting. This inconsistency is not addressed.

### **iii. Conclusion**

CONU is unable to determine the economic feasibility of the project because the applicant:

- Has not provided specific information in the form of a budget narrative.

- Has not provided financial forecasts that correspond with stated goals of the project, namely reducing ED visit growth through the inclusion of a preventive component.
- Has not developed an acceptable rationale for explaining how this project will not expand utilization of services in the ED and consequently in the OR and inpatient services.
- Has not provided financial forecasts that correspond to the stated goals of increasing efficiency and savings in per unit costs.
- Has not provided an explanation for how an ED that is “approaching maximum capacity” will still be able to serve an additional 16,000 ED visits in its current physical situation.

As presented, the CONU cannot determine that the financial forecast of CMMC is reasonable and is in conformity with stated objectives of the project. If the proposed capital expenditure is in excess of five million dollars, the certificate of need application states that the applicant may be required to include a full-scope financial feasibility study conducted by an independent certified public accountant; all applicable assumptions and sources of data used in preparing the financial projections shall be disclosed. Since the applicant was unable to meet the requirements of a reasonable and consistent financial forecast it is recommended that any further review of this project not be undertaken without the inclusion of a full-scope financial feasibility study conducted by an independent certified public accountant.

Consequently, CONU recommends that the Commissioner determine that CMMC has not met its burden to demonstrate that the proposed project demonstrates economic feasibility.

## IV. Needs to be Met

### A. From Applicant

“The organization’s primary service area consists of Androscoggin County, Oxford County, and part of northern Cumberland County. The secondary service area extends into surrounding counties and across Maine’s ‘central tier’ to the coast. This secondary service area includes Franklin, Kennebec Sagadahoc, and Lincoln counties. The State of Maine is considered a tertiary service area, as critically ill and injured patients may be brought to the facility from any point in the state.”

“The delineation of these service areas is supported by patient origin data for the ED and Lab, by hospital service area. A map of Maine by hospital service area is included in the Appendix following this section, as Attachment #1. Some 82% of patients served by the CMMC ED live in the primary service area, with the 18% balance of patients coming from other surrounding counties and in some instances outlying regions of Maine and eastern New Hampshire. The Lab service area is believed to be similar to the ED service area.”

“The only urban area in the primary service area is Lewiston/Auburn, with a combined population of 58,893 (~63,000 with the addition of new refugee population since 2000 census). The remaining towns are classified as being rural (or very rural). While there are other urban population centers in the central tier, this region is also is predominantly rural, as is most of the state. Transport to the ED from long distances is by LifeFlight of Maine or by one of the many EMS organizations serving the area.”

“The population in the comprehensive service area includes both an insured working population and a sub-set of poor, uninsured, aging, and chronically ill. In the Lewiston/Auburn area the influx of nearly 5,000 Somali and Somali Bantu to the region has brought new challenges to the healthcare system, particularly in the areas of language, determining and delivering culturally appropriate care, and meeting public health requirements.”

“Population figures for the towns (minor civil divisions) in CMMC’s primary service area, which is all of Androscoggin County (CMMC), Oxford County, and part of northern Cumberland County appear below. Androscoggin and Oxford counties alone are nearly 2,700 square miles, and CMMC is the nearest tertiary hospital / level II trauma center. (Population count is in descending order for each county, which points to the rurality of the majority of the area.)”

#### CMMC Primary Service Area:

Town	County	Population
Lewiston	Androscoggin	* 35,960

\* Plus additional  
~5,000

Town	County	Population
Auburn	Androscoggin	* 23,203
Lisbon	Androscoggin	9,077
Turner	Androscoggin	4,972
Poland	Androscoggin	4,866
Sabattus	Androscoggin	4,486
Greene	Androscoggin	4,076
Durham	Androscoggin	3,381
Livermore Falls	Androscoggin	3,227
Mechanic Falls	Androscoggin	3,138
Minot	Androscoggin	2,248
Livermore	Androscoggin	2,106
Leeds	Androscoggin	2,001
Wales	Androscoggin	1,322
Bridgton	N. Cumberland	4,883
Casco	N. Cumberland	3,469
Naples	N. Cumberland	3,274
Harrison	N. Cumberland	2,315
Sebago	N. Cumberland	1,433
Rumford	Oxford	6,472
Paris	Oxford	4,793
Norway	Oxford	4,611
Oxford	Oxford	3,960
Fryeburg	Oxford	3,083
Mexico	Oxford	2,959
Dixfield	Oxford	2,514
Bethel	Oxford	2,411
Buckfield	Oxford	1,723
Otisfield	Oxford	1,560
Peru	Oxford	1,515
Waterford	Oxford	1,455
Porter	Oxford	1,438
Hiram	Oxford	1,423
West Paris	Oxford	1,307
Woodstock	Oxford	1,307
Brownfield	Oxford	1,251
Canton	Oxford	1,121
Hebron	Oxford	1,053
Denmark	Oxford	1,004
Lovell	Oxford	974
Hartford	Oxford	963
Andover	Oxford	864
Sumner	Oxford	854
Greenwood	Oxford	802
Roxbury	Oxford	384

refugees since 2000

Town	County	Population
Newry	Oxford	344
Sweden	Oxford	324
Stow	Oxford	288
Stoneham	Oxford	255
Hanover	Oxford	251
Gilead	Oxford	156
Byron	Oxford	121
Upton	Oxford	62
Lincoln	Oxford	46
Magalloway	Oxford	37

“CMMC **Secondary Service** area – counties only (Androscoggin, Oxford, Northern Cumberland, Franklin, Kennebec Sagadahoc, and Lincoln)”

County	Population
Androscoggin	103,793
Oxford	54,755
Northern Cumberland (5 towns)	15,374
Franklin	29,467
Kennebec	117,114
Sagadahoc	35,214
Lincoln	33,616
Total	389,333

(2000 Census)

“A snapshot of demographic and health indicators for CMMC’s local and major county reflect higher mortality as a result of chronic illnesses (particularly heart, respiratory and cardiovascular disease, and diabetes). The population is also growing ‘older’. The aging of the population is a critical issue for healthcare planners. Over the next decades the Baby Boomers will continue to join the current elderly in record numbers, entering the prime years for developing chronic and other illnesses and complications of old age. The elderly have higher rates of chronic illness such as heart disease, stroke, diabetes, cancer, arthritis and osteoporosis. In 2004 people aged 45 and older represented 39% of Maine’s population. By 2025 this segment will rise to 47%. Those aged 65 and older will rise from ~14% to 21%. The current ED and Lab facilities at CMMC are insufficient for the rise in chronic illness and geriatric-related conditions projected for this aging population.”

“Comparison of local (Lewiston-Auburn) to Maine to US **demographic** data.”

	L/A	Maine	US
Percentage age 65 and older	17.8%	14.4%	12.4%

(US Census)

“Leading causes of death in the region also point out the high levels of chronic illness.”

“Comparison of Androscoggin County to US mortality data – leading causes of death 2003/04.”

per 100,000	Androscoggin C	US
Heart disease	262.0	237.0
Cancer	238.4	238.6
Stroke	66.9	61.3
Chronic lower respiratory diseases	63.1	59.8
Accidents (unintentional injuries)	36.8	39.4
Diabetes	33.9	30.4

(Vital Records, Maine CDC)

“Another factor in the increase in chronic illness is the rise in obesity statewide, particularly obesity in children. Maine has the highest rate of adult obesity in New England, and about a third of Maine youth are either overweight or at risk of becoming overweight.”

“The episodic crises for chronic illnesses require immediate medical intervention, and particularly impact the ED and Lab.”

“The hospital’s last complete fiscal year was FY 2007 (July 1, 2006-June 30, 2007). The historical use patterns for the Emergency Department and Laboratory for the latest three fiscal years are:

#### **Emergency Department (ED)**

FY 07	52,498 visits
FY 06	48,700 visits
FY 05	45,666 visits

#### **Laboratory (LAB)**

FY 07	740,159 tests
FY 06	698,198 tests
FY 05	685,388 tests”

“Current Maine ED capacity to meet projected need and demand - The need for ED capacity is a function of the scope of clinical services offered by individual hospitals and the demand including size/age breakdown of the population served. Under the present distribution of Maine’s ED capacity, the need for community hospital ED services will increase as Maine’s population dramatically ages in the future. The people over the age of 65 utilize ED services at a disproportionately high level of chronic disease resulting in frequent hospitalizations. Community hospitals EDs meet the needs of their local services area within their scope of services and also transfer patients to a tertiary center ED, when appropriate. Patients will continue to be treated in community hospitals so long

as physicians, nursing and technical support staff are available to provide high quality patient care. The projected shortage of physicians, nurses and other support staff will likely impact community hospitals even more than the tertiary centers. Lack of staff is already a common reason for transferring critically ill or injured patients from community hospitals to the tertiary centers or bypassing community hospitals completely.”

“Maine’s three tertiary care hospital EDs provide the highest level of emergency care within Maine’s healthcare delivery system. The aging of Maine’s population will also create increased demand on the tertiary hospitals. The tertiary centers will be in a best position to recruit and retain specialty physicians, including intensivists, ED and critical care nurses and specialized support staff to meet the demand for both the initial emergency services and subsequent high acuity hospitalizations in the decades to come.”

“Maine hospitals are straining to meet the demand for emergency care as evidenced by recently approved ED expansion projects at MaineGeneral, Southern Maine Medical Center, Mid-Coast Hospital, Maine Medical Center and St. Mary’s Regional Medical Center.”

“Future Need and Demand for Emergency Care - In 2000, Maine had the seventh highest share of elderly in the nation with almost 14% age 65 or over (see Attachment #2). By 2004, Maine now ranks as the “oldest” state in the nation with the median age of 40.7 years old.”

“Over the next twenty (20) years, Maine’s population is projected to grow by 10.9%. However, the Maine’s population growth will predominantly occur in the over 65 age group with the under 45 age group projected to lose population (see Attachment #3).”

“This significant demographic shift in Maine’s population will definitely impact the need and demand for ED services as people over 65 are disproportionately higher utilizers of ED services. For example, only about 15% of the CMMC service area population is over 65, but 15.7% of the CMMC ED patients were over age 65 during the most recent fiscal year. As the over 65 age group grows, the need and demand will rise precipitously.”

“Tertiary centers will most probably experience additional growth in ED patient transfers as community hospitals convert to Critical Access Hospitals or are unable to staff the beds due to the anticipated shortage of healthcare professionals.”

“All hospitals, but especially the tertiary centers, will be expected to “flex up” capacity to respond to the anticipated Avian flu pandemic, a potential terrorist attack or a natural disaster. Maine hospitals are preparing contingency plans for these public health emergencies, but have not added additional bed capacity. Maine’s three tertiary centers, which are regional resource centers for emergency preparedness, will be expected to have the capacity to respond to these and any other emergencies, including additional ED capacity for the critically ill or injured patients. The need and demand for ED bays at the tertiary centers will jump dramatically during any of the public health emergency scenarios described above.”

“Adoption of healthier lifestyles, broader adoption of advance directives and a cultural change away from “end of life” care in hospitals would mitigate the need and demand for ED services. While there are some encouraging signs regarding healthier lifestyles, the philosophical changes need to broaden the adoption of advance directives and end of life care have yet to occur. Any projection of a decreased need and demand for ED services based on these issues would be highly speculative.”

“Statewide Lab capacity - The need for Lab capacity is a function of the scope of clinical services offered by individual hospitals and the size/age breakdown of the population served. Under the present distribution of Lab capacity, the need for community hospital Lab services will increase as Maine’s population dramatically ages in the future. The people over the age of 65 utilize Lab services at a disproportionately high level due their frequency of hospitalization and the severity of their illness once hospitalized. Community hospitals Labs meet the needs of each community hospital’s service area and also transfer patients to tertiary center EDs, when appropriate. Patients will continue to be treated in community hospitals so long as physicians, nursing and technical support staff are available to provide high quality patient care.”

“Maine’s three tertiary care hospitals provide the highest level of critical care within Maine’s healthcare delivery system. The aging of Maine’s population will also create increased demand on the tertiary hospitals. In addition, the projected shortage of physicians, nurses and other support staff will likely impact community hospitals even more than the tertiary centers. Lack of staff is already a common reason for transferring critically ill patients from community hospitals to the tertiary centers. The tertiary centers will be in a best position to recruit and retain specialty physicians, including intensivists, ED and critical care nurses and specialized support staff to meet the demand for emergency services in the decades to come.”

“Future Need and Demand for Lab capacity - The planning horizon for this project is at least twenty five (25) years as the current Lab being replaced is 36 years old.”

“In 2000, Maine had the seventh highest share of elderly in the nation with almost 14% age 65 or over (see Attachment #4). By 2004, Maine now ranks as the “oldest” state in the nation with the median age of 40.7 years old (see Attachment #2).”

“Over the next twenty (20) years, Maine’s population is projected to grow by 10.9%. However, the Maine’s population growth will predominantly occur in the over 65 age group with the under 45 age group projected to lose population (see Attachment #3). This significant demographic shift in Maine’s population will definitely impact the need and demand for Lab services as people over 65 are disproportionately higher utilizers of Lab services. For example, only about 15% of the CMMC service area population is over 65, but 20% of the CMMC Lab patients were over age 65 during the most recent fiscal year. As the over 65 age group grows, the need and demand will rise precipitously.”

“Tertiary centers will most probably experience additional growth in patient transfers as community hospitals convert to Critical Access Hospitals or are unable to staff the beds due to the anticipated shortage of healthcare professionals.”

“All hospitals, but especially the tertiary centers, will be expected to “flex up” capacity to respond to the anticipated Avian flu pandemic, a potential terrorist attack or a natural disaster. Maine hospitals are preparing contingency plans for these public health emergencies, but have not added additional bed capacity. Maine’s three tertiary centers, which are regional resource centers for emergency preparedness, will be expected to have the capacity to respond to these and any other emergencies, including additional Lab capacity for the critically ill or injured patients. The need and demand for Lab capacity at the tertiary centers will jump dramatically during any of the public health emergency scenarios described above.”

“Adoption of healthier lifestyles, broader adoption of advance directives and a cultural change away from “end of life” care in hospitals would mitigate the need and demand for ED services. While there are some encouraging signs regarding healthier lifestyles, the philosophical changes need to broaden the adoption of advance directives and end of life care have yet to occur. Any projection of a decreased need and demand for Lab services based on these issues would be highly speculative.”

### **Emergency Department (ED)**

“The projected visits by year:

FY 2011	61,415 visits
FY 2012	63,872 visits
FY 2013	66,426 visits”

“The methodology is explained in below.”

“However, this is only a three year projection. We believe the need for ED services in the central, western and coast region of Maine will continue to increase for the reasons enumerated. in question (see above).”

### **Laboratory (LAB)**

“The projected tests by year:

FY 2011	926,385 tests
FY 2012	954,176 tests
FY 2013	982,802 tests”

“The methodology is explained in below.”

“However, this is only a three year projection. We believe the need for Lab services service in the central, western and coast region of Maine will continue to increase for the reasons enumerated (see above).”

“Central Maine Medical Center has already demonstrated it possesses the necessary medical specialists, clinical staff, management infrastructure and technological resources to provide tertiary level Emergency Department and Laboratory services. CMMC is now willing to make new investments in the physical plant and any other necessary additional resources that will enable it to provide the highest quality care for the patients at the higher volume levels anticipated in the future.”

“CMMC Emergency Department visits have grown an average 7% per year for the last three years (see above).”

“One approach to projecting the third year ED volume would be to continue the 7% straight line growth rate from 2007 through 2013, the third year of operation of the new CMMC ED. This projected rate of growth could be justified based on the most current utilization patterns.”

“The aging of the population, some population growth in the primary service area, projected migration of retirees to Maine and the continued expansion of the CMMC Medical Staff will necessarily increase demand on the CMMC Emergency Department. There are, however, mitigating factors or interventions which will slow the rate of ED growth. These mitigating factors (interventions) are:

- Expanding the base of primary care physicians in the greater Lewiston/Auburn area
- Continuing to invest in management of chronic disease
- Continue existing and possibly expand prevention initiatives”

“CMMC projected various future rates of growth based on the mitigation factors enumerated above. These growth rates are illustrated on Chart #1 – Line A (below).”

“After analysis of both the growth factors and the mitigation of growth factors enumerated above, CMMC is projecting the current 7% rate of growth can be cut by more than 40%, which equates to a 4% growth rate going forward. By projecting this conservative 4% growth rate instead of the current 7% growth rate, the projected 2013 ED visits drops from 78,785 to 66,427 (Chart #1 below – Line B).”

“Once the third year volume projection was complete, the next step was to determine the requisite number and type of treatment rooms to safely and efficiently accommodate this volume of patients.”

“An industry metric to determine capacity is a simple visits / treatment room guideline. Quoting from the Maine Medical center ED CON Application (pg 44): “The most current suggestion is 1,200 to 1,800 visits per treatment room with Academic Medical Centers, Teaching Hospitals, Level One Trauma Centers and other medical centers with

higher acuity patient and specialty services meeting the 1,200 visit mark and smaller community hospitals trending toward the 1,800 visits/ room mark.” (Health Strategies and Solutions, March 2004).”

“CMMC is a level II trauma center, a cardiac center, a teaching hospital, and offers a comprehensive scope of medical and surgical services. Using the 1,200 visits per room metric, 55 treatment rooms would be required to safely and effectively manage the 66,427 visits projected for 2013 (Chart #1 – Line C). If the mid-point of 1,500 visits per treatment room is adopted, 44 treatment rooms would be required. (Chart #1 – Line D).”

“CMMC ED leadership believe added efficiencies gained by the design of the new ED physical plant and ongoing performance improvement initiatives can reduce the number of needed treatment rooms further. The final ED design is for 42 treatment rooms, including the Clinical Decision Unit.”

- “Length of stay – Average length of stay for all emergency department patients will be less than 2.5 hours (**current LOS 2.78 Hours**).”
- “Location of holding or observation beds (treatment spaces) – The Clinical Decision Unit bays will be located outside of the emergency department which will allow you to move patients out of dept. for extended observation (currently observation occurs not only with in the emergency department for a select group of patients but also occurs on several nursing units)”
- “Time to admit- Emergency Department patients who are admitted will be transported out of the department less than 60 minutes after disposition ( current CMMC average is 127 minutes)”
- “Turnaround times for diagnostic tests – Average turn around times for results from lab and imaging studies will be 30 minutes or less (current CMMC lab turnaround =87 minutes, Current imaging – 56 minutes, CTs – 107 minutes)”

**CHART # 1**

2007	2013				
A.	7%	5%	4%	3.5%	
B. Visits 52,498	78,785	70,353	66,427	64,533	
C. @1,200	43	66	59	55	54
D. @1,500	35	53	47	44	43

**Lab**

“While the lab has had a 7% increase in tests in the last fiscal year, and a projected 7% increase for the next fiscal year, we are projecting a more conservative 3% annual growth rate in tests going forward.”

“Central Maine Medical Center is located in the geographic center of central Maine in Lewiston which is a convenient location to serve about one third (1/3) of Maine’s population. Lewiston is readily accessible by automobile and ground ambulance transports. Residents of this region also have rapid air access as a LifeFlight of Maine helicopter is based on a helipad on the CMMC. Critically ill and injured patients located anywhere in the Primary or Secondary Service Area have rapid access to the CMMC Emergency Department and Trauma Center.”

“All of the hospital-owned medical practices accept Medicare and MaineCare so area residents have access to primary and specialty physicians.”

“The CMMC Emergency Department and Laboratory are the busiest in central, western and coastal Maine, provides necessary medical care regardless of a patient’s ability to pay.”

“Finally, CMMC provides hospitalized patients necessary medical care regardless of a patient’s ability to pay.”

### **Additional**

“There are no deficiencies and/or waivers related to licensing, certification, accreditation and/or liability coverage that will be resolved by the project. We are embarking on this project to minimize or eliminate the possibility of receiving deficiencies or waivers in the future.”

“Need is defined as a *situation or a condition of a person, expressed in healthcare outcomes, such as mortality, morbidity, or disability, that is considered undesirable and is likely to exist in the future.*”

“Overall need drives demand, which is then reflected in utilization patterns. In this case the need is the underlying health status of the population served by the project. Maine as a whole has a high rate of chronic disease, with accompanying episodic or related complications that require intervention in the ED. Cardiovascular disease is the leading cause of death in Maine, accounting for 40% of all deaths and 25% of all hospital cost statewide. The rate of asthma in Maine is 10.2%, compared to 8% for the US.”

“There are also regional differences in chronic disease incidence. For example, Maine’s central region has a higher prevalence of diabetes and asthma than do the southern or northeastern regions of the state. The central region’s rate per thousand for individuals hospitalized for chronic obstructive pulmonary disease (COPD) is similar to that of the northern region, but considerably higher than that of the southern region. The rate of death from COPD is 30% higher in central than in southern Maine, and 9% higher than in northern Maine.”

“Utilization is the reflection/result of need, which the ED and Lab (in its ancillary function) must meet. It is also a reflection of the socioeconomic status of the population. In 2000, close to 12% of those in the central region were living below the poverty level, and statewide over 132,000 individuals were uninsured. For the uninsured and underinsured, the ED is often the provider of choice, and Maine hospitals are required to provide ED care with or without compensation. The annual hospital uncompensated care burdens are highest in the central region.”

“For CMMC, utilization is also a function of our tertiary status and the regional scope of services that we provide. These services include a level II trauma center (including LifeFlight of Maine), comprehensive cardiac services (Central Maine Heart and Vascular Center), and a wide range of specialties.”

“The potential for increase in demand would come as a result of increasing chronic disease resulting from the population becoming ‘older’, and an increase in chronic illness among younger individuals as a result of the obesity epidemic among youth, with obesity a contributing factor to diabetes, cardiovascular illness, asthma, etc. Therefore, there is no reconciliation of differences necessary.”

## **B. CONU Discussion**

### **i. Criterion**

Relevant criterion for inclusion in this section are specific to the determination there is a public need for the proposed services as demonstrated by certain factors, including, but not limited to:

- Whether, and the extent to which, the project will substantially address specific health problems as measured by health needs in the area to be served by the project;
- Whether the project will have a positive impact on the health status indicators of the population to be served;
- Whether the services affected by the project will be accessible to all residents of the area proposed to be served; and
- Whether the project will provide demonstrable improvements in quality and outcome measures applicable to the services proposed in the project;

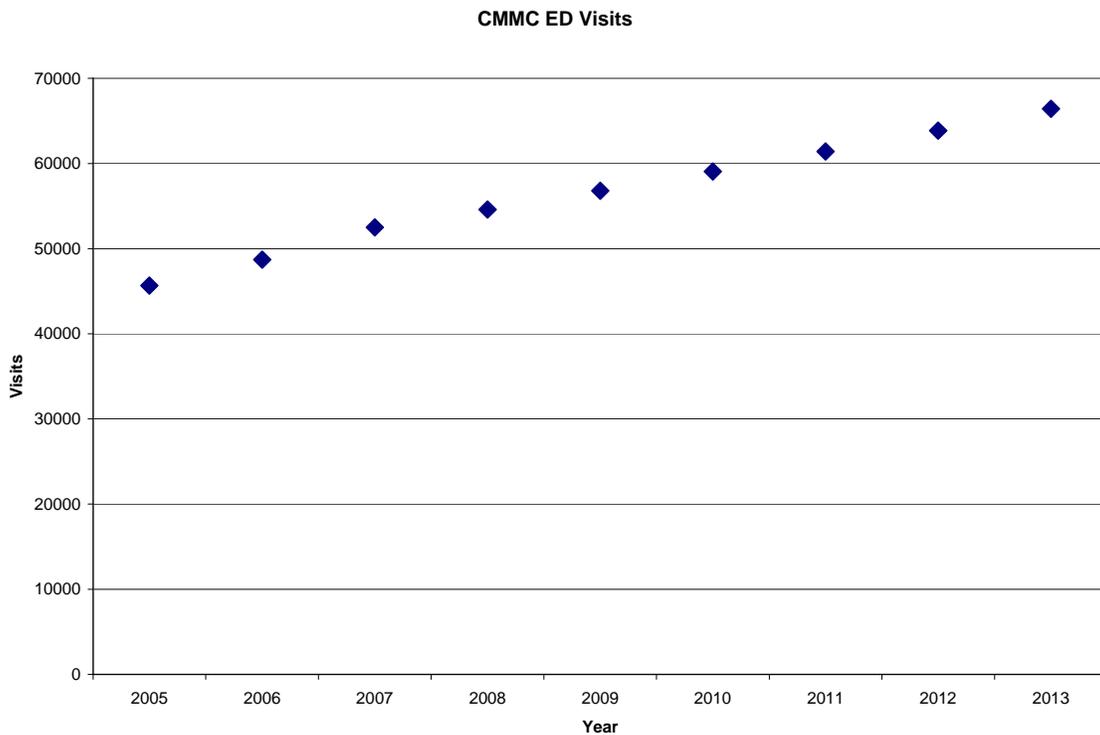
### **ii. Analysis**

The applicant provided partial historic and forecasted use patterns relative to the proposed Emergency Room and Laboratory expansion. According to data provided by the applicant, there has been a 7 % increase per year in ED visits from FY-05 through FY-07 and a 2 % increase in lab tests from FY-05 through FY-06 with a 7 % increase in lab tests from FY-06 through FY-07. Future growth is forecasted to be at 4 % in ED visits from FY-2007 through FY-2013 and 3 % in lab tests from FY-2008 through 2013. The applicant states that the current ED and Lab are not sufficient to accommodate the

existing and projected future need of the rise in chronic illness and geriatric-related conditions presenting themselves to CMMC's ED.

The applicant has conservatively estimated the growth of ED visits from 7% to 4% due to their addition of 7 family practices physicians and 2 pediatricians in their primary care network, having adult and pediatric hospitalists, existing prevention services, chronic care initiatives and the Community Health Prevention Fund.

The following charts were graphed by CONU using data provided from the applicant.



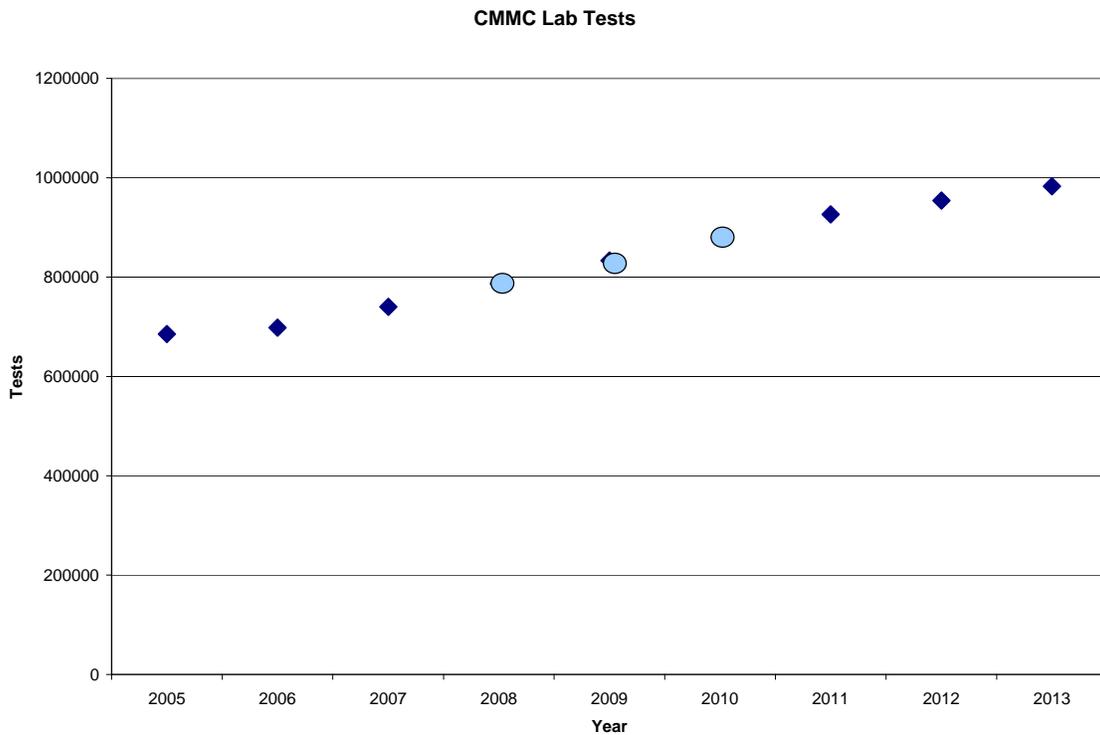
The applicant has stated that the main reasons that ED visits are increasing at CMMC is its status as a Tertiary Center and Level II Trauma Center and the maturing of Maine's population. As Maine's population continues to age more chronic conditions will occur resulting in more ED visits. CMMC continues to see a rise in patients leaving without being seen from .8 % in 2002 to 1.4 % in 2007. Other ED metrics show a higher rate in average time to physicians, average length of stay all patients, average length of stay admitted patients and average length of stay discharged patients compared to leading practices.

The applicant did not mention any instances of diversions in the original application. In information submitted on April 1, 2008, in response to additional questions asked by CONU, the applicant stated they are experiencing 1-2 diversions per week. The applicant was not clear as to whether these were ambulance diversions.

Additionally, the applicant compared the need for its additional ED beds to a recent submission by Maine Medical Center (MMC) that expanded their ED beds. While each application is evaluated on its own merits, it is notable that MMC had a much higher average length of stay of 4.5 hours vs. CMMC's 2.78 hours and MMC's left without being seen rate was 4% vs. CMMC's 1.4%. MMC also provided CONU with the percentage of ED patients being boarded and CMMC has not provided CONU with this information. It is not clear if CMMC's average length of stay in the ED included First Care patients. It is not clear what actions have been taken by the applicant to improve ED throughput prior to the decision to expand the ED. The information provided by CMMC does not indicate that a public need is apparent.

The applicant's current visits per ED bed in FY-2007 is 1,693 (52,498 ED visits / 31 beds). The applicant's projected visits per ED bed in FY-2013 would be 2,141 (61,415 ED visits / 31 beds) if beds are not added. The applicant proposes the same methodology that Maine Medical Center proposed in their 2007 CON application (Range between 1,200 to 1,800 visits per bed per day depending on type of facility).

The applicant has projected a need for 44 treatment rooms (66,427 visits / 1,500 per visits per bed). This is consistent with other ED projects recommended for approval by CONU in the past 3 years, including: MaineGeneral Medical Center, Southern Maine Medical Center, Maine Coast Memorial Hospital, Maine Medical Center and St. Mary's Regional Medical Center.



According to the applicant, CMMC has continued to see an increase in Lab services due to many of the same reasons resulting in an increase in ED visits. In addition, CMMC's

Lab provides services to its affiliated critical care hospitals in Bridgton and Rumford. The graph above represents partial data provided by the applicant as well as CONU interpreted data. The diamonds represent the data provided by the applicant, while the circles represent CONU's estimated data. The circles are estimated numbers due to CONU being unable to duplicate the growth measurement used by CMMC.

The applicant did not discuss the need for behavioral health treatment rooms, while the 2007 St. Mary's Regional Medical Center CON application stated the need for behavioral health intervention rooms in the ED as part of their designation of a behavioral health referral location.

The applicant also places emphasis on the aging population and the predicted growth in this population. The applicant did not speak to the specific needs of the elderly or provide ED utilization data, although they do provide data that suggests a disproportionate use of laboratory services by doctors treating elderly patients.

In this application, CMMC proposes rooms designed specifically for Behavioral Health patients. They do not say how many rooms will be designed, nor did they document in any way the need (i.e. utilization of CMMC ED by this population). The applicant does not discuss recently approved renovations of the Emergency Department Behavioral Health rooms at St. Mary's Hospital or what collaboration occurs or protocols exist for access to care. In the St. Mary's application they demonstrated that changes in their ED would decrease average length of stay of behavioral health patients by up to 1 day. CMMC has not demonstrated an improvement in outcome measures.

According to a GAO report entitled Hospital Emergency Departments (2003), "No single factor stands out as the reason why crowding occurs. Rather, a number of factors, including many outside the emergency department, are associated with crowding. In both the opinion of hospitals we surveyed and of hospital officials we interviewed, the factor more commonly associated with crowding was the inability to transfer emergency patients to inpatient beds once decisions had been made to admit them as hospital patients rather than to release them after treatment. In looking at why hospitals did not have the capacity to always meet the demand for inpatient beds from emergency patients, hospital officials, researchers, and others pointed to (1) financial pressures leading to limited hospital capacity to meet periodic spikes in demand for inpatient beds and (2) competition between admissions from the emergency department and scheduled admissions such as surgery patients, who are generally considered to be more profitable. Other factors cited as contributing to crowding include closures of nearby hospitals or availability of physicians and other providers in the community."

The applicant cites the challenges presented by significant number of Somali and Somali Bantu population such as language, culturally appropriate care and meeting public health requirements. However, they failed to state what measures they have already taken, if any, to meet this need or how this project will address this access need. This appears to be especially relevant with the relocation of First Care, although no Somali and Somali Bantu utilization data was presented for the ED or other hospital services. It is not clear

what the extent of Somali and Somali Bantu access to healthcare is facilitated by CMMC. Dr. Dora Mills comments on the apparent lack of consultation with the Somali and Somali Bantu population in her review of this application relative to the State Health Plan (located in Section VI).

They also speak to the need to “flex up” to meet public health emergencies. CMMC failed to demonstrate how much additional “flex capacity” is needed and what portion of that capacity CMMC plans to meet through this project.

The applicant has declared themselves as a non-profit hospital; therefore all services affected by the project will be accessible to all residents of the area proposed to be served.

A discussion about what collaborative efforts have occurred between CMMC and St. Mary’s to meet the present and future needs of the service area is appropriate.

### **iii. Conclusion**

The applicant has not met its burden to demonstrate that the project meets the following factors used to determine if a public need exists: the extent to which the project will substantially address specific health problems, as measured by health needs in the area to be served by the project; whether the project will have a positive impact on the health status indicators of the population to be served; and whether the project will provide demonstrable improvements in quality and outcome measures applicable to the services proposed in the project.

CONU recommends that the Commissioner determine that CMMC has failed to meet its burden to show that the proposed project meets the public need.

## V. Alternatives Considered

### A. From Applicant

#### **Emergency Department**

“The rationale for the new addition / renovation of the Emergency Department at the south side of the CMMC campus is covered in detail in Section II.”

“Since the Emergency Department heavily relies on existing services located within Central Maine Medical Center, there has never been a discussion about moving the Emergency Department to an offsite location, .i.e. a location other than 300 Main Street in Lewiston.”

#### **Laboratory**

“The Laboratory location followed the decision to expand the Emergency Department as described above. CMMC has considered and rejected building an offsite central lab and retaining a “stat” lab in the hospital. The added costs of redundant staffing, transportation and potential delays which compromise quality and add costs made the offsite central lab concept unfeasible.”

“The CMMC Emergency Department and Laboratory have a unique mission in Maine’s health care delivery system for reasons explained in detail in this Application.”

“Both the CMMC Emergency Department and Laboratory are existing services operating in woefully inadequate space. Residents of the communities we serve are telling us they want more expedited treatment and less waiting in the Emergency Department. The Laboratory physicians and staff tell us they need more space to manage today’s and future volume of lab tests.”

“Both the CMMC Emergency Department and Laboratory are existing services with established physician referral bases and market position in the region.”

“St. Mary’s Hospital recently gained approval to expand their Emergency Department. This Applicant stated that the proposed ED expansion would have no effect on CMMC. Likewise we do not believe the CMMC ED or Laboratory project will have any adverse effect on any other hospital in Maine.”

**B. CONU Discussion****i. Criteria**

Relevant criteria for inclusion in this section are specific to the determination that the proposed services are consistent with the orderly and economic development of health facilities and health resources for the State as demonstrated by:

- The impact of the project on total health care expenditures after taking into account, to the extent practical, both the costs and benefits of the project and the competing demands in the local service area and statewide for available resources for health care;
- The availability of state funds to cover any increase in state costs associated with utilization of the project's services; and
- The likelihood that more effective, more accessible or less costly alternative technologies or methods of service delivery may become available;

**ii. Analysis**

Total projected 3<sup>rd</sup> year incremental operating costs are projected to be \$3,649,700 and of that amount MaineCare's 3<sup>rd</sup> year cost is \$ 655,121 ( $\$3,649,700 \times 17.95\%$  (MaineCare payor mix projected by the applicant for CON project type of services only)), which is both the Federal and State portions combined. Currently the impact to the State portion of the budget by the third year of operation (2013) would be approximately \$229,292 ( $\$655,121 \times 35\%$ ).

Laboratory –

CMMC states that they did consider relocating the Laboratory off-site, however, they decided that this would result in duplicate staffing, the need for transportation, and delays. The applicant stated that this would compromise quality of care to patients, increase costs to services, increase turn-around time and diminish quality of results. The applicant did not quantify these statements or provide its analysis.

CMMC focuses on the idea that an off-site Laboratory would increase costs per test, costs in capital purchases and operating expenses. The applicant states that “the most significant issue is that there would need to be duplication of instrumentation.” CMMC is concerned with purchases of additional equipment to handle a split workload. However, they are proposing in this application to purchase roughly \$2,000,000 worth of new equipment/ supplies for the renovated Laboratory.

CMMC did not include a breakdown of the projected costs of having an off-site Laboratory versus enlarging their current space. CMMC is currently performing off-site Laboratory duties for two separate hospitals located in Bridgton and Rumford. The applicant did not discuss whether outsourcing this additional workload would help alleviate the need for added space and additional equipment to their Laboratory.

Hospital of the Future suggests that certain aspects of a Laboratory can be relocated to an off-site facility. The following chart illustrates the separation of Laboratory duties:

“Centralized

Routine chemistry  
Immunoassay  
Hematology testing  
Anatomical pathology  
Molecular diagnostics

Decentralized

Glucose testing  
Cardiac markers  
Toxicology/drug screening  
Coagulation testing  
Electrolyte testing  
Blood gas testing”

While the applicant did have conversations surrounding relocating Anatomic Pathology, Cytopathology, Microbiology and Donor Services, they did not talk about the possibilities of relocating all or part of any of their other Laboratory services.

CMMC states that having duplicate staff would be difficult due to a difficult recruitment market. CMMC did not explain whether they consulted with St. Mary’s Regional Medical Center about consolidating laboratory space. Should they collaborate, this would allow for shared costs and shared lab staff. These two hospitals would not be competing for clinical laboratory staff and may have easier recruitment.

CMMC has not considered a collaborative effort to combine Laboratory space with St. Mary’s. CMMC stated in a correspondence dated April 1, 2008 the following: “The idea of constructing and staffing a large reference lab to support both CMMC and St. Mary’s does not meet quality, operating costs, capital costs and staffing recruitment and retention criteria ... Therefore, there is no reason to proceed with a collaborative effort on the Laboratory project.”

CMMC did not provide any data to quantify their conclusion to exclude the possibility of collaboration. CMMC did not show how or why a collaborated offsite lab would not meet the criteria mentioned. The applicant only argues that an offsite lab would not benefit CMMC if they were to burden the costs alone.

Emergency Department –

The applicant states that they did not consider any alternatives in regards to their Emergency Department. They state that because “the Emergency Department heavily relies on existing services located within Central Maine Medical Center; there has never been a discussion about moving the Emergency Department to an offsite location.

One of the driving factors for this project is CMMC is claiming that patients are asking for “more expedited treatment and less waiting in the Emergency Department.” This applicant has stated that they have introduced 9 primary care physicians (PCP) surrounding the Lewiston/Auburn area within the last year to help alleviate the number of

patients who are seeking non-emergent care in the Emergency Department and to help address patient volume and waiting times. The applicant does acknowledge that the addition of PCP offices will not completely dissolve the problem of non-emergent cases from relying on the Emergency Department. PCP offices will still refer more severe cases to the Emergency Department or in cases where the PCP offices become overcrowded, patients may be redirected to the Emergency Department. This project, as proposed, appears to eliminate the First Care Department; the applicant did not describe what kinds of impact they expect this to have on ED volumes, wait times and the community. CONU would expect that keeping the First Care Department would reduce ED volumes.

Literature reviewed by CONU raises important issues regarding Emergency Room expansions. *A Delicate Balance: Managing The Inpatient Enterprise Across Time "Avoiding A Field of Dreams"* presents several lessons learned and conclusions relative to hospital growth, including:

- Lesson #12: "Answer-First Facilities Planning"

"Conclusion #28 Finding of Greatest Concern in the Research: Hospitals often seeing the need for new inpatient capacity, even investing the capital, but getting their investments wrong; two problems worth avoiding."

"Conclusion #29: Problem #1: Investing where physical capacity is "apparent", not actual short supply; too many hospitals are expanding their ED's and ORs when the real capacity shortage is further downstream in critical care or med/surg beds."

*Treating the Symptoms, Not the Cause*

Symptom	"First Blush" Cause	Actual Cause
ED wait times, walkouts increasing	ED too small	Inpatient beds full
Ambulance diversions increase	ED staff overloaded	Inpatient Beds full

- "Lesson #13: Add Capacity From Back To Front"

Conclusion #31: For many hospitals ED overcrowding and OR delays merely symptoms of a bottleneck further downstream; root cause problem is too few critical care beds and (even more important) too few med/surg beds-not solving access problems without investing on the back end first."

- Strategy Description

"Conclusion # 9: A less common but related practice-health systems alleviating ED overcrowding by encouraging patients to use other system hospitals nearby;

one health system reduced ED waiting times and improved patient satisfaction following an ED redirection campaign. “We attribute our recent decrease in ED activity to increased use of urgent care centers and migration of some patients to another nearby system facility. As a result, we have seen a decrease in ED wait times and increase in patient satisfaction.” Lee Huntley, CEO, Baptists Hospital of Miami. ED visits dropped from 7,550 to 7,009 per month following publication of an open letter to the community informing them of long ED wait time, that sicker patients are treated first, and encouraging them to receive preventive treatment and use urgent care centers.”

The Maine Quality Forum also confirms the following: “the application does not address in detail opportunities for collaboration, as specified in the State Health Plan, in either emergency services (recently expanded at St. Mary’s Regional Medical Center) or in Laboratory services (St. Mary’s currently has a CON application for enlarged laboratory space). An assessment of ways in which the two neighboring institutions could combine resources to improve services in their area with less impact would be appropriate.”

The applicant states that “both the CMMC Emergency Department and Laboratory are existing services with established physician referral bases and market position in the region.” They did not mention that the addition of Behavioral Health beds in the Emergency Department would be an addition of services and also a duplication of services since St. Mary’s Regional Medical Center currently performs Behavioral Health services. CMMC does not show any evidence that the orderly and economic development of health facilities and health resources for the state requires two hospitals within their service area to offer Behavioral Health services. The Maine CDC also confirms that the applicant failed to show evidence that they consulted with the mental health advocacy community to ensure that the needs of the community require such added services.

A consultation with DHHS Office of Adult Mental Health Services indicates that CMMC has not been in contact with them. They go on to state that “in the absence of any information from CMMC, [we] do not see a need and would steer consumers to either St. Mary's or TriCounty.”

### iii. Conclusion

CONU recommends that the Commissioner determine that CMMC has failed to met its burden to demonstrate that the proposed project is consistent with the orderly and economic development of health facilities and health resources for the State.

## VI. State Health Plan

### i. Introduction

This section includes information presented in the application relative to how the proposed project specifically relates to priorities in the State Health Plan (SHP). The applicant's comments, as well as input received from the Maine CDC/DHHS, and CONU findings are incorporated under the respective priorities for the SHP. The complete text of the Public Health Assessment by the Maine CDC/DHHS is contained in the CONU record.

This year, Certificate of Need (CON) applicants were provided with two items that provided clarifying information regarding the State Health Plan.

The first item is a memo to Potential CON Applicants dated October 9, 2007. This memo was developed by the Advisory Council on Health Systems Development to provide clarification and guidance relative to the State Health Plan Priority "projects that directly and unambiguously protect the public's health and safety," more specifically: 1) "projects that have as a primary, overriding objective the elimination of threats to patient safety" and 2) "projects that center on a redirection of resources and focus toward population-based health and prevention; such efforts address our state's greatest area of need . . ." The criteria and definitions contained in this memo will be used to evaluate the applications consistency with the State Health Plan. A copy of this memo is on file with CONU. It was included in packets distributed to attendees at the Technical Assistance Training, October 19, 2007.

The second item is a letter to CON Applicants dated January 10, 2008. This letter was developed to provide clarification specific to which State Health Plan guides the 2008 CON review process. The letter states that the current State Health Plan will guide the CON review.

Relevant criterion for inclusion in this section is specific to the determination that the project is consistent with the goals and priorities of the State Health Plan.

It is important to note that priorities are further defined within the CON section of the SHP. The CONU review of consistency with the SHP follows and is organized by priority.

**ii. Analysis**

***Priority: Projects that protect public health and safety are of utmost importance.***

*Projects that have as a primary, overriding objective the elimination of specific threats to patient safety.*

**a. Applicant's Discussion on Priority****"Threats to Public Safety"**

"Central Maine Medical Center (CMMC) asserts that the primary, overriding objective of this Emergency Department and Laboratory project is to eliminate threats to patient safety. This section provides supportive facts that both justify this claim and demonstrate that the Department should conclude the CMMC ED/LAB project qualifies as a "priority" project as per the 2006 Maine State Health Plan."

"A guiding principal in medicine is "first do not harm" to patients. Compliance with this principle requires physicians and other health professionals to always provide the highest quality of care. An equally important consideration is timely access to medical care. Any barrier to accessing medical care can compromise the ability of a team of health professionals from providing optimal medical care."

"Emergency Department overcrowding is a national problem. Overcrowding is a barrier to access for urgent and emergent medical care and is therefore a threat to public safety. The 2006 Institute of Medicine report "The Future of Emergency Care" key findings (see Attachment #1) were:

- Many EDs and trauma center are overcrowded - Increased demand for ED services has resulted in overwhelmed EDs with patients waiting hours or days in the ED for a hospital bed and ambulance diversions;
- Emergency care is highly fragmented - Poor communication between EMS and other public safety agencies;
- Critical specialists are often unavailable to provide emergency and trauma care - Creates "gaps" in specialist coverage requiring diversion or transfer of patients for care;
- The emergency care system is ill-prepared to handle a major disaster - Lack of "surge" capacity;
- EMS and EDs are not well equipped to handle pediatric care - Delays in treatment."

"Overcrowding is also a serious problem for the CMMC Emergency Department. The current ED physical space was designed for 25,000 patient visits, but some 52,500 patients received treatment at the CMMC ED in our fiscal year ending June 2007. When too many patients arrive at the CMMC ED, the less acute patients have to wait extended periods of time to be treated, patients already in the ED have to wait extended periods of

time before being either admitted or discharged and opportunities for medical errors can arise.”

“Overcrowding at the CMMC Emergency Department affects the entire Maine healthcare delivery system. CMMC is one of three (3) tertiary hospitals in Maine. These tertiary centers act as a “safety net” and are a vital part of Maine’s healthcare delivery system. Some of CMMC’s unique aspects are:

- **Level II Trauma Center** – Some 900+ critically injured patients are transported by ground and air ambulance each year;
- **LifeFlight of Maine base** – One of the two LifeFlight helicopters is based across the street from the CMMC ED. Patients transported to CMMC primarily from central, coastal, western Maine, but additionally from New Hampshire and other regions of Maine;
- **Central Maine Heart and Vascular Institute (CMHVI)** - CMMC operates the only accredited Chest Pain Center in Maine. The CMHVI and ED physicians have adopted primary cardiac angioplasty as first course of treatment for heart attacks and CMMC is the only hospital in state allow direct activation of the cardiac catheterization lab by trained EMS providers from field;
- **Regional Resource Center** - CMMC is one of three (3) designated Regional Resource Centers in the state and as such would be expected to handle “surge” capacity in the event of a natural catastrophic event or a terrorist act. CMMC has little, if any “surge” capacity in the ED today and this problem will only be exacerbated in the future;
- **Regional Referral Center** - CMMC offers a broad scope of clinical services so patients want to be admitted to CMMC for care and physicians practicing at community hospital routinely transfer patients to CMMC for a higher level of care. Local and regional primary care physicians who only have an outpatient practice also routinely direct patients to the CMMC adult and pediatric hospitalists for admission to CMMC;
- **Central Maine Medical Group** - Some 250 physicians are employed by CMMC, Bridgton and Rumford Hospital. The Central Maine Medical Group is the largest multi-specialty physician group in Maine and serves some 75,000 patients. When necessary, these patients want and do come to the CMMC, Bridgton and Rumford Hospital Emergency Departments. Patients arrive either directly at the CMMC ED or are transferred to CMMC via the CMMC ED from Bridgton Hospital and Rumford Hospital;”

“Overcrowding at CMMC in general or more specifically, the Emergency Department creates “system” gridlock because often the only clinically acceptable alternative in Maine for care is at Maine Medical Center. The Maine Medical Center alternative is often problematic because this hospital is often at or over capacity at the same time as CMMC. Transfers are very difficult for patients and their families and diversion of a patient to another hospital can create a delay in treatment with obvious negative consequences.”

“The nature of overcrowding and the “best practices” in Emergency Department design and operation are well documented the medical literature. All of the concepts included in this Application are “evidence-based”.”

“Continued growth of CMMC ED visits in the current space will result in delays in treatment, raise the potential for medical errors, create instances for diversion to other hospitals and diminish the overall quality of care – all of which are threats to patient safety.”

“Since the Laboratory supports the ED and is also woefully undersized for the current volume of test, the same threat to patient safety applies to this Department.”

**b. Maine CDC/DHHS Assessment**

“CMMC states that the overriding concerns this project addresses is patient safety for two basic issues:

- the ED is about one-half the size that is needed (was designed to accommodate 25,000 patient visits, yet 52,500 patients were treated there in 07); and
- the Lab is one-third the needed space, and was designed to accommodate the scope of work in 1972. The applicant states that the appropriate square footage for an ED with this many visits is 26,000 – 35,000 square feet.”

“Special rooms for Behavioral Health/Mental Health patients are included in the ED design. It would be helpful to see evidence of the applicant consulting with the mental health advocacy community (NAMI of Maine, for instance) to assure this aspect of the design addresses the needs of this community as well as does not further stigmatization.”

“A specific commitment to a number of negative pressure rooms for the ED would help in assuring public health emergency needs are addressed by the project.”

**c. CONU Discussion**

The Public Health Advisory Committee issued a clarifying memo on October 9, 2007 to potential certificate of need applicants. This memo provided clarification on certain portions of the Maine State Health Plan.

Item # 2 in this memo addresses this priority as follows: “Applicants that assert that they are meeting this priority must demonstrate that the project unambiguously protects patient safety. The burden rest with the applicant to demonstrate that the project is evidence-based and to demonstrate the need for the project for patients treated at their facility and quantify, if possible, effects on patient safety.” *Projects that directly and unambiguously protect the public’s health and safety are assigned the highest priority in the current environment, where resources are constrained.*

In this application, CMMC does not provide quantifiable data that “unambiguously and directly” supports the assertion that this application is necessary to protect public health and safety, specifically patient safety. This application provides inputs and outputs but does not speak to quantifiable patient specific safety outcomes.

The threats to patient and public safety cited in this application include “overcrowding”, however no data were presented specific to issues related to overcrowding and by how much this project will reduce these occurrences.

The applicant mentions the need for surge capacity to protect public safety but they do not quantify how much surge capacity there presently is within the service area, how much more is needed, and how much of this should be at CMMC.

*Projects that center on a redirection of resources and focus toward population-based health and prevention.*

**a. Applicant’s Discussion on Priority**

**“Population-based Health and Prevention”**

“CMMC will create a \$3,000,000 Community Health Initiatives Fund. The interest on which - estimated to be 4.5% annually, or \$135,000 – will be used for new prevention programs. This Community Health Improvement Fund will be administered by CMMC, to fund new projects and programs for preventive health programs both in-house and with Healthy Androscoggin, the Healthy Maine Partnership based on the CMMC campus. Healthy Androscoggin is a collaboration of area healthcare organizations and schools, and other community based non-profits. Strengthening this collaboration is consistent with the public health focus of the State Health Plan, and of the community-based system that is growing out of the original HMP network.”

“This Fund is consistent with our 2008 Strategic Plan which adds a new Community Pillar to our existing areas of concentration on quality, patient satisfaction, people, growth and financial stewardship. One element of the Community Pillar is to engage in a community assessment of needs. The CMMC Board and leadership is particular interested in exploring new adult and childhood obesity initiatives.”

**b. Maine CDC/DHHS Assessment**

“This project proposes to create a new \$3 million Community Health Initiatives Fund to expand prevention and chronic disease management efforts, with a focus on childhood and adult obesity. About \$135,000 is estimated to be available annually from the interest on this fund for new prevention programs. This fund is proposed to be administered by CMMC to pay for new projects and programs for preventive health programs both in-house and with Healthy Androscoggin, the local Healthy Maine Partnership (HMP). The CMMC Board and leadership are stated as having a particular interest in new adult and childhood obesity initiatives.”

“The applicant states they currently have:

- inpatient case management;
- chronic disease registries for diabetes and cardiovascular disease in 22 PCP practices (representing 73 PCP physicians and 12 mid-level PCPs) that cover about 40% of the 200,000 patients treated by these practices;
- chronic care model for over 5,000 patients using ScoreHealth;
- diabetic education system – via one-on-one counseling, classes, and telephone management.”

“CMHC primary care practices are following the NQF/MHMC quality metrics.”

“The commitment to the creation of a new \$3 million Community Health Initiatives Fund is to be commended. It would be helpful if there is a commitment stated to work collaboratively with the local public health infrastructure on developing the newly-funded initiatives and to invest in current public health infrastructure (such as the local/regional Healthy Maine Partnerships or existing CMMC initiatives).”

“The recent influx of ~5,000 Somali/Somali Bantu immigrants is mentioned. Because they are presumed to be among the users of the ED, it would be helpful to see evidence of consultation with the Somali and Somali Bantu communities to assure the design of the ED can accommodate cultural beliefs and preferences.”

**c. CONU Discussion**

The applicant proposes to establish a \$3,000,000 Community Initiatives Fund with the interest used for new prevention programs (4.5% interest=\$135,000 annual). This new program will fund several new initiatives including: in-house and with Healthy Androscoggin, the Healthy Maine Partnership based upon the CMMC campus and others such as youth and adult obesity. The number of initiatives may dilute the impact of the \$135,000.

The letter to Potential Certificate of Need Applicants dated October 9, 2007 provides guidance for applicants seeking priority ranking for this activity. It states, in part, “At a minimum, priority projects will devote a portion of the total “value” or cost of the project to new investment in a related public health effort that is aimed at reducing the demand for the service proposed under the application at the population level.”

**d. Determination**

CONU finds that the applicant did not meet its burden to demonstrate that this project directly and unambiguously protects public safety.

***Priority: Projects that contribute to lower costs of care and increased efficiencies.***

*Projects that clearly demonstrate they will generate cost savings either through verifiable increased operational efficiencies or through strategies that will lead to lower demand for high cost services in the near or long term.*

**a. Applicant's Discussion on Priority**

- “This project will reduce the future demand for Emergency Department services for reasons explained in Section II;”
- “Increased efficiencies resulting in improved ED throughput will reduce operating costs as explained in Section II;”

**b. Maine CDC/DHHS Assessment**

“The applicant states the cost per unit is anticipated to be reduced, but the overall demand for ED and Lab services is expected to rise over time, and this project is an attempt to meet that demand. CMMC states that they are investing in the expansion of the Primary Care Provider base, chronic disease management systems, and prevention initiatives in order to help mitigate the growth in demand for ED and Lab services, both of which are primarily driven by chronic disease and our aging population. The application states that these strategies are estimated to lower the growth projection of the CMMC ED from a 7% annual rate to 4%.”

**c. CONU Findings**

To avoid duplication, CONU findings for this priority are summarized on page 68-69.

*Projects that physically consolidate hospitals or services that serve all or part of the same area that demonstrate an appropriate, cost effective use for the “abandoned” infrastructure, that do not result in increased costs to the health care system and that, in accordance with state policy as expressed in Maine’s Growth Management Act, do not contribute to sprawl.*

**a. Applicant's Discussion on Priority**

- “Since this is a new construction/renovation project on an existing hospital campus, this project does not contribute to urban sprawl;”
- “Expansion of the existing Emergency Department which is primarily an ambulatory service is the best use of this existing capacity;”
- “CMMC has met the Dirigo price and cost targets;”

**b. Maine CDC/DHHS Assessment**

“This project is stated as not contributing to sprawl and does not result in abandoned infrastructure.”

**c. CONU Findings**

To avoid duplication, CONU findings for this priority are summarized on page 68-69.

*Telemedicine projects that facilitate improvements and cost-efficiencies in the quality of diagnosis and treatment in smaller, rural communities.*

**a. Applicant's Discussion on Priority**

- “This is not a telemedicine project;”

**b. Maine CDC/DHHS Assessment**

“This is not a telemedicine project.”

**c. CONU Findings**

To avoid duplication, CONU findings for this priority are summarized on page 68-69.

*Priority: Projects that advance access to services and reflect a collaborative, evidence-based strategy for introducing new services and technologies*

**a. Applicant's Discussion on Priority**

- “No new technology is being introduced by this project;”

**b. Maine CDC/DHHS Assessment**

“This project does not introduce new services or technologies.”

**c. CONU Findings**

To avoid duplication, CONU findings for this priority are summarized on page 68-69.

*Priority: Projects and/or applicants demonstrate certain attributes should be deemed higher priority than those without those attributes.*

*Projects that include a complementary preventive components that will lead to a reduced need for services at the population level.*

**a. Applicant's Discussion on Priority**

The applicant did not target this priority in the State Health Plan section of the application.

**b. Maine CDC/DHHS Assessment**

“The project proposes a new \$3 million Community Health Prevention Fund to address adult and childhood obesity. The application states that the strategies implemented because of this fund, combined with a new cadre of primary care physicians and hospitalists as well as chronic care initiatives, will mitigate the utilization of the CMMC ED to lower the growth projection for ED visits to a rate of 4% annually instead of 7%.”

**c. CONU Findings**

To avoid duplication, CONU findings for this priority are summarized on page 68-69.

*Construction that employs green building methods*

**a. Applicant’s Discussion on Priority**

- “This project will use the “best practices” in construction, renovation and operation – See Section II”

**b. Maine CDC/DHHS Assessment**

“The applicant states that the design team includes USGBC LEED accredited professionals, and there is a stated commitment to review green and sustainable objectives and to address these concepts. There is no firmly-stated commitment to using them.”

“There could be a more firmly-stated commitment to using USGBC LEED building standards.”

**c. CONU Findings**

To avoid duplication, CONU findings for this priority are summarized on page 68-69.

*Investments in the MHINT project and also investments in electronic medical records systems, such as HL7, will receive a higher priority ranking than those applicants failing to make such investments.*

**a. Applicant’s Discussion on Priority**

- “CMMC has demonstrated investment in the HL7 interface;”

**b. Maine CDC/DHHS Assessment**

“CMMC uses Logician outpatient EMR and ERNE inpatient EMR. CMHC (Central Maine Healthcare) also uses radiology imaging technology at CMMC, Bridgton, and Rumford hospital EDs. CMHC plans on implementing Portal Suite, a e-Health initiative.

CMMC is also a founding supporter of HealthInfoNet. CMMC is investing in HL-7 technology to allow for information exchange with the various technologies initiatives.”

**c. CONU Findings**

To avoid duplication, CONU findings for this priority are summarized on page 68-69.

***Priority: Balance of the State Health Plan Criteria:***

**a. Applicant’s Discussion on Priority**

The applicant provided a number of bullets to address the balance of the State Health Plan priorities as follows:

“Balance of the State Health Plan criteria:

- This project will reduce the future demand for Emergency Department services for reasons explained in Section II;
- Increased efficiencies resulting in improved ED throughput will reduce operating costs as explained in Section II;
- Expansion of the existing Emergency Department which is primarily an ambulatory service is the best use of this existing capacity;
- This project does not duplicate existing facilities in the region with existing capacity;
- This project does not increase the number of inpatient beds;
- This project is not a major expansion of existing services rather it “right sizes” the CMMC physical plant to efficiently and safely manage existing patient volume;
- This project will ensure high quality outcomes;
- This project will not negatively affect other healthcare providers;
- This project will not result in inappropriate increases in service utilization;
- This project can be funded within the Capital Investment Fund;”

**b. CONU Findings**

The above format contains statements of the applicant’s determination that certain priorities have been satisfied or are not applicable from the applicant’s perspective. These bullets do not contain supporting documentation and where supporting documentation is

referenced, it is not evidence-based. The applicant appears to be stating a matter of interpretation and has not met the burden of proof required to substantiate the statements.

**c. Determination**

In the Certificate of Need Procedures Manual, page 19:3 Application Content it states: “A statement or statements that the project will meet the conditions without supporting facts backed by relevant documentation and analysis constitute sufficient cause to deny the application. An application subject to full review must contain, if available and relevant to the particular service or technology, information on health status, public health need for the service or technology, quality assurance processes and prevention programs.” 22 M.R.S.A. Sec 337 (4).

CONU recommends that the Commissioner determine that CMMC has failed to met its burden to demonstrate that the proposed project meets the above criterion.

***Priority: Projects that exercise less than 0.5% increase on regional insurance premiums.***

**a. Applicant’s Discussion on Priority**

The applicant did not address the impact their project would have on regional insurance premiums. CONU, as a standard procedure, has consulted with the Bureau of Insurance during the review of all CON applications.

**b. Bureau of Insurance Assessment**

“Estimate[s] the maximum impact of this CON project on private health insurance premiums in Central Maine Medical Center’s service area for the projected third year of operation will be approximately 0.514% (0.514 per \$100) of premium. The impact for statewide private health insurance premiums is approximately 0.078% (0.078 per \$100) of premium.”

**c. Determination**

Since the impact for regional insurance premiums exceeds 0.5% this project shall not be considered a priority project.

**iii. Conclusion**

Based upon the assessment by the Maine CDC, the Bureau of Insurance and the number of priorities not satisfied, CONU recommends that the Commissioner determine that CMMC has not met its burden to show that this project is consistent with the State Health Plan.

## VII. Outcomes and Community Impact

### A. From Applicant

Although this application did not contain a section focused on outcomes and community impact, they did make the following comments in other sections of their application:

“The project will increase the capacity of both departments, improve patient safety and confidentiality, and result in improved patient care processes and employee efficiencies. The new ED will also result in lower costs per unit.”

“**Community Health Prevention Fund** – Central Maine Medical Center plans to set aside \$3 million dollars and use the income from this Fund to develop new community health initiatives including new strategies to combat adult and childhood obesity.”

#### **Emergency Department (ED)**

“Improved quality of care: The new ED space will have universal rooms, which will allow for more efficient placement of patients and increase both door-to-provider and door-to-treatment times. The new space will also have dedicated trauma resuscitation suites which will allow all necessary resources to manage up to 4 trauma patients at one time. The four (4) bed Clinical Decision Unit (CDU) will allow extended evaluation and monitoring of patients on an outpatient basis rather than admitting patients to the hospital for short stays. Clinical Decision Units (Observation Units) can improve ED operations by separating patients who need ongoing evaluation/observation for extended timeframes from the general ED patient population. Chest pain patients are one example of an appropriate patient for the CDU.”

“Unlike the current ED space, the new area will have private treatment rooms and separate patient and staff circulation space, thus improving patient privacy and confidentiality.”

“Patient safety enhancement: Aside from the new trauma suites, which will allow rapid access to appropriate treatment, specific rooms will also be designed for behavioral health patients. These rooms will allow both better staff visibility and adequate separation from other patient populations. The ED’s overall design allows better visibility of all patient rooms and increases treatment space capacity. The universal room design will facilitate a decrease in the percentage of those who leave without being seen. The overall design is one that provides a more secure department with secure entryways, and the ambulance and ambulatory entry ways will be in close proximity to avoid public confusion. Individual treatment rooms will be large enough to allow family members to stay at the bedside.”

“Lower costs per unit: Flexibility of design will allow consolidation of supply inventory (the main ED and First Care currently have separate supply inventories due to physical

separation). The design will also allow for flexibility of staff, ie: a decrease of hours per visit from the current 2.45, to an anticipated 2.34 hours per visit.”

**Laboratory (LAB)**

“Patient safety enhancement: Operational inefficiencies that are a result of inadequate work space impact patient safety. This can manifest in increased turnaround time of test results which may delay patient care or in creating an environment which may be prone to error. These inefficiencies also limit the implementation of improved work practices that would provide additional patient safeguards.”

**“The region’s existing capacity for such services, including how project impacts the volume of services and quality of care of other providers in the local area, as well as in the primary or secondary service area, including rationale for defining the service area”**

“Every acute care hospital in CMMC’s primary, secondary and tertiary service areas has an Emergency Department and Laboratory. CMMC provides a range of services that are unique to institutions with Tertiary and Level II Trauma Center designations. We project no change in the scope of services offered, no change in existing physician referral patterns and no significant upswing in patient volume as a result of the approval of this project.”

“St. Mary’s Hospital recently gained approval to expand their Emergency Department. This Applicant stated that the proposed ED expansion would have no effect on CMMC. Likewise we do not believe the CMMC ED or Laboratory project will have any adverse effect on any other hospital in Maine.”

**B. CONU Discussion**

**i. Criterion**

Relevant criterion for inclusion in this section are specific to the determination that the project ensures high-quality outcomes and does not negatively affect the quality of care delivered by existing service providers.

**ii. Analysis**

The applicant states that this project will have the following impact on patients:

	<u>Current</u>	<u>Project Goals</u>
Length of Stay (LOS)	2.78 Hours	2.5 Hours
Time to Admit	127 Min.	60 Min.

Central Maine Medical Center	- 71 -	Emergency Department and Laboratory Expansion/Renovations
Laboratory	87 Min.	< 30 Min.
Imaging	56 Min.	30 Min.
CT	107 Min.	30 Min.

The applicant does not explain how they plan to achieve the above projections with this project. They do not state whether the decreased times would be due to more space, increased efficiencies, improved procedures. The application fails to demonstrate that the project ensures high-quality outcomes. This conclusion is supported by the Maine Quality Forum's conclusions regarding CMMC's existing services.

The MQF comments: "The quality of care at CMMC, based on available metrics which are reported to CMS on inpatient care of cardiac conditions and pneumonia, and on care processes in perioperative patients, is very acceptable. The hospital's outpatient primary care practices likewise perform well on most measures. Quality indicators of emergency care are not specified in the application."

In support of this determination, the *Information Paper, Optimizing Emergency Department Front End Operations*, January 2008, developed by the American College of Emergency Physicians (ACEP) is a position paper developed by ACEP that defines optimal emergency care related to the front-end processing of patients presenting to the emergency department.

ACEP has adopted accepted metrics for ED front-end processing including: " 'patient to arrival triage,' 'triage to registration,' 'registration time,' 'registration to bed placement,' 'door to door,' and bed placement to physician/provider." This applicant did not present these metrics in the application or state how the project will positively impact them.

"Measuring the time intervals, followed by the design, implementation, and assessment of innovative throughput solutions, are the building blocks of departmental quality and performance improvement efforts."

This paper also presents "Strategies To Improve Front End Processing" which include:

- Immediate bedding
- Bedside registration
- Team approach patient care
- Resource-based triage
- Waiting room design changes
- Tracking systems
- Dedicated fast track
- Full/surge capacity protocols

“These interventions may help alleviate critical bottlenecks, match resources to demand, decrease operational variation, identify department service lines and track benchmark data, thereby optimizing ED front end operations and improving patient satisfaction in individual EDs.”

The applicant states that this project will not have any negative effects on any other hospital in Maine. However, the applicant states that they are including Behavioral Health dedicated beds in the Emergency Department. This is a duplication of services in their service area since St. Mary’s and TriCounty are where behavioral health consumers are currently being directed. A consultation with DHHS Office of Adult Mental Health Services revealed that there is no record of CMMC coordinating with the Department about a need in the area for additional Behavioral Health beds. CMMC did not show in the application any discussions of need with St. Mary’s, NAMI, or other behavioral health care providers.

**iii. Conclusion**

CONU recommends that the Commissioner determine that CMMC has failed to meet its burden to demonstrate that this project will ensure high-quality outcomes and will not negatively affect the quality of care delivered by existing service providers.

## VIII. Service Utilization

### A. From Applicant

Although this application did not contain a section on service utilization, they did present historical and projected Emergency Department and Laboratory utilization and projections in “Section IV: Needs to be Addressed”.

### B. CONU Discussion

#### i. Criterion

Relevant criterion for inclusion in this section are specific to the determination that the project does not result in inappropriate increases in service utilization, according to the principles of evidence-based medicine adopted by the Maine Quality Forum.

#### ii. Analysis

According to the Maine Quality Forum:

“The utilization data in the application regarding the increase in ED visits over time is compelling and does supply qualitative evidence that the facility is outdated. More support for this, in the form of space standards for emergency facilities based on the number of patients seen and their acuity would be desirable, if available.”

“The application uses demographic data, especially population aging statistics, to support a need for emergency department capacity. However most medical service research suggests that an undersupply of providers rather than an oversupply of patients will be the most prominent effect of aging in the population (See Reinhardt, *Health Affairs* 2003, 22(6):27-39).”

“The application does look at drivers of emergency department utilization, and describes plans to fund a prevention initiative for childhood and adult obesity. It also cites the importance of adequate primary care in the community in avoiding use of the emergency department for illnesses that could be managed in a physician’s office, relating this to the hospital’s efforts to place primary care physicians in the area. The Lewiston hospital service area, as analyzed in 2002 and 2003, shows a frequency of hospital admissions for ambulatory care sensitive conditions that is already below the state average for chronic cardiovascular and pulmonary disease, including hypertension.”

The Maine Quality Forum’s assessment that the Lewiston hospital service area was showing an under service utilization for hospital admissions for chronic cardiovascular and pulmonary disease as analyzed in 2002 and 2003 is outdated. CMMC on October 2, 2000, received approval to implement a cardiovascular heart surgery program. This program did not come online until the start of the hospital’s FY-2004 and as of June 30,

2006 it has been operating for three full years. The only information provided by the applicant, that was found in the need section of the application, is the projection that visits to their ED and lab tests will continue to grow yet at a slower pace through 2013 than current growth.

**iii. Conclusion**

The CONU recommends that the Commissioner determine that CMMC has not met its burden to demonstrate that inappropriate increases in service utilization will not occur.

## **IX. Funding in Capital Investment Fund**

### **A. From Applicant**

“This project can be funded within the Capital Investment Fund.”

### **B. CONU Discussion**

#### **i. Criterion**

Relevant criterion for inclusion in this section are related to the needed determination that the project can be funded within the Capital Investment Fund.

#### **ii. Analysis**

Capital Investment Fund (CIF): “ One of the constraints the law puts on Certificate of Need is an annual limit on the dollar value of the projects approved by the Department of Health and Human Services, which are allowed to go ahead with implementation” Maine State Health Plan, (pg 50). CON review criteria requires that a project can be funded within the limits of the CIF.

#### **iii. Conclusion**

Although there are sufficient funds in the Capital Investment Fund (CIF), CONU recommends that the project not be funded within the CIF.

## X. Timely Notice

### A. From Applicant

“Central Maine Medical Center filed a letter of intent for this project on March 12, 2007. The Department responded to this letter on April 4, 2007 stating that this project is subject to review under the Maine Certificate of Need Act of 2002.”

“Central Maine Medical Center (CMMC) attended the October 19, 2007 Technical Assistance Meeting held at the CONU office in Augusta. CMMC staff also presented an overview of this project to CONU staff and other attendees during this meeting.”

### B. CONU Discussion

Letter of Intent filed:	March 12, 2007
Subject to CON review letter issued:	April 4, 2007
Technical assistance meeting held:	October 19, 2007
CON application filed:	December 20, 2007
CON certified as complete:	December 20, 2007
Public Information Meeting Held:	January 22, 2008
Public Hearing held:	March 4, 2008
Public comment period ended:	April 3, 2008

## **XI. CONU Findings and Recommendations**

Based on the preceding analysis and the record, the CONU recommends that the Commissioner make the following findings and recommendations:

- A. That the applicant is fit, willing and able to provide the proposed services at the proper standard of care as demonstrated by, among other factors, whether the quality of any health care provided in the past by the applicant or a related party under the applicant's control meets industry standards.
- B. The applicant has failed to demonstrate the economic feasibility of the proposed services in terms of the:
1. Capacity of the applicant to support the project financially over its useful life, in light of the rates the applicant expects to be able to charge for the services to be provided by the project; and
  2. The applicant's ability to establish and operate the project in accordance with existing and reasonably anticipated future changes in federal, state and local licensure and other applicable or potentially applicable rules;
- C. The applicant has not demonstrated that there is a public need for the proposed services certain factors, including, but not limited to;
1. The project will not substantially address specific health problems as measured by health needs in the area to be served by the project;
  2. The project has not demonstrated that it will have a positive impact on the health status indicators of the population to be served;
  3. The services affected by the project will be accessible to all residents of the area proposed to be served; and
  4. The applicant has not demonstrated that the project will provide demonstrable improvements in quality and outcome measures applicable to the services proposed in the project;
- D. The applicant has not demonstrated that the proposed services are consistent with the orderly and economic development of health facilities and health resources for the State as demonstrated by:
1. The applicant has not demonstrated what the impact of the project on total health care expenditures after taking into account, to the extent practical, both the costs and benefits of the project and the competing demands in the local service area and statewide for available resources for health care;

2. The availability of State funds to cover any increase in state costs associated with utilization of the project's services; and
3. The likelihood that more effective, more accessible or less costly alternative technologies or methods of service delivery may become available was not demonstrated by the applicant;

In making a determination under this subsection, the commissioner shall use data available in the state health plan under Title 2, section 103, data from the Maine Health Data Organization established in chapter 1683 and other information available to the commissioner. Particular weight must be given to information that indicates that the proposed health services are innovations in high quality health care delivery, that the proposed health services are not reasonably available in the proposed area and that the facility proposing the new health services is designed to provide excellent quality health care.

- E. The applicant has not demonstrated that the project is consistent with the State Health Plan;
- F. The applicant has not demonstrated that the project ensures high-quality outcomes and does not negatively affect the quality of care delivered by existing service providers;
- G. The applicant has not demonstrated that the project does not result in inappropriate increases in service utilization, according to the principles of evidence-based medicine adopted by the Maine Quality Forum; and
- H. That the project can be funded within the Capital Investment Fund.

For all the reasons contained in the preliminary analysis and in the record, CONU recommends that the Commissioner determine that this project should be **Disapproved**.