Maine Inpatient Treatment Initiative Civil and Forensic

EXECUTIVE SUMMARY

DATED - February 15, 2000

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TABLE OF CONTENTS

LIST OF TABLES

I. INTRODUCTION

The **Maine Inpatient Treatment Initiative: Civil & Forensic** project is an outgrowth of the state's continuing commitment to develop a quality service delivery system for Maine citizens with serious mental illness. While there has been general consensus that the physical facilities of the antiquated Augusta Mental Health Institute (AMHI) are inadequate for providing inpatient psychiatric treatment and security for forensic and civil patients, conflicting opinions and proposals have been offered about how best to address the physical plant deficiencies. After considering numerous options, Maine legislators appropriated funding to conduct a comprehensive assessment to project the need for state-operated inpatient psychiatric beds, and to provide a design concept and cost proposal for a facility to replace AMHI.

The project was initiated in the summer of 1999 with the state's issue of a Request for Proposal. Various groups submitted proposals. Finalists were chosen to meet with Maine officials on August 19, 1999 to clarify and further explain their submissions. SMRT, Inc., in collaboration with Pulitzer/Bogard & Associates, LLC, and Architecture +, was the Project Team selected for the project.

The project included the following components:

- Preparation of a needs assessment to project the number of state-operated inpatient psychiatric beds required to adequately address the needs of forensic patients throughout the state.

- Preparation of a needs assessment to project the number of state-operated inpatient psychiatric beds required to complement the psychiatric inpatient treatment resources available within community hospitals for the civil patients of southern Maine.

- Development of an operational and architectural program and a design concept for a new facility to replace current AMHI operations.

- Selection of a site for the recommended facility.

- Identification of the construction and annual operational costs of the recommended facility.

Maine officials, interested parties and agencies, community mental health and hospital providers, and consumers of mental health services were involved throughout the process to ensure that various perspectives were considered. This document provides a brief overview of the project activities and recommendations.

II. BACKGROUND OF PROJECT

The Augusta Mental Health Institute (AMHI) first opened its doors in October, 1840 on a site "that was chosen in order to ensure that the Legislature and Governor would never forget the hospital, as they see it when the looked out their eastern windows." Established through a legislative resolve, the mission of the hospital, then known as the Maine Insane Hospital, was, in modern terms, to treat 100 actively psychotic individuals. Thus began the legacy of what is now known as AMHI.

For more than a century after opening its doors, AMHI continued to expand in size, reaching a peak census of more than 1800 patients in the 1950's. During that period little was known about helping people with mental illness recover from their symptoms, and it was common practice to remove persons with serious mental illness from society and place them in state hospitals for life. Until the 1960's, all public mental health funding flowed into the two state hospitals in Augusta and Bangor.

In the 1950's and 60's, breakthroughs in the treatment of mental illness, such as the introduction of effective psychotropic medications, made possible the development of a community mental health system that focuses on treating people with mental illness in their home communities. Beginning in the early 1970's, this shift in focus began to change the role of the two state hospitals in Maine. Rather than long term asylums for people with mental illness, AMHI and the Bangor Mental Health Institute (BMHI) became intensive treatment centers, where services last only as long as an individual's illness requires. A comparison of staffing patterns at AMHI serves well to illustrate the new role. In 1955-56, there were 506 staff who worked with an average daily census of 1840 patients. Now, 40 years later, 300 staff work with an average daily census of 83 patients.

As the role of the hospital has changed over the years, the buildings in which the hospital is housed have become antiquated, both in the condition of the physical plant and in their capacity as an appropriate psychiatric treatment environment. It is ironic that one of the first buildings to house patients at AMHI in the 1840's is the only building remaining that still serves patients on the extensive AMHI campus.

Between 1989 and 1999, four reports on mental health in Maine recommended that the current AMHI hospital be replaced with new facilities. During the summer of 1998, in an effort to explore less costly options, an architectural firm reviewed the feasibility and cost of renovating the forensic unit. The architects concluded that the renovation cost for the forensic unit would be comparable to new construction, and renovating the existing facility would significantly compromise the program, as the current building footprint and load bearing walls would not allow for the design of a state of the art treatment facility. Additionally, the logistics of housing patients during any renovations would be extremely daunting.

As a result of the architects' conclusion, the Governor included in his 2000-2001 budget package $17.5 million to develop new forensic units, with the understanding that the civil capacity would be added in another budget cycle. The Legislature determined that more preparation was needed prior to the plan's approval, and $500,000 was allocated to the Department of Administrative and Financial Services' Bureau of General Services (BGS) to work with the Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS) to complete the "programming study, feasibility planning and design work in fiscal year 2000 for the new Forensic Unit."

When putting together the budget, it became clear that it would be more cost effective to develop a plan to replace the entire hospital, including both civil and forensic capacity. The planning and design team concurred with this assessment. This document therefore represents a comprehensive needs assessment, program plan and concept design to replace the existing hospital capacity at the Augusta Mental Health Institute.

The State of Maine has invested significant financial and staff resources to develop a comprehensive mental health services delivery system; a system that will ensure that Maine citizens with serious mental illness receive appropriate treatment and support services in the least restrictive environment. The goal of providing client-based mental health services for all individuals in Maine with such needs is being pursued by the DMHMRSAS in the development of community resources to complement those provided by state agencies. Maine's commitment to a comprehensive mental health system is reflected by the most recent data of State Mental Health Agencies (SMHA). These data indicate that in Fiscal Year 1997, Maine ranked 8th in the nation in per capita expenditures for mental health services.

SMHA data provided the following comparison of Maine's FY 97 per-capita commitment to mental health services with that of other New England states.

Table 1
Comparison of Mental Health Services Per Capita Expenditures

State	Per Capita
Maine	**$88.29**
Connecticut	$99.14
New Hampshire	$99.02
Vermont	$92.38
Massachusetts	$90.19
Mean of 50 States & DC	$60.59
Median	$56.36

The DMHMRSAS commitment to developing a strong partnership with community providers that will provide a comprehensive array of mental health services has been demonstrated by the growth in the percentage of general funds allocated for community services. In FY 94, community services accounted for 41% of mental health general funding; in FY 97 the percentage was 64%; and, in FY 99 the percentage increased to 70%. This commitment to community-based mental health services exceeds that demonstrated by many other states.

III. NEEDS ASSESSMENT

Needs assessments are often based on an analysis of historical data that typically includes a five to ten year time frame. Since Maine's mental health system has changed dramatically in recent years and is continuing to evolve, historical data were of limited value for this project. For example, relying on historical data to project the number of needed civil beds would not have accounted for the continuing development of community resources. The need for state-operated civil inpatient beds is significantly affected by the availability of community inpatient beds as well as by the quality and continuity of outpatient services. Further, relying on historical data to project the number of needed forensic beds would not have accurately reflected the inpatient treatment required by individuals housed in local jails. There is consensus that jail inmates have been under-served due to lack of current forensic bed capacity.

This needs assessment process required consideration of qualitative information as well as forecasting based on available statistical data. The recommendations are based on a review of the overall Maine mental health system and information gained through discussions with DMHMRSAS administrative and clinical staff, community hospital and outpatient providers, mental health consumers, jail and prison administrators, and many interested Maine citizens.

The needs assessment was conducted for two distinct patient populations:

- Civil patients who are in need of psychiatric hospitalization but who are unable to be served within the community due to risk issues or lack of available community hospital bed space within the patient's area of residence and support.

- Forensic patients whose legal status requires treatment in a secure environment.

Projection of Need for State-Operated Civil Inpatient Beds

DMHMRSAS has established three Mental Health Regions for coordinating the provision of outpatient and inpatient mental health services for designated geographic areas.

Table 2
Maine's Mental Health Regions

Region	Counties
Region I:	Cumberland and York Counties
Region II:	Androscoggin, Franklin, Kennebec, Knox, Lincoln, Sagadahoc, Somerset, Oxford and Waldo Counties
Region III:	Aroostook, Hancock, Penobscot, Piscataquis, and Washington Counties

The needs assessment was conducted to determine the number of civil state-operated inpatient psychiatric beds needed to replace current operations at AMHI. AMHI now provides inpatient services for Region I and II. State-operated inpatient hospitalization for Region III is and will continue to be provided by the Bangor Mental Health Institute (BMHI).

AMHI is currently licensed to operate 76 civil inpatient beds. These beds primarily provide the "safety net" for involuntary patients who are unable to be served within the community due to risk issues or lack of bed availability. Since Maine currently has no female forensic inpatient beds, female forensic patients now occupy four or more of the civil beds.

There has been a public perception that the state presently rejects accepting civil patients at AMHI. Historical data indicated and DMHMRSAS staff confirmed that AMHI has had sufficient bed capacity for its civil patients when no other placement options exist in the community. The misperception seems related to problems with the hospitalization pre-screening process and not with bed availability.

A forecast of civil bed need based on AMHI civil admission and discharge data from 1998 and 1999 and population projections is provided in Table 3 on page 7.

While this forecast suggests the need for 63 to 72 civil patient beds by the year 2010, the forecast does not account for major changes anticipated within the overall Maine mental health delivery system during this period. As noted previously, consideration of current system practices and potential improvements is necessary to interpret the projection of bed need based on historical data.

DMHMRSAS is committed to developing a system for adults with serious mental illness that will ensure the availability of community outpatient and inpatient resources consistent with the level of consumer need; a system that will impact the need for state-operated civil inpatient beds. While the system as designed will provide the necessary array of services, full implementation has not yet been realized.

Improvements in the relationships between DMHMRSAS and community hospitals and between DMHMRSAS and community crisis services providers would significantly reduce the need for state-operated civil inpatient beds. Current problems within these relationships are not due to a lack of financial commitment but appear to be transitional and correctable through the developing partnership between DMHMRSAS and the community providers.

State/Community Hospitalization of Civil Patients: Although DMHMRSAS has contracted with community hospitals for several years to provide inpatient psychiatric treatment for patients hospitalized on an involuntary status, a mutually cooperative relationship has been slow to evolve.

TABLE 3
Population Forecast - Civil Patients
Based on AMHI 1998 and 1999 Admission and Discharge Data

Fiscal Year	Historical*		Population	
	Bed Days	Population**	Total Projected	Peaking Factor***
1998	20,979	51.9		
1999	19,995	58.0		
2000			59	55-63
2001			59	55-63
2002			60	56-64
2003			60	57-65
2004			60	57-65
2005			61	58-66
2006			62	59-67
2007			63	60-68
2008			63	60-68
2009			65	62-71
2010			66	63-72

* Although the female forensic patients are not excluded from the civil historical figures, the female forensic population was excluded from the civil patient forecast.

** AMHI's average monthly civil patient population ranged from 44 to 58 from January 1998 through October 1999.

*** Peaking factor was calculated by applying average standard deviation of monthly civil patient population to the number of projected beds.

- Based on the length of stay data collected from AMHI, approximately 22-25 % or 15-18 beds during this period were occupied by patients with lengths of stay of less than 30 days. The figure will grow slowly to approximately 16-19 beds by the year 2010 based on projected demographic population growth.

- Based on the length of stay data collected from AMHI, approximately 75-78 % or 40-44 beds during this period were occupied by patients with lengths of stay greater than 30 days. The figure will grow more rapidly as cases begin to stack up to approximately 46-49 beds by the year 2010.

For the purpose of this document, the term "community hospitals" refers to general hospitals that have specific units designated for psychiatric treatment while the term "community psychiatric hospitals" refers to stand-alone non-profit facilities providing only psychiatric treatment. Maine currently has two community psychiatric hospitals, Spring Harbor in Portland and Acadia in Bangor.

Contracts between DMHMRSAS and community hospitals presently exist. However, these contracts do not guarantee the availability of a community bed for a referred involuntary patient. Hospitals are required by law and standards to accept all patients who meet criteria for hospitalization; thus, the hospitals are unable to reserve the contracted beds for involuntary patients. Community hospitals also routinely staff units based on current patient census. Referrals requiring treatment beyond the ability of available staff cannot be accepted.

There is a perception that community hospitals reject involuntary patients because of reimbursement concerns. This perception seems exaggerated since DMHMRSAS ensures payment for involuntary patients served by community hospitals.

While the community hospitals have expressed the desire to increase their role in providing services for involuntary patients, they expressed concerns in three areas:

- Some patients referred to them are not from their geographic area. When such patients are admitted, the hospital no longer has the capacity to serve patients from their community. The practice of utilizing community beds even when they are not in the patient's community is the result of efforts to minimize admissions to the state-operated hospitals. The practice is inconsistent with achieving the DMHMRSAS goal of treatment within the consumer's own community. It also increases the difficulty faced by community hospitals in developing effective discharge plans.

- When patients who have been admitted to a community hospital and subsequently demonstrate the need for extended lengths of stay, transfer of these patients to state-operated hospitals, as provided by the DMHMRSAS contracts, has often been delayed.

- Discharge treatment planning by community hospitals may be compromised by the fact that patients discharged from state-operated hospitals receive priority for available community supports over patients discharged from community hospitals.

Information provided by the Maine Health Data Organization indicating the availability of community psychiatric beds in 1998 is provided in Table 4 on page 9. These data suggest that there were sufficient licensed community psychiatric hospital beds in Regions I and II to meet the general population needs. However, these figures represent maximum utilization of all licensed beds with no allowance for variations in need or time required for patient turnover.

The community hospital data for 1998 also did not include the use of AMHI civil beds. The civil bed utilization at AMHI in 1998 is provided in Table 5.

Table 4
Community Hospital Civil Psychiatric Bed Utilization - 1998

	Region I	Region II
Average Daily Bed Utilization Based on Patient County of Residence (Based on length of stay of 10.2 days)	57	74
Available Licensed Psychiatric Beds: Community Hospitals	Total: 84 SMMC: 13 Spring Harbor: 45 Maine Medical: 26	Total: 88 Pen Bay: 13 Maine General: 33 St. Mary's: 31 Mid Coast: 11
Average Daily Bed Utilization of Listed Community Hospitals (Based on length of stay of 10.2 days)	57	68

Source: Maine Health Data Organization

Table 5
AMHI Civil Bed Utilization - 1998

	Region I	Region II
Average Daily Bed Utilization Based on Patient County of Residence (Based on length of stay of 56.2 days)	26	30

AMHI is licensed to operate 103 psychiatric beds,
27 of which are dedicated to forensic patients

Source: Augusta Mental Health Institute

Thus, the 1998 data indicate an average need for 181 inpatient beds. With only an average of 146 available inpatient beds, the community hospitals would have had insufficient beds to meet completely the needs of all consumers residing in Regions I and II requiring either voluntary or involuntary inpatient hospitalization.

A survey of the community hospitals regarding the provision of involuntary and voluntary inpatient psychiatric services during the first six months of 1999 indicated that the community hospitals cannot meet the total needs of Region 1 and 2 for both voluntary and involuntary inpatient treatment. However, there are community beds available for additional involuntary psychiatric treatment. Table 6 confirms available community bed space if patients with lengths of stay greater than 30 days were transferred to state-operated beds.

Table 6
Maine Community Hospital Analysis: January 1999 – June 1999
ONLY ADULT PSYCHIATRIC PATIENTS

Region	Counties Served by Community Hospitals within the Region	Avg. Daily Census 1/99-6/99	Number of Licensed Beds	Number Of Operational Beds	Monthly Bed Days Available	Bed Days Used by Patients with LOS less than 30 days
Region I	Cumberland York	70.85	84	83	2490	1612
Region II	Androscoggin, Franklin, Oxford, Kennebec, Knox Somerset, Lincoln, Waldo Cumberland, Sagadahoc	69.2	88	83	2490	2025

- *Assumes patients with lengths of stay greater than 30 days (10.5 in Region I and 12 in Region II) would be transferred to state-operated beds.*

Since Spring Harbor opened 12 additional adult psychiatric beds in December of 1999, the number of licensed community psychiatric beds presently available within Region I and II has increased from 172 to 184.

Given the availability of community psychiatric beds and the potential that community hospitals may be willing to consider increasing psychiatric bed capacity to meet the need for involuntarily committed patients, DMHMRSAS is renewing efforts to expand the partnership with community hospitals that will facilitate the appropriate use of state-operated beds. General consensus of the optimal roles of the community and state-operated beds in providing inpatient psychiatric treatment includes the following:

- Ideally, community hospitals would serve only the patients residing within their geographic area.

- Psychiatric units of community acute care hospitals may be unable to effectively provide the level of treatment required by some patients. These patients would be best served by the community psychiatric hospitals and the state-operated hospitals.

- State-operated hospitals should serve as the "safety net" for patients admitted for acute treatment who meet the criteria for intensive and extended treatment.

- Patients admitted to community hospitals requiring extended care and substantial psychosocial rehabilitation would be best served by state-operated hospitals with extensive treatment resources. Duplicating this level of treatment resources in community acute care hospitals is not fiscally responsible.

- Patients admitted to community and state-operated hospitals should have the same access to residential and support services at discharge.

Given this consensus, the potential for the implementation of a state/community partnership seems likely. This consensus also reflects agreement that there remains a need for state-operated "safety net" acute beds and state-operated intermediate care beds for patients requiring extended treatment.

The goal of treatment in the least restrictive environment is reflected in current clinical practices that limit psychiatric hospitalization to brief periods followed by community support. This approach is effective for many consumers of mental health services. However, some individuals with severe and persistent mental illness or experiencing such complicating factors as substance abuse or a history of trauma require more extended treatment and psychosocial rehabilitation for adequate therapeutic effect.

AMHI Civil Patient Analysis: An analysis of the length of stay data for AMHI patients for 1998 and 1999 indicated the following:

Table 7
AMHI Civil Length of Stay: FY 1998-1999 Admissions

Length of Stay Group	Number	Percent
1-15 days	213	38.4%
16-30 days	99	17.9%
31-60 days	100	18.1%
60-120 days	80	14.4%
120 days and over	62	11.2%
Total	**554**	**100.0%**

The length of stay data from 1998 and 1999 indicate that 43.7% of AMHI civil patients had a length of stay over 30 days. A point-in-time review of the civil patients at AMHI on November 16, 1999 indicated that 64% of the current patients had lengths of stay greater than 30 days, with 22 of the patients (38%) having lengths of stay over 90 days. The increase in the number of patients with length of stays greater than 30 days reflects the increasing use of AMHI for extended care.

Additional review of the AMHI patients on November 16, 1999 confirmed the presence of persistent and serious mental illness as reflected by repeated hospitalizations. For 50% of the AMHI patients, the current hospitalization was their second since January of 1998. For six of the patients, the current hospitalization was the fourth or more since January of 1998.

Further, review of the AMHI patients on November 16, 1999 confirmed the presence of patients dual-diagnosed with substance abuse disorders and/or histories of trauma as well as serious mental illness. Patient diagnoses reflected such dual-diagnoses for 28 or 50% of the 56 cases reviewed. These numbers are consistent with AMHI patient profiles of 1998 admissions, which indicated that 45% of patients admitted had a dual-diagnosis of a substance abuse disorder.

Crisis Services: DMHMRSAS has contracted with community mental health providers in each area of the state to provide "no-reject" crisis services 24 hours a day for all individuals who experience psychiatric crises. The crisis services include: telephone consultation, evaluation, mobile crisis outreach services, placement in a crisis residential bed, and facilitation of hospitalization. A single statewide crisis care telephone line, the first in the country, ensures access to requests for mental health assistance.

DMHMRSAS staff and community providers agree that the crisis services system established during the last three years is improving. However, it has yet to achieve the consistent, effective crisis interventions that could reduce the system's reliance on inpatient psychiatric treatment.

Current deficiencies in the crisis system appear to be primarily related to the limited number of credentialed mental health clinicians in Maine and the number of large, sparsely populated areas to be served. In some rural areas, crisis workers may have limited or no face-to-face access to a psychiatrist and often must rely on telephone consultation. Reports suggest that the variable skills of crisis workers may effect clinical evaluations and the subsequent sharing of information with the consultant psychiatrist.

Although crisis workers should be "mobile" and provide intervention at the consumer's location, safety and transportation issues, particularly during non-business hours, frequently result in the consumer being required to come to a hospital emergency room for evaluation. The result of these evaluations is too often an inpatient admission. With limited access to a psychiatrist and a client's mental

health history, crisis workers may be unable to offer effective interventions other than hospitalization when the client experiences an acute psychiatric episode.

DMHMRSAS currently contracts with community crisis programs for the operation of crisis beds to divert hospital admissions when clinically indicated. However, many of the existing community crisis beds do not operate as designed. Community crisis beds are staffed 24 hours a day, but many have no consistent on-site presence of a nurse or psychiatrist, and their staffing levels may preclude the placement of persons presenting significant risk issues. Only persons who are non-violent and who are willing and able to contract that they will not engage in self-harm are accepted by many of the current crisis beds. Thus, the crisis beds do not now serve others who might benefit from a period of brief crisis stabilization.

The current process by which a person requiring intensive psychiatric treatment gains admission to an inpatient bed is often protracted, and at times dehumanizing. Pre-screening for hospitalization is typically conducted by a crisis worker within an acute medical care hospital emergency room. Pre-screenings are delayed when a potential patient arrives at the emergency room in an intoxicated condition, since the pre-screening cannot be completed while the patient's blood level suggests continued intoxication. When the decision to hospitalize is finally made, the crisis worker must canvass the community hospitals to determine bed availability and arrange for admission. AMHI placement is only pursued after all community hospitals have refused the admission. Not only is this process difficult for the patient but it also burdens the emergency rooms of the community general hospitals.

Initiatives under consideration by DMHMRSAS to improve current crisis services include:

- Development and monitoring of performance standards for crisis services.
- Development of assessment centers and 23-hour assessment beds for persons experiencing psychiatric crises.
- Staffing community crisis beds to optimize their appropriate utilization.
- Development of a clearinghouse to streamline the process of determining bed availability in the system.
- Staff development and enhanced training for crisis workers.

DMHMRSAS has continued to fund new crisis services that will impact hospitalization rates. For example, the development of "safe houses" for consumers experiencing crises related to histories of trauma has reduced inpatient utilization for these individuals.

Residential Treatment Options: Maine has made great strides in recent years in improving the residential options available for persons with serious mental illness. The increasing availability of these options has facilitated the discharge of patients who had previously been hospitalized for extended periods due to inadequate community resources. However, there is a relatively small group of hospitalized

individuals who require a level of supervision and continued psychosocial rehabilitation not currently available in the community. Most of these individuals have experienced numerous unsuccessful community placements.

Surveys of AMHI clinical staff at two points in time in the fall of 1999 indicated that the number of AMHI patients who could be discharged to an intensely supportive residential program ranges between 13 and 19. These estimates reflect patients remaining at AMHI after years of deinstitutionalization efforts and support the need for creating a supportive residential environment that could address both treatment and safety needs. Currently, to permit hospital discharge for this type of patient, the primary option is placement in an apartment with one-to-one staff supervision 24 hours a day. This option is not only cost prohibitive (up to $300,000 per year), but is intrusive on the privacy of the consumer.

Projection of Need for State-Operated Forensic Inpatient Beds

Providing forensic inpatient psychiatric treatment is a state responsibility not readily transferable to community providers due to the unique clinical and security concerns. The State of Maine is wise to continue to assume responsibility for this population. This needs assessment was conducted to determine the number of inpatient forensic beds needed for the entire state.

Review of information provided by the National Association of State Mental Health Program Directors (NASMHPD) Research Institute indicates that Maine has a low number of forensic patients in relation to its statewide population. An analysis of state responses to a survey of the number of current adult forensic inpatient census indicated the following:

Table 8
Forensic Inpatients per 100,000 Population

State	Forensic Inpatients per 100,000
Kansas	6.7
Virginia	5.2
New York	4.9
Minnesota	4.0
Massachusetts	3.3
Delaware	3.0
Maine	2.7

Source: NASMHPD Research Institute

Maine's relatively few forensic inpatients when compared to other states seem related to limited inpatient bed capacity rather than a lesser need for forensic treatment. The AMHI forensic unit has been challenged to meet the needs of

forensic inpatients due to limited space and the security issues related to the current space.

With only 27 forensic beds available at AMHI, patients on the forensic unit now are primarily patients who have been found not criminally responsible (NCR) or incompetent to stand trial (IST). The forensic bed space has restricted the access to inpatient psychiatric services for persons referred by Maine jails and prisons. Forensic bed space availability for correctional transfers has been further restricted by the need for the AMHI forensic unit to house two to four male patients without "legal holds" due to the inability of the current less secure civil patient units to manage these patients.

The AMHI forensic unit serves only male forensic patients, with female NCR, IST or correctional transfers now served within the civil units. Since the civil treatment teams assigned to NCR females are not forensically-focused, attention to the specialized processing for disposition options is compromised. Also, while the practice of housing the female forensic patients on the civil units would appear to minimize the secure supervision of female forensic patients, the lack of a forensic perimeter security for the females can actually result in more restrictive measures. For example, one female NCR was maintained with one-to-one supervision for five months as a security measure. As would be expected, this type of intervention was experienced by the patient as highly intrusive.

There are currently three male NCR patients at BMHI. Although the decision has been made to house all forensic patients at AMHI, the three male patients, all of whom have serious functioning impairments related to mental illness, have been permitted to remain at BMHI due to the limited security risks involved in their retention at the facility. Personal observation of these patients during the needs assessment process confirmed the clinical appropriateness of the decision to allow these patients to remain in the familiar BMHI environment.

During a review of the AMHI forensic unit on November 9, 1999, the 24 male forensic patients fell into the following legal categories:

Table 9
Legal Status of AMHI Male Forensic Patients - November 9, 1999

Legal Status	Number of Patients
NCR	12
IST	5
Pending Evaluation	1
Jail Transfers	6

Projected Need for NCR Beds: Hospitalization stays for the 12 male NCR patients currently at AMHI range from one month to 29 years, with seven of the patients

having been hospitalized for more than 12 years. Prolonged lengths of stay for Maine NCR patients are common. The length of hospitalization for the four female NCR patients now at AMHI ranges from 1 to 4.5 years.

The Maine judicial system has adopted the practice of not discharging NCR patients from the custody of the Commissioner of DMHMRSAS when the patient no longer requires inpatient psychiatric treatment but placing them on hospital leave. Review of the lengths of stay of the 19 NCR patients placed on hospital leave since 1982 indicates that historically, Maine NCR patients have had extensive lengths of stay.

Table 10
Length of Stays of 19 NCR Patients Placed on Hospital Leave since 1982

Length of Stay	Number of Patients
Less than 1 year	1
1 year to 5 years	2
5 years to 10 years	5
10 years to 15 years	4
15 years to 20 years	4
Over 20 years	3

A forecast of the need for forensic beds for non-correctional patients is presented in Table 11 on page 17. Patients referred by the jails and Department of Correction were omitted from this analysis due to the consensus that the historical statistics would not provide a valid estimate of need. Projections of the number of inpatient beds required by patients transferred for correctional institutions were based on national estimates and a survey of Maine correctional agencies.

The forecast model indicates that Maine will require a total of 21 NCR patient beds by the year of 2010. This forecast, like the forecast for civil beds, is based on recent historical data and population projections and does not account for potential change within the Maine mental health delivery system during this period. As noted previously, consideration of current system practices and potential improvements is necessary to interpret the projections of bed need based on historical data.

Forecast of the need for NCR patient beds is impacted by the number of NCR admissions as well as by the number of discharges. The number of admissions has remained fairly static while the number of NCR patients approved for hospital leaves recently increased. Since 1995 there have been only 7 NCR patient admissions, with four of these admissions occurring in 1997.

Significant progress in obtaining judicial approval for NCR hospital leave approvals is indicated by the fact that of the 19 NCR patients now on hospital leave, six of the leaves were granted in 1999. Implementation of a six bed halfway house for NCR patients, the Homestead House, has permitted NCR patient movement outside of the hospital.

Table 11
Population Forecast - Forensic Patients

Fiscal Year	Historical		Projected**				
	Bed Days	Population	Female	IST	NCR	Total Projected	Peaking Factor
1997*	8,382	22.96					
1998*	9,047	24.79					
1999*	9,387	29.71					
2000			4	5	12	21	18-24
2001			4	7	12	23	20-26
2002			4	7	12	23	20-26
2003			4	7	12	23	20-26
2004			5	7	13	25	22-28
2005			5	9	13	27	24-30
2006			5	9	13	27	24-30
2007			5	9	14	28	25-31
2008			6	10	14	30	27-33
2009			6	11	14	31	28-34
2010			6	11	15	32	29-35

* Includes all forensic patients, male and female
** Excludes forensic patients from correctional facilities and jails.

- The projections are based solely on male and female NCR and IST patients. Projection of beds for jail and prison transfers is based on national data.
- Female forensic cases housed with the civil population are included for the 1999 historical population.
- A peaking factor of +/- 3 beds has been applied to the total forecast to account for monthly variations. The 3 bed peaking factor was determined by applying the standard deviation calculated from the average daily forensic census from January 1998 through October 1999. The average daily census during this period ranged from 22 to 27 patients.

If additional secure halfway house forensic beds were developed, it is likely that additional NCR patients might be placed on hospital leave. Only a few of the current 16 hospitalized NCR patients at AMHI do not have access to grounds privileges. Most of these patients continue to require staff supervision when not within the facility.

Development of a second secure forensic halfway house is highly recommended as a cost effective and safe manner to address the needs of forensic patients requiring intense supervision but no longer requiring inpatient treatment. Based on discussions with many Maine agencies and citizens, the development of such a facility has strong community support. Locating the second forensic halfway house outside of the Augusta community, perhaps in the Portland area, would permit forensic patients on hospital leave to safely reside near their support networks.

The forecast that Maine will require a total of 11 IST patient beds by the year of 2010 is also significantly affected by current practices. The number of patients adjudicated to IST is increasing. Of the 22 patients admitted to the AMHI since 1995 for restoration to competency, ten were admitted since 1998. Lengths of stay of the current IST patients range from 130 to 306 days. These are unusually extended lengths of stay for restoration to competency and possibly reflect the staff's inability to obtain judicial approval for involuntary medication even though the patient has been committed for restoration to competency. While it is essential to protect patient rights in treatment decisions, IST patients who are permitted to refuse treatment may actually preclude competency restoration. Re-consideration of the current practice is recommended to reduce the length of hospitalization related to restoration of competency.

Projected Need for Forensic Evaluation Beds: Individuals may be admitted to the AMHI forensic unit for the completion of evaluations related to competency and/or criminal responsibility; however, the number of such admissions is minimal. AMHI records reflect only ten such admissions since 1995, with an average length of stay of 72 days. The majority of court-ordered evaluations are completed on an outpatient basis through State Forensic Services.

Projected Need for Correctional Forensic Beds: As noted previously, since there is consensus that individuals in jails and prisons requiring inpatient psychiatric treatment have been under-served, analysis of historical data would not have provided a valid forecast of future need. Projections for correctional forensic beds were based on national estimates and surveys of Maine correctional agencies.

The Maine Department of Correction (MDOC) has a current census of approximately 1,700 inmates. National statistics suggest that 10% of prison inmates experience some type of mental illness with an estimated one half to one percent requiring specialized treatment and placement for serious mental illness. The number of inmates requiring inpatient psychiatric treatment within a forensic hospital is largely determined by the level of services available within the correctional system.

MDOC projects the need for two inpatient forensic beds at any one time. These beds would be primarily utilized for acute treatment, with the inmate returning to the prison system after stabilization of the acute psychiatric episode. MDOC's development of the proposed Special Needs Unit at the Maine Correctional Center for inmates with serious mental illness will ensure the inmate's treatment after return to the prison system. Implementation of an involuntary medication process for prison inmates in accordance with the Supreme Court *Harper* decision might also reduce the need for the transfer of MDOC inmates to a forensic hospital setting.

Local jails of Maine now house approximately 1,100 male and 125 female inmates at any one time. The number of these inmates requiring inpatient psychiatric treatment was assessed through jail surveys, discussions with jail administrators and consumers who have been incarcerated, as well as by consideration of national trends.

Results of a survey completed by jail administrative staff indicated the following:

Table 12
Self-Reported Psychiatric Hospital Referrals - Maine Jail Survey, October 1999

Jail	Census	Annual Admissions	Annual Referrals	Reason for Referrals	Inmates Requiring Hospital Care
Androscoggin	98	5000	6	Suicidal	3
Aroostook	65	1200-1500	6-10	Suicidal/Mentally Ill	10-20%
Cumberland	325	8400	5	Suicidal/Mentally Ill	1
Franklin	19	735	3	Suicidal/Mentally Ill	1
Hancock	40	N/A	15	N/A	N/A
Kennebec	178	3068	8	Suicidal/Mentally Ill	10-12 year
Knox	40-50	1700+	3	Suicidal/Mentally Ill	1
Lincoln	32	1200	4	Mentally Ill	1-2 year
Oxford	30	1300	2-3	Suicidal	1/month
Penobscot	125	5000	7-10	Mentally Ill	1-2
Piscataquis	27	755	1-2	N/A	N/A
Sagadahoc	22	778	1	Mentally Ill	1
Somerset	54	1500	6	Suicidal/Mentally Ill	1
Waldo	24	1200	8	Suicidal/Mentally Ill	3
Washington	31	N/A	1	Mentally Ill	2
York	130	3500	7	Suicidal/Mentally Ill	3

N/A = Data not available.

Applying national estimates to the Maine jail population indicates that at any one time, approximately 184 (15% of inmate census) experience mental illness with 12 to 18 (1 to 1.5% of inmate census) requiring specialized placement due to serious mental illness. The number of inmates requiring inpatient psychiatric treatment is generally higher in jails than in prisons due to high jail turnover and the acuity of

mental illness of some inmates at admission. Maine jails reported more than 35,000 admissions each year, and given the unknown regarding new arrestees, each admission has the potential for mental illness or the risk of suicidal behavior.

Similar to the situation within prisons, the need to transfer jail inmates with mental illness for inpatient psychiatric care is partially determined by the level of mental health services available within the jail. Responses to the jail survey indicated that the availability of mental health services in Maine jails is limited at best. Given the limited on-site mental health assistance, jails have little recourse but to refer inmates with serious mental illness for inpatient treatment. Maintaining such inmates in a jail setting without appropriate follow-up is neither clinically acceptable nor safe.

Improving the admission process for jail inmates would also impact the number of forensic admissions. Development of a direct referral process between the jail and the hospital forensic staff would preclude the now lengthy, and likely unnecessary in many cases, process of requiring a second pre-screening in an emergency room of a community acute medical care hospital. Direct communication would permit collaboration in determining the most clinically appropriate level of treatment.

This needs assessment was conducted to assess the number of inpatient beds required to meet the needs of all Maine jails. Since BMHI now serves jail inmates from Aroostook, Hancock, Penobscot and Washington Counties, the establishment of a single site for all forensic correctional treatment will require a change in practice. The assurance of an adequately secure environment and forensically-based clinical treatment at the new forensic facility should compensate for the additional jail transportation requirements of the distant counties.

While the provision of additional well-staffed inpatient beds for jail inmates will improve services for persons with mental illness who are incarcerated, the level of mental health services available in the jails must be increased. Without adequate follow-up and the continuation of prescribed medication, inmates who have received effective inpatient care are not likely to maintain the functioning achieved during hospitalization.

Training law enforcement and correctional officers in identifying and effectively responding to persons with serious mental illness is also critical. Jail mental health services are compromised when security staff are not knowledgeable about mental illness or do not support the treatment process.

Finally, alternatives to incarceration for consumers disturbing the public with non-criminal mental health behavior must be found. For example, 23-hour assessment beds could provide law enforcement a viable alternative to incarceration and subsequent hospitalization, as well as enhance consumer access to appropriate levels of care. Addressing these issues would reduce the number of jail inmate referrals for inpatient treatment and limit the use of restrictive hospitalization to those instances when hospital-level care is clinically appropriate.

Summary of Projected Need for Forensic Beds: The year 2010 projected need for forensic inpatient beds based on the historical data, national estimates, proposed changes in service delivery practices and the potential for system improvements is as follows:

Table 13
Summary of Projected Need for Forensic Beds

Forensic Population	2010 Projected Beds	Rationale
NCR Patients	18-20	Based on population forecast and development of second secure halfway house beds for NCR patients no longer requiring hospitalization.
IST Patients	4-5	Based on decreasing lengths of stay and clinically aggressive treatment for restoration to competency.
Forensic Evaluations	1	Based on current practices and continuing outpatient evaluations by State Forensic Services.
Prison Transfers	2	Self-report of MDOC.
Jail Transfers	12-16	Based on national estimates and improvements in jail mental health services.
TOTAL	**37 – 44**	

The analysis of the need for forensic inpatient beds did not include the juveniles requiring inpatient psychiatric care who are in the custody of MDOC. MDOC has indicated a need for as many as six juvenile inpatient beds. Initially, juvenile forensic inpatient treatment was to be integrated into the new facility. Best treatment practices indicate that mixing adults and juveniles in the same facility is ill-advised. Discussions are now being conducted with community psychiatric hospitals to develop secure adolescent treatment beds for the juvenile forensic population. The establishment of such beds within Maine or the development of adolescent psychiatric beds within the MDOC system is crucial to end the current practice of sending some juveniles to out-of-state placements, a clinically disruptive and expensive resolution.

IV. NEEDS ASSESSMENT RECOMMENDATIONS

While the needs assessment focused on determining the need for state-operated inpatient psychiatric beds, the analysis also identified areas which would improve the overall Maine mental health system and reduce the need for hospitalization. Recommendations resulting from this analysis are summarized below.

Recommended Construction: Based on a review of current and developing practices as well as an analysis of historical data, a Psychiatric Treatment Center designed to provide treatment and living space for 48 civil patients and 44 forensic patients is proposed. In addition, two Supportive Living Centers are proposed to provide16 residential beds for patients now hospitalized.

The Psychiatric Treatment Center is designed to serve both civil and forensic patients to permit the continued sharing of support resources and maximize the utilization of expensive treatment space. Further, if the forensic beds were to be separated from the civil beds, operation of the forensic beds would no longer qualify for Federal Disproportionate Share funding.

The Psychiatric Treatment Center will provide the following units:

- Acute Care Unit: A 24-bed unit will provide the "safety net" beds for patients who are in need of psychiatric hospitalization but who are unable to be served within the community due to risk or lack of available community hospital bed space within the patient's local service network.

- Intermediate Care Unit: A 24-bed unit will provide extended treatment for patients whose severity of mental illness requires extended inpatient treatment for therapeutic effect. Many of these patients will require specialized treatment for trauma or substance abuse as well as a biological mental illness. Patients will be admitted to the intermediate care unit on a voluntary or involuntary basis.

- High Security Forensic Unit: A 20-bed unit will provide the initial placement for all forensic patients admitted to the hospital. NCR patients and IST patients will be transferred to the intermediate care forensic unit subsequent to treatment team recommendations. Forensic patients admitted to the hospital from jails or prisons will be maintained on the high security forensic unit for their entire hospitalization. The design of this unit will allow six beds to flex from high security to intermediate care if required.

- Intermediate Care Forensic Unit: A 24-bed unit will provide extended treatment for male and female patients who have been admitted to the hospital as NCR or IST and whose functioning has permitted treatment team approval of reduced security requirements.

The provision of a high security unit will minimize the security concerns involved when housing inmate patients. The provision of a dedicated clinical staff will also permit intensive acute psychiatric treatment and the cooperative discharge planning with jail and prison staff that will optimize an inmate's potential for maintaining stability after return to the correctional setting. These are areas now frustrating the relationship between corrections and the AMHI forensic unit.

The recommendation to provide 24 male and female intermediate care forensic beds was based on factoring the information gained about current Maine treatment and management of these patients with the population forecast. In many states, the forensic patients of this unit would have been transferred from high security forensic settings to less secure civil settings. Maine's practice of retaining all NCR and IST patients on a forensic unit requires the development of a less restrictive environment for long-term treatment and maintenance.

The Psychiatric Treatment Center has been designed to provide maximum flexibility in meet evolving system needs. Six beds of the high security forensic unit are designed to allow for use either as high security or intermediate care beds. Thus, the high security forensic unit could be reduced to 14 beds and the intermediate care forensic unit increased to 30 beds if needed.

The infrastructure of Psychiatric Treatment Center will be built to enable the addition of two 24-bed units (civil or forensic) without significant change to the core structure, in the event that additional beds are required as a result of changing demographics or policy change. This expansion will not be needed if the requisite community resources are established.

An essential component of the recommendation for the construction of the Psychiatric Treatment Center is the creation of two stand-alone eight bed intensely supervised residential facilities. The Supportive Living Centers will provide safe living environments for persons with serious and persistent mental illness who no longer require hospital-level treatment, but whose needs cannot now be adequately met in the community. The Supportive Living Centers will also provide a training setting for individuals throughout the state to develop skills to effectively treat and support this challenging population. This training will permit the sharing of best practices that will facilitate the subsequent development of similar placements in other locations within Maine.

A chart comparing the bed capacity of the current AMHI patient units with the bed capacity of the proposed units of the Psychiatric Treatment Center and the Supportive Living Centers is provided in Table 14 on page 24.

Table 14
Comparison of Existing and Proposed Civil and Forensic Beds

CURRENT AMHI UNITS	LICENSED BED CAPACITY		PROPOSED PSYCHIATRIC TREATMENT CENTER	BED CAPACITY
Region I-Civil	25		Acute Care-Civil	24
Region II-Civil	25		Intermediate Care-Civil	24
Region II-Civil	26			
Civil Subtotal	76		Civil Subtotal	48
Forensic-Maximum	6		Forensic-High Security	20
Forensic-Medium	21		Forensic-Intermediate	24
Forensic Subtotal	27		Forensic Subtotal	44
AMHI Total	103		Center Total	92
Residential Beds	0		Supportive Living Centers	16
TOTAL BEDS	**103**		**TOTAL BEDS**	**108**

System Recommendations: DMHMRSAS is and will continue to work on resolving system issues impacting the need for inpatient psychiatric treatment. It is strongly recommended that DMHMRSAS accomplish improvements in the following areas during the transition construction period to ensure optimal system functioning and utilization of the new inpatient beds.

- Continuing development of the partnership between DMHMRSAS and community hospitals and community psychiatric hospitals through agreement on the most clinically effective roles for community and state-operated beds and the establishment and monitoring of performance standards. As noted previously, there appears to be general agreement about the following hospital roles:

  - Optimally, community hospitals would serve only the patients residing within their geographic area.

  - Psychiatric units of community acute care hospitals may be unable to effectively provide the level of treatment required by some patients. These patients should be served by the community psychiatric hospitals and the state-operated hospitals.

  - State-operated hospitals should serve two functions: the "safety net" for patients needing acute treatment, and a treatment center for patients who meet the criteria for intensive and extended treatment.

  - Clearly defined criteria must be established to determine when transfers from community to state-operated beds are appropriate.

  - Patients admitted to community hospitals requiring extended care and substantial psychosocial rehabilitation would be best served by state-operated hospitals with extensive treatment resources.

- Continued efforts to integrate community and hospital mental health providers in developing inpatient treatment plans and discharge plans when a patient is hospitalized in a state-operated or community facility.

- Development of state-of-the-art treatment tracks and programming for inpatients with multiple needs related to persistent and serious mental illness, substance abuse and/or histories of trauma.

- Establishment of a centralized clearing-house process for hospital admissions to address the serious problems with the current psychiatric hospitalization pre-screening process.

- Refinement of community crisis services to maximize the effectiveness of outpatient services and limit the use of hospitalization to instances in which hospital-level care is clinically appropriate. These refinements include:

  - Development of 23-hour assessment beds and the provision of psychiatric support and adequate staff for the community crisis beds that would enable safe and effective options to hospitalization.

  - Refinement of use of in-home support staff to enable consumers experiencing psychiatric crises to be safely treated in the least restrictive environment.

  - Development and monitoring of performance standards for crisis services.

- Staff development and training opportunities for hospital-based mental health staff to enhance their skills in providing state of the art treatment. Staff development and training activities for community crisis workers and case managers to enhance skills in providing crisis interventions.

- Increased university affiliations to provide additional clinical resources for inpatient and community mental health services as well as provide training opportunities that would attract additional skilled clinicians to the State of Maine.

- Development of a peer support system.

- Development of a second secure forensic halfway house located in an appropriate location to address the needs of current forensic unit patients requiring supervision but no longer requiring inpatient treatment.

- Increasing mental health support to local jails through establishment and monitoring of performance standards for community agencies responsible for these services.

- Development of an admission protocol that would permit direct dialogue and acceptance/refusal of admissions between the forensic unit and jail staff.

- Training of law enforcement officers regarding mental health issues to facilitate the appropriate disposition when mental health issues may have contributed to minor law infractions.

- Training of correctional officers in identifying the signs of serious mental illness and appropriate interventions to facilitate effectiveness of mental health services within the jails and prisons.

- Development of partnership between the Maine Department of Correction and community psychiatric hospitals to provide inpatient treatment for adolescent forensic patients.

The construction-related recommendations arriving from the needs assessment set the stage for the development of the operational and architectural program, the concept design, and the capital and operating budgets described in the ensuing chapters.

V. OPERATIONAL AND ARCHITECTURAL PROGRAMS

Introduction

As mentioned above, the development of a Psychiatric Treatment Center and two Supportive Living Centers is recommended. Implementation of both an inpatient treatment facility and two highly supervised residential placements will complement community resources in the providing Maine citizens with state of the art treatment in the least restrictive setting.

The narrative that follows briefly describes the proposed operation of the Psychiatric Treatment Center and the Supportive Living Centers, organized by functional area. A summary of the corresponding square footage of these facilities appears in Tables 15 and 16 on pages 33 and 34 at the end of this section.

Psychiatric Treatment Center

The Psychiatric Treatment Center will allow the State of Maine to provide treatment for a full range of forensic patients, including patients referred from the state's correctional agencies, in a safe and secure environment. In addition, the Psychiatric Treatment Center will provide an appropriate number of state-operated inpatient beds for civil patients. The new facility is not designed to compete with community hospitals for patient services, but to provide treatment for patients unable to be safely treated within the community hospitals and for patients whose severity of illness will require extended treatment and significant psychosocial rehabilitation.

In accordance with the *Rights of Recipients of Mental Health Services,* Section B, Rights in Inpatient and Residential Settings, the Psychiatric Treatment Center "shall be designed to afford recipients comfort and safety, shall promote dignity and independence and shall be designed to make a positive contribution to the efficient attainment of treatment goals."

The Psychiatric Treatment Center is designed to accommodate an initial population of 92 patients. In the event that additional civil or forensic patient beds may be required in the future, programming space, support services and the utility infrastructure of the facility will be sized to accommodate a future expansion of up to 140 beds. Economies of scale in construction and operating costs will be realized if additional treatment beds should be needed as the result of changing demographics, service delivery practices or policy changes.

The Psychiatric Treatment Center will be both a physically and staff secure facility. The exterior walls and windows of the building's perimeter will be designed and constructed to meet the highest levels of security in conformance with industry standards, and will serve as the primary line of security for the facility. Architectural

fencing will be used to define property line demarcations. This approach will allow patients the freedom to move securely and safely throughout the facility as well as on the adjacent grounds.

A state of the art security electronics system will be utilized to allow staff to safely supervise patient movement and provide for personal safety. All security features will be sensitively designed so as to be unobtrusive and blend in with the normative and therapeutic environment of the facility. While electronic technology will be used to enhance the security of the hospital, in no instance will the use of electronic surveillance substitute for staff supervision and interaction.

On-line computer terminals will be placed in appropriate areas to ensure that needed information is readily available to staff involved in the decision-making and treatment processes.

Proposed operations of the various functional areas of the Psychiatric Treatment Center are as follows:

Public Lobby/Administration: The public lobby will be the primary access point into the Psychiatric Treatment Center through which all staff, visitors and patients with grounds or community privileges will pass. A receptionist will be present in the public lobby from 7:00 AM to 8:30 PM every day to greet, process and direct visitors to the administrative offices or the visitation area.

The administrative area will provide adequate space for administrative oversight and clinical supervision of Psychiatric Treatment Center activities, as well as for the efficient processing of facility and patient documentation. The administration area is divided into the following sub-areas:

- Superintendent's Office
- Mailroom/Switchboard
- Administrative Services
- Operational Services
- Clinical Services
- Clinical Support Services
- Patient Records
- Administrative Support

Sufficient training space has been included within the Psychiatric Treatment Center to promote the clinical skills of staff and the development of university affiliations. These affiliations will enhance patient treatment and offer clinical training opportunities for Maine residents.

Staff Support: Staff support areas include a staff break room and male and female staff shower and dressing rooms. The showers and dressing rooms will be essential when weather emergencies require staff presence for extended periods.

Patient Units: Civil and Forensic: The four patient units of the Psychiatric Treatment Center will provide space to conduct varying levels of treatment in order to address individual patient needs. Constant observation and seclusion and restraint rooms will provide the interventions and staff supervision required when a patient is experiencing the acute phase of mental illness or is behaving in a manner that presents a risk of harm to self or others. It is DMHMRSAS's goal to develop alternatives to seclusion and restraint as crisis care, in which case these rooms will be utilized for alternative treatment. Unit treatment areas will include the programming space and indoor/outdoor leisure space to facilitate the recovery process.

While the focus of treatment on the acute and intermediate care units will differ, based on the patients being served, the principles of care will be the same. All units will provide multidisciplinary treatment consistent with the patient's current mental status. All patients will be afforded active treatment focused on the reduction or management of symptoms and behaviors that led to the admission and the development of skills that will promote enhanced functioning over a sustained period.

The patient units are designed based on a cluster concept. Each unit is comprised of two to three clusters; each cluster providing bedroom and leisure space for four to sixteen patients. Each unit also has treatment space and multipurpose rooms for program activities. Offices for members of a patient's treatment team are located within the patient's unit to facilitate staff-patient interaction, staff-staff interaction and consistency in the treatment team process.

The patient units will permit the zoning and closure of staff office and programming space when these areas are not in use. This will limit the space requiring staff supervision to areas where the patients are present. The units will also allow the flexible separation of the bed space within designated clusters to meet the clinical needs of specific patient groups.

Patients of the high security forensic unit will remain on the unit unless escorted by staff to the visitation area or medical clinic. These patients will receive treatment and dining within the secure unit. Patients of the high security forensic unit will not interact with patients of the intermediate care forensic unit or the civil patient units. However, a section of the high security forensic unit is designed to flexibly provide safe housing for intermediate care forensic patients if needed.

Centralized Programming Services: Although treatment and programming space will be provided on each patient unit, programming efforts will be focused within a centralized Treatment Mall for patients who have recovered from the most acute phase of psychiatric disturbance. The Treatment Mall will provide the patient services and programs required for therapeutic benefits and enhanced quality of life. Since the Treatment Mall will be located within the secure perimeter, patients will be afforded freedom of movement and choice of program involvement without risk to

the safety of the patient or community. Patient participation in Treatment Mall activities will provide the patient and staff the opportunity to evaluate the patient's ability to cope with group situations in a community-like environment.

Programming options to be offered on the Treatment Mall include the following: psychotherapeutic groups, psychoeducational groups focused on understanding mental illness and activities of daily living, academic training, art and music therapy, pottery, vocational services, cooking groups, horticulture groups, structured leisure activities, and therapeutic exercise. Psychotherapeutic groups will address issues related to mental illness as well as problems related to substance abuse and trauma.

Space for religious services, unstructured leisure activities, indoor and outdoor recreation, and large group activities will also be provided. Offices for the chaplain, patient advocate and peer specialists will be located in this area, thereby facilitating patient access to these important resources. The patient library, barber/beauty shop, small patient chapel, and gymnasium will also be located on the Treatment Mall.

Admission/Discharge Area: A central admission/discharge area will be provided for all forensic and involuntary civil patients entering and leaving the Psychiatric Treatment Center. These patients will be admitted to the admission/discharge area through a secure garage that will serve as a vehicular sallyport and permit a controlled environment as well as an area protected from inclement weather.

Clinical staff of the patient unit accepting the patient will come to the admission/ discharge area to complete the admission process. A medical records clerk will assist in the preparation of documentation related to the admission.

The admission/discharge area will also serve as the exit and entry point for the transport of patients for off-site medical care, community appointments and court appearances. Further, the area will serve as the entry and exit point for individuals brought to the Psychiatric Treatment Center from correctional facilities for the completion of court-ordered evaluations by State Forensic Services staff.

Visitation: Since visitation of the patient by family and friends often serves to promote a patient's mental health, the Psychiatric Treatment Center will provide optimal opportunities for visitation. Visitors will be encouraged to consider the patient's involvement in therapeutic programming when scheduling their visits.

The visitation area will provide a multipurpose room for court commitment and other administrative hearings related to a patient's hospitalization. This multipurpose room will also be used by for group meetings that will include both patients and persons from the community. Such groups include the National Alliance for the Mentally Ill, Alcoholics Anonymous, and peer support groups.

Medical Support Services: Medical Support Services will provide patients of the Psychiatric Treatment Center with medical and dental care. This area will also house pharmacy services and provide sleeping accommodations for medical clinicians providing night coverage.

State Forensic Services: State Forensic Services coordinates and performs such court-ordered forensic evaluations as: competency to stand trial evaluations; criminal responsibility evaluations; pre-sentencing reports; and periodic assessments of the mental functioning and prognosis of individuals previously determined to be incompetent to stand trial (IST) or not criminally responsible (NCR).

Although State Forensic Services is not funded through the Psychiatric Treatment Center, its location within the hospital will facilitate the completion of court-ordered evaluations for patients of the forensic units, particularly patients who have been found IST or NCR. The location will also provide a secure environment when individuals are transported from jails or prisons for court-ordered evaluations.

Food and Laundry Services: While institutional linen will be laundered by a private provider, a laundry pick-up and distribution system is accommodated in the new facility. A production kitchen for the preparation of meals for patients and staff will include areas for meal planning, preparation, cooking, serving, cleaning, and storage. Dining areas will be located on patient units and on the Treatment Mall.

Security Services: A centralized Security Center will monitor and coordinate the hospital's security, safety and communications systems. Security Center activities include observing and controlling the hospital's entrance and exit traffic; monitoring the institution's communication, fire alarm/detection and personal alarm systems; issuing emergency keys and monitoring the issuance of all facility keys; monitoring and operating electronically controlled doors; and monitoring CCTV operations and perimeter security. Redundant touch screen door control and communication capabilities will allow one staff member to operate all necessary equipment and systems.

Facility Management Services: Adequate space is allocated for housekeeping and maintenance staff to maintain the hospital's physical plant. While DMHMRSAS will to outsource major maintenance and repairs, the hospital's maintenance staff will perform routine and preventive maintenance to ensure that all building systems are functioning properly. Facility management areas include space for minor repairs and housekeeping functions as well as a warehouse with a loading dock/staging area sufficient to meet the needs of the Psychiatric Treatment Center.

Site: The Psychiatric Treatment Center's exterior is designed to ensure the facility has a residential appearance and reflects the hospital's mission of treatment for persons with mental illness. When fencing is used, it will primarily be estate fencing. Two separate parking areas will provide adequate space for staff, official visitors, and the general public.

Supportive Living Centers

The Supportive Living Centers will provide staff-secure and safe home environments for persons with serious and persistent mental illness for whom community placements have proved unsuccessful. Unobtrusive measures such as security exterior glazing and estate fencing of outdoor areas will ensure resident safety while facilitating free movement within the facility.

While space for psychosocial rehabilitation and psychiatric treatment will be provided within the Supportive Living Centers, their primary function will be to provide a supervised living environment from which residents may safely access community resources.

Each Supportive Living Center will include eight private resident living areas configured around common leisure, dining, treatment and recreation space. Each of the individual resident living areas will include a sitting area and a private restroom and shower as well as a bedroom area. The sitting area will provide space for personal activities and quiet time and will be equipped to permit use of a personal television, computer and/or telephone. The individual living areas will have ample storage and display space for personal belongings.

Although part-time staff will assist with food preparation and house maintenance, residents will be expected to participate in these activities with staff support at a level consistent with their clinical status.

Architectural Program Summary

The architectural program summaries presented in Tables 15 and 16 represent the net and gross square footages for each of the functional areas of the Psychiatric Treatment Center and Supportive Living Centers.

Explanation of Square Footage Requirements: The total net usable or assignable (net square footage) of each functional area represents the actual, usable space for each area. A departmental grossing factor was applied to the total net square footage of each component to accommodate necessary circulation space within functions, mechanical shafts, and other unassigned areas that are part of the component.

In any facility, additional square footage is also needed for major enclosed circulation and mechanical rooms that related to the overall facility rather than individual components, as well as the building structure and exterior "skin." This additional gross area is computed by multiplying the sum of the individual building components by a building grossing factor, as illustrated at the bottom of the chart.

Table 15

Architectural Program Summary – Psychiatric Treatment Center

Number	*Functional Area*	*NSF*	*GSF*	*Notes*
	INDOOR SPACES – PSYCHIATRIC TREATMENT CENTER			
1.000	Administration/Public Lobby	8,885	10,546	
2.000	Staff Support	600	750	
3.000	Patient Units: Civil	17,915	26,873	
4.000	Patient Units: Forensic	18,180	27,270	
5.000	Centralized Programming Services	9,610	13,454	
6.000	Admission/Discharge Area	2,045	2,863	
7.000	Visitation	1,669	1,893	
8.000	Medical Support Services	3,160	4,266	
9.000	State Forensic Services	1,585	1,981	
10.000	Laundry and Food Services	3,810	5,106	
11.000	Security Services	380	513	
12.000	Facility Management	7,900	9,480	
13.000	Site	0	0	See Outdoor Spaces, below
	SUBTOTAL	**75,739**	**104,994**	
	Building Gross Factor (10%)	7,574	10,499	Includes Mechanical/Electrical, Building Gross, and Major Circulation
	TOTAL	**83,313**	**115,493**	

Note: NSF is the net usable or assignable area. GSF includes a departmental grossing factor to accommodate necessary circulation space within functions, mechanical shafts, and other unassigned areas that are part of the component.

Number	*Functional Area*	*NSF*	*GSF*	*Notes*
	OUTDOOR SPACES – PSYCHIATRIC TREATMENT CENTER			
	TOTAL	**112,500**	**112,500**	

Table 16

Architectural Program Summary - Supportive Living Centers

Number	*Functional Area*	*NSF*	*GSF*	*Notes*
	INDOOR SPACES – SUPPORTIVE LIVING CENTERS			
1.000	Living Areas	3,100	4,185	
2.000	Common Areas	1,850	2,498	
3.000	Staff Office Area	430	538	
4.000	Facility Maintenance and Support	580	696	
	SUBTOTAL	**5,960**	**7,916**	
	Gross Factor (10%)	596	792	Includes Mechanical/Electrical, Building Gross, and Major Circulation
	TOTAL	**6,556**	**8,708**	**Total interior square footage for 1 facility**
	x 2 FACILITIES	**13,112**	**17,415**	**Total interior square footage for 2 facilities**

Note: NSF is the net usable or assignable area. GSF includes a departmental grossing factor to accommodate necessary circulation space within functions, mechanical shafts, and other unassigned areas that are part of the component.

Number	*Functional Area*	*NSF*	*GSF*	*Notes*
	OUTDOOR SPACES – SUPPORTIVE LIVING CENTERS			
	TOTAL	**2,000**	**2,000**	**Total exterior square footage for 1 facility**
	x 2 FACILITIES	**4,000**	**4,000**	**Total exterior square footage for 2 facilities**

VI. SITE SELECTION

Site selection for any facility usually begins with the owner and/or user defining the key selection criteria that are specific to the particular project needs. In this case, the Project Team worked closely with DMHMRSAS to establish key custom criteria. Following that, several more site specific and development cost related criteria were added to identify available sites that fundamentally meet the selection criteria.

A first-cut assessment of the sites was then performed to narrow the field. As a final step, the Project Team worked closely with various stakeholder groups and City officials in the Augusta area, and came to recommend the AMHI site as the best available, all things considered. The narrative that follows briefly describes the site selection process for the new Psychiatric Treatment Center.

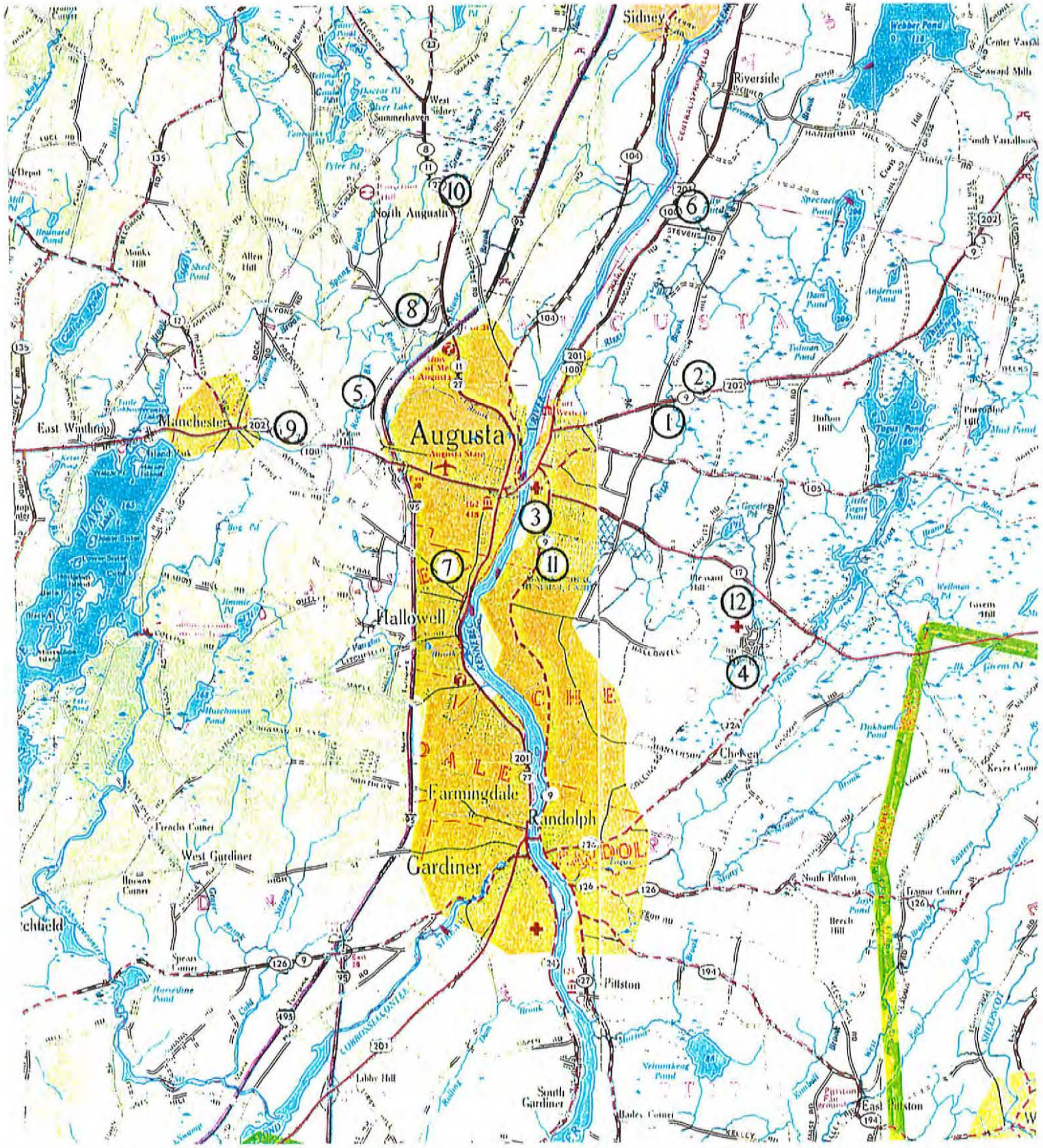
Beginning in September 1999, the Project Team met with representatives of DMHMRSAS to establish the most critical characteristics of a site in order for that site to be considered as suitable for the intended uses. These custom criteria included such considerations as location with respect to clients and existing workforce, distance from an acute care hospital, and distance from an interstate highway. More specifically, the list of custom criteria is as follows:

- Parcel of sufficient size and configuration to support the program needs, both now and for future expansion
- Proximity to an existing acute care medical hospital
- Proximity to existing workforce
- Proximity to civil client base (based on needs assessment)
- Proximity to interstate access point
- Proximity to locations offering "independent services" (convenience stores, etc.)
- Proximity to existing transportation services
- Physical buffer to achieve patient privacy
- Federal funding opportunities/constraints

A list of more general criteria includes cost to purchase, cost to develop, soils, wetlands, topography, regulatory issues, availability of utilities, zoning issues, encumbrances, hazardous materials impact, etc.

Two basic categories of sites were considered likely candidate sites. They included land already owned by the state or other government entity, and land currently for sale. The state/federal government-owned sites include the AMHI campus, Togus and the Stevens School in Hallowell. Other available land included nine sites in the Augusta area that were of a sufficient size and within the threshold "proximity" range to be considered viable. These sites are illustrated in the Site Location Map in Table 17 on page 36.

Table 17
Site Location Map



Members of the Project Team visited the 12 sites, took photographs, reviewed secondary data (USGS maps, zoning maps, etc.), evaluated them against the criteria, and narrowed the finalists to four sites:

- A 51 acre site on the corner of Route 3 and Church Hill Road
- A 70 acre site on Route 3, just east of the Church Hill Road intersection
- An approximately 20 acre developable area on the AMHI campus.
- An approximately 20 acre developable area on the Togus campus

The other eight sites did not make the first cut for various reasons, including remoteness, natural resources issues, utilities, configuration, absence of suitable independent services, traffic concerns and time/distance to Maine General Hospital (the acute care hospital identified in the custom criteria).

Throughout the site selection process and more aggressively as evaluation of the four finalist sites began, DMHMRSAS solicited comments from the key stakeholder and community groups involved. As discussions ensued, it became clear that two very important criteria became the focus of refined evaluation. Once it was established that each of the four sites satisfied to relative degrees such criteria as size, configuration, proximity to existing workforce and civil client base, it became clear that two criteria emerged as critical to the final selection. Those were relative distance to Maine General and place in the community.

With regard to proximity to an existing acute care facility, the criterion is defined simply as "the closer the better." With all other things being equal, it is critically important that a client be transported in the shortest possible time to the hospital.

The notion of independent services was clarified to include more than the ability to walk to the store and get a pack of candy or other personal items. It must offer a client the opportunity to become part of the community: to observe it, to reacquaint oneself with , and to participate in it to increasing degrees as individual health was restored.

Noting that the two Route 3/Church Hill Road sites offer a degree of opportunity to walk to a convenience store, they both failed to provide the richness and diversity of opportunity that a more in-town location could offer. Similarly, the Togus site, aside from its being the furthest from Maine General of the four finalists, also lacked any real opportunity to reestablish personal connections with the larger community. In the final analysis, of the 12 sites analyzed, the AMHI site emerged as the preferred site that best meets the defined needs of the proposed Psychiatric Treatment Center.

While implementation of the Supportive Living Centers is fundamental to this project, the Centers are not designed to be co-located with the Psychiatric Treatment Center. Indeed, from the perspective of many consumers of mental health services

and interested Maine citizens, the location of the Supportive Living Centers in separate locales is essential.

VII. STAFFING RECOMMENDATIONS

Staffing for both the Psychiatric Treatment Center and the two Supportive Living Centers for enhanced treatment and programming for 108 persons with serious mental illness is the same as is now provided at AMHI for 103 licensed patient beds.

Staffing levels for the Psychiatric Treatment Center patient units will meet or exceed those required by the *Bates v. Davenport* Consent Decree. The staff mix on each shift will be adequate to address the clinical needs of the patients.

While the staffing levels of the Psychiatric Treatment Center will not exceed those currently at AMHI, the enhanced physical plant will permit greater staff investment in programming and treatment activities. The physical limitations of AMHI that compromise patient treatment opportunities will no longer exist. The significant staff time now spent to ensure adequate patient safety and security and provide custodial care due to the physical plant will no longer be required. Thus, staff of the Psychiatric Treatment Center will have the space and additional time to devote to patient treatment and activities.

The new construction will result in a significant reduction in the need for facility maintenance staff. Eight of the current positions are being transferred to the Bureau of General Services to provide on-going maintenance for the state office buildings on the AMHI campus.

The total staffing for the Psychiatric Treatment Center and Supportive Living Centers is 311.9, as compared to the current AMHI staffing of 327.5. However, staffing for the proposed facilities does not include the ten member Reintegration Team now through AMHI but proposed for transfer to Central Office budget and the eight maintenance positions being transferred from AMHI's budget to the Bureau of General Services. The increase of 2.4 positions in the proposed staffing is related to additional clinical coverage which may be provided through professional service contracts.

Even though the number of direct care positions will not change with implementation of the proposed staffing plan, the plan will provide enhanced services through:

- Addition of 11.6 staff dedicated to patient programming
- Provision of 28.4 staff to operate Supportive Living Centers
- Dedicated security staff

While the proposed staffing reflects changes in current staff roles and functions, all current AMHI staff whose job functions change as a result of the proposed staffing

plan will be provided the opportunity, through training to be reassigned to new positions.

A comparison of the current staffing of AMHI with the proposed staffing for the new facilities is provided in Table 18.

Table 18
Staffing Comparison

	CURRENT AMHI STAFFING	PROPOSED STAFFING FOR NEW FACILITIES	POSITION TRANSFERS
Administrative Positions	**43**	**42**	**0**
Direct Care Positions	**223**	**223**	**0**
Support Positions	**51.5**	**46.9**	**8***
Reintegration Team	**10**	**0**	**10****
TOTAL	**327.5**	**311.9**	**18**

*** Maintenance positions transferred to Bureau of General Services**
**** Reintegration Team positions transferred to DMHMRSAS Central Office**

Note: *All AMHI staff whose job functions may change as a result of the proposed staffing plan will be provided the opportunity, through training, to be reassigned to a new position.*

VIII. CAPITAL AND OPERATIONAL COSTS

Capital Costs

A. Construction		$23,098,600.
B. Administrative Cost and Reserve		$ 3,414,360.
C. Fees and Services		$ 2,987,040.
D. Supportive Living Center		$ 1,000,000.
	Total Project Cost	**$30,500,000.**

The $ 30,500,000 capital budget for the project includes both the Psychiatric Treatment Center (92 beds) and the Supportive Living Centers (16 beds).

The budget presented reflects the standard Bureau of General Services Budget format which includes construction, administrative cost and reserve and fees and services.

The construction cost per square foot of $200 is estimated for the Psychiatric Treatment Center and includes projected site development costs. This cost per square foot is based on comparisons with similar facilities; it also reflects the current construction climate in the State of Maine.

Administrative cost and reserve includes furniture and equipment, legal and insurance costs as well as project contingency. The contingencies are based on percentage of construction cost. At this point a 5% bidding contingency and a 5% program and design contingency are being carried.

Fees and services include architect/engineer fees based on the BGS standard fee schedule, specialty consultants, regulatory approval fees and consultants, transition costs, life cycle analysis, clerk of the works, special inspections and reimbursables.

The project budget also includes $1,000,000 dedicated to the development of supportive living center projects. The assumption being that the funds would go toward the purchase, renovation and expansion of existing residences.

The site selected for a the project is a parcel on the existing Augusta Mental Health Institute property. There are a number of buildings on this parcel, of no historic significance, which must be removed prior to start of construction. The cost of removal and replacement of these structures is not included in the budget.

Operational Costs

The annual operational costs for the Psychiatric Treatment Center and the two Supportive Living Centers were estimated based on analysis of the current AMHI expenditures, review of the compensation for Maine state employees, and consultant estimates of utility costs for the new facilities.

The annual operational costs of the new facilities were based on the FY2000 dollars to facilitate a comparison with current AMHI operations. Thus, the operational cost estimates for the new facilities reflect current dollars and will need updating based on the year that the facilities become operational.

Current AMHI Expenditures: The FY2000 AMHI expenditures were determined through discussion with DMHMRSAS financial staff to ensure that supplemental fund requests and transfers as well as the existing budget were accurately reflected. For example, utility costs reflected in the AMHI budget are actually offset by credits from state office buildings on the AMHI campus. Further, while funds for overtime expenses are not budgeted for AMHI, the funds required are obtained by annual transfers of funds from other DMHMRSAS accounts.

Personnel Services (Employee) Costs: The salary for each staff position of the new facilities was based on an analysis of current AMHI personnel costs to ensure that the presence of staff with extended years of service and higher compensation levels were accurately represented. Benefit costs were estimated to be 40% of salaries based on discussions with AMHI administrative and personnel staff.

Reintegration Team: The Reintegration Team includes physicians, clinicians and administrative positions now included in the AMHI budget but whose primary function is to assist in the transition of patients to the community. DMHMRSAS has determined that this team will not be included in the budgeting for inpatient treatment in the future but will be included in the Central Office budget; thus, the Reintegration Team was not included in the operational costs for the new facilities.

Professional Services (Contract Staff) Costs: Since DMHMRSAS has relied on contracts to ensure adequate psychiatric coverage for AMHI, these positions were continued as contract positions for the Psychiatric Treatment Center.

Professional Services (Non Staff) Costs: These costs include numerous contracts with community providers for such necessary operational services as laundry, phlebotomy and specialized consultations. These costs fluctuate based on the patient population being served. The estimates for these costs for the new facilities were developed by multiplying the current AMHI annual per patient cost of $3,229 by the number of individuals to be served by the new facilities.

Miscellaneous Non-Personnel Costs: These costs include the provision of food, medication, and treatment supplies. These costs fluctuate based on the patient

population being served. The estimates for these costs for the new facilities were developed by multiplying the current AMHI annual per patient cost of $22,557 by the number of individuals to be served by the new facilities.

Utility/Repair and Maintenance Costs: The utility/repair and maintenance costs for the new facilities were developed based on an engineering analysis of the new facilities.

Table 19
Operating Cost Analysis: Comparison of AMHI to New Facilities

Augusta Mental Health Institute FY 2000			**NOTES:**
Number of Licensed Beds		103	
Number of Staff		318	Excludes positions proposed for transfer to Central Office Budget
Staff/100 Patients		308.25	
Total Personal Services (AMHI Employee) Costs		$ 13,149,452.00	
Reintegration Team		$ 859,397.00	
Overtime Costs		$ 175,000.00	Funds not budgeted; annual Transfer from other DMHMRSAS Accounts
Professional Services Costs-Contract Staff		$ 1,827,124.00	
Professional Services Costs-Non Staff		$ 332,611.00	Includes community contracts (laundry, phlebotomy)
Repairs and Equipment		$ 284,086.00	For entire AMHI campus
Utility Costs (Utilities and Fuel oil)		$ 1,019,754.00	
Misc. Non-Personnel Costs		$ 2,323,420.00	Includes food, medication, Supplies, operations
Credit for Non- Hospital Utilities on AMHI Campus		$ (500,000.00)	
Total Estimated Expenditures		**$ 19,470,844.00**	Includes budget plus transfers/ Requests of $975,00

Table 19 – cont'd
Operating Cost Analysis: Comparison of AMHI to New Facilities

Projected Psychiatric Treatment Center (FY2000 dollars)			**NOTES:**
Number of Licensed Beds		92	
Number of Staff		283.5	
Staff/100 Patients		308.15	
Total Personal Services (Employee) Costs		$ 11,818,250.00	
Reintegration Team		0	
Overtime Costs		$ 100,000.00	
Professional Services Costs-Contract Staff		$ 1,791,455.00	
Professional Services Costs-Non Staff		$ 297,068.00	Includes community contracts (laundry, phlebotomy)*
Repairs and Equipment		$ 50,000.00	Estimated figure based on new building
Utility Costs		$ 400,000.00	Estimated by SMRT for new building only
Misc. Non-Personnel Costs @ $22,557/patient		$ 2,075,244.00	Includes food, medication, supplies, operations **
Total Estimated Operating Expenditures		**$ 16,532,017.00**	

* Professional Services Costs-Non Staff estimated at current AMHI annual per patient cost of $3,229.
** Miscellaneous Non-Personnel Costs estimates at current AMHI annual per patient cost of $22,557.

Table 19 – cont'd
Operating Cost Analysis: Comparison of AMHI to New Facilities

Projected Supportive Living Centers (FY2000 dollars)			**NOTES:**
Number of Residents		16	
Number of Staff		28.4	
Staff/100 Residents		177.50	
Total Personal Services (Employee) Costs		$ 1,078,980.00	
Overtime Costs		$ 12,000.00	
Professional Services Costs-Non Staff		$ 51,664.00	Includes community contracts (laundry, phlebotomy)*
Repairs and Equipment		$ 10,000.00	Estimated
Utility Costs		$ 34,000.00	Estimated by SMRT
Misc. Non-Personnel Costs @ $22,557/resident		$ 360,912.00	Includes food, medication, supplies, operations **
Total Estimated Operating Expenditures		**$ 1,547,556.00**	

* Professional Services Costs-Non Staff estimated at current AMHI annual per patient cost of $3,229.
** Miscellaneous Non-Personnel Costs estimates at current AMHI annual per patient cost of $22,557.

Analysis of Operational Costs: Providing state-of-the-art treatment for 108 individuals in the new Psychiatric Treatment Center and two Supportive Living Centers will cost the state **$18,079,573** (in current dollars). In comparison, the FY 2000 costs for the operation of the 103 licensed AMHI beds is **$18,611,447**, which excludes the costs for the Reintegration. Translating this differential into the cost per patient day results in the following efficiencies:

- AMHI: 37,595 patient days at **$495.05** per day
- New Facilities: 39,420 patient days at **$458.64** per day

This translates into a **7.4%** decrease in daily operating costs, while actually increasing the overall number of positions working in the new facilities. This is achievable as the new facilities will be more efficient to maintain and operate. For example, maintaining security within the new treatment center will become more efficient when aided by the proposed state of the art facility design and security electronics. This will enable the eventual reassignment of positions, upon completion of a transition process, into direct patient treatment and services.