

GUAM MEMORIAL MEDICAL CENTER



Volume 5

FINANCIAL MASTER PLAN

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FINANCIAL MASTER PLAN

FOR GUAM MEMORIAL MEDICAL CENTER



CAPITAL COST
REQUIREMENTS
AND FUNDING
ALTERNATIVES

PREPARED BY CRESAP, McCORMICK AND PAGET INC. — UNDER CONTRACT TO DANIEL, MANN, JOHNSON, & MENDENHALL

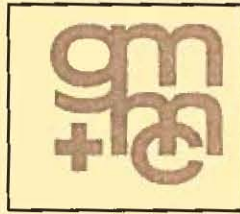
APRIL 1973

This report is confidential and intended solely for the information and benefit of the immediate recipient hereof.

GUAM MEMORIAL MEDICAL CENTER
FINANCIAL MASTER PLAN

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CHAPTER I

INTRODUCTION

I - INTRODUCTION

This chapter presents the objective and scope of our study, describes the approach taken to the study, and outlines the organization of the remainder of this report.

OBJECTIVE AND SCOPE OF THE STUDY

The objective of this study has been to develop a financial master plan for the future growth and development of the Guam Memorial Medical Center. Two primary tasks were undertaken to accomplish the objective of the study, including:

- Task I - analysis of available and contemplated financial assistance for development of the Guam Memorial Medical Center
- Task II - preparation of an incremental financial master plan which reflects the financing needs of the Guam Memorial Medical Center.

In scope, the study was limited to an analysis of the financial alternatives regarding the Phase I construction of the Guam Memorial Medical Center. Phase I of the overall architectural plans for the new Guam Memorial Medical Center calls for contract drawings to be initiated during June, 1973; construction bidding to occur during the July-October, 1974 period; the contract award period to occur during October-November, 1974; and construction to begin on November 1, 1974 and be completed by December 31, 1976. The Phase I plans call for 320 new beds to be built on a 405 bed chassis; of the 320 beds, 230 are acute beds and 90 are non-acute beds. Phase II of the overall master plan for the new Guam Memorial Medical Center calls for the construction of an additional 85 beds, thus increasing the bed complement of the Hospital to 405 beds by 1980. Phase III of the plan, which is to occur by 1985, calls for the establishment of an additional 135 beds, thus raising the total bed complement of the Guam Memorial Medical Center to 540 beds. Similarly, Phase IV calls for the establishment of an additional 80 beds by 1990, establishing the Guam Memorial Medical Center as a 620 bed inpatient facility.

The financial master plan prepared during this study covers the Phase I construction of 320 new beds for the Guam Memorial Medical Center. The additional phases of the project were not covered during this financial planning effort due to the absence of detailed statistical and operating projections.

APPROACH TO THE STUDY

In undertaking the study, a series of separately identifiable steps were pursued. Under Task I, these were:

- Conduct of a review of federal funding sources which might be available to Guam Memorial Medical Center
- Assessment of the feasibility of obtaining either partial or total funding for the Guam Memorial Medical Center from various foundations
- Conduct of a review of the potential for raising all or part of the capital construction needs for the new Guam Memorial Medical Center through the private financial market, including investment banking firms, commercial banks, mortgage bankers, and other lending institutions
- A brief assessment of the potential for raising funds within the Guam community
- Consolidation of the information gathered above and conduct of an overall analysis of requirements which may effect the role of the Government of Guam in financing the development of the Guam Memorial Medical Center.

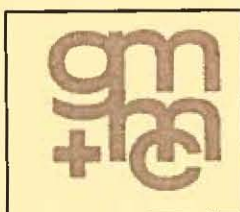
In undertaking Task II, the study was concerned with the formulation of an incremental master plan which would reflect the timing requirements for having various levels of financial support available for the development of the Guam Memorial Medical Center. This task resulted in the development of a long-range capital financing plan, which reflects the total amount of funds necessary for the project, timing for incremental segments of funds, and the potential sources and methods for obtaining such funds.

It was not the intent of the study to project the individual capital expenditure requirements for new facilities and equipment, as this data was generated and provided by Daniel, Mann, Johnson, & Mendenhall. Rather, this study concentrated on utilizing the capital expenditure requirements formulated by DMJM in the development of an incremental master plan.

ORGANIZATION OF THIS REPORT

The remainder of this report is divided into three chapters and an appendix, as follows:

- II - Summary of Conclusions - which summarizes the conclusions and findings regarding funding sources and the implications of the financial master plan.
- III - Analysis of Funding Sources - which describes briefly the current plans for the new Guam Memorial Medical Center, reviews federal funding sources which might be available, assesses the feasibility of obtaining either partial or total funding from various foundations, reviews the potential for raising capital construction financing through the private financial market, and assesses the potential for raising funds within the Guam community.
- IV - Financial Master Plan - which presents a long-range capital financing plan for the new Guam Memorial Medical Center, reflecting the total amounts of funds necessary for the project, the timing requirements for incremental segments of funds, and the implications of the debt service requirements on the operations of the Guam Memorial Medical Center.
- Appendix - which sets forth several financial assumptions and projections regarding the capital construction needs of the new Guam Memorial Medical Center.



CHAPTER II

**SUMMARY OF
CONCLUSIONS**

II - SUMMARY OF CONCLUSIONS

This chapter presents a summary of conclusions regarding the potential availability of funding for the proposed Guam Memorial Medical Center (GMMC) and the implications of debt service requirements on the operations of GMMC. A suggested statement of the next steps to be undertaken is also included.

FUNDING SOURCES

In attempting to identify potential funding sources for the proposed GMMC, a number of alternative financial sources were identified and analyzed, including: federal funding sources, such as the Hill-Burton program, the National Housing Act, the Community Mental Health Center program, the Family Health Center program, and others; foundation funding sources, such as the Rockefeller Foundation, the Ford Foundation, the Commonwealth Fund, and others; private funding sources, such as investment banking firms, commercial banks, mortgage bankers, and other lending institutions; philanthropy; and other miscellaneous sources, such as the least financing of equipment and private contractor financing of individual segments of the Medical Center.

Several general conclusions resulted from the above review, including:

- Federal funds for the construction of new acute care facilities are extremely limited, and this potential source of funds does not, at present, constitute a significant potential source of funds for the construction of the new GMMC. The Hill-Burton program is currently being phased out, and guaranteed loans under Section 242 of the National Housing Act, as administered by the Federal Housing Administration, are available only for private nonprofit and proprietary hospitals, and not for public institutions.
 - o If the proposed GMMC were to be granted autonomy by GovGuam and established as a freestanding, private institution, it would be eligible to apply for a guaranteed/insured loan under the FHA program during the next fiscal year (current fiscal year funds have already been committed under this program). If granted autonomy, the GMMC could qualify under this program as either a private nonprofit or proprietary facility. Average financial assistance under this program has been \$11,883,000.
 - o In summary, federal programs do not appear to constitute a significant source of funding for the proposed GMMC.

- Approximately 11 private foundations were reviewed to determine the feasibility of obtaining construction funds on a grant basis; although funds might be available from this source, these institutions become involved in only limited construction programs in the health field.
- Review of the private funding market indicated that the proposed GMMC will not be able to obtain private financing on its own, and that neither its historical financial record, nor its anticipated financial situation, qualify it under private lending "rules of thumb"; private funding sources might be available to the proposed GMMC if GovGuam were to guarantee the total debt issue.
- The potential for raising capital construction funds from philanthropy or endowments is not anticipated to be significant.

As a result of the above review, it can be concluded that external financing sources for the proposed GMMC are extremely limited and that substantial GovGuam guarantees and/or actual construction funds will be required if the proposed governmental hospital is to be constructed.

FINANCIAL MASTER PLAN

In developing the financial master plan, a set of six alternative cases, illustrating a complete range of potential funding sources, was developed, and calculations for determining the incremental debt service requirements were set forth under each case. The approach to the calculations was to determine what amount of cash must be generated to satisfy the debt service requirements of the project. In each case, the incremental debt service cost associated with each alternative was expressed as an average cost per patient day. The first three alternative cases were predicated upon the Government of Guam providing \$10 million in capital construction funds, as this amount appears to be that which is currently feasible for GovGuam participation. The final three alternatives reflected increasing participation on the part of GovGuam, from a low of \$15 million to a high of \$22 million, in order to more adequately satisfy private lender requirements. Assuming that the new facility will realize an 80 per cent occupancy rate, the incremental financial cost per patient day ranged from a high of approximately \$46.00 per patient day to a low of approximately \$16.00 per patient day (this latter case is based upon GovGuam contributing approximately \$22 million in construction funds to the new project).

The major conclusions which were reached in developing the incremental financial plan were:

- If GovGuam limits its capital contribution to \$10 million, the average amount of debt per bed for Phase I construction would be excessive and private lenders would not consider a project on this basis.

- Moreover, with a GovGuam capital contribution of \$10 million, the incremental financial costs per patient day are prohibitive and it can be concluded that the Hospital would not be able to meet its debt service requirements from its operating cash flow.

Exhibit II-1, following, shows how each of the six alternatives is measured against the three primary criteria of financial feasibility, including: dollar amount of debt per acute hospital bed, per cent of debt to total assets, and dollar amount of incremental debt service per patient day at 80 per cent average occupancy.

It can be concluded that the proposed \$37.6 million project for the new Guam Memorial Medical Center is not financially feasible on the basis of only a \$10 million GovGuam capital contribution. It is, therefore, necessary to explore other alternatives for the establishment of a new Guam Memorial Medical Center, as well as to identify the next steps which should be pursued in determining a financially feasible project. The next section of this chapter addresses itself to these points.

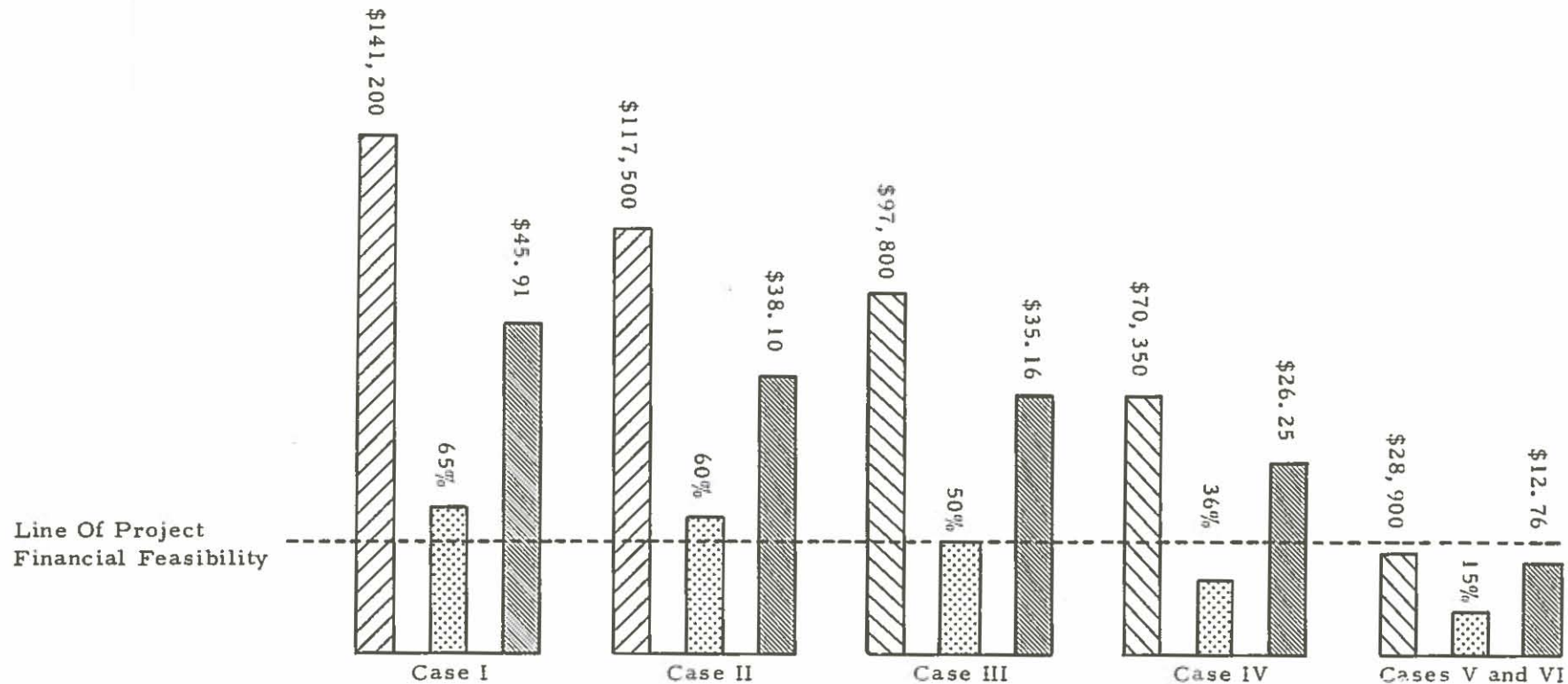
NEXT STEPS

In developing the criteria for the establishment of a new Guam Memorial Medical Center, Daniel, Mann, Johnson, & Mendenhall set forth seven alternative plans for a new Medical Center. These plans ranged from a low of 250 beds to a high of 320 beds; based on the estimated acute care needs of the population of Guam, the Board of Directors of the Medical Center selected alternative #5 (320 acute beds on a 405 bed chassis) as being most responsive to the anticipated health care requirements of Guam. It is this alternative, with an estimated project cost of approximately \$37.6 million, which served as the basis for the preparation of the incremental financial master plan. As indicated above, this project does not appear to be financially feasible within the guidelines set forth for the preparation of the incremental financial master plan; as a result of this, it is necessary to reassess the overall scope of the project in order to establish a project cost which is feasible.

In exploring financially feasible alternatives to the construction of a 320 bed hospital on a 405 bed chassis, several alternatives should be considered, including:

- A - Establishment of a facility with a reduced number of acute and non-acute beds
- B - Passage of legislation to allow for the utilization of interest income earned on the Guam retirement fund to offset the debt service requirements of the new Hospital
- C - Increasing GovGuam participation in funding the capital construction of the new facility above the \$10 million level.

**SUMMARY COMPARISON OF CASES
AGAINST THREE CRITERIA OF FINANCIAL FEASIBILITY**



Line of project financial feasibility is based on the following criteria:

- Debt per acute hospital bed not to exceed \$30,000
- Debt not to exceed 50% of total assets
- Incremental debt service not to exceed \$14 per patient-day at 80% average occupancy.

LEGEND:



Dollar amount of debt per acute hospital bed

Per cent of debt to total assets

Dollar amount of incremental debt service per patient-day at 80% average occupancy

Alternative A

The alternative of reducing the scope of the Phase I project should not greatly affect the implementation of the overall long-range plan for the new Guam Memorial Medical Center. This alternative results in Phase I of the long-range plan being incrementally reduced in terms of the number of beds; although the number of beds and range of programs and services in Phase I were established in direct relationship to the anticipated health care needs of the people of Guam, it can be anticipated that the identified deficiencies in meeting these health care needs, which will result if a reduced project is adopted, will be overcome during the implementation of Phases II and III of the long-range plan for the Guam Memorial Medical Center. In exploring this alternative, it will be necessary to re-examine the range of seven alternatives proposed by Daniel, Mann, Johnson, & Mendenhall for the new Medical Center.

As an example, it can be anticipated that the overall project cost might be reduced to an approximate level of \$26.5 million if the size of the proposed Guam Memorial Medical Center were reduced to 250 beds on a 250 bed chassis (this would result in an approximate \$11 million reduction in the size of the project from that currently endorsed). Exhibit II-2, on the following page, develops this example in outline form, utilizing the same overall assumptions as set forth in the appendix to this report. Moreover, it is assumed in this example that:

- The 250 beds are distributed 200 acute beds and 50 non-acute beds, thus qualifying the illustrative project for a \$4.5 million private mortgage
- The value of equipment and related items which may be placed on a 10-year lease approximates \$3.5 million
- A Hill-Burton loan guarantee of \$369,000 will be obtained
- GovGuam will be able to fund the capital needs resulting from a \$26.5 million project.

As can be seen from a review of Exhibit II-2, annual cash flow requirements resulting from this example approximate \$1,276,000. In addition, this example results in a 51.4 per cent equity position for GovGuam and in \$20,000 debt per bed as shown on Exhibit II-3, on the second following page; both of these factors meet private lender "rules of thumb". Moreover, if part or all of the interest income earned on the GovGuam retirement fund (as discussed under Alternative B below) can be utilized to service the debt created in this example, the problem of a financial record for the Medical Center can be overcome; as it is anticipated that interest income earned on the Guam retirement fund will exceed \$2.0 million in fiscal year 1973, only a portion of these funds would need to be utilized. Finally, it can be projected that interest income earned on the retirement fund will exceed

GUAM MEMORIAL MEDICAL CENTER

DEVELOPMENT OF ILLUSTRATIVE FINANCIAL PLAN
FOR A 250 BED HOSPITAL ON A 250 CHASSIS

(Dollars In Thousands)

Alternative Sources Of Funds		Cash Flow Requirements	
Sources of Funds	Amount of Funds	Description Of Cash Flow Requirements	Cash Flow Required Each Year For 1977-86 Period
Government of Guam	\$13,631	Debt service on permanent mortgage	\$ 535
Hill-Burton Program			
Guaranteed Loan	369	Debt service on Hill-Burton Guaranteed Loan	31
Grant	-		
Donations	-	Annual lease payment on equipment	455
Proceeds from sale of land by Government of Guam	-	Additional cash flow to meet lender requirements	255
Private construction and rental of central plant facility	4,500	Total	\$1,276
Equipment financing on lease	3,500		
Private source borrowed funds	4,500		
Total	\$26,500		

GUAM MEMORIAL MEDICAL CENTER

ESTIMATED REQUIREMENTS AND TIMING FOR FUNDS
SUPPLIED FOR PHASE I CONSTRUCTION - ILLUSTRATIVE EXAMPLE

(Dollars In Thousands)

<u>Description</u>	<u>Amount Applicable To Each Year</u>				<u>Total For Phase I</u>
	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	
Construction funds required (before financing costs)	\$335	\$2,503	\$10,081	\$13,581	\$26,500
Less values applicable to leased or rental facilities					
Private construction and ownership of central power plant, laundry and warehouse	-	-	(2,250)	(2,250)	(4,500)
Lease of hospital equipment	-	-	-	(3,500)	(3,500)
Add financing costs					
Interest on Hill-Burton program loan	-	-	-	20	20
Interest on interim construction loan	-	-	-	446	446
Commitment fee for permanent mortgage	-	-	-	100	100
Total Funds Required	\$335	\$2,503	\$ 7,831	\$ 8,397	\$19,066
Equity funds					
Government of Guam capital	\$335	\$2,503	\$ 7,831	\$ 2,962	\$13,631
Hill-Burton program grant	-	-	-	-	-
Donations	-	-	-	-	-
Borrowed funds					
Hill-Burton program loan guarantee	-	-	-	369	369
Private source borrowed funds	-	-	-	5,066	5,066
Total Funds Supplied	\$335	\$2,503	\$ 7,831	\$ 8,397	\$19,066

\$2.5 million in fiscal 1977 (the first year during which the debt on the new Medical Center would be serviced), resulting in less than half of these monies needing to be diverted to the new Medical Center, assuming that it is unable to service any of its debt on its own.

The above example illustrates the point that a financially feasible Phase I project can be established for the new Medical Center at a level approximating \$26.5 million.

Alternative B

The alternative of passing legislation to allow for the utilization of interest income earned on the Guam retirement fund to offset the debt service requirements of the proposed Guam Memorial Medical Center should be explored in depth. If legislation could be passed to allow for the utilization of these funds, the reduction in the amount of patient day debt service charge which the Medical Center would bear is substantial. From a strict financial point of view, these funds would not represent a source of financing, but rather would represent a method to reduce the amount of patient day debt service charge which would need to be met from the cash flow of the new Guam Memorial Medical Center. The availability of this stream of revenue would not change the criteria on amount of debt per hospital bed and percentage of debt to total assets. The effect of implementing this alternative would be to reduce the amount of patient day debt service charge by approximately one half for Case IV (which is developed in greater detail in Chapter IV of this report); and, for Cases V and VI, the amount of patient day debt service charge to be borne by Medical Center operations would be completely eliminated. If this alternative is implemented, it may be possible to persuade private lenders to view the availability of the interest income earned on the retirement fund as the equivalent of an equity contribution; this argument, if its merits can be established, would depend heavily upon legal interpretations of the new legislation making such income available.

Alternative C

The alternative of increasing GovGuam participation in the capital construction cost of the Medical Center should be developed in greater detail. It is realized that GovGuam is now in the position of funding a substantial number of projects from its own revenues which previously had been financed through the availability of rehabilitation act funds or other financing sources. However, as one of the major criterion for establishing financial feasibility of the project is the extent of equity participation by GovGuam, it is critical that GovGuam participation be maximized if any additional private funds are to be obtained. Because a new hospital is critically needed on Guam if the health care needs of the people are to be adequately met, it is anticipated that the establishment of a new Guam Memorial Medical Center will receive the highest priority from the Guam legislature and that additional capital funds will be identified.

Recommended Next Steps

It is recommended that the next steps in assessing the overall feasibility of establishing the proposed Guam Memorial Medical Center include:

- Detailed examination of each of the alternatives set forth above, including a definitive assessment of the economic and political feasibility of each
- Redefinition of the scope of Phase I of the overall project in light of the economic and political determinations set forth
- Preparation of a new incremental financial master plan based upon the redefined scope of the project
- Preparation of pro forma statements of income and expense and balance sheet accounts for the new Guam Memorial Medical Center, based upon a redefinition of the project scope.

It can be concluded that a new Guam Memorial Medical Center needs to be established and that the steps outlined above need to be explored immediately in order to determine a feasible project. It is felt that, with the early conduct of the action steps set forth above, an economically and politically feasible project can be established and that Phase I of the overall long-range plan for the new Medical Center can be implemented on schedule.



CHAPTER III

**ANALYSIS OF
FUNDING SOURCES**

III - ANALYSIS OF FUNDING SOURCES

This chapter describes Phase I of the overall master plan for the development of the new Guam Memorial Medical Center. It also sets forth a review of the various financial sources which might be available to assist the Government of Guam in constructing the new Hospital.

REVIEW OF PHASE I

During 1972-1973, the architectural firm of Daniel, Mann, Johnson, & Mendenhall prepared a master plan for the development of the new Guam Memorial Medical Center. Phase I of the Guam Memorial Medical Center master plan calls for the establishment of a new 320 bed hospital, which is to contain approximately 218,000 gross square feet. The 320 bed hospital is to be constructed on a 405 bed chassis. A central plant is also to be constructed during Phase I, which will provide the power supply for the new facility, as well as a laundry and additional storage and warehousing space. The 320 beds are to include 230 acute beds (45 pediatric, 30 medical, 60 surgical, 30 medical/surgical, 45 obstetrical/gynecological, and 20 intensive care) and 90 non-acute beds (20 physical medicine and rehabilitation, 20 neuropsychiatric, 20 tuberculosis, and 30 long-term care).

The Phase I planning period begins June 1, 1973 and ends December 31, 1976. Contract drawings for the new facility are to be prepared between June 1, 1973 and July 1, 1974. Construction bidding on the new facility is to occur between July 1, 1974 and October 1, 1974. The period October 1, 1974 to November 1, 1974 has been set aside for the construction contract award; construction is to begin on November 1, 1974 and end December 31, 1976.

The total project cost for the new Guam Memorial Medical Center is currently estimated at \$37,610,000. This total project cost is broken down as shown on the following page.

<u>Cost Item</u>	<u>Dollar Amount</u>
New hospital building construction including Group I equipment	\$20,716,000
Alterations to existing buildings	150,000
Site work	500,000
Plus factor for construction on Guam	2,136,600
Plus construction cost escalation for one year	2,350,260
New central plant construction including Group I equipment	4,500,000
Fees for architecture and engineering design	1,821,171
Soil and materials test, survey, plan check, permits, resident inspector, Group II equipment, etc.	<u>5,435,969</u>
Total	\$37,610,000

The master plan for the new Guam Memorial Medical Center also sets forth certain overall projected utilization and revenue figures for selected years. The estimated number of patient days for the new facility are 95,000 in 1975 and 114,360 in 1980. Patient income is estimated at \$10,027,500 in 1975 and \$15,676,500 in 1980; patient income is estimated to be supplemented by other income (primary additional federal and private grants in the health care field), including \$400,000 in 1975 and \$600,000 in 1980.

To date, the existing Guam Memorial Medical Center has not been financially self-sufficient, but has had to rely on governmental appropriations to offset its operating expenses. The Medical Center is financed through the same mechanisms as are the other regular line departments of the Government of Guam. Income from payments to the Medical Center for services rendered return to the general fund of the Government of Guam; thus, revenues generated by the Medical Center have no direct impact on the funds available for meeting operating or capital needs. Depreciation funding for the replacement of buildings or equipment has not historically occurred. In fiscal 1973, the Government of Guam appropriated \$7,901,998 in operating funds for the Medical Center; this appropriation is offset by an estimated \$4,500,000 in income collected by the Medical Center for services rendered and by approximately \$600,000 which is expected to be charged to the Department of Public Health and Social Services for certain special programs.

During fiscal 1973, room and board rates were increased in an attempt to make the charges reflective of actual cost; it is anticipated that the fees charged for professional services will be adjusted during July, 1973 and that room rates will be adjusted again during July, 1974. This series of adjustments in rates and charges in effect at the Medical Center is anticipated to place the Medical Center on a self-sustaining basis during fiscal 1974, assuming that the new rates and charges can be collected. Thus, it can be anticipated that prior to the opening of the new Medical Center, the existing facility will be operating at least on a break-even operating basis.

During fiscal 1972, the Medical Center experienced 76,666 adult patient days and 9,557 new born patient days, for a total of 86,223 patient days. During this same period, total expenses for the Medical Center approximated \$6,573,000, whereas net patient service revenues were about \$3,065,100 and total revenues approximately \$3,112,000. Thus, during fiscal 1972, total expenses approximated 114.4 per cent of net patient revenues; moreover, total expenses per patient day (including adult and new born patient days) approximated \$76.24. Assuming that the fiscal 1973 appropriation of approximately \$7,902,000 equals fiscal 1973 operating expenses, and assuming that fiscal 1973 patient days of care approximate 92,000, estimated total expenses per patient day in 1973 will be about \$85.79, representing a 12.5 per cent increase over total expenses per patient day in fiscal 1972 (this increase is approximately in line with expense increases experienced on the mainland). Projecting total expenses per patient day on the basis of a 112 per cent increase per year results in total expense per patient day of: \$96.08 in fiscal 1974, \$107.60 in fiscal 1975, and \$120.51 in fiscal 1976.

FEDERAL FUNDING SOURCES

As a first step in identifying external funding sources for the proposed Guam Memorial Medical Center, a review of existing federal funding programs was conducted. The overall requirements and present status of applicable federal programs are summarized below.

Hill-Burton Program. This program has two essential characteristics, including: direct grants and loans and loan guarantees. Direct grants under the Hill-Burton program are to be used for the new construction or replacement of facilities, expansion or remodeling of existing facilities or buildings, and equipment necessary for a construction project for the provision of a new service in a community. Federal assistance is not available for the purchase of land except for public health centers. State and local governments are eligible for grants, as are hospital districts or authorities and private non-profit organizations. Awards are based primarily on allocation formulas developed under individual state plans, which are approved by the health care facilities staff of the Department of Health, Education and Welfare regional offices. Allocations among the states are based on the weighted population

formulas; modernization grants are allocated on the basis of population, per capita income, and the need for modernization. Federal share of a project can be up to two-thirds of total eligible costs. Funds are released periodically to the applicant during the construction phase of the project.

Direct loans and guaranteed mortgage loans, provided for under the Hill-Burton program, may be used for the same types of projects as Hill-Burton grants. Eligibility requirements are also similar, as is the application and award process. Holders of guaranteed loans will be paid a subsidy sufficient to lower the net effective interest rate of a loan by 3 per cent. Direct loan borrowers will pay the effective interest rate, less 3 per cent, to the holder of their obligation. Both kinds of loans may not exceed 25 years. Loan guarantees may go up to 90 per cent of the cost of the project. Under this aspect of the Hill-Burton program, the hospital first strives to sell a bond or similar obligation in the private and public markets; if the hospital is unsuccessful, the Department of Health, Education and Welfare purchases the individual bond and then resells it as a taxable bond in the private market. At present, the interest basis for purchase of the bond is set at 7.72 per cent, resulting in a 3 per cent interest subsidy and an effective interest rate to an individual hospital of 4.72 per cent.

Based on discussions with the Department of Health, Education and Welfare Region IX Office, the potential availability of Hill-Burton monies, under any of the above mentioned programs, appears limited. At the time of this writing, fiscal 1973 money has not become available for the Hill-Burton program, which is currently scheduled to expire on June 30, 1973. The administration in Washington has indicated that it does not plan to renew the program. Under normal times, it would appear that approximately \$750,000 would be available to Guam on a direct grant basis and \$369,000 on a loan guarantee basis. The \$750,000 in grant money does not appear to be currently available; the \$369,000 on a loan guarantee basis does appear available. The new Dededo Health Center was funded out of fiscal 1972 Hill-Burton monies at an approximate level of \$600,000; if this project is not initiated, these funds might possibly be redirected to the proposed Guam Memorial Medical Center. In summary, it would appear at present that no direct grant monies or direct loan funds are available, and that only \$369,000 would be available on a loan guarantee with interest subsidy basis.

National Housing Act. This law, as amended in 1968, Section 242, provides for the Federal Housing Administration to ensure lenders against loss of mortgages made in relation to the financing of hospitals. The loans may be used to finance the construction or rehabilitation of private nonprofit and proprietary hospitals including major movable equipment; the maximum amount insurable under the program is \$50,000,000. The maximum mortgage amount may not exceed 90 per cent of the estimated replacement costs. The current maximum interest rate is 7 per cent plus 1/2 per cent for mortgage insurance premium; thus, under current market conditions, this

program would require the lender to place considerable "front end money" with the lender which can currently be estimated at approximately ten points. The proposed Guam Memorial Medical Center, as a public instrumentality, does not meet the eligibility requirements for participation in this program.

Mental Health - Community Mental Health Centers. Under the auspices of the Health Services and Mental Health Administration of the Department of Health, Education and Welfare, the Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963 provides funds to finance buildings of public and other nonprofit community mental health centers. Funds under this program may be used for construction of new facilities or for acquisition, remodeling, alteration, or expansion of existing facilities which fulfill requirements of the laws of community mental health centers. Construction grants are available to a political subdivision or public agency to operate an approvable community mental health program under the state plan. As under the Hill-Burton program, it would appear at this time that additional or new construction monies will not be made available under this program during the remaining life of the grants currently in effect.

Family Health Centers. Under the Public Health Service Act, Title 3, Section 314 (E), funds are made available to develop and provide health maintenance and treatment services to enrolled populations in areas with scarce health services on a prepaid capitation basis. This program, administered by the Health Services and Mental Health Administration of the Department of Health, Education and Welfare, has definitive restrictions regarding the use of funds for hospital and other non-ambulatory services not approved by the Administrator, HSMHA. Discussions with the Family Health Center program within Region IX of DHEW indicate that only limited construction funds have been available under this program, and that no new additional construction monies will be available unless provided for in the fiscal 1974 appropriations of Congress.

Cancer-Construction. Under the Public Health Service Act, Section 401 (2), the National Institutes of Health can provide project grants and contracts to expand existing cancer research facilities and to achieve a geographic distribution of cancer research facilities and centers. New facilities must be part of an existing cancer research effort; moreover, facilities constructed may not be used to replace existing cancer research facilities. Applicant eligibility is limited to any nonprofit organization competent to carry out cancer research.

Vocational Rehabilitation - Construction Grants. The Social and Rehabilitation Service of the Department of Health, Education and Welfare, under the Vocational Rehabilitation Act (Section 12), may make funds available to assist in the construction of public and other nonprofit rehabilitation facilities to improve and increase services to the handicapped. Type of assistance provided is in the form of project grants. This program provides for the construc-

tion of rehabilitation facilities and includes the construction of new buildings, acquisition of existing buildings, along with initial equipment for such acquired, expanded, remodeled, altered or renovated buildings. The cost of construction also includes the cost of architectural fees. Applicant eligibility is limited to a state vocational rehabilitation agency or any other public or nonprofit organization or agency which operates or proposes to operate a public or other nonprofit rehabilitation facility. The formula and matching requirements for a construction grant are the same as the Hill-Burton matching percentages, varying in states from 33-1/3 per cent to as much as 66-2/3 per cent federal funds. The range of financial assistance has varied from a low of \$50,000 to a high of \$3,100,000, with the average being \$200,000. In fiscal 1972, this program provided funds for construction of one facility. Discussions with the Social and Rehabilitation Service of DHEW Region IX indicate that additional funding of new construction projects under this program will not occur under existing appropriations.

Other. A partial list of other federal programs which were reviewed, but which were not applicable to the construction of a new hospital on Guam, include: Health Professions Education Facilities Program; Nurse Training Facilities Construction Program; Allied Health Facilities Program; Mental Retardation Facilities Construction Program; Small Business Administration Loan Program; Indian Health Services Facilities Program; Intensive Infant Care Projects (new born care), Social Security Act, Title 5, Section 508 (a) (2); Maternal and Child Health Services Program; Maternity and Infant Care Projects Program; Mental Health-Community Assistance Grants for Narcotic Addiction and Drug Abuse Program, as set forth under the Alcoholic and Narcotic Addict Rehabilitation Amendments of 1968, Part B, Title III; Mental Health-Hospital Improvement Grants Program, as defined under the Public Health Service Act, Section 303 (A) (2); Health Maintenance Organizations Service, of the Health Services and Mental Health Administration of the Department of Health, Education and Welfare; Crippled Children's Services Program; Dental Health of Children (Dental Care Projects) Program, of the Social Security Act, Title V, Section 510; Health Care of Children and Youth (Children and Youth Projects) Program; Veterans State Hospital Care; Grants to States for Remodeling of State Home Hospital/Domiciliary Facilities Program, of the Department of Medicine and Surgery, Veterans Administration; Grants to States for Construction of State Nursing Home Care Facilities (State Nursing Home Construction), of the Department of Medicine and Surgery, Veterans Administration; Mortgage Insurance - Group Practice Facilities (Title XI), of the Housing Production and Mortgage Credits/FHA, Department of Housing and Urban Development; Mortgage Insurance - Nursing Homes and Intermediate Care Facilities of the National Housing Act, Section 232, as administered by the Housing Production and Mortgage Credits/FHA, Department of Housing and Urban Development; and others.

FOUNDATION FUNDING SOURCES

As part of the review of potential funding sources for the proposed Guam Memorial Medical Center, discussions were entered into with several foundations concerning the feasibility of obtaining construction funds on a grant basis. Among others, the foundations contacted included: Rockefeller Foundation, New York, New York; Ford Foundation, New York, New York; Commonwealth Fund, New York, New York; Kellogg Foundation, Battle Creek, Michigan; Johnson Foundation, Princeton, New Jersey; Mellon Foundation, New York, New York; Carnegie Corporation, New York, New York; Lilly Endowment, Indianapolis, Indiana; Clark Foundation, New York, New York; Kresge Foundation, Birmingham, Michigan; and Kaiser Family Foundation, Palo Alto, California. At present, as shown on Exhibit III-1, following, it appears that most foundations are not funding capital construction projects, but are rather directing their monies within the health field toward health care programs and projects aimed at improving existing health delivery systems and/or increasing the supply of medical manpower resources, either through direct educational programs or clinical teaching experiences. Thus, this source of financing does not appear to be a viable source of funds for the construction of the new Guam Memorial Medical Center.

PRIVATE FUNDING SOURCES

A review of private funding sources was conducted as part of the study in regard to raising all or part of the capital construction needs for the proposed Guam Memorial Medical Center. Institutions contacted within the private sector included investment banking firms, commercial banks, mortgage bankers, and other lending institutions, including: First National City Bank; B. C. Ziegler and Company; the Consilium Corporation (a financial syndicate composed of the Wall Street investment firms of Merrill, Lynch, Pierce, Fenner and Smith, Inc.; Solomon Brothers; Eastman Dillon, Union Securities and Company; and Herbert J. Simms and Co., Inc.); duPont Glore Forgan Inc.; Francoeur and Co.; Advanced Mortgage Co.; the Lomas and Nettleton Company; Mid-Central Mortgage and Investment Co., Inc.; Citicorp International and Citicorp Leasing Inc.; State Mutual Life Assurance Company; and other private lenders.

In order to obtain an assessment of the feasibility of raising money through the private market, a review was made of the general lending rules and requirements followed by these types of institutions; a brief summary of the applicable lending rules and requirements follows. In general, a private lender requires a detailed financial analysis of both the existing hospital and the proposed hospital, as well as an area-wide survey indicating the need for the new construction. A detailed cash flow projection must be prepared,

GUAM MEMORIAL MEDICAL CENTER

SUMMARY OF POTENTIAL FOUNDATION FUNDING SOURCES

<u>Foundation</u>	<u>Size-1971 (a)</u>	<u>Type Projects</u>	<u>Largest Grants-1971(a)</u>	<u>Remarks</u>
Rockefeller Foundation New York, New York	\$ 831.9	Agriculture; programmatic health; university medical schools; population control	\$0.862	No construction
Ford Foundation New York, New York	3,400.0	Education; community development	7.5	No work in health field except population control
Commonwealth Fund New York, New York	135.8	Medical education; fellowship programs	0.3	Work through med. schools, individuals, no construction since 1948
Kellogg Foundation Battle Creek, Michigan	488.4	Education; programmatic health, agriculture	0.45	No construction grants
Johnson Foundation Princeton, New Jersey	1,180.1	Access to health quality care; health policy formation	2.4	No construction except in New Brunswick; all U.S. activity
Mellon Foundation New York, New York	671.0	Education, health, culture, community	2.5	Phasing out health, no construction grants, main emphasis-N.Y.
Carnegie Corporation New York, New York	319.7	Education; public affairs	1.6	No grants for construction; no longer in health
Lilly Endowment Indianapolis, Indiana	927.6	Historically education, community services, religion-in-Indiana	0.9	Expansion of local hospitals; going international; revising policies - possible interest
Clark Foundation New York, New York	123.4	Education, nursing, child welfare; care of aged	1.1	Almost out of health, no construction
Kresge Foundation Birmingham, Michigan	717.0	Construction in education, health	0.75	Possible interest
Kaiser Family Foundation Palo Alto, California	77.8	Health, programmatic in nature, health education, delivery systems	3.0	No construction at moment, possible in 1975 when current commitments ease up

(a) Millions.

usually based on past operations, which indicates operating income and operating expenses before interest and depreciation costs. In general, the following overall averages or "rules of thumb" are applied: average annual net income before interest and depreciation must equal \$2,000 - \$3,000 per bed; debt per bed of about \$20,000 is generally regarded as a safe limit for acute beds; working capital should equal 40 to 50 times total average daily charges, or about \$4,000 - \$5,000 per bed; debt service requirements will normally equal about 11 per cent of principle or, for each \$1 million of debt, about \$110,000 per year in debt service is required for both principle and interest payments; an equity position on the part of the lender is normally required, approximating 40 to 50 per cent of total project cost.

As can be seen, neither past hospital operations, nor hospital operations in the foreseeable future, satisfy the overall requirements of a private lender. It should be remembered that private lenders are placing their money in construction projects in order to obtain a return on principle, and that risk/reward decisions are made on the basis of competing hospital situations. The overall conclusion of the institutions contacted was that the proposed Guam Memorial Medical Center would not qualify for a private loan on a freestanding basis.

There are three basic types of private funds available for hospital construction: direct loans, public offerings and private placements. Private placement means that the money is obtained from a single or small group of institutional investors, such as banks, pension funds or insurance companies. In a public offering, debt issues or securities are either sold to the general public or to institutional security or bond holders. All of these types of funds require detailed financial analysis of past and projected hospital operations, as well as an adequate cash flow and working capital to ensure that debt repayment schedules will be met.

In addition to the hospital being able to retire debt on its own, there are two other common forms of financing arrangements in the private market, including: establishing the hospital as a nonprofit organization, which is then leased to the local governmental entity; and establishing the hospital as a semi-autonomous public instrumentality which has the authority to issue and retire its own bonds and debt obligations. Under either of these two alternative arrangements, some type of governmental guarantee, other than that of the hospital itself, is required when the hospital does not appear able to adequately retire the debt itself. In most cases, a 100 per cent governmental guarantee of the loan or debt issue is required; this places the governmental entity in a position of having to assume the loan or debt issue when and if the hospital goes into default on its debt payment schedule. If the hospital is established as a semi-autonomous, governmental instrumentality, it might enter into a form of tax exempt financing through the issuance of general obligation bonds or revenue bonds. Again, in most cases, this requires that the hospital be able to show an adequate cash flow to retire the debt issue,

otherwise it would not be able to find any purchasers of its debt instruments. If the hospital is set up as a nonprofit organization, it might obtain tax exempt financing under the "63-20" ruling; the nonprofit hospital can obtain a tax exempt status on its debt instruments under this approach because it enters into an irrevocable agreement with the local governmental entity to turn over the hospital to the government when its debt is retired. The only real advantage to a hospital with tax exempt bonds is a lower interest rate, which usually approximates 2 per cent lower than taxable debt instruments. The prime rate on Guam is normally 2 to 2-1/2 percentage points higher than that experienced in New York, which is currently 6-3/4 per cent.

Conclusions reached during the review of the private funding market include:

- The proposed Guam Memorial Medical Center will not be able to obtain private financing on its own, in that neither its historical financial record, nor its anticipated financial situation, qualify it under private lending "rules of thumb".
- The proposed Guam Memorial Medical Center might be able to obtain private financing through the general obligation bond or revenue bond approach, if the Government of Guam were to guarantee the total debt issue; under these circumstances, a thorough review would be made of the financial capability of the Government of Guam to retire the debt if the hospital were not able to meet the debt schedule requirements through operating funds - this review would probably result in the Government of Guam having to establish a special debt retirement account on an ongoing basis in order to meet debt services payment in case of the Hospital's default.

PHILANTHROPY

A brief review was conducted of the potential for raising capital construction funds on a philanthropic or endowment basis from individuals residing within the Guam community. Two overriding factors appear to negate against the possibility of achieving a significant portion of the capital funds from this potential source, including: the proposed Guam Memorial Medical Center will be a governmental institution; and the possibility of the Catholic Diocese establishing a new hospital still exists and, if this occurs, it would undoubtedly attract a majority of philanthropic funds due to the fact that most of the residents of the Island of Guam are Catholic. Because of these factors, it would not appear reasonable to include a large amount of endowment or philanthropic monies in the capital financing projections for the proposed Guam Memorial Medical Center; limited contributions, however, can be anticipated insofar as certain families and individuals will undoubtedly wish to donate particular types of medical facilities. Funds derived from these sources are not expected to be significant.

OTHER FUNDING SOURCES

This section presents a brief review of other potential funding sources which were examined during the course of the study. Included in this review were the following areas: U.S. Congressional support; federal support through revenue sharing; lease financing of equipment and related items; financing through use of interest income earned on GovGuam retirement funds; private contractor financing and operation of revenue-producing patient care area; and other. The following paragraphs briefly discuss each of these potential funding sources.

The possibility of obtaining special appropriations for construction of the proposed Guam Memorial Medical Center from the U.S. Congress does not appear viable at this time. The U.S. Congress has, in the past, provided such funds for the construction of the Lyndon B. Johnson Tropical Medical Center in American Samoa and for a hospital on the Island of Truk. However, due to the recent congressional financing of reconstruction projects on the Island of Guam under the Rehabilitation Act, as well as the current political climate, this potential financing mechanism does not currently appear practical.

The possibility of obtaining funds for Guam under the federal revenue sharing program was also explored. This program is currently slated to replace the Hill-Burton program in regard to providing funds for hospital modernization and construction. However, because Guam has received a 100 per cent return of federal taxes paid on the Island, it is currently not eligible for federal revenue sharing.

Because lease financing of equipment and related items has become increasingly common within the hospital field during recent years, preliminary discussions were entered into with several major lease companies. An estimate was made on the dollar value of equipment and related items which are currently being provided for in the \$37.6 million overall budget for the new Guam Memorial Medical Center; it is currently estimated that approximately \$4.5 million of equipment and related items would qualify for this type of private financing. The discussions entered into with leasing companies indicated substantial interest on their part in undertaking this type of financing for the new Guam Memorial Medical Center.

Based on discussions held on the Island of Guam, an additional potential source of financing might be the utilization of the interest income earned on the funds which are currently held in the Guam retirement fund. At present, the current value of this fund approximates \$34.9 million, and interest income of about \$1.8 million is being realized (during the fiscal year ending June 30, 1972). It would appear that the interest income from this fund might

be available for meeting the anticipated debt service requirements of the proposed Guam Memorial Medical Center; this action would require a removal of the current restrictions placed on the utilization of these funds by the Guam Legislature. It is realized that this source of financing should be used only if all other financing alternatives do not adequately provide for the debt service requirements of the new Hospital.

Brief discussions were also entered into with a selected number of companies in the private health field which specialize in constructing and operating various revenue-producing patient care departments within a hospital. Under this approach, the Guam Memorial Medical Center would enter into an agreement with such an organization by which the construction funds and equipment funds for a specific revenue-producing service would be provided by the private organization; in return, the private organization would operate the service within the new Hospital and would provide a fixed rate of return to the Hospital on revenues produced. Although this alternative appears feasible as a financing mechanism, its impact upon the overall financial condition of the new Guam Memorial Medical Center would be negative, insofar as the Medical Center would not realize the normal rate of return experienced by the particular revenue-producing departments. For example, it can be anticipated that the Medical Center might experience a 55 per cent net return on the operations of its clinical laboratory if it were to operate the service itself; under the aforementioned arrangement, a likely situation would be for the Medical Center to realize a 5 per cent net return on revenues experienced, with the private organization retaining the remainder in return for its having provided the funds for capital construction and for operating the department. Thus, this alternative provides a mechanism for overcoming the need for capital funds, but results in a long-term negative operating situation for the Medical Center in regard to the departments involved. No such private arrangements were discovered for either non-revenue-producing departments, or for revenue-producing departments which normally only break even.

Other additional financing alternatives which should be explored locally include: the sale of some of the land currently owned by the Medical Center which will not be utilized in the future; the rental of the existing facilities which the Medical Center occupies, but which it will be vacating when the new Guam Memorial Medical Center opens; and the reinclusion of funds in the current requests being submitted to the Department of Interior by Guam for additional rehabilitation act monies.



CHAPTER IV

FINANCIAL MASTER PLAN

IV - FINANCIAL MASTER PLAN

This chapter identifies the approach used in developing the incremental financial master plan, highlights the principal findings, summarizes the highlights, and presents conclusions and implications of debt service requirements for the Guam Memorial Medical Center.

APPROACH TO MASTER PLAN CALCULATIONS

The approach employed in developing the incremental financial plan involved the following steps.

- Data on the anticipated cost of construction were obtained from Daniel, Mann, Johnson, & Mendenhall.
- Possible sources of funds for construction were identified.
- The requirements which could be expected to be imposed by each source of funds was determined.
- A set of six alternative cases illustrating a complete range of solutions was established, and the calculations are presented in this chapter.

In concept, the calculations employ an incremental approach. Only those data that result from the financing arrangements are covered in the calculations. Since such data as salaries and wage expense depreciation, supplies expense and other operating charges do not vary with the method of financing employed for the project, they are not elements of the incremental financial master plan. The approach to the calculations was to determine what amount of cash must be generated to satisfy the financing requirements of the project after all income is collected and all cash operating expenses are paid. For ease in understanding the alternatives, the incremental costs associated with each are expressed as the average cost per patient day that must be obtained. For example, assuming operating expenses average \$50 per patient day, and incremental financial costs per patient day for an alternative are determined to be \$15, then a total charge of \$65 per patient day must be obtained to balance income and cash outflow.

The six cases for which financing calculations have been made involve obtaining funds from the following sources:

<u>Source</u>	<u>Amount Of Funds Supplied</u>	
	<u>Minimum</u>	<u>Maximum</u>
Government Of Guam	\$10,000,000	\$21,991,000
Hill-Burton programs	-	1,719,000
Donations	-	500,000
Private ownership of certain facilities	-	4,500,000
Equipment leases	-	4,000,000
Borrowing from private lenders	5,500,000	27,610,000

HIGHLIGHTS OF FINDINGS

Appendixes A and B contain details of all calculations used in this analysis, including the critical assumptions and the basis for key computations. The remainder of this section highlights the findings for each of the six alternatives.

Case I

This case is based on the Government of Guam supplying \$10 million and the Medical Center borrowing all remaining funds for the project. The result would be that almost three-fourths of the project costs are assumed by private lending sources. The average amount of debt per acute bed during Phase I would be \$141,250. Private lenders probably would not consider a project on this basis. Furthermore, the percentage of debt to total assets would be 65 per cent. This would be another indication of the financial instability of Case I from the point of view of private lending sources. Finally the incremental financial costs per patient day would be as follows for various assumed occupancy levels:

<u>Per Cent Occupancy</u>	<u>Incremental Financial Cost Per Patient Day</u>
100%	\$ 36.73
95	38.66
90	40.81
85	43.21
80	45.91
75	48.97

Case II

Case II is also based on Government of Guam participation of \$10 million. In addition to private long-term borrowing, it is assumed that maximum loan guarantees of \$369,000 would be obtained under the Hill-Burton program and

that private construction and financing of the central power plant, laundry and warehouse with a value of \$4.5 million would be obtained. Under arrangements with the private owners of the power plant, laundry and warehouse, the Medical Center would purchase Services. This arrangement would lower the amount of debt per acute bed by \$23,750 to \$117,500 compared with Case I. The percentage of debt to total assets changes to 60 per cent. Both of these measures probably would be unacceptably high for private lenders to consider investment. Incremental financial costs per patient day would range as follows (on the basis of various assumed occupancy levels):

<u>Per Cent Occupancy</u>	<u>Incremental Financial Cost Per Patient Day</u>
100%	\$ 30.48
95	32.08
90	33.87
85	35.86
80	38.10
75	40.64

Case III

This case is also based on \$10 million from the Government of Guam and Hill-Burton loan guarantees of \$369,000; private construction and ownership of the central power plant, laundry and warehouse is included. A new mechanism for financing movable hospital equipment such as beds, bed pans, laboratory equipment and the like would be used; the technique employed would be the use of a 10-year finance lease with an option to purchase the equipment at the end of the rental period. The result would be a reduction in the amount of debt per acute bed to \$97,800 and a lowering of the percentage of debt to total assets to 50 per cent. For the first 10 years of operations under Phase I, however, the incremental financial costs per patient day would be increased to the levels shown below:

<u>Per Cent Occupancy</u>	<u>Incremental Financial Costs Per Patient Day</u>
100%	\$ 30.91
95	32.54
90	34.34
85	36.37
80	38.64
75	41.21

The reason for this increase is that the debt service requirements for the leased equipment would exceed the comparable debt service requirements for ownership during the term of the lease. Nevertheless, once the lease expires

(in ten years) there would be a reduction in debt service requirements and incremental financial costs. The average cost per patient day for the full 20-year period shows that the lease would exert an overall favorable impact as shown in the summary below:

<u>Per Cent Occupancy</u>	<u>Incremental Financial Cost Per Patient Day</u>
100%	\$ 28.13
95	29.61
90	31.26
85	33.09
80	35.16
75	37.51

Case IV

The contribution of capital by the Government of Guam would be increased to \$15 million and the amount of private borrowing reduced, with all other sources of funds remaining the same as in the previous case. The financial implications resulting from these changes would be favorable, but probably not enough to attract private sources of funds to invest their share. The percentage of debt to total assets would fall to 36 per cent and be within the limits required to obtain private financing, but the amount of debt per acute bed would be \$70,350, still too high. The incremental financial costs per patient day would still be high, \$23.78 at 100 per cent occupancy. The amounts for lower levels of occupancy are shown below for the first 10 years and for the full 20 years.

<u>Occupancy Level</u>	<u>Incremental Financial Cost Per Patient Day</u>	
	<u>First 10 Years</u>	<u>Full 20 years</u>
100%	\$ 23.78	\$ 21.00
95	25.03	22.11
90	26.42	23.33
85	27.98	24.71
80	29.73	26.25
75	31.71	28.00

Cases V And VI

The economics of these cases would be similar, with the major difference being how the Government of Guam might go about obtaining its contribution of capital. Case VI shows receipt of an additional grant from the Hill-Burton program which is now set aside for the Dededo facility. The two cases were developed on the following basis:

Also, Guam Memorial Medical Center should probably maintain incremental financial costs of debt service below \$15 per patient day at 80 per cent occupancy levels. The only alternatives meeting these criteria are Cases V and VI.

CONCLUSIONS AND IMPLICATIONS

The preceding sections indicate that when Phase I is considered alone, an equity contribution of between \$22 and \$25 million is required to meet lender requirements. Without this amount of equity, the project will probably not attract funds from private lenders for remaining requirements. Two additional points require consideration, however.

First, the total project is envisioned to be completed in a series of phases. Phase I of the project incorporates some features intended to meet needs arising in Phases II, III and IV. For example, Phase I includes the cost of a 405 bed chassis with 320 beds usable during Phase I and the remaining 85 beds added in Phase II. Also, the central power plant, laundry and warehouse are sized to meet the needs of later phases.

Second, Phase I incorporates larger equity contributions than are needed to meet the percentage of debt to total assets criterion, but this large percentage of equity is required because the relationship of beds to total cost may not be balanced. Later phases appear to result in better balance if they add proportionately greater bed capacity per dollar of cost than in the case in Phase I alone.

The implications are that Phases II, III and IV may allow greater flexibility in arranging finances than were permitted in Phase I alone.



APPENDIX

KEY ASSUMPTIONS

1. The schedule of project costs was supplied by Daniel, Mann, Johnson, & Mendenhall and will result in completed construction of a 320 bed hospital on a 405 bed chassis.

2. Timing for disbursement of funds for completion of the facility by 1976 is based on the following.

- A & E fees will be paid as earned; 70 per cent of the fees will be earned through the stage where the contract is awarded (November 1, 1974) and 30 per cent will be earned during the construction period (November 1, 1974 through December 31, 1976).
- Site work will be started and completed in 1974.
- Tests, checks, permits and inspections will be performed continuously throughout 1974, 1975 and 1976.
- Movable hospital equipment will be installed during 1976.
- Central power plant, laundry and warehouse construction will begin in 1975 and be completed in 1976.
- Building and other construction will begin November 1, 1974 and be completed December 31, 1976.

3. Funds borrowed in a year will be charged interest for the full year.

4. The financing fee applicable to converting interim construction financing to a permanent mortgage will be paid December 31, 1976, when construction is completed.

5. The amount of permanent mortgage funds borrowed will include the values applicable to interim construction interest and the mortgage commitment fee.

6. Funds supplied by "equity sources" include the following:

- Government of Guam
- Hill-Burton program grants

- Donations
- Sale of land by GovGuam and use of the proceeds as additional contribution.

7. Where applicable to specific cases, the order for receipt and use of equity funds is the following:

- Government of Guam contribution
- Hill-Burton program grants and appropriations
- Donations
- Proceeds from land sale

8. Where applicable to specific cases the Hill-Burton loan guarantee will be used before other borrowing sources are used.

9. Central power plant, laundry and warehouse may be privately constructed and rented from the owners as needed; annual rental is considered an operating expense and is assumed to exactly offset the expense that would be incurred by the Guam Memorial Medical Center if they owned and operated the facility.

10. Equipment in the Guam Memorial Medical Center can be leased at an annual rental of 13 per cent of the principal value of the equipment. The lease period is 10 years with an option to purchase the equipment for \$1.00 at the expiration of the 10-year term.

11. Equity funds will be disbursed before borrowed funds are used in any applicable case on a year-to-year basis.

12. Interim construction loans are at the rate of 10 per cent interest without a commitment fee; construction loans will be paid off with the proceeds of the permanent mortgage when the project is completed in 1976.

13. Hill-Burton loan subsidies result in interest at three percentage points below the otherwise normal borrowing rate for permanent mortgage loans.

14. Permanent mortgage loans are available at 8.5 per cent interest, payable over 20 years and a commitment fee of 2 per cent of the principal amount borrowed.

15. Payment of principal on borrowed funds will commence in 1977, the first year of operation of the new facility.

16. Operating subsidies presently provided by the Government of Guam to the Guam Memorial Medical Center are not considered elements of the incremental financial master plan.

17. The cash flow from normal operations and receipt of subsidies from the Government of Guam are before interest expense and depreciation provisions.

18. Private lenders require annual cash flow from operations to exceed debt service requirements by 25 per cent annually.

MASTER PLAN CALCULATIONS

This appendix indicates in detail the data used in the incremental financial master plan calculations.

Exhibit 1 shows the various elements of cost for Phase I. These data were supplied by Daniel, Mann, Johnson, & Mendenhall. Financing costs are not included.

Exhibit 2 shows the sources of financing that were evaluated in the six alternatives. Each is successively more feasible than the preceding, with Cases V and VI representing what appear to be workable solutions for commencing negotiations with private lenders.

Exhibit 3 Through 8 present the specific calculations applicable to each case.

Exhibit 9 shows the annual debt service for Phase I applicable to each case.

Exhibit 10 presents a summary pro forma balance sheet for each case. The balance sheet data represent values that would apply at the beginning of operation on December 31, 1976.

Exhibit 11 is a summary of pertinent financial ratios for each case.

GUAM MEMORIAL MEDICAL CENTER

ESTIMATED USES AND DISPERSAL SCHEDULE
FOR FUNDS DURING PHASE I CONSTRUCTION(a)

(Thousands Of Dollars)

<u>Description Of Use Of Funds</u>	<u>Total Amount To Be Disbursed</u>	<u>Amount To Disburse In Each Year</u>			
		<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Architectural and engineering fees	\$ 1,821	\$525	\$ 802	\$ 247	\$ 247
Site work	500	-	500	-	-
Tests, checks, permits, inspections, etc.	500	-	166	167	167
Equipment	4,000	-	-	-	4,000
Central power plant, laundry and warehouse	4,500	-	-	2,250	2,250
Building and other construction	<u>26,289</u>	<u>-</u>	<u>2,022</u>	<u>12,133</u>	<u>12,134</u>
Total	\$37,610	\$525	\$3,490	\$14,797	\$18,798

(a) Does not include any funds required for operating the existing Guam Memorial Medical Center through December 31, 1976 and does not include any interest and financing charges prior to beginning operation of new facilities.

GUAM MEMORIAL MEDICAL CENTER

ALTERNATIVE SOURCES OF FUNDS FOR PHASE I CONSTRUCTION(a)

(Thousands Of Dollars)

<u>Source Of Funds</u>	<u>Amount Of Funds Supplied By Each Alternative Source</u>					
	<u>Case I</u>	<u>Case II</u>	<u>Case III</u>	<u>Case IV</u>	<u>Case V</u>	<u>Case VI</u>
Government of Guam	\$10,000	\$10,000	\$10,000	\$15,000	\$21,991	\$16,391
Hill-Burton program						
Guaranteed loan	-	369	369	369	369	369
Grant	-	-	-	-	750	750
Dededo appropriation	-	-	-	-	-	600
Donations	-	-	-	-	500	500
Proceeds from sale of land by Government of Guam	-	-	-	-	-	5,000
Private construction and rental of central plant facility	-	4,500	4,500	4,500	4,500	4,500
Equipment financing on lease	-	-	4,000	4,000	4,000	4,000
Private source borrowed funds	<u>27,610</u>	<u>22,741</u>	<u>18,741</u>	<u>13,741</u>	<u>5,500</u>	<u>5,500</u>
Total	\$37,610	\$37,610	\$37,610	\$37,610	\$37,610	\$37,610

(a) Does not include any provision for operating the existing Guam Memorial Medical Center through December 31, 1976 and does not include any interest and financing charges prior to beginning operation of the new facilities.

GUAM MEMORIAL MEDICAL CENTER

ESTIMATED FUND REQUIREMENTS AND SOURCES BY
YEAR FOR PHASE I CONSTRUCTION - CASE I

(Thousands Of Dollars)

<u>Description</u>	<u>Amount Applicable To Each Year</u>				<u>Total For Phase I</u>
	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	
Construction funds required (before financing costs)	\$525	\$3,490	\$14,797	\$18,798	\$37,610
Add financing costs:					
Interest on interim construction loan	-	-	979	3,249	4,228
Commitment fee for permanent mortgage	<u>-</u>	<u>-</u>	<u>-</u>	<u>650</u>	<u>650</u>
Total Funds Required	\$525	\$3,490	\$15,776	\$22,697	\$42,488
Equity funds					
Government of Guam capital	\$525	\$3,490	\$ 5,985	-	\$10,000
Borrowed funds					
Private source borrowed funds	<u>-</u>	<u>-</u>	<u>9,791</u>	<u>\$22,697</u>	<u>32,488</u>
Total Funds Supplied	\$525	\$3,490	\$15,776	\$22,697	\$42,488

GUAM MEMORIAL MEDICAL CENTER

ESTIMATED FUND REQUIREMENTS AND SOURCES BY
YEAR FOR PHASE I CONSTRUCTION - CASE II

(Thousands Of Dollars)

<u>Description</u>	<u>Amount Applicable To Each Year</u>				<u>Total For Phase I</u>
	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	
Construction funds required (before financing costs per Exhibit 1)	\$525	\$3,490	\$14,797	\$18,798	\$37,610
Less values applicable to leased or rental facilities					
Private construction and ownership of central power plant, laundry and warehouse	-	-	(2,250)	(2,250)	(4,500)
Add financing costs					
Interest on Hill-Burton Program loan	-	-	20	20	40
Interest on interim construction loan	-	-	690	2,667	3,357
Commitment fee for permanent mortgage	-	-	-	533	533
Total Funds Required	\$525	\$3,490	\$13,257	\$19,768	\$37,040
Equity funds					
Government of Guam capital	\$525	\$3,490	\$ 5,985	-	\$10,000
Borrowed funds					
Hill-Burton Program loan guarantee	-	-	369	-	369
Private source borrowed funds	-	-	6,903	\$19,768	26,671
Total Funds Supplied	\$525	\$3,490	\$13,257	\$19,768	\$37,040

GUAM MEMORIAL MEDICAL CENTER

ESTIMATED FUND REQUIREMENTS AND SOURCES BY
YEAR FOR PHASE I CONSTRUCTION - CASE III

(Thousands Of Dollars)

<u>Description</u>	<u>Amount Applicable To Each Year</u>				<u>Total For Phase I</u>
	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	
Construction funds required (before financing costs per Exhibit 1)	\$525	\$3,490	\$14,797	\$18,798	\$37,610
Less values applicable to leased or rented facilities					
Private construction and ownership of central power plant, laundry and warehouse	-	-	(2,250)	(2,250)	(4,500)
Lease of hospital equipment	-	-	-	(4,000)	(4,000)
Add financing costs					
Interest on Hill-Burton Program loan	-	-	20	20	40
Interest on interim construction loan	-	-	690	2,213	2,903
Commitment fee for permanent mortgage	-	-	-	442	442
Total Funds Required	\$525	\$3,490	\$13,257	\$15,223	\$32,495
Equity funds					
Government of Guam capital	\$525	\$3,490	\$ 5,985	-	\$10,000
Borrowed funds					
Hill-Burton Program loan guarantee	-	-	369	-	369
Private source borrowed funds	-	-	6,903	\$15,223	22,126
Total Funds Supplied	\$525	\$3,490	\$13,257	\$15,223	\$32,495

GUAM MEMORIAL MEDICAL CENTER

ESTIMATED FUND REQUIREMENTS AND SOURCES BY
YEAR FOR PHASE I CONSTRUCTION - CASE IV

(Thousands Of Dollars)

<u>Description</u>	<u>Amount Applicable To Each Year</u>				<u>Total For Phase I</u>
	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	
Construction funds required (before financing costs per Exhibit 1)	\$525	\$3,490	\$14,797	\$18,798	\$37,610
Less values applicable to leased or rented facilities					
Private construction and ownership of central power plant, laundry and warehouse	-	-	(2,250)	(2,250)	(4,500)
Lease of hospital equipment	-	-	-	(4,000)	(4,000)
Add financing costs					
Interest on Hill-Burton Program loan	-	-	20	20	40
Interest on interim construction loan	-	-	135	1,581	1,716
Commitment fee for permanent mortgage	-	-	-	316	316
Total Funds Required	\$525	\$3,490	\$12,702	\$14,465	\$31,182
Equity funds					
Government of Guam capital	\$525	\$3,490	\$10,985	-	\$15,000
Borrowed funds					
Hill-Burton Program loan guarantee	-	-	369	-	369
Private source borrowed funds	-	-	1,348	\$14,465	15,813
Total Funds Supplied	\$525	\$3,490	\$12,702	\$14,465	\$31,182

GUAM MEMORIAL MEDICAL CENTER

ESTIMATED FUND REQUIREMENTS AND SOURCES BY
YEAR FOR PHASE I CONSTRUCTION - CASE V

(Thousands Of Dollars)

<u>Description</u>	<u>Amount Applicable To Each Year</u>				<u>Total For Phase I</u>
	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	
Construction funds required (before financing costs per Exhibit 1)	\$525	\$3,490	\$14,797	\$18,798	\$37,610
Less values applicable to leased or rental facilities					
Private construction and ownership of central power plant, laundry and warehouse	-	-	(2,250)	(2,250)	(4,500)
Lease of hospital equipment	-	-	-	(4,000)	(4,000)
Add financing costs					
Interest on Hill-Burton Program loan	-	-	-	20	20
Interest on interim construction loan	-	-	-	627	627
Commitment fee for permanent mortgage	-	-	-	126	126
Total Funds Required	\$525	\$3,490	\$12,547	\$13,321	\$29,883
Equity funds					
Government of Guam capital	\$525	\$3,490	\$12,547	\$ 5,429	\$21,991
Hill-Burton program grant	-	-	-	750	750
Donations	-	-	-	500	500
Borrowed funds					
Hill-Burton Program loan guarantee	-	-	-	369	369
Private source borrowed funds	-	-	-	6,273	6,273
Total Funds Supplied	\$525	\$3,490	\$12,547	\$13,321	\$29,883

GUAM MEMORIAL MEDICAL CENTER

ESTIMATED FUND REQUIREMENTS AND SOURCES BY
YEAR FOR PHASE I CONSTRUCTION - CASE VI

(Thousands Of Dollars)

<u>Description</u>	<u>Amount Applicable To Each Year</u>				<u>Total For Phase I</u>
	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	
Construction funds required (before financing costs per Exhibit 1)	\$525	\$3,490	\$14,797	\$18,798	\$37,610
Less values applicable to leased or rented facilities					
Private construction and ownership of central power plant, laundry and warehouse	-	-	(2,250)	(2,250)	(4,500)
Lease of hospital equipment	-	-	-	(4,000)	(4,000)
Add financing costs					
Interest on Hill-Burton Program loan	-	-	-	20	20
Interest on interim construction loan	-	-	-	627	627
Commitment fee for permanent mortgage	-	-	-	126	126
Total Funds Required	\$525	\$3,490	\$12,547	\$13,321	\$29,883
Equity funds					
Government of Guam capital	\$525	\$3,490	\$12,376	-	\$16,391
Hill-Burton Program grant	-	-	171	\$ 579	750
Hill-Burton Program Dededo appropriation	-	-	-	600	600
Donations	-	-	-	500	500
Proceeds from sale of land	-	-	-	5,000	5,000
Borrowed funds					
Hill-Burton Program loan guarantee	-	-	-	369	369
Private source borrowed funds	-	-	-	6,273	6,273
Total Funds Supplied	\$525	\$3,490	\$12,547	\$13,321	\$29,883

GUAM MEMORIAL MEDICAL CENTER

SUMMARY OF ANNUAL CASH FLOW TO MEET
REQUIREMENTS OF PRIVATE SOURCE LENDERS - PHASE I CONSTRUCTION

(Thousands Of Dollars)

<u>Description Of Cash Flow Requirements</u>	<u>Cash Flow Required Each Year For The Period</u>		<u>Total For 20-Year Period</u>
	<u>1977-86</u>	<u>1987-96</u>	
Case I			
Debt service on permanent mortgage	\$3,433	\$3,433	\$68,660
Annual addition to cash flow to meet lenders requirements	858	858	17,160
Total	\$4,291	\$4,291	\$85,820
Case II			
Debt service on permanent mortgage	\$2,818	\$2,818	\$56,360
Debt service on Hill-Burton Program guaranteed loan	31	31	620
Annual addition to cash flow to meet lenders requirements	712	712	14,240
Total	\$3,561	\$3,561	\$71,220
Case III			
Debt service on permanent mortgage	\$2,338	\$2,338	\$46,760
Debt service on Hill-Burton Program guaranteed loan	31	31	620
Annual lease payment on equipment	520	-	5,200
Annual addition to cash flow to meet lenders requirements	722	592	13,140
Total	\$3,611	\$2,961	\$65,720
Case IV			
Debt service on permanent mortgage	\$1,671	\$1,671	\$33,420
Debt service on Hill-Burton Program guaranteed loan	31	31	620
Annual lease payment on equipment	520	-	5,200
Annual addition to cash flow to meet lenders requirements	556	426	9,820
Total	\$2,778	\$2,128	\$49,060
Case V			
Debt service on permanent mortgage	\$ 663	\$ 663	\$13,260
Debt service on Hill-Burton Program guaranteed loan	31	31	620
Annual lease payment on equipment	520	-	5,200
Annual addition to cash flow to meet lenders requirements	304	174	4,780
Total	\$1,518	\$ 868	\$23,860
Case VI			
Debt service on permanent mortgage	\$ 663	\$ 663	\$13,260
Debt service on Hill-Burton Program guaranteed loan	31	31	620
Annual lease payment on equipment	520	-	5,200
Annual addition to cash flow to meet lenders requirements	304	174	4,780
Total	\$1,518	\$ 868	\$23,860

GUAM MEMORIAL MEDICAL CENTER

SUMMARY PROFORMA BALANCE SHEET AT COMPLETION OF
PHASE I CONSTRUCTION FOR EACH CASE

(Thousands Of Dollars)

<u>Account Description</u>	<u>Case I</u>	<u>Case II</u>	<u>Case III</u>	<u>Case IV</u>	<u>Case V</u>	<u>Case VI</u>
Assets						
Net working capital(a)	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
Plant and equipment(b)	<u>37,610</u>	<u>33,110</u>	<u>33,110</u>	<u>33,110</u>	<u>33,110</u>	<u>33,110</u>
Total	\$49,610	\$45,110	\$45,110	\$45,110	\$45,110	\$45,110
Liabilities and equity						
Capitalized long-term leases(c)	-	-	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
Borrowed funds(d)	\$32,488	\$27,040	22,495	16,182	6,642	6,642
Equity capital(e)	<u>17,122</u>	<u>18,070</u>	<u>18,615</u>	<u>24,928</u>	<u>34,468</u>	<u>34,468</u>
Total	\$49,610	\$45,110	\$45,110	\$45,110	\$45,110	\$45,110

(a)Based on December 31, 1972 working capital of \$8,720,000 and increase in scale to correspond to increased size of facility from 242 beds to 320 beds.

(b)Represents the value of new construction which will be owned or leased by Guam Memorial Medical Center at original cost.

(c)Represents the value of leased equipment at original cost.

(d)Based on calculation of funds supplied for construction of Phase I facility.

(e)Based on transfer of equity from existing operations and new input of funds by Government of Guam, Hill-Burton grants and donations. Land sale for Case VI is assumed to be part of Government of Guam contributions.

GUAM MEMORIAL MEDICAL CENTER

SUMMARY OF FINANCIAL HIGHLIGHTS FOR EACH CASE

<u>Description</u>	<u>Case I</u>	<u>Case II</u>	<u>Case III</u>	<u>Case IV</u>	<u>Case V</u>	<u>Case VI</u>
Amount of debt per acute bed(a)	\$141,250	\$117,500	\$97,800	\$70,350	\$28,900	\$28,900
Percentage of debt to total assets(b)	65%	60%	50%	36%	15%	15%
Incremental financial costs per bed day at 100 per cent average occupancy(c)	\$36.73	\$30.48	\$30.91	\$23.78	\$13.00	\$13.00

(a)Based on 230 acute beds among the 320 total beds in the facility.

(b)Based on borrowed funds (excluding capitalized leases).

(c)Based on 116,800 patient-days (320 beds times 365 days) and debt service requirements in the first 10 years of operations under Phase I conditions.