

**MISSISSIPPI DEPARTMENT OF HEALTH
DIVISION OF HEALTH PLANNING
AND RESOURCE DEVELOPMENT
AUGUST 2007**

**CON REVIEW HG-R-0607-015
FORREST GENERAL HOSPITAL
RENOVATION OF NEONATAL INTENSIVE CARE UNIT
CAPITAL EXPENDITURE: \$6,054,437
LOCATION: HATTIESBURG, FORREST COUNTY, MISSISSIPPI**

STAFF ANALYSIS

I. PROJECT SUMMARY

A. Applicant Information

Forrest General Hospital (FGH) is a Level II trauma center and a 512-bed short-term, general acute care, public hospital located in Hattiesburg, Forrest County, Mississippi. The hospital is owned by Forrest County, Mississippi, and was established in July 1952. The hospital is governed by a seven-member board of trustees, certified to participate in the Medicare and Medicaid programs, and is accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).

The licensed bed complement of the hospital consists of 400 short-term, general acute care beds, 24 rehabilitation beds, 56 adult psychiatric beds, and 32 adult chemical dependency beds. The occupancy rates, average lengths of stay (ALOS), and Medicaid utilization rates for the three most recent years are as follows:

Fiscal Year	Occupancy Rate (%)	ALOS (DAYS)	Medicaid Utilization Rate (%)
2003	61.24	4.59	29.16
2004	61.97	4.61	25.17
2005	62.74	4.83	22.23

Source: Division of Health Facilities, Licensure and Certification, MDH

B. Project Description

Forrest General Hospital requests Certificate of Need (CON) authority to renovate and relocate Neonatology Services, which includes: Labor and Delivery (L&D), Neonatology Intensive Care Unit (NICU), and Intermediate Care Nurseries (ICN).

Forrest General Hospital proposes to renovate 13,000 square feet of an existing patient care unit and relocate the new Neonatology Services to a larger and modern unit. The current location of the Neonatal Intensive Care unit is 2,041 square feet and the Intermediate Care Nursery is 1,130 square feet on the fourth floor of the existing hospital. The space has not increased since 1987; meanwhile, the volume has steadily increased. Patient admissions and days in the Intermediate Care Nursery and Neonatal Intensive Care Unit have increased over the past four years.

According to FGH, the new location will be centrally located between the mother-baby unit (postpartum) and pediatric unit; however, still in close proximity to the Labor and Delivery Department. The new 13,000 square feet of renovated area will include a new family-centered Neonatal Intensive Care Unit and Intermediate Care Nursery. The new location will have upgrades to technology standards as written in the *Guidelines for Perinatal Care*, 5th edition and acoustical and speech privacy in accordance with the Health Insurance Portability and Accountability Act (HIPPA). The increased square footage of the project will allow designated clerical, nursing, and scrub areas; utility, electrical and mechanical rooms; storage and office spaces; and a family waiting room.

The Mississippi Department of Health, Division of Health Facilities Licensure and Certification, has approved the site for the proposed project.

The application includes a capital expenditure summary, a three-year projected operating statement, financial feasibility study, and an audited financial statement. The project will require new personnel to staff the area: four (4) Registered Nurses, eight (8) Technicians, and two (2) Administrative staff members. Furthermore, historical data demonstrates that Forrest General Hospital's Neonatology Services has an extremely low turnover rate.

Forrest General Hospital has transfer/referral/ affiliation agreements with 9 entities that are directly related to the proposed project.

Funding for the total proposed capital expenditure of \$6,054,437 project will come from FGH's cash reserves. Upon approval of the CON, the project will be completed by March 1, 2009.

II. TYPE OF REVIEW REQUIRED

The Mississippi State Department of Health reviews applications for construction, renovation, expansion, or capital improvement involving a capital expenditure in excess of \$2,000,000, under the applicable statutory requirements of Section 41-7-173, 41-7-191 (1) (j), and 41-7-193, Mississippi Code of 1972, as amended.

In accordance with Section 41-7-197(2) of the Mississippi Code of 1972 Annotated, as amended, any affected person may request a public hearing on this project within 20 days of publication of the staff analysis. The opportunity to request a hearing expires September 4, 2007.

III. CONFORMANCE WITH THE STATE PLAN AND OTHER ADOPTED CRITERIA AND STANDARDS

A. State Health Plan (SHP)

The *FY 2007 Mississippi State Health Plan (FY 2007 MSHP)* contains criteria and standards which the applicant is required to meet before receiving CON authority for construction, renovation, and the acquisition of major medical equipment. This application is in compliance with applicable criteria and standards.

Projects which do not involve the addition of any acute care beds: The applicant shall document the need for the proposed project. Documentation may consist of, but is not limited to, citing of licensure or regulatory code deficiencies, institutional long-term plans (duly adopted by the governing board), recommendations made by consultant firms, and deficiencies cited by accreditation agencies (JCAHO, CAP, etc.). In addition, for projects which involve construction, renovation, or expansion of emergency department facilities, the applicant shall include a statement indicating whether the hospital will participate in the statewide trauma system and describe the level of participation, if any.

SHP Criterion 1 - Need

Forrest General Hospital contends that the hospital's neonatal intensive care unit is designed as an open plan for neonates positioned along a service counter and headwall system. The applicant cited the open plans have been found to be contradictory to encouraging family-centered care.

According to FGH, with the significant advancements in healthcare technology and modern designs of neonatal intensive care units this proposed project can address the concerns, i.e. flexibility to provide specialized neonatal care, as well as, infant and family privacy, caused by an open plan. FGH states that individual private rooms provide the best setting for the critical care nurseries of the future with substantial benefits. FGH listed the following to justify the need for the proposed project:

- ✓ Maximized efficiency of care by enabling performance of all care and needed procedures in one room;
- ✓ Environmental control (lighting, noise, sound, temperature, etc.) for each patient;
- ✓ Acoustical and speech privacy as demanded by HIPAA;
- ✓ Active participation of parents in the medical care of and decision making for their babies, thereby decreasing parental stress and increasing parental satisfaction and confidence; improved patient-infant attachment;
- ✓ Increased breastfeeding success;
- ✓ Reduced potential of infections;
- ✓ Enhanced developmental care; and
- ✓ Improved outcomes such as greater discharge weight, decreased mortality, lengths of stay, and readmission rates.

The applicant further states that the following are also benefits for locating the new unit between the mother-baby unit (postpartum) and pediatric unit:

- ✓ New mothers that are not discharged from the mother-baby unit (postpartum) have greater accessibility to their infants;
- ✓ Neonatology Services' nurses, who are specially trained to treat critically ill and premature newborns, have the flexibility to easily float to the pediatric unit for assistance when necessary;
- ✓ Nurse relationship and the new Neonatology Services location will allow a variety of qualified staff to respond to a code or other emergencies throughout the Family Birthplace, an all-inclusive Women's and Children's area at FGH;
- ✓ Within close proximity to Labor and Delivery so Neonatology Services' staff can assist in attending deliveries and transitioning newborns during their first hours of life.

The applicant states that the facility's planning committee reviews the plan and shares it with the Board of Trustees, who approves the plan before any action is taken. The application contains a resolution adopted by the Board of Trustees approving this project to renovate and relocate the Neonatology Services.

The applicant states that FGH is not adding additional beds or services.

SHP Criterion 2 - Bed Service Transfer/Reallocation/Relocation

The applicant asserts that this project does not involve transfer/reallocation/relocation of beds to another facility within GHSA 6. Therefore, this criterion is not applicable to the proposed project.

SHP Criterion 3 - Charity/Indigent Care

Forrest General Hospital affirms that it will provide a “reasonable amount” of indigent/charity care as described in Chapter I of the *2007 Mississippi State Health Plan*.

SHP Criterion 4 - Cost of Proposed Project

The applicant states that using the computation of the cost per square foot taken from Chapter 8 of the *Mississippi Certificate of Need Review Manual, 2006 revision*, Section IV, General Review Criteria; #14 Construction Projects: Item “E”, the costs of land and non-fixed equipment are excluded from the cost per square foot calculation. The applicant states the proposed project shall cost approximately \$266 per square foot. The *2007 Means Construction Cost Data* publication does not compare costs of renovation projects.

Staff’s calculation of the renovation cost per square foot is \$323.54 per square foot to renovate 13,000 square feet of an existing patient care unit (see Attachment II).

The applicant states that the total fixed equipment cost is \$160,000 and the non-fixed equipment cost is \$1,848,437. Forrest General Hospital affirms that equipment costs do not exceed the median costs for equipment of similar quality by more than 15%.

SHP Criterion 5 - Floor Area and Space Requirements

Forrest General Hospital proposes to renovate 13,000 square feet of existing space to relocate the Neonatal Intensive Care Nursery and Intermediate Care Nursery.

Forrest General Hospital asserts that the renovation project is comparable to state and national norms for similar projects.

Forrest General Hospital contends that the architectural design of the existing facility does not place any restraints on the proposed project and that there are no special considerations for this project due to local conditions.

SHP Criterion 6 – Cost of Proposed Renovation or Expansion Project

The applicant certifies that the proposed renovation project will not exceed 85% of the cost of a replacement facility.

General Review (GR) Criteria

Chapter 8 of the *Mississippi Certificate of Need Review Manual, November 12, 2006 revision*, addresses general criteria by which all CON applications are reviewed. This application is in substantial compliance with general review criteria.

GR Criterion 1 – State Health Plan

According to FGH, the project is in compliance with all criteria, standards, and policies of the FY 2007 *Mississippi State Health Plan*.

GR Criterion 2 - Long Range Plan

The applicant states that in 1997, FGH engaged John Sierra with the Eckroth Planning Group to facilitate the development of a Long Range Facility Development Plan for the hospital. FGH states that the plan is fluid, not static, and has been updated twice. The Long Range Plan is developed by administration with input from the medical staff, hospital staff, community focus groups, patient surveys, statistical data, and local, state, and national agencies.

The applicant asserts that each year as FGH's planning process, a Vision Alignment Matrix is developed. As a result, four strategies have been continued: quality patient experience, quality staff experience, quality business experience, and alignment with physicians. FGH states that the renovation of Neonatology Services is consistent with all four strategies. Furthermore, all plans are presented by the facility planning committee to the Board of Trustees and in turn, the Board of Trustees approves or disapproves all plans. The Board unanimously adopted a resolution to apply for a CON in order to renovate and relocate the Neonatology Services which includes: Labor and Delivery (L&D), Neonatology Intensive Care Unit (NICU), and Intermediate Care Nurseries (ICN) on May 22, 2007, for approximately \$6,105,000. This project is in compliance with this criterion.

GR Criterion 3 - Availability of Alternatives

The applicant asserts that the proposed project is the result of planning and the identification of long range facility improvement.

- **Status Quo**

The first alternative to be considered was to complete cosmetic upgrades to the existing Neonatology Services areas. This was rejected because the current floor space for isolettes in the Neonatology Services areas do not meet the new recommended guidelines (150 sq ft/infant) contained in the American Institute of Architects 2006 Edition of "Guidelines for Construction of Hospitals and Healthcare Facilities."

This alternative was not considered because FGH felt strongly that by choosing to pursue status quo, patients would not receive the highest quality care demanded by the hospital and patients. FGH contends that patient quality experience is a “passion” of the hospital.

○ **Site Options**

The Master Facility Planning Committee looked at various options: 1) renovation of existing area; 2) adding a floor to the phase IX tower; and 3) relocation to an area on the fourth floor adjacent to the mother-baby unit (postpartum) and pediatric unit.

The recommended option, renovation of space adjacent to the mother-baby unit (postpartum) and pediatric unit is optimal for reasons listed:

1. **Quality of Care:** This project will upgrade the Neonatal Intensive Care Unit and Intermediate Care Nursery to technology standards as written in the Guidelines for Perinatal Care, 5th Edition. These standards address space requirements, headwalls, ventilation, lighting, sound attenuation, equipment, and infection control issues. In addition, the private room concept for “family-centered care” also improves quality outcomes.
2. **Cost:** The renovation of space as described in the project description has less cost implications than building a new patient tower floor or renovating the existing space. To renovate in place would add considerable cost, mainly because of scheduling construction around operations of the existing nurseries. The project would require more time, temporary installation of power, ventilation, and more infection control prevention measures.
3. **Efficiency:** The proposed space for renovation will be designed for more staff efficiencies, better support for physicians, ergonomically designed clinical and support functions, and better access and accommodations for patients and family members.

GR Criterion 4 - Economic Viability

Forrest General Hospital contends that there should not be any significant changes in future financial forecasts because the services are already being provided. However, Forrest General Healthcare Foundation has undertaken a fundraising campaign to support FGH’s Neonatology Services’ efforts.

The applicant stated that proposed Neonatal Intensive Care Unit and Intermediate Care Nursery consist of private rooms which provide family-centered and individually tailored care in controlled environments. This will likely decrease hospital acquired infections, lengths of stay, readmissions, number of days on mechanical ventilation, and number of days on total parenteral nutrition thereby potentially decreasing the cost of neonatal healthcare for all patients regardless of payor. The applicant further

cited the proposed charges are based on historical trends and will be market driven; therefore, profitability will increase as a result of the facility's ability to provide a critical service in a unique, state of the art facility.

The applicant affirms that the proposed costs and charges associated with the project are comparable to similar renovation projects in the state. The applicant asserts that the overall impact on the cost of health care will be positive as a result of this project.

The applicant affirms that hospital utilization in GHSA 6 has been projected based on conservative assumptions that inpatient admissions will remain relatively flat since this is only a relocation of services that are currently operating at near maximum capacity. The applicant further affirms that the hospital's projected utilization data is comparable to that of GHSA 6 and surrounding hospitals; however, other facilities in the service area do not provide the extensive range of services that FGH offers, specifically, the Neonatal Transport Team.

The three-year operating statement contained in the application indicates that there will be a loss of \$894,884 the first year, \$863,542 the second year, and \$912,746 the third year, for the Neonatal Intensive Care Unit only (see Attachment I). However, the application contained a feasibility study signed by the chief financial officer of FGH. The study reveals that operating expenses of the project are primarily absorbed in normal operations covered through cash flow generated by depreciation, which is a non-cash expense. Based on the projections listed in the three-year operating statement for the entire facility, all financial requirements will be met during the projected three years. Thus, this proposed project will be financially feasible.

GR Criterion 5 - Need for the Project

The FGH states the facility will serve all patients in GHSA 6 without respect to race, color, age, sex, ethnicity, or ability to pay. Forrest General Hospital will operate 7 days per week, 24 hours per day, and 365 days a year.

The applicant asserts that this project does not involve the relocation of the facility or service.

The application contained six letters of support for this proposed project.

GR Criterion 6 - Accessibility

The applicant affirms that FGH will serve all patients in GHSA 6 without regard to race, color, age, sex, ethnicity, and/or ability to pay. FGH currently serves Medicare, Medicaid, and medically indigent patients and will continue to provide same. The hospital operates 7 days per week, 24 hours per day, and 365 days per year. The transportation and travel time to the facility will not change since this project is in the existing hospital.

GR Criterion 7 - Information Requirement

The applicant affirms that FGH will record and maintain the information required by this criterion and shall make the data available to the Mississippi State Department of Health within fifteen (15) business days of request.

GR Criterion 8 - Relationship to Existing Health Care System

The applicant states that no new service is proposed in this application. FGH is only enhancing their Neonatology Services to continue to provide state of the art services to critically ill and premature newborns and their families. FGH believes that failure to implement the proposed project would adversely impact patient's outcome as well as increasing the cost of neonatology healthcare services. Thus, the applicant asserts this project will not have an adverse impact on existing facilities in GHSA 6. Forrest General Hospital has transfer agreements with nine (9) health care providers.

GR Criterion 9 - Availability of Resources

The applicant asserts that the Neonatal Intensive Care unit and Intermediate Care Nursery are currently staffed by three neonatologists and two nurse practitioners who will continue to meet the medical staffing needs of the proposed project. The proposed project will require additional medical and support staff for the renovated unit: four (4) registered nurses, two (2) p.m. unit secretaries, and eight (8) acute care technicians. The applicant believes with the extremely low turnover rate in Neonatology Services, there will be no problem with filling the available positions.

GR Criterion 10 - Relationship to Ancillary or Support Services

The applicant asserts that the project is not expected to have an adverse effect upon the delivery of ancillary health or support services.

GR Criterion 11 - Health Professional Training Programs

The applicant affirms that the proposed project will have little to no effect on the healthcare professional training programs in GHSA 6. The new unit will be available to local nursing programs, (University of Southern Mississippi, William Carey College, Pearl River Community College, Jones County Junior College, and the University of South Alabama) for continued clinical training.

GR Criterion 12- Access by Health Professional Schools

The applicant affirms that students enrolled in health professional schools will continue to have access to nursing care services at FGH for training purposes.

GR Criterion 13 – Individuals Residing Outside Service Area

According to the applicant, this project will have no adverse effect on any individuals residing outside of the service area.

The applicant states that Forrest General Hospital's Neonatology Services predominantly serves FGH's traditional 17 county area. However, in addition to serving South Mississippi, the Forrest General Neonatal Transport Team may bring critical infants to FGH from other geographic areas including Jackson, Mississippi and New Orleans, Louisiana.

GR Criterion 14 - Construction Projects

The architect hired by the hospital, Perkins Architecture, PLLC submitted a cost estimate to show a proposed capital expenditure of \$4,046,000, which excludes \$160,000 for fixed equipment and \$1,848,437 for non-fixed equipment cost. The application includes a site approval letter from the Division of Health Facilities Licensure and Certification and includes a schematic drawing.

In addition, the applicant states that the project complies with state and local building codes, zoning ordinances, and all appropriate regulatory authorities. The applicant has provided written assurance that FGH will comply with state statutes and regulations for the protection of the environment.

The renovation formula was used by FGH to show how much the proposed project will cost per square foot. The applicant states that the cost to renovate 13,000 square feet of the fourth floor existing space will be \$266 per square foot. Staff calculated a cost per square foot of \$323.54.

The *2007 Means Construction Cost Data* does not compare costs for renovation projects.

GR Criterion 16 - Quality of Care

The applicant asserts that FGH is certified to participate in the Medicare and Medicaid programs, is accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and the College of American Pathology (CAP). Also, FGH holds Certification as a Level II trauma hospital and was recently ranked in the top 20% of United States hospitals by the Center for Medicare/Medicaid Services.

The applicant asserts that FGH has won several high ranking honors based on the hospital's delivery of healthcare services. Forrest General Hospital affirms it has a history of providing quality care to residents of Forrest County and will continue its efforts to deliver superior medical care.

IV. FINANCIAL FEASIBILITY

A. Capital Expenditure Summary

Cost Item	Capital Expenditure	Percentage
Construction Cost - New		
Construction Cost - Renovation	\$3,458,000	57%
Capital Improvements		
Total Fixed Equip Cost	\$160,000	3%
Total Non-Fixed Equip Cost	\$1,848,437	31%
Land Cost		
Site Prep Cost		
Fees	\$415,000	7%
Contingency Reserve	\$173,000	3%
Capitalized Interest		
Other Cost		
Total Proposed Expenditures	\$ 6,054,437	*100%

*Percentage off by 1% due to rounding.

Forrest General Hospital will renovate 13,000 square feet of existing space on the fourth floor of the hospital. The applicant received an estimated cost of \$266 per square foot to renovate 13,000 square feet of the facilities' existing space. Staff calculated a cost per square foot of \$323.54 (see Attachment II).

B. Method of Financing

Forrest General Hospital will use cash reserves to fund the project. Financial documents contained in the application reveal that sufficient funds are available for the project.

C. Effects on Operating Costs

The applicant projects for this project gross patient revenue of \$94,416; \$175,957; and \$100,854 the first, second, and third year of operation, respectively (See Attachment I).

D. Cost to Medicaid/Medicare

Patient Mix	Utilization Percentage	First Year Cost
Medicare	0%	\$
Medicaid	86%	41,643
Other Payors	<u>14%</u>	<u>6,799</u>
Total	100.0%	\$ 48,422
FGH projects 4.2% of gross patient revenue for medically indigent and charity care patients.		

V. RECOMMENDATION OF OTHER AFFECTED AGENCIES

The Division of Medicaid was provided a copy of this application for comments.

VI. CONCLUSION AND RECOMMENDATION

This project is in substantial compliance with the criteria and standards for construction, renovation, and expansion projects as contained in the *2007 Mississippi State Health Plan*; Chapter 8 of the *Mississippi Certificate of Need Review Manual, revised November 12, 2006*; and all adopted rules, procedures, and plans of the Mississippi Department of Health.

The Division of Health Planning and Resource Development recommends approval of this application submitted by Forrest General Hospital.

**ATTACHMENT I
 FORREST GENERAL HOSPITAL
 RENOVATION OF NEONATAL INTENSIVE CARE UNIT
 THREE YEAR PROJECTED OPERATING STATEMENT**

	First Year	Second Year	Third Year
Revenue			
Inpatient Care Revenue	\$ 94,416	\$ 175,957	\$ 100,854
Outpatient Care Revenue			
Gross Patient Care Revenue	<u>\$ 94,416</u>	<u>\$ 175,957</u>	<u>\$ 100,854</u>
Deductions:			
Charity Care Deductions from Revenue	\$ (45,994)	\$ (85,715)	\$ (49,128)
Net Patient Care Revenue	<u>\$ 48,422</u>	<u>\$ 90,242</u>	<u>\$ 51,726</u>
Other Operating Revenue			
Total Operating Revenue	<u>\$ 48,422</u>	<u>\$ 90,242</u>	<u>\$ 51,726</u>
Operating Expense			
Salaries	\$ 436,592	\$ 445,324	\$ 454,230
Benefits	87,318	89,064	90,846
Supplies			
Services			
Lease			
Depreciation	419,396	419,396	419,396
Interest			
Other			
Total Operating Expense	<u>\$943,306</u>	<u>\$ 953,784</u>	<u>\$ 964,472</u>
Net Operating Income (Loss)	<u>\$(894,884)</u>	<u>\$(863,542)</u>	<u>\$(912,746)</u>
Inpatient Days			
Outpatient Visits			
Charge per Outpatient Visit			
Charge per Inpatient Day			
Cost per Inpatient Day			
Cost per Outpatient Visit			

**ATTACHMENT II
 FORREST GENERAL HOSPITAL
 RENOVATION OF NEONATOLOGY SERVICES
 COMPUTATION OF CONSTRUCTION AND RENOVATION COST**

<u>Cost Component</u>	<u>Total</u>	<u>New Constructon</u>	<u>Renovation</u>
New Construction Cost	\$0	\$0	
Renovation Cost	\$3,458,000		\$3,458,000
Total Fixed Equipment Cost	\$160,000		160,000
Total Non-Fixed Equipment Cost	\$1,848,437	\$0	
Capital Improvement			
Land Cost	\$0		
Site Preparation Cost	\$0	\$0	
<i>Fees (Architectural, Consultant, etc.)</i>	\$415,000	\$0	\$415,000
<i>Contingency Reserve</i>	\$173,000	\$0	\$173,000
<i>Capitalized Interest</i>		\$0	\$0
Total Proposed Capital Expenditure	\$6,054,437	\$0	\$4,206,000

Square Footage	13,000		13,000
<i>Allocation Percent</i>		0.00%	100.00%

Costs Less Land, Non-Fixed Eqt.& Cap. Improvement	\$4,206,000	\$0	\$4,206,000
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Cost Per Square Foot		\$323.54
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