

**DIVISION OF HEALTH PLANNING AND RESOURCE DEVELOPMENT (THURMAN)
AUGUST 2004**

CON Review: HG-R-0604-024
Forrest General Hospital
Renovation to Labor & Delivery and Neonatology Services
Capital Expenditure: \$8,970,383
Location: Hattiesburg, Mississippi

STAFF ANALYSIS

I. PROJECT SUMMARY

A. Applicant Information

Forrest General Hospital (FGH) is a five hundred and four (504) bed, general acute-care short term medical and surgical facility located in Hattiesburg, Mississippi. Forrest General Hospital is a not-for-profit, tax exempt institution owned by Forrest County, Mississippi. The hospital is governed by a seven-member Board of Trustees. All citizens of Forrest County are eligible to serve on the Hospital Board of Trustees which are appointed by the Forrest County Board of Supervisors. Forrest General Hospital is accredited by the Joint Commission on Accreditation of HealthCare Organizations (JCAHO).

The occupancy rates, average lengths of stay (ALOS) and the Medicaid utilization rates for the three most recent fiscal years are as follows (medical/surgical beds only):

Fiscal Year	Occupancy Rate (%)	ALOS (Days)	Medicaid Utilization Rate (%)
2001	72.08	4.57	18.8%
2002	64.70	4.72	12.1%
2003	61.24	4.59	29.2%

Source: Division of Health Facilities Licensure and Certification, MSDH

B. PROJECT BACKGROUND

Forrest General Hospital requests Certificate of Need (CON) authority for the Renovation to Labor & Delivery and Neonatology Services. Forrest General Hospital, located in Hattiesburg, Mississippi, proposes to renovate its current Labor & Delivery and Neonatology Services on the fourth floor of the existing 1976 building. This project will create twelve (12) new replacement Labor & Delivery rooms, a replacement operating room, nurses station, family waiting space, clinical support space, support lockers, physician sleeping quarters and lounge, and a new four (4) bed recovery room.

The Neonatology Services will be remodeled to include new intermediate and special care nurseries and upgrades to technology standards as written in the Guidelines for Perinatal Care, 5th Edition. Also included in the project will be a nurses lounge, locker space, lactation room and patient teaching space.

The equipment acquisition for the project would be:

Fixed

Headwalls
Casework
Nurses Call System
Labor/Delivery Lights
Infant Abduction System
Operating Room Lights
Tube Stations

Non-Fixed

Furniture
Drapes
Delivery Beds
Monitoring Equipment
Bassinets

The project will completely renovate Labor and Delivery, the Neonatal Special Care Nursery and the Intermediate Care Nursery. The area to be renovated is approximately 27,178 square feet of existing space on the fourth floor of the building originally constructed in 1976. The reconfigured space will provide the following: labor and delivery rooms, recovery room, renovated operating room, a gynecology exam room, nurse station, clean/soiled/medication rooms, physician on-call rooms, employee lounge and locker support space, conference and waiting room space. The Neonatal Intermediate Nursery will have expanded square footage per bassinet, an isolation room, new headwalls, and new acoustical and lighting requirements which meet the new recommended standards.

There will be no change in range or type of services provided by this project. There will be no bed changes. An equipment list with description was included in the application. Also, there will be no significant change to the mechanical, plumbing and electrical system as the new construction will work off existing mechanical, plumbing and electrical systems. Such systems will be in compliance with the Licensure standards of the State Department of Health.

There will be no increase or decrease in the use of ancillary or support services as a result of this project. There will be no increase or decrease in costs or charges of ancillary or support services as a result of this project.

The capital expenditure for this project will be obligated within thirty (30) days of the approval of the Certificate of Need application and is expected to be completed within approximately thirty (36) months of the date of initial approval.

II. TYPE OF REVIEW REQUIRED

The MSDH reviews applications for construction, renovation, expansion, relocation, and non-medical equipment replacement in accordance with Section 41-7-191, subparagraphs (1)(f) and (j), Mississippi Code 1972 Annotated, as amended, and duly adopted rules, procedures, plans, criteria, and standards of the Mississippi State Department of Health.

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 7, 2004.

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

A. State Health Plan (SHP)

The *FY 2004 State Health Plan* contains criteria and standards which the applicant is required to meet before receiving CON authority for construction, renovation, expansion, relocation, and the acquisition of non-medical equipment. This application is in substantial compliance with the overall objectives of the *State Health Plan*.

B. General Review (GR) Criteria

Chapter 8 of the *Mississippi Certificate of Need Review Manual, 2000*, addresses general criteria by which all CON applications are reviewed. This application is in substantial compliance with general review criteria.

GR Criterion 2 - Long Range Plan

The applicant states that this proposal has been approved by the Hospital's Board of Trustees and is consistent with the hospital's long range plan.

GR Criterion 3 - Availability of Alternatives

The first alternative to be considered was to just do cosmetic upgrades to the existing Labor & Delivery and Neonatology Services. This was rejected because the current room sizes for Labor & Delivery rooms and floor space for the bassinets in the Neonatal Intermediate Nursery do not meet the new recommended guidelines developed by the American Institute of Architects Academy of Architecture for Health; 2001 Edition.

Forrest General strongly felt that choosing not to pursue the new room size guidelines for Labor & Delivery rooms and the floor space required for bassinets would result in patients not receiving the standard of high quality care which it provides in its other Centers of Excellence. The applicant states that patient quality experience is a "passion" of the hospital.

Site Options

Option A: The Master Facility Planning Committee looked at various options: 1) the building of an off-site specialty hospital for Women's Services; 2) adding additional floors to the current Phase IX Emergency Room project; 3) relocation of Labor & Delivery and Neonatology Services to another area of the hospital; 4) renovation of the existing areas.

1. Quality of Care - This project will upgrade twelve (12) of FGH's LDR's and six (6) Intermediate Care bassinets to comply with the national "Guidelines for Design and Construction of Hospital and Health Care Facilities". The proposed room size will ensure that these services are consistent and competitive with the new standards for labor and delivery care. The purchase of new equipment and a new infant abduction security system will further enhance the quality of patient care.
2. Cost - The renovation of existing space has less cost implications than building a new facility or relocating the services to another area of the hospital. This project will have four (4) phases and take approximately 18 months to complete.

3. More Efficient - The proposed renovated space is designed for more staff efficiencies, better support for physicians, ergonomically designed clinical and support functions and better access and accommodations for the patients and visitors.

Final Objectives - The applicant believes that the proposed project is the best alternative to ensure Forrest General meets the new space guidelines and to ensure the hospital continues to provide high-quality, technically superior healthcare at a reasonable cost to the residents of South Mississippi.

There are no training or research programs involved with this project. The applicant states that failure to implement this project would greatly impact the quality and efficiency of services rendered to its patients.

GR Criterion 4 - Economic Viability

The applicant has determined that this project is financially feasible. The three-year operating projections reflect excess operating revenue of \$2,117,627 the first year, \$2,180,067 the second year, and \$2,244,177 the third year. Therefore, the project appears to be economically viable.

GR Criterion 5 - Need for the Project

The applicant states that Forrest General Hospital has provided obstetrical services to the residents of South Mississippi, a sixteen (16) county area, for fifty-one (51) years. In 1997, the hospital created a Center of Excellence for Women's and Children's Services, which was a commitment to improving the quality of services to their patients. Forrest General Hospital is ranked second in the state for the highest reported number of obstetrical deliveries consecutively for at least the last five (5) years. There were over 2,800 births at Forrest General Hospital in 2003.

According to the applicant, this project will address the need for renovation of existing Labor & Delivery and Neonatology Services. The need for renovation is as follows:

Labor & Delivery Services

Increase Room Size – The size requirements of the Labor & Delivery rooms will be enlarged to the current standards of Guidelines for Design and Construction, Hospital Healthcare Facilities published by the American Institute of Architects Academy of Architecture for Health, 2001 Edition.

Technology Enhancements – The renovation will include new headwalls, new delivery lights in all L&D rooms, a new Nurse Call System, a new infant security system, new operating room lights and new patient monitoring equipment in each room.

Enhanced Staffing Productivity – The design of the new Labor & Delivery space will enhance staffing productivity by more functional locations of major activities. The location of the Nurse Station with relationship to patient rooms, medication room and support space is greatly enhanced.

Upgraded Patient Room Facilities – The new room décor will include new delivery beds, built-in headwalls, new draperies and furniture, wood grain sheet vinyl flooring, upscale bathrooms and flat screen televisions. These upgraded rooms will meet and

exceed the hospitality requirements of today's customers.

Neonatology Services

Forrest General Hospital needs to upgrade and renovate its Special Care Nursery and Neonatal Intermediate Care Nursery to achieve the following requirements:

Adequate Bed Size Per Bassinet – The space requirement for Special Care bassinets will be increased from an average existing size of 47.9 square feet per bassinet to a proposed size of 72.3 to 115 square feet per bassinet. The Guidelines for Perinatal Care standards are 50 square feet per bassinet, plus 4' 0" clearance between bassinets. The new configuration will not only increase space per bassinet above the new Guidelines for Perinatal Care space per bassinet, the new configuration will also put significantly more space between bassinets. This is important for clearances for equipment and clinical staff responding to a potential code situation. This is also important for infection control separation.

The space requirement for intermediate Care bassinets will be increased from an average existing size of 122.3 square feet per bassinet (when six (6) bassinets are in the room) to a proposed size of 145.3 square feet per bassinet. Currently, the Intermediate Care Nursery can hold overflow patients from the Special Care Nursery. In these situations, there can be up to ten (10) bassinets in the existing room. In these situations, the effective size of the average station is diminished to an average of 73.4 square feet per bassinet (when ten (10) bassinets are in the room). An important part of the new plan will be to increase capacity for the Special Care Nursery, so it does not overflow into the Intermediate Care room, thereby protecting the requirements for space in the Intermediate Care positions.

Clearances between existing bassinets in the Intermediate Care Nursery range from 2' – 8" to 6' 0". The Guidelines for Perinatal Care standards are 100-120 square feet per bassinet for Intermediate Care, plus 4' 0" clearance between bassinets. The new configuration will not only increase space per bassinet above the new Guidelines for Perinatal Care space per bassinet, the new configuration will also put significantly more space between bassinets. This is important for clearances for equipment and clinical staff responding to a potential code situation. This is also important for infection control separation.

Technology Requirements – The technology requirements of the Special Care and Intermediate Nursery bassinet positions will be expanded to the current standards of the Guidelines for Perinatal Care, 5th Edition. This increased technology standard will be important for the increased use of physiological monitoring and medical equipment used at each bassinet position.

The existing Special Care Nursery has 14 bassinets, of which 12 are hard-wired monitors and two are portable monitors. The typical Special Care station has one oxygen, one vacuum, one air, one slide and one duplex emergency power outlet. One of the power outlets is used for the monitor plugs, the other is split, using a power strip extension. This is not at an acceptable current standard and needs to be upgraded. This project will expand the capability for each Special Care Nursery position to at least one oxygen, one vacuum, one air, one slide and six emergency power duplex outlets per station.

The Intermediate Care Nursery has six bassinets, but can expand to ten bassinets, to include overflow from Special Care. This puts additional burden on the technology

requirements for each station. The typical Intermediate Care room station has one oxygen, one vacuum, one air, one slide and four duplex emergency power outlets. The one oxygen can typically have a splitting connection, with resulting pressure drop. Although the four duplex emergency power outlets are barely adequate, at times it would be desirable to have more outlets for some more complex cases. This project will expand the capability for each Intermediate Care Nursery position to two oxygen, two vacuum, two air, two slide and eight emergency power duplex outlets per station. The increased medical gas outlets will provide more than sufficient redundancy in power to avoid the need for any power strips.

Enhanced Staffing Flexibility and Coverage – Currently the Intermediate Care Nursery and Special Care Nursery are in totally separate areas. Cross coverage by both physician and nurses is difficult, based on the physical separation. The new configuration will move the Special Care Nursery immediately adjacent to the Intermediate Care zone. This will facilitate cross coverage by clinical staff. This will also facilitate sharing of some equipment like lab analyzers and x-ray equipment. Moving these two key areas into one contiguous suite is particularly important during the night shift, where staffing ratios and physician coverage is less.

Upgrades in Building Systems – Neonatal Department's building standards for built-in systems have evolved dramatically in the 18 years since this department was built. A variety of national guidelines and committees now publish strict criteria for lighting, noise, HVAC and environmental standards. It is the intent of this project to upgrade the following building system standards for the Intermediate and Special Care Nursery:

- Lighting quality standards will be upgraded, based on the Guidelines for Perinatal Care, 5th Edition standards, to provide adjustable ambient lighting levels, reduce direct glare to patients, and balanced lighting color.
- Noise attenuation provided with compartmentalized design and sound absorbing surfaces.
- HVAC standards upgraded to meet the air changes, temperature ranges and humidity standards from the Guideline for Design and Construction of Hospital and Health Facilities, 2001 Edition.
- Sinks are very important in Neonatal departments for infection control. The proposed project will upgrade the quantity of sinks based on the Guidelines for Perinatal Care, 5th Edition standard of one sink per three-four bassinet stations.

GR Criterion 6 - Access to the Facility or Service

The applicant states that the hospital maintains no institutional barriers to medically underserved populations receiving medical care or other clinical services. The percentage of underserved populations receiving care at Forrest General Hospital reasonably reflects their percentages in the service area populations. All demographic groups in the service area will benefit from the Labor & Delivery and Neonatology Services' renovated space and ease of access that will be available.

The applicant states that it complies with all applicable federal regulations regarding community service, access by under-served groups, access by handicapped persons, and the provision of uncompensated care. Forrest General Hospital serves Medicare, Medicaid and medically indigent patients and will continue to provide health services to these groups.

The applicant provided the following dollar amount and percentage to medically indigent patients for 2001, 2002, and 2003:

<i>Fiscal Year</i>	<i>Gross Patient Revenue</i>	<i>Charity</i>	<i>Percent</i>
2000	\$ 364,076,000	\$ 8,887,945	2.4%
2001	\$ 403,044,183	\$ 11,222,216	2.8%
2002	\$ 467,065,990	\$ 24,602,272	5.3%
2003	\$ 512,791,236	\$ 13,698,366	2.7%

GR Criterion 7 - Information Requirement

The applicant affirms that it will record and maintain the required utilization data and make it available to the Mississippi State Department of Health as required by the Department.

GR Criterion 8 - Relationship to Existing Health Care Service

This project does not involve the offering of new health care services and therefore should not effect existing health care providers.

GR Criterion 15 - Available Resources

The applicant currently maintains a full complement of professional and support staff for the provision of Labor & Delivery and Neonatal services. Forrest General has documented in the application the health management and financial resources necessary to carry forward with this project.

GR Criterion 16 - Relationship to Ancillary or Support Services

There will be no increase or decrease in the use of ancillary or support services as a result of this project. This project does not involve the offering of new health care services.

GR Criterion 17 - Quality of Care

FGH is in compliance with the Minimum Standards of Operation for Mississippi Hospitals, according to the Division of Health Facilities Licensure and Certification. FGH is accredited by the Joint Commission on Accreditation of Health Care Organizations, is licensed and certified by the Mississippi State Department of Health and certified for participation in the Medicare and Medicaid programs.

IV. FINANCIAL FEASIBILITY

A. Capital Expenditure Summary

FGH submitted the following capital expenditure summary:

Renovation Cost	\$	5,797,358
Total Fixed Equipment	\$	1,040,000
Total Non-Fixed Equipment	\$	965,000
Fees	\$	581,175
Contingency Reserve	\$	586,850
Total Expenditure	\$	8,970,383

The proposed capital expenditure is for Renovation to Labor & Delivery and Neonatology Services. The total renovated square footage is 27,178. Based on the formula contained in the *Mississippi Certificate of Need Review Manual, 2000*, the estimated cost per square foot is \$294.55. The proposed cost is comparable to other projects reviewed by the Department. The 2004 Means Construction Cost Data does not compare projects for renovation.

The applicant submitted the following depreciation schedule:

DESCRIPTION	COST	METHOD OF DEPRECIATION	USEFUL LIFE	ANNUAL DEPRECIATION EXPENSE
Const.- Renovation	\$ 5,797,358	S/L	30 Years	\$ 193,245
Fixed Equipment	\$ 1,040,000	S/L	15 Years	\$ 69,333
Non-Fixed Equipment	\$ 965,000	S/L	7 Years	\$ 137,857
Fees	\$ 581,175	S/L	20 Years	\$ 29,059
Contingency Reserve	\$ 586,850	S/L	20 Years	\$ 29,343
Total	\$ 8,970,383			\$ 458,837

B. Method of Financing

The applicant proposes to finance this project with cash reserves. No additional debt is projected.

C. Effect on Operating Cost

The applicant projects the following expenses, utilization, and results from operation for the first three years following completion of the project:

EXPENSES	YEAR 1		YEAR 2		YEAR 3	
Salaries & Wages	\$	100,967,843	\$	103,996,878	\$	107,116,785
Benefits	\$	20,822,680	\$	21,447,360	\$	22,090,781
Professional Fees	\$	25,674,861	\$	26,445,107	\$	27,238,460
Supplies & Other	\$	89,363,745	\$	92,044,557	\$	94,805,997
Depreciation (Existing)	\$	15,870,335	\$	16,361,401	\$	16,867,195
Interest Expense	\$	3,470,149	\$	3,574,253	\$	3,681,481
Depreciation (New)	\$	458,837	\$	458,837	\$	458,837
TOTAL EXPENSES	\$	256,628,450	\$	264,328,393	\$	272,259,536
NET PAT. SVC. REVENUE	\$	248,520,077	\$	255,975,680	\$	263,654,950
OTHER OPERATING REV.	\$	10,226,000	\$	10,532,780	\$	10,848,763
TOTAL OPERATING REV.	\$	258,746,077	\$	266,508,460	\$	274,503,713
EXCESS REVENUE	\$	2,117,627	\$	2,180,067	\$	2,244,177

The applicant submits that the only increased cost as a result of this project will be depreciation.

D. Cost to Medicaid/Medicare

Patient Mix by Type Payor	Utilization Percentage	First Year Expenses
Medicaid	60.2%	\$ 276,220
Medicare	0.3%	\$ 1,377
Blue Cross	18.1%	\$ 83,049
Private Pay	12.7%	\$ 58,272
Self Pay	8.7%	\$ 39,919
TOTAL	100.0%	\$ 458,837

Bad Debt Patients 6.2%, and Charity Care Patients 2.7%

V. RECOMMENDATIONS OF OTHER AFFECTED AGENCIES

The Division of Medicaid was provided a copy of this application for review. No additional comments from DOM have been received.

VI. CONCLUSION AND RECOMMENDATION

This project is in substantial compliance with criteria and standards contained in the 2004 State Health Plan; the Certificate of Need Review Manual, revised 2000; and duly adopted rules, procedures, and plans of the Mississippi State Department of Health.

The Division of Health Planning and Resource Development recommends approval of the application submitted by Forrest General Hospital for the renovation to labor and delivery, and neonatology services.