

ORIGINAL

14-006

ILLINOIS HEALTH FACILITIES AND SERVICES REVIEW BOARD
APPLICATION FOR PERMIT

RECEIVED

SECTION I. IDENTIFICATION, GENERAL INFORMATION, AND CERTIFICATION

FEB 05 2014

This Section must be completed for all projects.

HEALTH FACILITIES &
SERVICES REVIEW BOARD

Facility/Project Identification

Facility Name:	Northwestern Lake Forest Hospital		
Street Address:	660 North Westmoreland Road		
City and Zip Code:	Lake Forest, Illinois 60045		
County:	Cook	Health Service Area	8
		Health Planning Area:	A-09

Applicant /Co-Applicant Identification

[Provide for each co-applicant [refer to Part 1130.220].

Exact Legal Name:	Northwestern Lake Forest Hospital
Address:	660 North Westmoreland Road, Lake Forest, Illinois 60045
Name of Registered Agent:	Carol M. Lind
Name of Chief Executive Officer:	Thomas J. McAfee
CEO Address:	660 North Westmoreland Road, Lake Forest, IL 60045
Telephone Number:	847-535-6003

Type of Ownership of Applicant/Co-Applicant

☒	Non-profit Corporation	☐	Partnership	
☐	For-profit Corporation	☐	Governmental	
☐	Limited Liability Company	☐	Sole Proprietorship	☐ Other

- Corporations and limited liability companies must provide an **Illinois certificate of good standing**.
- Partnerships must provide the name of the state in which organized and the name and address of each partner specifying whether each is a general or limited partner.

APPEND DOCUMENTATION AS ATTACHMENT-1 IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Primary Contact

[Person to receive ALL correspondence or inquiries]

Name:	Bridget Orth
Title:	Director, Regulatory Facility Planning
Company Name:	Northwestern Memorial HealthCare
Address:	211 East Ontario Street Suite 1750
Telephone Number:	312-926-8650
E-mail Address:	borth@nmh.org
Fax Number:	312-926-4545

Additional Contact

[Person who is also authorized to discuss the application for permit]

Name:	Rob Christie
Title:	Sr. Vice President, External Affairs
Company Name:	Northwestern Memorial HealthCare
Address:	211 East Ontario Street Suite 1750
Telephone Number:	312-926-7527
E-mail Address:	rchristi@nmh.org
Fax Number:	312-926-0373

ILLINOIS HEALTH FACILITIES AND SERVICES REVIEW BOARD APPLICATION FOR PERMIT

SECTION I. IDENTIFICATION, GENERAL INFORMATION, AND CERTIFICATION

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Facility/Project Identification

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Street Address:	660 North Westmoreland Road		
City and Zip Code:	Lake Forest, Illinois 60045		
County:	Cook	Health Service Area	8
		Health Planning Area:	A-09

Applicant /Co-Applicant Identification

[Provide for each co-applicant [refer to Part 1130.220].

Exact Legal Name:	Northwestern Memorial Healthcare
Address:	251 East Huron Street, Chicago, Illinois 60611
Name of Registered Agent:	Carol M. Lind
Name of Chief Executive Officer:	Dean M. Harrison
CEO Address:	251 East Huron Street, Chicago, Illinois 60611
Telephone Number:	312-926-3007

Type of Ownership of Applicant/Co-Applicant

☒ Non-profit Corporation ☐ For-profit Corporation ☐ Limited Liability Company	☐ Partnership ☐ Governmental ☐ Sole Proprietorship	☐ Other
○ Corporations and limited liability companies must provide an Illinois certificate of good standing. ○ Partnerships must provide the name of the state in which organized and the name and address of each partner specifying whether each is a general or limited partner.		
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E-mail Address:	rchristi@nmh.org
Fax Number:	312-926-0373

Post Permit Contact

[Person to receive all correspondence subsequent to permit issuance-**THIS PERSON MUST BE EMPLOYED BY THE LICENSED HEALTH CARE FACILITY AS DEFINED AT 20 ILCS 3960**

Name:	Bridget Orth
Title:	Director, Regulatory Facility Planning
Company Name:	Northwestern Memorial Healthcare
Address:	211 East Ontario Street Suite 1750
Telephone Number:	312-926-8650
E-mail Address:	borth@nmh.org
Fax Number:	312-926-4545

Site Ownership

[Provide this information for each applicable site]

Exact Legal Name of Site Owner:	Northwestern Lake Forest Hospital
Address of Site Owner:	660 North Westmoreland Road, Lake Forest, Illinois 60045
Street Address or Legal Description of Site:	
Proof of ownership or control of the site is to be provided as Attachment 2. Examples of proof of ownership are property tax statement, tax assessor's documentation, deed, notarized statement of the corporation attesting to ownership, an option to lease, a letter of intent to lease or a lease.	
APPEND DOCUMENTATION AS ATTACHMENT-2, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.	

Operating Identity/Licensee

[Provide this information for each applicable facility, and insert after this page.]

Exact Legal Name:	Northwestern Lake Forest Hospital
Address:	660 North Westmoreland Road, Lake Forest, Illinois 60045
☒ Non-profit Corporation	☐ Partnership
☐ For-profit Corporation	☐ Governmental
☐ Limited Liability Company	☐ Sole Proprietorship ☐ Other
- Corporations and limited liability companies must provide an Illinois Certificate of Good Standing. - Partnerships must provide the name of the state in which organized and the name and address of each partner specifying whether each is a general or limited partner. Persons with 5 percent or greater interest in the licensee must be identified with the % of ownership.	
APPEND DOCUMENTATION AS ATTACHMENT-3, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.	

Organizational Relationships

Provide (for each co-applicant) an organizational chart containing the name and relationship of any person or entity who is related (as defined in Part 1130.140). If the related person or entity is participating in the development or funding of the project, describe the interest and the amount and type of any financial contribution.

APPEND DOCUMENTATION AS ATTACHMENT-4, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Flood Plain Requirements

[Refer to application instructions.]

Provide documentation that the project complies with the requirements of Illinois Executive Order #2005-5 pertaining to construction activities in special flood hazard areas. As part of the flood plain requirements please provide a map of the proposed project location showing any identified floodplain areas. Floodplain maps can be printed at www.FEMA.gov or www.illinoisfloodmaps.org. **This map must be in a readable format.** In addition please provide a statement attesting that the project complies with the requirements of Illinois Executive Order #2005-5 (<http://www.hfsrb.illinois.gov>).

APPEND DOCUMENTATION AS ATTACHMENT -5, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Historic Resources Preservation Act Requirements

[Refer to application instructions.]

Provide documentation regarding compliance with the requirements of the Historic Resources Preservation Act.

APPEND DOCUMENTATION AS ATTACHMENT-6, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

DESCRIPTION OF PROJECT**1. Project Classification**

[Check those applicable - refer to Part 1110.40 and Part 1120.20(b)]

Part 1110 Classification:

- ☒ Substantive
☐ Non-substantive

2. Narrative Description

Provide in the space below, a brief narrative description of the project. Explain **WHAT** is to be done in **State Board defined terms**, **NOT WHY** it is being done. If the project site does NOT have a street address, include a legal description of the site. Include the rationale regarding the project's classification as substantive or non-substantive.

Northwestern Lake Forest Hospital (NLFH) proposes to construct a replacement facility on the existing hospital campus in Lake Forest, Illinois. The address of the new facility will be the same as the current hospital address: 660 North Westmoreland Road, Lake Forest. As part of an on-going process with the HFSRB, a permit for the design phase of the project was approved in September 2013.

The construction project will replace the current clinical services offered at NLFH. Each service will be "right-sized" based on historic and projected patient volumes. Currently, NLFH is authorized for 201 beds which includes 117 acute care beds and 84 long-term care beds. The new facility will replace 114 acute care beds: 84 medical/surgical beds, 12 ICU beds (addition of 2 beds), and 18 obstetrics beds (reduction of 5 beds). The 84 long-term care beds will not be part of the proposed replacement facility. NLFH is in the process of determining an optimal post-acute care delivery system on campus.

Other clinical services that will be included in the new facility are: Emergency Department, Surgical Services with 8 operating rooms and 4 procedure rooms, Clinical Decision Unit, Special Care Nursery, Birthplace with 5 LDRs and 2 C-section rooms, Interventional Radiology, Cardiac Catheterization, Oncology, Diagnostic Imaging, Cardiology, Neurology, Wound Care, inpatient Rehabilitation, etc.

The proposed project also includes a contiguous medical office building with physician office space for approximately 60 physicians.

The building also contains standard support functions and building systems. They are included as "non-clinical" components and include: Pharmacy, Laboratory, Central Sterile Processing, Environmental Services, Materials Management, Administration, Conference space, Dietary, Retail, MEP Systems, etc.

The project also includes a major expansion and upgrade of the existing Central Power Plant that serves the campus.

Additionally, campus parking and landscaping requirements per the Special Use Permit approved by the City of Lake Forest have been included.

NLFH has engaged both architects and a construction management firms to provide design and construction management expertise. Pelli Clarke Pelli of New Haven, CT and Hemmal Green and Abrahamson (HGA) based in Minneapolis, MN will provide architectural and engineering services for the project. Construction management services are being provided by Turner Construction, headquartered in New York, NY.

Volume projections, strategic plans, master facilities studies, financial projections and feasibility studies, and schematic design have been completed for the project. Design Development is underway.

The anticipated opening date for the replacement facility is Fall, 2017.

The project is classified as substantive pursuant to Section 1110.40.

Total project cost is \$377,986,895. The project close-out will be by December, 2018.

Project Costs and Sources of Funds

Complete the following table listing all costs (refer to Part 1120.110) associated with the project. When a project or any component of a project is to be accomplished by lease, donation, gift, or other means, the fair market or dollar value (refer to Part 1130.140) of the component must be included in the estimated project cost. If the project contains non-reviewable components that are not related to the provision of health care, complete the second column of the table below. Note, the use and sources of funds must equal.

Project Costs and Sources of Funds			
USE OF FUNDS	CLINICAL	NONCLINICAL	TOTAL
Preplanning Costs			
Site Survey and Soil Investigation	\$ 73,262	\$ 62,488	\$ 134,750
Site Preparation	\$ 5,869,936	\$ 5,150,064	\$ 11,020,000
Off Site Work	\$ 10,950,704	\$ 9,340,188	\$ 20,290,892
New Construction Contracts	\$ 108,058,944	\$ 84,900,902	\$ 192,959,845
Modernization Contracts			
Contingencies	\$ 10,805,894	\$ 8,490,090	\$ 19,295,985
Architectural/Engineering Fees	\$ 5,631,798	\$ 4,803,532	\$ 10,435,330
Consulting and Other Fees	\$ 7,863,956	\$ 6,707,408	\$ 14,571,364
Movable or Other Equipment (not in construction contracts)	\$ 45,646,812	\$ 6,399,732	\$ 52,046,544
Bond Issuance Expense (project related)	\$ 2,232,680	\$ 1,904,320	\$ 4,137,000
Net Interest Expense During Construction (project related)	\$ 8,192,429	\$ 6,987,571	\$ 15,180,000
Fair Market Value of Leased Space or Equipment			
Other Costs To Be Capitalized	\$ 20,731,590	\$ 17,182,595	\$ 37,914,185
Acquisition of Building or Other Property (excluding land)			
TOTAL USES OF FUNDS	\$ 226,058,006	\$ 151,928,889	\$ 377,986,895
SOURCE OF FUNDS	CLINICAL	NONCLINICAL	TOTAL
Cash and Securities	\$ 18,613,888	\$ 12,510,007	\$ 31,123,895
Pledges			
Gifts and Bequests	\$ 44,854,334	\$ 30,145,666	\$ 75,000,000
Bond Issues (project related)	\$ 162,589,784	\$ 109,273,216	\$ 271,863,000
Mortgages			
Leases (fair market value)			
Governmental Appropriations			
Grants			
Other Funds and Sources			
TOTAL SOURCES OF FUNDS	\$ 226,058,006	\$ 151,928,889	\$ 377,986,895
NOTE: ITEMIZATION OF EACH LINE ITEM MUST BE PROVIDED AT ATTACHMENT-7, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.			

Related Project Costs

Provide the following information, as applicable, with respect to any land related to the project that will be or has been acquired during the last two calendar years:

Land acquisition is related to project	☐ Yes	☒ No
Purchase Price: \$	_____	
Fair Market Value: \$	_____	
The project involves the establishment of a new facility or a new category of service ☐ Yes ☒ No		
If yes, provide the dollar amount of all non-capitalized operating start-up costs (including operating deficits) through the first full fiscal year when the project achieves or exceeds the target utilization specified in Part 1100.		
Estimated start-up costs and operating deficit cost is \$ _____ N/A _____.		

Project Status and Completion Schedules

For facilities in which prior permits have been issued please provide the permit numbers.	
Indicate the stage of the project's architectural drawings:	
☐ None or not applicable	☐ Preliminary
☒ Schematics	☐ Final Working
Anticipated project completion date (refer to Part 1130.140): <u>December, 2018</u>	
Indicate the following with respect to project expenditures or to obligation (refer to Part 1130.140):	
☐ Purchase orders, leases or contracts pertaining to the project have been executed.	
☐ Project obligation is contingent upon permit issuance. Provide a copy of the contingent "certification of obligation" document, highlighting any language related to CON Contingencies	
☒ Project obligation will occur after permit issuance.	
APPEND DOCUMENTATION AS ATTACHMENT-8, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.	

State Agency Submittals

Are the following submittals up to date as applicable:
☒ Cancer Registry
☒ APORS
☒ All formal document requests such as IDPH Questionnaires and Annual Bed Reports been submitted
☒ All reports regarding outstanding permits
Failure to be up to date with these requirements will result in the application for permit being deemed incomplete.

Cost Space Requirements

Provide in the following format, the department/area **DGSF** or the building/area **BGSF** and cost. The type of gross square footage either **DGSF** or **BGSF** must be identified. The sum of the department costs **MUST** equal the total estimated project costs. Indicate if any space is being reallocated for a different purpose. Include outside wall measurements plus the department's or area's portion of the surrounding circulation space. **Explain the use of any vacated space.**

Dept. / Area	Cost	Gross Square Feet		Amount of Proposed Total Gross Square Feet That Is:			
		Existing	Proposed	New Const.	Modernized	As Is	Vacated Space
REVIEWABLE							
Medical Surgical							
Intensive Care							
Diagnostic Radiology							
MRI							
Total Clinical							
NON REVIEWABLE							
Administrative							
Parking							
Gift Shop							
Total Non-clinical							
TOTAL							
APPEND DOCUMENTATION AS <u>ATTACHMENT-9</u> , IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.							

Facility Bed Capacity and Utilization

Complete the following chart, as applicable. Complete a separate chart for each facility that is a part of the project and insert following this page. Provide the existing bed capacity and utilization data for the latest **Calendar Year for which the data are available. Include observation days in the patient day totals for each bed service.** Any bed capacity discrepancy from the Inventory will result in the application being deemed **incomplete**.

FACILITY NAME: Northwestern Lake Forest Hospital		CITY: Lake Forest			
REPORTING PERIOD DATES: CY12 From: 1/1/12 to: 12/31/12					
Category of Service	Authorized Beds	Admissions	Patient Days	Bed Changes	Proposed Beds
Medical/Surgical	84	5,655	21,008	0	84
Obstetrics	23	1,581	4,174	-5	18
Pediatrics	0*	424	923	0	0
Intensive Care	10	796	2,215	+2	12
Comprehensive Physical Rehabilitation	0	0	0	0	0
Acute/Chronic Mental Illness	0	0	0	0	0
Neonatal Intensive Care	0	0	0	0	0
General Long Term Care	84	736	21,081	0	84
Specialized Long Term Care	0	0	0	0	0
Long Term Acute Care	0	0	0	0	0
Other ((identify))	0	0	0	0	0
TOTALS:	201	9,192	49,401	-3	198

CERTIFICATION

The application must be signed by the authorized representative(s) of the applicant entity. The authorized representative(s) are:

- in the case of a corporation, any two of its officers or members of its Board of Directors;
- in the case of a limited liability company, any two of its managers or members (or the sole manager or member when two or more managers or members do not exist);
- in the case of a partnership, two of its general partners (or the sole general partner, when two or more general partners do not exist);
- in the case of estates and trusts, two of its beneficiaries (or the sole beneficiary when two or more beneficiaries do not exist); and
- in the case of a sole proprietor, the individual that is the proprietor.

This Application for Permit is filed on the behalf of Northwestern Lake Forest Hospital * in accordance with the requirements and procedures of the Illinois Health Facilities Planning Act. The undersigned certifies that he or she has the authority to execute and file this application for permit on behalf of the applicant entity. The undersigned further certifies that the data and information provided herein, and appended hereto, are complete and correct to the best of his or her knowledge and belief. The undersigned also certifies that the permit application fee required for this application is sent herewith or will be paid upon request.

SIGNATURE

Thomas J. McAfee
PRINTED NAME

President, NLFH
PRINTED TITLE

SIGNATURE

Matthew J. Flynn
PRINTED NAME

Sr. Vice President & Chief Financial Officer, NLFH
PRINTED TITLE

Notarization:

Subscribed and sworn to before me
this 30 day of January, 2014

Signature of Notary

Seal

Notarization:

Subscribed and sworn to before me
this 30 day of January, 2014

Signature of Notary

Seal

*Insert EXACT legal name of the applicant



CERTIFICATION

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- in the case of a limited liability company, any two of its managers or members (or the sole manager or member when two or more managers or members do not exist);
- in the case of a partnership, two of its general partners (or the sole general partner, when two or more general partners do not exist);
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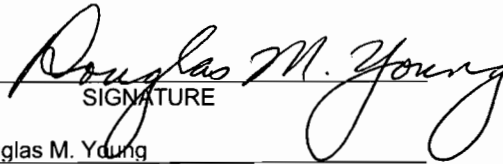


SIGNATURE

Dean M. Harrison

PRINTED NAME

President & Chief Executive Officer, NMHC
 PRINTED TITLE



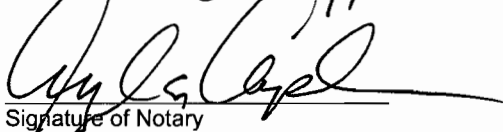
SIGNATURE

Douglas M. Young

PRINTED NAME

Interim Chief Financial Office & Treasurer, NMHC
 PRINTED TITLE

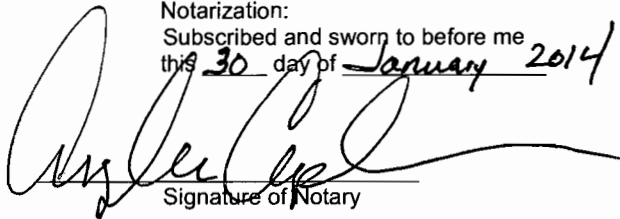
Notarization:

 Subscribed and sworn to before me
 this 30 day of January, 2014


Signature of Notary

Seal

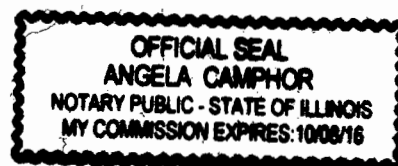
Notarization:

 Subscribed and sworn to before me
 this 30 day of January, 2014


Signature of Notary

Seal

*Insert EXACT legal name of the applicant



SECTION III – BACKGROUND, PURPOSE OF THE PROJECT, AND ALTERNATIVES - INFORMATION REQUIREMENTS

This Section is applicable to all projects except those that are solely for discontinuation with no project costs.

Criterion 1110.230 – Background, Purpose of the Project, and Alternatives

READ THE REVIEW CRITERION and provide the following required information:

BACKGROUND OF APPLICANT

1. A listing of all health care facilities owned or operated by the applicant, including licensing, and certification if applicable.
2. A certified listing of any adverse action taken against any facility owned and/or operated by the applicant during the three years prior to the filing of the application.
3. Authorization permitting HFSRB and DPH access to any documents necessary to verify the information submitted, including, but not limited to: official records of DPH or other State agencies; the licensing or certification records of other states, when applicable; and the records of nationally recognized accreditation organizations. **Failure to provide such authorization shall constitute an abandonment or withdrawal of the application without any further action by HFSRB.**
4. If, during a given calendar year, an applicant submits more than one application for permit, the documentation provided with the prior applications may be utilized to fulfill the information requirements of this criterion. In such instances, the applicant shall attest the information has been previously provided, cite the project number of the prior application, and certify that no changes have occurred regarding the information that has been previously provided. The applicant is able to submit amendments to previously submitted information, as needed, to update and/or clarify data.

APPEND DOCUMENTATION AS ATTACHMENT-11, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM. EACH ITEM (1-4) MUST BE IDENTIFIED IN ATTACHMENT 11.

PURPOSE OF PROJECT

1. Document that the project will provide health services that improve the health care or well-being of the market area population to be served.
2. Define the planning area or market area, or other, per the applicant's definition.
3. Identify the existing problems or issues that need to be addressed, as applicable and appropriate for the project. [See 1110.230(b) for examples of documentation.]
4. Cite the sources of the information provided as documentation.
5. Detail how the project will address or improve the previously referenced issues, as well as the population's health status and well-being.
6. Provide goals with quantified and measurable objectives, with specific timeframes that relate to achieving the stated goals **as appropriate**.

For projects involving modernization, describe the conditions being upgraded if any. For facility projects, include statements of age and condition and regulatory citations if any. For equipment being replaced, include repair and maintenance records.

NOTE: Information regarding the "Purpose of the Project" will be included in the State Board Report.

APPEND DOCUMENTATION AS ATTACHMENT-12, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM. EACH ITEM (1-6) MUST BE IDENTIFIED IN ATTACHMENT 12.

ALTERNATIVES

- 1) Identify **ALL** of the alternatives to the proposed project:

Alternative options **must** include:

- A) Proposing a project of greater or lesser scope and cost;
- B) Pursuing a joint venture or similar arrangement with one or more providers or entities to meet all or a portion of the project's intended purposes; developing alternative settings to meet all or a portion of the project's intended purposes;
- C) Utilizing other health care resources that are available to serve all or a portion of the population proposed to be served by the project; and
- D) Provide the reasons why the chosen alternative was selected.

- 2) Documentation shall consist of a comparison of the project to alternative options. The comparison shall address issues of total costs, patient access, quality and financial benefits in both the short term (within one to three years after project completion) and long term. This may vary by project or situation. **FOR EVERY ALTERNATIVE IDENTIFIED THE TOTAL PROJECT COST AND THE REASONS WHY THE ALTERNATIVE WAS REJECTED MUST BE PROVIDED.**

- 3) The applicant shall provide empirical evidence, including quantified outcome data that verifies improved quality of care, as available.

APPEND DOCUMENTATION AS ATTACHMENT-13, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

SECTION IV - PROJECT SCOPE, UTILIZATION, AND UNFINISHED/SHELL SPACE**Criterion 1110.234 - Project Scope, Utilization, and Unfinished/Shell Space**

READ THE REVIEW CRITERION and provide the following information:

SIZE OF PROJECT:

1. Document that the amount of physical space proposed for the proposed project is necessary and not excessive. **This must be a narrative.**
2. If the gross square footage exceeds the BGSF/DGSF standards in Appendix B, justify the discrepancy by documenting one of the following:
 - a. Additional space is needed due to the scope of services provided, justified by clinical or operational needs, as supported by published data or studies;
 - b. The existing facility's physical configuration has constraints or impediments and requires an architectural design that results in a size exceeding the standards of Appendix B;
 - c. The project involves the conversion of existing space that results in excess square footage.

Provide a narrative for any discrepancies from the State Standard. A table must be provided in the following format with Attachment 14.

SIZE OF PROJECT				
DEPARTMENT/SERVICE	PROPOSED BGSF/DGSF	STATE STANDARD	DIFFERENCE	MET STANDARD?

APPEND DOCUMENTATION AS ATTACHMENT-14, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

PROJECT SERVICES UTILIZATION:

This criterion is applicable only to projects or portions of projects that involve services, functions or equipment for which HFSRB has established utilization standards or occupancy targets in 77 Ill. Adm. Code 1100.

Document that in the second year of operation, the annual utilization of the service or equipment shall meet or exceed the utilization standards specified in 1110.Appendix B. **A narrative of the rationale that supports the projections must be provided.**

A table must be provided in the following format with Attachment 15.

UTILIZATION					
	DEPT./ SERVICE	HISTORICAL UTILIZATION (PATIENT DAYS) (TREATMENTS) ETC.	PROJECTED UTILIZATION	STATE STANDARD	MET STANDARD?
YEAR 1					
YEAR 2					

APPEND DOCUMENTATION AS ATTACHMENT-15, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

UNFINISHED OR SHELL SPACE:

Provide the following information:

1. Total gross square footage of the proposed shell space;
2. The anticipated use of the shell space, specifying the proposed GSF to be allocated to each department, area or function;
3. Evidence that the shell space is being constructed due to
 - a. Requirements of governmental or certification agencies; or
 - b. Experienced increases in the historical occupancy or utilization of those areas proposed to occupy the shell space.
4. Provide:
 - a. Historical utilization for the area for the latest five-year period for which data are available; and
 - b. Based upon the average annual percentage increase for that period, projections of future utilization of the area through the anticipated date when the shell space will be placed into operation.

APPEND DOCUMENTATION AS ATTACHMENT-16, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

ASSURANCES:

Submit the following:

1. Verification that the applicant will submit to HFSRB a CON application to develop and utilize the shell space, regardless of the capital thresholds in effect at the time or the categories of service involved.
2. The estimated date by which the subsequent CON application (to develop and utilize the subject shell space) will be submitted; and
3. The anticipated date when the shell space will be completed and placed into operation.

APPEND DOCUMENTATION AS ATTACHMENT-17, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

SECTION V. - MASTER DESIGN AND RELATED PROJECTS

This Section is applicable only to proposed master design and related projects.

Criterion 1110.235(a) - System Impact of Master Design

Read the criterion and provide documentation that addresses the following:

1. The availability of alternative health care facilities within the planning area and the impact that the proposed project and subsequent related projects will have on the utilization of such facilities;
2. How the services proposed in future projects will improve access to planning area residents;
3. What the potential impact upon planning area residents would be if the proposed services were not replaced or developed; and
4. The anticipated role of the facility in the delivery system including anticipated patterns of patient referral, any contractual or referral agreements between the applicant and other providers that will result in the transfer of patients to the applicant's facility.

Criterion 1110.235(b) - Master Plan or Related Future Projects

Read the criterion and provide documentation regarding the need for all beds and services to be developed, and also, document the improvement in access for each service proposed. Provide the following:

1. The anticipated completion date(s) for the future construction or modernization projects; and
2. Evidence that the proposed number of beds and services is consistent with the need assessment provisions of Part 1100; or documentation that the need for the proposed number of beds and services is justified due to such factors, but not limited to:
 - a. limitation on government funded or charity patients that are expected to continue;
 - b. restrictive admission policies of existing planning area health care facilities that are expected to continue;
 - c. the planning area population is projected to exhibit indicators of medical care problems such as average family income below poverty levels or projected high infant mortality.
3. Evidence that the proposed beds and services will meet or exceed the utilization targets established in Part 1100 within two years after completion of the future construction of modernization project(s), based upon:
 - a. historical service/beds utilization levels;
 - b. projected trends in utilization (include the rationale and projection assumptions used in such projections);
 - c. anticipated market factors such as referral patterns or changes in population characteristics (age, density, wellness) that would support utilization projections; and
 - d. anticipated changes in delivery of the service due to changes in technology, care delivery techniques or physician availability that would support the projected utilization levels.

Criterion 1110.235(c) - Relationship to Previously Approved Master Design Projects

READ THE CRITERION which requires that projects submitted pursuant to a master design permit are consistent with the approved master design project. Provide the following documentation:

1. Schematic architectural plans for all construction or modification approved in the master design permit;
2. The estimated project cost for the proposed projects and also for the total construction/modification projects approved in the master design permit;
3. An item by item comparison of the construction elements (i.e. site, number of buildings, number of floors, etc.) in the proposed project to the approved master design project; and
4. A comparison of proposed beds and services to those approved under the master design permit.

APPEND DOCUMENTATION AS ATTACHMENT-18, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

SECTION VII - SERVICE SPECIFIC REVIEW CRITERIA

This Section is applicable to all projects proposing establishment, expansion or modernization of categories of service that are subject to CON review, as provided in the Illinois Health Facilities Planning Act [20 ILCS 3960]. It is comprised of information requirements for each category of service, as well as charts for each service, indicating the review criteria that must be addressed for each action (establishment, expansion and modernization). After identifying the applicable review criteria for each category of service involved, read the criteria and provide the required information, AS APPLICABLE TO THE CRITERIA THAT MUST BE ADDRESSED:

A. Criterion 1110.530 - Medical/Surgical, Obstetric, Pediatric and Intensive Care

- Applicants proposing to establish, expand and/or modernize Medical/Surgical, Obstetric, Pediatric and/or Intensive Care categories of service must submit the following information:
- Indicate bed capacity changes by Service: Indicate # of beds changed by action(s):

Category of Service	# Existing Beds	# Proposed Beds
☒ Medical/Surgical	84	84
☒ Obstetric	23	18
☐ Pediatric		
☒ Intensive Care	10	12

- READ the applicable review criteria outlined below and **submit the required documentation for the criteria:**

APPLICABLE REVIEW CRITERIA	Establish	Expand	Modernize
1110.530(b)(1) - Planning Area Need - 77 Ill. Adm. Code 1100 (formula calculation)	X		
1110.530(b)(2) - Planning Area Need - Service to Planning Area Residents	X	X	
1110.530(b)(3) - Planning Area Need - Service Demand - Establishment of Category of Service	X		
1110.530(b)(4) - Planning Area Need - Service Demand - Expansion of Existing Category of Service		X	
1110.530(b)(5) - Planning Area Need - Service Accessibility	X		
1110.530(c)(1) - Unnecessary Duplication of Services	X		
1110.530(c)(2) - Maldistribution	X	X	
1110.530(c)(3) - Impact of Project on Other Area Providers	X		
1110.530(d)(1) - Deteriorated Facilities			X

APPLICABLE REVIEW CRITERIA	Establish	Expand	Modernize
1110.530(d)(2) - Documentation			X
1110.530(d)(3) - Documentation Related to Cited Problems			X
1110.530(d)(4) - Occupancy			X
1110.530(e) - Staffing Availability	X	X	
1110.530(f) - Performance Requirements	X	X	X
1110.530(g) - Assurances	X	X	X
APPEND DOCUMENTATION AS <u>ATTACHMENT-20</u> , IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.			

F. Criterion 1110.1330 - Cardiac Catheterization

This section is applicable to all projects proposing to establish or modernize a cardiac catheterization category of service or to replace existing cardiac catheterization equipment.

1. Criterion 1110.1330(a), Peer Review

Read the criterion and submit a detailed explanation of your peer review program.

2. Criterion 1110.1330(b), Establishment or Expansion of Cardiac Catheterization Service

Read the criterion and, if applicable, submit the following information:

- a. A map (8 1/2" x 11") showing the location of the other hospitals providing cardiac catheterization service within the planning area.
- b. The number of cardiac catheterizations performed for the last 12 months at each of the hospitals shown on the map.
- c. Provide the number of patients transferred directly from the applicant's hospital to another facility for cardiac catheterization services in each of the last three years.

3. Criterion 1110.1330(c), Unnecessary Duplication of Services

Read the criterion and, if applicable, submit the following information.

- a. Copies of the letter sent to all facilities within 90 minutes travel time which currently provide cardiac catheterization. This letter must contain a description of the proposed project and a request that the other facility quantify the impact of the proposal on its program.
- b. Copies of the responses received from the facilities to which the letter was sent.

4. Criterion 1110.1330(d), Modernization of Existing Cardiac Catheterization Laboratories

Read the criterion and, if applicable, submit the number of cardiac catheterization procedures performed for the latest 12 months.

5. Criterion 1110.1330(e), Support Services

Read the criterion and indicate on a service by service basis which of the listed services are available on a 24 hour basis and explain how any services not available on a 24 hour basis will be available when needed.

6. Criterion 1110.1330(f), Laboratory Location

Read the criterion and, if applicable, submit line drawings showing the location of the proposed laboratories. If the laboratories are not in close proximity explain why.

7. Criterion 1110.1330(g), Staffing

Read the criterion and submit a list of names and qualifications of those who will fill the positions detailed in this criterion. Also provide staffing schedules to show the coverage required by this criterion.

8. Criterion 1110.1330(h), Continuity of Care

Read the criterion and submit a copy of the fully executed written referral agreement(s).

9. Criterion 1110.1330(i), Multi-institutional Variance

Read the criterion and, if applicable, submit the following information:

- a. A copy of a fully executed affiliation agreement between the two facilities involved.
- b. Names and positions of the shared staff at the two facilities.
- c. The volume of open heart surgeries performed for the latest 12-month period at the existing operating program.
- d. A cost comparison between the proposed project and expansion at the existing operating program.
- e. The number of cardiac catheterization procedures performed in the last 12 months at the operating program.
- f. The number of catheterization laboratories at the operating program.
- g. The projected cardiac catheterization volume at the proposed facility annually for the next 2 years.
- h. The basis for the above projection.

APPEND DOCUMENTATION AS ATTACHMENT-25 IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

O. Criterion 1110.3030 - Clinical Service Areas Other than Categories of Service

1. Applicants proposing to establish, expand and/or modernize Clinical Service Areas Other than Categories of Service must submit the following information:
2. Indicate changes by Service: Indicate # of key room changes by action(s):

Service	# Existing Key Rooms	# Proposed Key Rooms
☒ See ATTACHMENT-34 for complete list of services		
☐		
☐		

3. READ the applicable review criteria outlined below and **submit the required documentation for the criteria:**

PROJECT TYPE	REQUIRED REVIEW CRITERIA	
New Services or Facility or Equipment	(b) -	Need Determination - Establishment
Service Modernization	(c)(1) -	Deteriorated Facilities
		and/or
	(c)(2) -	Necessary Expansion
		PLUS
	(c)(3)(A) -	Utilization - Major Medical Equipment
		Or
	(c)(3)(B) -	Utilization - Service or Facility
APPEND DOCUMENTATION AS <u>ATTACHMENT-34</u>, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.		

The following Sections **DO NOT** need to be addressed by the applicants or co-applicants responsible for funding or guaranteeing the funding of the project if the applicant has a bond rating of A- or better from Fitch's or Standard and Poor's rating agencies, or A3 or better from Moody's (the rating shall be affirmed within the latest 18 month period prior to the submittal of the application):

- Section 1120.120 Availability of Funds – Review Criteria
- Section 1120.130 Financial Viability – Review Criteria
- Section 1120.140 Economic Feasibility – Review Criteria, subsection (a)

VIII. - 1120.120 - Availability of Funds

The applicant shall document that financial resources shall be available and be equal to or exceed the estimated total project cost plus any related project costs by providing evidence of sufficient financial resources from the following sources, as applicable: **Indicate the dollar amount to be provided from the following sources:**

	a)	Cash and Securities – statements (e.g., audited financial statements, letters from financial institutions, board resolutions) as to:
	1)	the amount of cash and securities available for the project, including the identification of any security, its value and availability of such funds; and
	2)	interest to be earned on depreciation account funds or to be earned on any asset from the date of applicant's submission through project completion;
	b)	Pledges – for anticipated pledges, a summary of the anticipated pledges showing anticipated receipts and discounted value, estimated time table of gross receipts and related fundraising expenses, and a discussion of past fundraising experience.
	c)	Gifts and Bequests – verification of the dollar amount, identification of any conditions of use, and the estimated time table of receipts;
	d)	Debt – a statement of the estimated terms and conditions (including the debt time period, variable or permanent interest rates over the debt time period, and the anticipated repayment schedule) for any interim and for the permanent financing proposed to fund the project, including:
	1)	For general obligation bonds, proof of passage of the required referendum or evidence that the governmental unit has the authority to issue the bonds and evidence of the dollar amount of the issue, including any discounting anticipated;
	2)	For revenue bonds, proof of the feasibility of securing the specified amount and interest rate;
	3)	For mortgages, a letter from the prospective lender attesting to the expectation of making the loan in the amount and time indicated, including the anticipated interest rate and any conditions associated with the mortgage, such as, but not limited to, adjustable interest rates, balloon payments, etc.;
	4)	For any lease, a copy of the lease, including all the terms and conditions, including any purchase options, any capital improvements to the property and provision of capital equipment;
	5)	For any option to lease, a copy of the option, including all terms and conditions.
	e)	Governmental Appropriations – a copy of the appropriation Act or ordinance accompanied by a statement of funding availability from an official of the governmental unit. If funds are to be made available from subsequent fiscal years, a copy of a resolution or other action of the governmental unit attesting to this intent;
	f)	Grants – a letter from the granting agency as to the availability of funds in terms of the amount and time of receipt;
	g)	All Other Funds and Sources – verification of the amount and type of any other funds that will be used for the project.
	TOTAL FUNDS AVAILABLE	

APPEND DOCUMENTATION AS ATTACHMENT-36, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

IX. 1120.130 - Financial Viability

All the applicants and co-applicants shall be identified, specifying their roles in the project funding or guaranteeing the funding (sole responsibility or shared) and percentage of participation in that funding.

Financial Viability Waiver

The applicant is not required to submit financial viability ratios if:

1. "A" Bond rating or better
2. All of the projects capital expenditures are completely funded through internal sources
3. The applicant's current debt financing or projected debt financing is insured or anticipated to be insured by MBIA (Municipal Bond Insurance Association Inc.) or equivalent
4. The applicant provides a third party surety bond or performance bond letter of credit from an A rated guarantor.

See Section 1120.130 Financial Waiver for information to be provided

APPEND DOCUMENTATION AS ATTACHMENT-37, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

The applicant or co-applicant that is responsible for funding or guaranteeing funding of the project shall provide viability ratios for the latest three years for which **audited financial statements are available and for the first full fiscal year at target utilization, but no more than two years following project completion.** When the applicant's facility does not have facility specific financial statements and the facility is a member of a health care system that has combined or consolidated financial statements, the system's viability ratios shall be provided. If the health care system includes one or more hospitals, the system's viability ratios shall be evaluated for conformance with the applicable hospital standards.

Provide Data for Projects Classified as:	Category A or Category B (last three years)			Category B (Projected)
Enter Historical and/or Projected Years:				
Current Ratio				
Net Margin Percentage				
Percent Debt to Total Capitalization				
Projected Debt Service Coverage				
Days Cash on Hand				
Cushion Ratio				

Provide the methodology and worksheets utilized in determining the ratios detailing the calculation and applicable line item amounts from the financial statements. Complete a separate table for each co-applicant and provide worksheets for each.

2. Variance

Applicants not in compliance with any of the viability ratios shall document that another organization, public or private, shall assume the legal responsibility to meet the debt obligations should the applicant default.

APPEND DOCUMENTATION AS ATTACHMENT 38, IN NUMERICAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

X. 1120.140 - Economic Feasibility

This section is applicable to all projects subject to Part 1120.

A. Reasonableness of Financing Arrangements

The applicant shall document the reasonableness of financing arrangements by submitting a notarized statement signed by an authorized representative that attests to one of the following:

- 1) That the total estimated project costs and related costs will be funded in total with cash and equivalents, including investment securities, unrestricted funds, received pledge receipts and funded depreciation; or
- 2) That the total estimated project costs and related costs will be funded in total or in part by borrowing because:
 - A) A portion or all of the cash and equivalents must be retained in the balance sheet asset accounts in order to maintain a current ratio of at least 2.0 times for hospitals and 1.5 times for all other facilities; or
 - B) Borrowing is less costly than the liquidation of existing investments, and the existing investments being retained may be converted to cash or used to retire debt within a 60-day period.

B. Conditions of Debt Financing

This criterion is applicable only to projects that involve debt financing. The applicant shall document that the conditions of debt financing are reasonable by submitting a notarized statement signed by an authorized representative that attests to the following, as applicable:

- 1) That the selected form of debt financing for the project will be at the lowest net cost available;
- 2) That the selected form of debt financing will not be at the lowest net cost available, but is more advantageous due to such terms as prepayment privileges, no required mortgage, access to additional indebtedness, term (years), financing costs and other factors;
- 3) That the project involves (in total or in part) the leasing of equipment or facilities and that the expenses incurred with leasing a facility or equipment are less costly than constructing a new facility or purchasing new equipment.

C. Reasonableness of Project and Related Costs

Read the criterion and provide the following:

1. Identify each department or area impacted by the proposed project and provide a cost and square footage allocation for new construction and/or modernization using the following format (insert after this page).

COST AND GROSS SQUARE FEET BY DEPARTMENT OR SERVICE									
Department (list below)	A	B	C	D	E	F	G	H	Total Cost (G + H)
	Cost/Square Foot New	Mod.	Gross Sq. Ft. New	Circ.*	Gross Sq. Ft. Mod.	Circ.*	Const. \$ (A x C)	Mod. \$ (B x E)	
Contingency									
TOTALS									

* Include the percentage (%) of space for circulation

D. Projected Operating Costs

The applicant shall provide the projected direct annual operating costs (in current dollars per equivalent patient day or unit of service) for the first full fiscal year at target utilization but no more than two years following project completion. Direct cost means the fully allocated costs of salaries, benefits and supplies for the service.

E. Total Effect of the Project on Capital Costs

The applicant shall provide the total projected annual capital costs (in current dollars per equivalent patient day) for the first full fiscal year at target utilization but no more than two years following project completion.

APPEND DOCUMENTATION AS ATTACHMENT -39, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

XI. Safety Net Impact Statement

SAFETY NET IMPACT STATEMENT that describes all of the following must be submitted for ALL SUBSTANTIVE AND DISCONTINUATION PROJECTS:

1. The project's material impact, if any, on essential safety net services in the community, to the extent that it is feasible for an applicant to have such knowledge.
2. The project's impact on the ability of another provider or health care system to cross-subsidize safety net services, if reasonably known to the applicant.
3. How the discontinuation of a facility or service might impact the remaining safety net providers in a given community, if reasonably known by the applicant.

Safety Net Impact Statements shall also include all of the following:

1. For the 3 fiscal years prior to the application, a certification describing the amount of charity care provided by the applicant. The amount calculated by hospital applicants shall be in accordance with the reporting requirements for charity care reporting in the Illinois Community Benefits Act. Non-hospital applicants shall report charity care, at cost, in accordance with an appropriate methodology specified by the Board.
2. For the 3 fiscal years prior to the application, a certification of the amount of care provided to Medicaid patients. Hospital and non-hospital applicants shall provide Medicaid information in a manner consistent with the information reported each year to the Illinois Department of Public Health regarding "Inpatients and Outpatients Served by Payor Source" and "Inpatient and Outpatient Net Revenue by Payor Source" as required by the Board under Section 13 of this Act and published in the Annual Hospital Profile.
3. Any information the applicant believes is directly relevant to safety net services, including information regarding teaching, research, and any other service.

A table in the following format must be provided as part of Attachment 43.

Safety Net Information per PA 96-0031			
CHARITY CARE			
Charity (# of patients)	Year	Year	Year
Inpatient			
Outpatient			
Total			
Charity (cost in dollars)			
Inpatient			
Outpatient			
Total			
MEDICAID			
Medicaid (# of patients)	Year	Year	Year
Inpatient			
Outpatient			
Total			

Medicaid (revenue)			
Inpatient			
Outpatient			
Total			

APPEND DOCUMENTATION AS ATTACHMENT-40, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

XII. Charity Care Information

Charity Care information **MUST** be furnished for **ALL** projects.

1. All applicants and co-applicants shall indicate the amount of charity care for the latest three **audited** fiscal years, the cost of charity care and the ratio of that charity care cost to net patient revenue.
2. If the applicant owns or operates one or more facilities, the reporting shall be for each individual facility located in Illinois. If charity care costs are reported on a consolidated basis, the applicant shall provide documentation as to the cost of charity care; the ratio of that charity care to the net patient revenue for the consolidated financial statement; the allocation of charity care costs; and the ratio of charity care cost to net patient revenue for the facility under review.
3. If the applicant is not an existing facility, it shall submit the facility's projected patient mix by payer source, anticipated charity care expense and projected ratio of charity care to net patient revenue by the end of its second year of operation.

Charity care" means care provided by a health care facility for which the provider does not expect to receive payment from the patient or a third-party payer. (20 ILCS 3960/3) Charity Care **must** be provided at cost.

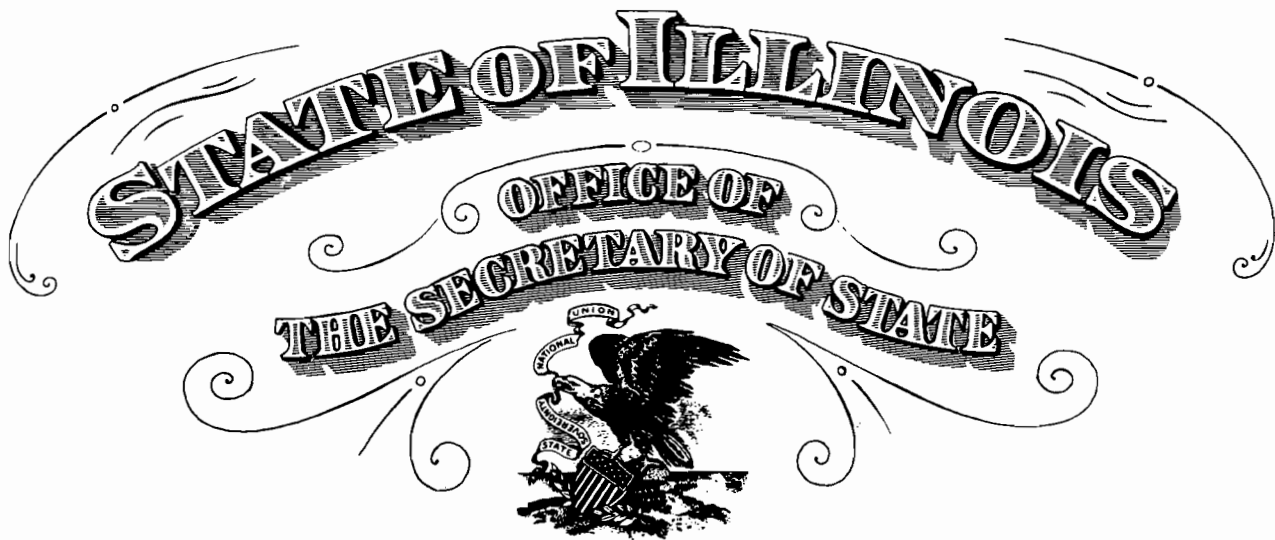
A table in the following format must be provided for all facilities as part of Attachment 44.

CHARITY CARE			
	Year	Year	Year
Net Patient Revenue			
Amount of Charity Care (charges)			
Cost of Charity Care			

APPEND DOCUMENTATION AS ATTACHMENT-41, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

After paginating the entire, completed application, indicate in the chart below, the page numbers for the attachments included as part of the project's application for permit:

INDEX OF ATTACHMENTS		
ATTACHMENT NO.		PAGES
1	Applicant/Coapplicant Identification including Certificate of Good Standing	29-30
2	Site Ownership	31-35
3	Persons with 5 percent or greater interest in the licensee must be identified with the % of ownership.	N/A
4	Organizational Relationships (Organizational Chart) Certificate of Good Standing Etc.	36
5	Flood Plain Requirements	37-38
6	Historic Preservation Act Requirements	39
7	Project and Sources of Funds Itemization	40-50
8	Obligation Document if required	51
9	Cost Space Requirements	52
10	Discontinuation	N/A
11	Background of the Applicant	53-54
12	Purpose of the Project	55-56
13	Alternatives to the Project	57-70
14	Size of the Project	71-120
15	Project Service Utilization	121
16	Unfinished or Shell Space	122
17	Assurances for Unfinished/Shell Space	122
18	Master Design Project	123-136
19	Mergers, Consolidations and Acquisitions	N/A
	Service Specific:	
20	Medical Surgical Pediatrics, Obstetrics, ICU	137-152
21	Comprehensive Physical Rehabilitation	N/A
22	Acute Mental Illness	N/A
23	Neonatal Intensive Care	N/A
24	Open Heart Surgery	N/A
25	Cardiac Catheterization	153-163
26	In-Center Hemodialysis	N/A
27	Non-Hospital Based Ambulatory Surgery	N/A
28	Selected Organ Transplantation	N/A
29	Kidney Transplantation	N/A
30	Subacute Care Hospital Model	N/A
31	Children's Community-Based Health Care Center	N/A
32	Community-Based Residential Rehabilitation Center	N/A
33	Long Term Acute Care Hospital	N/A
34	Clinical Service Areas Other than Categories of Service	164-183
35	Freestanding Emergency Center Medical Services	N/A
	Financial and Economic Feasibility:	
36	Availability of Funds	184
37	Financial Waiver	184
38	Financial Viability	184
39	Economic Feasibility	185-191
40	Safety Net Impact Statement	192-197
41	Charity Care Information	198



To all to whom these Presents Shall Come, Greeting:

I, Jesse White, Secretary of State of the State of Illinois, do hereby certify that

NORTHWESTERN LAKE FOREST HOSPITAL, A DOMESTIC CORPORATION, INCORPORATED UNDER THE LAWS OF THIS STATE ON DECEMBER 10, 1918, APPEARS TO HAVE COMPLIED WITH ALL THE PROVISIONS OF THE GENERAL NOT FOR PROFIT CORPORATION ACT OF THIS STATE, AND AS OF THIS DATE, IS IN GOOD STANDING AS A DOMESTIC CORPORATION IN THE STATE OF ILLINOIS.



Authentication #: 1335102344

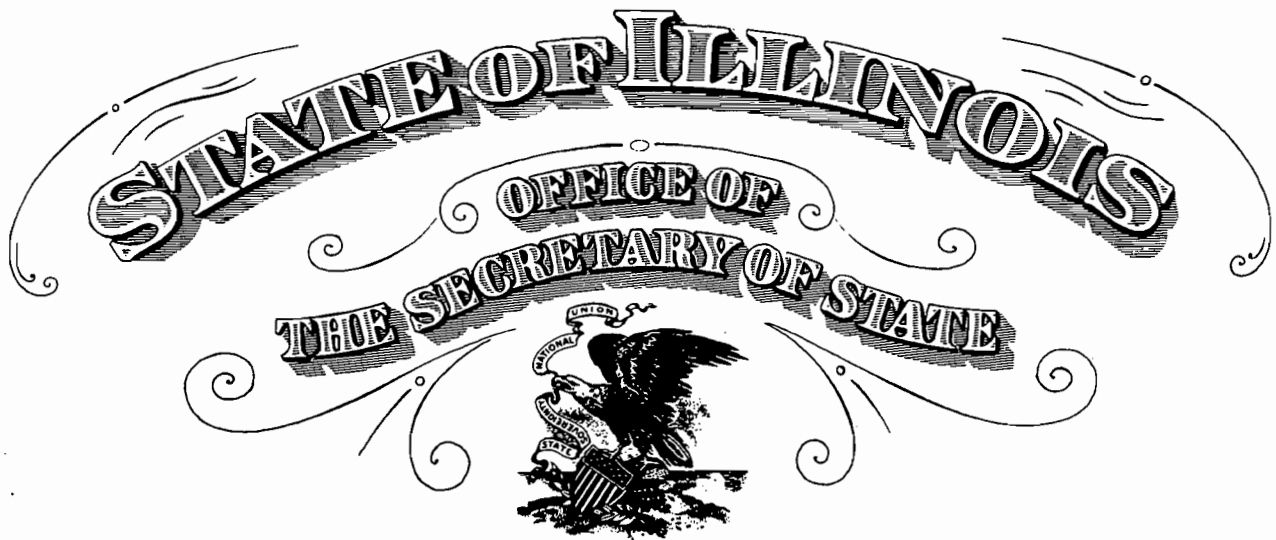
Authenticate at: <http://www.cyberdriveillinois.com>

In Testimony Whereof, I hereto set my hand and cause to be affixed the Great Seal of the State of Illinois, this 17TH day of DECEMBER A.D. 2013 .

Jesse White

SECRETARY OF STATE

ATTACHMENT-1



To all to whom these Presents Shall Come, Greeting:

I, Jesse White, Secretary of State of the State of Illinois, do hereby certify that

NORTHWESTERN MEMORIAL HEALTHCARE, A DOMESTIC CORPORATION, INCORPORATED UNDER THE LAWS OF THIS STATE ON NOVEMBER 30, 1981, APPEARS TO HAVE COMPLIED WITH ALL THE PROVISIONS OF THE GENERAL NOT FOR PROFIT CORPORATION ACT OF THIS STATE, AND AS OF THIS DATE, IS IN GOOD STANDING AS A DOMESTIC CORPORATION IN THE STATE OF ILLINOIS.



Authentication #: 1335102330

Authenticate at: <http://www.cyberdriveillinois.com>

In Testimony Whereof, I hereto set
my hand and cause to be affixed the Great Seal of
the State of Illinois, this 17TH
day of DECEMBER A.D. 2013 .

Jesse White

SECRETARY OF STATE

ATTACHMENT-1

Approved By Chicago Title and Trust Co.
(Chicago Real Estate Board)
S-3 1 of 2

(The Above Space For Recorder's Use Only)

410137
LAKE

THE GRANTOR— William J. Halligan, Jr. and Marydith Halligan,
his wife
of the City of Lake Forest County of Lake State of Illinois
for and in consideration of TEN and no/100----- (\$10.00) DOLLARS,
and other valuable consideration in hand paid,
CONVEY and WARRANT to Lake Forest Hospital, an Illinois corpora-
tion of Lake Forest, Illinois
a corporation created and existing under and by virtue of the Laws of the State of Illinois
having its principal office in the City of Lake Forest and
State of Illinois the following described Real Estate situated in the County
of Lake in the State of Illinois, to wit:

Exhibit A attached hereto and made a part hereof.

Cancelled

071558
STATE OF ILLINOIS
REAL ESTATE TRANSFER TAX
JUL 31 '78 DEPT. OF REVENUE
\$900.00

\$900.00

Cancelled

071557
STATE OF ILLINOIS
REAL ESTATE TRANSFER TAX
JUL 31 '78 DEPT. OF REVENUE
\$57.00

207584

Grantee's Address: Lake Forest Hospital, 660 Westmorland, Lake Forest
Illinois

hereby releasing and waiving all rights under and by virtue of the Homestead Exemption Laws of
the State of Illinois.

DATED this 30th day of June 1978

PLEASE PRINT OR TYPE NAME(S) BELOW
William J. Halligan, Jr. (Seal)
Marydith Halligan (Seal)
SIGNATURE(S) Marydith Halligan

State of Illinois, County of Cook ss., I, the undersigned, a Notary Public in
and for said County, in the State aforesaid, DO HEREBY CERTIFY that
William J. Halligan, Jr. and Marydith Halligan,
his wife
personally known to me to be the same persons whose names are
subscribed to the foregoing instrument appeared before me this day in
person, and acknowledged that they signed, sealed and delivered the said
instrument as their free and voluntary act, for the uses and purposes
therein set forth, including the release and waiver of the right of homestead.

Given under my hand and official seal, this 14th day of July 1978

Commission expires 4/11 1979
THOMAS J. KELLY NOTARY PUBLIC

APPROPRIATE "RIDER" OR REVENUE ST

THIS INSTRUMENT IS REACKNOWLEDGED AND RECORDED IN ORDER TO SHOW THE
CONSIDERATION PAID.

Prepared by:
Thomas J. Kelly
Pedersen & Houpt
Suite 3400

ADDRESS OF PROPERTY:

NAME
ADDRESS 180 North LaSalle Street
CITY AND STATE Chicago, Illinois

THE ABOVE ADDRESS IS FOR STATISTICAL
PURPOSES ONLY AND IS NOT A PART OF
THIS DEED.

SEND SUBSEQUENT TAX BILLS TO:

CHICAGO TITLE INSURANCE CO.

1934994
DOC
LAKE COUNTY, ILLINOIS

'78 JUL 31 PM 2 43

Ernest J. Ruston
RECORDER OF DEEDS

1942003

DOC
LAKE COUNTY, ILLINOIS

'78 AUG 29 AM 11 17

Ernest J. Ruston
RECORDER OF DEEDS

Mail to

CHICAGO TITLE AND TRUST COMPANY
111 WEST WASHINGTON
CHICAGO, ILLINOIS 60602
ATTN: J. WERLE LL56

34313F

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, the undersigned, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY that William J. Halligan, Jr. and Marydith Halligan, his wife, personally known to me to be the same persons whose names are subscribed to the foregoing instrument appeared before me this day in person and acknowledged that they signed, sealed and delivered the said instrument as their free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of homestead.

Given under my hand and official seal, this 15th day of August, 1978.

1942003

My Commission Expires 6/24/80

Helene M. Kaut

PARCEL 1:

That part of the West half of Section 29, Township 44 North, Range 12, East of the 3rd P.M., described as follows: The South 18.79 acres lying South of a line drawn parallel with the South line of the West half of the South West quarter of said Section 29, (except that part thereof lying Easterly of the Westerly line of Skokie Highway, according to the plat of Dedication, therefore recorded as Document 418857, on November 18, 1935), in Lake County, Illinois.

PARCEL 2:

The West half of the South West quarter of Section 29, Township 44 North, Range 12, East of the 3rd P.M., (except that part thereof lying Easterly of the Westerly line of Skokie Highway, according to the plat of Dedication, therefore recorded as Document 418857, on November 18, 1935 and also except the South 18.79 acres thereof, lying South of a line parallel with the South line of said West half of the South West quarter), in Lake County, Illinois.

PARCEL 3:

That part of the North West quarter of Section 29, and the North East quarter of Section 30, all in Township 44 North, Range 12, East of the 3rd P.M., described as follows: Beginning at the South East corner of said North East quarter of Section 30; thence West along the South line of said North East quarter of Section 30, 1452.00 feet; thence North 13 degrees West 149.82 feet; thence East parallel with said South line of the North East quarter of Section 30, 1485.59 feet, more or less, to the East line of the North East quarter aforesaid; thence East parallel with the South line of said North West quarter of Section 29, 941.75 feet, more or less, to the Westerly line of Skokie Highway, according to the plat of Dedication therefore, recorded as Document 418857, on November 18, 1935; thence Southerly along said Westerly line of Skokie Highway 147.30 feet, more or less, to said South line of the North West quarter of Section 29, and thence, West along said South line of the North West quarter of Section 29, 960.60 feet, more or less, to the corner of beginning, in Lake County, Illinois.

1942003

PARCEL 4:

That part of the North half of the South East quarter of Section 30, Township 44 North, and Range 12, East of the 3rd P.M., lying Easterly of the Easterly line of the public highway known as Waukegan Road, except that part thereof described as follows: Beginning at a point on the Easterly line of the public highway known as Waukegan Road 341.00 feet Northerly of the South line of said North half of the South East quarter of Section 30, (measured along said Easterly line of Waukegan Road) and; thence, Northerly along said Easterly line of Waukegan Road 350.00 feet; thence Easterly along a line perpendicular to said Easterly line of Waukegan Road, 376.61 feet; thence Southerly parallel with said Easterly line of Waukegan Road, 350.00 feet; and thence Westerly along the line perpendicular to said Easterly line of Waukegan Road 376.61 feet to the place of beginning, in Lake County, Illinois.

THIS INSTRUMENT WAS PREPARED BY:

111 West Washington Street
Chicago, Illinois 60602

Thomas Szymczyk
% Chicago Title and Trust Company
630-2168

2523020



ER O Mail
RELEASE DEED

F. 1699 R. 12/73

THE ABOVE SPACE FOR RECORDERS USE ONLY

2523020
RECORDED
LAKE COUNTY, ILLINOIS
1987 JAN -7 AM 9:12

Frank J. Kustra

KNOW ALL MEN BY THESE PRESENTS, That CHICAGO TITLE AND TRUST COMPANY, a
corporation of the State of Illinois, as
Trustee

in consideration of one dollar, and other good and valuable considerations, the receipt whereof is hereby
acknowledged, does hereby release, convey and quit-claim unto

Lake Forest Hospital, not for profit,
the heirs, legal representatives and assigns of the grantee or grantees herein, (or if the grantee is a
corporation, its successors and assigns) all the right, title, interest, claim or demand whatsoever it may have
acquired in, through or by a certain Trust Deed, recorded in the Recorder's Office of
Lake County, in the State of Illinois, as Document Number 1934995

in book , page , to the premises situated in the said County, State of Illinois,
described as follows, to-wit:

PARCEL 1:

The West half of the South West quarter of Section 29, Town-
ship 44 North, Range 12, East of the 3rd P.M., (except that
part thereof lying Easterly of the Westerly line of Skokie
Highway, according to the plat of Dedication, therefore re-
corded as Document 418857, on November 18, 1935 and also
except the South 18.79 acres thereof, lying South of a line
parallel with the South line of said West half of the South
West quarter), in Lake County, Illinois.

PARCEL 2:

That part of the North West quarter of Section 29, and the
North East quarter of Section 30, all in Township 44 North,
Range 12, East of the 3rd P.M., described as follows: Beginning
at the South East corner of said North East quarter of Section
30; thence West along the South line of said North East quarter
of Section 30, 1452.00 feet; thence North 13 degrees West
149.82 feet; thence East parallel with said South line of the
North East quarter of Section 30, 1485.59 feet, more or less,
to the East line of the North East quarter aforesaid; thence
East parallel with the South line of said North West quarter
of Section 29, 941.75 feet, more or less, to the Westerly line
of Skokie Highway, according to the plat of Dedication therefore,
recorded as Document 418857, on November 18, 1935; thence
Southerly along said Westerly line of Skokie Highway 147.30
feet, more or less, to said South line of the North West
quarter of Section 29, and thence, West along said South line
of the North West quarter of Section 29, 960.60 feet, more or
less, to the corner of beginning, in Lake County, Illinois.

PARCEL 3:

2523020

That part of the North half of the South East quarter of Section
30, Township 44 North, and Range 12, East of the 3rd P.M., lying
Easterly of the Easterly line of the public highway known as
Waukegan Road, except that part thereof described as follows:
Beginning at a point on the Easterly line of the public highway
known as Waukegan Road 341.00 feet Northerly of the South line of
said North half of the South East quarter of Section 30, (measured
along said Easterly line of Waukegan Road) and; thence, Northerly
along said Easterly line of Waukegan Road 350.00 feet; thence
Easterly along a line perpendicular to said Easterly line of
Waukegan Road, 376.61 feet; thence Southerly parallel with said
Easterly line of Waukegan Road, 350.00 feet; and thence
Westerly along the line perpendicular to said Easterly line of
Waukegan Road 376.61 feet to the place of beginning, in Lake
County, Illinois.

CHICAGO TITLE INSURANCE CO.

ATTACHMENT-2

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together with all the appurtenances and privileges thereunto belonging or appertaining.

IN WITNESS WHEREOF, Said CHICAGO TITLE AND TRUST COMPANY, as Trustee as aforesaid, has caused these presents to be signed by its Assistant Vice-President, and attested by its Assistant Secretary, and its corporate seal to be hereto affixed.

(Date) December 30, 1986

CHICAGO TITLE AND TRUST COMPANY
as Trustee as aforesaid,

By

Attest



Assistant Vice-President

Assistant Secretary

**FOR THE PROTECTION OF THE
OWNER, THIS RELEASE SHALL
BE FILED WITH THE RECORDER
OF DEEDS IN WHOSE OFFICE
THE MORTGAGE OR DEED OF
TRUST WAS FILED.**

STATE OF ILLINOIS, } ss.
COUNTY OF COOK

I, the undersigned, a Notary Public in and for the County and State aforesaid, DO HEREBY CERTIFY, that the above named Assistant Vice President and Assistant Secretary of the CHICAGO TITLE AND TRUST COMPANY, Grantor, personally known to me to be the same persons whose names are subscribed to the foregoing instrument as such Assistant Vice President and Assistant Secretary respectively, appeared before me this day in person and acknowledged that they signed and delivered the said instrument as their own free and voluntary act and as the free and voluntary act of said Company for the uses and purposes therein set forth; and the said Assistant Secretary then and there acknowledged that said Assistant Secretary, as custodian of the corporate seal of said Company, caused the corporate seal of said Company to be affixed to said instrument as said Assistant Secretary's own free and voluntary act and as the free and voluntary act of said Company for the uses and purposes therein set forth.

Given under my hand and Notarial Seal

Date 12/30/86

Notary Public

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NAME
STREET
CITY

Wilson & McIlvaine
ATTN: B. Adler
135 S. La Salle Street
Chicago, Il 60603

OR

INSTRUCTIONS

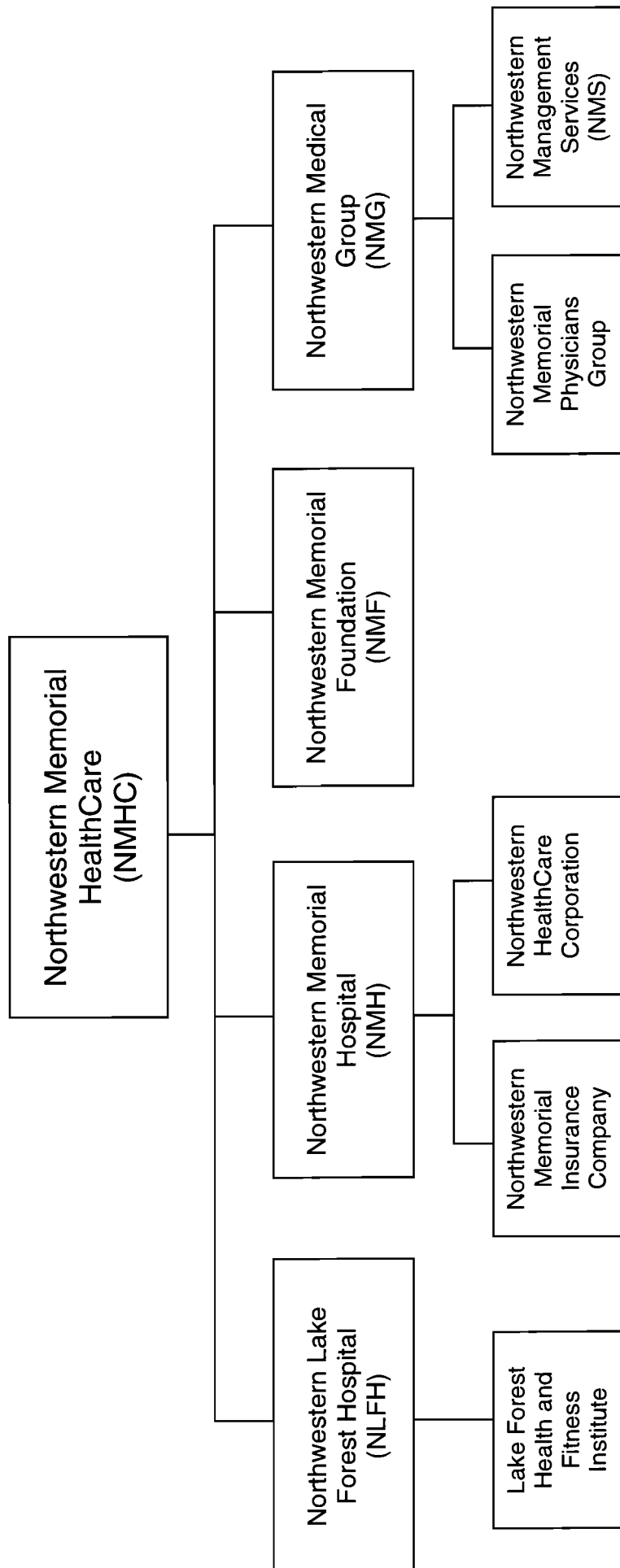
RECORDER'S OFFICE BOX NUMBER

FOR INFORMATION ONLY
INSERT STREET ADDRESS OF ABOVE
DESCRIBED PROPERTY HERE

"OFFICIAL SEAL"
Diane Helms

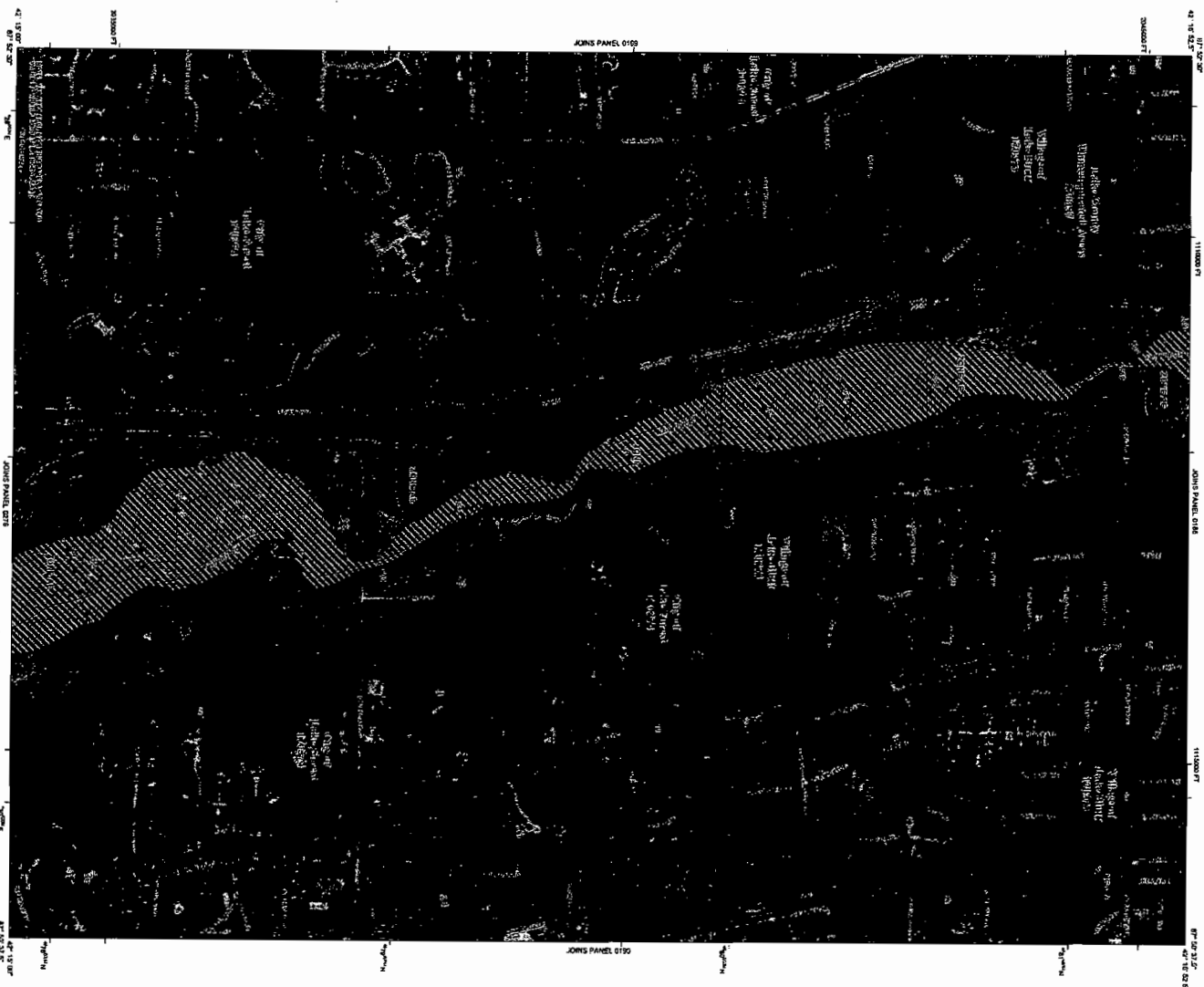
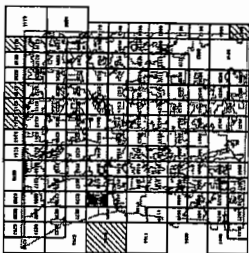
Notary Public
My Commission Expires 10/1/87

NMHC Organizational Chart



Flood Plain Requirements

The location for the proposed replacement facility is on the Northwestern Lake Forest campus. The address will be 660 North Westmoreland Road. As shown on the map on the following page, the project is located west of Skokie Highway and will not be located in a special flood hazard area and therefore complies with the requirements of Illinois Executive Order #2005-5.

[illegible][illegible][illegible][illegible]

The following is a list of 12 different materials used in the study. The materials are listed in the table below. The materials are listed in the table below. The materials are listed in the table below.

Material	Material	Material	Material	Material	Material	Material	Material	Material	Material	Material	Material
1. 100% Cotton	2. 100% Polyester	3. 100% Nylon	4. 100% Spandex	5. 100% Silk	6. 100% Wool	7. 100% Linen	8. 100% Rayon	9. 100% Bamboo	10. 100% Hemp	11. 100% Jute	12. 100% Flax

Answer: **None**

① ————— ②
③ ————— ④
⑤ ————— ⑥

Case Report

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MAP SCALE 1" = 400'

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FIRM
FLOOD INSURANCE RATE MA
LAKE COUNTY,
ILLINOIS
AND INCORPORATED AREAS

[illegible]

NATIONAL

FEDERAL BUREAU OF INVESTIGATION

MAP NUMBER
17097C0168

MAP REVISION
SEPTEMBER 16, 2010

Federal Forestry Management Agency



Illinois Historic Preservation Agency

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

Lake County

Lake Forest

660 N. Westmoreland Road

CON - New Construction of Replacement Hospital, Northwestern Lake Forest Hospital

PLEASE REFER TO: IHPA LOG #022011813

January 28, 2013

Bridget Orth

Northwestern Memorial HealthCare

251 E. Huron St.

Chicago, IL 60611-2908

Dear Ms. Orth:

The Illinois Historic Preservation Agency is required by the Illinois State Agency Historic Resources Preservation Act (20 ILCS 3420, as amended, 17 IAC 4180) to review all state funded, permitted or licensed undertakings for their effect on cultural resources. Pursuant to this, we have received information regarding the referenced project for our comment.

Our staff has reviewed the specifications under the state law and assessed the impact of the project as submitted by your office. We have determined, based on the available information, that no significant historic, architectural or archaeological resources are located within the proposed project area.

According to the information you have provided concerning your proposed project, apparently there is no federal involvement in your project. However, please note that the state law is less restrictive than the federal cultural resource laws concerning archaeology. If your project will use federal loans or grants, need federal agency permits, use federal property, or involve assistance from a federal agency, then your project must be reviewed under the National Historic Preservation Act of 1966, as amended. Please notify us immediately if such is the case.

This clearance remains in effect for two (2) years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the IL Human Skeletal Remains Protection Act (20 ILCS 3440).

Please note that this letter covers only the area where new construction will occur and does not constitute approval of the demolition of any existing buildings.

Please retain this letter in your files as evidence of compliance with the Illinois State Agency Historic Resources Preservation Act.

Sincerely,

Anne E. Haaker

Deputy State Historic

Preservation Officer

ATTACHMENT-6

A teletypewriter for the speech/hearing impaired is available at 217-524-7128. It is not a voice or fax line.

Project Costs and Sources of Funds

USE OF FUNDS

Itemization of each line item:

Line 2 – Site Survey and Soil Investigation – (\$135,750) – this includes:

- Soils testing
- Continued site survey work

Of the total amount, \$73,262 is the clinical Site Survey and Soil Investigation cost.

Line 3 – Site Preparation – (\$11,020,000) – this includes:

- Excavation work for the new hospital basement and foundation systems
- Excavation, grading, service ramp for below grade loading dock
- Route 43 secondary access road to internal ring road (for staff/ambulance/service access). Work activities include traffic control, grade work, asphalt paving, concrete curbs, landscape, light poles, markings, and storm utility
- Water retention pond. Work activities include excavation, concrete weir wall, discharge storm utility systems, landscaping and lighting
- Bio swale plantings. Work activities include grading of swale and landscaping plantings

Of the total amount, \$5,869,936 is the clinical Site Preparation cost. Together with the Site Survey and Soil Investigation costs, this amount is 5.0% of the clinical Construction and Contingency costs.

Line 4 – Off Site Work – (\$20,290,892) – this includes:

In order for the new facility's mechanical and electrical infrastructure to be served from an existing central energy plant, a 14,200 square foot addition must be made to the north of the existing plant. Additionally, the existing equipment will either be upgraded or replaced.

- The existing plant will provide steam for humidification and sterilization purposes utilizing the existing high pressure boilers and related equipment.
- The existing chillers, cooling towers, and pumps will be replaced with more efficient and appropriately sized units and will be placed in the new addition and a commonly shared equipment yard.
- Chilled water systems will be available 24/7/365 and used for air handling unit cooling coils and high energy intensity spaces such as the electrical rooms, the telecommunication rooms, refrigerators and freezers, and some imaging equipment.
- Heat for the new facility via reheat coils and perimeter finned tube radiation, unit heaters, and radiant heating panels will be provided by 140 degree hot water boilers and will be placed in the new addition.
- The fuel oil system will be upgraded and expanded with direct burry tanks to provide appropriate capacity for the dual fuel boilers and emergency generators.
- The existing electrical service will be upgraded and reconfigured to serve the existing campus and new facility by reworking existing electrical equipment in the existing plant and adding new electrical equipment in the addition.

The Central Plant will connect to the hospital via underground piping for the steam, condensate return, heating water supply and return piping, chilled water supply and return piping, and electrical utility duct banks.

Of the total amount, \$10,950,704 is the clinical Off Site Work cost.

Line 5 – New Construction Contracts – (\$192,959,845) – this includes:

- All construction contracts/costs to complete the Project. Includes group I fixed equipment and contractor's overhead and profit.

Of the total amount, \$108,058,944 is the clinical New Construction cost.

Line 7 – Contingencies - (\$19,295,985) – this includes:

- Allowance for unforeseen new construction costs

Of the total amount, \$10,805,894 is the clinical Contingency cost.

The total clinical BGSF of the proposed project is 252,894. New Construction cost plus contingencies for this space equates to \$470.05/clinical BGSF.

When determining the reasonableness of the clinical construction and contingency costs, NLFH applied the Cost Complexity Ratios found in Section 1120.APPENDIX A:

Service Area/Department	Complexity Ratio
Medical/Surgical	1.0738
ICU	1.2700
Obstetrics	1.0738
Birthplace	1.4826
Special Care Nursery	1.4052
Clinical Decision Unit	1.0738
Emergency Department	1.1472
Interventional Procedures	1.2959
Prep and Recovery	1.5163
Outpatient Services	1.0252
Diagnostic Imaging – IP/OP/ED	1.2959
IP Rehabilitative Services	0.8535
Imaging – Women's Health	1.2959
Neurology	0.8776
Cardiac Pulmonary Rehabilitation	0.7983
Non-Invasive Cardio Diagnostics	0.8776
Cancer Center	1.2959
Wound Care	1.0252

Line 8 – Architectural / Engineering Fees – (\$10,435,330) – this includes:

Construction Document Phase Services:

- Provide proposed Reconciled Statement of Probable Construction Cost
- Provide drawings and specifications

- Prepare documentation for alternate bids
- Assist in filing Construction Documents for approval by City and State agencies

Bidding and Negotiation Phase Services:

- Revise Construction Documents as necessary in accordance with Reconciled Statement of Probable Construction Cost

Construction Administration Phase Services:

- Advise and consult during Construction Phase
- Attend weekly job progress meetings
- Provide on-site representation to review progress/quality of Work
- Prepare written interpretations of Contract Documents including Bulletins and information requests
- Correct Errors or Omissions in the drawings, specifications and other documents
- Review and approve Contractor's submittals
- Submit notifications for work which does not conform to Contract Documents
- Review and analyze requests for Change Orders
- Assist Construction Manager with punchlist completion
- Assist Construction Manager with Final Completion including system testing and commissioning
- Inspect Project after correction of Work period for deficiencies and update Construction Manager

Of the total amount, \$5,631,798 is the clinical Architectural / Engineering Fee. This amount is 4.74% of the clinical Construction and Contingency costs.

Line 9 – Consulting and Other Fees – (\$14,571,364) – this includes:

Charges for the services of various types of consulting and professional experts, including:

- Legal services
- Survey
- General commissioning
- HVAC commissioning
- Low Voltage - Systems Technology / Integration
- Special investigative engineering analysis related to determining structural and building system capacity and code requirements
- Art Consultants
- Pre-Construction Services
- Third Party Cost Estimating
- Traffic Consultant
- Equipment Planning Consultant
- Code Consultant
- LEED/Sustainable Design Consultant
- Activation/Transition Planning Consultant
- Vibration Consultant
- Materials Management Consultant
- Exterior Wall Consultant
- Testing, Inspection, and Quality Control
 - Develop procedures for materials testing, inspections and field quality control procedure
 - Develop budget for materials testing for Owner's approval
- Construction Management Services

- Budget Management – includes estimating and value engineering throughout the design process
- Scheduling – prepare, update and maintain schedules for all project activities including, design, agency reviews and move-in planning as well as construction activities.
- Design Review – review Design Documents for completeness at each stage for construction feasibility, cost effectiveness, availability of materials and labor. Evaluate general and special conditions to the specifications and onsite construction logistics and construction phasing effects. Perform a technical review for coordination of MEP systems. Coordinate consultant comments and follow-up on all actions resulting from the review. Evaluate design options and alternatives.
- Certificate of Need Assistance – develop information budget, schedule and statistics required for the project.
- Bidding and Negotiations – includes writing scopes of work, prepare bid packages, manage bidding process, review and evaluate bids with the owner.
- Public Agency Review and Interface – initiate and coordinate the design review process with City, State and Federal agencies to insure proper approvals are secured; assist in obtaining all building and related permits; coordinate activities with agencies for final review of construction and approval for occupancy and use.
- Testing and Commissioning – assist the owner in planning and executing a full commissioning plan for all building systems.

Of the total amount, \$7,863,956 is the clinical Consultant and Other Fees cost.

Line 10 – Movable Capital Equipment – (\$52,046,544) – this includes:

Equipment, furniture, and furnishings (FFE) for the new Northwestern Lake Forest Hospital. The equipment cost is a budget, yet to be finalized. Group I (fixed) equipment is included in the New Construction line item above. Group II major medical equipment and Group III mobile equipment is included in this line item. The preliminary budget has been developed based on the expectation that a substantial amount of existing equipment at NLFH will be moved to the new facility. Additionally, most of the equipment purchased between now and 2017 and used in the current facility will also be moved to the new facility.

Hospital staff will manage the planning and procurement processes. Consultants will be retained to provide specific expertise during equipment planning and specification, and to assist the hospital in ensuring effective use of available funding. Equipment planning will be closely coordinated with architectural design. The cost of equipment consultants is included in the Consulting and Other Fees line item.

Consultant services may include: inventory of existing assets; planning of relocation and refurbishment; development of bid and contract documents; preparation of requests for proposal; analysis of bids and contract award; placement of purchase orders, delivery scheduling, expediting, warehousing, receiving, acceptance, and approval for payment of equipment, furniture, and furnishings.

At this stage, the itemized list of equipment to be purchased is not complete. The aggregate equipment budget, however, is considered appropriate, as it is based on input from consultants

and NMH personnel with experience on previous projects (Feinberg/Galter, new Prentice Women's Hospital).

Total acquisition costs will be evaluated during market assessment and contract award, including purchase, installation, training, and maintenance. The approval process during contract award will be consistent with existing NMHC financial procedures.

Product standards will facilitate detailed equipment planning and appropriate building design, maximize the effectiveness of competitive bidding, and minimize costs for training and long-term maintenance.

The following list identifies types of equipment in the estimate:

Surgical Services

- Anesthesia Machine with Physiological Monitoring
- Fluid Waste System
- Electrosurgical Unit
- Endoscopy Equipment
- Surgical Microscopes
- Surgical Lasers
- Mobile Radiographic Unit
- Portable Ultrasound
- Scope Washers
- Fluid Waste Dockers
- Physiological Monitoring
- Headwalls
- Surgical Tables
- Blanket Warmers
- Intra-aortic Balloon Pumps
- Point-of-Care Blood Gas Analyzers
- Infusion Pumps
- Stainless Steel Operating Room Furniture
- Scrub Dispensers
- Supply Storage Carts
- Medication Dispensing Units
- Automatic Tourniquet System
- Patient Stretchers
- Suction Regulator
- Flowmeters
- Refrigerators, Dishwashers, Ice Makers, Coffee Dispensers
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Hampers, Waste Containers
- Housekeeping Equipment

Interventional Procedure Suite (Interventional Radiology and Cardiac Catheterization Lab)

- (1) Bi-Plane Angiography Unit
- (2) Single Plane Angiography Unit
- Contrast Media Injectors

- Hemodynamic Monitoring System
- Intravenous Ultrasound System
- Physiological Monitoring
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Hampers, Waste Containers
- Housekeeping Equipment

Central Sterile Supply

- Ultrasonic Cleaner
- Washer Disinfector
- Prep and Pack Workstations
- Cart Washer
- Steam Sterilizers
- Water Softener and Deionized Water System
- Low Temperature Sterilizers
- Instrument Tracking System
- Wrapping Tables
- Tray Transfer System for Washer Disinfectors

Diagnostic Imaging/Women's Imaging

- (2) CT Scanner
- (1) MRI, 1.5T
- (1) MRI, 3.0T
- (3) Digital Radiographic Systems
- (2) Mammography
- (1) Bone Density Unit
- (2) Nuclear Medicine Cameras
- Contrast Media Injectors
- Ferrous Detectors
- Disinfector, Ultrasound Transducer
- Cytocentrifuge
- Portable Ultrasound
- Pump Infusion, Single Channel
- Defibrillator/Monitor
- Physiological Monitoring
- Vital Signs Monitors
- Glucose Analyzers
- Procedure Lights
- Hovermatt Patient Transfer Systems
- Patient Lifts
- MRI Patient Entertainment System
- Refrigerators, Dishwashers, Ice Makers, Coffee Dispensers
- Carts: Crash, Exchange, Linen, MRI Compatible, Procedure, Utility, Wire
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Hampers, Waste Containers
- Housekeeping Equipment

Oncology

- Linear Accelerator
- PET CT
- Contrast Media Injector
- Radiation Monitor
- Medication Dispensing Units
- Stretchers
- Physiological Monitoring
- Carts: Crash, Exchange, Linen, Procedure, Utility, Wire
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Hampers, Waste Containers
- Housekeeping Equipment

Gastrointestinal Procedure Suite

- Endoscopy Equipment
- Audio/Visual Integration System
- Fluoroscopy Equipment (ERCP)
- Blanket Warmers
- Medication Dispensing Units
- Procedure Stretchers
- Physiological Monitoring
- Carts: Crash, Exchange, Linen, Procedure, Utility, Wire
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Hampers, Waste Containers
- Housekeeping Equipment

Cardiac Diagnostic Services/Cardiac Rehabilitation

- Cardiac Ultrasound
- EKG Machines
- ECHO Beds
- Stretchers
- CV Stress Testing Equipment
- Physiological Monitoring
- Medication Dispensing Units
- Gym Equipment
- Procedure Stretchers
- Carts: Crash, Exchange, Linen, Procedure, Utility, Wire
- Telephones, Copiers, Printers, PCs, Televisions
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Hampers, Waste Containers

Emergency Department

- Stretchers
- Vital Sign Monitors
- Physiological Monitoring
- Blood Glucose Monitors
- Blanket Warmers
- Medication Dispensing Units

- Suction Regulator
- Flowmeters
- Carts: Crash, Exchange, Linen, Procedure, Utility, Wire
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Hampers, Waste Containers

Labor & Delivery

- OB/GYN Stretchers
- Birthing Beds
- Fetal Monitors
- Surgical Tables
- Procedure Lights
- Electrosurgical Units
- Vital Sign Monitors
- Physiological Monitoring
- Blood Glucose Monitors
- Blanket Warmers
- Medication Dispensing Units
- Scales
- Suction Regulator
- Flowmeters
- Carts: Crash, Exchange, Linen, Procedure, Utility, Wire
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Hampers, Waste Containers

Inpatient Units

- ICU Beds
- Patient Beds
- Bassinets
- Patient Recliners
- Vital Sign Monitors
- Physiological Monitoring
- Ventilators
- Infusion Pumps
- Blood Glucose Monitors
- Blanket Warmers
- Medication Dispensing Units
- Scales
- Thermometers
- Suction Regulator
- Flowmeters
- Carts: Crash, Exchange, Linen, Procedure, Utility, Wire
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Hampers, Waste Containers

Clinical Labs

- Grossing Stations
- Blood Gas Analyzers

- Chemistry Analyzers
- Coagulation Analyzers
- Hematology Analyzers
- Immunoassay Analyzers
- Flammable Storage Cabinets
- Non-flammable Storage Cabinets
- Refrigerators
- Freezers
- Centrifuges
- Bio-Safety Cabinets
- Carts: Utility, Wire
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Hampers, Waste Containers

Pharmacy

- Medication Package Unit
- Medication Carousel
- Narcotic Storage Cabinets
- Refrigerators
- Freezers
- IV Mixing Hoods
- Lab Balances
- Work-Flow Management System
- Pass-through cabinets
- Carts: Utility, Wire
- Miscellaneous Items: Glove Dispensers, Sharps Receptacles, Waste Containers

Kitchen

- All kitchen equipment required to support dietary operations including exhaust hoods, grills, refrigerators, freezers, ovens, dishwashers, any equipment related to the servery (serving hot tables, refrigerated cases, salad bar, beverage dispensing, refrigerated food storage), walk-in refrigerators, pots, pans, dinnerware, carts, and trays

Signage

- Campus monument signs
- Exterior way finding program
- Interior room numbering signage

Technology

- Netbotz Cameras
- Service Provider racks, equipment & cabling
- Network routers and switches, fiber optic patch cables
- Telephony call manager
- Emergency Backup phone system (switches)
- Wireless access points with structured cable
- IT Devices:
 - Computers
 - Printers
 - Phones

- Wireless VoIP devices
- Security video monitoring server
- Security access control network connections
- Merci Radio Antenna
- Facility systems LAN Integration
- OR/AV LAN integration
- Entertainment TVs and Display Monitors
- Cable/Broadcast TV network connectivity

A detailed list and associated budget will be developed during Design Development.

Timing of new equipment purchases will be an important component of the project schedule. NLFH has made a basic assumption that replacement of all equipment at the time of occupancy is inappropriate. Most capital purchases made in 2010 – 2017 will be relocated into the new facility. Budget allocation in FY14 – FY17 will strategically replace existing equipment that will be relocated to the new facility. Where practical, new systems will be installed in the existing facility, at least in limited scope, prior to implementation in the new facility.

Procurement will occur in several phases:

- Group I equipment begins in 2015
- Major Group II equipment with long lead time and potential major impacts on construction, such as radiology equipment and linear accelerators, will begin in 2016 and continue through 2017.
- Remainder of Group II and Group III equipment will occur in 2017. Standard documents for request for proposal, contract award, and acceptance will be developed with the NMHC General Counsel. Warehousing, training, acceptance testing, and other logistical issues will be defined and scheduled.

A major assumption within the equipment cost estimate is that current prices have been escalated to 2016 prices. Freight and installation costs are also included in the estimate.

Of the total amount, \$45,646,812 is the clinical component of the Moveable Capital Equipment cost.

Line 11 – Bond Issuance Expense – (\$4,137,000) – this includes:

All costs associated with the issuance of the \$276,000,000 bond issue, including issuer's fees, bond counsel's fee, printing costs, underwriters' discount, etc.

Of the total amount, \$2,232,680 is the clinical component of the Bond Issuance Expense.

Line 12 – Net Interest Expense During Construction – (\$15,180,000) – this represents:

The difference between the interest earned on the bond funds and the interest expense on the bonds.

Of the total amount, \$8,192,429 is the clinical component of the Net Interest Expense During Construction.

Line 14 – Other Costs To Be Capitalized – (\$37,914,185) – this includes:

- In-house staff (e.g. project managers), temporary office space, advertising and other routine costs to support the project through close-out
- Permits and various utility connection fees
- Wetland mitigation credit purchasing, associated fees and temporary erosion control measures for storm water management during construction
- Insurance costs for professional liability, builder's risk, excess general liability and worker's compensation are also included in this amount
- Campus work required by City of Lake Forest Special Use Permit (SUP):
 - Route 43 to secondary road access,
 - Internal access roads
 - Parking
 - Bike/pedestrian paths
 - Cut and fill excavation work creating earth berms along Route 43 and other select locations, as well all associated trees, shrubs, plantings and grass seed
- Water Detention pond, landscaping and lighting, exterior concrete walkway with perimeter guard rail, and concrete pavement/walkways at pond
- New utility work including storm, sanitary, water, gas telecom and electrical service
- Tennant Improvement Allowance for medical office leases

Of the total amount, \$20,731,590 is the clinical component of the Other Costs to be Capitalized.

SOURCES OF FUNDS

In addition to Cash and Securities and Bond Issues, NLFH plans to use \$75,000,000 raised by Northwestern Memorial Foundation (NMF) to fund the construction of the proposed project. From the period beginning with the Master Design CON approval in September, 2013 through mid-January, 2014, NMF's unaudited fundraising total for the NLFH campaign is almost \$9 million which includes pledges and cash received (contributions for fundraising reporting purposes are recognized using national standards published by the Council for Advancement and Support of Education (CASE)).

NLFH's last fundraising campaign, conducted between 2002 – 2005, raised \$15 million for the Hunter Family Women's Center. NMF's last campaign, conducted between 2002 – 2007, raised over \$207 million against a goal of \$150 million for the new Prentice Women's Hospital.

While NLFH is confident the fundraising goal can be achieved, in the event that \$75 million is not raised, the remaining portion of the project costs will be funded with Cash and Securities.

Project Status and Completion Schedules

Stage of the project's architectural drawings: Schematics

Anticipated project construction start date: September, 2014

Anticipated midpoint of construction date: March, 2016

Anticipated building opening: Fall, 2017

Project close-out date: December, 2018

Project obligation will occur after CON permit issuance.

Cost Space Requirements

		Departmental Gross Square Feet		Building Gross Square Feet		Amount of Proposed Total Building Gross Square Feet That Is:			
Department	Cost	Existing DGSF	Proposed DGSF	Floor Gross Factor	Proposed BGSF	New Const.	Modern- ized	As Is	Vacated Space
CLINICAL									
Medical/Surgical	\$ 25,741,114	*	55,650	1.199	66,734	66,734			
ICU	\$ 4,919,468	*	9,381	1.193	11,189	11,189			
Obstetrics	\$ 7,348,213	*	15,244	1.204	18,353	18,353			
Birthplace	\$ 7,055,670	*	11,573	1.193	13,804	13,804			
Special Care Nursery	\$ 1,977,700	*	3,430	1.193	4,091	4,091			
Clinical Decision Unit	\$ 1,761,479	*	3,861	1.229	4,747	4,747			
Emergency Department	\$ 6,039,588	*	12,289	1.230	15,110	15,110			
Interventional Procedures (Surgery, Cardiac Cath, IR)	\$ 19,194,157	*	33,700	1.230	41,437	41,437			
Prep and Recovery	\$ 11,170,213	*	17,518	1.230	21,540	21,540			
Diagnostic Imaging - IP/OP/ED	\$ 7,700,832	*	14,116	1.230	17,357	17,357			
Outpatient Services	\$ 1,080,994	*	2,506	1.229	3,081	3,081			
IP Rehabilitative Services	\$ 150,776	*	397	1.204	478	478			
Cancer Center	\$ 5,838,605	*	10,656	1.230	13,102	13,102			
Imaging - Women's Health	\$ 3,753,474	*	6,880	1.230	8,460	8,460			
Cardiac Pulmonary Rehabilitation	\$ 2,084,992	*	5,376	1.230	6,610	6,610			
Non-Invasive Cardio Diagnostics	\$ 1,125,139	*	2,901	1.230	3,567	3,567			
Wound Care	\$ 938,942	*	2,172	1.230	2,671	2,671			
Neurology	\$ 177,587	*	472	1.193	563	563			
Clinical Subtotal =	\$ 108,058,944		208,122	1.215	252,894	252,894	0	0	0
NON-CLINICAL									
Physician Office Space	\$ 22,713,876	*	59,701	1.206	72,010	72,010			
Pharmacy	\$ 1,709,453	*	2,275	1.309	2,977	2,977			
Laboratory	\$ 3,201,255	*	4,091	1.308	5,353	5,353			
Engineering	\$ 943,441	*	2,286	1.308	2,991	2,991			
Central Sterile Processing	\$ 3,167,398	*	4,202	1.308	5,498	5,498			
Materials Management/Loading Dock	\$ 1,593,065	*	3,255	1.308	4,259	4,259			
Environmental Services	\$ 1,012,026	*	2,263	1.292	2,924	2,924			
Central Distribution	\$ 290,434	*	755	1.309	988	988			
Administration	\$ 9,056,847	*	23,833	1.205	28,713	28,713			
Conference Center	\$ 3,984,175	*	7,405	1.230	9,105	9,105			
Conference / Education space	\$ 1,408,880	*	2,835	1.200	3,402	3,402			
Dietary	\$ 7,102,610	*	11,413	1.309	14,934	14,934			
Biomedical Support	\$ 497,012	*	989	1.308	1,294	1,294			
Public/Lobby	\$ 4,074,420	*	7,461	1.230	9,174	9,174			
Retail	\$ 1,109,459	*	2,860	1.230	3,517	3,517			
Staff Lockers/Lounges	\$ 1,285,710	*	3,042	1.197	3,641	3,641			
Reception/Waiting/Public Toilets	\$ 5,891,181	*	13,173	1.211	15,957	15,957			
MEP Systems	\$ 12,354,417	*	16,449	1.308	21,523	21,523			
Chapel	\$ 335,881	*	925	1.229	1,137	1,137			
On-Call Center	\$ 1,113,768	*	1,734	1.289	2,235	2,235			
Storage	\$ 90,624	*	238	1.307	311	311			
Ambulance Garage	\$ 1,964,970	*	4,756	1.000	4,756	4,756			
Non-Clinical Subtotal =	\$ 84,900,902		175,941	1.232	216,699	216,699			
TOTAL =	\$ 192,959,845		384,063	1.223	469,593	469,593	0	0	0
OTHER									
Preplanning Costs									
Site Survey & Soil Investigation Fees	\$ 135,750								
Site Preparation	\$ 11,020,000								
Off-Site Work	\$ 20,290,892								
Contingencies	\$ 19,295,985								
A/E Fees	\$ 10,435,330								
Consulting & Other Fees	\$ 14,571,364								
Movable or other Equipment	\$ 52,046,544								
Bond Issuance Expense	\$ 4,137,000								
Net Interest Expense During Construction	\$ 15,180,000								
Other Costs To Be Capitalized	\$ 37,914,185								
Other Subtotal =	\$ 185,027,050								
GRAND TOTAL =	\$ 377,986,895								

* The proposed project is new construction and therefore does not have any existing departments.

BACKGROUND OF APPLICANT

Northwestern Memorial HealthCare is the parent corporation of Northwestern Lake Forest Hospital and Northwestern Memorial Hospital.

Northwestern Lake Forest Hospital's licensing, certification and accreditation identification information:

IDPH License, Permit, Certification, Registration I.D. Numbers:

Hospital: 0005660

Freestanding Emergency Center: 22002

Lake Forest Health and Fitness Institute: 189009561

Grayslake ASTC: 7003156

Grayslake Endoscopy ASTC: 7003149

Medicare Provider Number: 140130

Medicaid Provider Number: 36-2179779001

The Joint Commission Organization I.D. Number: 3918

Northwestern Memorial Hospital's licensing, certification and accreditation identification information:

IDPH License, Permit, Certification, Registration I.D. Number: 0003251

Medicare Provider Number: 140281

Medicaid Provider Number: 37 096 0170-001

The Joint Commission Organization I.D. Number: 7267

City of Chicago Hospital License Number: 1118921

February 4, 2014

Ms. Kathryn J. Olson
Chair
Illinois Health Facilities and Services Review Board
525 West Jefferson Street – Second Floor
Springfield, Illinois 62751

Dear Ms. Olson:

As President and Chief Executive Officer of Northwestern Memorial HealthCare, I hereby certify that no adverse action has been taken against Northwestern Lake Forest Hospital, directly or indirectly, within three years prior to the filing of this application. For the purpose of this letter, the term "adverse action" has the meaning given to it in the Illinois Administrative Code, Title 77, Section 1130.

I hereby authorize HFPB and IDPH to access any documentation which it finds necessary to verify any information submitted, including, but not limited to: official records of IDPH or other State agencies and the records of nationally recognized accreditation organizations.

If you have questions or need additional information, please contact Bridget Orth at (312) 926-8650.

Sincerely,



Dean M. Harrison

PURPOSE OF PROJECT

As stated in the Master Design Permit (CON #13-033), the purpose of this project is to replace the Northwestern Lake Forest Hospital (NLFH) facility that is at the end of its useful life. The physical plant is deteriorating; there are structural limitations that do not allow for changing practice standards; utility systems are antiquated, have failures, and are expensive to maintain; and patient privacy and satisfaction are not up to current standards/expectations. The main sections of the hospital were built in 1942 and 1957. While there have been many projects to upgrade the facility over the years, certain problems cannot be corrected, such as:

- Semi-private patient rooms
- Patient bathrooms that lack showers
- Deficient room sizes and adjacencies
- Single loaded multi-functional vs double loaded efficient corridors
- Dated and inefficient mechanical, electrical, and plumbing systems

NLFH's market area is all of Lake County, northern Cook County and southern Wisconsin, however, the primary service area within that market area consists of the following areas: Lake Forest, Waukegan, Grayslake, Gurnee, Lake Bluff, Lake Villa, Libertyville, North Chicago, Round Lake, Zion, Vernon Hills, Mundelein, Antioch, Highland Park, Wadsworth, Deerfield, Lincolnshire, Winthrop Harbor, Great Lakes, and Highwood. This primary service area is the source of 81.3% of NLFH admissions.

The vision for the project is that the new facility will provide Lake County residents with convenient access to Northwestern Medicine, building on the 2010 affiliation with Northwestern Memorial HealthCare. The new facility will be adaptable, sustainable, and cost effective to meet the changing needs of the healthcare market and will support the academic mission. It will also embrace the history and traditions of the Lake Forest community. The new, contemporary facility will meet community needs through adaptive planning to anticipate growing demand for outpatient services and inpatient care, especially addressing the expanding aging population.

In October, 2012, IDPH reviewed and approved a health assessment and improvement plan for Lake County called MAPP (Mobilizing for Action through Planning and Partnerships). MAPP is a comprehensive health assessment and improvement plan for the overall health of Lake County and was developed with input from a number of local health system partners, including a representative from NLFH. Additionally, a 2012 Community Health Needs Assessment was completed by Professional Research Consultants, on behalf of NLFH as required by the Affordable Care Act. The hospital replacement proposal is consistent with and will help accomplish goals outlined in these plans.

Analysis of NLFH and Lake County utilization trends and forecasts demonstrates that NLFH is a significant provider of inpatient care (approximately 8,000 annual inpatient admissions at the hospital) and outpatient services delivered at five geographically dispersed sites in Lake County and northern Cook County.

Lake County is expected to experience inpatient growth, in part due to the aging of the population. Lake County residents over age 65 are responsible for 38% of inpatient patient days ⁽¹⁾. The new hospital facility will especially enable NLFH to meet demands for orthopedics and chronic disease services including oncology, cardiac, and neurosciences. Cancer, heart disease, and stroke are the leading causes of death in Lake County, responsible for 52.3% of deaths ⁽²⁾.

The new facility will help NLFH play a role in meeting Health People 2020 goals for Lake County: cancer death rate of 144.5/100,000 residents (down from 154.9) and 125.2/100,000 coronary heart disease deaths (down from 134.2) ⁽¹⁾.

In addition to promoting improvement in public health measures, the new facility will replace the current hospital building, most of which is not compliant with contemporary health care delivery and utility system standards. The replacement facility will reduce annual resources that are spent to maintain the outdated NLFH building, parts of which are 60 – 70 years old. These costs are approaching \$500,000 per year, not including over \$1,000,000 in needed upgrades requested this year and on hold. Certain conditions have received regulatory citations, such as lack of alarms in medical gas panels and blocking of sprinkler heads in storage areas due to the storage of necessary equipment and supplies in those limited storage areas.

The older inpatient facility does not meet many current hospital codes. Three examples of code violations and citations are:

1. Bathroom doors in the older wings are not wide enough to allow wheelchair access or IV pumps.
2. Air exchange in the special procedures rooms is at best 15 per hour; less than the 25 per hour NFPA 99 requirement.
3. Lack of storage has resulted in clutter in corridors and obstruction of means of egress.

These conditions have been grandfathered as ongoing conditions.

References:

⁽¹⁾Community Health Status Assessment, January 2012. Developed by the Mobilizing for Action through Planning and Partnerships (MAPP) process, Lake County's strategic planning approach to community health improvement.

⁽²⁾Community Health Needs Assessment Report, 2012. Developed by Professional Research Consultants, Omaha, Nebraska, for Northwestern Lake Forest Hospital and the Metropolitan Chicago Healthcare Council.

ALTERNATIVES

This section reintroduces the proposed project, as originally described in the Master Design Permit (CON #13-033), which is the construction of a replacement facility on the Northwestern Lake Forest campus to replace the current antiquated hospital. As context for the project, this section outlines a brief history of the incremental development of the campus over the past seven decades and provides detail about the significant deficiencies of the building and its aged utility systems. Four alternatives to the proposed project are also presented, along with an updated estimate of comparative costs.

Background

The original Lake Forest Hospital, located at 660 North Westmoreland Road opened in 1942, replacing the Alice Home founded in 1898. Since then, there have been ten additions or major renovation projects. The five most significant additions were 1) the south wing extension in 1959, 2) the west wing in 1967, 3) the north wing in 1984, 4) the emergency services and health education center addition in 2001, and 5) the Hunter Family Center for Women's Health in 2004. These facilities collectively make up the main hospital, totaling 370,000 square feet.

The main hospital anchors the Northwestern Lake Forest campus of 170 acres. Additional buildings on the campus include physician office buildings (built in 1951, 1981, 1987/1992), employee apartments (built in 1975), the Westmoreland Long-Term Care facility (built in 1975), the power plant (built in 1976), the grounds and maintenance building (built in 1983), the laundry (built in 1983), the Dearhaven Child Care and Learning Center (built in 1990) and the Health and Fitness Center (built in 1993). These facilities and the main hospital total approximately 740,000 square feet.

Main hospital Building Deficiencies

While the exterior appearance and interior spaces of the main hospital are very attractive, they mask significant obsolescence, maintenance challenges, and functional problems due to the age of the building. Utility systems are dated; some of the electrical distribution feeders are original. Air handlers serve the patient rooms and common areas in individual buildings with only code-required ventilation, not air conditioning. Most of the air handler units are undersized and at capacity. Individual wall units below windows provide air conditioning for the patient rooms. These are expensive to operate and maintain. Inadequate interstitial space above hallway and room ceilings prevents the introduction of ductwork for central air conditioning.

Inpatient rooms no longer meet patient expectations and contemporary health care delivery standards. Their small size restricts the ability to do procedures in the rooms; many are double occupancy and only a few have patient showers. Storage and work stations for staff are undersized. Outpatient areas are remote from patient entrances. Travel patterns through the sprawling facility are complex and confusing and often require patients, visitors, and staff to travel through patient care areas, negatively impacting noise levels within the clinical care areas. Over the decades, the incremental building additions and programmatic changes have resulted in complex intersections of programs and patient/staff traffic patterns. Many outpatient areas are proximate to inpatient functions, creating inefficiencies, privacy conflicts, way-finding confusion, and overall substandard patient experience.

Structural deficiencies

- Inadequate interstitial space. The building floor slab design is a “flat plate” concrete system. In the older buildings, the slabs are 12” to 14” thick, which makes it almost impossible to penetrate or modify floors in the building. The floor to floor dimensions are between 10’ and 11’. Current facilities are designed with floors 14’ to 16’ apart. This condition severely limits the space for state-of-the-art mechanical and electrical systems to be incorporated. Because of the thickness of the concrete floor slabs, some of the interstitial spaces above ceilings are only 6” to 8” in height. These spaces are filled with fiber-optic and computer cabling, telephone receptacles, nurse call cables, lighting receptacles, and so on. There is no ability to accommodate ductwork for heating and air conditioning. As a result, many of the hospital areas are cooled by window/exterior wall units and portable units.

Code deficiencies

- Due to the age of the facilities, there are numerous code issues that become increasingly costly to address. Examples:
 - In the west wing, there is no grounding for some of the electrical systems; disruptive channeling of plaster walls is needed to install piping.
 - There is negative pressure in Nuclear Medicine; the two rooms require two monitors but there is only one.
 - The 1942 and 1959 buildings do not meet ventilation codes because there is no ductwork in main hallways.
 - Medical gas panels are out of code, not compliant with NFPA – 70. Most of the existing gas panels do not have alarm stations so there is no alarm when a shut-off occurs.
- Lack of storage space is a problem throughout the main hospital. Medical gases should be in a dedicated room, but they are often put in storage spaces with cots for family members, chairs, boxes of supplies, etc. Stacked materials in storage areas block electrical panels, breaker and laser panels which compromises the required 36” clearance, and 18” clearance for sprinkler heads. There is no extra space for necessary storage.

Current conditions do not meet contemporary planning standards

- Patient rooms
 - 20 of the 84 medical/surgical beds are in semi-private rooms. The hospital industry standard recognizes that private rooms enhance operating efficiencies, promote infection control, avoid gender conflicts and issues with clinical conditions, and address patient preferences for privacy, comfort, and patient confidentiality. The current patient rooms are small, especially the semi-private rooms. Patient rooms average 176 nsf per bed in the west wing and 210 nsf per bed in the south wing. The hospital’s medical/surgical services average 369 dgsf per bed, well below the State standard of 500 – 600 dgsf per bed and the Health Care Advisory Board’s Facility Planning Forum’s Clinical Information Matrix standards of 290 – 340 nsf. This small room size limits the kinds of procedures (such as imaging and physical therapy) that can be done in the room and requires the patient to be taken to various support and treatment areas.
 - Additionally, moving a patient from the room often requires moving a nightstand to the hallway for clearance.

- The wall and window unit air conditioners further reduce functional room space for family/patient and healthcare provider.
 - The 10-bed and 13-bed medical/surgical units in the south wing are too small for efficient nursing staffing.
 - The 10-bed ICU averages 434 dgsf per room, significantly below the State standard of 600 – 685 dgsf per room.
 - The heating and ventilation systems lack adequate control for appropriate patient needs and comfort and in some cases do not meet current code requirements for air changes and proper air exhaust.
 - Most of the patient rooms do not have showers; use of showers in the hallways is a privacy concern for many patients.
 - All nursing units lack adequate amounts of family space and waiting accommodations.
- Toilet rooms
 - Many of the toilet and sink rooms average 25 – 30 square feet. They are inadequate for today's standards where the average toilet room size is 40 – 50 square feet to accommodate patient assistance and accessibility.
 - Expansion of some of the toilet rooms to accommodate a size change would preclude the ability of the patient rooms to function as semi-private rooms.
 - Modification of these toilet rooms while the units are occupied would be a long, costly, and disruptive process.
 - Some of the doors to the toilet room are too narrow for wheelchair and walker access. Additionally, for some bathrooms, a patient with an IV pole must rotate the pole because the leg base is too wide to clear through the doorway.
- Diagnostic and Treatment Areas
 - Several important clinical areas have significant spatial problems that prevent the services from meeting contemporary standards of care. Many of the treatment areas are at capacity and have no ability to expand. Closely related functions within the same department are often distant from one another. There is often no separation of staff work areas and the public spaces. There is limited space for staff work stations, support and storage space, and public waiting areas. Examples are as follows:
 - Surgery: 2nd floor surgery areas are spread over two wings. There are long travel distances between the 8 operating rooms and the prep/recovery area. The minor procedures area is located off a public hall forcing pre-op patients to go to the procedure rooms through a public waiting area. There is no separation of inpatient and outpatient functions, resulting in inefficiencies, including delays for outpatient cases. The 8 operating rooms range in size from 386 to 638 nsf, with most on the lower end of this range. The Health Care Advisory Board's standard is 600-650 nsf.
 - Emergency Department: the Emergency Department Triage area is remote from the Emergency Department treatment rooms. Access for ED patients who require surgery or intensive care is indirect, via public hallways and public elevators. There is an inadequate amount of space for storage, documentation and charting.
 - Diagnostic Radiology: expansion is constrained due to the fact that surrounding uses are fixed: the Emergency Department, Dietary and Pharmacy. There is no "soft space" for expansion. Imaging rooms are small. The area lacks storage. There is no separation of patient and staff traffic. One of the staff work stations is located between two ultrasound

rooms, without a door to the hallway. If the ultrasound tech needs to enter or leave the work area, he/she must wait until a procedure is completed which creates productivity inefficiencies.

- Oncology Services: Infusion Therapy is isolated from Radiation Oncology. There are 6 infusion chairs and one bed, most without windows. The area is cramped, public space with limited work stations and support areas for staff.
- Internal Circulation
 - The incremental growth of the hospital buildings has resulted in complex and confusing traffic flows for the public and staff. There is minimal separation of patient and support services movement in hallways and elevators. Access to and from imaging, cardiac testing, and from the Emergency Department is via public use corridors, compromising patient privacy and noise levels.
- Elevators
 - The building elevators are in good mechanical condition. However, they are located in the middle of clinical departments rather than in central lobbies, which results in inappropriate public traffic going through most of the first floor patient care areas. This is disruptive to patients and staff. Moreover, the elevators are not dedicated by function; patients, visitors, and staff use the same elevators which also compromises patient privacy. Modern standards promote separate elevators for patients, visitors, and staff and support functions such as food and supply delivery and soiled waste removal.

Dated infrastructure does not meet current and long term use requirements

- Mechanical, electrical, and plumbing systems
 - Mechanical, electrical, and plumbing systems have been renovated in different projects over the years, but many of the system components are nearing the end of their useful lives. System failures and service disruptions are increasingly frequent. Examples:
 - Earlier this year an oxygen line failed, affecting the entire Medical/Surgical Telemetry unit. Two patients were temporarily put on oxygen tanks.
 - In April 2013, there were three separate incidents: 1) a natural gas leak, 2) a steam leak, and 3) an electric power failure that required one building to be on a generator for several days.
 - In May 2013, one of the main cooling tower gearbox assemblies failed.
- Heating, ventilation, and air conditioning systems
 - Three firetube boilers are 37 years old and approaching the end of useful life. They are the original boilers in the 1976 power plant. They are adequate to provide the campus with steam generation for only an additional 5 – 10 years due to their age.
 - The power plant houses three chillers which are also aging; studies have recommended their replacement with three 1200 ton units. There is inadequate chilled water piping capacity due to the piping configuration; delivery line size is 5" and it should be 8". As a result many areas of the hospital cannot be cooled appropriately. For example, the occupational health area can't get sufficient air flow to reduce temperatures below 78- 80 degrees in summer; two rented portable A/C units are used to bring the temperatures down. Rental A/C units are also used in the emergency department.
 - Sterile processing in the wing built in 1984 is served by an undersized air handler and has insufficient ventilation.

- The building systems cannot properly dehumidify the south wing of the main building. Its system was not designed with an air return; it takes in 100% outside air and exhausts 100% (a good system recirculates at least 50%), resulting in significant waste of energy.
- Summer temperatures in hallways in the main building's first, second, and third floors are often not below 78-80 degrees.
- Plumbing system
 - Old piping in the older buildings delivers low water pressures, due to build-up of residues and minerals inside the pipes. The maintenance staff has been maintaining the lines in the north and west wings, requiring frequent opening of the plaster walls and replacing sections of pipe.
 - When the 1984 wing was constructed, plumbing in some sections utilized less expensive/thinner pipe, instead of cast iron. After 30 years, there are increasing leaks and failures.
 - Repairs are frequent in the kitchen area. Part of the problem is caused by a reduction in the waste lines from 4" to 2 ½".
- Medical gases
 - There have been failures in some of the old style panels, especially in the 1942 and 1959 hospital buildings and the west wing. As previously stated, many of the gas panels do not have an alarm station to alert staff when there are problems. When there are gas leaks, it may be necessary to access the leaks by taking whole walls apart; this has been the case in the 1984 building especially. While repair work is going on, staff must use portable cylinders for patients.
- Electric Service
 - The electric service is inadequate because it was designed at a time when the electrical requirements of systems and equipment were much less than they are currently. Electricity is provided from three utility feeders from the ComEd substation in Lake Bluff. The cabling that is in use from 1940, including some sections that have cloth insulation, is brittle and can no longer be maintained.
 - Some campus ductbanks and feeders are original from the 1970's and are beyond the normal life expectancy of 25-30 years.
 - The existing emergency power system is in good condition, with two Caterpillar diesel generators totaling 4,000 kW. However, the phase and ground conductors from the generator to paralleling switchgear are undersized; there is insufficient cable sizing for generator feeders.
 - Electric feeders have leaks, getting into switchgears. Most of the transfer switches are in need of replacement due to age and availability of spare parts.
 - In the 1942 and 1959 buildings, there are occurrences of overloaded outlets and circuits, requiring breakers to be reset frequently (about twice a month). Some of the breakers are old and have not been turned off for testing, out of concern that they might not come back on. Breaker panels have only 100 Amps, and should have 200 Amps.
- Communications systems
 - The Zetron and Responder III paging systems are antiquated. The Zetron system was installed in the late 1980s and has not been upgraded. It can handle only one page at a time. This results in delays of 20 to 90 seconds for notifications that should be instantaneous.

- Replacement parts are no longer available for the Responder III system which serves Occupational Health, the Outpatient Laboratory, and the minor procedure room area.
- The telephone system is also antiquated. The phones system at NLFH is primarily based on old technology referred to as PBX. The system has very limited features/functions as compared to contemporary systems such as Voice Over Internet Protocol (VOIP). The current system is at the end of its life cycle and needs to be upgraded or replaced. However, due to the older construction, limited capacity to handle more network cable, and limited network closet space, the current hospital building presents many challenges to moving to a full VOIP system.
- There is limited wireless coverage on the campus due to construction and design limitations.
- Pneumatic system
 - The pneumatic tube system connecting Pharmacy, Emergency Department, and Laboratory is in good working order. However, the pneumatic system/central vacuuming system in the 1967 wing did not perform well for cleaning and has been abandoned. The limited system requires the manual delivery of specimens and pharmaceuticals, delaying delivery and an efficient patient care experience.

Inefficient adjacencies and spatial deficiencies

As is the case with many hospitals that have grown incrementally through multiple additions, clinical programs at NLFH have evolved in locations that are not proximate to their supporting functions. Outpatient departments have spread in locations often remote from the main entrances and as a result, are difficult to find because their locations are without views of outside references. Interrelated clinical services have been placed in different buildings, based on the availability of space rather than on the need for functional interaction between related services. These inefficient adjacencies result in several operational problems, including lack of ability to share staff, and the time required by staff to escort patients and visitors to difficult to find services.

- Oncology Services
 - The related functions of Radiation Oncology, Breast Center, Medical Oncology and Outpatient Infusion Therapy are separated from each other and located on different floors. The Infusion Therapy area is located on the first floor in undersized space adjacent to a Medical/Surgical unit. Patients and visitors for the infusion area must walk through the inpatient unit, often asking for directions at the unit's nursing station.
 - Radiation Oncology on the lower level is also difficult to find and is adjacent to Materials Management and MEP spaces. Patient access to this area is difficult, via an employee entrance next to the loading docks. The dispersal and configuration of these related modalities complicates the organization of a contemporary cancer center at NLFH.
- Cardiac Services
 - Cardiac Services are fragmented. Interventional cardiology is located on the first floor near Intensive Care. Echocardiograms are performed in two separate rooms on the ground floor (one level below 1st floor); one of the rooms is a file room with a staff work station which patients walk through to get to the testing area.

- Cardiac stress testing is located in a different department altogether – within the Radiology area on the ground floor – in three rooms, one separated from the other two by 100 feet.
- The Cardiology reading room is located between the room for treadmills and the stress testing machines; staff work flow is impeded when testing is underway.
- The Cardiac Rehabilitation service is in the basement of the 900 Building, two buildings and a long, unheated tunnel, remote from the hospital. Because of the dispersal of these programs, staff coordination and coverage is not efficient.
- Radiology
 - Radiology, located on the lower level, is disjointed due to incremental growth. The two CT scanners are not adjacent which makes tech coverage difficult.
 - Storage is 100 feet away which results in delays when staff have to obtain special supplies.
 - There is no bathroom located near the MRI.
 - Similarly, there is no conference room or area for meetings and/or education.
 - The lounge area for staff is undersized and storage is limited.
- Outpatient Surgery
 - Outpatients coming for surgery experience a complicated route to their destination: they access the building through the Visitor Entrance, a volunteer is required to escort the patient past the Catheterization Lab, through an acute care unit on the first floor of the west wing, to the elevator bay in the oncology waiting area, and up to the second floor outpatient surgery waiting area to avoid patients getting lost.
- General Way-finding
 - Many patients and visitors find the entrance into the hospital a challenge. Usually patients and visitors to a hospital go to a main entrance. NLFH has both a Main Entrance and a Visitor Entrance which are both located off the main parking lot. Many people coming to the hospital are confused as to which is the appropriate entrance.
 - Patients dropped off at the Main Entrance are surprised to find steps and a ramp going down to the front door which is not a welcoming or handicap-friendly design feature.
 - The Visitor Entrance handles the patient discharge function which often causes confusion for visitors.
 - Neither entrance has a significant lobby or sight lines to family picking them up at the entrances or other distinguishing feature.
 - Once in the hospital, it is often confusing how to navigate to the right destinations.
 - Accessing elevators is a challenge; elevators are not located near the entrances, but are within clinical department nursing units.
 - Many elevators have front and rear access doors; creating confusion for patients.
 - When a person is leaving, getting back to either the Main Entrance, the Visitor Entrance, or the Emergency Entrance is not easy. One reason for the difficulty is that the entrances are on different floor levels. Usually the person will exit whichever entrance he/she comes upon first. However, upon leaving the building, the visual orientation to parking is different if they entered through the other entrance. The multiple entrance experience makes the visit a less than confident experience for many.

- **Waiting Areas**
 - There is an overall lack of public waiting areas in the hospital. Areas that once provided waiting space have been converted to clinical and support use. For example, a waiting area in the south wing serving Orthopedics has been converted to Physical Therapy space for patients having hip, knee, or other joint procedures.
 - Chairs in hallways or in nooks provide limited waiting space.
 - Public restrooms are an inconvenient distance from the waiting areas.
- **Charting Space**
 - Most of the buildings on campus were built before the computer age. There is not enough non-public space for charting and documentation. There are no data closets in several of the wings; mobile carts with computers for downloading information add to the clutter and congestion of patient space.
- **Administrative Space**
 - Administrative offices are located on the third floor of the west building. There is no way to access the offices without going through inpatient units. This is not typical in most hospitals, and further compromises privacy on the units.

Current facility maintenance and renovations are cost prohibitive

- **Annual facility maintenance is costly.**
 - Service contracts for facility maintenance are budgeted at \$410,000 for next year, up from \$369,000 this year, and \$344,000 in 2012.
 - An additional \$1,120,000 in requests for upgrades is on hold, due to the planned facility replacement. Significant investments are required for the main hospital buildings to remain operational into the future.
 - Maintenance and upgrades support only the status quo, and do not advance the ability to accommodate changes in the delivery of patient service in the future.
 - Examples of maintenance expenditures are listed below. The cost figures are based on last year's actual expenditures, unless otherwise specified. Cost information is provided by the NLFH Facilities Maintenance Department.
 - \$15,000 roof repairs
 - \$25,000 water system repairs
 - \$20,000 drain repairs
 - \$55,000 to address natural gas leaks, past three years
 - \$19,000 on smoke/fire damper repairs
 - \$15,000 on window unit A/C (parts only)
 - \$40,000 in medical gas systems to the surgery suite; replacement of all outlets
 - \$35,000 upgrade to diamond three medical gas system in patient rooms
 - Anticipated expenditures in the next year include:
 - \$150,000 – \$190,000 for two air handler units to serve areas of sterile processing (P2-09), Emergency Department and Occupational Health (MB-01).
 - \$49,000 replacement of duct system in the kitchen
- **The hard costs of major renovation and partial reconstruction of the current NLFH to continue using the building beyond ten years are estimated to exceed \$220 million.**
 - Major projects would include:
 - reconstruction of all inpatient and outpatient areas and support spaces to replace water pipes, electric feeder line, and medical gas systems

- replacement of boilers and chillers
- modification of ceilings to accommodate installation of central air conditioning
- reconstruction of inpatient rooms from double occupancy to single occupancy with showers
- roof reconstruction in some of the buildings
- relocation of elevators to new central lobby; and other major investments
- None of these projects would correct the issues of inappropriate adjacencies of clinical functions; in order to relocate these functions, building additions would have to be constructed.
- Disruption of ongoing patient care and support operations would be intolerable and extend over 4 – 5 years.
- Costs do not include the lost patient care revenue that would be incurred with a renovation or partial construction approach.
- These expenditures approach the cost of a total facility replacement and are not justified or even feasible investments.

In summary, the main hospital buildings are nearing functional obsolescence. Infrastructure and utility systems are antiquated, frequently fail, and require constant repairs. Patient care areas do not meet contemporary planning standards. Patient, staff and visitor flows are complex, confusing, and prevent efficient and effective care delivery. Maintaining the current hospital buildings for long-term future use is not a justifiable investment.

Alternative Projects Considered

NLFH began assessing facility issues and long range campus planning options in 2006. Internal task forces were given the charge to evaluate programmatic needs and set the direction for future services. Future program and facility needs were central topics in discussions between Northwestern Memorial HealthCare (NMHC) and NLFH, which became affiliated in 2010. Several consulting studies were undertaken to assess the hospital's facilities and building systems. Analysis considered a number of different alternative solutions. The planning process evaluated alternative building solutions in the context of patient convenience, patient access, internal circulation, functional layouts, building design, community context, growth potentials, land availability, implementation and costs. Five options are reviewed below:

Alternative 1: Renovate/modernize the current facility

Alternative 2: Construct a replacement facility (the proposed project)

Alternative 3: Replace the older hospital buildings; maintain the Hunter wing for Women's care

Alternative 4: Replace the current hospital with a significantly larger new hospital

Alternative 5: Build replacement hospital on the Grayslake Outpatient campus

Alternative 1: Renovate/modernize the current facility

This option recognizes that the age, obsolescence, and layout of the current hospital buildings, as described above, require a reconstruction of all inpatient, outpatient, and support spaces. The reconstruction would replace double occupancy rooms with single occupancy rooms. Showers would be installed in all patient room bathrooms. All water lines, plumbing, electric feeders, and medical gas systems would be replaced. New boilers and chillers would be installed. A central lobby with new elevators would replace the Visitor and Main entrances now in place. In order to relocate certain patient care areas to enhance adjacencies, new building additions would be needed.

Advantages

- Certain attractive areas of the hospital that are popular with hospital patrons would remain.
- The relatively new Hunter wing for Women's Health would continue to utilize support functions in the current hospital.

Disadvantages

- Major reconstruction of most of the hospital while operating all services would be very disruptive to patient care and hospital operations.
- Certain services/areas would have to be closed for periods of time resulting in a loss of volume and revenue.
- The time required to complete the reconstruction is estimated at 4 – 5 years; there is no time saved compared to a replacement project, and it is likely the timeline would be longer than new construction.
- Floorplates that were designed for patient care in the 1940s and 1950s are not adaptable to evolving state of the art care delivery.
- The cost of this alternative would be approximately \$385 million. This expenditure is slightly higher than the cost of constructing a modern replacement hospital.

This option was rejected because of the extensive costs and the difficulty of a total refurbishment of the facility's clinical, diagnostic and treatment, support space, and mechanical and utility systems.

Alternative 2: Replace the current hospital (the proposed project)

This alternative recognizes that it is no longer cost effective to invest in maintaining the current hospital buildings – the 1942, 1959, 1984 wings – due to their age and functional obsolescence. A new facility will have approximately the same bed complement as the current hospital: 84 M/S beds (no change from current bed complement), 12 bed ICU (increase of 2), and 18 Obstetrics beds (reduction of 5). The facility will have all modern diagnostic and treatment services in support of inpatient and outpatient care. All support services and building mechanical and utility systems will be new.

The hospital will also include an approximately 100,000 square foot medical office wing to accommodate practices of 60 physicians as well as outpatient clinical areas. This element of the project recognizes that one of the current physician office buildings, built in 1959, has significant building issues that include the need to replace the current roof structure. There is need to provide additional office space at the hospital in recognition of the 2010 affiliation with Northwestern Memorial HealthCare and the plan to expand specialty services by Northwestern physicians at NLFH as well as the requisite space to support the teaching and educational requirements of an academic affiliated hospital.

The new hospital will be constructed on the Northwestern Lake Forest Hospital campus, north and west of the current hospital buildings. A variety of potential re-use options for the current buildings are being evaluated but a final plan has not yet been determined at this time.

Advantages

- Provides facilities capable of delivering modern/state-of-the-art care, with all new mechanical, electrical, and plumbing systems.
- By building at a nearby but separate location to the current hospital buildings, the project avoids disruption of ongoing patient care in the existing main hospital.

- Replacement can be accomplished in a timeframe before boilers and chillers serving the current facility are at the end of their useful lives.
- New facilities can deliver standard of care that Northwestern has implemented on its Chicago campus; this cannot be achieved in the current facilities.

Disadvantages

- A few long-time patrons of the hospital are sentimentally attached to the original hospital building which was designed to simulate an estate home.

The cost of the proposed project is \$377,986,895.

This option is the preferred alternative.

Alternative 3: Replace the older hospital buildings but maintain the Hunter wing for Women's Health and administrative offices in the west wing of the current hospital

The Hunter wing, with 23 obstetrics beds and mammography, opened in 2004 and is the newest building in the main hospital complex. The wing has new building systems, central air conditioning, private patient rooms, and current technology. The Hunter wing has a separate entrance and parking on the south portion of the NLFH campus. It utilizes imaging, surgery rooms, laboratory, and pharmacy services of the main hospital.

This option is to construct a new facility to replace all of the patient care areas except for the Women's Health programs which would continue to be located in the Hunter wing. Additionally, administrative offices would remain in the west wing.

Advantages

- Continues use of a relatively new wing that is popular with hospital patients.

Disadvantages

- This alternative is not less expensive than the cost of a new replacement facility.
- It is not possible to build a new replacement hospital proximate to the Hunter wing. The Westmoreland Long-Term Care facility is located immediately to the south. Setback requirements on the west are restrictive. The current hospital buildings are adjacent to the Hunter building on its north and east side.
- This option requires continuation of certain functions in the current building: operating rooms, pharmacy, and imaging. This support will require upgrading and maintenance of all building systems that are outdated and in need of replacement, or reconstruction of these facilities in a building adjacent to the Hunter wing.
- The hospital would need to support Emergency Services at both acute care locations: the replacement hospital and the women's hospital (Hunter), increasing operational expense.
- There would be duplication of the clinical support functions between those put in place to support Women's Health at Hunter, and those located in the new hospital construction.
- Staffing for these functions would be split between this site and the new hospital, instead of having all centralized in the new hospital and capturing economies and efficiencies of operation.
- Support services, such as food service and laundry, will require transport of food and supplies from the central support services in the new hospital, increasing operating costs.
- If administration remains in the current buildings, it will be remote from activity in the new hospital. Additionally, there is not enough administrative space in the proposed project to make a significant cost savings.

The estimated project cost of this alternative is between \$375 - 380 million.

This alternative was rejected because it is less efficient and does not save money. The cost of not including Women's Health and Administration in the new facility is likely exceeded by a) costs to maintain these services in the existing facility close to Hunter or in a new addition to Hunter, b) higher operating costs with duplicate Emergency Services, diagnostic and treatment services in a new building that could be constructed adjacent to the Hunter wing, and c) extra costs to extend support services from the new hospital.

Alternative 4: Replace the current hospital building with significantly larger new hospital

This alternative received significant attention and support during the initial planning phase for the new hospital. Options considered included a new hospital with an increase to 100 Medical/Surgical beds (16 bed increase) or more, 15 ICU beds (5 bed increase), and 25 obstetric beds (2 bed increase).

A 100-bed Medical/Surgical bed complement reflects the State's standard of 100 Medical/Surgical bed requirement for new hospitals located in a metropolitan statistical area. A 100-bed Medical/Surgical complement also anticipates that the affiliation between NMHC and NLFH will result in the development of new services at NLFH and the extension of clinical programs from Northwestern Memorial Hospital in Chicago. Growth in several specialties has increased since the affiliation with NMH, however, historic patient utilization volume does not support an increased bed complement at this time. If inpatient volumes increase beyond the conservative projections included in ATTACHMENT-20, NLFH will request additional beds with a subsequent CON application.

Advantages

- Construction of a larger hospital at this time in anticipation of growth will reduce the cost of adding capacity through a future project.
- A 100-bed Medical/Surgical complement would be consistent with the State minimum size standard.

Disadvantages

- Construction of a larger hospital now increases the cost of the replacement hospital project in the short term.
- Current and historic patient volumes do not justify an increase in bed size.
- Healthcare reform impact may change utilization of several inpatient functions and additional capacity may be needed.

The cost of this alternative is approximately \$390 million.

This option was rejected due to current patient volumes. The new facility will be designed for flexibility that will accommodate changes in future patient volumes.

Alternative 5: Build replacement hospital in Grayslake instead of on the Northwestern Lake Forest Hospital campus.

NLFH's 44-acre campus in Grayslake includes a Freestanding Emergency Center, a medical office building, a cancer center, and 2 Ambulatory Surgery Treatment Centers. The site is large enough to accommodate a full service hospital. The planning process gave consideration to

replacing the Lake Forest facility in Grayslake, since both locations are located in the same State planning area (Lake County). If this option were to be pursued, current hospital operations would be discontinued in Lake Forest after the opening of a new facility in Grayslake.

Advantages

- Establishes a facility to serve north and central Lake County, adjacent to other NLFH facilities on the site.
- The new hospital can be built without any interference or disruption of the current hospital in Lake Forest.

Disadvantages

- NLFH's long commitment to care in Lake Forest dates back to 1898 with the founding of Alice Home. The 1942 Lake Forest Hospital replaced the Alice Home, extending its heritage to 115 years of continuous service in Lake Forest. Lake Forest and the surrounding communities in southern Lake County have expressed strong interest in continuing health care service delivery at the current NLFH campus.
- Three professional office buildings on the hospital campus in Lake Forest house 43 physicians. They have a strong preference in having the hospital remain in Lake Forest, to facilitate visiting inpatients near their office practices, and to maintain their practices of patients living in the southeastern area of Lake County.
- Other buildings on the current Lake Forest campus have a synergy with the hospital on that campus. These include the Health and Fitness center, the Dearhaven Child Care and Learning Center, and the Balmoral Care Center at Lake Forest Place (a CCRC located on campus). The fitness center and the child care center serve employees of the hospital. Additionally, the fitness center supports the rehabilitation needs of NLFH patients. Relocation of the hospital to Grayslake would reduce the utilization of the child care and fitness center on the current campus.
- In the negotiations for the 2010 affiliation with NLFH, NMHC committed to build new and/or refurbish the current hospital facilities, and not to sell the property.
- The optimal location for inpatient beds at Grayslake would be on top of the ASTC area of the facility. Constructing in this location could disrupt Grayslake operations.

The cost of this alternative is approximately \$390 million.

This option was rejected because of the strong preference of Lake Forest residents to have the hospital continue in their community, the commitment of the staff to the community, and the interdependencies with the physician offices, fitness center and child care services.

Summary

The following table provides a summary cost benefit analysis of the preferred project and the alternatives:

Location/Alternative	Meets functional program?	Project Cost	Availability
Renovate/modernize current facility	Yes	\$385M	2019
Construct replacement facility (proposed project)	Yes	\$378M	2017
Replace older wings/Maintain Hunter Wing for women's care	Yes	\$380M	2017
Construct larger replacement facility	Yes	\$390M	2017
Build replacement facility in Grayslake	Yes	\$390M	2018

Construction of a new, contemporary facility on the Lake Forest Campus is the preferred option because it meets the function program most efficiently and is the least costly alternative.

SECTION IV – PROJECT SCOPE, UTILIZATION, AND UNFINISHED/SHELL SPACE

Criterion 1110.234 – Project Scope, Utilization, and Unfinished/Shell Space

SIZE OF PROJECT

General Size of the Proposed Project

This section addresses the planning process and general issues related to the building: site parameters, building horizontal and vertical adjacencies, and standards used in planning.

Site Location and Attributes

The NLFH project is generally situated north of the current hospital building on the Lake Forest campus, located north of 660 N. Westmoreland Road in the City of Lake Forest – Lake County, Illinois. Geographically, the project area is found in the southwest ¼ of Section 29 and southeast ¼ of Section 30 of T44N, R12E, east of the Third Principle Meridian. The central portion of the project site is located at approximately 42.257333° North Latitude and - 87.865648° West Longitude.

The new hospital has been efficiently planned and designed to consolidate services and share equipment and space where possible. The number of acute care beds has been reduced and are vertically “stacked” on levels above the diagnostic and treatment platform which minimizes the footprint over the campus. Following several traffic flow and mobility studies of the existing hospital campus, including vehicular traffic, service and emergency access, visitor and staff mobility, and overall campus organization, the result was an integrated planning and design approach that consolidates services under one roof to maximize operational efficiencies. Consolidating the interventional services and medical offices further minimizes the development footprint on the site.

Alternatives to the project were considered, as stated in ATTACHMENT-13, including the refurbishment of the existing hospital building, but proved infeasible. The proposed project includes a state-of-the-art hospital and contiguous new medical office building located on the central campus. To minimize the impact of the natural site features, improve water quality and reduce runoff volume, a combination of open space, best management practices (BMP's), and buffer zones, including enhanced natural areas and storm water management features were at the forefront of the design throughout the planning process.

The NLFH project team of planners, architects, engineers, and consultants were committed to designing the new building as a single, well-integrated, and highly organized system. Promoting design and construction practices that are sustainable and meet U.S. Green Building Council, Leadership in Energy and Environmental Design (LEED) Silver Certification requirements as well as ASHREA 189.1 standards and ENERGYSTAR objects has resulted in a project that carefully balances building placement with energy, water conservation, and material and equipment efficiencies for the greatest overall long-term benefit to the community.

The studies, planning, and design work undertaken for the project successfully demonstrate the sequential steps that have been taken to avoid and/or minimize impacts to wetlands and natural resources to the greatest extent practicable. The anticipated impact associated with the project is the least environmentally damaging practicable alternative option developed.

To protect water quality and effectively manage storm water runoff, a treatment train of Best Management Practices was incorporated and adapted to replicate site conditions to support required water quality functions, and set aside on site, open space acreage. In addition, through close coordination with the U.S. Army Corp of Engineers, the Illinois Environmental Protection Agency, and Lake County, appropriate compensation (wetland mitigation) is proposed to replace wetland areas disturbed by the project that cannot be replicated on site. The wetland strategy used replaces those on site wetland areas disturbed with wetlands in close proximity to the project; which remain within the same watershed with matching functional value.

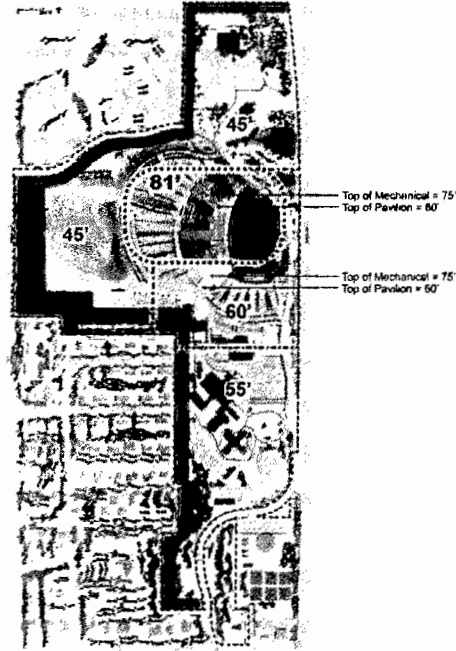
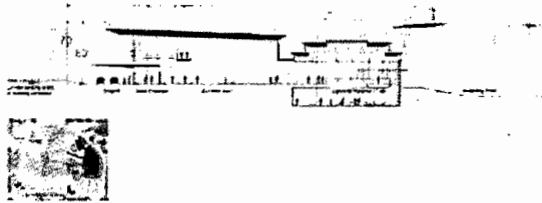
Through the wetland investigation and other logistic studies, NLFH initiated the conceptual design process based on the need for improved patient access and mobility, emergency treatment, and critical care needs required on the hospital campus. Local input and City planning processes were critical in the determination of the proposed hospital building location, size, and height, and in the general formation of the conceptual plans. Further studies, planning, coordination and compliance with local requirements over the course of nearly two years followed, and have produced the proposed project.

Requirements that influenced the site and building design include local ordinance requirements and the issuance of a Special Use Permit by the City of Lake Forest, a series of public meetings and open houses, reviews by the City's Project Advisory Committee who considered local residents' input, zoning code requirements, and legal restrictions that govern the land use. Engineering design and development, LEED certification considerations, and protection of existing natural resources, on site wetland, and open space were also at the forefront of the coordinated planning and review process. All necessary state and federal regulatory provisions were incorporated into the design from the project's conception.

Zoning

The Special Use Permit (SUP) approved by the City of Lake Forest included a Campus Master Plan for the site and provided guidance regarding allowable building height in various zones of the campus. The maximum height was set at 81' in a zone in the central portion of campus, with allowances of 45' on the north and western portions of campus, and 60' and 55' to the south. The building design respects the intent of the SUP with heights of 60' to the top of the pavilions and 75' to the top the mechanical screening as measured relative to the lowest adjacent existing grade.

Building Height Allowance Special Use Permit



Note: Heights are stated above lowest existing grade
(2' to 10' below first floor elevation)

Northwestern
Medicine

Program

The size of the building was driven by the component clinical programs, their volumes, and required support services. An extensive strategic planning process identified the clinical programs and volume projections, based on historic growth and projected community need. These programs and volumes were the basis for the functional programming and space planning process. The architectural firm of Hemmal Green and Abrahamson (HGA) provided technical support for significant internal user-group participation.

Additionally, there were several site visits to other health care facilities to collect benchmarking and best practice information related to operations, programming and design. Site visits were taken to the following facilities:

- *Supply / Materials Deployment Strategies:*
 - Rush University Medical Center, Chicago, IL
 - Advocate Lutheran General Hospital, Park Ridge, IL
 - Froedtert Hospital, Milwaukee, WI
- *Coordinated Call Center:*
 - Elmhurst Memorial Hospital, Elmhurst, IL
- *Integrated Surgical/Procedural Interventional Platform:*
 - Rush University Medical Center, Chicago, IL
 - Virtua Voorhees Hospital, Voorhees, NJ
- *Integration of Community Based Ambulatory Services with Academic Programs:*
 - Indiana University (IU) Health Saxony Hospital, Fisher, IN

- *Integrated Pediatric Programming; Inpatient and Outpatient Services:*
 - Silver Cross Hospital, New Lenox, IL
 - Adventist Bolingbrook Hospital, Bolingbrook, IL
- *Women's Services:*
 - Prentice Women's Hospital – Northwestern Memorial Hospital, Chicago, IL
 - Rush University Medical Center, Chicago, IL
 - Elmhurst Memorial Hospital, Elmhurst, IL
 - Advocate Sherman Hospital, Elgin, IL
- *Lean Operational Strategies:*
 - SSM Healthcare-St. Clare Hospital, St. Louis, MO
- *Hospital Operation Overview Tours:*
 - Virtua Voorhees Hospital, Voorhees, NJ
- *Sustainability:*
 - Chicago Botanic Gardens, Glencoe, IL

Floor Gross Assumptions

As in previous CON applications submitted by Northwestern Memorial Hospital, floor gross elements that are not part of the “usable floor area” were not included in the departmental square footage (DGSF) determination. These elements include:

- Elevator cores and lobbies
- Stairs
- Shafts including mechanical, plumbing, ComEd, and Life Safety
- Electrical rooms
- Communication rooms
- Non-departmental circulation

The building gross takes the departmental square footage and adds the floor gross as well as the building's exterior wall, resulting in a building gross square footage (BGSF).

Building Structural Grid

The planning of the proposed project accommodates the space and operational needs of the space program in a way that is both functional, in providing the appropriate area and clearances necessary to perform a given procedure, and efficient, in the use of space necessary to support the given function.

To maximize the future flexibility of the facility, a 31'- 4" x 30'- 0" module was chosen. The uniqueness of this structural grid, however, lies in the variation due to the radial nature of the building. At the heart of the diagnostic and treatment center (Interventional platform), the building's centerline rests at the module noted above, yet the bays gradually reduce as they fan out from that centerline. The inpatient units follow the 31'- 4" x 30'- 0" module since they are linear pavilions resting atop the radial podium below.

Sustainability/Green Design

Northwestern Memorial HealthCare (NMHC) has set clear and concise facility and site performance standards for all NMHC projects including Northwestern Lake Forest Hospital. NMHC projects will meet USGBC LEED Silver requirements, ASHREA 189.1 standards, and utilize EnergyStar equipment to meet our corporate-social responsibility to design, build and operate sustainable/green facilities and sites within the NMHC System.

USGBC Leadership in Energy and Environmental Design (LEED)

The goal of the NLFH project is to achieve US Green Building Council LEED Silver Certification. LEED addresses sustainable design issues such as:

- Site design features
- Water consumption
- Energy efficiency
- Envelope design
- Natural and electrical lighting approach
- Material and finish selection
- Healthy environment

ASHAE Standard 189.1

The American Society of Heating and Air-Conditioning Engineers (ASHAE) Standard 189.1 provides a total building sustainability standard for the design, construction and operations of green buildings. From site location to energy use to recycling, this standard used for NLFH sets the foundation for green buildings by addressing site sustainability, water use efficiency, energy efficiency, indoor environmental quality, and the building's impact on the atmosphere, materials and resources. ASHAE Standard 189.1 serves as a compliance option in the 2012 International Green Construction Code™ (IgCC), which has not yet been adopted by the State of Illinois.

ENERGY STAR

A U.S. Environmental Protection Agency (EPA) voluntary program, the ENERGY STAR program has been instrumental in reducing a significant amount of greenhouse gas (GHG) emission. As part of a comprehensive Northwestern Medicine System-wide program to addresses the challenges of climate change, and in an effort to achieve reduced carbon emissions generated by facility heating, cooling, and other equipment, the project will select ENERGY STAR certified equipment.

Total Building Size

The proposed project has 208,122 DGSF of clinical space and 175,941 DGSF of non-clinical space. The project has a departmental to building gross square footage ratio of 1.22. The project has a total of 469,593 BGSF.

Clinical Components

Medical/Surgical

With the driving functionality of universal design and flexible, adaptable spaces, the Medical/Surgical platform is comprised of 24-bed units, divisible into “pods” of twelve, six or even down to pods of two to accommodate acuity and visualization. The high degree of flexibility of this design is intended to accommodate varying levels of patient acuity as well as help to maintain adequate nursing ratios.

The Inpatient Experience

To achieve exceptional patient care and safety, the Inpatient Platform will feature lean efficiency measures such as deployment of supplies and medications, decentralized level of care and electronic medical records, and a state-of-the-art environment capable of supporting a flexible, adaptable, high quality, best practice model of care.

The Inpatient Platform is driven by the need for an exceptional level of patient care and experience; through an efficient and universal design, patients will feel empowered, informed, and connected in the care plan operating in a stress-free, reliable care environment. The units will incorporate direct accessibility to staff and supplies for a high level of personalized care and communication.

Unit Design

The new facility will serve as a replacement of the old facility; yet the innovation of the new facility will include an upgrade to the patient rooms, making them into private spaces with dedicated family areas incorporated in each room where family can stay overnight comfortably. Units will be flanked by a single-loaded corridor design of patient rooms along the outside of the unit with a support core extending through the middle. NLFH plans to pursue a semi-decentralized model of supplies and medications in a current state, with the capability for full decentralization in the future; therefore, the support core contains a 2:12 supply room ratio to patient rooms, 1:12 meds room, 1:12 nourishment, 1:12 equipment, and 1:24 soiled utility access.

Patient rooms will be private yet have direct visibility to staff charting stations for adequate monitoring and connection to the patient. A staff “collaboration hub” has been designed into the support core of each unit and strategically placed to provide direct views into four patient rooms; through this model, all hubs are able to monitor all patient rooms in a unit.

Hubs will contain charting capabilities as well as provide a touch-down space for staff to collaborate but still maintain proximity to patients. In addition to charting in the core, each patient room will support and include the technology for staff to chart and increase their time at the patient bedside.

Room Design

Each patient room will feature a “supply server” intended to support this model of supply decentralization. Research has shown how greatly room-side supplies and medications decrease staff travel times and increase time at the bedside. Staff is better able to concentrate on a single patient, reduce opportunity for error, and reduce patient falls due to increased monitoring and increased one-on-one staff and patient time. The design of these room-side servers will allow staff access from the corridor as well as inside the patient room and will house most-frequently used supplies, linens, PPE and potentially medications in the future.

In terms of the patient room detail, rooms will be oriented in a same-handed fashion vs. the mirrored approach, directly supporting the universal nature of the unit and encouraging an efficient and intuitive environment. Research has shown that same-handed patient room orientation supports staff and physicians by promoting an environment where the main variable is the patient, therefore eliminating distractions and the opportunity for errors by driving focus to the patient.

Patient rooms will feature outboard and footwall toilet room configuration where it resides on the outer wall of the room, opposite from the entry and on the opposite wall than the patient's head. Footwall orientation enables patients to maintain a direct and unobstructed path of travel from the bed to the toilet room. Often times, furniture like recliners or family chairs or even equipment such as ventilators, flank the sides of the patient headwall and can be an obstacle when in the path to a headwall toilet configuration. Outboard allows staff to maintain a designated and accessible "staff zone" where they can chart, work with the patient, prep supplies and/or medications, and monitor the patient effectively.

Visualization is also an added benefit to the same-handed, outboard toilet configuration of the patient rooms. This design orientation, along with the placement of the collaboration hubs within the support core allow a high degree of visibility into the patient rooms from the corridor for staff to monitor and maintain connection with patients.

Unit Innovations

The inpatient environment will promote healing through the connection to natural light and views to nature. Patients will also have the opportunity to feel comfort through the inclusion of family space within each private patient room to enhance the comfort and healing nature of the unit.

The hospital will also benefit from the design of separated "on-stage" and "off-stage" circulation, keeping public corridors and elevators separate from those used by patients, staff, and support services. This design feature will allow a private and efficient experience for patients and staff so public are not intermixed with workflows and interrupting modes of travel for staff. The patient units include this separation of circulation, allowing supplies to be brought up directly to the units and distributed as well as allowing the movement of patients discretely to hospital services such as surgery, ED, and imaging services.

Medical/Surgical units will also benefit from the integration of inpatient rehabilitative services through a dedicated workroom/inpatient rehab gym space. Although these areas will not support the full extent of rehabilitative functions (i.e. a fully-equipped and sized rehab gym) but will allow rehab staff to interact with patients and remain in close proximity to them in order to maintain a good relationship and be a part of the care plan.

Lastly, the units will feature technological support to connect patients and staff while maintaining a quiet and calming atmosphere. Staff will utilize personal communication devices to eliminate the need and disturbance of overhead paging. Patient rooms will also feature an element of connection to staff as well as education to remain informed about the care plan. The details of these technology elements are to be determined, but will be integrated into the process and design to support the overall function of these spaces as well as benefit the patients and staff.

Comparison of Space to Cost Standard

Square footage for the Medical/Surgical department is 55,650 DGSF.
Components and space standards used are as follows:

MEDICAL/SURGICAL	DGSF
84 Medical/Surgical beds, as designed	55,650
State Standard for 84 medical/surgical beds, 660 dgsf/bed	55,440
Amount of difference, explained and justified below	210

Explanation/Justification of difference, by component

1.	Room Design	
	Patient/Family/Visitor Zone As in the NMH inpatient rooms, the rooms at NLFH are designed to be patient and family-centered. The patient/family/visitor zone has additional space requirements. The daybed/seating area has been adopted all over the country as a model for providing comfortable seating and overnight sleeping arrangements for family members. This will eliminate the need to move a cot into the patient rooms or providing recliners for family members, neither of which is comfortable, and both are often in the way of providing patient care. 84 x 40 nsf/room difference x 1.55 n-g conversion factor = 5,208 DGSF	5,208
	Temporary Mobile Equipment Parking At the entry of each patient room, there is a small alcove for temporary mobile equipment parking. This staging space is designed for mobile imaging or other equipment that is being utilized on the floor but does not have a permanent storage location on the unit. This space will become even more necessary as more diagnostic equipment becomes portable. 84 x 16 nsf/room difference x 1.55 n-g conversion factor = 2,083 DGSF	2,083
	TOTAL SQUARE FOOTAGE JUSTIFIED	7,291

The square footage justifications exceed the difference from the State standard by 7,081 sf.

Intensive Care Unit (ICU)

In order to promote and maintain the universal nature of this hospital's design, the Intensive Care Unit has been designed in the same fashion as Medical/Surgical, as explained above. All inpatient rooms will be fitted to the codes/standards/clearances of ICU rooms for the highest degree of flexibility and adaptability as patient acuities flex throughout the day, week and seasons; this flexible design will also allow the facility to accommodate the changing patient volumes and patient types as the world of healthcare changes in the years to come.

The main difference between the ICU and Medical/Surgical units is the inclusion of an enlarged waiting room area for public due to the intensity of the patient types admitted to ICUs. Families typically remain on the unit for longer periods of time in an ICU setting, and therefore, we have accommodated that public need to support the ICU unit.

The ICU unit will have 12 beds and will mimic the Medical/Surgical patient room design as well as unit design in reference to items such as the support core. Although universality is the driving force in this process, the ICU will be staffed and even supported differently in terms of supplies, equipment, medications and specific room details such as medical gases and patient headwall designs. These details will be determined during the Design Development phase of the project as well as during the Activation process prior to facility opening.

Comparison of Space to Cost Standard

Square footage for the ICU department is 9,381 DGSF.

Components and space standards used are as follows:

ICU	DGSF
12 ICU beds, as designed	9,381
State Standard for 12 ICU beds, 685 dgsf/bed	8,220
Amount of difference, explained and justified below	1,161

Explanation/Justification of difference, by component

1.	Room Design	
	Patient/Family/Visitor Zone As in the NMH inpatient rooms, the rooms at NLFH are designed to be patient and family-centered. The patient/family/visitor zone has additional space requirements. The daybed/seating area has been adopted all over the country as a model for providing comfortable seating and overnight sleeping arrangements for family members. This will eliminate the need to move a cot into the patient rooms or providing recliners for family members, neither of which is comfortable, and both are often in the way of providing patient care. 12 x 40 nsf/room difference x 1.55 n-g conversion factor = 744 DGSF	744

	Temporary Mobile Equipment Parking At the entry of each patient room, there is a small alcove for temporary mobile equipment parking. This staging space is designed for mobile imaging or other equipment that is being utilized on the floor but does not have a permanent storage location on the unit. This space will become even more necessary as more diagnostic equipment becomes portable. 12 x 16 nsf/room difference x 1.55 n-g conversion factor = 298 DGSF	298
2.	Department Design	
	Each inpatient 24-bed unit has a room designed for inpatient Rehabilitative services. Because these 24-bed pods are designed universally, the ICU unit contains one of these special procedure rooms. Because ICU patients will not utilize rehabilitative services, the room will be used primarily for storage of respiratory therapy equipment such as ventilators, flow meters, bronchoscopy carts, Bipap units, intubation scopes, etc. 250 nsf x 1.55 n-g conversion factor = 389 DGSF	389
	TOTAL SQUARE FOOTAGE JUSTIFIED	1,431

The square footage justifications exceed the difference from the State standard by 270 sf.

Obstetrics

The new facility will be designed as an LDR + P model, as in the current facility, where postpartum or “obstetric” functions will be in separated rooms from Labor & Delivery spaces. In the new facility, Labor & Delivery (including C-Section rooms, Triage, LDRs, Special Care Nursery, etc.) will be located on Level 2 of the southern-most pavilion of the bed towers. The Labor & Delivery unit will be situated directly above the Emergency Department for 24-hour access and security support. The Obstetrics unit will be directly above this unit on Level 3.

As a function of both the Women’s and Inpatient platforms, Obstetrics will serve the postpartum and well-baby patient population while maintaining a universal Inpatient unit design as in Medical/Surgical and ICU. Like the other inpatient units, Women’s Services are driven by the need for an exceptional level of patient care and experience; through this efficient and universal design, staff will be better able to help patients feel empowered, informed, and connected in the care plan.

The benefit to designing Obstetrics in the same fashion as adjacent Inpatient units is a high degree of short term as well as long term flexibility; as patient volumes surge, staff can easily adapt and flex between units because of their similarity – here again, the intent is to create an environment where the patient is the main variable, not the environment.

Obstetrics will support 18 total obstetric beds, including antepartum and postpartum patient needs. These 18 rooms will be oriented in the same manner as Medical/Surgical and ICU rooms except a Normal Newborn (or “Well-Baby”) Nursery will be fitted into the unit where the 6 additional beds would be on neighboring Inpatient units. Again, each patient room will be private and have designated space for both mom and baby; these patient spaces will promote healing through connection to natural light and views to nature. Family space will again be integrated into the room design to accommodate overnight stays and family inclusion in the care plan as well as education.

Consistent with a standard labor-delivery-recovery (“LDR”) model, mothers who undergo a vaginal or C-section delivery will be transferred from the L&D unit to one of the 18 private postpartum rooms after recovery. Units will accommodate mobile technology and imaging capabilities as well as the necessary support staff and services to improve workflows. The platform will have direct accessibility to surgical and imaging services as well as connection to neighboring inpatient units. Staff in postpartum will emphasize 24-hour rooming in of babies, utilizing the nursery primarily for babies requiring higher level of observation or for mothers who are unable to provide care of the baby 24 hours/day. Due to the active rooming-in policy the nursery is designed to accommodate up to 12 newborns.

Comparison of Space to Cost Standard

Square footage for the Obstetrics department is 15,244 DGSF.
Components and space standards used are as follows:

OBSTETRICS	DGSF
18 Obstetrics beds with 12 newborn bassinets, as designed	15,244
State Standard for 18 Obstetrics beds, 660 dgsf/bed	11,880
State Standard for 12 Level I nursery bassinets, 160 dgsf/obstetrics bed	1,920
	13,800
Amount of difference, explained and justified below	1,444

Explanation/Justification of difference, by component

1.	Room Design	
	Patient/Family/Visitor Zone As in the NMH inpatient rooms, the rooms at NLFH are designed to be patient and family-centered. The patient/family/visitor zone has additional space requirements. The daybed/seating area has been adopted all over the country as a model for providing comfortable seating and overnight sleeping arrangements for family members. This will eliminate the need to move a cot into the patient rooms or providing recliners for family members, neither of which is comfortable, and both are often in the way of providing patient care. 18 x 40 nsf/room difference x 1.55 n-g conversion factor = 1,116 DGSF	1,116
	Temporary Mobile Equipment Parking At the entry of each patient room, there is a small alcove for temporary mobile equipment parking. This staging space is designed for mobile imaging or other equipment that is being utilized on the floor but does not have a permanent storage location on the unit. This space will become even more necessary as more diagnostic equipment becomes portable. 18 x 16 nsf/room difference x 1.55 n-g conversion factor = 446 DGSF	446
	TOTAL SQUARE FOOTAGE JUSTIFIED	1,562

The square footage justifications exceed the difference from the State standard by 118 sf.

Birthplace

As mentioned above, the Women's Platform will feature a LDR + P model with separated services on two adjacent floors, all directly above the Emergency Department (Level 1). Birthing Services on Level 2 will include the following:

- 2 Triage rooms
- 2 C-Section Prep rooms
- 2 C-Section rooms
- 2 C-Section Post-Anesthesia Recovery Bays (room for two moms and up to three babies to accommodate twins)
- 5 Labor & Delivery rooms (LDRs)
- Special Care Nursery with 6 Level II+ bassinets (including 1 Isolation)

The co-location and intuitive sequence of Triage and C-Section services upon entry to the Birthplace unit creates an ease of patient flow and supports the stages of a patient's visit within the birthplace; this patient flow enables patients to progress through the system and helps maintain availability in higher turnover rooms such as LDRs. The Women's Platform also utilizes a key adjacency between the Emergency Department for arriving moms to have direct access to labor and delivery services during emergent birth situations.

The Birthplace unit will feature the appropriate level of security to provide an excellent patient experience and calming environment. As in Inpatient and Obstetrics units, LDR rooms will include family accommodations for overnight stay and dedicated area for newborns with a bassinet, supplies, charting capabilities, etc. to encourage connection with mother and family under the precedent of rooming-in. Private room designs also feature private toilet rooms and showers.

One difference in the LDR room design from Inpatient, other than sizing a larger floor area to accommodate the functionality and workflow of this type of space, is the designated and accessible storage area for each LDR. Due to the amount of specialty equipment and need for immediate accessibility in many cases, each LDR is fitted with an adjacent storage area which can be accessed from both the LDR patient room as well as the corridor outside the room for ease of mobility and stocking.

The C-Section Suite on this floor is strategically placed with direct access to Triage, LDR, and the staff "off-stage" elevator in case of emergent need to transfer to the Interventional services on the floor below. Staff lockers are situated so staff can enter and exit on a sterile side of the unit in proximity of the C-Section rooms. Anesthesia support (i.e. workroom, medication room, supplies, etc.) will be located directly across from the C-Section rooms with access to Recovery spaces as well.

Communication technology will be embedded within the units, in patient rooms as well as carried on all care providers to minimize patient distraction and increase staff response time; this technology readily connects patients to care providers, as well as care providers to other care providers. Patient rooms will feature technology access such as computer, TV, music, electronic communication boards for educational purposes and calming effects.

The unit will be a healing environment; rooms will feature windows with natural daylight and views to nature, noise reduction design and technology measures such as non-overhead paging

protocols, directly reducing patient and staff stress, and finally on-stage & off-stage corridor and elevator concepts to maintain separation of public and staff / patient / support services travel.

Comparison of Space to Cost Standard

Square footage for the Birthplace department is 11,573 DGSF.

Components and space standards used are as follows:

BIRTHPLACE	DGSF
5 Labor/Delivery/Recovery rooms, 2 C-Section rooms and Triage area, as designed	11,573
State Standard for 5 LDRs, 1,600 dgsf/room	8,000
State Standard for 2 C-Section rooms, 2,075 dgsf/OR	4,150
	12,150
Amount of difference, explained and justified below	(577)

The Birthplace Department falls within the State standard for department size.

Special Care Nursery (SCN)

In an effort to provide an excellent patient and family experience, especially under situations in a Special Care Nursery, the Special Care Nursery unit in the new facility is designed as a private bay model. To support current volumes, this unit is designated as a Level II+ NICU or Special Care Nursery (SCN). The private bay setting is specifically designed for staff access, yet separation of patients for a calming atmosphere as well as family inclusion.

Each private bay will be a three-walled space with views through an exterior window to nature, and have one open side (either curtained or glass sliding doors) to enable efficient monitoring as well as provide privacy for families for discussions with physicians and staff. This design allows an intimate level of care without squeezing patients together; each patient will benefit from a one-on-one interface with staff, and will consequently benefit family inclusion in the care plan as well.

The SCN unit will be a closed, secured unit with access only granted by checking in with the staff member at the front of the unit who will also check with the nurse currently in the SCN. Five SCN bays are included in the design as well as one isolation bay with attached ante room for PPE gowning, etc.

To support the unit, rooms such as Clean Utility, Medication Room, and Nourishment have been located inside the doors of the SCN so staff can remain in constant proximity to patients. Staff is supported in the unit by a central staff workstation as well as toilet room (which is also accessible for visiting parents coming from the Birthplace unit, Obstetrics unit, or home).

Due to the nature of patients in this setting, family members may often want to spend the night with patients; although the SCN bays are large enough to incorporate a "family zone" with rocking chair, they may not be comfortably large enough for overnight stay. In order to support the inclusion of families, the design has included two "Family Overnight" rooms complete with private toilet rooms and directly adjacent to the Special Care Nursery for connection to patients and staff. These spaces may be used by family members staying overnight as well as mothers who have already been discharged and who are coming back to visit their babies still in the SCN.

Comparison of Space to Cost Standard

Square footage for the Special Care Nursery department is 3,430 DGSF.
Components and space standards used are as follows:

SPECIAL CARE NURSERY	DGSF
6 Level II Nursery bassinets, as designed	3,430
State Standard for 6 Level II nursery bassinets, 160 dgsf/obstetrics bed	960
Amount of difference, explained and justified below	2,470

Explanation/Justification of difference, by component

1.	Extra Departmental Component	
	Family overnight rooms Many parents/family members stay in the SCN with their babies for hours and/or days. For this reason, there will be two overnight rooms that can be used by parents/family of patients in the SCN. They can also be utilized for resting/lactation support during the day. 1430 nsf x 1.55 n-g conversion factor = 2,217 DGSF	2,217
2.	Size Considerations	
	Level I vs. Level II+ While the State has only one standard for Level I and Level II+ nursery bassinets, there is a large difference in the amount of space needed for the two acuity levels. Level II+ nurseries require space for separate patient bays, more equipment, and space for family-centered care. 6 x 60 nsf/bed difference x 1.55 n-g conversion factor = 558 DGSF	558
	TOTAL SQUARE FOOTAGE JUSTIFIED	2,775

The square footage justifications exceed the difference from the State standard by 305 sf.

Clinical Decision Unit

The Clinical Decision Unit is located adjacent to and between the Emergency Department and the Prep and Phase II Recovery areas and consists of 8 identically sized, handed, and outfitted rooms, each with a patient toilet and shower. All patient rooms have direct access to natural daylight through exterior windows that face an internal, exterior courtyard.

The unit will be accessed by the public through entrance portals to be shared with the OR and Interventional Prep and Phase II recovery area.

The unit will be used to expedite treatment of inpatient and observation patients. Patients in the unit will begin admission protocols such as administration of antibiotics and ordering of tests.

Because of this unit's proximity to the ED and Prep and Phase II recovery area, it can also serve as flex space to serve the extended patient care needs of ED patients as well as for Prep and Phase II patient space needs. The Emergency and Prep and Phase II Recovery areas have been co-located to provide additional seamless flexibility in capacity to meet the dynamic needs of each area.

The 8 patient rooms will be standardized and designed to include staff, patient and family zones; all to provide faster access, better outcomes, and consistent care for demands of the ever changing patient types utilizing these rooms.

All support spaces including medication, clean supply, soiled and nutrition are shared with the adjacent Prep and Phase II Recovery area and are also same handed and equipped to provide the same level of added safety and efficiency being provided in each patient care space. Equipment alcoves have been distributed throughout the care area to provide timely, convenient access from any location.

Comparison of Space to Cost Standard

Square footage for the Clinical Decision Unit is 3,861 DGSF

There is no State space standard for Clinical Decision Units/Observation beds.

As a comparison, the 12 observation beds that were included in NMH's Galter Inpatient Beds project (CON #09-039) encompassed 5,647 DGSF. That is approximately 471 DGSF/bed. The 8 observation like beds in this department are proposed to encompass 3,861 DGSF which is 483 DGSF/bed. The 12 DGSF/bed difference is due to the fact that the observation beds in Galter had shared toilet rooms (1 toilet rooms for every 2 patient rooms). All 8 rooms in the proposed project will have private bathrooms.

Emergency Department

The Emergency Department is co-located with the Clinical Decision Unit and the Prep and Phase II Recovery area to allow it to flex up or down based on time of day, day of week and the demands of each patient care area. The drop-off, entrance vestibule and greeter also serve the Birthplace patients arriving through the same area. Birthplace patients will enter the building and be directed back to a dedicated Women's Center elevator, while ED patients will be directed to the adjacent ED waiting area and then back into the ED.

Each of the 16 Emergency Department patient treatment spaces will be private, same handed and outfitted similarly. Four of the spaces are Assessment/Discharge (urgent care) spaces located and designed for quick patient exchanges. An adjacent sub-waiting space will be provided to allow for the staging of these patients prior to and/or awaiting test results, prior to disposition and discharge.

Eleven of the patient rooms are same handed and similarly outfitted plus have an integral patient toilet and sink and are designed to include staff, patient and family zones; all to provide faster access, better outcomes, consistent care of pre- and post-procedure patients, higher productivity of staff, and utilization of space in a patient and family friendly way. Two of the eleven will additionally be outfitted with behavioral health safety features and one of the eleven will be partnered with ante rooms to provide care for isolation patients.

The trauma/resuscitation room is sized to accommodate one or two patient based on needs and type of patient and is located to provide discrete, direct access from the ambulance garage, access to specialty equipment located in adjacent alcoves, and key supervision from adjacent staff spaces. Access from the resuscitation room to the CT is convenient, off-stage, and direct.

All support spaces including medication, clean supply, soiled and nutrition are also same handed, standardized and equipped to provide the same level of added safety and efficiency being provided in each patient care space. Equipment alcoves have been distributed throughout the care area to provide timely, convenient access from any location.

Comparison of Space to Cost Standard

Square footage for the Emergency Department is 12,289 DGSF.
Components and space standards used are as follows:

EMERGENCY DEPARTMENT	DGSF
16 Emergency Department rooms, as designed	12,289
State Standard for 16 Emergency Department rooms, 900 dgsf/station	14,400
Amount of difference	(2,111)

The Emergency Department falls within the State standard for department size.

Interventional Procedures

Three procedural areas have been brought together under one platform to create combined synergy and services that are much greater than each area alone. This platform is comprised of 8 Operating rooms, 2 Gastrointestinal Procedure rooms, 1 Minor Procedure room, 1 Pain Management Procedure room, 1 Catheterization Lab, and 2 Interventional Radiology Labs now under a common umbrella. Additionally and in support of, a centralized PACU (Phase I Recovery) has been included to provide a consistent and safe level of care to all services present under this Platform.

The Interventional Platform is designed to promote a high level of collaboration between staff while providing necessary resources of a large surgical and interventional service. All patients receiving sedation and/or anesthesia including surgical, interventional imaging and procedures will receive the same high level of care through co-location of services which will utilize common Phase I and Phase II recovery areas. Patient privacy and dignity will be respected through discrete off-stage access to Prep and Phase II recovery, the Emergency Department, and to the Inpatient Units.

To achieve exceptional patient care, the Interventional Platform will feature lean efficiency measures such as a common sterile core to centralize access to supplies and medications, convenient access to electronic medical records, and a state of the art environment capable of supporting a flexible, adaptable, high quality, best practice model of care that can accommodate the various stages of the interventional journey. Same handed operating rooms will provide faster access, consistent care, and higher productivity of staff and utilization of space while providing flexibility for a dynamic procedural future.

All 8 Operating Rooms will be same sized and same handed to provide flexibility and promote safety and efficiency. All rooms are sized to accommodate Class C cases including but not limited to cardiovascular, orthopedic, and neurological procedures. A surgeon's scrub station will be located in the recessed alcove space that will be immediately adjacent to each OR entrance doors; a cart alcove that is sized large enough for a hospital bed will be provided adjacent to yet separate from the scrub station. The 8 ORs front a sterile core that will be used to stage case carts, medications, back-up sterile disposable supplies, and specialty equipment carts. Equipment alcoves will be located throughout the semi-restricted area, ringing the OR suite, providing convenient access to all ORs.

The Catheterization and Interventional Radiology Lab suite is located immediately adjacent to the ORs are all also same sized, same handed and positioned.

There will also be a Transesophageal Echocardiogram (TEE) room located adjacent to the Interventional labs to support efficiency and ease of access for the cardiologists as well as convenient access to the Prep & Recovery area.

The GI/ERCP, Pain Management, and Minor Procedure rooms are located in a suite that includes its own equipment processing areas.

The PACU (Phase I Recovery) includes 11 patient recovery cubicle spaces (1 of which will be an isolation room) which surround a central staff work area. The PACU is strategically located between the Interventional procedure areas, the Prep and Phase II Recovery areas and elevator access to the Inpatient Units to provide direct, safe, off-stage travel to and from each of these areas.

Staff lockers for the Interventional platform staff will be located at the perimeter of the unit to allow for one way flow from street attire into the semi-restricted area. The staff and the surgeon's lounge and shared conference rooms are located at the edge of the semi-restricted area to allow for convenient, immediate access.

Comparison of Space to Cost Standard

Square footage for the Interventional Department is 33,700 DGSF.
Components and space standards used are as follows:

INTERVENTIONAL PROCEDURES	DGSF
Interventional Procedures Department, as designed	33,700
8 Class C operating rooms	
4 Class B operating rooms	
1 Cardiac Catheterization lab	
2 Interventional Radiology labs	
11 Post-Anesthesia Recovery Phase I rooms	
1 Transesophageal Echocardiogram (TEE) room	
State Standards	
8 Class C Surgical Operating Suite, 2,750 dgsf/OR	22,000
4 Class B Surgical Procedure Suite, 1,100 dgsf/Procedure Room	4,400
1 Cardiac Catheterization lab, 1,800 dgsf/unit	1,800
2 Angiography (Special Procedures) rooms, 1,800 dgsf/unit	3,600
11 Post-Anesthesia Recovery Phase I stations, 180 dgsf/recovery station	1,980
1 TEE room, no standard – assume 800 dgsf/Ambulatory Care room	800
	34,580
Amount of difference	(880)

The Interventional Procedures Department falls within the State standard for department size.

Prep & Recovery

The Prep and Recovery unit includes 40 identical patient Prep and Phase II Recovery rooms designed to support procedural, surgical and interventional volumes in a single contiguous area. These 40 rooms straddle both sides of a staff and support core sequenced with distributed staff and support spaces designed to minimize travel distances and maximize patient area visualization.

The Prep and Recovery area is served by two entrance portals located along the naturally lit concourse that extends from the main lobby. This same concourse parallels the exterior walkway and an exterior retention pond with waiting spaces that are open, naturally lit and with wide views to the exterior. Individual greeter desks with entry portals will be provided for each, the GI, Minor and Pain Management procedure areas and for the combined OR, Cath and IR Lab area.

Prep and Phase II Recovery areas are positioned to flex up and down based on time of day and day of week based on need. The Emergency and Clinical Decision Units have been co-located to provide additional seamless flexibility in capacity to meet the dynamic needs of each area. The use of portable diagnostics will be leveraged to the greatest extent possible for procedures and testing not requiring the services of a dedicated imaging room.

Each of the 40 patient rooms will be same handed and similarly equipped. Each will have an attached patient toilet/sink alcove, and are designed to include staff, patient and family zones; all to provide easy access, enhanced patient/family satisfaction, consistent care of pre- and post-procedure patients, higher productivity of staff and utilization of space in a patient and family friendly way.

All support spaces including medication, clean supply, soiled and nutrition will also be same handed and equipped to provide the same level of added safety and efficiency being provided in each patient care space. Equipment alcoves will be distributed throughout the care area to provide timely, convenient access from any location.

Comparison of Space to Cost Standard

Square footage for the Prep & Recovery department is 17,518 DGSF.
Components and space standards used are as follows:

PREP & RECOVERY	DGSF
40 Post-Anesthesia Recovery Phase II rooms, as designed	17,518
State Standard for 40 Post-Anesthesia Recovery Phase II rooms, 470 dgsf/recovery station	18,800
Amount of difference	(1,282)

The Prep & Recovery department falls within the State standard for department size.

Diagnostic Imaging – Inpatient/Outpatient/Emergency Department

The Diagnostic Imaging department is subdivided into three care areas in an effort to provide the most suitable type of patient care at the most ideal location. The service sub-areas in this department are the Outpatient Imaging area, the combined Outpatient, Inpatient and ED Imaging area, and the Inpatient and ED Imaging area. Each area is designed to provide services at the most appropriate location possible for each patient type based on patient experiences, adjacencies, work flows, travel distances, and patient volumes.

The Outpatient Diagnostic Imaging area consists of 1 CT, 2 X-Rays, 2 Nuclear Cameras, and 1 CV Holter/EKG room. This area is proximate to the Outpatient Services area and is located immediately off of the main lobby to support the higher volume, quick exchange scheduled and same day types of services these modalities often provide. Access to and within this area is quick and simple, central dressing and patient sub-wait areas provide convenient access to each modality. Staff spaces are off-stage yet convenient to patient care areas. This area will also serve as back-up to the Inpatient / ED Imaging area as needs arise.

The Outpatient, Inpatient and ED Imaging area will have 2 MRIs and 2 Ultrasound rooms. The co-location of the MRIs offers the ability to gain efficiencies in staff coverage, staff and patient safety protocols, and access to supplemental MRI specific equipment. The Ultrasound rooms are sized and outfitted to accommodate diagnostic as well as procedural cases. Staff and probe cleaning is located centrally with access to both rooms to support patient safety, throughput, and ideal work flows.

The Inpatient and ED Imaging area includes within 1 CT and 2 X-Rays rooms. This area's immediate adjacency to the Emergency Department and convenient, off-stage access to the Inpatient Units will allow it to function freely and meet the demands of each area without interrupting the scheduled flow of the outpatient imaging area.

In addition to the above, the use of portable diagnostics will be leveraged to the greatest extent possible in the ED, Inpatient and Prep and Phase II recovery areas in an effort to minimize patient movement and preserve patient comfort and dignity.

Support spaces have been semi-decentralized and located at imaging area edges, also off-stage to preserve appropriate and ideal patient care space flows and adjacencies.

Staff break rooms with lockers have been provided and are conveniently accessible to each of the three areas. Radiologist and Cardiologist reading spaces have been positioned to minimize travel to the procedural imaging rooms. Administrative offices are also off-stage along the edges of each patient care area.

Comparison of Space to Cost Standard

Square footage for the Diagnostic Imaging Department is 14,116 DGSF.
Components and space standards used are as follows:

DIAGNOSTIC IMAGING	DGSF
Diagnostic Imaging Department, as designed	14,116
2 CT rooms	
2 MRI rooms	
4 X-Ray rooms	
2 Ultrasound rooms	
1 CV Holter/EKG room	
2 Nuclear Medicine rooms	
State Standards	
2 CT units, 1,800 dgsf/unit	3,600
2 MRI unit, 1,800 dgsf/unit	3,600
4 General Radiography units, 1,300 dgsf/unit	5,200
2 Ultrasound units, 900 dgsf/unit	1,800
1 EKG room, no standard – assume 800 dgsf/Ambulatory Care room	800
2 Nuclear Medicine units, 1,600 dgsf/unit	3,200
	18,200
Amount of difference	(4,084)

The Diagnostic Imaging Department falls within the State standard for department size.

Outpatient Services

The Outpatient Services reception and waiting area will be co-located with Outpatient Diagnostic Imaging and will be positioned directly off the main lobby. Outpatient Services patient spaces are universal in design and detail and are intended to flex as needed based on time of day and day of week. Services included are patient registration, blood draws and pre-admission testing which are all relatively quick exchanges requiring similar type spaces.

The Outpatient Services patient spaces consist of 5 registration rooms and 3 Pre-Admission testing/blood draw rooms along with staff and support spaces. Patient care spaces are all same sized, same handed and similarly equipped to provide flexibility and promote work flow efficiencies.

Staff spaces are on-stage and distributed to provide immediate support and back-up as required to meet the ever changing and demanding variations in patient services and volumes.

Comparison of Space to Cost Standard

Square footage for the Outpatient Services department is 2,506 DGSF.
Components and space standards used are as follows:

OUTPATIENT SERVICES	DGSF
Outpatient Services department, as designed	2,506
5 Registration rooms	
3 Pre-Admission Testing/Blood Draw rooms	
State Standards	
3 rooms, no standard – assume 800 dgsf/Ambulatory Care room	2,400
5 rooms, no standard – assume 800 dgsf/room	4,000
	6,400
Amount of difference	(3,894)

The Outpatient Services department falls within the State standard for department size.

Inpatient Rehabilitative Services

There will be three inpatient rehabilitative services areas, each located on a medical/surgical unit. These areas will be utilized by PT/OT staff to support the functions of these inpatient units such as orthopedic patients, for example. Inpatient therapy spaces will be utilized to support staff as well as provide gym space for staff interaction with patients (i.e. therapy tables, small equipment to monitor patients' limitations as well as abilities).

Inpatient therapy areas on these units will support a provision of services to help patients develop, maintain, and restore maximum movement and functional ability. Spaces such as these are key in order to accommodate differing patient types, activities and acuity levels; not all patients work well in larger therapy gyms and need immediate attention after certain procedures/surgeries. Through the inclusion of these spaces on the inpatient units, staff will be better equipped and readily available to work with patients and monitor progress.

Comparison of Space to Cost Standard

Square footage for the Inpatient Rehabilitative Services areas is 397 DGSF.
Components and space standards used are as follows:

INPATIENT REHABILITATIVE SERVICES	DGSF
Inpatient Rehabilitative Services, as designed 1 room	397
State Standards 1 exam room, no standard – assume 800 dgsf/Ambulatory Care room	800
Amount of difference	(403)

The Inpatient Rehabilitative Services areas fall within the State standard for department size.

Cancer Center

Along with its dedicated, convenient drop-off and entrance, the Cancer Center program includes both Chemo Infusion services and Radiation Therapy. Both are designed to host a wide range of treatment options. Both areas will be supported by common waiting, patient exam, patient changing/sub-wait rooms, staff and support areas.

The Chemo Infusion area is located toward the front of the department and consists of 7 patient infusion spaces. All infusion spaces will have exterior windows to promote healing with views to natural light and garden areas. All patient treatment spaces are supported by a centralized staff spaces and a support core which is designed to allow work and direct visual supervision of each patient care area.

The Radiation Therapy area is positioned slightly further back, discretely located and consisting of 1 PET/CT Simulator and 1 Linear Accelerator.

There will be 4 shared exam rooms that will be same sized and same handed to promote patient safety and staff work flow efficiency and will be convenient to the naturally lit waiting area, the infusion areas, the Linear Accelerator, and the PET/CT treatment areas. Navigators will be positioned at the edge of this and the adjacent Women's Imaging department to provide the same, consistent level of guidance and care across both platforms.

Comparison of Space to Cost Standard

Square footage for the Cancer Center is 10,656 DGSF.
Components and space standards used are as follows:

CANCER CENTER	DGSF
Cancer center, as designed	10,656
7 Infusion rooms	
1 PET/Simulator	
1 Linear Accelerator	
4 exam rooms	
State Standards	
7 Infusion rooms, no standard – assume 470 dgsf/Hemodialysis station	3,290
1 PET/Simulator, 1,800 dgsf/Simulator	1,800
1 Linear Accelerator, 2,400 dgsf/Accelerator	2,400
4 exam rooms, 800 dgsf/Ambulatory Care room	3,200
	10,690
Amount of difference	(34)

The Cancer Center falls within the State standard for department size.

Imaging – Women’s Health

The Women’s Health Imaging area includes 3 Mammography, 4 Ultrasounds, 1 Bone Densitometry room and 1 Stereotactic biopsy room. A separate, dedicated sub-wait area for patients awaiting diagnostics will be provided. Both screening and diagnostic Mammography rooms are located up-front for quick access to the patient changing and sub-waiting area. The Mammography Tech Workroom will be located at the opposite side, off-stage providing convenient, private and direct access to each mammography room. The radiologist reading rooms directly behind this will facilitate clear and timely communication during, between and after tests and procedures.

The Bone Densitometry room and one Mammography room are located at the edge of the department with a discreet “side door” adjacency for male patients accessing these services without the need to enter the main women’s waiting and dressing areas.

The Women’s Health Imaging department is conveniently located on Level I of the Clinic with a comfortable, calming naturally lit access route that fronts the external walkway and retention pond.

Staff work, offices and support spaces are located toward the rear of the department, off-stage and out of the way.

Comparison of Space to Cost Standard

Square footage for the Imaging – Women’s Health department is 6,880 DGSF.
Components and space standards used are as follows:

IMAGING – WOMEN’S HEALTH	DGSF
Imaging – Women’s Health department, as designed	6,880
3 Mammography rooms	
4 Ultrasound rooms	
1 Bone Density rooms	
1 Stereotactic Biopsy room	
State Standards	
3 Mammography units, 900 dgsf/unit	2,700
4 Ultrasound units, 900 dgsf/unit	3,600
1 Bone Density unit, no standard – assume 900 dgsf/Ultrasound unit	900
1 Stereotactic Biopsy unit, no standard – assume 900 dgsf/Ultrasound unit	900
	8,100
Amount of difference	(1,220)

The Imaging – Women’s Health department falls within the State standard for department size.

Cardiac/Pulmonary Rehabilitation

The Cardiac / Pulmonary Rehabilitation unit will be located on Level I of the clinic, close to the main lobby to provide close and convenient access for patients. It will be adjacent to the Non-Invasive Cardiac Diagnostic (NICD) area and physician office space, providing ready access for both patients and clinicians.

The Rehab Gym is located and designed to allow for continuous, unobstructed supervision of each patient work stations from deployed and centralized staff work areas. All patient work stations are oriented to allow for viewing of naturally lit extension of public lobby and to the exterior landscape. Patient work stations will consist of 8 treadmills, 10 recumbent bikes, 3 ergometers, 5 step machines, 4 elliptical stations, 3 rowing machines, 9 air-dynes, 3 stationary bikes, 2 cross country machines and a universal weight station.

Warm-up and cool down spaces will be provided and will be located to allow for unobstructed, incoming and out-going patient traffic. Mirrors, weights, hand-rails, and mats will outfit this area for both pre- and post-workout routines. Support and staff spaces will be conveniently located at the perimeter edge of gym areas to allow for convenient access without being in the way. There will also be three consultation rooms.

A central staff work space and break area will allow for constant supervision of all patient care areas. Patient lockers, toilets, shower and lead hook-up areas are positioned up-front to allow monitoring staff convenient access to help out when needed.

Comparison of Space to Cost Standard

Square footage for the Cardiac Rehabilitation department is 5,376 DGSF.

There is no State space standard for Cardiac Rehabilitation departments. The space was sized to accommodate the proposed equipment detailed above.

Non-Invasive Cardiac Diagnostics (NICD)

Non-Invasive Cardiac/Cardiopulmonary Diagnostics will be located on Level 1 of the Clinic adjacent to both Cardiac/Cardiopulmonary Rehabilitation and Physician offices spaces. Access is off the main, naturally lit lobby, with waiting space oriented toward the lobby.

The NICD department includes of 2 CV Echocardiogram rooms, 1 CV Stress Test room, 1 CV Holter/EKG room, and 2 Pulmonary Function Testing rooms positioned in a compact layout with patient changing, patient toilet, patient shower and sub-wait spaces central to all.

Both, staff and support spaces have been placed off-stage, toward the rear of the department to free up space and provide appropriate patient care adjacencies in patient care areas.

Comparison of Space to Cost Standard

Square footage for the NICD department is 2,901 DGSF.
Components and space standards used are as follows:

NICD	DGSF
Non-Invasive Cardiac Diagnostics department, as designed	2,901
1 CV Stress Test room	
2 CV Echocardiogram (Echo) rooms	
1 CV Holter/EKG rooms	
2 Pulmonary Function Testing (PFT) rooms	
State Standards	
6 NICD rooms, no standard – assume 800 dgsf/Ambulatory Care room	4,800
Amount of difference	(1,899)

The Non-Invasive Cardiac Diagnostics department falls within the State standard for department size.

Wound Care

Wound Care is located on Level I of the Clinic, between the Cardiac/Cardiopulmonary Rehabilitation area and the Cancer Center, providing outpatient access through convenient location and clear, simple way-finding.

The Wound Center program brings a strong multi-disciplinary approach to wound care through the use of advanced wound care therapies. These therapies will be provided through the use of its 3 patient exam rooms and 2 hyperbaric oxygen therapy (HBO) chambers. The HBO chambers will be co-located in a common room for patient safety, enabling clear staff supervision of multiple patients. All three exam rooms will be same sized and same handed to promote patient safety and facilitate staff work flow efficiency.

Staff work and office spaces will be centrally located within the unit to reduce time and movement needed to access each patient care area.

Comparison of Space to Cost Standard

Square footage for the Wound Care department is 2,172 DGSF.
Components and space standards used are as follows:

WOUND CARE	DGSF
Wound Care department, as designed 3 Wound Care rooms 2 Hyperbaric Oxygen Therapy chambers (HBOs)	2,172
State Standards	
3 exam rooms, no standard – assume 800 dgsf/Ambulatory Care room	2,400
2 HBOs, no standard – assume 800 dgsf/Ambulatory Care room	1,600
	4,000
Amount of difference	(1,828)

The Wound Care department falls within the State standard for department size.

Neurology

The Neurological Testing department consists of 1 EEG and 1 EMG Testing Room. The Neurology Testing area is supported by a patient toilet and a staff work room.

Comparison of Space to Cost Standard

Square footage for the Neurology department is 472 DGSF.
Components and space standards used are as follows:

NEUROLOGY	DGSF
Neurology department, as designed	472
1 EEG room	
1 EMG room	
State Standards	
1 EEG room, no standard – assume 800 dgsf/Ambulatory Care room	800
1 EMG room, no standard – assume 800 dgsf/Ambulatory Care room	800
	1,600
Amount of difference	(1,128)

The Neurology department falls within the State standard for department size.

SIZE OF PROJECT				
DEPARTMENT	PROPOSED DGSF	STATE STANDARD	DIFFERENCE	MET STANDARD?
Medical/Surgical	55,650	55,440	210	No
ICU	9,381	8,220	1,161	No
Obstetrics	15,244	13,800	1,444	No
Birthplace	11,573	12,150	(577)	Yes
Special Care Nursery	3,430	960	2,470	No
Clinical Decision Unit	3,861	No Standard	N/A	N/A
Emergency Department	12,289	14,400	(2,111)	Yes
Interventional Procedures	33,700	34,580	(880)	Yes
Prep & Recovery	17,518	18,800	(1,282)	Yes
Diagnostic Imaging – OP/IP/ED	14,116	18,200	(4,084)	Yes
Outpatient Services	2,506	6,400	(3,894)	Yes
IP Rehab Services	397	800	(403)	Yes
Cancer Center	10,656	10,690	(34)	Yes
Diagnostic Imaging – Women's	6,880	8,100	(1,220)	Yes
Cardio/Pulmonary Rehabilitation	5,376	No Standard	N/A	N/A
Non-Invasive Cardio Diagnostics	2,901	4,800	(1,899)	Yes
Wound Care	2,172	4,000	(1,828)	Yes
Neurology	472	1,600	(1,128)	Yes

Non-Clinical Components

Physician Office Space

There are 876 physicians currently on the NLFH medical staff. Since the 2010 affiliation with NMHC, 169 physicians have joined the medical staff. This is an average annual growth of almost 8%.

NLFH has four medical office buildings on its campus. Like the main hospital building, significant portions of the existing medical office buildings on campus are near the end of their useful life. Some were originally built as cottages for nurses approximately 57 years ago. Because of their age and original purpose, some of the buildings have inadequate and inefficient floor plans which can force a physician practice to be on multiple floors. There are also connectivity problems which can only be corrected with a major infrastructure upgrade. Additionally, the buildings have indoor air quality issues. In the near future, leases will begin to be phased out as they come up for renewal, causing existing tenants to need to find other locations for their practices.

Locating physicians on campus has advantages for both patients and physicians. For patients, visits to physicians' offices can be coordinated with outpatient testing and other hospital services. For physicians who have active practices, it is beneficial to be located in a building connected to the hospital to increase their availability for inpatients.

The proposed project includes physician office space totaling 59,701 DGSF. This amount will provide space for approximately 60 physicians. Physicians leasing space will be able to designate suite sizes based on the number of physicians in their practices.

NLFH has received letters of interest from 5 physician practices including one from Northwestern Medical Group (NMG). NMG is the primary faculty practice for Northwestern University Feinberg School of Medicine with over 800 physicians.

The Physicians' Office space of the proposed project totals 59,701 DGSF. NLFH has received letters of interest from 55 physicians. Assuming 1,000 DGSF per physician based on current leasing trends on campus, this equates to approximately 55,000 DGSF, which is 92.1% of the available space.

Physician Group	Current Location	# of Current Physicians	# of Anticipated Physicians 2017	Projected DGSF 2017
Northwestern Medical Group	800 N. Westmoreland, Suite 102	20	20	20,000
Weil Foot & Ankle Institute	800 N. Westmoreland, Suite 200	16	20+	20,000
Hematology/Oncology of the North Shore	900 N. Westmoreland, Suite 105	2	2	2,000
North Shore Podiatry	900 N. Westmoreland, Suite 128	7	8	8,000
UroPartners, LLC	900 N. Westmoreland, Suite 125	4	5	5,000
TOTAL		49	55	55,000



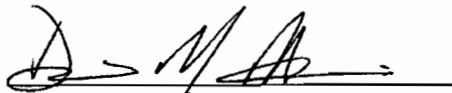
To: **Gina Weldy**
Vice President, Finance and Real Estate
Northwestern Memorial HealthCare
541 North Fairbanks Court, Suite 1675
Chicago, IL 60611

Re: **Interest in Leasing Physician Office Space**

I am aware that Northwestern Lake Forest Hospital is planning to construct physician office space as part of their replacement facility on the Lake Forest campus. The new building is planned to open in 2017.

My partners and I are interested in leasing office space in the new facility upon its completion. I understand the terms and conditions are yet to be developed, and that this letter of interest does not bind me or my partners.

Sincerely,


(Signed)

Practice: Northwestern Medical Group

Date: 1/17/14

Current Office Location: 800 Bldg. Ste 102
(Building/Suite)

800 N. Westmoreland
(Street Address)

Lake Forest, IL 60045
(City, State)

of Physicians in My Practice
Now:

20

Projected # of Physicians in My Practice
in 2017:

20



To: Gina Weldy
Vice President, Finance and Real Estate
Northwestern Memorial HealthCare
541 North Fairbanks Court, Suite 1675
Chicago, IL 60611

Re: Interest in Leasing Physician Office Space

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My partners and I are interested in leasing office space in the new facility upon its completion. I understand the terms and conditions are yet to be developed, and that this letter of interest does not bind me or my partners.

Sincerely,

A handwritten signature in black ink, appearing to read 'John A. Weil'.

(Signed)

Practice: WEIL FOOT & ANKLE INSTITUTE.

Date: 1/17/14

Current Office Location: 800 Westmoreland, Suite 200
(Building/Suite)

(Street Address)

LAKE FOREST, IL

(City, State)

of Physicians in My Practice
Now:

16

Projected # of Physicians in My Practice
in 2017:

OVER 20



To: Gina Weldy
Vice President, Finance and Real Estate
Northwestern Memorial HealthCare
541 North Fairbanks Court, Suite 1675
Chicago, IL 60611

Re: Interest In Leasing Physician Office Space

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My partners and I are interested in leasing office space in the new facility upon its completion. I understand the terms and conditions are yet to be developed, and that this letter of interest does not bind me or my partners.

Sincerely,

E. Kaplan
(Signed)

Practice:

HEMATOLOGY/ONCOLOGY OF THE NORTH SHORE

Date:

1-20-2014

Current Office Location:

900 - 105
(Building/Suite)

WEST MORNCLAND
(Street Address)

LAKE FOREST, IL.
(City, State)

of Physicians in My Practice

Now:

2

Projected # of Physicians in My Practice
in 2017:

2

To: Gina Weldy
Vice President, Finance and Real Estate
Northwestern Memorial HealthCare
541 North Fairbanks Court, Suite 1675
Chicago, IL 60611

Re: Interest in Leasing Physician Office Space

I am aware that Northwestern Lake Forest Hospital is planning to construct physician office space as part of their replacement facility on the Lake Forest campus. The new building is planned to open in 2017.

My partners and I are interested in leasing office space in the new facility upon its completion. I understand the terms and conditions are yet to be developed, and that this letter of interest does not bind me or my partners.

Sincerely,

Karen Rogers
(Signed)

Practice: North Shore Podiatry

Date: 1/20/14

Current Office Location: 900 N. Westmoreland Rd. Suite 128
(Building/Suite)

(Street Address)

Lake Forest, IL
(City, State)

of Physicians in My Practice
Now:

7

Projected # of Physicians in My Practice
in 2017:

8

To: Gina Weldy
Vice President, Finance and Real Estate
Northwestern Memorial HealthCare
541 North Fairbanks Court, Suite 1675
Chicago, IL 60611

Re: Interest in Leasing Physician Office Space

I am aware that Northwestern Lake Forest Hospital is planning to construct physician office space as part of their replacement facility on the Lake Forest campus. The new building is planned to open in 2017.

My partners and I are interested in leasing office space in the new facility upon its completion. I understand the terms and conditions are yet to be developed, and that this letter of interest does not bind me or my partners.

Sincerely,

Carle B. Edwards L
(Signed)

Practice: Uropartners LLC

Date: 1/23/2014

Current Office Location: 900 N. Westmoreland # 125
(Building/Suite)

(Street Address)
Lake Forest IL 60045
(City, State)

of Physicians in My Practice
Now: 4

Projected # of Physicians in My Practice
in 2017: 5

Pharmacy

The Pharmacy in the new facility will be full-service and will be responsible for providing first medications, stat medications, routine doses, IV prep, Chemo prep and compounding. This pharmacy will also serve the Grayslake campus via courier.

The Pharmacy will be co-located with other support services on the lower level of the hospital along the service spine. This provides efficiencies through sharing staff support spaces such as lounges, locker rooms, and toilet rooms. The Pharmacy will be connected vertically to the patient care areas through the use of stairs and elevators as well as through the use of a pneumatic tube system.

The pharmacy will be fitted with the latest technologies (including a medication carousel) and will ensure compliance with all regulatory agencies (including USP-797 Guidelines for chemo and IV prep).

The Pharmacy is designed for maximum flexibility and adaptability. Casework will be composed of modular furniture which can easily be modified to accommodate future technologies and new equipment.

Safe, timely, effective and patient-centered medication administration will occur not only through pharmacists based within the pharmacy itself but on the units. Unit based pharmacists will help increase communication and collaboration across the organization.

The Pharmacy area of the proposed project totals 2,275 DGSF.

Laboratory

Laboratory services will be tailored to be a combination of high volume/low mix activities that require less than a 24-hour turnaround. Operationally, the NLFH lab will be capable of performing an abbreviated battery of tests and will serve as a receiving lab for the main lab located downtown at Northwestern Memorial Hospital to which the NLFH lab is ultimately responsible.

The Lab will be responsible for providing the following services: Chemistry, Urinalysis, Hematology/Coagulation, Blood Bank, Limited Microbiology/Kit Work, Fine Needle Aspiration, Blood Culture, Bone Marrow and Partial Pathology Services - Frozen Section. Histology, Cytology, Microbiology, Immunology and Full Pathology Services will be sent to the main lab via courier.

Like the Pharmacy, the lab will be co-located with other support services on the lower level of the hospital along the service spine. This provides efficiencies through sharing staff support spaces such as lounges, locker rooms, and toilet rooms. The lab will be connected vertically to the patient care areas through the use of stairs and elevators as well as through the use of a pneumatic tube system.

The Lab is designed for maximum flexibility and adaptability. Lab benches will be composed of modular furniture which can easily be modified to accommodate future technologies and new equipment.

Phlebotomists will be deployed throughout the facility to retrieve specimens. Outpatients will have their blood draws done in the outpatient areas of the hospital, while inpatient blood draws will be done at the bedside by phlebotomists.

The Laboratory area of the proposed project totals 4,091 DGSF.

Engineering

Engineering is responsible for preventative, routine, and emergency maintenance of the building, grounds, and limited equipment. Specialty areas include HVAC, finish replacement/upgrade, locksmith, and electrical. Grounds keeping are outsourced.

Engineering will be co-located with other support services on the lower level of the hospital along the service spine. This provides efficiencies through sharing staff support spaces such as lounges, locker rooms, and toilet rooms as well as places engineering near the main mechanical, electrical, and plumbing areas of the building. Engineers will move throughout the facility to complete work orders in other areas using back of house corridors and elevators.

The engineering shop will act as a home base for receiving work orders and work carts for engineers out on the floors. The shop will include work benches for specific services (general maintenance, electrical, upholstery and HVAC) as well as storage for additional stock and replacement parts.

The Engineering area of the proposed project totals 2,286 DGSF.

Central Sterile Processing

The Central Sterile Processing department will be strategically located immediately below the Operating Rooms to provide direct access for outgoing sterile instruments and supplies and for incoming soiled instruments. This location also provides convenient vendor access from the loading dock and vendor parking areas located on the same floor level. An internal clean elevator will connect the sterile storage/case cart picking area in Central Sterile Processing to the central sterile core above. Post-procedure dirty case carts will have waste off-loaded in the Soiled Holding room that is located at the edge of the semi-restricted surgical suite and then will have instruments delivered to the CSP decontamination area via a dedicated dirty elevator. All deliveries, both ways will be discreet and off-stage.

Central Sterile Processing will serve the Operating Rooms, Emergency Department, and Birthplace Unit from a central, off-stage location. All instrument deliveries will be made off-stage through a dedicated staff/patient/materials transport corridor and elevator network.

The Decontamination area will consist of an automated cart washer, 2 sink work stations, 1 ultrasonic cleaner and 3 washer decontamination units. Included in the Prep and Pack area will be 5 modular prep and pack work stations, an automated scope washer, plasma sterilizers and steam sterilization units. A central sterile instrument and consumables storage area completes the layout along with a convenient case cart staging area. The placement and layout of each area is designed to support progressive and efficient work flows.

Central sterile staff lockers are combined with the Interventional area lockers located on the floor above. An ante room with additional PPE will be located at the entrance into the clean

area to support supplemental staff needs. Central sterile staff will access break and conference rooms through shared spaces located at central, common areas also located on the lower level.

Administrative space is provided within the department for direct management of the area.

The Central Sterile Processing area of the proposed project is 4,202 DGSF.

Materials Management/Loading Dock

The Materials Management Department will be responsible for purchasing, shipping and receiving, inventory control, and distribution services for the new facility.

A Just-In-Time supply replenishment system will be implemented. Linen will be provided on exchange carts using an off-site commercial laundry for processing. Waste management is also incorporated into this function.

Materials Management will be co-located with other support services on the lower level of the hospital along the service spine. This provides efficiencies through sharing staff support spaces such as lounges, locker rooms, and toilet rooms. Materials Management techs will move supplies throughout the facility using back of house corridors and elevators.

The loading dock includes space for pre-packed totes and carts that will move straight to the units. Items that will not be stocked on the units immediately will be placed in the central storeroom directly adjacent to the dock. The dock will be strictly for clean incoming goods such as supplies, foodstuff, and clean linen. There will be a separate exit for outgoing dirty items such as trash and soiled linen.

The Materials Management/Loading Dock areas of the proposed project total 3,255 DGSF.

Environmental Services

The Environmental Services Department (EVS) will operate 24/7 and is responsible for housekeeping services for both clinical and non-clinical areas, stocking areas with soap and paper products, sorting and stocking of clean linen, removal of soiled linen, removal of waste and recycling for disposal, and collection of pharmaceutical and bio-hazardous waste.

EVS will be co-located with other support services on the lower level of the hospital along the service spine. This provides efficiencies through sharing staff support spaces such as lounges, locker rooms, and toilet rooms. EVS staff will move throughout the facility using back of house corridors and elevators.

The main EVS department will provide storage for cleaning supplies, paper products, large equipment, and equipment not used on a regular basis. Housekeeping carts will be deployed to the units in standardized housekeeping closets located within each department.

Trash and linen chutes will also be integrated into the design of the hospital, connecting the EVS department in the lower level up through the platforms, all the way up into the bed areas. These chutes will allow a great deal of efficiency and ensure a hygienic workflow by eliminating travel of waste and soiled linens in the elevators, releasing further airborne pathogens into the hospital.

The EVS areas of the proposed project total 2,263 DGSF.

Central Distribution

This room will serve as a storage room and distribution hub for house wide equipment that is not deployed to the units. Space will also be allocated for the storage of specialty beds as well as an area dedicated to the repair of broken beds.

This room will be located adjacent to EVS, who may be transporting the equipment and beds, as well as engineering staff who provide bed repair.

The Central Distribution room of the proposed project is 755 DGSF.

Administration

Space will be provided in both the hospital and the Clinic for Administration, Foundation, Physician's Lounge/Medical Staff, Dieticians, Volunteers, Release of Information, Nursing Administration, and Order Management Unit.

The specific locations for administrative spaces are determined by the degree to which these services need to be proximate to patients, staff, or physicians. For example, offices for clinical managers will be located within the clinical areas while functions such as Administration, Foundation, and Volunteers will be located within the Clinic. By placing these functions in the Clinic, the hospital space is freed up for direct patient care uses.

The Administration areas of the proposed project total 23,833 DGSF.

Conference Center

Conference room space will be flexible enough to accommodate a large range of attendees and a variety of functions including quarterly staff meetings, staff and community education, fundraising events, and appreciation dinners.

The Conference Center will include support spaces for the storage of additional chairs and tables, A/V equipment, and catering services. The pre-function space will be utilized for appetizers and drinks, registration space, or general queuing for events.

The Conference Center will be located on the Clinic side of the building to maintain critical patient services on the hospital side. The Conference Center will be easily accessible to those entering the facility by the main entry or those working throughout the facility.

The Conference Center in the proposed project is 7,405 DGSF.

Conference/Education Space

Conference/Education space has been included in the design of the inpatient units to support both staff (including medical residents) as well as public functionality. These spaces can accommodate larger groups of people and may be used as a larger consultation space in cases of large families, or can be an informational setting either for public or staff. To support the variety of uses, these spaces will include technology and seating comfortable for large groups, with added mobility of furniture to provide flexibility per the specific function need.

Staff will also access these conference/education spaces for large staff meetings, large rounding conference sessions, staff report-outs, re-occurring informational presentations for staff, educational purposes for staff on the unit (without having to travel and leave the proximity of the workflow) and can even be utilized as a “touch-down” space for staff to sit down and chart or communicate with other staff and/or physicians in private.

These spaces are located on each patient unit towards the public end for access for both public and staff. In the case of Women’s Services, these rooms may even function as an education setting for women’s classes such as Lamaze, for example. Rooms will feature access to exterior walls and windows with views outside.

Overall, these spaces will work to support the connection between staff, patients, and public; providing a more informed, patient-centered base of care and cohesive, comfortable environment.

The Conference/Education spaces in the proposed project total 2,835 DGSF.

Dietary

The Dietary department in the new facility will serve patients, staff, visitors, and the public. It will be located on the lower level of the entry rotunda which allows for easy access for people coming from both the Clinic and hospital. This location also allows kitchen staff to transport patient meals along the lower level service spine and up to the patient care areas through service elevators.

Similar to Prentice Women’s Hospital, patient meals will be prepared using a room service concept. Patients will order exactly what they want and have it delivered at the time they want it. Safeguards will be in place for monitoring restricted diets, and for feeding critically ill patients who may be unable to place their own orders.

Orders will be processed by the diet office. Meals will be freshly cooked to order, and delivered in less than one hour. Each patient care floor will have a room service galley to fulfill beverage and snack requests immediately. Patients will make choices throughout the day, contributing positively to their healthcare experience and overall patient satisfaction.

The cafeteria will offer multiple food stations. Food will be prepared either in an on-site kitchen and delivered directly to the serving lines or at the servery stations on request. The variety of choices will satisfy all tastes, diets, and appetites.

A catering component will support Conference Center functions. Prepared food will be delivered either from the kitchen or catering pantry located adjacent to the conference areas. The Conference Center pantry will be a space reserved for staging meal service and providing post function clean up.

The Dietary spaces in the proposed project total 11,413 DGSF.

Biomedical Support

The Biomedical Support department in the new facility will be responsible for procuring, evaluating, repairing, and maintaining clinical equipment for the facility. In addition to servicing

equipment, biomedical engineers use their technical expertise to train patient care staff during in-services, evaluate new products, monitor and enforce recall campaigns, and perform routine quality control inspections.

Biomedical Engineering will be co-located with other support services on the lower level of the hospital along the service spine. This provides efficiencies through sharing staff support spaces such as lounges, locker rooms, and toilet rooms as well as places Biomedical Support near the receiving dock where new equipment will be delivered prior to testing. Biomedical Engineers will move throughout the facility to complete work orders in other areas using back of house corridors and elevators.

The Biomedical Support space in the proposed project is 989 DGSF.

Public/Lobby

The main entrance to the proposed project will lead to an inviting, welcoming lobby. The main entrance will be a single point of entry for both the hospital as well as the clinic thus making the public space a connecting point for several adjacent programs. The size of the lobby will safely accommodate the projected circulation of both hospital patients/visitors and clinic patients/visitors. The entrances for all retail spaces and community education and conference space will be from the main entrance lobby.

There will be a concierge desk for two people (either employees or volunteers). Additionally, there will be way-finding kiosks and electronic directory.

Valet parking and wheelchair storage will also be part of this space.

Additionally, there will be seating areas for patients/visitors in this area. The design will encourage the most efficient use of this destination.

It is anticipated that this space will also be used as reception space for hospital and community events.

The Public/Lobby space in the proposed project totals 7,461 DGSF.

Retail

The proposed project includes retail spaces on Level 1. NLFH will seek retailers that can provide key services to patients, visitors, and physician tenants. Likely options include food, coffee, and sundries, conveniences, and patient gifts.

The Retail areas of the proposed project total 4,054 DGSF.

Staff Lockers/Lounges

Each floor in the new hospital will have staff locker rooms, staff toilets, and a staff lounge. These facilities will be shared by the departments located on that floor.

In most cases, male and female staff will have their own designated locker rooms, which includes all staff and physicians. Inpatient units are the only instances where locker rooms are

shared between male and female. Included in locker rooms will be separate male and female bathrooms with showers. A shared employee lounge will be in the vicinity of these amenities.

The Surgical Platform and C-Section rooms in Labor & Delivery will have unique “pass-through” style locker rooms programmed within their areas, because their staff is required to change into scrubs; these locker spaces will have a designated exit into the “sterile” zone of these areas to separate workflows and maintain proper infection control protocols.

The Staff Lockers/Lounges areas of the proposed project total 3,042 DGSF.

Reception/Waiting/Public Toilets

Public spaces will include reception/waiting areas and public toilets. These functions will be located at the entry point of each department in an effort to separate staff/patient and public flows. The main course of public circulation is oriented around the retention pond around which the hospital wraps, serving as a main spine to the facility.

Along this spine on the first floor are main points of reception and waiting which serve as entry portals to specific types of services: Outpatient Services, Surgical Procedures, Surgery, and Interventional Radiology. From the main entrance of the hospital, these entry portals are organized so the longer length of stay procedures are embedded in the hospital; therefore, the quick turnover services are located near the entrance and those which are longer are located further down the public circulation spine to provide privacy and less traffic for those waiting.

Each entry portal on the first floor of the hospital has an adjoining waiting space to accommodate families in a private manner, yet still remain accessible to the public functions of the facility as well as remain in close proximity to the patients.

On the inpatient units in the pavilions above the first floor, a public reception desk will be located just off the public elevator for direction into the patient units. This function serves as security as well as direction for proper way-finding and information. Public waiting spaces are located directly in front of the public elevator on the patient units, facing the retention pond as well as the surrounding nature of the site. These more open waiting spaces have direct access to a private, enclosed family waiting room, consult room for interaction/discussion with staff or physicians, public toilet room as well as conference/education spaces. Therefore, the public is ideally located in proximity to patients with access to public functions, all while enjoying a separated and private experience with views to nature and calming environment.

The Reception/Waiting/Public Toilets areas of the proposed project total 13,173 DGSF.

MEP Systems

Mechanical Central Plant and Distribution

The new facility will be served by a South Central Plant. The Central Plant will provide high pressure steam, 140 degree heating water, chilled water, and oxygen to the new facility. The Central Plant will house the high pressure steam boilers, dearators, condensing hot water boilers, chillers, cooling towers, and pumps, as well as the fuel oil storage tanks for the dual fuel boilers and for the emergency generators. The Central Plant will connect to the hospital via underground piping for the steam, condensate return, heating water supply and return piping, and chilled water supply and return piping. High pressure steam will be used for sterilization and for generating low pressure steam via a heat exchanger. 140 degree hot water will be used

for heating via reheat coils and perimeter finned tube radiation, unit heaters, and radiant heating panels. Chilled water will be available 24/7/365 and used for air handling unit cooling coils and high energy intensity spaces such as the electrical rooms, the telecommunication rooms, refrigerators and freezers, and some imaging equipment.

Ventilation and Air Conditioning – Hospital

The hospital portion of the campus will be served by air handling units in two locations. In a lower level mechanical room, the air handling units will serve: Cardiac Catheterization Lab and IR Labs, Diagnostic Imaging, Outpatient Services, Prep/Recovery, Clinical Decision Unit, Nuclear Medicine; Engineering, Biomedical Support, Pharmacy, Decontam, and Storage. The other location for the air handling units will be on the roof of each of the three pavilions. These air handling units will serve LDR, Recovery, SCN, and Obstetrics, along with the other inpatient room and Isolation rooms.

Systems will be Variable Air Volume (VAV) with terminal units with reheat coils. Operating rooms will have perforated panel laminar flow type ceiling diffusers with integral HEPA filters and low side wall returns. Toilet rooms and other general exhaust rooms will be exhausted. The Ambulance garage will be exhausted based on CO levels in the garage. The Emergency Department waiting and triage area will be 100% exhausted, along with one isolation room in the ED area. Isolation Rooms will be exhausted to the building exterior, through vertical shafts to the roof and via a separate exhaust fan. Isolation Rooms will be individually monitored for pressure. Pharmacy Chemo and Compounding Hoods will be exhausted to the building exterior through vertical shafts to the roof and via a separate exhaust fan. Hood Exhaust ducts shall be located in separate shafts from environmental air.

Ventilation and Air Conditioning – Clinic

The clinic and lobby will be served by rooftop units (DX compressors and air cooled condensing units) and condensing hot water boilers and gas fired humidifiers. Systems will be VAV with reheat coils.

Automatic Controls

The automatic control system will be a direct digital control system. The control system will use an open protocol platform (such as the Tridium Niagara framework) with the capability of interfacing with other open protocol systems in a seamless fashion.

Plumbing – Hospital

The hospital portion of the campus will be served by new services extended to the building from available municipal and utility services. Two new 6" domestic water lines will be provided and connected to one new meter for the hospital. A separate water service will be provided for the Clinic. The water service will enter at the Mechanical Room location. A new fire protection water line, fire pump, jockey pump, and RPZ will be provided. Storm water will discharge into the retention pond. Multiple connections will be made from the city sewer to the building. A duplex sewage ejector will be provided for the Lower Level of the hospital, and a separate duplex sewage ejector will be provided for the Lower Level of the clinic. Foundation drainage systems will be provided as required to protect the facility from groundwater intrusion. At a minimum, the lowered mechanical room and all elevator sumps will be protected

Potable Water

Domestic cold, hot, and recirculating hot water piping will be provided to building fixtures and equipment. Piping will be concealed within building shafts, walls, and above ceiling spaces in finished areas. A triplex domestic water booster pump, with associated tank and controls, will

be provided, in order to increase domestic water pressure by 25 psi. It will be located in the Lower Level Mechanical Room. 110°F water will be provided to all patient use fixtures. Domestic water heating for the hospital will be generated by multiple plate and frame heat exchangers. The water heaters will be located in the Lower Level Mechanical Room. Domestic water heating for the clinic will be provided by gas fired domestic water heaters. In-line centrifugal circulating pumps will be provided to recirculate domestic hot water. The hot water branch lines will have flow fittings and balancing valves to balance the flow of recirculated hot water. Water piping will be provided with shutoff valves for isolation of piping sections for maintenance and repair. Means will be provided to drain piping.

Fire Protection

The fire protection sprinkler and standpipe system will consist of 2-1/2 inch fire department valves at each floor will be provided in or near each stair enclosure and elsewhere as required for full coverage with 100 foot hoses. There will be two standpipes per pavilion, plus additional standpipes on the ground floor to meet NFPA 14 requirements. All areas will be sprinkled for 100% coverage. Sprinkler zones will be provided as required, with one zone per floor of each pavilion and clinic, three zones for the ground floor of the hospital, a separate zone per floor of the lobby, and a separate zone for the lower level of the hospital. A 1000 gpm, 300 feet, 100 hp fire pump, jockey pump, and controllers will be provided.

Medical Gases

Medical Vacuum/WAGD and Medical Air units will be provided to serve the hospital. These units will be located in the Lower Level mechanical room. The Medical Vacuum/WAGD unit will be skid mounted, triplex type vacuum pump system, with space on the skid for a fourth pump, with a 200 gallon receiver, single point connection and control package. The Medical Air unit will be skid mounted, triplex type with space for a fourth compressor, compressors with a 200 gallon receiver, desiccant dryers, single point connection and control package. A new duplex Instrument Air unit, located in the lower level mechanical room, will provide instrument air to serve the OR/ED. Piping will be extended above grade in ceiling plenums and wall cavities to medical gas outlets and equipment throughout the building. Medical gas piping will be Type L or K hard drawn copper tubing with brazed joints. Piping will be cleaned and suitable for oxygen service. Piping will be installed and tested by a certified by an ASSE 6010 medical gas installer and certifier. Medical gas wall outlets and wall inlets will be "Quick-Connect" type for O2, MA, MV, N2O, and WAGD. High pressure IA, CO2 and N2 and ceiling mounted outlets and inlets will be DISS type. Medical gas zone valve boxes will be recessed type with removable clear covers. Valves will be 3-piece, full-port, ball valve type with handles that swing out. Medical gas line pressure sensors, master alarm panels and area alarm panels will be installed per NFPA 99. New master alarm panels will be provided for all new medical gas and vacuum equipment and new CO2 manifold. Piping systems will be installed according to state and local plumbing codes, including State Health Department and NFPA-99 requirements.

Electrical Infrastructure

Electrical Central Campus Distribution: The new hospital facility and new South Central Plant will be served by a new South Central Plant Building. The Plant will accommodate new medium voltage utility equipment, new medium voltage paralleling gear and infrastructure to serve the new Central Plant.

Central Campus Normal Power: Two new 12.47 KV utility circuits will be provided for the new interior medium voltage utility line up. Each circuit will be able to accommodate the entire Central Campus and new Plant load upon loss of one of the Utility feeders. The lineup will

contain one switch for the central plant normal power substation and two switches for the new Central Campus hospital substations.

Central Campus Generator Power: Two new 1.5 MW 12.47 KV Tier 2 interior generators will be furnished and installed in the new plant. One of the two existing 2 MW 480V generators will be stepped up to 12.47 KV and will be repurposed to provide additional emergency power for the new Central Campus. The three generators will be paralleled together and will have output breakers for an Emergency substation in the Central plant. Additional overcurrent devices will be provided for an Essential Systems substation and an Equipment branch substation in the Hospital. The generator design will provide power to only code required loads and select optional loads.

Electrical Central Campus Central Plant Distribution: A new normal branch medium voltage substation and a new emergency branch medium voltage substation will be located at grade in the single story building adjacent to the utility switchgear line up and the paralleling gear line up. Automatic transfer switches, additional panel boards and step-down transformers will be provided to accommodate the needs of the mechanical equipment in the building.

Electrical Systems New Central Campus Hospital Main Electrical Infrastructure: Medium voltage feeders will be routed from the new central plant approximately 800 feet to the medium voltage substations in the Lower Level of the hospital. The normal distribution main electrical room will have two medium voltage substations and the emergency distribution main electrical room will house two medium voltage substations- one substation for essential systems and one for equipment and optional branch loads. Additional automatic transfer switches and panels will be located in the emergency distribution room.

Electrical Systems New Central Campus Hospital Electrical Distribution: Electrical rooms will be stacked from the Lower Level, to the Ground Level to floors two and three for each of the three pavilions. The Lower Level and Ground Level will be a traditional 480/277V to 120/208V distribution and will provide power for life safety, critical and normal power loads. Select pieces of imaging equipment and sterilizing equipment will be furnished with equipment branch power and Operating Rooms and C-section rooms will each be provided with two isolated power panels. The second and third levels of the pavilion will be furnished with 480/277V power from the lower level substations and will step down to a 120/208V distribution panel to distribute branch circuit panels for both second and third floors at 120/208V. Technology loads will be served from a single distribution panel via the emergency distribution and a UPS. The power will be stepped down to three 120/208V distribution panels, one located in each of the three lower level pavilion electrical rooms. The dedicated panel in each telecom room will be fed from the distribution panel at the lower level of each pavilion. Mechanical equipment on the lower level and the roof level will be provided with separate equipment branch and normal power panels and associated infrastructure. A separate utility transformer will be furnished for the fire pump and the pump will receive its emergency power from the medium voltage substation.

Electrical Systems New Central Campus Clinic Electrical Distribution: Normal power will be furnished by a separate utility transformer and will be distributed by a 480/277V switchboard in the lower level of the clinic. Emergency power will be provided by a stand-alone 150 kva 480V exterior generator. Emergency power will be distributed via a single transfer switch and will supply primarily life safety loads. Distribution in the clinic will be separated between public shared spaces and tenant spaces. Each public space area will contain general purpose power for lighting and receptacles and power for egress lighting and life safety needs. The tenant spaces will be designed to have their own 480/277V and 120/208V distributions.

Technology/Communication Systems

Multiple technology systems comprise the communications systems for the proposed new facility. These systems can be grouped into several broad categories:

- Facility systems (Fire Alarm, Building Management, etc.)
- Security Systems (Access Control, Video Surveillance, Duress Alarm, Emergency Intercom, Infant Security System, etc.)
- Network Systems (Telephone, Cable Support Systems, Wireless Data Systems, Distributed Antenna System for cell phones)
- Two-Way Radio Systems (Police, Fire, Ambulance)
- Video/Instructional Technology Systems (Master TV, PACS, Audio/Visual, Overhead Code Paging)
- Medical Systems (Nurse Call System, Medical Telemetry, etc.)
- Miscellaneous Systems (Localized Intercom, Emergency Phone System, Master Clock, Digital Signage, etc.)

The MEP Systems areas in the proposed facility total 16,449 DGSF.

Chapel/Pastoral Care

An ecumenical chapel will be provided in the new facility, designed as a flexible area meeting the physical requirements of all faith denominations. The chapel will be located on a public floor with convenient access for patients and their families, as well as staff. It will be open 24 hours/day. The space will be a sanctuary conveying spirituality, peace, reflection, and serenity. Access to natural light will be provided.

The hospital will employ a chaplain to provide spiritual support for patients and their family members. The chaplain will have an office. A private, quiet area will be created for consultations and confidential conversations.

The Chapel in the proposed project is 925 DGSF.

On-Call Center

An On-Call Center will be provided within the new facility and will consist of 6 sleeping rooms, shower facilities, lounge and exercise room. The purpose of this space is to provide physicians with a place for respite while they are on-call while still allowing them to be proximate to patients and staff when needed.

These 6 rooms are conveniently located in the lower level directly off a dedicated staff & physician entrance adjacent to physician parking and in direct connection to the "off-stage" corridor where they can travel easily to other sections of the hospital without entering the main workflow of the departments.

To supplement these 6 call rooms for physicians across the hospital, 4 additional call rooms are included in the women's pavilion to accommodate the immediate adjacency required by that workflow. The women's call rooms will have shared toilet/showers and will be located within the limits of the unit and adjacent to staff lounges.

The On-Call Center in the proposed project is 1,734 DGSF.

Storage

There will be one storage area provided in the Lower Level. The storage will be used by both the hospital as well as the physician and retail tenants.

The Storage area of the proposed project is 238 DGSF.

Ambulance Garage

The Ambulance Garage is located at the edge of the Emergency Department (ED) with an access drive that is completely separate of traffic from the main ED patient entrance. The garage layout and design allows for controlled, drive-through traffic and parallel internal parking for three ambulances.

The Emergency Medical Services (EMS) Work room, EMS Storage, and Mass Biohazard Equipment Storage spaces are located at the adjacent, internal edge of the Emergency Department, all three with convenient access from the ambulance garage.

Additional ambulance, police, and security vehicle parking will be provided at paved surface spaces located immediately adjacent to the Garage. Externally wall mounted electrical and water outlets will be provided within this same area to allow for utilization as an external, mass-decontamination site.

The Ambulance Garage in the proposed project is 4,756 DGSF.

PROJECT SERVICES UTILIZATION

Detailed projection rationale is provided in ATTACHMENT-20, ATTACHMENT-25, AND ATTACHMENT-34. Projections are provided for CY19, two years after project completion.

UTILIZATION DEPARTMENT	HISTORICAL UTILIZATION CY12	PROJECTED UTILIZATION CY19	STATE STANDARD	MET STANDARD ?
Medical/Surgical	21,931 (71.5%)	24,678 (80.5%)	75%	Yes
ICU	2,215 (61%)	2,628 (60%)	60%	Yes
Obstetrics	4,102 (48.9%)	5,053 (76.9%)	75%	Yes
LDRs	1,626	1,868	1,600	Yes
C-Section Rooms	519	596	800	No
Special Care Nursery	1,131 (51.6%)	1,410 (64.4%)	No Standard	N/A
Clinical Decision Unit	6,848	7,141	No Standard	N/A
Emergency Department	27,819	29,009	30,000	No
Operating Rooms	11,946	12,675	10,500	Yes
G.I. Procedure Rooms	1,378	1,380	1,500	No
Pain Procedure Rooms	509	519	1,500	No
Minor Procedure Rooms	507	567	1,500	No
Cardiac Catheterization	531	565	200	Yes
Interventional Radiology	2,113	2,247	1,500	Yes
General X-Ray	28,871	30,697	24,000	Yes
Mammography	12,884	13,699	10,000	Yes
Ultrasound	16,287	17,317	15,500	Yes
CT	11,197	11,905	7,000	Yes
MRI	3,821	4,063	2,500	Yes
Nuclear Medicine	1,808	1,922	2,000	No
Bone Density	644	685	No Standard	N/A
Stereotactic Biopsy	261	278	No Standard	N/A
Outpatient Services	2,311	4,118	4,000	Yes
IP Rehabilitation	11,541	12,271	No Standard	N/A
Linear Accelerator	3,095	5,380	7,500	Yes
Oncology Simulator	477	551	No Standard	N/A
Oncology Infusion	8,308	9,413	No Standard	N/A
Cardiac Pulmonary Rehab	10,542	11,209	No Standard	N/A
CV Stress Test	816	868	2,000	Yes
CV TEE	139	148	2,000	Yes
CV Echo	2,383	2,534	2,000	Yes
CV Holter/EKG	9,558	10,163	2,000	Yes
Respiratory Therapy	2,977	3,165	2,000	Yes
Wound Care	4,200	4,466	4,000	Yes
Hyperbaric Oxygen Therapy	2,144	2,280	2,000	Yes
EEG	403	428	2,000	Yes
EMG	1,197	1,273	2,000	Yes

UNFINISHED OR SHELL SPACE

Not Applicable – there is no unfinished or shell space in the proposed project.

ASSURANCES

Not Applicable – there is no unfinished or shell space in the proposed project.

SECTION V – MASTER DESIGN AND RELATED PROJECTS

Criterion 1110.235(a) – System Impact of Master Design

1. Availability of alternative health care facilities within the planning area and impact that the proposed project will have on the utilization of such facilities

Northwestern Lake Forest Hospital (NLFH) is one of five full-service hospitals in the Planning Area A-09, Lake County. Additionally, there are two hospitals that offer limited inpatient services in the planning area:

- Advocate Condell Medical Center, Libertyville
- Advocate Good Shepherd Hospital, Barrington
- NorthShore Highland Park Hospital, Highland Park
- Vista Medical Center East, Waukegan
- Vista Medical Center West, Waukegan – inpatient psychiatry and rehabilitation beds only
- Midwestern Regional Medical Center, Zion – oncology services only

The three full-service, not-for-profit hospitals (Advocate Condell Medical Center, Advocate Good Shepherd Hospital, and NorthShore Highland Park Hospital) staff all of their authorized beds and have an average facility utilization of between 61 – 72.5%.

The proposed project will have no adverse impact on these and the other three hospitals within the planning area because it is only a replacement of existing facilities and services. In fact, the aggregate number of acute care beds in the proposed project is 3 beds less than in the current acute care facility. While the proposed project increases ICU beds by 2 beds, it decreases the number of obstetric beds by 5 in an attempt to respond to current birth trends and “right-size” the facility for the future. Additionally, the proposed increase in ICU beds and decrease in obstetric beds is consistent with the HFSRB’s calculated bed need for Lake County, where there is a need for 3 ICU beds and an excess of 47 obstetric beds.

2. How proposed services will improve access to planning area residents

The replacement of the current NLFH with a modern facility will enhance access to health care in several ways:

- Improves access to specialty care
- Expands NLFH’s commitment to community service, including the introduction of Erie HealthReach as a new partner in Lake County care delivery, based on NMH’s 50+ year relationship with the Erie Family Health Center
- Improves access to primary care, including the establishment of a Family Medicine Residency program in Lake County based at NLFH and its outpatient centers
- Addresses patient preferences that are not accommodated in the current, outdated facility, including private rooms as the standard of care, patient rooms that are able to accommodate support treatment services, ample family waiting, and floor and circulation layouts that do not compromise patient privacy.
- Improves access to translational research opportunities to Lake County residents.

Additionally, the new facility will provide academic enhancements for the training of future physicians through fellowship rotations and other educational training programs.

Northwestern Medicine is the collaboration between Northwestern Memorial HealthCare (including Northwestern Memorial Hospital and Northwestern Lake Forest Hospital), Northwestern University Feinberg School of Medicine, and Northwestern Medical Group (NMG) around a strategic vision to transform the future of healthcare. It encompasses the research, teaching, and patient care activities of the academic medical center including primary care and sub-specialty access. The entities involved share a commitment to superior quality, academic excellence, and patient safety. The proposed new facility will enable NLFH to participate fully in this collaboration through the construction of a replacement facility with the capacity to accommodate integrated physician faculty members and medical residents.

The principles of healthcare reform call for increasing access to care in a low-cost, high quality, and integrated manner. The Northwestern Medicine (NM) Plan strives to increase access to exceptional care to residents of Illinois by delivering the right care in locations more convenient to patients while improving quality and patient outcomes. The expansion of an academic medical center presence into Lake County provides additional benefits for patients, including new locations for innovative and advanced treatment options closer to home as well as access to clinical trials and translational research.

The proposed new facility will meet community needs through adaptive space that is planned to anticipate growing demand for outpatient services while also addressing the aging population in Lake County who will require more acute inpatient care. Additionally, the proposed facility will improve access for planning area residents in the following ways:

- The project improves access to specialty care

NLFH continues to focus on improving access to specialty care by bringing Northwestern Medicine specialists to Lake County and providing seamless integration with Northwestern Memorial Hospital services. Lake County residents are provided convenient access to specialty care, closer to home. NLFH has enhanced clinical capabilities through alignment with NMG, the physician practice comprised of the world-class faculty of the Feinberg School of Medicine, and through service line expansion, including the following key specialties:

- Breast Surgery
- Cardiology / Cardiac Surgery
- General Surgery
- Gastroenterology / Interventional Gastroenterology
- Gynecology Oncology
- Medical Oncology
- Radiology / Interventional Radiology
- Neurology
- Orthopaedic Surgery
- Otolaryngology
- Pulmonology / Critical Care
- Radiation Oncology
- Vascular Surgery
- Thoracic Surgery

Additionally, NMG provides critical care/pulmonary services within the ICU unit at NLFH and provides 24 hour coverage by internal medicine hospitalists 7 days/week.

Most of these services are now available at NLFH however the affiliation with Northwestern Memorial expands the breadth and depth of these services, bringing more specialty capabilities to Lake County residents.

For patients who require more tertiary or quaternary level acute care, NLFH's integration within Northwestern Memorial HealthCare provides seamless access to Northwestern Memorial Hospital, the leading academic medical center in Illinois (source: U.S. News & World Report and consumer preference studies conducted annually by the National Research Council).

- The project continues NLFH's commitment to community service

Access to medical care is a vital component to the health of all communities, especially communities that have been historically underserved. To address this need, NLFH has been working with community-based organizations to support efforts to reach the most medically underserved residents in Lake County.

For more than seven years, NLFH has provided vital patient care services to medically underserved residents of Lake County in partnership with the Lake County Health Department and Community Health Center. Through this relationship, NLFH provided needed colonoscopy, radiology, imaging services, and neurologic consultations.

NLFH supports health care for the medically underserved in Lake County through its partnership with HealthReach, an independent not-for-profit organization that partners with public and private organizations to provide access to free primary and specialty medical care, dental, vision, and pharmaceutical services for uninsured Lake County residents. In FY12, NLFH provided grant funding to HealthReach, helping the organization to provide more than 20,000 patient visits and pay for more than 28,000 prescriptions for those who could not afford their medications.

Also in FY12, NLFH provided more than \$97,000 in laboratory support, diagnostic imaging and testing, and hospitalization for HealthReach patients. Surgeons and physicians on the medical staff of NLFH also provided pro bono services for patients in need of care for life-threatening diseases and illnesses.

For over 50 years, Northwestern Memorial Hospital has had a close relationship with Erie Family Health Center (ERHC), a Federally Qualified Health Center based in the Humboldt Park area in Chicago. In December 2010, NMH introduced EFHC to HealthReach to support the development of a sustainable model of providing access to medical, dental, vision and pharmacy services to the medically uninsured or underserved, low income residents of Lake County, Illinois. In May 2012, EFHC received notice of HRSA funding for their proposed model of care. EFHC plans to open the Lake County clinic in 2014. The Erie clinic will also be a critical education site for the residents in the Northwestern McGaw Lake County Family Medicine Residency program. NLFH will provide specialty and inpatient care for the patients seen at the Erie clinic.

- The project improves access to primary care

Family medicine and primary care physicians have an integral role in the healthcare system of our country. In addition to diagnosing and treating illness, they also provide preventive care, immunizations and screening, and personalized counseling

on maintaining a healthy lifestyle. Nearly one in four office visits in the United States are to a family physician, accounting for approximately 208 million office visits each year; nearly 83 million more than the next largest medical specialty. Primary Care/Family physicians provide more care for America's underserved and rural populations than any other medical specialty.

Over the past year, Northwestern Medicine has expanded primary care services to several locations in northern Cook County and Lake County, including Lake Forest, Grayslake, Highland Park, Deerfield, Libertyville, Evanston, and Glenview. These primary care clinics enable better access to preventative medicine for residents in these areas, including the uninsured and underinsured.

Additionally, NLFH and Northwestern Memorial Physicians Group (NMPG) have collaborated to establish a Family Medicine Residency program called the Northwestern McGaw Lake County (NMLC) Family Medicine Residency program. NMLC Family Medicine Residency will be a patient-centered medical home in Lake County. NMLC Family Medicine Residency is ideally positioned to train family physicians who will continue their careers in Lake County, serving those residents with the greatest needs.

Pending accreditation, the NMLC Family Medicine Residency will accept 8 medical residents per year, for a total of 24 residents over the 36-month training period. The program is expected to begin recruiting in July 2014. Based on national requirements, these residents will care for more than 40,000 patients as outpatients. Many of these patients will require hospital care for either an illness, an emergency, or obstetrical care. The family medicine residents will deliver at least 1,080 babies during their training and care for thousands of hospitalized patients; all under the supervision of the excellent physician faculty at NLFH.

Residency training requires a minimum of 36 months of training following medical school under the direct supervision of physician faculty. This training occurs across practice settings, with a substantial portion in the care of hospitalized adults and children, care of the laboring patient, and emergency and surgical care. These experiences are ideally placed at NLFH. But there is no space in the current facility.

Through the partnership with the Erie clinic, the NMLC Family Medicine residents will devote a significant part of their training to caring for the more than 110,000 medically underserved patients of Lake County. In this FQHC service area, 38% of the residents live below the 200% Federal Poverty Level, compared to 19% in surrounding Lake County. Many of these patients currently receive no preventive care and when acute or chronic health needs escalate, they receive emergent care that perpetuates an expensive, fragmented system.

The NMLC Family Medicine residents, in conjunction with NLFH, will reduce the burden and cost of episodic care, providing the right care in the right setting to improve the health of Lake County. Ultimately, many of these Family Medicine residents will remain in Lake County and at NLFH to continue their practices after residency, supporting the communities in which they received their training and forging a tradition of excellence.

- The project improves patient care by addressing industry standards and patients' preference for private rooms

Currently, almost 25% of the medical/surgical beds at NLFH are in semi-private rooms. As demonstrated by the experience at Northwestern Memorial Hospital since the opening of the Feinberg/Galter Pavilions in 1999 and the opening of the new Prentice Women's Hospital in 2007, hospital with all private rooms have several benefits including decreased infection rates, and increased staff productivity, patient confidentiality, and bed utilization.

- The project will improve access to clinical trials to Lake County residents

In order to advance Northwestern Medicine's academic mission in Lake County, the hospital will need appropriate space for research to conduct clinical trials in areas such as:

- Neurology – potential studies of stroke, multiple sclerosis, and neuromuscular diseases
- Cardiovascular – potential studies of vascular and heart diseases, such as arrhythmias
- Dermatology – potential studies of inflammatory skin diseases such as rheumatoid arthritis and psoriasis

Additionally, NLFH has plans to develop the Lurie Oncology program in Lake County and will also be bringing a comprehensive array of phase 2 and 3 oncology and hematology clinical trials to the region.

3. Potential impact on planning area residents if proposed services were not replaced

Currently, NLFH is ranked among Illinois' "Best Hospitals" by *U.S. News & World Report* and has been named the Consumer Choice hospital in Lake and Kenosha counties for eight years in a row by National Research Corporation. NLFH operates a Stroke Center, a Chest Pain Center, and the only Radiation Oncology program in Lake County accredited by the American College of Radiology. Additionally, NLFH is a Magnet hospital, having earned the country's highest recognition for patient care and nursing. The proposed facility will enhance our ability to provide the highest quality patient care to the residents of Lake County. Without the new facility, more financial and staff resources will be increasingly required to compensate for the facility deficits, limiting the ability to evolve programs to meet changing health care delivery requirements.

If NLFH cannot replace its current facility, access to care will suffer. As stated in the Alternatives section, the main hospital is aging. The 70-year old building is at the end of its useful life, with many systems in significant need of replacement. Also included in the Alternatives section, renovating the current facility and replacement of current utility systems is more expensive and less effective than constructing a new facility.

In addition to reducing access to critical inpatient care if the facility is not replaced, outpatient services would also be negatively impacted. The NLFH campus supports over 200,000 outpatient visits per year.

As earlier described, the new facility will provide a hub for two new programs that will extend community health care services to Lake County residents: Erie HealthReach, extending to Lake County the 50+ year relationship between NMH and EFHC in Chicago, and the

Northwestern McGaw Lake County Family Medicine Residency program. The proposed new facility provides necessary space for the operation and physician support of these two programs; space that is not available in the current building.

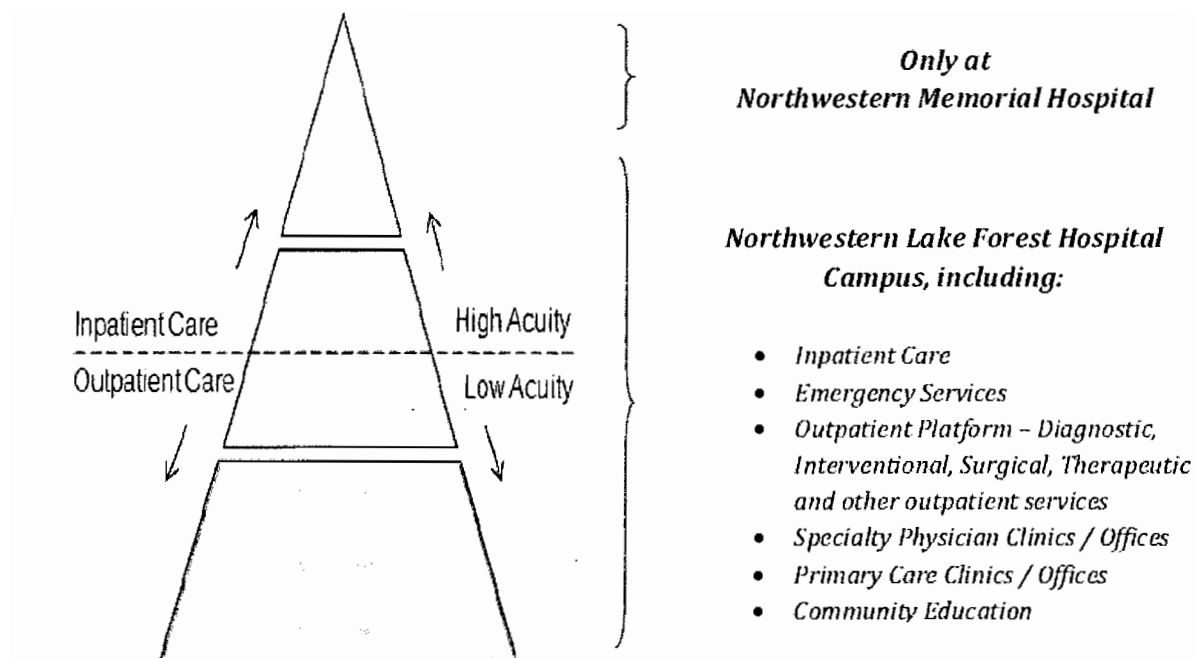
4. Anticipated role of the facility in the delivery system including anticipated patterns of patient referral

For more than 110 years, Lake County residents have turned to NLFH for high quality, compassionate care in a unique environment. In 2010, Lake Forest Hospital affiliated with Northwestern Memorial HealthCare. Today, NLFH is building on its deep-rooted traditions with unparalleled expertise and capabilities of NMHC and Northwestern University Feinberg School of Medicine to expand access to Northwestern care in Lake County. The partnership brings forth specialty care, nationally recognized physicians, pioneering research, and top tier performance in quality and patient safety closer to home for Lake County residents. The new facility will enable NLFH to advance the Northwestern Medicine vision of delivering exceptional healthcare while advancing medical science and knowledge.

NMHC committed to revitalize NLFH, as part of the 2010 affiliation agreement approved by the HFSRB. This replacement facility project accomplishes that commitment.

The NLFH campus provides a centralized hub of clinical care, consistent with services typically provided at a community-based hospital. NLFH anchors Northwestern Medicine's clinical care within Lake County as the inpatient care provider. However, consistent with the existing care model, the Lake Forest campus will also continue to provide a significant outpatient platform, primary care and specialty care physician offices, and community educational services.

Because of NLFH's affiliation with Northwestern Memorial Hospital, NLFH does not need to duplicate the highest level of acute care services already available within Northwestern Memorial HealthCare. This relationship insures that high acuity, low volume specialty care is handled in an environment that promotes the best patient care. For example, NLFH does not propose to perform transplant surgeries; transplant patients will receive their operative care at NMH. However, NLFH offers pre- and post-operative care for transplant patients at the Lake Forest campus.



Criterion 1110.235(b) – Master Plan or Related Future Projects

1. Anticipated completion date for the replacement hospital

Substantial completion of construction is anticipated to be Spring, 2017 with project close-out in December, 2018.

2. The proposed number of beds is consistent with the Part 1100 need assessment provisions

According to the 12/18/13 Update to Inventory of Hospital Services, there is a calculated need for 3 ICU beds in Planning Area A-09. There is a calculated excess of medical/surgical/pediatrics beds and obstetric beds. The proposed beds at NLFH respond to the calculated need for ICU beds and excess of medical/surgical/pediatrics and obstetric beds.

The proposed project decreases the number of obstetric beds by 5, reducing the excess obstetric beds in the planning area to 42. The project also increases the number of ICU beds by 2, reducing the calculated need in the planning area to 1. The number of medical/surgical beds in the proposed project remains the same as in the current facility.

According to the 12/18/13 Update to Inventory of Hospital Services, the Part 1100 need assessment for Planning Area A-09 Lake County is:

BED CATEGORY	A-09 CALCULATED NEED / (EXCESS)	NLFH Proposed Change
Medical-Surgical/Pediatric	(120)	No change
Obstetric	(47)	-5
Intensive Care	3	+2

3. The proposed beds and services will meet Part 1100 utilization targets within two years after project completion

Historic utilization data and projections for Year 2019 (two years after estimated project completion) for bed and services are included in ATTACHMENT-20: Medical/Surgical, Obstetric, Pediatric and Intensive Care and ATTACHMENT-37: Clinical Service Areas Other than Categories of Service. Projected utilization levels for Year 2019 are consistent with State standards.

Criterion 1110.235(c) – Relationship to Previously Approved Master Design Projects

1. Schematic architectural plans for all construction approved in the master design permit

Schematic design plans are included at the end of this ATTACHMENT.

2. The estimated project cost for the proposed project approved in the master design permit

The estimated project cost for the proposed project is \$377,986,895.

3. An item by item comparison of the construction elements (i.e. site, number of buildings, number of floors, etc.) in the proposed project to the approved master design project

CONSTRUCTION ELEMENTS	Master Design Permit (#13-033)	Construction Permit
# of buildings	Not Specified	1
# of floors	Not Specified	3 (+ lower level)
Total BGSF	Not Specified	469,593

4. A comparison of proposed beds and services to those approved under the master design permit

CLINICAL COMPONENTS	Master Design Permit	Construction Permit	Changes
Medical/Surgical Med/Surg beds	84	84	0
Intensive Care ICU beds	12	12	0
Obstetrics OB beds	18	18	0
Nursery bassinets	12	12	0
Special Care Nursery Level II bassinets	6	6	0
Labor & Delivery LDRs	5	5	0
C-Section rooms	2	2	0
Emergency Department ED stations	16	16	0
Clinical Decision Unit Rooms	8	8	0
Inpatient Rehabilitation Rooms	1-3	1	0
Surgery Operating rooms	8	8	0
Procedure rooms	4	4	0
Phase I Recovery stations	12	11	-1
Phase II Recovery stations	48	40	-8
Interventional Radiology Rooms	2	2	0
Cardiac Catheterization Lab	1	1	0
Oncology Accelerator	1	1	0
PET/Simulator	1	1	0
Infusion rooms	7	7	0
Imaging X-Ray	4	4	0
MRI	2	2	0
CT	2	2	0
U/S	6	6	0
Mammography	3	3	0
Bone Density	1	1	0
Stereotactic Biopsy	1	1	0
Nuclear Medicine	2	2	0
Neurology EEG	1	1	0
EMG	1	1	0

Cardiac Diagnostics			
CV Stress Test	1	1	0
TEE	1	1	0
Echo	2	2	0
Holter/EKG	2	2	0
PFT	2	2	0
Cardiac Rehabilitation			
Gym	1	1	0
Wound Care			
Rooms	3	3	0
HBOs	2	2	0
Pre-Admission Testing			
Rooms	2	3	+1

CERTIFICATE OF
NEED

DEPARTMENT NAME	DGSF
ADMINISTRATION	2185 SF
BED STORAGE & CENTRAL DISTRIBUTION	736 SF
BIOMED	989 SF
CENTRAL STERILE	4202 SF
DIETARY	11413 SF
ENGINEERING	2286 SF
EVS	1878 SF
LAB	4081 SF
MATERIALS MANAGEMENT	3255 SF
MEP SYSTEMS	16449 SF
ON-CALL CENTER	1438 SF
PHARMACY	2275 SF
STORAGE	238 SF
Grand total	51454 SF

DEPARTMENT NAME	DGSF
CIRCULATION - INTERDEPARTMENTAL	11135 SF
FLOOR GROSS	2909 SF
MEP DISTRIBUTION	1829 SF
Grand total	15873 SF

TOTAL FLOOR AREA	67327 SF
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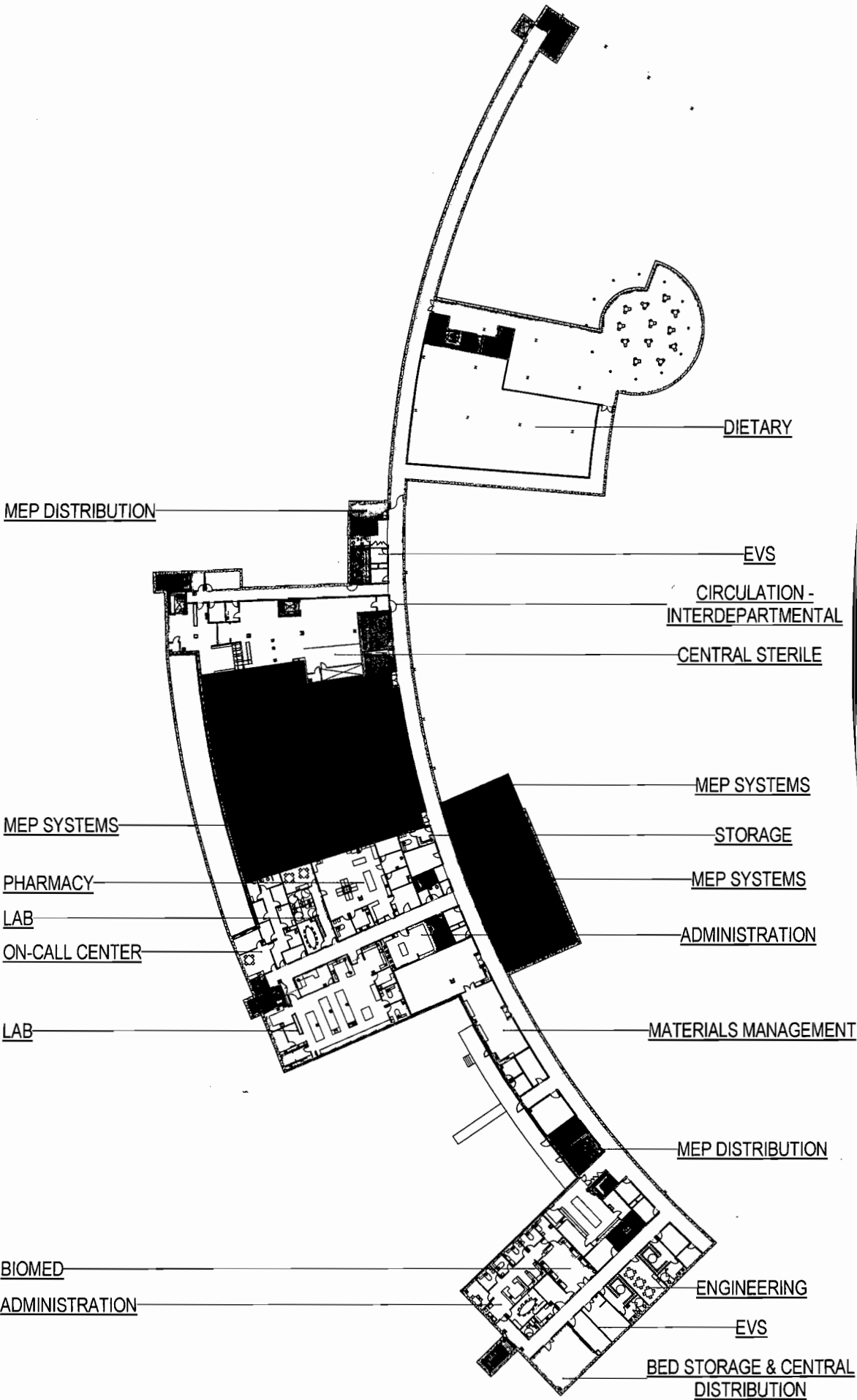
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 - ☐ AMBULANCE GARAGE
 - ☒ BED STORAGE & CENTRAL DISTRIBUTION
 - ☒ BIOMED
 - ☐ BIRTHPLACE
 - ☒ CANCER CENTER
 - ☐ CARDIAC/ CARDIOPULMONARY REHAB
 - ☐ CDU
 - ☒ CENTRAL DISTRIBUTION
 - ☒ CENTRAL STERILE
 - ☒ CHAPEL
 - ☐ CIRCULATION - INTERDEPARTMENTAL
 - ☒ CIRCULATION - PUBLIC
 - ☐ CONFERENCE CENTER
 - ☐ CONFERENCE/ EDUCATION
 - ☒ CONNECTOR
 - ☒ DIAGNOSTIC IMAGING
 - ☒ DIETARY
 - ☒ EMERGENCY
 - ☒ ENGINEERING
 - ☐ EVS
 - ☒ FLOOR GROSS
 - ☒ ICU
 - ☐ INPATIENT REHAB
 - ☒ INTERVENTIONAL
 - ☒ LAB
 - ☒ LOCKERS/ LOUNGES
 - ☐ MATERIALS MANAGEMENT
 - ☒ MED SURG
 - ☒ MEP DISTRIBUTION
 - ☒ MEP SYSTEMS
 - ☒ NEUROLOGY
 - ☒ NON INVASIVE CARDIAC/ CARDIOPULMONARY DIAGNOSTICS
 - ☒ OBSTETRICS
 - ☐ ON-CALL CENTER
 - ☒ OUTPATIENT SERVICES
 - ☐ PHARMACY
 - ☒ PHYSICIANS OFFICES
 - ☒ PREP & PHASE II RECOVERY
 - ☐ PUBLIC/ LOBBY
 - ☐ RETAIL
 - ☒ SPECIAL CARE NURSERY - LEVEL II
 - ☐ STORAGE
 - ☒ WAITING/ PUBLIC SPACE
 - ☐ WOMENS IMAGING
 - ☒ WOUND CARE



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A200 January 13, 2014

① CON - LOWER LEVEL



Campus
Revitalization Project
Lake Forest, IL

CERTIFICATE OF
NEED

DEPARTMENT NAME	DGSF
ADMINISTRATION	438 SF
AMBULANCE GARAGE	4796 SF
CANCER CENTER	10656 SF
CARDIAC/ CARDIOPULMONARY REHAB	5376 SF
CDU	3661 SF
CHAPEL	925 SF
CONFERENCE CENTER	7405 SF
DIAGNOSTIC IMAGING	14116 SF
EMERGENCY	12289 SF
EVS	125 SF
INTERVENTIONAL	33700 SF
NON INVASIVE CARDIAC/ CARDIOPULMONARY DIAGNOSTICS	2901 SF
OUTPATIENT SERVICES	2506 SF
PHYSICIANS OFFICES	18390 SF
PREP & PHASE II RECOVERY	17518 SF
PUBLIC/ LOBBY	7461 SF
RETAIL	2660 SF
WAITING/ PUBLIC SPACE	5387 SF
WOMENS IMAGING	6890 SF
WOUND CARE	2172 SF
Grand total	157752 SF

DEPARTMENT NAME	DGSF
CIRCULATION - INTERDEPARTMENTAL	4640 SF
CIRCULATION - PUBLIC	18172 SF
FLOOR GROSS	7751 SF
MEP DISTRIBUTION	5656 SF
Grand total	36218 SF

TOTAL FLOOR AREA 193970 SF

- DEPARTMENT NAME
- ☐ ADMINISTRATION
 - ☐ AMBULANCE GARAGE
 - ☒ BED STORAGE & CENTRAL DISTRIBUTION
 - ☐ BIOMED
 - ☐ BIRTHPLACE
 - ☒ CANCER CENTER
 - ☒ CARDIAC/ CARDIOPULMONARY REHAB
 - ☐ CDU
 - ☒ CENTRAL DISTRIBUTION
 - ☒ CENTRAL STERILE
 - ☒ CHAPEL
 - ☐ CIRCULATION - INTERDEPARTMENTAL
 - ☒ CIRCULATION - PUBLIC
 - ☐ CONFERENCE CENTER
 - ☐ CONFERENCE/ EDUCATION
 - ☐ CONNECTOR
 - ☒ DIAGNOSTIC IMAGING
 - ☒ DIETARY
 - ☒ EMERGENCY
 - ☒ ENGINEERING
 - ☐ EVS
 - ☒ FLOOR GROSS
 - ☒ ICU
 - ☐ INPATIENT REHAB
 - ☐ INTERVENTIONAL
 - ☐ LAB
 - ☒ LOCKERS/ LOUNGES
 - ☐ MATERIALS MANAGEMENT
 - ☒ MED SURG
 - ☒ MEP DISTRIBUTION
 - ☒ MEP SYSTEMS
 - ☒ NEUROLOGY
 - ☒ NON INVASIVE CARDIAC/ CARDIOPULMONARY DIAGNOSTICS
 - ☒ OBSTETRICS
 - ☐ ON-CALL CENTER
 - ☒ OUTPATIENT SERVICES
 - ☐ PHARMACY
 - ☒ PHYSICIANS OFFICES
 - ☒ PREP & PHASE II RECOVERY
 - ☐ PUBLIC/ LOBBY
 - ☐ RETAIL
 - ☒ SPECIAL CARE NURSERY - LEVEL II
 - ☐ STORAGE
 - ☒ WAITING/ PUBLIC SPACE
 - ☐ WOMENS IMAGING
 - ☒ WOUND CARE



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A201 January 13, 2014

① CON - LEVEL 1



CANCER CENTER

ADMINISTRATION

WOMENS IMAGING

NON INVASIVE CARDIAC/
CARDIOPULMONARY
DIAGNOSTICS

CARDIAC/
CARDIOPULMONARY REHAB

CIRCULATION - PUBLIC

RETAIL

RETAIL

OUTPATIENT SERVICES

WAITING/ PUBLIC SPACE

PREP & PHASE II
RECOVERY

CIRCULATION - PUBLIC

CDU

CHAPEL

EMERGENCY

WOUND CARE

PHYSICIANS OFFICES

CONFERENCE CENTER

PUBLIC/ LOBBY

DIAGNOSTIC IMAGING

INTERVENTIONAL

CIRCULATION -
INTERDEPARTMENTAL

AMBULANCE GARAGE

Campus
Revitalization Project
Lake Forest, IL

CERTIFICATE OF
NEED

DEPARTMENT NAME	DGSF
ADMINISTRATION	19612 SF
BIRTHPLACE	11573 SF
CONFERENCE/ EDUCATION	1005 SF
EVS	115 SF
ICU	9381 SF
LOCKERS/ LOUNGES	1892 SF
MED SURG	23595 SF
NEUROLOGY	472 SF
ON-CALL CENTER	296 SF
PHYSICIANS OFFICES	25553 SF
SPECIAL CARE NURSERY - LEVEL II	3430 SF
WAITING/ PUBLIC SPACE	3500 SF
Grand total	100524 SF

DEPARTMENT NAME	DGSF
CIRCULATION - INTERDEPARTMENTAL	3338 SF
CIRCULATION - PUBLIC	5041 SF
FLOOR GROSS	7573 SF
MEP DISTRIBUTION	3423 SF
Grand total	19375 SF

TOTAL FLOOR AREA	119899 SF
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- DEPARTMENT NAME
- ☐ ADMINISTRATION
 - ☐ AMBULANCE GARAGE
 - ☒ BED STORAGE & CENTRAL DISTRIBUTION
 - ☒ BIOMED
 - ☐ BIRTHPLACE
 - ☒ CANCER CENTER
 - ☐ CARDIAC/ CARDIOPULMONARY REHAB
 - ☐ CDU
 - ☒ CENTRAL DISTRIBUTION
 - ☒ CENTRAL STERILE
 - ☒ CHAPEL
 - ☐ CIRCULATION - INTERDEPARTMENTAL
 - ☒ CIRCULATION - PUBLIC
 - ☐ CONFERENCE CENTER
 - ☐ CONFERENCE/ EDUCATION
 - ☐ CONNECTOR
 - ☒ DIAGNOSTIC IMAGING
 - ☒ DIETARY
 - ☒ EMERGENCY
 - ☒ ENGINEERING
 - ☐ EVS
 - ☒ FLOOR GROSS
 - ☒ ICU
 - ☐ INPATIENT REHAB
 - ☐ INTERVENTIONAL
 - ☒ LAB
 - ☒ LOCKERS/ LOUNGES
 - ☐ MATERIALS MANAGEMENT
 - ☒ MED SURG
 - ☒ MEP DISTRIBUTION
 - ☒ MEP SYSTEMS
 - ☒ NEUROLOGY
 - ☒ NON INVASIVE CARDIAC/ CARDIOPULMONARY DIAGNOSTICS
 - ☒ OBSTETRICS
 - ☐ ON-CALL CENTER
 - ☒ OUTPATIENT SERVICES
 - ☐ PHARMACY
 - ☒ PHYSICIANS OFFICES
 - ☒ PREP & PHASE II RECOVERY
 - ☐ PUBLIC/ LOBBY
 - ☒ RETAIL
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 - ☒ WAITING/ PUBLIC SPACE
 - ☐ WOMENS IMAGING
 - ☒ WOUND CARE

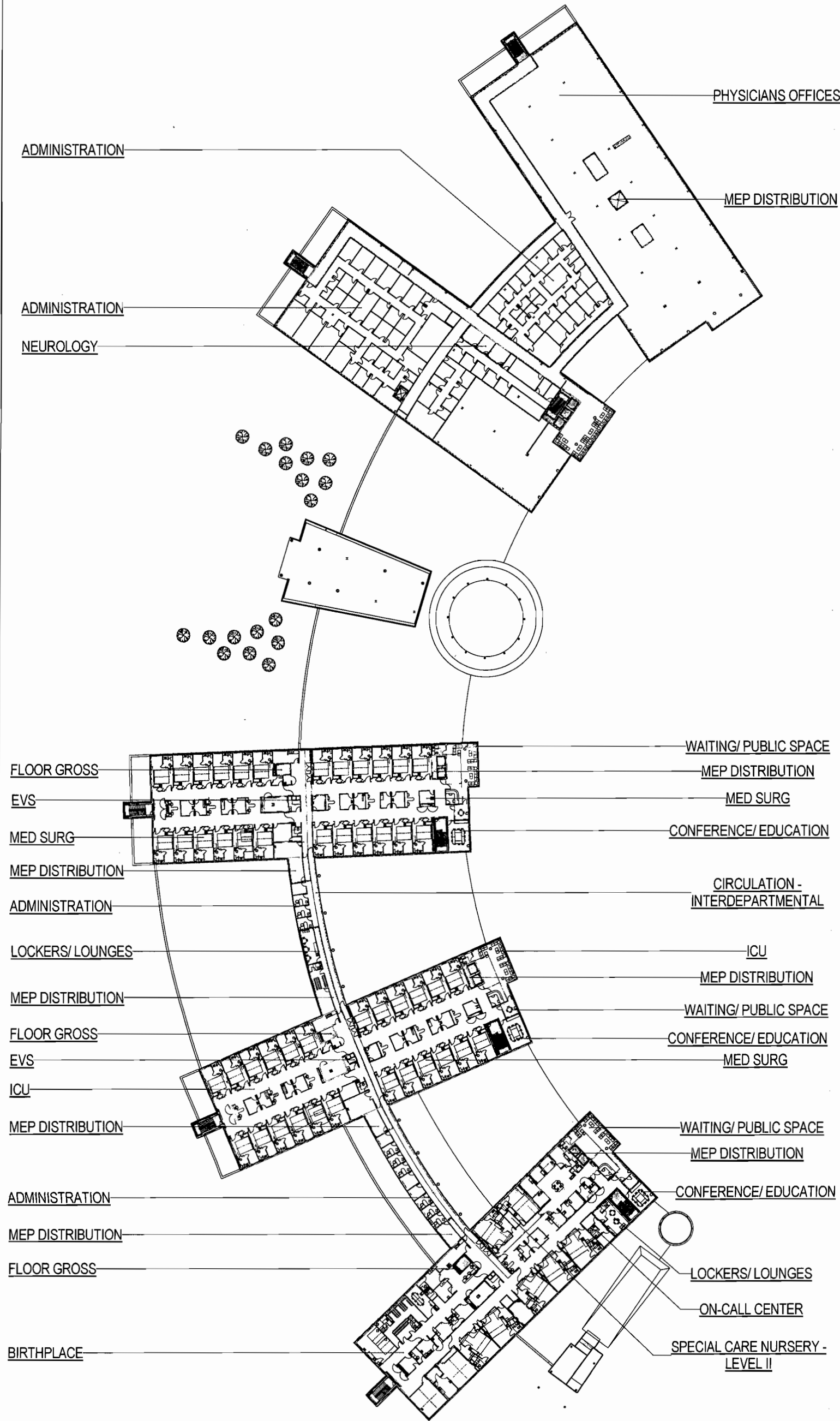


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A202

January 13, 2014

1 CON - LEVEL TWO



CERTIFICATE OF
NEED

DEPARTMENT NAME	DGSF
ADMINISTRATION	1598 SF
CIRCULATION - PUBLIC	2453 SF
CONFERENCE/ EDUCATION	1830 SF
EVS	115 SF
INPATIENT REHAB	397 SF
LOCKERS/ LOUNGES	1150 SF
MED SURG	32055 SF
OBSTETRICS	15244 SF
PHYSICIANS OFFICES	17758 SF
WAITING/ PUBLIC SPACE	4186 SF
Grand total	76786 SF

DEPARTMENT NAME	DGSF
CIRCULATION - INTERDEPARTMENTAL	2525 SF
CIRCULATION - PUBLIC	0 SF
FLOOR GROSS	6728 SF
MEP DISTRIBUTION	3452 SF
Grand total	12705 SF

TOTAL FLOOR AREA	89491 SF
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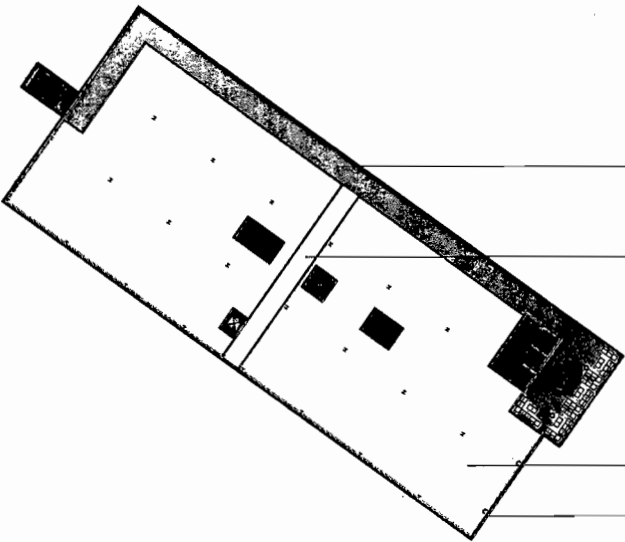
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 - ☒ BED STORAGE & CENTRAL DISTRIBUTION
 - ☒ BIOMED
 - ☐ BIRTHPLACE
 - ☒ CANCER CENTER
 - ☐ CARDIAC/ CARDIOPULMONARY REHAB
 - ☐ CDU
 - ☒ CENTRAL DISTRIBUTION
 - ☒ CENTRAL STERILE
 - ☒ CHAPEL
 - ☐ CIRCULATION - INTERDEPARTMENTAL
 - ☒ CIRCULATION - PUBLIC
 - ☐ CONFERENCE CENTER
 - ☐ CONFERENCE/ EDUCATION
 - ☐ CONNECTOR
 - ☒ DIAGNOSTIC IMAGING
 - ☒ DIETARY
 - ☐ EMERGENCY
 - ☒ ENGINEERING
 - ☐ EVS
 - ☒ FLOOR GROSS
 - ☒ ICU
 - ☐ INPATIENT REHAB
 - ☒ INTERVENTIONAL
 - ☐ LAB
 - ☒ LOCKERS/ LOUNGES
 - ☐ MATERIALS MANAGEMENT
 - ☒ MED SURG
 - ☒ MEP DISTRIBUTION
 - ☒ MEP SYSTEMS
 - ☒ NEUROLOGY
 - ☒ NON INVASIVE CARDIAC/ CARDIOPULMONARY DIAGNOSTICS
 - ☒ OBSTETRICS
 - ☐ ON-CALL CENTER
 - ☐ OUTPATIENT SERVICES
 - ☐ PHARMACY
 - ☒ PHYSICIANS OFFICES
 - ☒ PREP & PHASE II RECOVERY
 - ☐ PUBLIC/ LOBBY
 - ☒ RETAIL
 - ☒ SPECIAL CARE NURSERY - LEVEL II
 - ☐ STORAGE
 - ☒ WAITING/ PUBLIC SPACE
 - ☐ WOMENS IMAGING
 - ☒ WOUND CARE



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A203 January 13, 2014

① CON - LEVEL THREE

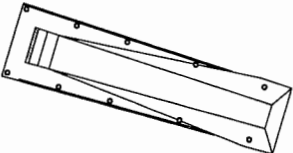


CIRCULATION - PUBLIC

CIRCULATION -
INTERDEPARTMENTAL

PHYSICIANS OFFICES

FLOOR GROSS



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SECTION VII – SERVICE SPECIFIC REVIEW CRITERIA

A. Criterion 1110.530 – Medical/Surgical, Obstetric, and Intensive Care

Category of Service	# Existing Beds	# Proposed Beds
ICU	10	12
Medical/Surgical	84	84
Obstetric	23	18

INTENSIVE CARE

According to the 12/18/13 Update to Inventory of Hospital Services, there is a calculated need for 3 ICU beds in Planning Area A-09. NLFH's proposed addition of 2 ICU beds will reduce the need from 3 beds to 1 bed. Additionally, all of the existing providers of ICU service in the Planning area are operating at above the State's occupancy target.

FACILITY	CY12 Occupancy
Midwestern Regional Medical Center	101.5%
Advocate Good Shepherd Hospital	76.2%
Advocate Condell Medical Center	75.1%
Northshore Highland Park Hospital	75.0%
Vista Medical Center East	71.0%

1110.530(b)(2) – Planning Area Need – Service to Planning Area Residents

As stated in ATTACHMENT-12 and ATTACHMENT-18, the proposed replacement facility will provide access to Northwestern Medicine to Lake County residents. The replacement facility will provide increased specialty services in both medical/surgical and ICU areas.

Typical ICU admissions at NLFH are for large abdominal surgeries such as bowel resections after performance, large tumor debulking, thoracotomy, VATS, post-interventional radiology procedures such as embolectomy. Trans flaps for SPO2 monitoring, bi-lateral hip and knee replacements, craniotomy, and post-acute cardiac stent placements. The majority of the ICU patients are medical; respiratory failure, CVA, CHF, renal failure, overdose, ETOH withdrawal, liver failure, sepsis, and cancer.

NLFH's market area is all of Lake County, and more specifically, the primary service area within that market area consists of the following areas: Lake Forest, Waukegan, Grayslake, Gurnee, Lake Bluff, Lake Villa, Libertyville, North Chicago, Round Lake, Zion, Vernon Hills, Mundelein, Antioch, Highland Park, Wadsworth, Deerfield, Lincolnshire, Winthrop Harbor, Great Lakes, and Highwood. As detailed below, in CY12, 814 ICU admissions were residents of the primary service area. This is 87.6% of the total 929 ICU admissions (see patient origin data by zip code on the next pages).

NLFH Primary Service Area CY12 ICU Patient Origin Data by Zip Code

City	Zip Code	CY12 ICU Admissions
Lake Forest	60045	155
Waukegan	60085	83
Grayslake	60030	64
Gurnee	60031	58
Lake Bluff	60044	56
Lake Villa	60046	56
Libertyville	60048	46
North Chicago	60064	42
Round Lake	60073	40
Waukegan	60087	39
Zion	60099	29
Vernon Hills	60061	27
Mundelein	60060	24
Antioch	60002	23
Highland Park	60035	19
Wadsworth	60083	17
Deerfield	60015	11
Lincolnshire	60069	10
Winthrop Harbor	60096	7
Great Lakes	60088	6
Highwood	60040	2
		814

CY12 ICU Patient Origin Data by Zip Code

Zip Code	CY12 ICU Admissions
60045	155
60085	83
60030	64
60031	58
60044	56
60046	56
60048	46
60064	42
60073	40
60087	39

60099	29
60061	27
60060	24
60002	23
60035	19
60083	17
60015	11
60069	10
60041	9
60089	8
60096	7
60088	6
60062	6
60090	6
60020	4
60047	4
60051	4
60022	3
60093	3
60084	3
60040	2
60025	2
60010	2
60081	2
92056	1
92064	1
32960	1
33426	1
30014	1
83455	1
60611	1
60614	1
60618	1
60630	1
60632	1
60639	1
60640	1
60643	1
60645	1
60646	1
60647	1
60016	1
60202	1

60712	1
60074	1
60463	1
60008	1
60076	1
60487	1
60139	1
60527	1
60102	1
60014	1
60021	1
60097	1
60098	1
61604	1
61832	1
47331	1
46321	1
46383	1
70118	1
2332	1
64105	1
49431	1
49091	1
49079	1
39540	1
27013	1
7436	1
11205	1
29322	1
78155	1
53142	1
53143	1
53158	1
53168	1
53179	1
53181	1
53105	1
53402	1
53406	1
53115	1
	929

1110.530(b)(4) – Planning Area Need – Service Demand – Expansion of an Existing Category of Service

The request for expansion of NLFH's ICU services is based on three supporting justifications:

1. Continued occupancy above the State Occupancy Standard
2. Population growth in Lake County
3. Growth in specialized clinical services at NLFH

1. Historic Occupancy above the State Occupancy Standard

Category of Service	Board Occupancy Standard	CY11	CY12
ICU	60%	65%	61%

Occupancy of NLFH's 10 ICU beds has been over 60% (State Occupancy Standard) every year for the past decade. Average annual occupancy has ranged from 61% - 79%.

Historic Utilization

ICU	CY02	CY03	CY04	CY05	CY06	CY07	CY08	CY09	CY10	CY11	CY12
Admissions	943	970	557	639	965	1,097	1,192	1,098	1,053	1,037	929
Patient Days	2,883	2,705	2,219	2,333	2,275	2,247	2,636	2,476	2,243	2,337	2,215
ADC	7.9	7.4	6.1	6.4	6.2	6.2	7.2	6.8	6.1	6.4	6.1
Beds	10	10	10	10	10	10	10	10	10	10	10
Occupancy	79.0%	74.1%	60.8%	63.9%	62.3%	61.6%	72.2%	67.8%	61.5%	64.0%	60.7%

While the ADC for CY12 was 6.1, there were many days that the ICU was operating at its peak census of 10. "Code White" is a term at NLFH that is called by the house operations leader when there is a patient throughput challenge due to high census in the inpatient units. There were approximately 70 "Code Whites" in both CY11 and CY12. Approximately 50% of the Code Whites have been related to ICU. The other 50% have been related to medical/surgical.

2. Population growth in Lake County

According to a population study of NLFH's primary service area by Truven Health Analytics (based on Claritas data), there is a projected population increase in this area between 2012 and 2017.

	2012	2017	Average Annual growth rate
0-17	159,804	158,688	-0.14%
18-44	205,932	200,342	-0.54%
45-64	149,671	162,747	1.75%
65+	56,429	67,397	3.89%
Total	571,836	589,174	0.61%

Because over 80% of NLFH's ICU patients are age 45+, based on this study NLFH assumed that there will be a 2.33% average annual growth in the key users of ICU services between CY12 – CY19.

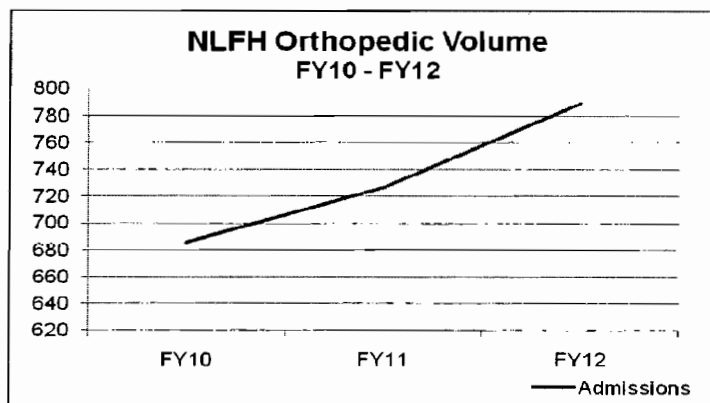
	2012	2017	Average Annual growth rate
45-64	149,671	162,747	1.75%
65+	56,429	67,397	3.89%
Total	206,100	230,144	2.33%

3. Growth in specialized clinical services at NLFH

As mentioned in previous attachments, since the affiliation of NLFH with NMHC, access to specialized services at NLFH has increased. In just the past year, NLFH has experienced increased admissions in the following clinical specialties:

- Gastroenterology: +5.9%
- General Surgery: +19.3%
- Neurosciences: +1.3%
- Otolaryngology: +1.6%

More specifically, growth in Orthopedics has increased 15% since FY10:



Increases in admissions in these and other clinical specialties are expected to continue at NLFH with the recent (September, 2013) affiliation between NMHC and Northwestern Medical Faculty Foundation (NMFF), the second largest physician practice in Illinois. This affiliation will further enhance clinical care in Lake County by including the physician practice in NMHC's commitment to provide high quality, affordable healthcare.

As admissions in clinical specialties have increased, so has the acuity level of the patients. This trend is expected to continue.

	FY10	FY11	FY12
Case Mix Index (CMI)	1.13	1.15	1.17
% of Cases Above 2.00 CMI	11.70%	13.37%	14.20%
% of Cases Above 3.00 CMI	4.00%	4.09%	4.22%

1110.530(d)(1) – Deteriorated Facilities

As addressed in ATTACHMENT-13, in addition to the many facility infrastructure deficiencies that affect the ICU, the patient rooms in the current facility are below current industry standards. The current ICU averages 434 dgsf per room, significantly below the State standard of 600 – 685 dgsf per room. This limits the kinds of procedures (such as imaging and physical therapy) that can be done in the room and requires the patient to be taken to various support and treatment areas.

Additionally, the facility was built as a community hospital and therefore does not have space for the educational requirements of an Academic Medical Center. ICU rooms are too small to adequately fit all of the caregivers who participate in Medical Rounds and other aspects of patient care.

1110.530(d)(4) – Occupancy

Projections for ICU admissions assume an average annual increase of 2.33% from CY12 – CY19 (two years after project completion). This assumption is consistent with the projected average annual increase of the population age 45+ in the primary service area.

Projections

ICU	CY13	CY14	CY15	CY16	CY17	CY18	CY19
Admissions	951	973	995	1,019	1,042	1,067	1,092
Patient Days	2,270	2,326	2,383	2,442	2,502	2,564	2,628
ALOS	2.39	2.39	2.39	2.40	2.40	2.40	2.41
ADC	6.2	6.4	6.5	6.7	6.9	7.0	7.2
Beds	10	10	10	10	12	12	12
Occupancy	62.2%	63.7%	65.3%	66.9%	57.1%	58.5%	60.0%

Projections for the ICU patient days also assume a 2% increase in the average length of stay by CY19 to accommodate the increasing patient acuity levels. This projected increase is consistent with the ALOS for the 5 other ICU programs in the A-09 planning area. In fact, even with a projected ALOS of 2.41, NLFH's ICU ALOS will still be the lowest in the planning area.

CY12 Planning Area A-09 ICU Programs

FACILITY	ICU ALOS
Northwestern Lake Forest Hospital	2.4 days
Northshore Highland Park Hospital	2.5 days
Advocate Condell Medical Center	2.6 days
Vista Medical Center East	3.2 days
Midwestern Regional Medical Center	4.2 days
Advocate Good Shepherd Hospital	4.5 days

Even with these conservative projection assumptions, the 12 ICU beds in NLFH's proposed replacement facility will be at the State's target occupancy by two years after project completion.

1110.530(e) – Staffing Availability

Recruitment efforts for the additional 2 ICU beds will be conducted with both internal and external candidates. NLFH has an in-house nurse residency program in place that prepares current Medical/Surgical RNs for critical care as well as serves as a significant recruitment tool for new hires. There is also an active in-house RN pool at NLFH that at all times has 4-5 RNs with critical care experience. This RN pool can be used until a new permanent staff member is hired.

Additionally, NLFH uses recruiting tools that include critical care specialty organization journals, professional recruiters, current staff referrals and the NLFH website.

1110.530(f) – Performance Requirements

The minimum unit sized for an intensive care unit is 4 beds. The proposed ICU unit is 12 beds.

1110.530(g) – Assurances

See letter at the end of this ATTACHMENT.

MEDICAL/SURGICAL

According to the 12/18/13 Update to Inventory of Hospital Services, there is a calculated excess of 120 medical/surgical/pediatrics beds in Planning Area A-09. NLFH proposes to have 84 medical/surgical beds in the replacement facility. This is the current number of medical/surgical beds, following the 6/26/13 approval of CON #13-014 for the discontinuation of 10 pediatrics beds that were re-classified as medical/surgical beds.

1110.530(d)(1) – Deteriorated Facilities

As documented in ATTACHMENT-13, the facility as a whole has many deficiencies and is nearing the end of its useful life. Some of the issues specific to the medical/surgical beds are:

- 20 of the 84 medical/surgical beds are in semi-private rooms. The hospital industry standard recognizes that private rooms enhance operating efficiencies, promote infection control, avoid gender conflicts and issues with clinical conditions, and address patient preferences for privacy, comfort, and patient confidentiality. The current patient rooms are small, especially the semi-private rooms. Patient rooms average 176 nsf per bed in the west wing and 210 nsf per bed in the south wing. The hospital's medical/surgical services average 369 dgsf per bed, well below the State standard of 500 – 600 dgsf per bed. This limits the kinds of procedures (such as imaging and physical therapy) that can be done in the room and requires the patient to be taken to various support and treatment areas.
- Additionally, moving a patient from the room often requires moving a night table to the hallway for clearance.
- The wall and window unit air conditioners further reduce functional room space for family/patient and healthcare provider.
- The 10-bed and 13-bed medical/surgical units in the south wing are too small for efficient nursing staffing.
- The heating and ventilation systems lack adequate control for appropriate patient needs and comfort and in some cases do not meet current code requirements for air changes and proper air exhaust.
- Most of the patient rooms do not have showers; use of showers in the hallways is a privacy concern for many patients.
- All nursing units lack adequate amounts of family space.

1110.530(d)(4) – Occupancy

Category of Service	Board Occupancy Standard	FY11	FY12
Medical/Surgical	75%	75.1%	71.5%

Historic Utilization

Medical/Surgical

Medical/Surgical	CY02	CY03	CY04	CY05	CY06	CY07	CY08	CY09	CY10	CY11	CY12
Admissions	3,854	4,012	4,266	4,801	4,848	5,077	5,875	5,514	5,726	5,397	5,655
Patient Days	17,599	18,734	18,947	19,765	18,861	18,862	22,449	20,668	19,848	19,776	18,893
Observation Days			1,580	1,348	1,603	1,694	1,887	2,069	1,828	1,972	2,115
TOTAL Days	17,599	18,734	20,527	21,113	20,464	20,556	24,336	22,737	21,676	21,748	21,008
ADC	48.2	51.3	56.2	57.8	56.1	56.3	66.7	62.3	59.4	59.6	57.6
Beds	64	74	74	74	74	74	74	74	74	74	74
Occupancy	75.3%	69.4%	76.0%	78.2%	75.8%	76.1%	90.1%	84.2%	80.3%	80.5%	77.8%

The average annual occupancy of the medical/surgical beds have exceeded the State standard of 75% for 9 of the last 10 years.

Pediatrics

Pediatrics	CY02	CY03	CY04	CY05	CY06	CY07	CY08	CY09	CY10	CY11	CY12
Admissions	187	261	279	392	412	558	566	546	471	545	424
Patient Days	950	1,163	751	936	924	1,231	1,200	1,110	909	1,136	770
Observation Days			337	360	295	212	162	201	168	153	153
TOTAL Days	950	1,163	1,088	1,296	1,219	1,443	1,362	1,311	1,077	1,289	923
ADC	2.6	3.2	3.0	3.6	3.3	4.0	3.7	3.6	3.0	3.5	2.5
Beds	10	10	10	10	10	10	10	10	10	10	10
Occupancy	26.0%	31.9%	29.8%	35.5%	33.4%	39.5%	37.3%	35.9%	29.5%	35.3%	25.3%

Utilization of the dedicated pediatric unit was low, which prompted NLFH to discontinue the beds as pediatrics beds and re-classify them as medical/surgical beds in order to continue to care for these patients but to increase the flexibility of the beds. While the average annual occupancy was low, there were multiple days with a peak census of 10.

Combined Medical/Surgical and Pediatrics

Medical/Surgical/ Pediatrics	CY02	CY03	CY04	CY05	CY06	CY07	CY08	CY09	CY10	CY11	CY12
Admissions	4,041	4,273	4,545	5,193	5,260	5,635	6,441	6,060	6,197	5,942	6,079
Patient Days	18,549	19,897	19,698	20,701	19,785	20,093	23,649	21,778	20,757	20,912	19,663
Observation Days	0	0	1,917	1,708	1,898	1,906	2,049	2,270	1,996	2,125	2,268
TOTAL Days	18,549	19,897	21,615	22,409	21,683	21,999	25,698	24,048	22,753	23,037	21,931
ADC	50.8	54.5	59.2	61.4	59.4	60.3	70.4	65.9	62.3	63.1	60.1
Beds	74	84	84	84	84	84	84	84	84	84	84
Occupancy	68.7%	64.9%	70.5%	73.1%	70.7%	71.8%	83.8%	78.4%	74.2%	75.1%	71.5%

NLFH's combined medical/surgical/pediatrics admissions increased 50.4% over the last decade, from 4,041 in CY02 to 6,079 in CY12. This is an average increase of 5% per year.

NLFH's combined medical/surgical/pediatrics patient days (including observation days) have increased by 18.2% over the last decade, from 18,549 in CY02 to 21,931 in CY12. This is an average annual increase of 1.8%.

Projections

Projections for medical/surgical/pediatrics volumes assume an average annual increase of 1.8% in patient days (including observation days) from CY12 – CY19 (two years after project completion). This assumption is consistent with the historic average annual growth of 1.8% in medical/surgical/pediatrics patient days (including observation days) from CY02 – CY12. Using this growth rate, the 84 beds will operate at over 80% occupancy which is above the State Standard of 75%. In order to achieve the State's minimum occupancy target of 75%, patient day volume would only have to grow by an average annual growth rate of 0.6%, which is consistent with the projected population growth rate of NLFH's primary service area (see table in ICU section above).

The factors contributing to the projected growth are: patient preference; increasing specialization of services; pending affiliation with NMFF (physician specialists); population growth in the primary service area in Lake County. NLFH projects 24,678 medical/surgical/pediatrics patient days (including observation days) in FY19, two years after completion of the project. This is an average annual growth of 1.8% per year from CY12 to CY19; the same annual growth rate as the last decade.

Combined Medical/Surgical and Pediatrics

Medical/Surgical/ Pediatrics	CY13	CY14	CY15	CY16	CY17	CY18	CY19
Admissions	6,059	6,161	6,265	6,371	6,479	6,588	6,699
Patient Days	19,995	20,333	20,676	21,025	21,380	21,741	22,108
Observation Days	2,309	2,350	2,393	2,436	2,480	2,524	2,570
TOTAL Days	22,304	22,683	23,069	23,461	23,860	24,265	24,678
ADC	61.1	62.1	63.2	64.3	65.4	66.5	67.6
Beds	84	84	84	84	84	84	84
Occupancy	72.7%	74.0%	75.2%	76.5%	77.8%	79.1%	80.5%

As with the average length of stay for ICU, NLFH's medical/surgical/pediatrics ALOS is the lowest in the A-09 planning area. The projections assume a 3.3 day length of stay which is the average inpatient ALOS of the past three years.

CY12 Planning Area A-09 Medical/Surgical/Pediatrics Programs

FACILITY	ICU ALOS
Northwestern Lake Forest Hospital	3.7 days
Advocate Good Shepherd Hospital	4.1 days
Vista Medical Center East	4.3 days
Advocate Condell Medical Center	4.4 days
Northshore Highland Park Hospital	5.7 days
Midwestern Regional Medical Center	8.5 days

1110.530(f) – Performance Requirements

The proposed medical/surgical bed capacity for NLFH's replacement facility is 84 beds. While this is slightly lower than the minimum bed capacity for a medical/surgical category of service within a Metropolitan Statistical Area (MSA) of 100 beds, it is consistent with the historic and projected utilization.

OBSTETRICS

According to the 12/18/13 Update to Inventory of Hospital Services, there is a calculated excess of 47 obstetric beds in Planning Area A-09. NLFH's proposed reduction of 5 obstetrics beds (from 23 to 18 beds) will reduce the excess from 47 to 42 beds.

Obstetrics will be primarily organized around a standard labor-delivery-recovery (LDR) model. Mothers undergoing a vaginal delivery will remain in the LDR during recovery and then be transferred to the obstetrics unit. All cesarean births will occur in specifically designated procedure rooms. After recovery, patients will be transferred to the obstetrics unit.

Although the rooms will be designed for rooming-in, there will be one Normal Newborn Nursery integrated in the unit. There will also be a Special Care Nursery with 6 Level II Nursery bassinets.

The obstetrics unit will accommodate both antepartum and postpartum patients.

1110.530(d)(1) – Deteriorated Facilities

1110.530(d)(2-3) – Documentation Related to Cited Problems

As stated in ATTACHMENT-13, the Hunter Family Center for Women's Health, where the obstetrics beds are located, opened in 2004. While these are the most updated inpatient beds in the hospital, they are being replaced because operating inpatient beds in two different buildings is less efficient and requires duplication of diagnostic & treatment services as well as support services.

1110.530(d)(4) – Occupancy

Category of Service	Board Occupancy Standard	FY11	FY12
Obstetric	75%	57.7%	48.9%

There are no occupancy standards or specific for Level II Newborn bassinets.

Historic Utilization

Obstetrics

Obstetrics	CY02	CY03	CY04	CY05	CY06	CY07	CY08	CY09	CY10	CY11	CY12
Deliveries	2,042	1,843	2,007	2,179	2,262	2,263	2,474	1,936	1,742	1,687	1,626
Admissions	2,358	2,123	2,310	2,518	2,613	2,596	2,831	2,146	1,873	1,836	1,581
Patient Days	5,891	5,314	5,847	6,468	6,648	6,795	7,407	5,607	4,976	4,820	4,102
ADC	16.1	14.6	16.0	17.7	18.2	18.6	20.3	15.4	13.6	13.2	11.2
Beds	23	23	23	23	23	23	23	23	23	23	23
Occupancy	70.2%	63.3%	69.6%	77.0%	79.2%	80.9%	88.2%	66.8%	59.3%	57.4%	48.9%

Projections

Delivery volume at NMH's Prentice Women's Hospital has been increasing continuously since 1985. In 1985, there were 4,090 deliveries at NMH, in 2012, there were 12,856. Delivery volume since the opening of the new Prentice Women's Hospital has grown from 11,106 in CY07 to 12,856 in CY12, an increase of 16%. Average annual occupancies have ranged from 69.6% the year new PWH opened up to 78.5%. Deliveries downtown are expected to continue growing and soon Prentice will be at maximum capacity.

In CY12, 961 maternity patients traveled from the northern Cook County/Lake County areas to deliver their babies at Prentice. In order to alleviate the high census at Prentice downtown, NLFH will work with NMFF and NMPG obstetricians to develop a plan to use maternity services at NLFH for patients who live in the northern Cook County/Lake County area. By CY19, two years after project completion, NLFH plans to accommodate 25% of those deliveries at the new NLFH. That equates to approximately 240 more deliveries at NLFH than in CY12.

Obstetrics	CY13	CY14	CY15	CY16	CY17	CY18	CY19
Deliveries	1,659	1,692	1,726	1,760	1,795	1,831	1,868
Admissions	1,709	1,743	1,778	1,813	1,850	1,887	1,924
Patient Days	4,487	4,576	4,668	4,761	4,856	4,953	5,053
ADC	12.3	12.5	12.8	13.0	13.3	13.6	13.8
Beds	23	23	23	23	18	18	18
Occupancy	53.4%	54.5%	55.6%	56.7%	73.9%	75.4%	76.9%

NLFH's obstetric ALOS is consistent with the ALOS's in the A-09 planning area. The projections assume a 2.63 day length of stay which is the average ALOS of the past three years.

CY12 Planning Area A-09 Medical/Surgical/Pediatrics Programs

FACILITY	OB ALOS
Vista Medical Center East	2.3 days
Advocate Good Shepherd Hospital	2.5 days
Advocate Condell Medical Center	2.6 days
Northwestern Lake Forest Hospital	2.6 days
Northshore Highland Park Hospital	3.0 days

1110.530(f) – Performance Requirements

The minimum unit size for a new obstetric unit within an MSA is 20 beds; however, the proposed obstetric unit is a replacement of an existing obstetric unit. The proposed unit size of 18 beds is based on current and projected obstetric volume.

SPECIAL CARE NURSERY (SCN)

NLFH has a "Special Care Nursery Level II with Exceptions". Our Affiliation Agreement with the Northwestern Perinatal Center considers the NLFH SCN appropriate for care of:

1. Low birth weight infant greater than 1250 grams
2. Premature infants 30 weeks or greater
3. Neonates on conventional mechanical ventilation
4. Suspected neonatal sepsis, hypoglycemia responsive to glucose infusion and asymptomatic neonates of diabetic mothers

The SCN is led by board certified neonatologists from Lurie Children's Hospital seven days per week, as well as the pediatric hospitalist from Lurie providing coverage 24/7.

Currently, NLFH has a special care nursery with 6 Level II beds. There were 185 admissions to the Level II unit in CY12.

Historic Utilization

SCN	CY06	CY07	CY08	CY09	CY10	CY11	CY12
Admissions	201	157	205	138	156	177	185
Patient Days	1,341	1,124	1,237	951	1,239	995	1,131
ADC	3.7	3.1	3.4	2.6	3.4	2.7	3.1
Beds	6	6	6	6	6	6	6
Occupancy	61.2%	51.3%	56.5%	43.4%	56.6%	45.4%	51.6%
Admissions % of Deliveries	8.9%	6.9%	8.3%	7.1%	9.0%	10.5%	11.4%

NLFH's SCN admissions increased 34.1% from CY09 – CY12, from 138 in CY09 to 185 in CY12. This is an average increase of 11.4% per year.

Projections

SCN	CY13	CY14	CY15	CY16	CY17	CY18	CY19
Admissions	189	193	196	200	204	208	213
Patient Days	1,252	1,277	1,303	1,328	1,355	1,382	1,410
ADC	3.4	3.5	3.6	3.6	3.7	3.8	3.9
Beds	6	6	6	6	6	6	6
Occupancy	57.2%	58.3%	59.5%	60.7%	61.9%	63.1%	64.4%
Admissions % of Deliveries	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%

Over the past 6 years, admissions to the SCN have averaged 9% of the total NLFH births. However, since CY09, the percentage of NLFH births resulting in a SCN admission has been steadily increasing. In CY12, 11.4% of the births at NLFH resulted in a SCN admission. With the increased use of infertility treatments and the continued trend of increasing maternal age this higher percentage was used in NLFH's projections.

The ALOS for the past 7 years was 6.6 days. This was the assumption used for the projections.

There are no occupancy standards or specific review criteria for Level II Newborn bassinets.



Thomas J. McAfee
President

January 27, 2014

Ms. Kathryn Olson
Chair
Illinois Health Facilities and Services Review Board
525 West Jefferson Street – Second Floor
Springfield, Illinois 62751

Dear Ms. Olson:

As required by 77 Ill. Adm. Code 1110.530 for the expansion of the Intensive Care category of service, as President of Northwestern Lake Forest Hospital, I hereby attest that by CY19 (the second year of operation after project completion), NLFH plans to achieve and maintain the occupancy standards specified in 77 Ill. Adm. Code 1100.

Sincerely,

A handwritten signature in black ink, appearing to read 'Thomas J. McAfee', is written over the printed name and title.

Thomas J. McAfee
President

F. Criterion 1110.1330 – Cardiac Catheterization

NLFH currently operates one (1) cardiac catheterization lab. Diagnostic, interventional and Electro-Physiological procedures are performed. NLFH proposes one (1) cardiac catheterization lab in the new facility.

1. Criterion 1110.1330(a), Peer Review

NLFH has a comprehensive peer review program that consists of the following:

- Weekly STEMI (ST Segment Elevation Myocardial Infarction) Review Committee: team members from NLFH's Emergency Department, Grayslake Emergency Department, Catheterization Lab, Critical care/Inpatient/Quality Committee
- Monthly Catheterization Conference Meeting: Cardiology Department and open to all hospital physicians, staff, and administration
- Cardiology Integrated Review Meeting: NMH/NLFH Cardiology Medical Directors, Nursing Directors, VP's, Physicians, and Managers
- Weekly NMH Catheterization Lab meeting via simulcast
- Cardiology Department Staff Meeting
- Echo Peer Review Committee: Physician/Staff peer review of non-invasive diagnostic tests

2. Criterion 1110.1330(b), Establishment or Expansion of Cardiac Catheterization Service

Not Applicable – NLFH is not proposing the establishment or expansion of cardiac catheterization service

3. Criterion 1110.1330(c), Unnecessary Duplication of Services

Not Applicable – NLFH is not proposing the establishment of cardiac catheterization service

4. Criterion 1110.1330(d), Modernization of Existing Cardiac Catheterization Laboratories

NLFH received approval for the establishment of cardiac catheterization service in 2007. Since that time, the one lab has met the minimum utilization standard of 200 cardiac catheterization procedures per year.

	CY07	CY08	CY09	CY10	CY11	CY12
TOTAL Cardiac Cath Procedures	43	279	416	359	349	531
Diagnostic	40	192	295	233	249	312
Interventional	3	30	31	44	40	60
EP	0	57	90	82	60	159

5. Criterion 1110.1330(e), Support Services

Not Applicable – NLFH is not proposing the establishment of cardiac catheterization service

6. Criterion 1110.1330(f), Laboratory Location

Not Applicable – NLFH is not proposing the addition of cardiac catheterization laboratories

7. Criterion 1110.1330(g), Staffing

Not Applicable – NLFH is not proposing the establishment of cardiac catheterization service

8. Criterion 1110.1330(h), Continuity of Care

NLFH has transfer agreements with Northwestern Memorial Hospital and Highland Park Hospital. The transfer agreements are immediately following this section.

9. Criterion 1110.1330(i), Multi-Institutional Variance

Not Applicable – NLFH is not proposing the establishment of cardiac catheterization service

Subject: Patient Care	Page 1 of 9	Policy # NLFH PCL 05.2186
Title: Transfer Outside of Hospital	Revision of: 03/2012	Version: 2.0
		Effective Date: 09/2013
		Removal Date:

I. PURPOSE:

Northwestern Lake Forest Hospital (NLFH) and Northwestern Grayslake shall ensure that it fully complies with the requirements of the Emergency Medical Treatment and Active Labor Act (EMTALA). In particular, each patient will be provided an appropriate medical screening exam. If the screening exam determines that the patient either has an emergency medical condition or is in active labor, Northwestern Lake Forest Hospital will endeavor to stabilize the patient before any transfer. If Northwestern Lake Forest Hospital is unable to stabilize the patient, there can only be a transfer if:

1. Patient specifically requests a transfer and signs a consent form, or
2. The attending or treating physician determines and certifies that the medical benefits reasonably expected from treatment at another specified facility outweigh the increased risk associated with the transfer.

In the event that the attending or treating physician certifies the need for transfer or the patient knowingly requests transfer, the hospital personnel will arrange, via appropriate transportation, a transfer following an order and certification from the treating physician. This must be preceded by an agreement from the receiving physician.

II. POLICY STATEMENT:

1. The appropriate transfer form, based on the reason for transfer, must be completed on all patients who are being transferred to another hospital facility:
 - A **patient initiated transfer** is defined as any transfer for reasons other than need for higher level of care, specialty care, or specialty equipment and will include any patient with an emergency medical condition or in active labor who has requested transfer. The **Patient Initiated Transfer** form is to be completed including "Patient Initiated Transfer" and including the Notice of Risks of Transfer. The form is to be signed by the treating physician, registered nurse, patient or guardian, and by a witness and a copy sent to the receiving facility.
 - A **hospital initiated transfer** is defined as any transfer completed for medical necessity such as a need for higher level of care, specialty care, or specialty equipment not available at Northwestern Lake Forest Hospital. The **Hospital Initiated Transfer** form is to be completed including "Physician Certificate of Transfer" and Notification of the Risks and Benefits of Transfer. The form is to be signed by the treating physician, registered nurse, patient or guardian and by a witness and a copy sent to the receiving facility.

2. Both *Patient Initiated* and *Hospital Initiated* transfer forms include the following sections, which are to be completed on all patients being transferred:
 - **Section 3 - Patient Information for the Recipient Hospital** including "Discharge Assessment"
 - **Section 4 - Physician Authorization for Ambulance Transfer** to be completed when applicable
 - **Section 5 - Transfer Checklist** to assure that appropriate forms/documentation are completed
 - **Section 6 - Signatures** of the transferring physician and registered nurse
 - **Section 7 - Patient Consent to Transfer** to be signed by patient or person responsible for the patient's care and by a witness
3. *Authorization for Release of Medical Records* form is to be completed by hospital staff, signed by the patient or guardian, witnessed and a copy sent to the recipient hospital.
4. *Release from Responsibility for Discharge/Informed Consent to Refuse* must be completed by the hospital staff and signed by both patient/guardian and the treating physician in the event that a patient with an emergency medical condition or in active labor refuses treatment or requests transfer before that patient has been stabilized.
5. All relevant portions of the medical record that are available at the time of transfer should be sent with the patient. These may include available history, records related to the individual's emergency medical condition, medical screening examination report, observations of the signs or symptoms, preliminary diagnosis, results of diagnostic studies, or telephone reports of the studies, treatment provided, and results of any other tests. Records not available at the time of transfer should be sent as soon as possible.
6. Compact Disc of diagnostic/interventional test must be sent upon transfer.
7. For transfers to Northwestern Memorial Hospital, contact the transfer coordinator at 312-926-3321. An external transfer request will only be honored if there is a bed available, an accepting physician at NMH, and patient stability for transfer has been determined and documented.
8. Nursing and/or Case Management will offer patient/family directions to accepting facility upon request.
9. For behavioral emergencies please see policy PC 05.2014 Behavioral Emergencies – Assessment and Disposition of.
10. For pediatric patients please see department specific policy and policy EDL 15.2079 ED Pediatric Transfer policy
11. For helicopter transfers please see policy SS.EC.EP.176 Helicopter Transports at Northwestern Lake Forest Hospital and Grayslake
12. For current list of hospital to hospital transfer agreements, see Nursing Operations Leader.

2. **PERSONS AFFECTED:**

Nursing, physicians, Case Management, Nursing Operations Leaders

3. **RESPONSIBILITIES:**

Review and follow policy

Title: Transfer Outside of Hospital	Page 3 OF 9	Policy # NLFH PCL 05.2186 Version: 2.0
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4. **DEFINITIONS:**

Emergency Medical Treatment and Active Labor Act (EMTALA) - requires hospitals to provide care to anyone needing emergency healthcare treatment regardless of citizenship, legal status or ability to pay. There are no reimbursement provisions. Participating hospitals may only transfer or discharge patients needing emergency treatment under their own informed consent, after stabilization, or when their condition requires transfer to a hospital better equipped to administer the treatment

5. **POLICY UPDATE SCHEDULE:**

This policy will be reviewed every five years or more as appropriate

6. **RELEVANT REFERENCES:**

Center for Medicare and Medicaid Services (2012) Emergency Medical Treatment & Labor Act (EMTALA) CMS 1063-F found at <http://www.cms.gov/Regulations-and-Guidance/Legislation/EMTALA/index.html>.

7. **APPENDICES:**

- A. Patient Transfer - Hospital Initiated (form #5030072)
- B. Patient Transfer - Patient Initiated (form #5030073)
- C. Physician Certification Statement for Ambulance Transportation (form #5030214)
- D. Authorization for Use or Disclosure of Information (form #5030676)
- E. Release from Responsibility for Discharge

8. APPROVAL:

Responsible Party/ies/Reviewers: Beverly Weaver McLaughlin, MS, RN, NE-BC
Director Emergency Services

Jenny Prescia, MSN, RN, ACM, CCDS
Interim Director Case Management

Dawn Frank, BSN, RN
Director Grayslake Emergency Services

Committee/s: Clinical Practice Governance Council 9/12/13
Nurse Executive Council 10/8/13
Medical Executive Council 9/23/13

Approval Party/ies: Denise Majeski, MSN, RN, ACM, NE-BC
Interim VP and Chief Nurse Executive
Electronic Approval:

Dr. Michael Ankin, MD
Chief Medical Officer, Administration
Electronic Approval:

9. REVIEW HISTORY:

Written: 7/92

Revised: 8/95, 5/98, 1/00, 5/00, 6/05, 6/07, 9/10, 3/12, 9/13

Reviewed: 5/3, 12/11

TRANSFER AGREEMENT

This Agreement is made and entered into this 28 day of Sept, 2005, by and between Highland Park Hospital, a not-for-profit/for-profit corporation organized under the laws of the State of Illinois (hereinafter referred to as "HOSPITAL"), and Lake Forest Hospital, a not-for-profit community hospital organized under the laws of the State of Illinois (hereinafter referred to as "LFH") (each individually referred to as "Party" and collectively referred to as the "Parties").

WITNESSETH

WHEREAS, HOSPITAL is licensed to provide open heart surgery and advanced cardiac care services and maintains and operates an acute care hospital equipped and staffed to provide open heart surgery and advanced cardiac care services in the City of Highland Park, Illinois; and,

WHEREAS, LFH maintains and operates an acute care hospital which seeks to offer cardiac catheterization services and has applied for a Certificate of Need from the Illinois Health Facilities Planning Board to operate a cardiac catheterization lab organized and licensed under the laws of the State of Illinois in the City of Lake Forest, Illinois; and,

WHEREAS, LFH does not have a capacity to provide open heart surgery and advanced cardiac care services; and

WHEREAS, in order to provide continuity of medical care for its patients, LFH desires to enter into an agreement for the transfer of its cardiac catheterization lab patients who members of the LFH Medical Staff determine require advanced cardiac care services ("LFH Patients") to a local hospital that offers such services; and,

WHEREAS, HOSPITAL is willing to provide such medical services to LFH Patients in need of advanced cardiac care or related treatment or services.

NOW, THEREFORE, the Parties hereto agree as follows:

1. **POLICY.** When a member of the LFH Medical Staff determines that in the best medical judgment of the physician, an LFH Patient would be appropriately treated with cardiac care services unavailable at LFH and thereby requires admission to HOSPITAL, HOSPITAL agrees to accept the transfer of such LFH Patient and will admit such patient as promptly as possible provided admission requirements are met and adequate staff, equipment, bed space and capacity to provide advanced cardiac care services for such patient are available at HOSPITAL.

2. **EMTALA COMPLIANCE.** The Parties recognize and agree that the transfers contemplated by this Agreement are transfers for which HOSPITAL has specialized capabilities within the meaning of 42 U.S.C. § 1395dd(g) that generally require HOSPITAL to accept transfers provided that HOSPITAL has the capacity to treat the transferred patient. The Parties shall fulfill their respective obligations under this Agreement in a manner that complies with all applicable requirements of 42 U.S.C. § 1395dd (Emergency Medical Treatment and Active Labor Act ("EMTALA")) and 42 C.F.R. § 489.24. The Parties shall exert their best efforts to

work together to ensure compliance by both Parties with each applicable EMTALA requirement. In the event that one Party has concerns that the other Party may not be fulfilling all of its obligations under EMTALA, that Party shall first inform the other Party of any deficiency and the Parties shall work together to correct any perceived deficiencies.

3. **COORDINATION OF TRANSFER.** HOSPITAL shall designate a person or persons to serve as "HOSPITAL Liaison" for purposes of facilitating transfers and the continuity of care under this Agreement. LFH shall notify HOSPITAL Liaison as far in advance as reasonably practicable of a request for transfer of an LFH Patient in need of advanced cardiac care services or related treatment or services for admission to HOSPITAL. HOSPITAL shall accept the LFH patient for admission to HOSPITAL provided that HOSPITAL has the capacity to treat the LFH patient.

4. **TRANSFER PROCEDURE.** The patient's medical condition shall be assessed by the physician responsible for the patient's care at LFH. If the physician deems that as a result of the patient's condition, the patient needs to be transferred to HOSPITAL, the transferring physician or designee shall initiate the transfer process by calling HOSPITAL Liaison to facilitate transfers pursuant to this Agreement. LFH shall be responsible for fulfilling the responsibilities of a transferring hospital under EMTALA and shall inform the patient, or the patient's family or representative, of the need to transfer patient to HOSPITAL.

5. **TRANSPORT OF A PATIENT.** LFH, in consultation with the HOSPITAL Liaison and/or the receiving physician at HOSPITAL, shall be responsible for and shall make all the necessary arrangements for the appropriate, safe transportation of an LFH patient from LFH to HOSPITAL.

6. **NON-DISCRIMINATION.** Both Parties agree that the transfer of an LFH Patient pursuant to this Agreement shall be accomplished with no discrimination based on race, religion, national origin, age, sex, physical condition or economic status. The Parties also agree that the transfer or receipt of patients in need of emergency care shall not be based upon a patient's inability to pay for services rendered by the transferring or receiving institution.

7. **CONSULTATION, CARE AND TREATMENT.** The appropriate physicians of each institution shall be reasonably available to the physicians of the other institution for consultation with respect to the care and treatment of any transferred patient who was transferred pursuant to this Agreement.

LFH understands and agrees, upon HOSPITAL's request, to accept for return transfer and prompt admission to hospital, any patient that has been medically stabilized and that has been transferred to hospital pursuant to this agreement.

Notwithstanding any provision of this Agreement to the contrary, any physician who is permitted to participate in the care and treatment of a patient transferred pursuant to this Agreement must have medical staff privileges at HOSPITAL and comply with the medical staff bylaws, rules, and regulations of the HOSPITAL.

8. **MEDICAL RECORDS.** LFH shall send with each patient transferred from LFH to HOSPITAL, at the time of transfer, the medical information necessary to continue the patient's treatment. Said information shall include, but is not limited to, a copy of the patient's medical record. Parties agree to comply with all applicable federal, state and local laws, rules and regulations, as they may be amended from time to time, and all LFH and HOSPITAL bylaws, rules, regulations, and policies governing the confidentiality of patient's medical records. The medical records for transferred patients which are maintained by each Party shall remain the property or in the custody of that Party. Notwithstanding the foregoing, each Party shall allow the other Party access to any such information as the first Party may reasonably request.

9. **HIPAA COMPLIANCE.** The parties hereto acknowledge that they are each "Covered Entities", as that term is defined by the Health Insurance Portability and Accountability Act ("HIPAA"), and each party agrees to comply with all applicable requirements of the HIPAA Privacy Regulations (65 Fed. Reg. 82462 (December 28, 2000) as modified by 67 Fed. Reg. 53182 (August 14, 2002)) and Security Regulations (68 Fed. Reg. 8334 (February 20, 2003) as modified by 68 Fed. Reg. 18895 (April 17, 2003)).

10. **PATIENT VALUABLES.** Both Parties shall work together to provide appropriate protection of all valuables of a patient, including where appropriate the preparation and transfer of a written inventory of all valuables of a LFH Patient which shall accompany the LFH Patient in the transfer to HOSPITAL.

11. **BILLING.** Each Party shall be responsible for billing and collecting from the patient, third party insurance coverage or other sources normally billed for the services provided by that Party, and neither Party shall have any liability to the other for such charges except to the extent that such liabilities would exist apart from this Agreement.

12. **INSURANCE.** Each Party shall maintain and keep in full force and effect through the term of this Agreement general and professional liability insurance policies in amounts generally maintained for like facilities in the same geographical area and shall provide or cause to be provided to the other Party written evidence of such insurance. Either Party may provide such insurance through a self-insurance program adopted by its governing body.

13. **PATIENT DISCHARGE.** Nothing contained herein shall prevent or in any way prohibit HOSPITAL from discharging a transferred patient who has been admitted to the HOSPITAL if the responsible HOSPITAL physician considers it medically appropriate or if, against medical advice, the transferred patient signs out or is signed out by the person or agency legally authorized to act on behalf of such transferred patient.

14. **TERM AND TERMINATION.** This Agreement shall be effective and shall commence as of the 28 day of Sept., 2005, and shall continue in full force and effect for an initial term of one year unless earlier terminated as provided herein. After the initial term, this Agreement shall automatically renew for successive one year periods unless either Party gives thirty (30) days written notice of intent to terminate prior to the expiration of the initial term or the renewal term then in effect. This Agreement may be terminated: (i) immediately by mutual written agreement of the Parties; (ii) without cause by either Party for any reason by giving a thirty (30) day written notice of its intention to terminate this Agreement and by providing for

the continuity of care to patients for whom LFH has begun the Agreement's transfer process in good faith. This Agreement shall automatically terminate without regard to notice upon the date that: (i) either Party cease to have a valid provider agreement with the Secretary of the Department of Health and Human Services; (ii) either party fails to maintain its license or certification status; or (iii) HOSPITAL discontinues providing advanced cardiac care services for any reason.

15. **USE OF NAME.** Neither Party shall use the name of the other Party in any promotional or advertising material without first obtaining written approval from the other Party whose name is to be used.

16. **ASSIGNABILITY.** This Agreement shall not be assigned by either Party without the express written consent of the other Party. Any attempt to assign this Agreement without consent shall be void.

17. **NOTICES.** All notices hereunder by either Party to the other shall be in writing, delivered personally or by overnight courier, and shall be deemed to have been duly given when delivered personally or one day after delivered to the overnight carrier, charges prepaid and properly addressed to the respective Parties at the addresses shown below:

Lake Forest Hospital
President & Chief Executive Officer
600 North Westmoreland Road
Lake Forest, IL 60045

Highland Park Hospital
President
718 Glenview Avenue
Highland Park, IL 60035

18. **INDEPENDENT OPERATION.** Nothing in this Agreement shall, in any way, affect the independent operation of either Party, nor create an employer/employee, principal/agent, or joint venture/partnership relationship. The governing body of each shall have exclusive control of policies, management, assets and affairs of its respective institutions.

19. **NONEXCLUSIVITY.** Each Party understands and confirms that this Agreement is nonexclusive, and each Party reserves the right to enter into similar agreements with other institutions, agencies, and parties.

20. **MODIFICATION AND AMENDMENT.** This Agreement may be modified or amended by the mutual agreement of the Parties, provided that all modifications or amendments shall require the written approval of all signatories or the authorized agent of each Party. Any such modification or amendment shall be attached to and become a part of this Agreement.

21. **INDEMNIFICATION.** Each Party agrees to indemnify and hold harmless the other Party and its respective directors, officers, staff physicians and employees from all losses, damages, liabilities, claims, demands, lawsuits, and expenses, including reasonable attorney's

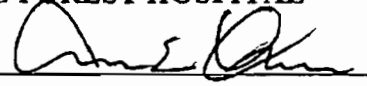
fees and expenses, that the indemnified Party or its respective directors, officers, staff physicians or employees may incur or be liable for arising out of or in connection with the services provided by the indemnifying Party under this Agreement.

22. **GOVERNING LAW.** This Agreement shall be construed and governed in accordance with the substantive and procedural laws of the State of Illinois. The parties hereto both consent to the jurisdiction of Illinois courts to resolve any dispute arising from this Agreement.

23. **COUNTERPARTS.** This Agreement may be executed in counterparts, each of which shall be considered an original for all purposes.

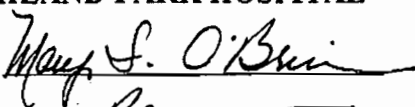
IN WITNESS WHEREOF, we the undersigned, duly authorized representatives have executed and delivered this Agreement on this 28 day of Sept., 2005 without reservation and having read the Terms contained herein.

LAKE FOREST HOSPITAL

BY: 

TITLE: VICE PRESIDENT

HIGHLAND PARK HOSPITAL

BY: 

TITLE: PRESIDENT

O. Criterion 1110.3030 – Clinical Service Areas Other than Categories of Service

Indicate changes by Service:

Service	# of Existing Key Rooms	# of Proposed Key rooms	Δ
Acute Care – Birthplace	8	5	-3
Labor Delivery Recover (LDR)	2	2	0
C-Section Suite			
D&T – Clinical Decision Unit	0	8	+8
D&T – Emergency Department	17	16	-1
D&T – Interventional Procedures			
Operating Suite	8	8	0
Procedure Suite	8	4	-4
Interventional Radiology	1	2	+1
D&T: Prep/Recovery			
Phase I: Operating Rooms	10	11	+1
Phase II: Operating Rooms	18	20	+2
Phase II: All Other (Procedure Rooms, Non-Surgical)	21	20	-1
D&T: Radiology			
General Radiology	5	4	-1
Mammography	4	3	-1
Ultra-sound	7	6	-1
CT Scan	2	2	0
MRI	1	2	+1
Nuclear Medicine	2	2	0
Bone Density	1	1	0
Stereotactic Biopsy	1	1	0
D&T: Ambulatory Care – Outpatient Services	2	3	+1
D&T: Inpatient Physical Rehabilitation	1	1	0
D&T: Radiation Therapy			
Linear Accelerator	1	1	0
Simulator	1	1	0
Oncology Infusion	6	7	+1
D&T: Ambulatory Care – Cardiac Rehab	1	1	0
D&T: Ambulatory Care – Cardiac Diagnostics	9	7	-2
D&T: Ambulatory Care – Wound Center			
Wound Care	4	3	-1
Hyperbaric Oxygen Therapy	2	2	0
D&T: Ambulatory Care – Neurology Diagnostics	2	2	0

3) c) Service Modernization

As stated in the ATTACHMENT-13, the main hospital is aging. The 70-year old building is at the end of its useful life, with many systems in significant need of replacement. Several important clinical areas have significant spatial problems that prevent the services from meeting contemporary standards of care. Many of the treatment areas are at capacity and have no ability to expand. Closely related functions within the same department are often distant from one another. There is often no separation of staff work areas and the public spaces. There is limited space for staff work stations, support and storage space, and public waiting areas.

Only 7 of the 28 clinical service areas in the table on the previous page are expanding their current capacity. The 21 other areas are either replacing their current capacity or downsizing based on lower usage or increased efficiencies. Where possible, equipment that is in good condition will be relocated to the proposed replacement facility.

In almost all cases, CY12 volumes justify the proposed number of key rooms or stations and CY19 projections are consistent with State utilization standards. CY19 projections are based on the projected population growth in NLFH's primary market area for ages 18 and older. Based on the study by Truven Health Analytics using Claritas data, the population ages 18 and older in North Lake County is expected to have an average annual growth rate of 0.90% from 2012 – 2017.

	2012	2017	Average Annual growth rate
18-44	205,932	200,342	-0.54%
45-64	149,671	162,747	1.75%
65+	56,429	67,397	3.89%
Total	412,032	430,486	0.90%

In order to be conservative in our projections this same growth rate was used to forecast the CY19 clinical volumes unless otherwise noted.

Birthplace

Labor-Delivery-Recovery

Like NMH's Prentice Women's Hospital on the downtown campus, NLFH's obstetric service is primarily organized around a Labor/Delivery/Recovery model of care.

As stated in Obstetrics Section of ATTACHMENT-20, delivery volume at NMH's Prentice Women's Hospital has been increasing continuously since 1985. In 1985, there were 4,090 deliveries at NMH, in 2012, there were 12,856. Delivery volume since the opening of the new Prentice Women's Hospital has grown from 11,106 in CY07 to 12,856 in CY12, an increase of 16%. Average annual occupancies have ranged from 69.6% the year new PWH opened up to 78.5%. Deliveries downtown are expected to continue growing and soon Prentice will be at maximum capacity.

In CY12, 961 maternity patients traveled from northern Cook County/Lake County to deliver their babies at Prentice. In order to alleviate the high census at Prentice downtown, NLFH will work with NMFF and NMPG obstetricians to develop a plan to use maternity services at NLFH for patients who live in the northern Cook County/Lake County area. By CY19, two years after

project completion, NLFH plans to accommodate at least 25% of those deliveries at the new NLFH. That equates to approximately 240 more deliveries at NLFH than in CY12.

LDRs	Actual		Projected	
	CY11	CY12	CY18	CY19
Births	1,687	1,626	1,831	1,868
# of LDRs	8	8	5	5
Births/LDR	211	203	366	374
Standard	400	400	400	400
# of LDRs Justified	4.2	4.1	4.6	4.7

There are currently 8 LDR rooms. Based on CY12 birth volume and the projected number of births CY19, NLFH can justify 5 LDR rooms in the replacement facility.

C-Section Suite

NLFH's c-section rate is consistent with the national average. In CY12, the c-section rate at NLFH was 31.9%. According to the National Center for Health Statistics, the 2011 national cesarean rate was 32.8%. C-section projections are based on the assumption that the c-section rate will remain the same as CY12, at 31.9%.

C-Section Rooms	Actual		Projected	
	CY11	CY12	CY18	CY19
Births	1,687	1,626	1,831	1,868
C-Sections	583	519	584	596
% C-Section	34.6%	31.9%	31.9%	31.9%
Standard	800	800	800	800
# of Rooms Justified	0.7	0.6	0.7	0.7

Using the State standard for C-Section Suites of 800 procedures/room/year, NLFH can justify 1 c-section room; however there are 2 c-sections rooms planned for the proposed hospital. Because the rooms are used for scheduled as well as emergent c-sections, it is necessary for patient safety to have 2 rooms available. In addition to c-sections, the rooms are used for tubal ligations and other obstetric surgical procedures, as well as emergent procedures such as retained placenta, hysterectomies and versions.

Additionally, as described in ATTACHMENT-14, there will be 4 rooms that will be used for OB Triage as well as for C-Section Prep and 2 C-Section Post-Anesthesia Recovery bays.

Clinical Decision / Intake Unit

NLFH proposes to establish a Clinical Decision / Intake Unit with 8 rooms in the new facility. This unit will be used to expedite treatment of inpatient and observation patients. Patients in the Critical Decision Unit will begin admission protocols such as administration of antibiotics and ordering of tests. This unit will improve both the Emergency Department throughput as well as the patient care experience by initiating care more quickly.

Projections for the Clinical Decision Unit are based on the projections for medical/surgical/pediatrics and ICU admissions (see ATTACHMENT-20). All patients that are admitted to the hospital will begin their care in this unit. It is estimated that each patient will spend 1 – 2 hours in the Clinical Decision Unit before being admitted.

Clinical Decision Unit	Actual		Projected	
	CY11	CY12	CY18	CY19
Admissions (M/S/Peds, ICU Direct Admits)	6,652	6,848	7,098	7,141
# of Rooms	0	0	8	8
Average Patient Treatment Time (Hours)	1.5	1.5	1.5	1.5
Total Hours	9,978	10,272	10,647	10,712
Target Utilization (Hours/Room)	1,500	1,500	1,500	1,500
# of Rooms Justified	6.7	6.8	7.1	7.1

There is no utilization target for a Clinical Decision Unit. NLFH assumed 1,500 hours/room as the target utilization which is consistent with the State's utilization standard for procedure rooms.

Based on CY12 volume, NLFH can justify 7 CDU rooms; however, based on projected CY19 admissions volume, NLFH can justify 8 rooms.

Emergency Department

The Emergency Department at NLFH is a Level II Trauma Center staffed by board-certified emergency medicine physicians who are trained and equipped to stabilize patients who have undergone major trauma, or who are suffering from a heart attack, stroke or other health emergency. It is also designated as an Emergency Department Approved for Pediatrics, a certification awarded by Emergency Medical Services for Children in conjunction with the Illinois Department of Public Health. This certification means that NLFH is able to provide superior emergency care to children in the form of preventative, acute, and rehabilitative services. Because there is significant pediatrics utilization of the Emergency Department at NLFH, projections for the Emergency Department use the average annual growth rate for all age groups in NLFH's primary service area of 0.61% from 2012 – 2017 (source: Truven Health Analytics using Claritas data).

	2012	2017	Average Annual growth rate
0-17	159,804	158,688	-0.14%
18-44	205,932	200,342	-0.54%
45-64	149,671	162,747	1.75%
65+	56,429	67,397	3.89%
Total	571,836	589,174	0.61%

Emergency Department	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	27,992	27,819	28,836	29,009
# of Stations	17	17	16	16
Visits/Station	1,647	1,636	1,802	1,813
Standard	2,000	2,000	2,000	2,000
# of Stations Justified	14.0	13.9	14.4	14.5

There are currently 17 emergency department stations. Based on CY19 volume, NLFH can justify 15 stations; however, there are 16 stations in the proposed replacement facility. There will be 8 acute care stations, 4 urgent care stations, 1 dedicated trauma room, 2 dedicated rooms for behavioral health, and 1 isolation room.

Additionally, according to Emergency Department Benchmarking Alliance, for emergency departments with annual visits between 20,000 and 40,000, the average visits per station is 1,750. Using this benchmark, NLFH can justify 16 ED stations based on CY12 volume and 17 ED stations based on projected CY19 volume.

Interventional Procedures

The Interventional Procedures platform includes the following clinical services:

- Surgical Services
- Interventional Radiology
- Cardiac Catheterization (see ATTACHMENT-25)

Surgical Services

NLFH provides the following surgical specialties: cardiovascular, general surgery, neurology, ob/gynecology, oral/maxillofacial, ophthalmology, orthopedic, otolaryngology, plastic surgery, podiatry, thoracic, and urology.

Operating Rooms

Currently, NLFH has 8 operating rooms. The proposed project proposes to replace all 8 operating rooms.

Projections for the number of inpatient and outpatient cases are based on the projected population growth rate in the NLFH's market area for ages 18 and older of 0.90%. The average time per inpatient case for CY11 and CY12 was 2.39 hours. The average time per outpatient case for CY11 and CY12 was 1.41 hours. These average case times were used for the projections for CY18 and CY19.

Operating Rooms	Actual				Projected			
	CY11		CY12		CY18		CY19	
	Cases	Hours	Cases	Hours	Cases	Hours	Cases	Hours
Inpatient	1,904	4,604	1,848	4,374	1,948	4,661	1,965	4,701
Outpatient	6,016	8,371	5,337	7,572	5,625	7,904	5,675	7,974
Total	7,920	12,975	7,185	11,946	7,573	12,564	7,640	12,675
# of ORs	8		8		8		8	
Standard (Hours/OR)	1,500		1,500		1,500		1,500	
# of ORs justified	8.7		8.0		8.4		8.5	

Based on CY12 volume, NLFH can justify 8 operating rooms.

Procedure Rooms

Currently, there are 8 surgical procedure rooms at NLFH: 5 procedure rooms for gastrointestinal procedures, 1 for pain management, and 2 for minor surgery including dermatology, minor plastic surgery, and cyst removals.

NLFH proposes to have 4 surgical procedure rooms in the new facility: 2 for gastrointestinal procedures, 1 for pain management and 1 for minor procedures.

Gastrointestinal Procedures

Gastrointestinal	Actual				Projected			
	CY11		CY12		CY18		CY19	
	Cases	Hours	Cases	Hours	Cases	Hours	Cases	Hours
Inpatient	359	203	293	203	309	194	312	196
Outpatient	1,862	1,097	1,784	1,175	1,880	1,173	1,897	1,184
Total	2,221	1,300	2,077	1,378	2,189	1,367	2,209	1,380
# of Procedure Rooms	5		5		2		2	
Standard	1,500		1,500		1,500		1,500	
# of Rooms justified	0.9		0.9		0.9		0.9	

Projections for the number of inpatient and outpatient gastrointestinal cases are based on the projected population growth rate in the NLFH's market area for ages 18 and older of 0.90%. The average time per inpatient case for CY11 and CY12 was 0.63 hours. The average time per outpatient case for CY11 and CY12 was 0.62 hours. These average case times were used for the projections for CY18 and CY19.

Based on CY12 volume, NLFH can justify 1 procedure room for gastrointestinal procedures however there are significant equipment needs in the gastrointestinal procedure rooms, making it necessary to have a second room available in case of emergency cases and/or equipment malfunction in one of these rooms. Additionally, one of these will be used for Endoscopic Retrograde Cholangiopancreatography (ERCP) and Endoscopic Ultrasonography (EUS) which requires different equipment in the procedure room. Only one room will be equipped for ERCP and EUS procedures.

Pain Management

Pain Management	Actual				Projected			
	CY11		CY12		CY18		CY19	
	Cases	Hours	Cases	Hours	Cases	Hours	Cases	Hours
Inpatient	40	18	30	16	32	16	32	16
Outpatient	1,758	710	1,126	493	1,187	500	1,197	504
Total	1,798	728	1,156	509	1,219	515	1,229	519
# of Procedure Rooms	1		1		1		1	
Standard	1,500		1,500		1,500		1,500	
# of Rooms justified	0.5		0.3		0.3		0.3	

Projections for the number of inpatient and outpatient pain management cases are based on the projected population growth rate in the NLFH's market area for ages 18 and older of 0.90%. The average time per inpatient case for CY11 and CY12 was 0.49 hours. The average time per outpatient case for CY11 and CY12 was 0.42 hours. These average case times were used for the projections for CY18 and CY19.

Based on CY12 volume, NLFH can justify 1 procedure room for pain management procedures.

Minor Procedures

Minor Procedures	Actual				Projected			
	CY11		CY12		CY18		CY19	
	Cases	Hours	Cases	Hours	Cases	Hours	Cases	Hours
Inpatient	7	7	12	10	13	12	13	12
Outpatient	1,038	750	757	497	798	550	805	555
Total	1,045	757	769	507	811	562	818	567
# of Procedure Rooms	2		2		1		1	
Standard	1,500		1,500		1,500		1,500	
# of Rooms justified	0.5		0.3		0.4		0.4	

Projections for the number of inpatient and outpatient minor procedure cases are based on the projected population growth rate in the NLFH's market area for ages 18 and older of 0.90%. The average time per inpatient case for CY11 and CY12 was 0.92 hours. The average time per outpatient case for CY11 and CY12 was 0.69 hours. These average case times were used for the projections for CY18 and CY19.

Based on CY12 volume, NLFH can justify 1 procedure room for minor procedures.

Interventional Radiology

Interventional Radiology uses the latest in imaging technology to perform minimally invasive procedures throughout the body. Procedures that once required large incisions, general anesthesia, and days or weeks in the hospital can now be done on an outpatient basis with an incision so small that it does not require stitches. Procedures include angiograms and venograms.

Currently, NLFH has 1 Interventional Radiology room. Because of current and projected volumes, there are 2 Interventional Radiology Rooms in the proposed project.

Interventional Radiology	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	1,918	2,113	2,227	2,247
# of Rooms	1	1	2	2
Visits/Rooms	1,918	2,113	1,114	1,124
Standard (Visits)	1,800	1,800	1,800	1,800
# of Rooms Justified	1.1	1.2	1.2	1.2

Projections for the number of Interventional Radiology visits are based on the projected population growth rate in the NLFH's market area for ages 18 and older of 0.90%.

Using the State standard for Angiography of 1,800 visits per room, NLFH can currently justify 2 rooms for Interventional Radiology.

CV Transesophageal Echocardiogram (TEE) room

Also included in this area will be a CV Transesophageal Echocardiogram (TEE) room. A transesophageal echocardiogram (TEE) is another way to perform an echocardiogram of the heart. This procedure involves passing a probe into a patient's esophagus, while the patient is sedated, to view any structural abnormalities of the heart.

NLFH currently has 1 CV (TEE) room. The proposed project includes 1 CV (TEE) room.

CV (TEE)	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	150	139	147	148
# of Rooms	1	1	1	1
Visits/Room	150	139	147	148
Standard (Visits)	2,000	2,000	2,000	2,000
# of Rooms Justified	0.1	0.1	0.1	0.1

Using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can currently justify 1 CV (TEE) room.

Prep/Recovery

There will be 11 Phase I rooms for post-anesthesia care for surgical patients in the proposed new facility. IDPH Hospital Licensure requires a 1:1 ratio of operating rooms to Phase I recovery areas. Additionally, there will be Phase I capacity to support the other services in the Interventional platform.

There will also be 40 Prep/Phase II recovery spaces in the proposed new facility. These universal care spaces will support the 8 operating rooms, 4 procedure rooms, 2 Interventional radiology rooms, 1 Cardiac Catheterization lab, Imaging (CT and MRI) and TEE room.

The number of proposed Prep/Phase II spaces was determined using the Guidelines for the Design and Construction of Healthcare Facilities, FGI 2010 Edition which notes that there should be a minimum of 3 Phase II positions per outpatient operating room.

Prep/Phase II Recovery

Driver Space	# of Rooms	Ratio Rooms:Prep/Phase II spaces	# of Prep/Phase II spaces needed
Inpatient OR	2	1:1	2
Outpatient OR	6	1:3	18
Procedure Rooms	4	1:2	8
IR Rooms	2	1:2	4
Cardiac Cath Labs	1	1:2	2
Imaging/TEE	3	1:2	6
TOTAL	18		40

There is no State standard for Post Anesthesia Recovery.

Radiology Services

Radiology Services will be provided in 2 main areas:

- Diagnostic Imaging – Inpatient/Outpatient/Emergency Department
- Imaging – Women's Health

Projections for the number of radiology procedures are based on the projected population growth rate in the NLFH's market area for ages 18 and older of 0.90%.

General X-Ray

There are currently 5 fixed x-ray machines at NLFH. NLFH proposes to have 4 in the new facility. All 4 will be located in the Diagnostic Imaging – IP/OP/ED department.

General Radiography	Actual		Projected	
	CY11	CY12	CY18	CY19
Procedures	30,211	28,871	30,429	30,697
# X-Ray Machines	5	5	4	4
Procedures/Machine	6,042	5,774	7,607	7,674
Standard (Procedures)	8,000	8,000	8,000	8,000
# of X-Ray Machines Justified	3.8	3.6	3.8	3.8

The State standard for general radiography is 8,000 procedures per x-ray machine. Using this standard, NLFH can currently justify 4 fixed x-ray machines.

Mammography

There are currently 4 mammography rooms at NLFH. NLFH proposes to have 3 in the new facility. All 4 will be located in the Imaging – Women's Health department.

Mammography	Actual		Projected	
	CY11	CY12	CY18	CY19
Procedures	11,908	12,884	13,579	13,699
# of Mammography Machines	4	4	3	3
Procedures/Machine	2,977	3,221	4,526	4,566
Standard (Procedures)	5,000	5,000	5,000	5,000
# of Mammography Justified	2.4	2.6	2.7	2.7

The State standard for mammography is 5,000 procedures per mammography machine. Using this standard, NLFH can currently justify 3 mammography machines.

Ultrasound

Currently, NLFH has 7 diagnostic ultrasound rooms. The proposed project includes 6 diagnostic ultrasound rooms. There will be 2 ultrasound rooms in the Diagnostic Imaging – IP/OP/ED department and 4 in the Imaging – Women’s Health department.

Ultrasound	Actual		Projected	
	CY11	CY12	CY18	CY19
Procedures	12,046	16,287	17,166	17,317
# of U/S Rooms	7	7	6	6
Procedures/U/S Room	1,721	2,327	2,861	2,886
Standard (Procedures)	3,100	3,100	3,100	3,100
# of U/S Rooms Justified	3.9	5.3	5.5	5.6

The State standard for ultrasound is 3,100 procedures per ultrasound room. Using this standard, NLFH can currently justify 6 ultrasound rooms.

CT

Currently, NLFH has 2 CT machines. The proposed project includes 2 CT machines. Both machines will be in the Diagnostic Imaging – IP/OP/ED department.

CT	Actual		Projected	
	CY11	CY12	CY18	CY19
Procedures	12,770	11,197	11801	11,905
# of CT Machines	2	2	2	2
Procedures/Machine	6,385	5,599	5,901	5,953
Standard (Procedures)	7,000	7,000	7,000	7,000
# of CT Machines Justified	1.8	1.6	1.7	1.7

The State standard for CT is 7,000 procedures per CT machine. Using this standard, NLFH can currently justify 2 CT machines.

MRI

Currently, NLFH has 1 MRI. The proposed project includes 2 MRIs. Both machines will be in the Diagnostic Imaging – IP/OP/ED department.

MRI	Actual		Projected	
	CY11	CY12	CY18	CY19
Procedures	3,825	3,821	4,027	4,063
# of MRI Machines	1	1	2	2
Procedures/Machine	3,825	3,821	2,014	2,032
Standard (Procedures)	2,500	2,500	2,500	2,500
# of MRIs Justified	1.5	1.5	1.6	1.6

The State standard for MRI is 2,500 procedures per MRI. Using this standard, NLFH can currently justify 2 MRIs.

Nuclear Medicine

Nuclear medicine technology involves the use of small amounts of radioactive materials (or tracers) to help diagnose and treat a variety of diseases. Nuclear medicine determines the cause of a medical problem based on the function of the organ, tissue, or bone. Approximately 50% of the nuclear medicine diagnostic testing performed at NLFH is for cardiac conditions. Nuclear medicine imaging for cardiac services examines blood flow to the heart, diagnosing chest pain, health or heart arteries, or detecting post event damage to the heart.

Currently, NLFH has 2 Nuclear Medicine rooms. The proposed project includes 2 Nuclear Medicine rooms. Both machines will be in the Diagnostic Imaging – IP/OP/ED department.

Nuclear Medicine	Actual		Projected	
	CY11	CY12	CY18	CY19
Procedures	1,834	1,808	1,906	1,922
# of Nuclear Medicine Rooms	2	2	2	2
Procedures/Room	917	904	953	961
Standard (Procedures)	2,000	2,000	2,000	2,000
# of Rooms Justified	0.9	0.9	1.0	1.0

The State standard for Nuclear Medicine is 2,000 procedures per room. Using this standard, NLFH can currently justify only 1 Nuclear Medicine room; however, having only 1 camera would significantly reduce the ability to accommodate emergency exams without compromising another patient's study. While the average exam length is 1-2 hours, some exams last up to 5 hours. Additionally, equipment problems and even preventative maintenance would completely halt services. The average downtime if parts are needed is 3 days. Additionally, patients receive injections of radioactive material which must be carefully timed with their imaging. Having to repeat a study due to equipment failure and/or emergency exams would require additional doses of radiation which is not optimal patient care. The projected volume for Nuclear Medicine is only 79 procedures under the Standard.

Bone Density

Bone densitometry, or DEXA (Dual-Energy X-ray Absorptiometry), is a simple, non-invasive X-ray procedure that is used to measure bone mineral density. There is currently 1 Bone Densitometer at NLFH. The proposed project includes 1 Bone Densitometer that will be located in the Imaging – Women's Health department.

Bone Density	Actual		Projected	
	CY11	CY12	CY18	CY19
Procedures	852	644	679	685
# of Bone Densitometers	1	1	1	1
Procedures/Machine	852	644	679	685
Standard	N/A	N/A	N/A	N/A
# of Densitometers Justified	1	1	1	1

There is no State standard for Bone Density. Only 1 room is proposed.

Stereotactic Biopsy

A Stereotactic breast biopsy is a minimally invasive technique using an image-guided needle to evaluate a breast abnormality.

There is currently 1 Stereotactic Biopsy room at NLFH. The proposed project includes 1 Stereotactic Biopsy room that will be located in the Imaging – Women’s Health department.

Stereotactic Biopsy	Actual		Projected	
	CY11	CY12	CY18	CY19
Procedures	337	261	275	278
# of Stereotactic Machines	1	1	1	1
Procedures/Machine	337	261	275	278
Standard	N/A	N/A	N/A	N/A
# of Machines Justified	1	1	1	1

There is no State standard for Stereotactic Biopsy. Only 1 room is proposed.

Outpatient Services

Currently, the Pre-Admission Testing Center has 2 exam rooms. The Outpatient Services department of proposed project includes 3 exam rooms for Pre-Admission Testing/Blood Draw.

In CY11 and CY12, approximately 30% of NLFH surgical cases and c-sections received their pre-operative work-ups at the NLFH Pre-Admission Testing Center. Like the Pre-Admission Testing Center that is being constructed as part of NMH’s Outpatient Care Pavilion, the goal for this area is to see 50-60% of all surgical and c-section patients prior to surgery. The projections for CY18 and CY19 are based on 50% of the projected surgical and c-section cases at NLFH.

Pre-Admission Testing	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	2,551	2,311	4,079	4,118
# of Rooms	2	2	2	2
Visits/Room	1,275	1,156	2,039	2,059
Standard (Visits)	2,000	2,000	2,000	2,000
# of Rooms Justified	1.3	1.2	2.0	2.1

Using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can currently justify 3 rooms for Pre-Admission Testing.

This department will also include 5 rooms for patient registration. All patients other than Emergency Department patients will register in this department.

Inpatient Rehabilitative Services

There will also be space on one of the medical/surgical units for inpatient rehabilitative services (physical therapy/occupational therapy).

Projections for rehabilitative services are based on the projected population growth rate in the NLFH's market area for ages 18 and older of 0.90%.

Inpatient Rehab Services	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	10,497	11,541	12,164	12,271
# of Rooms	1	1	1	1
Visits/Room	10,497	11,541	12,164	12,271
Standard (Visits)	N/A	N/A	N/A	N/A

There is no State standard for rehabilitative services. NLFH will be proposing 1 space for rehabilitative services.

Cancer Center

The Cancer Center in the proposed project includes the following services:

- Linear Accelerator
- PET/CT Simulator
- Infusion Services

Radiation Oncology – Linear Accelerator

Radiation therapy uses high-powered energy beams to kill cancer cells. Radiation treatment can be in the form of external beam radiation or it can be placed internally as with brachytherapy. Using the linear accelerator, NLFH provides the following treatments:

- Image Guided Radiation Therapy (IGRT): precisely locates the cancer with 3D ultrasound and CT technology; adjusts radiation treatment to its precise dimensions; and treats only the targeted cancer cells, rather than healthy cells. This minimizes radiation to the body, and gives the safest, most accurate treatment available.

- Intensity Modulated Radiation Therapy (IMRT): delivers radiation therapy by sculpting the dose to conform to the unique shape of the tumor. This highly precise approach maximizes the impact of therapy while minimizing the effects that radiation can have on healthy tissues and organs.
- Real-time Position Management (RPM): provides clear images of the target for radiation therapy and even allows technologists to visualize the tumor as it moves while a patient is breathing. With this technology, radiation doses are only given when the tumor can be accessed best, eliminating unnecessary radiation to the body.
- Accelerated Breast Radiation Therapy: for patients facing radiation therapy after surgery for breast cancer, a standard course of treatment can involve daily radiation sessions over a period of weeks. NLFH uses new radiation techniques that can significantly shorten the frequency and duration of radiation, which can lessen the inconvenience and stress of traditional treatment courses.
- Iodine (I-131) Therapy: radioactive iodine I-131 is taken into the body's thyroid gland and can destroy the thyroid gland and other thyroid cells, including cancer cells, without affecting the rest of the body. It can be used to destroy any thyroid tissue not removed by surgery or to treat thyroid cancer that has spread to other parts of the body.
- Radioimmunotherapy (RIT): this new, targeted treatment delivers radiation therapy through a technique similar to chemotherapy. In RIT, a tumor-killing dose of a radioactive substance is linked to an antibody that then binds directly to the cancerous cells of the tumor. The radiation then kills only the targeted and nearby cancer cells, while normal tissue gets only a minimal dose. RIT may reduce the frequency and duration of cancer treatments.

NLFH has 1 linear accelerator. In CY12, it was replaced and was down for 7 months which resulted in decreased annual utilization. There is 1 linear accelerator in the proposed project. Projections are based on the assumption that nationally, radiation oncology demand will increase by 22% from 2012 – 2022, which is an average annual increase of 2.2% (source: Sg2 2012 Executive Summit).

Linear Accelerator	Actual		Projected	
	CY11	CY12	CY18	CY19
Treatments	4,576	3,095	5,257	5,380
Accelerators	1	1	1	1
Treatments/Accelerator	4,576	3,095	5,257	5,380
Standard (Treatments)	7,500	7,500	7,500	7,500
# of Lin Accs Justified	0.6	0.4	0.7	0.7

Using the State standard for linear accelerators of 7,500 treatments per linear accelerator, NLFH can currently justify 1 linear accelerator.

Radiation Oncology - Simulator

Radiation Oncology uses the simulator in treatment planning by creating computer images, sometimes in real-time, that allow physicians to see precisely where the tumor is, pinpoint its location, and determine correct radiation doses.

Currently, NLFH has 1 simulator. There is 1 PET/CT simulator in the proposed project.

Projections are based on the assumption that nationally, radiation oncology demand will increase by 22% from 2012 – 2022, which is an average annual increase of 2.2% (source: Sg2 2012 Executive Summit).

Simulator	Actual		Projected	
	CY11	CY12	CY18	CY19
Procedures	531	477	539	551
Simulators	1	1	1	1
Procedures/Simulator	531	477	539	551
Standard	N/A	N/A	N/A	N/A
# of Simulators Justified	1	1	1	1

There is no State standard for Simulators. Only 1 room is proposed.

Infusion Services

Infusion therapy provides medication through an intravenous line. It is mostly used with cancer or blood disorders, but may also be used for many different conditions, including rheumatoid arthritis, multiple sclerosis, congestive heart failure, gastrointestinal disorders, immune disorders, growth hormone deficiencies, and neurological problems. Offering comprehensive care for oncology patients, NLFH provides the following treatments, along with other infusions for non-cancer patients:

- Chemotherapy administration
- Blood and other blood product transfusions
- Central line care and maintenance
- Procrit, Epogen, Neulasta, and Neupogen Injections
- Monoclonal Antibody infusions, such as Remicade and Rituxan
- Bone marrow biopsies
- Biological therapy
- Hormone therapy
- Targeted drug therapy

NLFH currently has 6 infusion stations. There are 7 infusion stations in the proposed project.

Projections are based on the assumption that nationally, oncology infusion demand will increase by 19% from 2012 – 2022, which is an average annual increase of 1.9% (source: Sg2 2012 Executive Summit). The number of projected hours is based on the average time per visit for CY11 and CY12 of approximately 3.5 hours per visit.

Oncology Infusion	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	3,083	2,368	2,636	2,683
Hours	10,817	8,308	9,248	9,413
# of Stations	6	6	7	7
Hours/Station	1,803	1,385	1,321	1,345
Standard (Hours)	1,500	1,500	1,500	1,500
# of Stations Justified	7.2	5.5	6.2	6.3

There are no specific State standards for Oncology Infusion; NLFH used the standard of 1,500 hours/room to determine the number of stations justified. Because each visit lasts an average of 3.5 hours, it is more appropriate to use a time metric rather than a visit metric.

There will also be 4 exam rooms in the Cancer Center for patient exams/consults.

Cardiac Rehabilitation

NLFH's Cardiac Rehabilitation Program is designed to help patients achieve and maintain heart health and functionality by providing integrated, comprehensive services and support. Cardiac Rehabilitation programming is designed to help a patient regain strength, vitality, and enjoyment of life.

Currently, NLFH's Cardiac Rehabilitation Program includes 1 gym-like room. It also includes 1 exam room. The proposed project includes 1 gym-like room and 3 consult rooms.

Cardiac Rehab	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	12,662	10,542	11,111	11,209
Rooms	1	1	1	1
Visits/Room	12,662	10,542	11,111	11,209
Standard (Visits)	N/A	N/A	N/A	N/A

There is no State standard for Cardiac Rehabilitation; however, using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can more than justify 1 gym-like room and 3 consult rooms.

Non-Invasive Cardiac Diagnostics (NICD)

Cardiac diagnostic services are used to diagnose irregularities of the heart. Most tests are non-invasive and provide accurate reports on heart function and behavior. Within the Cardiac Diagnostics area, NLFH performs an extensive array of non-invasive diagnostic heart tests including:

- Echocardiogram (ECHO): Transthoracic, Transesophageal, Stress, and Pediatric
- Electrocardiogram (ECG): 12-lead, 18-lead, and Stress
- Heart Monitoring: Holter Monitor, Event Monitor, and Implantable Loop Recorder
- Nuclear Stress Test
- Oximetry
- Tilt Table Test

Projections for the Non-Invasive Cardiac Diagnostics visits are based on the projected population growth rate in the NLFH's market area for ages 18 and older of 0.90%.

There are no specific State standards for Cardiac Diagnostics; NLFH used the State Standard for Ambulatory Care of 2,000 visits/year/room to determine the number of rooms justified.

CV Stress Test

Cardiac stress testing assesses arterial blood flow to the heart on exertion. The heart's electrical activity is recorded on an electrocardiogram (ECG) during exercise on a treadmill or through medications that induce the heart to act as if the patient were exercising.

NLFH currently has 2 CV Stress Test rooms. The project includes 1 CV Stress Test room.

CV Stress Test	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	902	816	860	868
# of Rooms	2	2	1	1
Visits/Room	451	408	860	868
Standard (Visits)	2,000	2,000	2,000	2,000
# of Rooms Justified	0.5	0.4	0.4	0.4

Using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can currently justify 1 CV Stress Test room.

CV Echocardiogram (Echo)

An echocardiogram is an ultrasound of the heart. This exam shows the interior structures and walls of the heart while it is beating.

NLFH currently has 3 CV Echo rooms. The proposed project includes 2 CV Echo rooms.

CV Echo	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	2,354	2,383	2,512	2,534
# of Rooms	3	3	2	2
Visits/Room	785	794	1,256	1,267
Standard (Visits)	2,000	2,000	2,000	2,000
# of Rooms Justified	1.2	1.2	1.3	1.3

Using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can currently justify 2 CV Echo rooms.

CV Holter/EKG

A holter monitor is a small portable device that uses electrodes to continuously monitor the heart on a short-term basis, usually between 24 to 72 hours, to evaluate the patient's heart rate and rhythm. This test is commonly ordered for complaints of palpitations, light headedness, or cardiac arrhythmias. An event monitor is a portable device that is similar to a holter monitor, but is often used for a longer duration (between 10 and 30 days).

NLFH currently has 2 CV Holter/EKG rooms. The proposed project includes 2 CV Holter/EKG rooms. One will be located in the Diagnostic Imaging – IP/OP/ED department in the hospital and one will be located in the Non-Invasive Cardiac Diagnostics (NICD) department in the clinic.

CV Holter/EKG	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	10,472	9,558	10,074	10,163
# of Rooms	2	2	2	2
Visits/Room	5,236	4,779	5,037	5,082
Standard (Visits)	2,000	2,000	2,000	2,000
# of Rooms Justified	5.2	4.8	5.0	5.1

Using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can currently justify 5 CV Holter/EKG rooms; however only 2 rooms are proposed.

Respiratory Therapy

Respiratory Therapy services are provided to patients who have lung conditions, including asthma, bronchitis, emphysema, Chronic Obstructive Pulmonary Disease (COPD), lung cancer, and other pulmonary illnesses. Diagnostic tests and treatments within respiratory therapy services include arterial blood gas analysis, oximetry, and pulmonary function testing (PFT). PFT provides a measure of how well the lungs are moving air in and out and how well they are moving oxygen to the blood.

NLFH currently has 2 rooms for Respiratory Therapy/Pulmonary Function Testing. The proposed project includes 2 rooms for this function.

PFT	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	4,427	2,977	3,138	3,165
# of Rooms	2	2	2	2
Visits/Room	2,214	1,489	1,569	1,583
Standard (Visits)	2,000	2,000	2,000	2,000
# of Rooms Justified	2.2	1.5	1.6	1.6

Using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can currently justify 2 rooms for Respiratory Therapy/Pulmonary Function Testing.

Wound Center

NLFH's Wound Center provides a multidisciplinary team dedicated to healing chronic wounds, including a non-healing wound for more than four weeks or a wound that has resisted traditional treatment.

Projections for Wound Center are based on the projected population growth rate in the NLFH's market area for ages 18 and older of 0.90%.

Currently, NLFH has 4 rooms for Wound Care. The proposed project includes 3 exam rooms for Wound Care.

Wound Care	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	3,783	4,200	4,427	4,466
# of Rooms	4	4	3	3
Visits/Room	946	1,050	1,476	1,489
Standard (Visits)	2,000	2,000	2,000	2,000
# of Rooms Justified	1.9	2.1	2.2	2.2

Using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can currently justify 3 rooms for wound care.

Hyperbaric Oxygen Therapy

The hyperbaric oxygen (HBO) chambers in NLFH's Wound Center provide treatments with 100% oxygen at higher than normal atmospheric pressure. This treatment is a painless, proven way to help the body heal. Treatment sessions, or dives, increase the amount of oxygen in the blood, allowing red blood cells to pass more easily into the wounds and heal them from the inside out. HBO chambers have evolved to treat patients suffering from diabetic ulcers, infections, compromised skin grafts and flaps, and wounds that haven't healed within 30 days.

The current Wound Center also includes 2 hyperbaric oxygen chambers (HBOs). The proposed project includes 2 hyperbaric oxygen chambers.

HBO	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	2,037	2,144	2,260	2,280
# of Rooms	2	2	2	2
Visits/Room	1,019	1,072	1,130	1,140
Standard (Visits)	2,000	2,000	2,000	2,000
# of Rooms Justified	1.0	1.1	1.1	1.1

Using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can currently justify 2 hyperbaric oxygen chambers.

Neurology Diagnostics

Neuro Diagnostics analyzes and monitors nervous system function to promote the effective treatment of neurological diseases and conditions. Neuro Diagnostic technologists record electrical activity arising from the brain, spinal cord, and peripheral nerves using a variety of techniques and instruments.

Projections for the Neuro Diagnostic visits are based on the projected population growth rate in the NLFH's market area for ages 18 and older of 0.90%.

As with Cardiac Diagnostics, there are no specific State standards for Neuro Diagnostics; therefore, NLFH used the State Standard for Ambulatory Care of 2,000 visits/year/room to determine the number of rooms justified.

Electroencephalography (EEG)

Electroencephalography (EEG) is the recording of electrical activity along the scalp produced by the firing of neurons within the brain.

NLFH currently has 1 EEG rooms. The proposed project includes 1 EEG room.

EEG	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	403	403	425	428
# of Rooms	1	1	1	1
Visits/Room	403	403	425	428
Standard (Visits)	2,000	2,000	2,000	2,000
# of Rooms Justified	0.2	0.2	0.2	0.2

Using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can currently justify 1 EEG room.

Electromyogram (EMG)

An electromyogram (EMG) is a test that is used to measure the electrical activity of muscles at rest and during contractions. Nerve conduction studies measure how well and how fast the nerves can send electrical signals. EMGs are performed to find diseases that damage muscle tissue, nerves, or the junctions between nerve and muscle, including a herniated disc, amyotrophic lateral sclerosis (ALS), or myasthenia gravis (MG). EMGs are also performed to find the cause of weakness, paralysis, or muscle twitching.

NLFH currently has 1 EMG rooms. The proposed project includes 1 EMG room.

EMG	Actual		Projected	
	CY11	CY12	CY18	CY19
Visits	919	1,197	1,262	1,273
# of Rooms	1	1	1	1
Visits/Room	919	1,197	1,262	1,273
Standard (Visits)	2,000	2,000	2,000	2,000
# of Rooms Justified	0.5	0.6	0.6	0.6

Using the State standard for Ambulatory Care of 2,000 visits/room, NLFH can currently justify 1 EMG room.

VIII. 1120.120 – Availability of Funds

Not Applicable – see attached proof of bond rating.

IX. 1120.130 – Financial Viability

Not Applicable – see attached proof of bond rating.

X. 1120.140 – Economic Feasibility

A. Reasonableness of Financial Arrangements

Not Applicable – see attached proof of bond rating.

B. Conditions of Debt Financing

January 30, 2014

Ms. Kathryn Olson
Chair
Illinois Health Facilities and Services Review Board
525 West Jefferson Street, Second Floor
Springfield, Illinois 62751

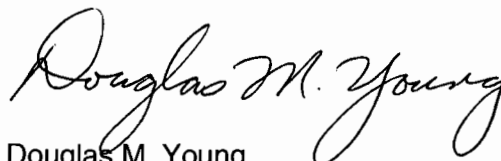
Dear Ms. Olson:

As authorized representatives of Northwestern Memorial HealthCare, we hereby attest that the form of debt financing selected for the project will be at the lowest net cost available, or if a more costly form of financing is selected, that form will be more advantageous due to such terms as prepayment privileges, no required mortgage, access to additional debt, term financing costs, or other factors.

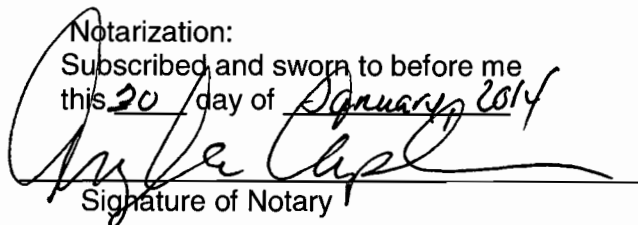
Sincerely,



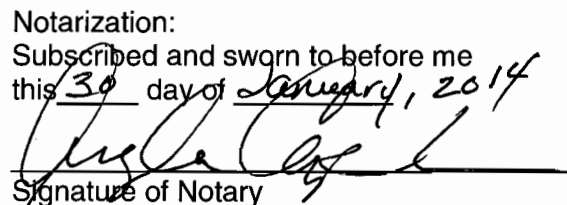
Dean M. Harrison
President & Chief Executive Officer
Northwestern Memorial HealthCare



Douglas M. Young
Interim Chief Financial Officer & Treasurer
Northwestern Memorial HealthCare

Notarization:
Subscribed and sworn to before me
this 20 day of January, 2014

Signature of Notary

Seal

Notarization:
Subscribed and sworn to before me
this 30 day of January, 2014

Signature of Notary

Seal



C. Reasonableness of Project and Related Costs

COST AND GROSS SQUARE FEET BY DEPARTMENT								
Department	A	B	C	D	E	F	G	H
	Cost/Square Foot New	Mod.	BGSF New	Circ.*	BGSF Mod.	Circ.*	Const. \$ (A x C)	Mod. \$ (B x E)
CLINICAL								
Medical/Surgical	\$ 385.73		66,734	19.9%			\$ 25,741,114	\$ 25,741,114
ICU	\$ 439.67		11,189	19.3%			\$ 4,919,468	\$ 4,919,468
Obstetrics	\$ 400.38		18,353	20.4%			\$ 7,348,213	\$ 7,348,213
Birthplace	\$ 511.13		13,804	19.3%			\$ 7,055,670	\$ 7,055,670
Special Care Nursery	\$ 483.43		4,091	19.3%			\$ 1,977,700	\$ 1,977,700
Clinical Decision Unit	\$ 371.07		4,747	22.9%			\$ 1,761,479	\$ 1,761,479
Emergency Department	\$ 399.71		15,110	23.0%			\$ 6,039,588	\$ 6,039,588
Interventional Procedures	\$ 463.21		41,437	23.0%			\$ 19,194,157	\$ 19,194,157
Prep and Recovery	\$ 518.58		21,540	23.0%			\$ 11,170,213	\$ 11,170,213
Diagnostic Imaging - IP/OP/ED	\$ 443.67		17,357	23.0%			\$ 7,700,832	\$ 7,700,832
Outpatient Services	\$ 350.86		3,081	22.9%			\$ 1,080,994	\$ 1,080,994
IP Rehabilitative Services	\$ 315.43		478	20.4%			\$ 150,776	\$ 150,776
Cancer Center	\$ 445.63		13,102	23.0%			\$ 5,838,605	\$ 5,838,605
Imaging - Women's Health	\$ 443.67		8,460	23.0%			\$ 3,753,474	\$ 3,753,474
Cardiac Pulmonary Rehab	\$ 315.43		6,610	23.0%			\$ 2,084,992	\$ 2,084,992
Non-Invasive Cardiac Diag.	\$ 315.43		3,567	23.0%			\$ 1,125,139	\$ 1,125,139
Wound Care	\$ 351.53		2,671	23.0%			\$ 938,942	\$ 938,942
Neurology	\$ 315.43		563	19.3%			\$ 177,587	\$ 177,587
Clinical Subtotal =	\$ 427.29		252,894	21.5%			\$ 108,058,944	\$ 108,058,944
NON-CLINICAL								
Physician Office Space	\$ 315.43		72,010	20.6%			\$ 22,713,876	\$ 22,713,876
Pharmacy	\$ 574.22		2,977	30.9%			\$ 1,709,453	\$ 1,709,453
Laboratory	\$ 598.03		5,353	30.8%			\$ 3,201,255	\$ 3,201,255
Engineering	\$ 315.43		2,991	30.8%			\$ 943,441	\$ 943,441
Central Sterile Supply	\$ 576.10		5,498	30.8%			\$ 3,167,398	\$ 3,167,398
Materials Management/Dock	\$ 374.05		4,259	30.8%			\$ 1,593,065	\$ 1,593,065
Environmental Services	\$ 346.11		2,924	29.2%			\$ 1,012,026	\$ 1,012,026
Central Distribution	\$ 293.96		988	30.9%			\$ 290,434	\$ 290,434
Administration	\$ 315.43		28,713	20.5%			\$ 9,056,847	\$ 9,056,847
Conference Center	\$ 437.58		9,105	23.0%			\$ 3,984,175	\$ 3,984,175
Conference / Education	\$ 414.13		3,402	20.0%			\$ 1,408,880	\$ 1,408,880
Dietary	\$ 475.60		14,934	30.9%			\$ 7,102,610	\$ 7,102,610
Biomedical Support	\$ 384.09		1,294	30.8%			\$ 497,012	\$ 497,012
Public/Lobby	\$ 444.13		9,174	23.0%			\$ 4,074,420	\$ 4,074,420
Retail	\$ 315.46		3,517	23.0%			\$ 1,109,459	\$ 1,109,459
Staff Lockers/Lounges	\$ 353.12		3,641	19.7%			\$ 1,285,710	\$ 1,285,710
Reception/Waiting/Public Toilets	\$ 369.19		15,957	21.1%			\$ 5,891,181	\$ 5,891,181
MEP Systems	\$ 574.01		21,523	30.8%			\$ 12,354,417	\$ 12,354,417
Chapel	\$ 295.41		1,137	22.9%			\$ 335,881	\$ 335,881
On-Call Center	\$ 498.33		2,235	28.9%			\$ 1,113,768	\$ 1,113,768
Storage	\$ 291.40		311	30.7%			\$ 90,624	\$ 90,624
Ambulance Garage	\$ 413.16		4,756	1.0%			\$ 1,964,970	\$ 1,964,970
Non-Clinical Subtotal =	\$ 391.79		216,699	23.2%			\$ 84,900,902	\$ 84,900,902
GRAND TOTAL =	\$ 410.91		469,593	22.3%			\$ 192,959,845	\$ 192,959,845

D. Projected Operating Costs**Projected Direct Operating Expenses – FY19**

	NLFH
Total Direct Operating Costs	\$ 312,629,000
Equivalent Patient Days	109,022
Direct Cost per Equivalent Patient Day	\$ 2,868

E. Total Effect of the Project on Capital Costs**Projected Capital Costs – FY19**

	NLFH
Equivalent Patient Days	109,022
Total Project Cost	\$ 377,986,895
Useful Life (years)	18
Total Annual Depreciation	\$ 20,999,272
Depreciation Cost per Equivalent Patient Day	\$ 192.62



Northwestern Memorial HealthCare, IL's Series 2013 Bonds Assigned 'AA+' Rating

Primary Credit Analyst:

Brian T Williamson, Chicago (1) 312-233-7009; brian_williamson@standardandpoors.com

Secondary Contact:

Suzie R Desai, Chicago (1) 312-233-7046; suzie_desai@standardandpoors.com

CHICAGO (Standard & Poor's) Feb. 5, 2013--Standard & Poor's Ratings Services assigned its 'AA+' long-term rating to the Illinois Finance Authority's \$119.7 million series 2013 bonds issued on behalf of Northwestern Memorial HealthCare (NMHC). The outlook is stable.

"The rating reflects our view of NMHC's continued strong operations despite a decline in revenue," said Standard & Poor's credit analyst Brian Williamson. "NMHC's management team also continues to build its solid balance sheet even amid continued investments in capital, and this helps NMHC to remain a relevant provider in the very competitive Chicago market. Finally, we view the close affiliations of the recently relocated Ann & Robert H. Lurie Children's Hospital and the Rehabilitation Institute of Chicago as a strength in this medical corridor of Chicago," Mr. Williamson added.

The 'AA+' rating further reflects our view of NMHC's:

- Strong liquidity, with approximately 490 days' cash on hand for fiscal 2012 and an average of 420 days' cash on hand during the past four years;
- Strong pro forma maximum annual debt service (MADS) coverage of 11x in the first quarter of fiscal 2013 ended Nov. 30 as a result of solid operations and solid investment income;
- Outstanding governance and management, including the numerous benefits realized through affiliations with all Northwestern University-related entities, including the Feinberg School of Medicine; and
- Stable business position as the market share leader.

The series 2013 bond proceeds will be used to partially refund the series

Northwestern Memorial HealthCare, IL's Series 2013 Bonds Assigned 'AA+' Rating

2009B bonds and to pay for and/or reimburse Northwestern Memorial Hospital (NMH) for capital expenditures.

For a more detailed analysis please see our report on NMH published Dec. 20, 2012 on RatingsDirect on the Global Credit Portal.

The stable outlook reflects our opinion that the system will continue to post strong operations as NMHC's leadership implements strategies to address the rising expense base and volume challenges.

RELATED CRITERIA AND RESEARCH

- USPF Criteria: Not-For-Profit Health Care, June 14, 2007
- USPF Criteria: Bank Liquidity Facilities, June 22, 2007
- USPF Criteria: Standby Bond Purchase Agreement Automatic Termination Events, April 11, 2008
- USPF Criteria: Municipal Swaps, June 27, 2007
- USPF Criteria: Contingent Liquidity Risks, March 5, 2012

Complete ratings information is available to subscribers of RatingsDirect on the Global Credit Portal at www.globalcreditportal.com. All ratings affected by this rating action can be found on Standard & Poor's public Web site at www.standardandpoors.com. Use the Ratings search box located in the left column.

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McGRAW-HILL

XI. Safety Net Impact Statement

Northwestern Lake Forest Hospital (NLFH) provides access to primary and specialty medical care, clinical trials and a host of other healthcare services for patients in Lake County and surrounding regions. From its founding 114 years ago as Alice Home on the campus of Lake Forest College, NLFH has upheld its promise to provide Lake County residents convenient access to the highest quality, most advanced healthcare services available.

NLFH has continually expanded its healthcare services to respond to the growing needs of its community. NLFH shares Northwestern Memorial's commitment to provide care for those unable to pay, consistently providing the highest percentage of charity care as a percent of patient revenue among Lake County hospitals. In 2011, NLFH provided 28% of the total hospital-based charity care in Lake County, the highest percentage in the county.

Additionally, NLFH's board-certified emergency physicians and trauma-trained nurses serve and support the Region 10 Emergency Medical System, providing trauma and emergency care to patients at its Level II Trauma Center at NLFH and emergency services at the Northwestern Grayslake Emergency Center. In 2011, NLFH's Emergency Department was among 20 national recipients to receive the Emergency Nurses Associations 1st annual Lantern Award. The award recognizes emergency departments that exemplify exceptional and innovative performance in leadership, practice education, advocacy and research, and a commitment to excellence.

NLFH continues to earn recognition for quality care. NLFH earned an "A" rating in hospital safety by the Leapfrog Group, an organization that provides the only national, public comparison of hospitals across safety, quality and efficiency of care dimensions. NLFH was among only 92 hospitals selected out of nearly 1,200 surveyed to achieve this rating.

NLFH received the Consumer Choice Award for Lake and Kenosha counties in 2012 for the 8th consecutive year. NLFH achieved the prestigious Magnet designation from the American Nurses Credentialing Center, the gold standard for nursing excellence and an organizational commitment to quality care. NLFH is among an elite group of the nation's healthcare organizations to do so.

1. Impact of the Project on Essential Safety Net Services in the Community

The proposed facility will have a positive impact on the safety net services in Lake County. NLFH works with community-based organizations to support efforts to reach the most medically underserved residents in Lake County.

For more than seven years, NLFH has provided vital patient care services to medically underserved residents of Lake County in partnership with the Lake County Health Department and Community Health Center. Through this relationship, NLFH provided needed colonoscopy, radiology, imaging services and neurologic consultations.

NLFH supports health care for the medically underserved in Lake County through its partnership with HealthReach, an independent not-for-profit organization that partners with public and private organizations to provide access to free primary and specialty medical care, dental, vision and pharmaceutical services for uninsured Lake County residents. In FY12, NLFH provided grant funding to HealthReach, helping the organization to provide

more than 20,000 patient visits and pay for more than 28,000 prescriptions for those who could not afford their medications.

Also in FY12, NLFH provided more than \$97,000 in laboratory support, diagnostic imaging and testing and hospitalization for HealthReach patients. Surgeons and physicians on the medical staff of NLFH also provided pro bono services for patients in need of care for life-threatening diseases and illnesses.

For over 50 years, Northwestern Memorial Hospital has had a close relationship with Erie Family Health Center (ERHC), a Federally Qualified Health Center based in the Humboldt Park area in Chicago. In December 2010, NMH introduced EFHC to HealthReach to support the development of a sustainable model of providing access to medical, dental, vision and pharmacy services to the medically uninsured or underserved, low income residents of Lake County, Illinois. In May 2012, EFHC received notice of HRSA funding for their proposed model of care. EFHC plans to open the Lake County clinic in 2014. The Erie clinic will also be a critical education site for the residents in the Northwestern McGaw Lake County Family Medicine Residency program. NLFH will provide specialty and inpatient care for the patients seen at the Erie clinic.

Over the past year, Northwestern Medicine has expanded primary care services to several locations in northern Cook County and Lake County, including Lake Forest, Grayslake, Highland Park, Deerfield, Libertyville, Evanston, and Glenview. These primary care clinics enable better access to preventative medicine for the uninsured and underinsured.

Additionally, NLFH and Northwestern Memorial Physicians Group (NMPG) have collaborated to establish a Family Medicine Residency program called the Northwestern McGaw Lake County (NMLC) Family Medicine Residency program. NMLC Family Medicine Residency will be a patient-centered medical home in Lake County. NMLC Family Medicine Residency is ideally positioned to train family physicians who will continue their careers in Lake County, serving those residents with the greatest needs.

Pending accreditation, the NMLC Family Medicine Residency will accept 8 medical residents per year, for a total of 24 residents over the 36-month training period. The program is expected to begin recruiting in July 2014. Based on national requirements, these residents will care for more than 40,000 patients as outpatients. Many of these patients will require hospital care for either an illness, an emergency, or obstetrical care. The family medicine residents will deliver at least 1,080 babies during their training and care for thousands of hospitalized patients; all under the supervision of the excellent physician faculty at NLFH.

Residency training requires a minimum of 36 months of training following medical school under the direct supervision of physician faculty. This training occurs across practice settings, with a substantial portion in the care of hospitalized adults and children, care of the laboring patient, and emergency and surgical care. These experiences are ideally placed at NLFH. But there is no space in the current facility.

Through the partnership with the Erie clinic, the NMLC Family Medicine residents will devote a significant part of their training to caring for the more than 110,000 medically underserved patients of Lake County. In this FQHC service area, 38% of the residents live below the 200% Federal Poverty Level, compared to 19% in surrounding Lake County. Many of these patients currently receive no preventive care and when acute or chronic health needs escalate, they receive emergent care that perpetuates an expensive, fragmented system.

The NMLC Family Medicine residents, in conjunction with NLFH, will reduce the burden and cost of episodic care, providing the right care in the right setting to improve the health of Lake County. Ultimately, many of these Family Medicine residents will remain in Lake County and at NLFH to continue their practices after residency, supporting the communities in which they received their training and forging a tradition of excellence.

2. Impact of the Project on Safety Net Services at Other Hospitals

The proposed project will not have a negative impact on essential safety net services in the community. Nor will this project impact the ability of other providers to cross-subsidize safety net services. Because NLFH does not plan to add any services that are not currently provided, there is no anticipated impact on area providers at all.

NLFH Charity Care and Medicaid

Safety Net Information per PA 96-0031			
CHARITY CARE			
Charity (# of patients)	FY11	FY12	FY13
Inpatient	284	353	375
Outpatient	2,596	4,884	3,062
Total	2,880	5,237	3,437
Charity (cost in dollars)			
Inpatient	\$ 3,347,000	\$ 3,548,681	\$ 4,711,143
Outpatient	\$ 6,874,000	\$ 6,663,782	\$ 6,751,493
Total	\$ 10,221,000	\$ 10,212,163	\$ 11,462,636
MEDICAID			
Medicaid (# of patients)	FY11	FY12	FY13
Inpatient	527	450	532
Outpatient	18,557	23,211	16,317
Total	19,084	23,661	16,849
Medicaid (revenue)			
Inpatient	\$ 2,085,210	\$ 1,754,716	\$ 2,238,244
Outpatient	\$ 4,297,078	\$ 3,854,036	\$ 3,074,747
Total	\$ 6,382,288	\$ 5,608,752	\$ 5,312,991

Source: IDPH Annual Hospital Questionnaires

NLFH Community Benefit

To help meet the needs of the community during FY2013, NLFH contributed \$47.3 million in community benefits, which represents 21.8% of its patient service revenue. The major components of our \$47.3 million community benefit contribution are:

- \$33.3 million government sponsored care (unreimbursed cost of Medicaid and Medicare).
- \$11.5 million charity care, at cost.
- \$2.0 million bad debt, at cost. An important part of NLFH's commitment to providing quality and accessible healthcare is covering the expense of payments that were expected but not received.
- \$0.5 million of other community benefits. NLFH provides community benefit through subsidized health services, including education and information to improve the health of the community, donations to charitable and community organizations, volunteer efforts, language assistance and translation services for patients and their families, and more.

NLFH Free and Discounted Care Policy

Free and Discounted Care is available to those seeking care at NLFH based upon the following program criteria:

- The Free and Discounted Care Policy measures patient income against the U.S. Health and Human Services Federal Poverty Guideline, known as the federal poverty level (FPL) to determine eligibility. One hundred percent free care is provided to patients with household incomes less than or equal to 250% of the FPL. Additionally, patient care services are provided at approximate cost for those qualifying patients with household income between 251% and 600% of the FPL.
- The Free and Discounted Care Policy includes a Catastrophic Program for qualifying patients with household income above 250% of the FPL (patients at or below this level are eligible for free care). Under this program, the patient's total responsibility to either NLFH or to NMH and affiliates will not exceed 21% of annual household income over a three year period (7% of annual household income per year for three years) for patients with annual household income between 251% and 600% of the FPL. This is less burdensome for patients than the amount defined by the Illinois Hospital Uninsured Patient Discount Act enacted April 1, 2009, which allows healthcare organizations to hold patients in this category responsible for up to 25% of annual household income. For uninsured and underinsured patients with annual household income over 600% of the FPL, the patient's maximum responsibility is limited to 35% of annual household income. The Illinois Hospital Uninsured Patient Discount Act does not limit an uninsured or underinsured patient's responsibility when household income is over 600% of FPL.
- The Free and Discounted Care Policy includes a discount program for patients who do not have third-party insurance (uninsured) with incomes above the threshold to qualify for free care. This program is also available to patients with third-party insurance that does not cover services deemed to be medically necessary. The discount program provides patients a 30% discount off billed charges, which represents the median managed care discount rate based on NLFH and NMH managed care contracts with non-governmental payors during the prior fiscal year.

Other NLFH Community Benefit Activities

NLFH provides health education lectures and awareness programs at schools, nursing homes and other locations throughout Lake County, as well as support groups and services for patients and their families including:

- Presentations to area school staff and parents regarding care of the child with type 1 diabetes in school.
- An annual children's safety fair.
- Health education to members of the Down Syndrome Development Council regarding childhood obesity in children with special needs.
- Programs for cancer patients and survivors offered free of charge, including:
 - Support for newly diagnosed patients
 - "I Can Cope" for patients in treatment for cancer
 - "Look Good, Feel Better" for patients suffering from cosmetic challenges relating to treatment
 - Nutrition consultations for diagnosed patients
 - Wig boutique
 - Cancer survivors networking group
 - Survivors health and nutrition programs

- Meditation class
 - Yoga class
- NLFH staff provide medical career advisory training at Lake County High Schools Technical Campus for students pursuing careers in healthcare directly following high school or seeking professional healthcare careers.
- NLFH provides on-site training for physically, mentally and emotionally challenged students learning to perform housekeeping duties in partnership with the Special Education District of Lake County, a cooperative educational organization working among 35 school districts in Lake County, Illinois.
- More than 160 NLFH employees and their families participated in a day of service at Lambs Farm, a not-for-profit organization that provides residence, vocational services, employment and support to adults with developmental disabilities in Lake County, Illinois. The families helped with painting and landscaping services.

XII. Charity Care Information

Charity Care

NLFH is committed to providing care for those who are unable to pay, consistently providing the highest percentage of charity care as a percent of net patient revenue among Lake County hospitals. In 2012, NLFH provided approximately 25% of the total hospital-based charity care in Lake County.

NLFH CHARITY CARE			
	FY2011	FY2012	FY2013
Net Patient Revenue**	\$ 222,102,446	\$ 217,261,274	\$ 209,205,806
Amount of Charity Care (charges)	\$ 31,708,397	\$ 32,560,946	\$ 35,841,207
Cost of Charity Care	\$ 10,221,000	\$ 10,212,163	\$ 11,462,636
Charity Care as % of Net Revenue	4.6%	4.7%	5.5%

** Net Patient Revenue for FY2011 represents patient service revenue before deducting bad debt (at charges) of \$5.1 million. Net Patient Revenue for FY2012 and FY2013 represents patient service revenue after deducting bad debt (at charges) of \$7.6 million and \$7.3 million, respectively.