



STATE OF ILLINOIS
HEALTH FACILITIES AND SERVICES REVIEW BOARD

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DOCKET NO: H-10	BOARD MEETING: January 24, 2017	PROJECT NO: 16-047	PROJECT COST: Original: \$46,966,265
FACILITY NAME: Advocate Christ Medical Center Radiation Oncology Department in the Cancer Center		CITY: Oak Lawn	
TYPE OF PROJECT: Non-Substantive			HSA: VII

PROJECT DESCRIPTION: The applicants (Advocate Health Care Network and Advocate Health and Hospitals Corporation d/b/a Advocate Christ Medical Center) are proposing to modernize and expand the Radiation Oncology Department on the campus of Advocate Christ Medical Center ("ACMC"), Oak Lawn. The project cost is \$46,966,265, and the project completion date is December 31, 2020.

EXECUTIVE SUMMARY

PROJECT DESCRIPTION:

- The applicants (Advocate Health Care Network and Advocate Health and Hospitals Corporation d/b/a Advocate Christ Medical Center) are proposing to expand and modernize its Radiation Oncology Department in the Cancer Center, with a combination of modernization and new construction. The facility is located on the campus of Advocate Christ Medical Center, Oak Lawn, Illinois, and the project cost is \$46,966,265. The completion date is December 31, 2020.
- The proposed radiation oncology facility will replace the current Radiation Oncology Department, which is described as being functionally obsolete. The facility has three external beam radiation devices that will be replaced with three state-of-the-art units. The proposed project will be a combination of modernization and new construction that will correct space and functional deficiencies.

WHY THE PROJECT IS BEFORE THE STATE BOARD:

- This project is before the State Board because the project is “by or on behalf of a health care facility” and is in excess of the capital expenditure minimum of \$12,950,881 (20 ILCS 3960).

PURPOSE OF THE PROJECT:

- According to the applicants *“The purpose of this project is to improve cancer care for patients in Advocate Christ Medical Center’s (ACMC/Christ Medical Center) defined regional service area and beyond by expanding and modernizing the currently deficient facilities and replacing the aging radiation therapy equipment in the Radiation Oncology Department. These investments will provide advanced cancer treatment services and functional facilities that will contribute to improving the health care and well-being of the market area population.”*

PUBLIC COMMENT:

- A public hearing was offered in regard to this project, but one was not requested. Letters of support were included in the application for permit from the following:
 - State Senator Jacqueline Y. Collins (16th District)
 - State Senator Bill Cunningham (18th District)
 - State Representative Frances Ann Hurley (35th District)
 - State Representative Kelly Burke (36th District)
 - State Representative Margo McDermed (37th District)
 - Dr. Sandra Bury, Mayor of Oak Lawn
 - Larry Lehman, President Oak Lawn Chamber of Commerce
 - David G. Seaman, Mayor, Village of Tinley Park
 - James J. Sexton, Mayor, Village of Evergreen Park
 - Gilda's Club Chicago
 - Laura Jane Hyde, Chief Executive Officer, Gilda’s Club Chicago
 - Michele Goodier, Vice President, Advocate Cancer Center
 - Mary Mayer, Radiation Oncology Patient
 - Kenneth W. Lukhard, President, Advocate Christ Medical Center
 - Richard Scott, MD, Chief Medical Officer, Advocate Christ Medical Center
 - Dr. Amar Hamad, Senior Chief, Department of Hematology and Oncology, Advocate Christ Medical Center
 - Keith Ammons, MBA, BSRT (T), Director of Operations, Cancer Institute, Advocate Christ Medical Center

- Faisal Yah, MD, MSc, Chairman, Department of Radiation Oncology, Advocate Christ Medical Center
- John McKee, Clinical Coordinator, Radiation Oncology Department, Advocate Christ Medical Center

Those in support of the project emphasized the need to better serve cancer patients requiring radiation treatment. According to the letters of support Christ Medical Center is the only comprehensive tertiary and quaternary care facility in the Southland. Expansion and modernization of the current radiation oncology department will improve patient access to radiation services at Christ Medical Center's main campus, allow the medical center to perform more radiation procedures by upgrading to equipment with the newest end safest clinical features, and position the medical center for meeting the area's future health care demands.

CONCLUSION:

- Based upon the information in the application for permit and additional information provided by the applicants we note the following:
- To determine if there is a need for the modernization of a healthcare facility, the State Board must determine if the facility has deteriorated and in need of modernization or the modernization is necessary to address the proposed increased demand for services. This project addresses both of these issues. [See pages 12-13 of this report]
- The State Board Staff also notes while the applicants exceed the State Board Cost standards the costs are consistent with other recently approved projects with this degree of complexity. [See Permit #16-008 – The University of Chicago Medical Center]
- The applicants addressed a total of fourteen (14) criteria and were found non-compliant with the following:

State Board Standards Not Met	
Criteria	Reasons for Non-Compliance
Criterion 1120.140(c) Reasonableness of Project Costs	The applicants have exceeded the State standard for Site Survey/Soil Investigation/Site Prep, New Construction and Contingencies, and Modernization and Contingencies. [See pages 15-16 of this report for an explanation of the excess.]

STATE BOARD STAFF REPORT
Project #16-047
Advocate Christ Medical Center-Cancer Institute

APPLICATION SUMMARY/CHRONOLOGY	
Applicants	Advocate Health Care Network Advocate Health and Hospitals Corporation d/b/a Advocate Christ Medical Center
Facility Name	Advocate Christ Medical Center - Radiation Oncology Department in the Cancer Center
Location	4440 West 95 th Street, Oak Lawn
Application Received	November 3, 2016
Application Deemed Complete	November 10, 2016
Review Period Ends	January 9, 2017
Permit Holder	Advocate Health and Hospitals Corporation
Operating Entity/Licensee	Advocate Health and Hospitals Corporation
Owner of the Site	Advocate Health and Hospitals Corporation
Project Financial Commitment Date	Upon Permit Issuance
Gross Square Footage	24,446 GSF
Project Completion Date	December 31, 2020
Can Applicants Request Another Deferral?	Yes
Has the Application been extended by the State Board?	No

I. The Proposed Project

The applicants (Advocate Health Care Network and Advocate Health and Hospitals Corporation) are proposing to expand and modernize a 24,446 GSF Radiation Oncology Department on the campus of Advocate Christ Medical Center, Oak Lawn, Illinois at a cost of \$46,966,265. The anticipated completion date is December 31, 2020.

II. Summary of Findings

- A. The State Board Staff finds the proposed project appears to be in conformance with the provisions of Part 1110.
- B. The State Board Staff finds the proposed project **does not** appear to be in conformance with the provisions of Part 1120.

III. General Information

Advocate Christ Medical Center's Radiation Oncology Department in the Cancer Center is located on the campus of Advocate Christ Medical Center, Oak Lawn. Advocate Health and Hospitals Corporation is a subsidiary division of Advocate Health Care Network, which is the parent corporation of ten additional acute care hospitals, two specialty hospitals, two long-term care facilities, and seven ambulatory surgery treatment centers (ASTC). The applicants' Radiation Oncology Department opened in the early 1970s, in its current location. Increases in patient volume and advances in radiation oncology treatment services have rendered the current facility severely undersized and technologically obsolete.

Financial commitment will occur after permit issuance. The project is a non-substantive project subject to 1110 and 1120 review.

IV. Health Service Area VII

The Radiation Oncology Department is located on the campus of Advocate Christ Medical Center, 4440 West 95th Street, Oak Lawn, Illinois in suburban Cook County, A-04 Hospital Planning Area and Health Service Area HSA VII. Planning Area A-04 includes the Chicago community areas of West Pullman, Riverdale, Hegewisch, Ashburn, Auburn Gresham, Beverly, Washington Heights, Mount Greenwood, and Morgan Park. Included in HPA A-04 are the Cook County townships of Lemont, Stickney, Worth, Lyons, Palos, Calumet, Thornton, Bremen, Orland, Rich, and Bloom. HSA VII includes the Illinois Counties of Suburban Cook and DuPage. Health Service Area VII includes

- Palos Community Hospital, Palos Heights [425 beds],
- MetroSouth Medical Center, Blue Island [314 beds],
- Little Company of Mary Hospital, Evergreen Park [298 beds],
- Ingalls Memorial Hospital, Harvey [478 beds],
- Franciscan St. James Health-Olympia Fields [158 beds]
- Franciscan St. James Health-Chicago Heights, [312 beds]*
- Advocate South Suburban Hospital, Hazel Crest [284 beds]
- Advocate Christ Medical Ctr., Oak Lawn [788]
- Adventist LaGrange Memorial Hospital, LaGrange [196]

*Discontinued per E-008-16, complete by:10-31-19

V. Project Details

The applicants propose to expand and modernize the existing Radiation Oncology Department which is part of the Cancer Center on the campus of Advocate Christ Medical Center, Oak Lawn. The current facility was developed in the early 1970s. Within the last 40 years, patient volume and treatment complexity have increased. To accommodate this growth and better serve the growing patient base, over the years the applicants have extended the original space by moving into nearby vacated space. This piecemeal expansion has resulted in poor workflow and inadequate patient privacy. The Department is currently equipped with three external beam radiation devices, including one stereotactic device (CyberKnife) and two standard linear accelerators. Over the years, the original equipment was upgraded and the department is now served by units purchased in 2006 (CyberKnife), 2008 and 2009; they have reached the end of their useful life.

The applicants propose to modernize 12,123 GSF of existing and vacated space and incorporate 12,308 GSF of newly constructed space in addition to 15 GSF of "as is" space resulting in a 24,446 GSF facility. The newer/larger facility will occupy an expanded building footprint. The project will be completed in phases in an effort to cause minimal disruption to patient care. During Phase I, the existing Cyberknife north vault will be demolished and a new vault will be constructed and equipped with a new stereotactic device. The new space developed during Phase I will also include a new

dedicated front entrance with a canopy, patient registration, waiting, gowning, and exam areas. During Phase II, the linear accelerators in the remaining south and east vaults will be replaced; the CT simulator, the HDR brachytherapy area and physician and support space will be remodeled. New standard linear accelerators will be installed in these vaults. At the conclusion of Phase II, the stereotactic components will be relocated from the south vault to the north vault. As a result of this move the two standard linear accelerators will be co-located in the front of the department and be more convenient for the high volume of linac outpatients and the stereotactic device will be located in the back of the department with improved access for inpatients. By phasing the location of the technology in this way, the stereotactic unit will be available sooner (than if initial installation was delayed until Phase II). This new technology is the most advanced non-invasive treatment available and new applications for the technology substantially improve the success rates for cancer treatment. [Application for permit pages 6-7]

V. Project Costs and Sources of Funds

The total cost of the project is \$46,966,265 and it is being funded by a combination of cash and securities totaling \$17,431,768, and project-related bond issues totaling \$29,534,265.

TABLE ONE			
Project Costs and Sources of Funds			
Project Costs	Reviewable	Non-Reviewable	Total
Preplanning Costs	\$120,900	\$199,700	\$320,600
Site Survey and Soil Investigation	\$53,000	\$62,600	\$115,600
Site Preparation	\$250,400	\$663,300	\$913,700
Off Site Work	\$195,780	\$547,446	\$743,226
New Construction Contracts	\$2,714,319	\$7,558,662	\$10,272,981
Modernization Contracts	\$3,246,885	\$2,417,979	\$5,664,864
Contingencies	\$755,484	\$1,113,575	\$1,869,059
Architectural/Engineering Fees	\$530,387	\$904,017	\$1,434,404
Consulting and Other Fees	\$675,900	\$2,032,800	\$2,708,700
Movable or Other Equipment (not in construction contracts)	\$15,241,765	\$2,190,003	\$17,431,768
Bond Issuance Expense*	\$84,772	\$231,540	\$316,312
Net Interest Expense During Construction*	\$295,296	\$806,555	\$1,101,851
Other Costs to be Capitalized	\$1,075,950	\$2,997,250	\$4,073,200
Total	\$25,240,838	\$21,725,427	\$46,966,265
Sources of Funds			
Cash and Securities			\$17,431,768
Bond Issues*			\$29,534,497
Total			\$46,966,265
*Project-Related Source: Application for Permit page 35 revised. Itemization of these costs can be found at pages 59-60 of the application for permit.			

VI. Cost Space Requirements

The applicants are proposing to expand and modernize an existing Radiation Oncology Department on the campus of Advocate Christ Medical Center, Oak Lawn. The proposed facility will consist of 24, 446 GSF of space. Of this space, 12,308 GSF will be new construction, 12,123 GSF will be remodeled space, and 15 GSF will be considered “as-is” space. Table Two outlines the spatial allocations.

TABLE TWO							
Cost Space Chart							
Department/Area	Cost	Existing	Proposed	New Construction	Remodeled	As Is	Vacated Space
Clinical							
Therapeutic Radiology							
CT Simulator	\$575,835	601	601		601		
Linear Accelerators	\$10,858,551	2,401	2,535		2,535		
Stereotactic Surgery System	\$8,439,100	1,005	1,859	1,524	335		
HDR Brachytherapy	\$414,357	432	432		432		
Nurse Stations	\$385,921	67	403	223	180		
Exam Rooms	\$686,533	753	716	716			
Internal Dept. Circulation	\$3,880,541	2,314	4,049	1,139	2,910		
Total Clinical	\$25,240,838	7,573	10,595	3,602	6,993	0	0
Non Clinical							
Storage/Shared Support	\$9,134,467	0	6,310	1,889	4,421		
Public Space/Amenities	\$3,815,384	0	2,636	2,636			0
Building Components*	\$8,775,576	0	4,905	4,181	709		
Total Non-Clinical	\$21,725,427	0	13,851	8,706	5,130	15	0
Total Project	\$46,966,265	7,573	24,446	12,308	12,123	15	0
*Includes mechanical, electrical support space, and exterior canopy.							
Source: Application for Permit page 63							

VII. Background of the Applicants

A) **Criterion 1110.530 (b) (1) (3) - Background of the Applicants**

The site of the proposed project complies with the requirements of Illinois Executive Order #2006-5. The proposed site is in compliance with Section 4 of the Illinois State Agency Historic Resources Preservation Act (20 ILCS 3420/1 et. seq. The applicants authorized the Health Facilities and Services Review Board ("HFSRB") and the Illinois Department of Public Health ("IDPH") access to any documents necessary to verify information submitted as part of this application for permit and authorized HFSRB and IDPH to obtain any additional information or documents from other government agencies which HFSRB or IDPH deem pertinent to process this application for permit. Advocate Health Care Network is the parent company of eleven hospitals in Illinois. They are:

- Advocate Christ Medical Center, Oak Lawn

- Advocate BroMenn Medical Center, Normal
- Advocate Condell Medical Center, Libertyville
- Advocate Eureka Hospital, Eureka
- Advocate Good Samaritan Hospital, Downers Grove
- Advocate Good Shepherd Hospital, Barrington
- Advocate Illinois Masonic Medical Center, Chicago
- Advocate Lutheran General Hospital, Park Ridge
- Advocate South Suburban Hospital, Hazel Crest
- Advocate Sherman Hospital, Elgin
- Advocate Trinity Hospital, Chicago

VIII. Purpose of the Project, Safety Net Impact, Alternatives

A) Criterion 1110.230 (a) – Purpose of the Project

The applicants stated the following:

“The purpose of this project is to improve cancer care for patients in Advocate Christ Medical Center’s (ACMC, Christ Medical Center) defined regional service area and beyond by expanding and modernizing the currently deficient facilities and replacing the aging radiation therapy equipment in the Radiation Oncology Department. These investments will provide advanced cancer treatment services and functional facilities that will contribute to improving health care and well-being of the market area population.” [See Application for permit pages 69-84]

B) Criterion 1110.230 (b) – Safety Net Impact Statement

This project is considered a non-substantive project, and by statute no safety net impact statement is required for non-substantive projects. However, the applicants included this information for the Board’s consideration.

TABLE THREE Safety Net Information per PA 96-0031 CHARITY CARE			
Net Patient Revenue	\$900,774,000	\$936,543,941	\$961,099,001
Charity (# of patients)	Year	Year	Year
	2013	2014	2015
Inpatient	1,483	562	411
Outpatient	11,413	7,560	5,718
Total	12,896	8,122	6,129
Charity (cost In dollars)			
Inpatient	\$23,079,000	\$5,427,000	\$9,241,000
Outpatient	\$4,389,000	\$3,046,000	\$4,281,000
Total	\$27,468,000	\$8,473,000	\$13,522,000
% of Charity Exp./Net Patient Revenue	3.04%	1%	1.40%
MEDICAID			

TABLE THREE			
Safety Net Information per PA 96-0031			
Medicaid (# of patients)	Year 2013	Year 2014	Year 2015
Inpatient	6,922	9,404	9,932
Outpatient	74,378	76,692	100,187
Total	81,300	86,096	110,119
Medicaid (revenue)			
Inpatient	\$88,477,783	\$126,822,509	\$120,316,095
Outpatient	\$2,327,324	\$7,231,715	\$211,785,154
Total	\$90,805,107	\$134,054,224	\$141,491,249
% of Medicaid/Net Patient Revenue	10.08%	14.31%	14.72%

C) Criterion 1110.230 (c) – Alternatives to the Proposed Project

The applicants explored six (6) options for expanding and modernizing the Radiation Oncology Department.

The options considered were:

- Redevelop the Radiation Oncology Department in Parking Lot Across the Street;
- Redevelop the Radiation Oncology Department in Place, Reduce the Number of Treatment Units from Four to Three (Project of Lesser Scope);
- Replace Existing Linear Accelerators and the Stereotactic Radiosurgery Device (SRS) Stereotactic Body Radiotherapy Device (SRT), Expand/Modernize Radiation Oncology Department (Initial Project of Choice);
- Expand/Modernize Radiation Oncology Department in Place, replace/relocate SRS/SRT; (Final project of choice)
- Pursue a Joint Venture
- Utilize Other Health Care Resources

1. Redevelop the Radiation Oncology Department in Parking Lot Across the Street

The applicants rejected this option, due to the separation from key support staff and services, and the additional encumbrances related to patient transport. **Cost of this alternative: \$53,000,000.**

2. Redevelop the Radiation Oncology Department in Place, Reduce the Number of Treatment Units from Four to Three (Project of Lesser Scope)

The applicants rejected this alternative because it would eliminate the stereotactic capability and retain two standard linear accelerators and the HDR Brachytherapy unit. The absence of the SRS/SRT unit would create a need in the planning area. **Cost of Proposed Alternative: \$21,800,000.**

3. Replace Existing Linear Accelerators and the Stereotactic Radiosurgery Device (SRS) Stereotactic Body Radiotherapy Device (SRT), Expand/Modernize Radiation/Oncology Department (Initial Choice)

The applicants note that this was initially the alternative of choice, but later rejected this, because it would have delayed the availability of stereotactic technology, thus detracting from the optimal operational efficiency planned for the facility. **Cost of the Proposed Alternative: \$45,900,000.**

4. Expand/Modernize Radiation Oncology Department in Place, Replace/Relocate Linear Accelerators and SRS/SRT (Chosen Alternative)

The applicants chose this alternative as most viable alternative based on the immediate availability of stereotactic capability during the project (Phase I), which the most is advanced non-invasive treatment available which improves success rates for cancer treatment. It is also noted that this alternative will co-locate the linear accelerators in the front of the department, enhancing access for the high volume of linac outpatients. **Cost of the Proposed Alternative: \$46,966,265.**

5. Pursue Joint Venture

The applicants rejected this alternative, because a proposed joint venture of this magnitude would most likely involve a joint venture of the entire hospital. This is not a viable alternative. **No cost was identified with the proposed alternative.**

6. Utilize Other Health Care Resources

The applicants rejected this alternative, because a) there are no other cancer referral centers in the planning area, b) local hospitals lack the experienced staff and technology to provide the level of service already provided by the applicants, c) referring cancer patients to other facilities would compromise current progress and reduce patient access to Advocate Christ Medical Center's research protocols, and d) utilizing other cancer care resources would increase patient travel times and disrupt the continuity of care. **No cost was identified with the proposed alternative.** *[Application for permit pages 85-104]*

IX. Size of the Project, Projected Utilization, Assurances

A) Criterion 1110.234 (a) – Size of the Project

To demonstrate compliance with 77 IAC 1110.234(a) Size of the Project the applicant provided the departmental gross square footage for all areas being expanded and modernized.

This project proposes to expand and modernize the existing Radiation Oncology Department on the campus of Advocate Christ Medical Center, Oak Lawn. The entire project will encompass 24,446 GSF of space. Of this space, 10,595 GSF is being allocated for clinical functions. Table Four lists the services offered and the spatial allotments for each. It appears the applicant has met the requirements of this criterion.

TABLE FOUR Spatial Allotments for Services Advocate Christ Medical Center Radiation Oncology Department in the Cancer Center				
Dept./Service and # of Rooms	Proposed DGSF	State Standard per room (DGSF)	Difference (DGSF)	Met Standard?
CT Simulator/1	601	1,800	(1,199)	Yes
Standard Linear Accelerators/2 Rooms	2,536	2,400/4,800	(2,264)	Yes
Stereotactic Radiosurgery System/1	1,859	N/A	N/A	N/A
HDR Brachytherapy/1	432	N/A	N/A	N/A
Nurse Stations/2	403	N/A	N/A	N/A
Exam Rooms/6	716	N/A	N/A	N/A
Application, p. 106, Data replicated in Table Two				

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT TO BE IN CONFORMANCE WITH CRITERION SIZE OF PROJECT (77 IAC 1110.234(a))

B) Criterion 1110.234 (b) – Projected Utilization

The applicant shall document that, by the end of the second year of operation, the annual utilization of the clinical service areas or equipment shall meet or exceed the utilization standards specified in Appendix B.

The applicant supplied historical utilization data for years 2014 and 2015 as well as partial year data for 2016, and projected utilization for 2022 (application, p. 110). The applicant has established that the proposed cancer care facility will meet the projected utilization requirement, based on the number of units established. A positive finding results for this criterion.

TABLE FIVE Project Services Utilization Advocate Christ Medical Center Radiation Oncology Department in the Cancer Center						
	Historic Utilization 2014	Historic Utilization 2015	Projected Utilization 2022	Number Rooms/Units Proposed	State Board Standard	Met Standard?
CT Simulator	542	568	682	1	N/A	Yes
HDR Brachytherapy	273	159	190	1	N/A	Yes
Linear Accelerator	15,543*	15,349*	17,004*	2	7,500 Treatments/Year	Yes
SRS/SRT	223	1,832*	2,382*	1	N/A	Yes
*Utilization reflects a change in treatment times that the applicant claims are longer in duration since the initial development of State guidelines. Treatments indicated in 15-minute equivalents. (See application, p. 110)						

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT APPEARS TO BE IN CONFORMANCE WITH THE PROJECT UTILIZATION CRITERION (77 IAC 1110.234(b)).

C) Criterion 1110.234 (e) – Assurances

To determine compliance with this criterion the applicants must attest by the end of the second year of operation after the project completion, the applicant will meet or exceed the utilization standards specified in Appendix B.

The applicants have provided the required attestation at page 130 of the application for permit.

THE STATE BOARD STAFF FINDS THE PROJECT IN CONFORMANCE WITH CRITERION ASSURANCES (77 IAC 1110.234 (e))

X. 1110.3030 – Clinical Service Areas Other than Categories of Service

A) Criterion 1110.3030 (c) (1) – Deteriorated Facilities

B) Criterion 1110.3030 (c) (2) – Necessary Expansion

To demonstrate compliance with this criterion the applicants must document that (1) the clinical services other than categories of service are deteriorated and in need of modernization or (2) the proposed modernization of clinical services other than categories of service is necessary for needed expansion.

The applicants are proposing to expand and modernize the existing Radiation Oncology Department on the campus of Advocate Christ Medical Center (“ACMC”), Oak Lawn. The Radiation Oncology Department at ACMC is located in an undersized and outdated building. Through the years, additional space has been allocated to the Department, resulting in a unit that has poor work flow, inadequate patient privacy, and a continuing need for additional space. The services that are affected by the proposed project are:

1. Stereotactic Radiosurgery (SRS)/Stereotactic Radiation Therapy (SRT)
2. CT Simulator
3. HDR Brachytherapy
4. Standard Linear Accelerators

Because the project entails both expansion and modernization, both criteria were addressed.

1. Stereotactic Radiosurgery (SRS)/Stereotactic Radiation Therapy

SRS and SRT are the newest addition to the services offered at ACMC. They are performed on specially-equipped linear accelerators, and are often referred to by the brand names of Cyberknife or Gamma Knife. Currently, ACMC has one dedicated CyberKnife unit, which was purchased in 2006. The applicants note the CyberKnife device has a useful life of 7 to 10 years. The current maintenance cost for this particular unit is approximately \$325,000 per year, and replacement parts are becoming increasingly difficult to obtain. These are indicators that this

unit is reaching the end of its useful life. The applicants also cite an increase in the allotted time that is considered to be “equivalent treatment time” for the SRS/SRT treatments. This is acknowledged in Table Five and accounts for the applicant being compliant in terms of utilization.

2. CT Simulator

CT Simulators are used for the purpose of scanning the patient to determine the best treatment plan while utilizing other oncologic modalities. These simulators ensure the treatments utilized will ensure precise targeting of the treatment area, while missing surrounding critical structures. The applicants note the CT simulator unit will not be replaced or relocated. However, modernization of the clinical space housing the device will occur, due to the advanced age of the facility

3. HDR Brachytherapy

Like the CT Simulator, the HDR Brachytherapy device itself will not be replaced or relocated. However, modernization of the clinical space housing the device will occur, due to the advance age of the facility.

4. Standard Linear Accelerators

ACMC currently has two linear accelerators that are approaching the end of their useful lives, and the applicants note both will have surpassed their 7-year life expectancy, and will be approximately 11 years old at the time of project completion. The applicants cite increased costs for maintenance and increased downtime of the units. The applicants also cite decreased accuracy and clinical capabilities with the old models, fewer quality control features, and no opportunities for upgrades/enhancements. The applicants feel the only alternative to improve patient care would be the total replacement of the units as proposed. Table Five above illustrates historical utilization of these devices that project an increase in utilization that will meet and surpass the State standard upon project completion.

THE STATE BOARD STAFF FINDS THE PROJECT IN CONFORMANCE WITH CRITERION CLINICAL SERVICE AREAS OTHER THAN CATEGORIES OF SERVICE (77 IAC 1110.3030 (c) (1) (2))

XI. FINANCIAL VIABILITY

A) Criterion 1120.120 - Availability of Funds

B) Criterion 1120.130 - Financial Viability

To demonstrate compliance with these criteria the applicants must document that funds for the project are available, and the applicants are financially viable by evidence of an “A” or better bond rating.

The applicants are proposing to finance this project with cash and securities totaling \$17,431,768, and bond issues totaling \$29,534,497. The applicants also

provided proof of an Aa2 bond rating from Moody's Investor Service, dated August 28, 2015. The applicants also acknowledge having an AA Bond Rating, dated August 2015, from Fitch Ratings Service, as well as an AA Bond Rating from Standard & Poor's Ratings Service, dated August 2015. These ratings, including an Independent Auditor's Report, were included with application for permit #16-038, Advocate Sherman Ambulatory Surgery Center

The applicants provided audited financial statements as supplemental information, mailed on May 3, 2016. As can be seen from the Table below there is sufficient cash that has been designated for Capital Projects to fund this project.

TABLE SEVEN Advocate Health Care Network Audited Financial Statements 2013, 2014 and 2015 (Dollars in Thousands)			
	2015	2014	2013
Cash	\$203,792	\$272,912	\$563,229
Current Assets	\$1,248,543	\$1,322,268	\$1,524,917
Total Assets	\$9,643,175	\$9,534,180	\$9,049,946
Current Liabilities	\$1,441,184	\$1,439,058	\$1,380,596
LTD	\$1,539,372	\$1,458,375	\$1,452,109
Net Patient Service Revenue	\$4,884,611	\$4,786,197	\$4,468,468
Total Revenue	\$5,392,562	\$5,231,393	\$4,938,002
Expenses	\$5,062,027	\$4,900,793	\$4,637,807
Operating Income	\$330,535	\$330,600	\$300,195
Revenues in Excess of Expenses	\$78,605	\$369,607	\$765,320
Source: Supplemental Information submitted for #16-038 Advocate Sherman Ambulatory Surgery Center			

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IN CONFORMANCE WITH CRITERIA AVAILABILITY OF FUNDS AND FINANCIAL VIABILITY (77 IAC 1120.120, 77 IAC 1120.130)

XI. ECONOMIC FEASIBILITY

- A) Criterion 1120.140 (a) - Reasonableness of Financing Arrangements**
- B) Criterion 1120.140 (b) - Terms of Debt Financing**

The applicants supplied a certified letter from Kenneth W. Lukhard, President Advocate Christ Medical Center, attesting to the reasonableness of debt financing, and the terms of repayment.

Kenneth Lukhard, President, Advocate Christ Medical Center, Oak Lawn

"The purpose of this letter is to attest to the fact that the selected form of debt financing (bond issue) for the proposed Advocate Christ Medical Center Radiation Oncology Department Expansion and Modernization project will be the lowest net cost available. Generally the term of indebtedness is anticipated to be 30 years but not to exceed 40

years and the interest rate approximately 4.5 percent, but not to exceed 6.0 percent.”
[Source Application for Permit page 136]

The applicants have met the requirements of these criteria.

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IS IN CONFORMANCE WITH CRITERIA THE REASONABLENESS OF FINANCING ARRANGEMENTS AND TERMS OF DEBT FINANCING (77 IAC 1120.140(a) (b))

C) Criterion 1120.140 (c) - Reasonableness of Project Costs

The State Board staff applied the reported clinical costs against the applicable State Board standards.

Preplanning Costs are \$120,900 and are less than one percent (1%) of construction, modernization, contingencies, and movable equipment costs of \$21,985,453.

Site Survey/Soil Investigation/Site Prep – The State Standard for site survey, soil investigation and site preparation is 5% of the new construction and contingency costs. Proposed new construction costs and contingencies are \$2,984,394. (See page 137 of the application) The combined site survey, soil investigation and site preparation are \$303,400 or 10.18 percent of new construction and contingency costs. Site survey and soil investigation costs are \$53,000 or 1.78% of new construction and contingency. The site preparation costs are \$250,400 or 8.40% of new construction and contingency and account for the difference between the project cost and the State Standard. This appears **HIGH** compared to the State Standard.

According to the applicants *the project’s site preparation costs are high because the demolition of the existing building must be completed within extremely tight quarters as the proposed site is between the Emergency Department Entrance Ramp to the west, adjacent to and below the existing building overhang to the east, and abutting the patient drop/off entry for the Outpatient Pavilion to the south. Further, the project includes the demolition and complete removal of an existing Cyberknife treatment vault, which consists of a 4 foot thick concrete wall which does not fit into the standard models for demolition. Additionally, due to the adjacencies cited above, this work needs to be completed in such a manner that reduces noise and eliminates vibrational impacts to the adjacent hospital functions, including vibration sensitive, highly calibrated equipment.* (See pages 139 and 140 of the application)

Off Site Work – These costs total \$195,780. The State Board does not have a standard for these costs.

New Construction and Contingencies New construction and contingency costs for the project total \$2,984,394 (\$2,714,319 construction + \$270,075 contingency). Total cost per square foot is $(\$2,984,394 / 3,602 \text{ GSF}) = \828.54 per GSF. (See page 137 of the application.) This appears **HIGH** when compared to the State Board Standard of \$492.82 (2015 Means Oak Lawn = \$415 per GSF x 3 years of 3 percent inflation to 2018 mid-point of construction).

Reviewer Note: While the clinical construction and contingency cost exceeds the adjusted State Board Standard, the overall construction and contingency cost is consistent with previous projects of this complexity.

According to the applicants *“the State’s complexity coefficient for a treatment room in the Radiation Oncology Department is 2.1688 or a conversion factor that would result in a base rate more than twice the standard for average space or \$1,068.83 (\$492.82 x 2.1688). This high coefficient factor reflects the implications of the very tight construction quarters noted in Site Survey/Soil Investigation/Site Prep above. These constraints create premiums associated with reduced flow to/from the project site, premiums for steel erection, and building envelope installations that generally require a large space for erection.”*

Reviewer Note: The State Board’s complexity index was eliminated September 27, 2016 with changes to Part 1120 Appendix A approved by the Joint Commission on Administrative Rules (JCAR).

“Further, the project must be completed in multiple phases requiring extensive interim life safety measures in order to perform construction activities without interrupting the operations of the occupied Emergency Department/Trauma Center as well as protecting hospital staff and patients. Due to the project phasing, multiple mobilization and demobilization of the project team will be required. Because the project will require multiple phases to be completed within the occupied department and adjacent to occupied treatment areas, these areas will require multiple set-ups and removals of infection control measures which are beyond typical construction procedures.

With a portion of this project being completed within the existing hospital, there are numerous utility mains that are routed through the areas of renovation that serve adjacent modalities that will need to remain uninterrupted. As a result of the new piping and ductwork, routing temporary duct work and piping will need to be installed to facilitate the installation of the new work without affecting the adjacent hospital areas; this is another example of effort that is beyond typical construction procedures.

Finally, the strategic and measure use of off-hours lab or will be required to perform shut downs and complete certain demolition activities. In addition, afterhours access to existing hospital modalities, not scheduled for modernization, will be required from time to time.

The applicants’ cost per square foot is in compliance with a base rate adjusted for inflation and the complexity index.” (See pages 139 and 140 of the application.)

Modernization and Contingencies – Modernization and contingency costs total \$3,732,294 (\$3,246,885 modernization + \$485,409 contingency). Total cost per square foot is \$533.72 (\$3,732,294/6,993 GSF). (See page 137 of the application.) This appears **HIGH** when compared to 70 percent of adjusted new construction cost, of \$453.38 or (\$492.82 X 70% = \$344.97).

Reviewer Note: While the modernization and contingency cost exceeds the adjusted Board standard (\$453.38), the overall modernization and contingency cost is consistent with projects of this complexity.

According to the applicants, *“the State’s complexity coefficient for radiation oncology space other than the treatment vaults is 1.2959 or a conversion that would result in a base rate approximately 30% higher than the standard for average space or \$691.64 (\$453.38*

x1.2959). *Seventy percent (70 %) of the complexity adjusted modernization amount would be \$484.15. This high coefficient factor reflects the same factors described in Clinical Construction and Contingencies.”*

Reviewer Note: The State Board’s complexity index was eliminated September 27, 2016 with changes to Part 1120 Appendix A approved by the Joint Commission on Administrative Rules (JCAR).

Contingencies/New Construction – These costs are \$270,075 and are 9.95% of new construction cost ($270,075/\$2,714,319 = 9.95\%$). This appears reasonable when compared to the State Board Standard of 10.0 percent. (See page 137 of the application.)

Contingencies/Modernization – These costs are \$485,409 and are 14.95% of modernization costs ($\$485,409/\$3,245,886 = 14.95\%$). This appears reasonable when compared to the State Board Standard of 15 percent. (See page 137 of the Application)

Architectural and Engineering Fees/New Construction – These costs total \$241,326 and are 7.8% of new construction and contingencies. These costs appear reasonable when compared to the State Board Standard of 6.42% - 9.64%.

Architectural and Engineering Fees/Modernization – These costs total \$289,061 and are 7.9% of modernization and contingencies. These costs appear reasonable when compared to the State Board Standard of 6.54% - 9.82%.

Consulting and Other Fees – These costs are \$675,900. The State Board does not have a standard for these costs.

Movable Equipment – These costs total \$15,241,765. The State Board does not have a standard for these costs.

Net Interest Expense During Construction – These costs total \$295,296. The State Board does not have a standard for these costs.

Bond Issuance Expense – These costs total \$84,772. The State Board does not have a standard for these costs.

Other Costs to be Capitalized – These costs total \$1,075,950. The State Board does not have a standard for these costs.

The applicants have exceeded the State standard for Site Survey/Soil Investigation/Site Prep, New Construction and Contingencies, and Modernization and Contingencies. Based on the above calculations the applicants have not met the requirements of this criterion.

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT DOES NOT APPEAR TO BE IN CONFORMANCE WITH THE

REASONABLENESS OF PROJECT COSTS CRITERION (77 IAC 1120.140 (c)).

D) Criterion 1120.140 (d) - Projected Operating Costs

The applicants provided the necessary information as required. The projected operating cost per patient day is \$3,399.99. The State Board does not have a standard for these costs. [Application for Permit page 141]

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IN CONFORMANCE WITH CRITERION PROJECTED OPERATING COSTS (77 IAC 1120.140 (d))

E) Criterion 1120.140 (e) – Total Effect of Project on Capital Costs

The applicants provided the necessary information as required. The projected capital cost per procedure is \$231.53 per unit of service. The State Board does not have a standard for these costs. [Application for Permit page 142]

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IN CONFORMANCE WITH CRITERION TOTAL EFFECT OF THE PROJECT ON CAPITAL COSTS (77 IAC 1120.140 (e))

The map displays the Chicago metropolitan area, including suburbs like Naperville, Joliet, and Evanston. Major highways such as I-55, I-57, and I-90 are shown. A callout box identifies the location of Advocate Christ Medical Center at 4440 W 95th St, Oak Lawn, IL 60453. The map also shows Lake Michigan to the east and Lake Calumet to the south.

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Ownership, Management and General Information			Patients by Race		Patients by Ethnicity	
ADMINISTRATOR NAME:	Kenneth Lukhard		White	52.6%	Hispanic or Latino:	11.5%
ADMINSTRATOR PHONE	708-684-5010		Black	35.7%	Not Hispanic or Latino:	82.4%
OWNERSHIP:	Advocate Health and Hospital Corporation		American Indian	0.6%	Unknown:	6.1%
OPERATOR:	Advocate Health and Hospital Corporation		Asian	0.8%		
MANAGEMENT:	Church-Related		Hawaiian/ Pacific	0.0%	IDPH Number:	0315
CERTIFICATION:	(Not Answered)		Unknown	10.2%	HPA	A-04
FACILITY DESIGNATION:	General Hospital				HSA	7
ADDRESS	4440 West 95th Street	CITY: Oak lawn	COUNTY:	Suburban Cook County		

<u>Facility Utilization Data by Category of Service</u>										
<u>Clinical Service</u>	Authorized CON Beds 12/31/2015	Peak Beds Setup and Staffed	Peak Census	Admissions	Inpatient Days	Observation Days	Average Length of Stay	Average Daily Census	CON Occupancy Rate %	Staffed Bed Occupancy Rate %
Medical/Surgical	394	373	373	23,669	118,598	980	5.1	327.6	83.1	87.8
0-14 Years				0	0					
15-44 Years				3,980	17,482					
45-64 Years				7,734	39,850					
65-74 Years				4,930	27,510					
75 Years +				7,025	33,756					
Pediatric	45	45	45	3,690	12,213	1,235	3.6	36.8	81.9	81.9
Intensive Care	153	103	103	6,481	33,808	24	5.2	92.7	60.6	90.0
Direct Admission				5,019	26,182					
Transfers				1,462	7,626					
Obstetric/Gynecology	56	39	39	4,596	12,575	256	2.8	35.2	62.8	90.1
Maternity				4,129	11,346					
Clean Gynecology				467	1,229					
Neonatal	64	37	37	1,183	10,091	0	8.5	27.6	43.2	74.7
Long Term Care	0	0	0	0	0	0	0.0	0.0	0.0	0.0
Swing Beds			0	0	0		0.0	0.0		
Acute Mental Illness	39	35	35	1,466	10,475	0	7.1	28.7	73.6	82.0
Rehabilitation	37	37	37	894	12,304	0	13.8	33.7	91.1	91.1
Long-Term Acute Care	0	0	0	0	0	0	0.0	0.0	0.0	0.0
Dedicated Observation	34					4346				
Facility Utilization	788			40,517	210,064	6,841	5.4	594.3	75.4	

(Includes ICU Direct Admissions Only)

<u>Inpatients and Outpatients Served by Payor Source</u>							
	Medicare	Medicaid	Other Public	Private Insurance	Private Pay	Charity Care	Totals
Inpatients	39.9%	24.5%	0.0%	34.6%	0.0%	1.0%	
	16154	9932	0	14020	0	411	40,517
Outpatients	25.5%	29.2%	0.0%	42.7%	1.0%	1.7%	
	87574	100187	0	146521	3336	5718	343,336

<u>Financial Year Reported:</u>	1/1/2015 to	12/31/2015	<u>Inpatient and Outpatient Net Revenue by Payor Source</u>					Charity Care Expense	Total Charity Care Expense
	Medicare	Medicaid	Other Public	Private Insurance	Private Pay	Totals			
Inpatient Revenue (\$)	37.7%	17.5%	0.0%	43.7%	1.1%	100.0%			13,522,000
	259,694,105	120,316,095	0	301,239,385	7,635,466	688,885,051	9,241,000		
Outpatient Revenue (\$)	24.8%	7.8%	0.0%	65.0%	2.3%	100.0%			Total Charity Care as % of Net Revenue
	67,622,159	21,175,154	0	177,022,640	6,393,997	272,213,950	4,281,000		1.4%

<u>Birthing Data</u>			<u>Newborn Nursery Utilization</u>			<u>Organ Transplantation</u>	
Number of Total Births:	3,859		Level I	Level II	Level II+	Kidney:	10
Number of Live Births:	3,830		Beds	44	0	Heart:	16
Birthing Rooms:	0		Patient Days	7,349	0	Lung:	6
Labor Rooms:	0		Total Newborn Patient Days			Heart/Lung:	0
Delivery Rooms:	0					Pancreas:	0
Labor-Delivery-Recovery Rooms:	15					Liver:	0
Labor-Delivery-Recovery-Postpartum Rooms:	0		<u>Laboratory Studies</u>			Total:	32
C-Section Rooms:	3		Inpatient Studies		1,279,939		
CSections Performed:	1,425		Outpatient Studies		474,942		
			Studies Performed Under Contract		0		

Surgery and Operating Room Utilization

Surgical Specialty	Operating Rooms				Surgical Cases		Surgical Hours			Hours per Case	
	Inpatient	Outpatient	Combined	Total	Inpatient	Outpatient	Inpatient	Outpatient	Total Hours	Inpatient	Outpatient
Cardiovascular	0	0	5	5	2295	445	10602	8093	18695	4.6	18.2
Dermatology	0	0	0	0	0	0	0	0	0	0.0	0.0
General	0	10	6	16	2753	2559	7979	4977	12956	2.9	1.9
Gastroenterology	0	0	0	0	0	0	0	0	0	0.0	0.0
Neurology	0	0	1	1	1115	104	4946	234	5180	4.4	2.3
OB/Gynecology	0	0	2	2	552	1380	1844	2914	4758	3.3	2.1
Oral/Maxillofacial	0	0	0	0	32	62	98	197	295	3.1	3.2
Ophthalmology	0	2	1	3	39	1554	94	2506	2600	2.4	1.6
Orthopedic	0	0	5	5	2996	2631	9343	5585	14928	3.1	2.1
Otolaryngology	0	0	1	1	353	1265	783	2059	2842	2.2	1.6
Plastic Surgery	0	0	2	2	514	1304	1371	2505	3876	2.7	1.9
Podiatry	0	0	0	0	167	338	365	778	1143	2.2	2.3
Thoracic	0	0	2	2	462	280	1328	552	1880	2.9	2.0
Urology	0	0	2	2	454	1101	1137	2139	3276	2.5	1.9
Totals	0	12	27	39	11732	13023	39890	32539	72429	3.4	2.5

SURGICAL RECOVERY STATIONS

Stage 1 Recovery Stations

30

Stage 2 Recovery Stations

80

Dedicated and Non-Dedicated Procedure Room Utilization

Procedure Type	Procedure Rooms				Surgical Cases		Surgical Hours			Hours per Case	
	Inpatient	Outpatient	Combined	Total	Inpatient	Outpatient	Inpatient	Outpatient	Total Hours	Inpatient	Outpatient
Gastrointestinal	3	7	0	10	3704	8456	4339	7680	12019	1.2	0.9
Laser Eye Procedures	0	0	0	0	0	0	0	0	0	0.0	0.0
Pain Management	0	0	0	0	0	0	0	0	0	0.0	0.0
Cystoscopy	0	0	0	0	0	0	0	0	0	0.0	0.0
<u>Multipurpose Non-Dedicated Rooms</u>											
	0	0	0	0	0	0	0	0	0	0.0	0.0
	0	0	0	0	0	0	0	0	0	0.0	0.0
	0	0	0	0	0	0	0	0	0	0.0	0.0

Emergency/Trauma Care

Certified Trauma Center	Yes
Level of Trauma Service	Level 1
Operating Rooms Dedicated for Trauma Care	1
Number of Trauma Visits:	4,138
Patients Admitted from Trauma	2,435
Emergency Service Type:	Comprehensive
Number of Emergency Room Stations	53
Persons Treated by Emergency Services:	98,143
Patients Admitted from Emergency:	20,352
Total ED Visits (Emergency+Trauma):	102,281

Free-Standing Emergency Center

Beds in Free-Standing Centers	0
Patient Visits in Free-Standing Centers	0
Hospital Admissions from Free-Standing Center	0

Outpatient Service Data

Total Outpatient Visits	343,336
Outpatient Visits at the Hospital/ Campus:	314,643
Outpatient Visits Offsite/off campus	28,693

Cardiac Catheterization Labs

Total Cath Labs (Dedicated+Nondedicated labs):	6
Cath Labs used for Angiography procedures	0
Dedicated Diagnostic Catheterization Lab	0
Dedicated Interventional Catheterization Labs	0
Dedicated EP Catheterization Labs	2

Cardiac Catheterization Utilization

Total Cardiac Cath Procedures:	5,980
Diagnostic Catheterizations (0-14)	128
Diagnostic Catheterizations (15+)	3,445
Interventional Catheterizations (0-14):	214
Interventional Catheterization (15+)	1,088
EP Catheterizations (15+)	1,105

Cardiac Surgery Data

Total Cardiac Surgery Cases:	1,635
Pediatric (0 - 14 Years):	293
Adult (15 Years and Older):	1,342
Coronary Artery Bypass Grafts (CABGs) performed of total Cardiac Cases :	436

Diagnostic/Interventional Equipment**Examinations****Therapeutic Equipment****Therapies/ Treatments**

	Owned Contract		Inpatient	Outpt	Contract		Owned Contract		
General Radiography/Fluoroscopy	15	0	94,353	60,341	0	Lithotripsy	0	1	99
Nuclear Medicine	6	0	3,208	3,856	0	Linear Accelerator	2	0	9,944
Mammography	5	0	15	20,934	0	Image Guided Rad Therapy			3,562
Ultrasound	14	0	16,499	21,862	0	Intensity Modulated Rad Thrp			3,019
Angiography	2	0				High Dose Brachytherapy	1	0	159
Diagnostic Angiography			8,079	5,013	0	Proton Beam Therapy	0	0	0
Interventional Angiography			1,778	619	0	Gamma Knife	0	0	0
Positron Emission Tomography (PET)	1	0	0	1,013	0	Cyber knife	1	0	238
Computerized Axial Tomography (CAT)	8	0	27,768	25,634	0				
Magnetic Resonance Imaging	7	0	6,633	8,892	0				