Supplementary Listing Record

NRIS Reference Number: SG100002335 Date Listed:

Property Name: St. Luke's Hospital Historic District

County: St. Louis State: MO

This Property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation

Barbara Wyatt 4-20-18

Signature of the Keeper Date of Action

==========

Amended Items in Nomination:
Section 1, Name of Property should be changed to St. Luke's Hospital

Section 5 should be modified to classify this property as one building, instead of a district. Various wings of the building contribute to its mid-century design and reflect the hospital's major post-war building campaign. Components of the building that do not contribute to the mid-century design or building campaign are the Outpatient Clinic (1968-69), the two front additions on the main building (1968), and the Emergency Room (1990). Some earlier components were incorporated into the overall complex in the building campaign, mainly the West Wing Extension (1913) and the Boiler House (1929).

The count in **Section 5** should be 1 building, with the rest eliminated.

The MISSOURI SHPO was notified of this amendment.

DISTRIBUTION:
National Register property file
Nominating Authority (without nomination attachment)

NPS Form 10-900 OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property

Historic name St. Luke's Hospital Historic District
Other names/site number Charter Hospital, St. Louis Regional Hospital, ConnectCare
Name of related Multiple Property Listing n/a

2. Location

Street & number 5535 Delmar Boulevard | n/a | not for publication
City or town St. Louis | n/a | vicinity
State Missouri Code MO County St. Louis [Independent City] Code 510 Zip code 63112

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this _x_ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property _x_ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ national ___ statewide _x_ local

Applicable National Register Criteria: ___ A ___ B _x_ C ___ D

Signature of certifying official/Title — Date 2/26/18

Missouri Department of Natural Resources
State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official — Date

Title — State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

_____ entered in the National Register
_____ determined eligible for the National Register
_____ determined not eligible for the National Register
_____ removed from the National Register
_____ other (explain:) _____

Signature of the Keeper — Date of Action

5. Classification

Ownership of Property
(Check as many boxes as apply.)

	private
x	public - Local
	public - State
	public - Federal

Category of Property
(Check only **one** box.)

	building(s)
x	district
	site
	structure
	object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
5	1	buildings
		sites
1	1	structures
		objects
6	2	**Total**

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions.)

HEALTH CARE: hospital

Current Functions
(Enter categories from instructions.)

vacant

7. Description

Architectural Classification
(Enter categories from instructions.)

MODERN MOVEMENT

Materials
(Enter categories from instructions.)

foundation: CONCRETE
STONE
walls: CONCRETE
BRICK
roof:
other:

X **NARRATIVE DESCRIPTION ON CONTINUTATION PAGES**

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [ ] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [x] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

[x] **STATEMENT OF SIGNIFICANCE ON CONTINUTATION PAGES**

Areas of Significance

Architecture

Period of Significance

1951-1965

Significant Dates

n/a

Significant Person

(Complete only if Criterion B is marked above.)

n/a

Cultural Affiliation

n/a

Architect/Builder

Wischmeyer, Kenneth E.
LaBeaume & Klein
LaBeaume & Unland
Link, Theodore C.

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

Previous documentation on file (NPS):

- [x] preliminary determination of individual listing (36 CFR 67 has been requested)
- [ ] previously listed in the National Register
- [ ] previously determined eligible by the National Register
- [ ] designated a National Historic Landmark
- [ ] recorded by Historic American Buildings Survey #_____
- [ ] recorded by Historic American Engineering Record # _____
- [ ] recorded by Historic American Landscape Survey # _____

Primary location of additional data:

- [x] State Historic Preservation Office
- [ ] Other State agency
- [ ] Federal agency
- [ ] Local government
- [ ] University
- [ ] Other

Name of repository: _____

Historic Resources Survey Number (if assigned): n/a

10. Geographical Data

Acreage of Property 6.6

Latitude/Longitude Coordinates
Datum if other than WGS84: _____
(enter coordinates to 6 decimal places)

1	38.654202 (Latitude:)	-90.280576 (Longitude:)	3	_____ (Latitude:)	_____ (Longitude:)
2	_____ (Latitude:)	_____ (Longitude:)	4	_____ (Latitude:)	_____ (Longitude:)

UTM References
(Place additional UTM references on a continuation sheet.)
_____ NAD 1927 or _____ NAD 1983

1	Zone	Easting	Northing	3	Zone	Easting	Northing
2	Zone	Easting	Northing	4	Zone	Easting	Northing

Verbal Boundary Description (On continuation sheet)

Boundary Justification (On continuation sheet)

11. Form Prepared By

name/title Lynn Josse and Michael Allen
organization Preservation Research Office
date December 18, 2017
street & number 3517 Connecticut St.
telephone (314) 920-5680
city or town St. Louis
state MO
zip code 63118
e-mail michael@preservationresearch.com

Additional Documentation

Submit the following items with the completed form:

- **Maps:**
  - A **USGS map** (7.5 or 15 minute series) indicating the property's location.
  - A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Continuation Sheets**
- **Photographs**
- **Owner Name and Contact Information**
- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log:

Name of Property: **St. Luke's Hospital Historic District**

City or Vicinity: **St. Louis**

County: **St. Louis [Independent City]** State: **Missouri**

Photographer: **Lynn Josse and Elyse McBride**

Date Photographed: **January 2017 and March 2017**

Description of Photograph(s) and number, include description of view indicating direction of camera:

Building numbers refer to Figure 1 (page 7.2)

1 of 17
Fowler Wing of main building (1A on Figure 1)
Camera facing NW
Lynn Josse
January 2017

2 of 17
Fowler Wing (1A, left), Original Hospital (1B), and Medical Office Building (2)
Camera facing NW
Lynn Josse
March 2017

3 of 17
Fowler Wing (1A, left), Medical Office Building (2)
Camera facing N
Lynn Josse
January 2017

4 of 17
Medical Office Building (2, left), Outpatient Clinic Building (6)
Camera facing SW
Lynn Josse
January 2017

5 of 17
Outpatient Clinic Building (6, center), Medical Office Building (2, left)
Camera facing W
Elyse McBride
March 2017

6 of 17
Outpatient Clinic Building (6, left), North Wing (1D)
Camera facing SW
Lynn Josse
March 2017

7 of 17
1913 addition (1C)
Camera facing SW
Elyse McBride
March 2017

8 of 17
1913 addition (1C, left), Service Building (5A), Nurses' Home (5B, background), Boiler House (3)
Camera facing SW
Elyse McBride
March 2017

9 of 17
Service Building (5A, right), 1913 Wing (1C), North Wing (1D)
Camera facing SE
Lynn Josse
March 2017

10 of 17
Service Building (5A, left), Boiler House (3), Nurses' Academic Building (4)
Camera facing SW
Lynn Josse
January 2017

11 of 17
Nurses' Academic Building (4)
Camera facing SW
Elyse McBride
March 2017

12 of 17
Nurses' Academic Building (4)
Camera facing SE
Lynn Josse
March 2017

13 of 17
Nurses' Academic Building (4)
Camera facing NE
Lynn Josse
January 2017

14 of 17
Nurses' Academic Building (4, left), Nurses' Home (5B)
Camera facing NE
Elyse McBride
March 2017

15 of 17
Nurses' Home (5B)
Camera facing NE
Elyse McBride
March 2017

16 of 17
Emergency Room addition (1E, lower left), Fowler Wing (1A)
Camera facing NE
Lynn Josse
January 2017

17 of 17
West courtyard (1B)
Camera facing S to Fowler Wing addition
Lynn Josse
March 2017

Figure Log:

Include figures on continuation pages at the end of the nomination.

Summary

St. Luke's Hospital Historic District is a complex of five contributing buildings and one non-contributing building. It is located in the west-central section of St. Louis, Missouri at 5535 Delmar Boulevard. The original section of the hospital opened in 1904 on a large site with plenty of room to expand. That original building is still the heart of complex, which includes additional wings and buildings that expanded the capacity and services of the hospital between 1913 and 1990. The period of significance, 1951-1965, includes the construction of major buildings and additions[1] which exemplify best practices in postwar hospital planning and design. With the exception of the single-story Service Building (1951), which laid the foundation for future expansion through the construction of a new kitchen and shop facilities at the rear of complex, these sections of the district are its most visible units. They unify the exterior of the hospital district through elements of Modern design, blond brick, and flat roofs. The buildings range between one and eight stories.

The most prominent section of the hospital is the Fowler Wing, which is located at the south end of the district facing Delmar Boulevard. The first five stories of the Fowler Wing were added across the front of the original complex in 1954 to serve as the hospital's new façade. The top three stories were added in 1961. Subsequent additions to the hospital, both during and after the period of significance, almost completely enveloped the original building. Three of the new additions and buildings that were constructed between 1959 – 1964 use the same device of placing the blond brick exterior wall bays between full-height vertical concrete ribs (these are labeled as #2, 1D, and 5B on Figure 1). At the far west end of the complex, the two-story Nurses' Academic Building (#4 on Figure 1) was also constructed during the period of significance but, at two stories, it does not use the vertical rib devices. Later additions to the district, all constructed after the period of significance, continue the use of blond brick but are distinguishable because they are a single story each (#6 and 1E).

Building interiors throughout the district are intact and in good condition. Many interior plans reflect the distinguishing characteristics of postwar hospital design. Patient floors feature double-loaded corridors and racetrack plans. In general the interiors devote more space to medical services and relatively less space to patient rooms.

In addition to the six buildings, there is one contributing parking lot and one noncontributing parking lot, as well as a noncontributing grassy lot.

[1] On Figure 1, these are noted as 1A (Fowler Wing, 1954/1961); 2 (Medical Office Building, 1963-1964), 1D (North Wing, 1962-1964), 4 (Nurses' Academic Building, 1959-1960), 5A Service Building (1951), and 5B (Nurses' Home, 1959-1960).

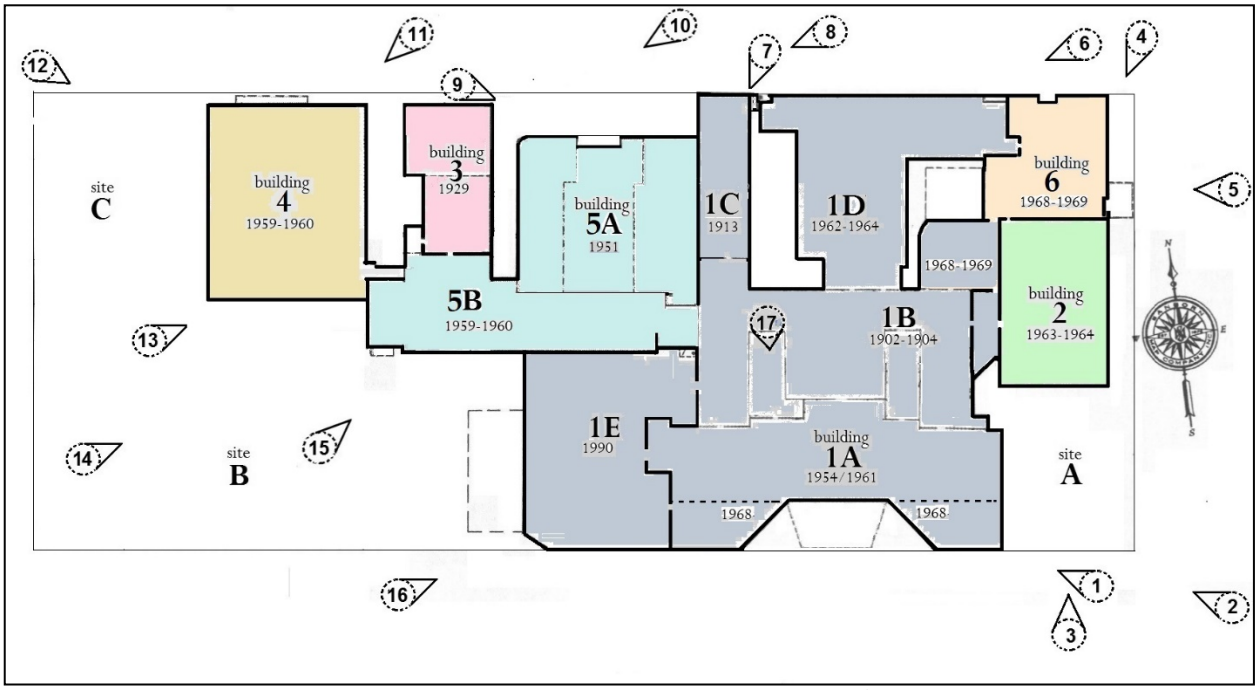

Figure 1: Building and photo key. Source: Sanborn map 1998/Lynn Josse.

Building 1 (Contributing):

1A: Fowler Wing, 1954/1961 (with 1968 1-story additions)
1B: Original Hospital, 1902-1904
1C: West Wing Extension, 1913
1D: North Wing, 1962-1964
1E: Emergency Room, 1990

Building 2: Medical Office Building, 1963-1964 (Contributing)
Building 3: Boiler House, 1929 (Contributing)
Building 4: Nurses' Academic Building, 1959-1960 (Contributing)
Building 5 (Contributing):

5A: Service Building, 1951
5B: Nurses' Home, 1959-60

Building 6: Outpatient Clinic, 1968-1969 (Noncontributing)

(All decisions regarding which sections are counted as separate buildings and which are additions are based on NPS determination, 2017. [2])

Structure A: Southeast surface parking lot (Contributing)
Structure B: Southwest surface parking lot (NC)
Site C: Grassy lot (NC)

[2] "Comments Sheet: Historic Preservation Certification Application, St. Luke's Hospital." Signed by Alexis Abernathy, July 27, 2017.

Location and Setting

St. Luke's Hospital Historic District is located on the north side of Delmar Boulevard approximately 5.6 miles west-northwest of the downtown St. Louis riverfront. This location is considered the northern edge of the city's east-west central corridor. The site is bounded by Delmar Boulevard on the south, Belt Avenue on the east, Enright Avenue on the north, and Clara Avenue on the west (see Figures 42 and 44).

The immediate area is characterized by historic multi-family buildings. Across Delmar Boulevard to the south is a series of courtyard apartment buildings and walkups (of at least 6 units). There is also a mid-century high rise on the south side of Delmar Boulevard. To the east is the three-story Harlan Court apartment complex, c. 1916, which has two parallel wings stretching from Delmar to Enright. To the west, nine deep walkup apartment buildings (eight with 24 units and one of 18 units) line both sides of Enright. On Delmar to the west is a large parking lot which serves a modern apartment building.

The complex includes two asphalt-paved parking lots and one grassy site. The parking lots are located at the southeast and southwest corners of the site, and the grassy lot is at the northwest. These are described separately below.

A Note on Windows

Most windows throughout the complex date to the period of significance (1951-1965), meaning they are original to some buildings and midcentury replacements in others. Many of the windows are double-glazed, with interior and exterior sashes that differ in composition. In most exterior descriptions, only the exterior windows are described.

Building 1
Main Hospital
1902-1990
Contributing

The main hospital building was constructed in stages, growing over time to accommodate the needs of an expanding institution. The original hospital (labeled 1B on Figure 1), completed in 1904, was expanded with a northwest wing in 1913 (1C). The attached front pavilion of the hospital (the Fowler Wing, 1A) was begun in 1954 and expanded in 1961. The North Wing was added between 1962 and 1964 (1D). Finally, in 1990, the emergency room was expanded to the west of the Fowler Wing (block1E).

Due to the complexity of the building, each section will be described separately.

1A: Fowler Memorial Wing
1954, 1961, 1968
Architect: LaBeaume and Unland / Wischmeyer & Lorenz (first five stories in 1954); Kenneth E. Wischmeyer (upper three stories in 1961)
Photos 1, 2, 3, 16

The Fowler Wing of the main building is the most visible section of the hospital. Constructed beginning in 1954,[3] this new front wing was originally designed to accommodate additional stories when funding permitted. The first five stories were completed and opened in 1955. The top three floors were added beginning in 1961.

The wing has eight stories, 25 façade bays, and is two bays deep (Photo 1). The exterior is clad with blond brick. The top two stories are set apart with a limestone string course. All windows are aluminum sash, with double hung windows over a pair of horizontal windows. The second through sixth stories have a completely uniform brick texture, with the exception of small horizontal ventilation slits under some windows at the fifth and sixth stories. There is a subtle change in the brick between the fifth and sixth stories (apparently a change in the depth of the mortar joints), indicating the break between the original five-story building and the added three stories (Figure 30, page 48). At the seventh and eighth stories, windows are vertically connected by a metal spandrel panel, and separated by two-story limestone panels. Above a limestone frieze, there is an inconspicuous limestone cornice.

Set back at the left (west) elevation is an elevator tower of the same materials as the rest of the wing (Photo 16). The tower was added during the 1960s. It is one bay wide, with paired windows (matching those at the rest of the façade) at each story. The cornice detailing from the main body of the building extends as a belt course around the tower, separating the bottom eight stories from the ninth.

The main entrance of the hospital is centered at the façade (Photo 1). It remains intact, with an aluminum-framed wall of glass surrounding the transomed entrance bay. Here, there is a sliding glass door next to a hinged glass door. The concrete canopy over the drive in front is original to the building.

To either side of the entrance, projecting single-story additions (1968) mirror each other at the left and right (Photo 1). These have a trapezoidal footprint which funnels visitors to the doors. The additions' walls are clad in concrete panels over a granite-clad foundation. Each has seven fixed-pane windows at the Delmar Boulevard sidewalk; the window frames are aluminum and the windows themselves are boarded from the inside. At all three elevations, there is a shallow projecting concrete canopy over the sidewalks. Constructed beginning in 1968, after the period of significance, these additions do not contribute to the significance of the hospital complex.

The Fowler Wing was designed to stretch across the front of the original complex, connecting the three arms of its "E" shape. Because the center arm of the 1904 building is set back farther than the other two, the Fowler Wing has a rear projection that extends north to meet the front of the center arm (see Figure 1). This section is all brick, but to either side of it (at the north elevation only), the three upper stories are clad in enameled panels (a similar color to the brick).

[3] This and subsequent permit dates were obtained from City of St. Louis Building Permits, located on microfilm in St. Louis City Hall, Comptroller's Office, Room 1.

1B: Original St. Luke's Hospital
1902-1904
Architect: Theodore C. Link
Photos 2, 14, 17

Additions radiate in every direction from the original building, still the heart of the St. Luke's complex. The spine of the E-shaped footprint is to the north, and the wings stretch south toward Delmar Boulevard. The original hospital is visible from multiple vantages around and within the complex.

Above a raised limestone basement, the exterior of this three-story building is brick (Photo 2). Those walls that are visible from the perimeter of the complex are painted buff to match later additions; the original brick color is still visible at the interior courtyards between the arms of the "E" (Photo 17). The first floor serves as a base for the composition, with recessed courses of brick imitating rustication. A course of buff terra cotta separates the first story from the upper two. A smaller terra cotta course serves as a sill course for the second story windows. The second story windows have a flared limestone lintel with a center limestone keystone. The third story windows are shorter than those below; they have similar lintels but these are terra cotta instead of limestone. Their sills are also terra cotta. A buff terra cotta cornice crowns the third story.

None of the original windows in the 1904 building are extant; most appear to have been replaced in the 1950s. The first story windows are tall fixed-pane aluminum units with transoms. The second story windows are the same as those on the front of the Fowler Wing. At the third story, 1/1 windows appear to be later replacements in dark aluminum.

In the two center courtyards (Photo 17), detailing of the east and west wings is similar. The unpainted brick is brown at the first story and a lighter variegated brown above. Both courtyards have later infill (a single story at the raised basement level) constructed during the period of significance. At the south end of the east courtyard, this infill extends up past the sill course of the first story windows, resulting in these openings being shortened. In addition, the upper part of those openings has been filled in with blond brick. Some of the other windows on all three stories have been bricked in with a variegated light orange brick which is consistent with the 1951 Service Building at the north end of the complex (Building 5A).

The center arm of the "E" shape, originally the central pavilion of the hospital, has different detailing than the outer wings (Photo 17). At the first story the window openings have brick frames, and the terra cotta above them projects, with descending dentils, to create an entablature. At the second story, the windows are set back in round-arched recesses with stone sills and keystones. Smaller 1/1 windows are within these openings, surrounded by the same variegated brown brick that makes up the walls. (This detailing is consistent with the fenestration at the second story of the original front of this pavilion; see the center bay of the hospital building, left side of Figure 24). The third story windows are identical to those on the opposite wall. This arm has some infilled windows.

On the roof of the original building is a single-story brick structure known as the "rabbit hutch" (said to have been the home of rabbits used in early pregnancy tests). Its south elevation has double pilasters supporting a terra cotta cornice. A centered round-arched window (which retains the gothic pane pattern

in its wood upper sash) has bricked-in roundels to either side. Similar windows are at the east and west elevations, and the door is to the north.

A three-story brick connector which runs east from the rear of the east elevation is also included as part of this building (only partially visible in photos 2, 3). It appears to be the only section left from LaBeaume & Klein's 1917 Nurses' Home addition, which was demolished to make way for the later Medical Office Building (Building 2, below). This brick connector is only three bays wide and is painted to match the adjacent wall of the original hospital. The original raised basement is hidden behind a triangular-plan section which is architecturally consistent with the 1950s and 1960s work. The first story windows have limestone lintels with flared ends and keystones; the center opening is bricked up. At the second story the two windows are 1950s/1960s aluminum replacements with a fixed pane over a hopper window; four courses of brick are infilled between the stone sills and the window units. At the center bay between the two windows is a raised brick panel which appears original. Above the second story there is a terra cotta course. At the third story the windows at the left and right bays are 1/1 replacements on brick sills and with brick lintels. The center opening is infilled with brick.

A single-story utility area at the rear of the original hospital was added in 1967-1968. The east side of this section is connected to the Medical Office Building, and at the east end of the north elevation there is an opening into the Outpatient Clinic. The exterior of this addition is visible from the garage under the North Wing. Double doors facing north are boarded, and the rest of this elevation is blind.

Although constructed prior to the period of significance, this building was an important part of the major improvement program of the 1950s and 1960s. For this reason, it is considered contributing.

1C: West Wing Extension
1913
Architect: LaBeaume & Klein
Photos 7, 8, 9

This 1913 addition to the original 1904 building extends the west wing north towards Enright Avenue (Photo 7). It has a rectangular footprint and is clad with brown brick above the basement. At its connection to the original building, the southernmost bay is four full stories (Photo 9), with brick quoins defining the edges. At the east elevation, there is a single 1/1 window at the top story, a pair at the third, and two separate 1/1s at the second story. At the west elevation, fenestration at the 4-story section (partially visible in Photo 9) consists of single 1/1 windows at each story.

The remainder of the wing was shortened in 1965 as part of the hospital's modernization program. The top stories were removed, leaving a single story over a full-height raised basement. The lower stories were remodeled at that time. At the east elevation, the first story extends back toward Enright Avenue with 1/1 windows over 2-pane horizontal windows. Over the window level is a raised panel of soldier bricks. The roofline is capped with a limestone course. The whole wing is set on a full-height raised basement of rough ashlar limestone.

At the west elevation (Photo 9), the windows at the one-story section are consistent with those at the east elevation, except for the last two bays, which have blind recessed arches. At the north end, facing Enright Avenue, four more recessed round-arched openings face Enright Avenue. The right three retain 1/1

windows (midcentury replacements), and the left arch has been expanded to accommodate an 8/8 metal sash window under an arched louver. At the left section, the wall is infilled with variegated orange brick which matches the next building to the west. All of the corners are defined by brick quoins. At this corner, the quoins set against the orange brick background are blond brick.

At all visible elevations, the ground-level (raised basement) openings are boarded.

1D: North Wing
1962-1964
Architect: Kenneth E. Wischmeyer and Associates
Photos 5, 6

As more wings and buildings were added to meet the medical needs of the community, parking became scarce. The North Wing was designed to preserve the existing open parking lot on the site, with four stories added over the parking. Its articulation is similar to that of the Medical Office Building (Building 2), but the concrete ribs define smaller bays, and they originate at the first story as rectangular-footprinted columns in front of the open-air parking garage (Photo 6). Under the building at the first story, the structural supports are thick concrete columns.

The upper four stories of this wing are divided into eight concrete-framed bays which project from a setback wall plane on either side. Like the other modern buildings of the complex, the surface is blond brick. Each bay has a single window opening, which accommodates an original window set with pairs of 1/1 windows each over two horizontal panes (the same configuration seen at the front of the Fowler Wing and retrofitted into the second story of the original hospital).

This spandrel panels between each set of windows are darker (light brown) brick, adding to the verticality of the composition. A small horizontal vent is under each window set.

At the set back left and right bays, at each of the four upper stories is set of three 1/1 aluminum windows.

The plan of this wing is roughly T-shaped, with the long side to the north along Enright Avenue, and the thick stem extending to a single-story entrance attached to the original 1904 hospital.

1E: Emergency Room Addition
1990
Photo 16

This single-story addition is clad in blond brick. Its footprint is rectangular except for a cutaway corner at the southwest corner. It is connected to the Fowler Wing and original building at the east and to the Nurses' Home at the north. There is an open canopy with a drive underneath at the west elevation. The south elevation facing Delmar Boulevard is a series of blind brick panels separated by recessed tile panels. The upper wall has a recessed channel of tile over the brick, capped by a concrete course, another recessed course, and concrete panels as a frieze. The visible foundation is blocks of decorative small-aggregate concrete.

Building 2
Medical Office Building
1963 (permit date)
Architect: Kenneth E. Wischmeyer
Photos 2, 3, 4, 5
Contributing

The Medical Office Building is a five-story brick and concrete building. Its footprint is rectangular. The façade (Photo 3) faces south to Delmar Boulevard, set back behind the parking lot at the southeast corner of the site.

Facing south, the building presents four wide bays framed by full-height painted concrete exterior ribs which rise the full height of the building. Between these are bays of four windows each. The regularity of the windows creates a grid. The first story is slightly taller than the others. Windows are original aluminum sash with three horizontal panes above each other. At the roofline, the concrete ribs meet another projecting element (the same composition and dimension as the ribs) which runs across the entire width of the elevation. The second bay of the first story is the entrance. Unlike most of the other projecting canopies around the complex, this one appears to be metal and uses enameled panels on its surfaces. The entrance has two sets of transomed sliding glass doors, with two panels of large-aggregate scored concrete to the right.

Facing Belt Avenue (Photo 4), the building presents five wide bays framed by full-height painted concrete exterior ribs. The composition is similar to that of the south elevation.

The rear (north) elevation of the building (Photo 4) is articulated similarly to the south elevation, but here the right two bays rise an additional story, indicating the mechanical room at the northwest quadrant of the building. At the first story, the Outpatient Clinic is connected.

The five-story Medical Office Building is considered a separate building (rather than an addition) for the purposes of this nomination. It has a separate identity, architectural style, and function from the main hospital building. Connection to the main hospital is through a single opening at the first, third, and fourth floors (none at the third or fifth floor).

Building 3
Boiler House
1929 (permit date)
Architect: LaBeaume & Klein
Photos 8, 10
Contributing

The northern section of the Boiler House building (Photo 10) is two tall stories clad with brown brick. The northern wall, facing Enright Avenue, is divided into three bays by raised brick piers. The first story is blind and has a soldier course near the top. At the second story there is a single metal sash 1/1 window at the left and center bays, and two of them at the right bay. The side elevations of the two-story section are divided into two bays. A tall brick smokestack is attached on the west side of this section. There is a

very tall vehicular entrance at the north end of the east elevation; it has a pedestrian door built into it. A standard pedestrian door is to its left. It is not clear if these entrances are original, although the brickwork around them appears undisturbed.

This south end of this building is one story, and was originally built for the laundry. It is connected to the Nurses' Home (5B on Figure 1) at its southern end. There are two additional vehicular doors along the east elevation of this section. It is not clear if these entrances are original, although the brickwork around them appears undisturbed.

The building was constructed away from the main hospital as a freestanding plant. A ten-foot wide tile-lined hallway was built to connect the two (date unknown). That hallway was replaced when the Service Building (5A) was constructed. Because it was constructed as a free-standing building, it is still counted as a separate building. It is considered contributing because it served the hospital in an important capacity during the period of significance.

Building 4
Nurses' Academic Building
1959-1960
Architect: Kenneth E. Wischmeyer
Photos 10, 11, 12, 13, 14
Contributing

This two-story building has a rectangular footprint and is clad with blond brick. It faces north to Enright Avenue (Photo 11). The left third of the Enright Avenue elevation is blind. The entrance is off center to the right. This section is clad with limestone panels and topped with a horizontal concrete canopy with copper flashing. The entrance section has five bays. The first and third are paired aluminum windows; each window unit consists of a center fixed pane under a transom light (sharing a common storm unit), set over two smaller lights with their own storm unit. The second bay has paired glass doors under a transom. The fourth bay has a small high window opening which is boarded. The wide fifth bay is boarded, but above the boards an expanse of aluminum-framed glass indicates either doors or windows. Above the entrance are two sets of four windows on limestone sills and with slightly recessed vertical limestone framing elements to either side. The windows are the same as those on the first story. To the right of the entrance bay the façade is blind, with the exception of a small rectangular louvered vent at the first story above a cornerstone which reads "1959."

The center section of the west elevation (facing Clara Avenue, Photo 12) is lower in height than its left and right bays. At the left bay there are two louvered vents. The center five bays have triple sets of multilight metal windows at the second story, indicating the gymnasium within. Under the first and fifth window sets are metal double doors; otherwise the first story of this section is blind. The wide right bay is the same height as the left bay; it has metal doors to either side of a pair of metal sash windows on the first story. At the second story there is a small window with three stacked horizontal lights, and to its right a pair of multilight metal sash windows as at the first story.

The south elevation (Photo 13) faces a parking lot (Site B) and is visible from Delmar Boulevard. Its first story has three metal sash windows widely spaced at the left, and a ribbon of such windows at the right. The second story is a ribbon of the same windows, broken into pairs by limestone mullions.

This building was constructed at the same time as the Nurses' Home (5B), but as a separate building. The connection between the Nurses' Home and the Academic Building is a corridor which allows secured covered access between the two, but the two were always conceived of and referred to as separate buildings.

Building 5
Service Building and Nurses' Home
1951 - 1960
Contributing

Along the west side of the original hospital's 1913 wing is the 1951 single-story Service Building (5A). The Nurses' Home (5B) was added over the south end of the Service Building in 1959-1960.

5A: Service Building
1951
Architect: LaBeaume & Unland, Wischmeyer & Lorenz
Photos 8, 9, 10

The Service Building, constructed in 1951, is a single-story building with a rectangular footprint (Photo 9). Its exterior is clad with variegated orangish brick. A drive along the north elevation of the building dips to a recessed receiving bay. Brick is the only visible material at the foundation.

To the left of the receiving bay are seven small horizontal (almost square) window openings. In slightly raised brick frames with a contrasting brick rowlock sill. The third window is retrofitted with a louvered vent surrounded by sheet metal. The other windows retain 4-pane metal windows which appear to be original. A soldier brick course runs across the upper wall for the full width of the building, and the roofline is capped with limestone.

The receiving bay is recessed. To either side of metal double doors is a wide metal sash window with 15 panes over a full-width operable window (probably a hopper). To the right of the receiving bay there are two 15-light metal sash windows, a small 1/1 window, and an opening that appears to have been a pedestrian door. Its base is now bricked in, with an assortment of boarding and metal sash windows above. The corner is rounded, consistent with the vernacular Moderne style of the building (Photo 10).

5B: Nurses' Home
1959-1960
Architect: Kenneth E. Wischmeyer
Photos 10, 14, 15

The Nurses' Home was built in 1959-1960 to the west of the main hospital as a replacement for the 1917 dormitory (demolished), which stood at the east side of the hospital. The residence was conceived as a six-story building that would be "superimposed" on a section of the 1951 Services Building (5A) for a total of seven stories.

It has a rectangular footprint and is clad in blond brick that matches the rest of the complex (Photo 14). Its articulation is similar to the North Wing (Building 1D) and Medical Office Building (Building 2), with a center section divided into seven bays by full-height painted concrete ribs connected across the roofline by another projecting concrete course. The full façade of the building has ten bays. The left bay is the tallest at eight stories. At its first story is an entrance consisting of two sets of glass sliding doors under a tall transom and a projecting canopy. The upper seven stories have sets of five vertical metal sash windows.

The second bay from the left is narrower and projects forward. Its eight stories are shorter than the bay to its left and the 1/1 windows are spaced between stories, indicating this bay's role as a staircase. There is a metal door at the first story (Photo 15).

The next seven bays are framed in concrete as described above. The first story's first three bays, set back behind the base of the concrete piers, have small irregularly spaced rectangular windows openings. Most have six-light metal sash windows although one has a louvered vent. These windows are consistent with those on the rear of the Service Building (5A), and seem to confirm that the first story of this wing was constructed as part of that addition before the next six stories were added. The right section of the first story is connected to the 1990 single-story Emergency Room addition (Building 1E).

At the second story, the left four bays have a projecting concrete balcony with metal railing. All seven bays of this section have full glass walls between the concrete ribs, consisting of five window sections and a transomed glass door. The top five stories of this section have pairs of slider windows at either end adjacent to the concrete fins. The spandrel panels are of a darker brick, as at Building 5, and each has a small horizontal vent. The wall between the windows is a vertical expanse of blond brick.

The elevation's rightmost bay is another stair tower articulated in the same manner as the second bay. The far corner attaches to the west wing of the original 1904 building.

The rear elevation (Photo 10) is bookended by the same east and west towers that appear on the façade. The east stair tower is set back at the left, and the west bay projects from the rest of the building at the right. The rear elevation does not use concrete ribs as the front does. Instead, full-height triple slider windows are interspersed with smaller slider pairs, indicating the disposition of service rooms along the north side of the corridors. Viewing the north elevation *without* the recessed left stair tower, the tall windows are placed at the first, fourth, fifth, ninth, tenth, thirteenth, fourteenth, and seventeenth bays. At the fifth and ninth bays only, the triple windows have the lower slider pairs (each tall window set is

divided into a one-over-two) that are found in many other buildings of the complex. At the rear elevation it is also clear that there is a flat-roofed covered area attached to the west tower.

The Nurses' Home must be counted as an addition to the Service Building because it was planned and built at least in part over an existing first story. (This is particularly evident in the ground floor plan - Figure 2. Along the north side of the east-west corridor at the base of the Nurses' Home, the doors open directly to Service Building spaces.)

Building 6
Outpatient Clinic
1968-1969
Architect: Kenneth E. Wischmeyer
Photos 4, 5, 6
Noncontributing

This single-story building was constructed at the rear of the Medical Office Building (Building 2).

The building is clad with a similar colored brick as the other midcentury additions. Facing Belt Avenue (Photo 4), the wall can be divided into four bays. At the leftmost (southern) bay, a concrete canopy (Photo 5) covers a sunken driveway. The doors at the drive are boarded, but the tall transoms overhead are intact. The center two bays have a course of four horizontal windows each at the level of the drive's transoms. The right (north) bay is blind.

The north elevation is blind, with the exception of a single metal door in a recessed bay off center to the right (Photo 6).

The Outpatient Clinic is considered noncontributing because it was constructed after the close of the period of significance (which is based on the hospital's assessment of the completion of its expansion and modernization plan). Its massing and fenestration are not consistent with the design of the rest of the public-facing hospital buildings.

Sites and Structures

Structure A: Southeast Parking Lot
c. 1960
Photo 3
Contributing
This is an asphalt lot with entrances from the south and east. The date that this site was first used for parking is unknown, but it is present in a 1960 aerial view.[4] The lot is separated from Delmar Boulevard and Belt Avenue by a concrete-capped brick wall which matches or is close to the brick of the Medical Office Building. There is a narrow planting strip between the wall and the sidewalks. Vehicular and pedestrian access is at the northeast corner from Belt Avenue and the southwest corner from Delmar Boulevard (currently blocked by a temporary concrete barrier). This lot is currently striped for eighteen parking places.

[4] "Air View Pictures Development at St. Luke's Hospital," *St. Louis Post-Dispatch*, June 19, 1960.

Structure B: Southwest Parking Lot
c. 1960 (partial)
Photo 14
Noncontributing
The east half of this asphalt lot was in use by the time a 1960 aerial view was published.[5] During the period of significance, the western half of the lot was occupied by six apartment buildings facing Delmar Boulevard and two facing Clara Avenue. These buildings were razed in 1974. It is not known at what later date the west half of the lot was paved and put into use, but it was clearly after the period of significance.

The lot is currently striped for 90 parking places. Vehicular and pedestrian entrances are at the southeast corner at Delmar Boulevard and the northwest corner at Clara Avenue. Concrete curbs define the parking rows and provide planting space for trees and bushes. The lot is separated from the streets by a non-historic metal fence.

This lot is considered noncontributing because so much of it did not exist during the period of significance.

Site C: Northwest Lot
Photo 12
Noncontributing (not included in resource count)
This is a grassy lot. During most of the period of significance, the site was occupied by four apartment buildings facing Clara Avenue. These were razed in 1974. Maps on file at the nominated property show that this was the proposed site for a new building in the 1980s (never constructed, although one post-1990 plan suggests that there may have been a temporary structure here at that time).

As a noncontributing site, this lot is not included in the resource count.

Interior

The interior displays traits that demonstrate that St. Luke's Hospital fits into the postwar hospital typology. The consolidated block planning of the complex is evident in the interconnected nature of the group of buildings, where connections between floors are present at most levels rather than at the ground floor. Thus interior characteristics generally are similar among the buildings, and finishes dating to the same period span buildings.

The interior displays no distinctive decorative features, but instead repeated usage of mass-manufactured materials such as acoustic ceiling tiles set in grids, wall paneling, vinyl baseboard moldings, composite floor tiles, concrete blocks, steel and wooden slab doors, steel door jambs and, in some areas, laminate window sills. Comprehensive assessment of all materials to determine whether they date to the period of significance has not occurred, but many floor and wall coverings appear to be original. Segmental tile baseboards in the Fowler Wing, the original hospital and the north wing appear to date from the period of significance.

[5] "Air View Pictures Development at St. Luke's Hospital," *St. Louis Post-Dispatch*, June 19, 1960.

On the first floor (Figure 2), the lobbies and corridors have standard finishes, with adjoining specialization areas including a pharmacy, central emergency room and emergency operating rooms possessing similar finishes with acoustic tile ceilings, drywall or paneled walls and sanitary tile floors. The pharmacy is not in the original location, and its finishes appear to date to the 1990s. The emergency room and emergency operating rooms are located both in the non-contributing one-story addition and part of the Fowler Wing, so it is unlikely that much of this area's configuration dates to the period of significance. Cabinetry and equipment in the emergency room is partially present, and offer the only real signification of past use of the space. Other significantly legible historic spaces are the nursing school gymnasium, the physical plant and kitchen and service area, all of which have utilitarian appearances. Two of the lobby areas appear to have been remodeled. The main entrance of the Fowler Addition has a built-in laminate reception desk that appears consistent with a 1980s date. The main public space of the Outpatient Clinic is a large diamond-shaped waiting area with reflective finishes. Both the plan and finishes of this space seems more consistent with postmodernist design than modernist design, and are assumed to be nonhistoric.

The upper floors retain many small specialized medical rooms that define this type of hospital, mostly loaded double along corridors. Again, the material finishes are mass-manufactured and indistinct across corridors and rooms. Inpatient rooms on floors 2 through 8 and doctor's office rooms on floors 2 through 5 across the complex use similar floor, wall, ceiling and door treatments. The operating rooms located on floors 3 and 4 (including delivery rooms on floor 3) are similarly treated generically, visually defined in the past by stationary medical equipment that has mostly been removed. The academic and dormitory rooms in the nursing school buildings make use of wooden doors and moldings in places, providing a contrast that connotes a different use from the rest of the complex.

Historic documentation of original material finishes is scarce. While floorplans exist, they are not original. No original architect specifications or contractor receipts are known to exist, and interior photographs that would establish such information are not known to be extant. Visual inspection of the interior spaces suggests that the present generic appearances of spaces is consistent with the type and era of construction.

Condition and Integrity

Condition

Exterior walls of all buildings appear to be in good condition. The only notable exception to this is a section of the rear (north) wall of the original 1904 hospital (1B), located between the North Wing and the 1913 addition. Here a wide section of face brick between the first and second story windows has delaminated and fallen. Interiors throughout the hospital appear to be in good condition; initial inspection reveals areas of moisture penetration affecting plaster and paint, but little else.

Integrity

St. Luke's Hospital possesses integrity. All of the buildings and additions constructed as part of the postwar expansion program are intact, with original form, finishes, and even windows. The building

envelopes are overwhelmingly intact from the period of significance (1951-1965), with the following additions:

- In 1968, a single-story wing was added to the first floor of the Fowler Wing façade (Building 1A on Figure 1) to either side of the main entrance. The original entrance and its canopy are still intact.
- Also in 1968, the Outpatient Clinic (Building 6 on Figure 1) filled in the northeast corner of the site with a single-story brick building attached to the Medical Office Building (Building 2) to the south. This addition does not impact any other building's primary elevations.
- The 1990 Emergency Room addition (Building 1E on Figure 1) at the west side of the Fowler Wing (Building 1A). Like the Outpatient Clinic, it does not adversely impact any of the primary elevations of the contributing buildings.

These additions are each a single story and, while intrusive from certain angles, are small relative to the overall size of the hospital complex.

The interior of the complex is generally intact in plan and, in some areas, materials. The institutions which used the complex after St. Luke's generally did not reconfigure the plan, leaving original flooring and wall surfaces intact throughout the hospital. The west half of the Fowler wing's first story was reconfigured when the Emergency Room was added (1990), and the lobby design in the Fowler Wing and the Outpatient Clinic may date from the same period.

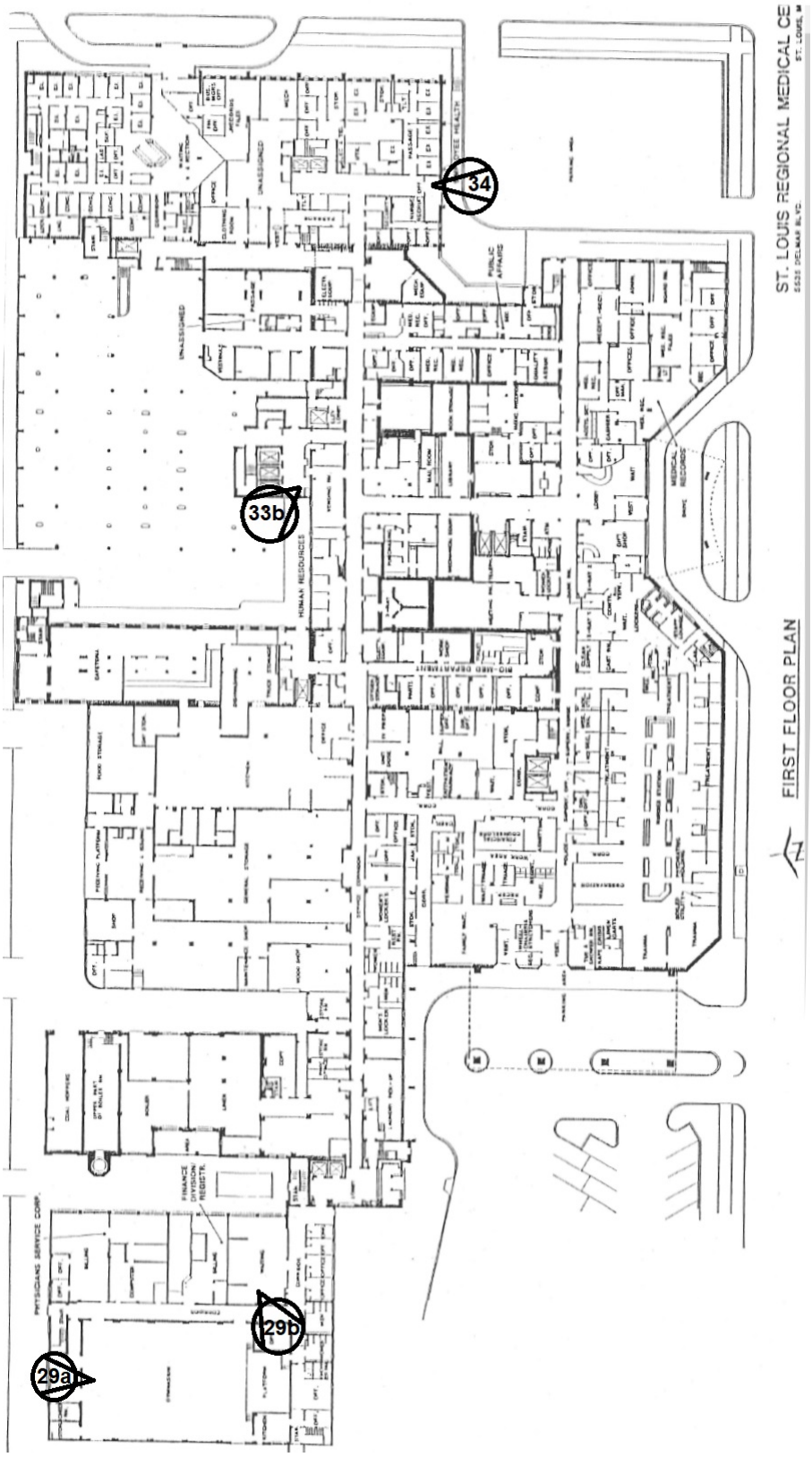

Figure 2: 1st floor plan (source: c. 1991 as-built found on site). Keyed to figure numbers.

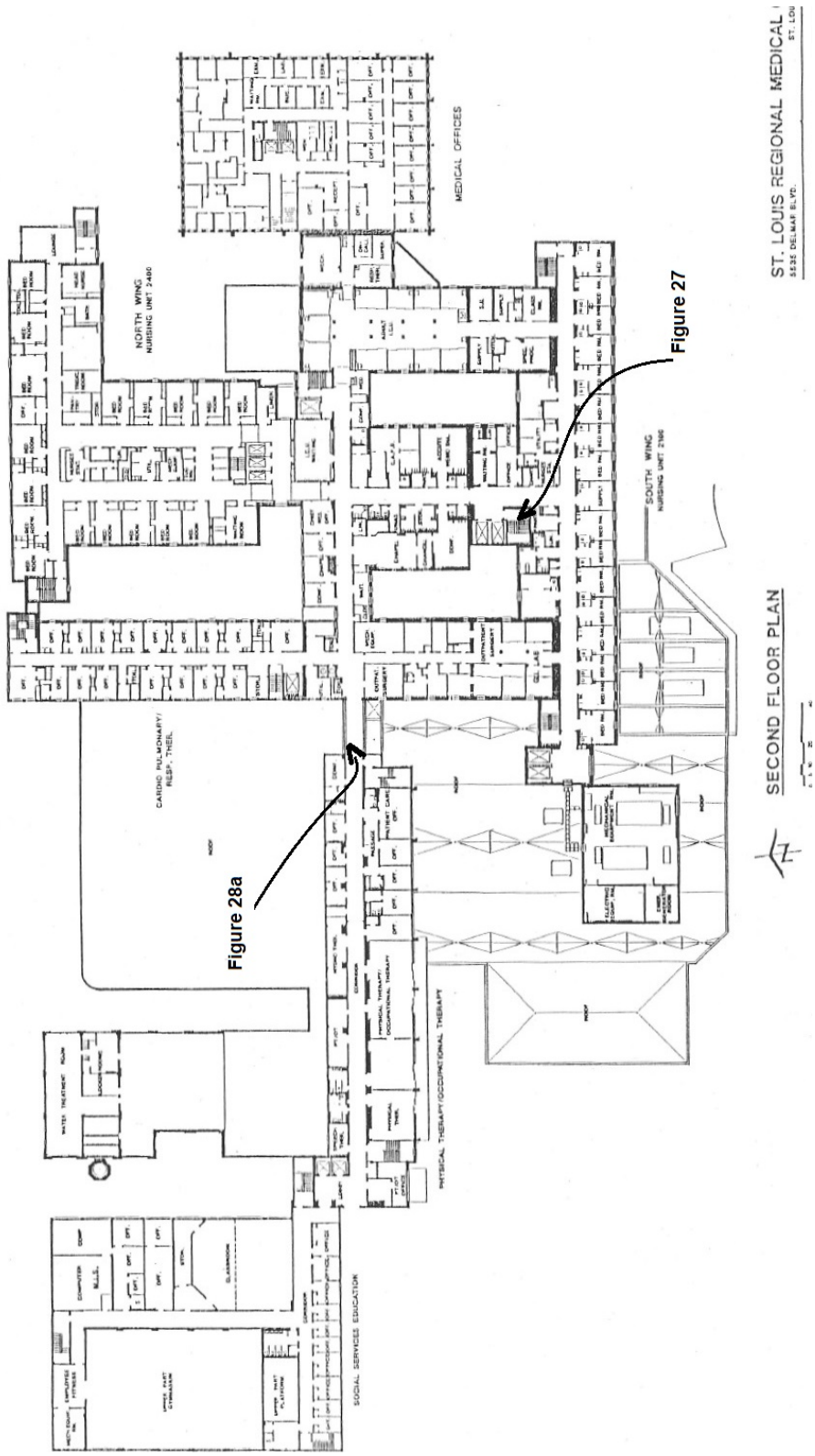

Figure 3: 2nd floor plan and figure key (source: c. 1991 as-built found on site)

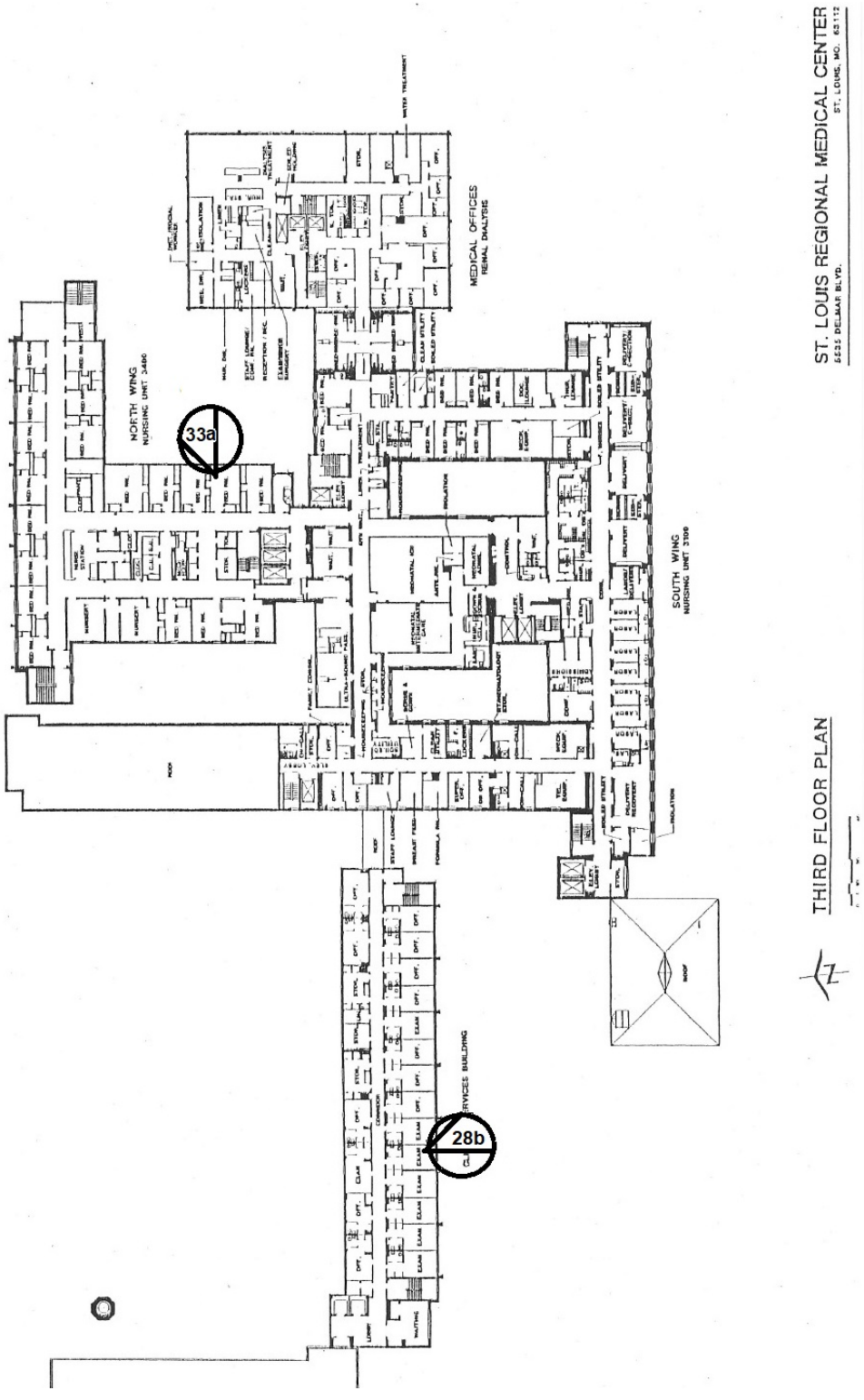

Figure 4: 3rd floor plan (source: c. 1991 as-built found on site). Keyed to figure numbers.

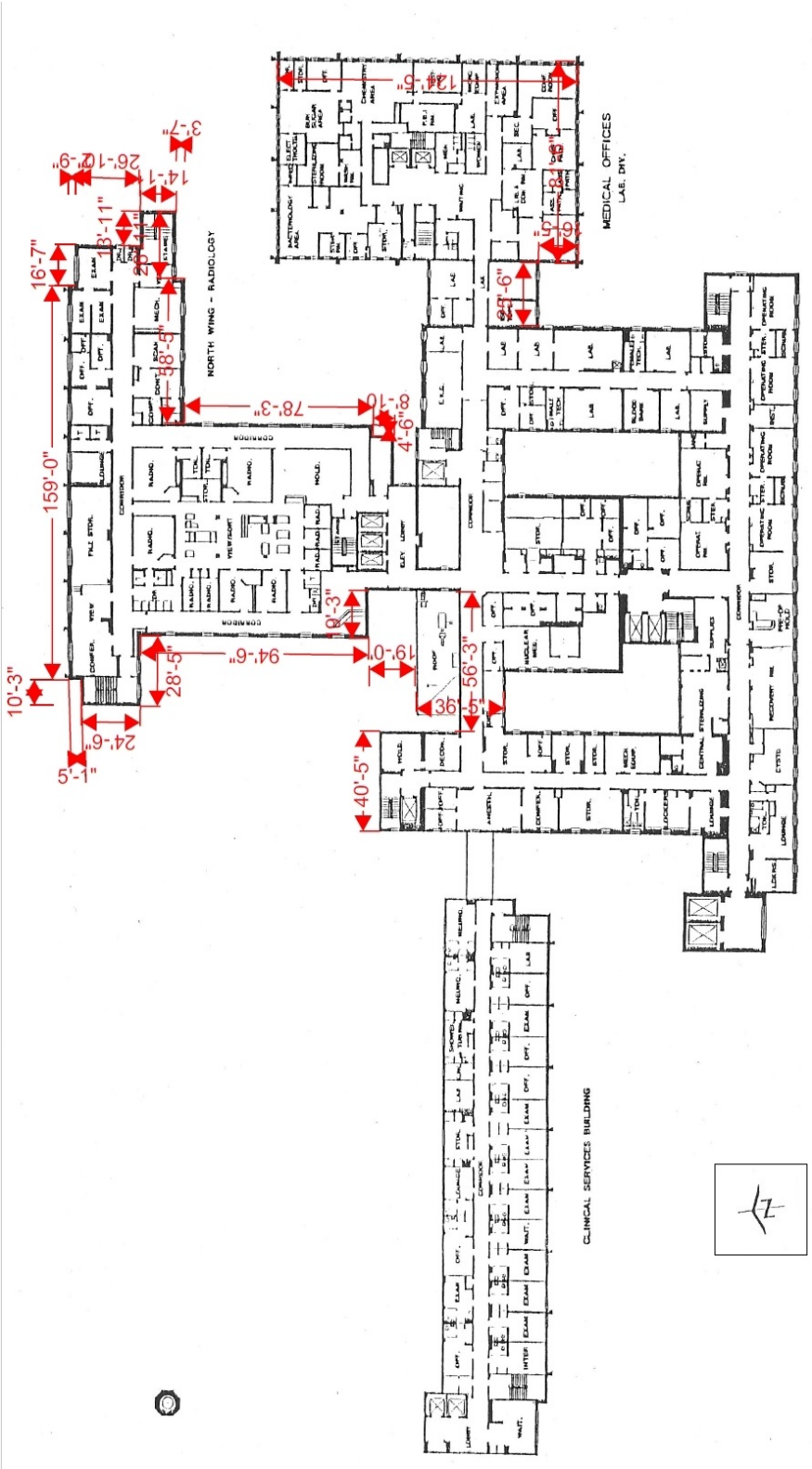

Figure 5: 4th floor plan (source: c. 1991 as-built found on site, measurements added by Forum Studio)

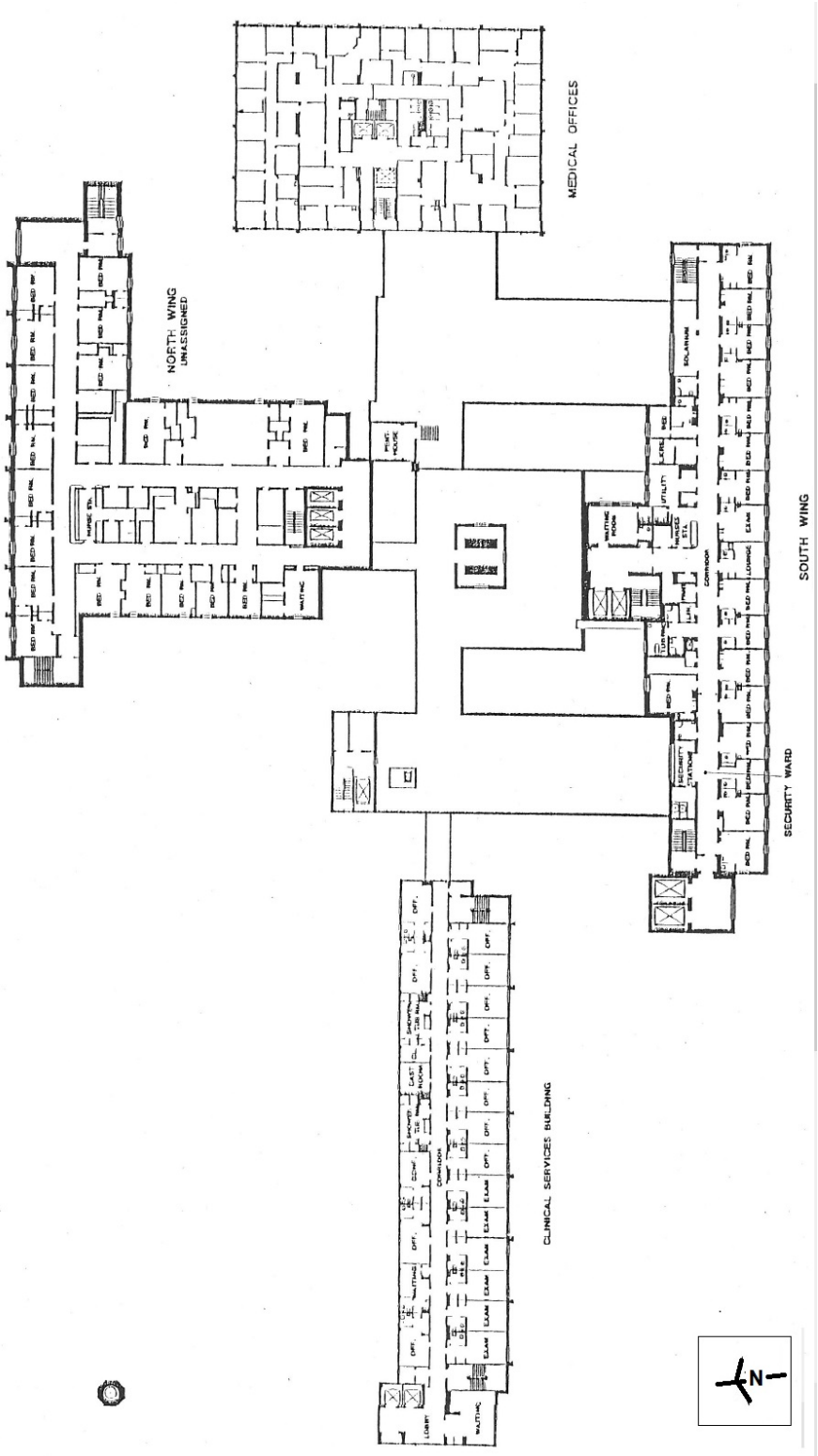

Figure 6: 5th floor plan (source: c. 1991 as-built found on site)

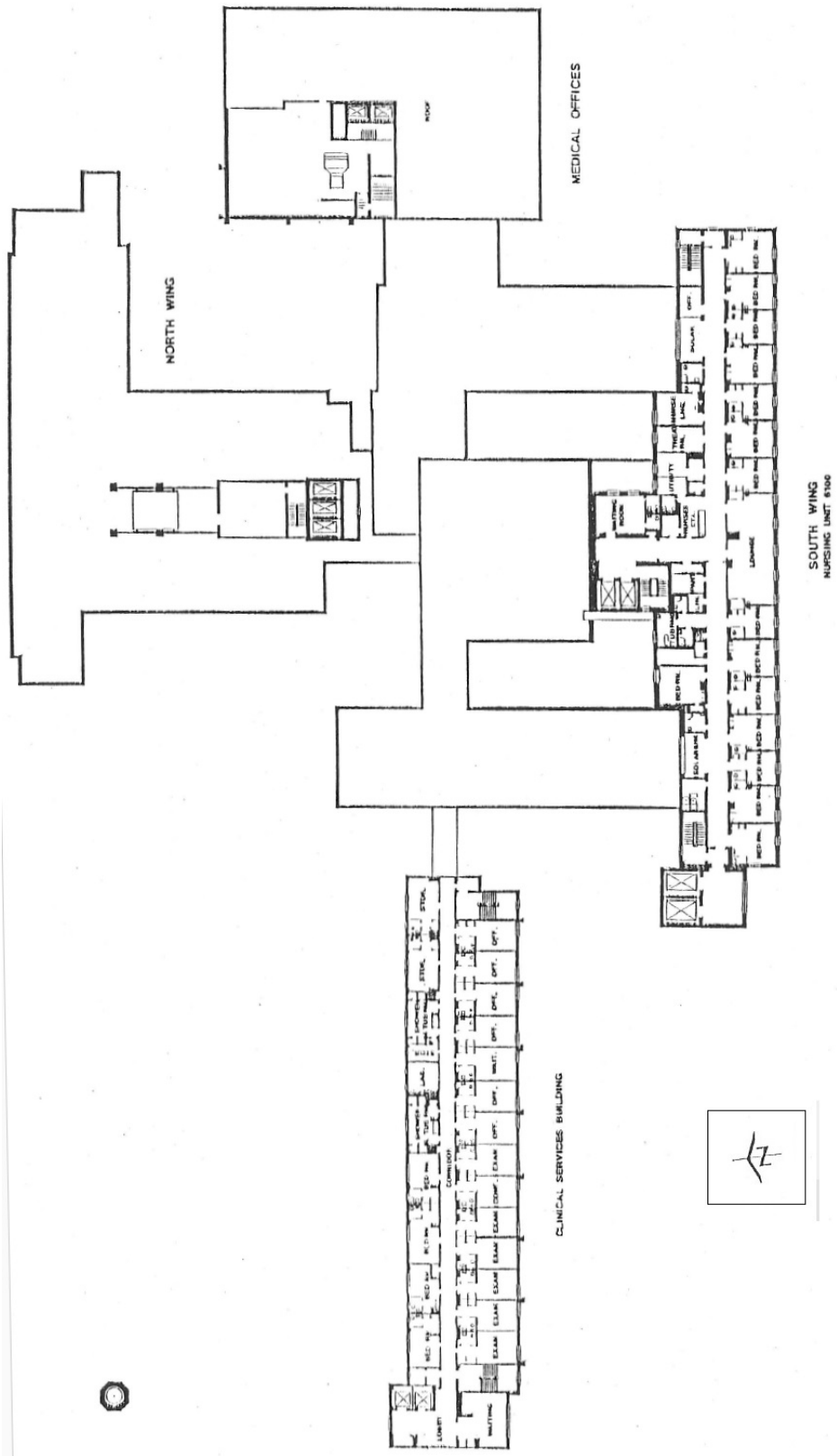

Figure 7: 6th floor plan (source: c. 1991 as-built found on site)

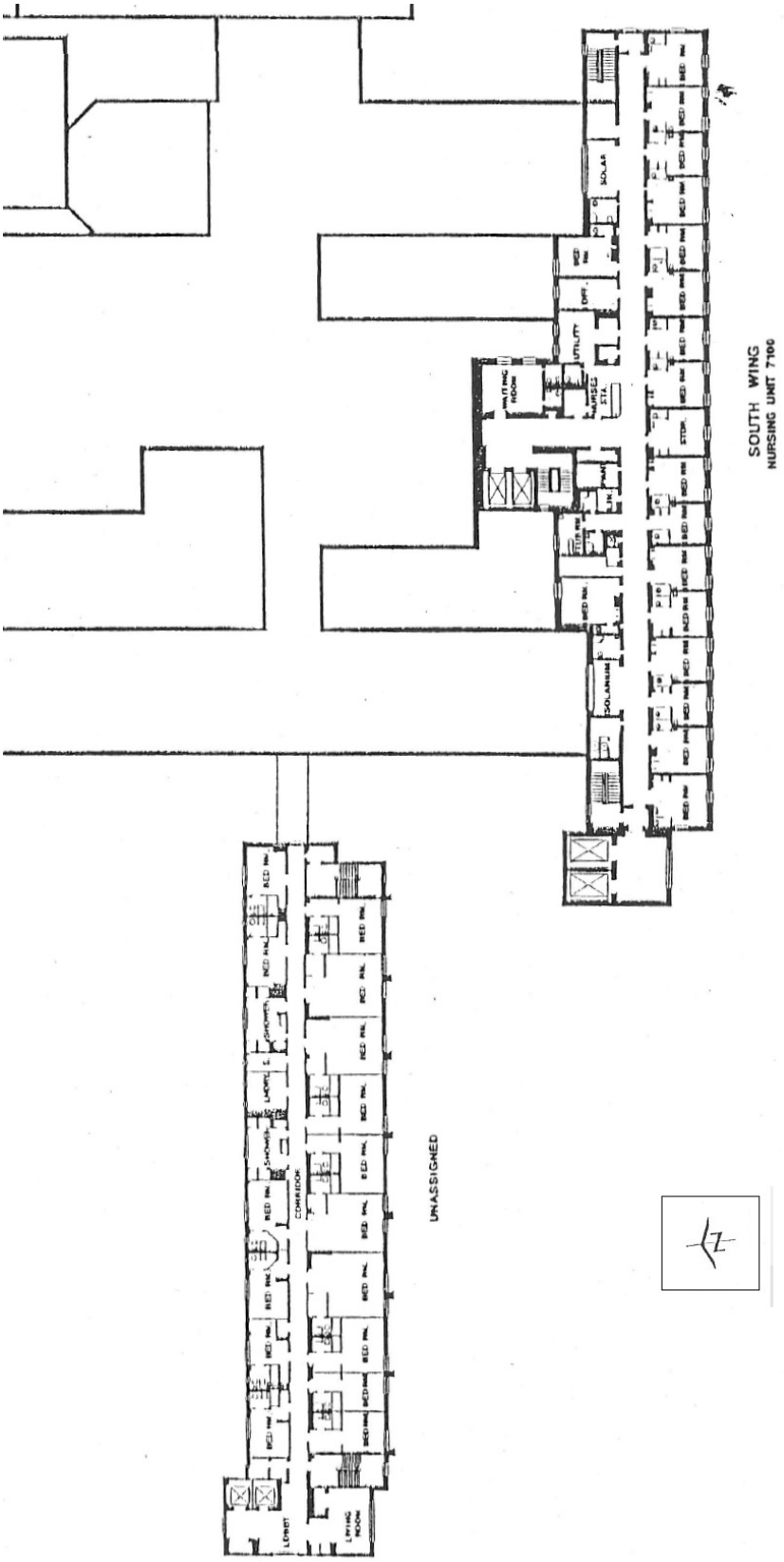

Figure 8: 7th floor plan (source: c. 1991 as-built found on site)

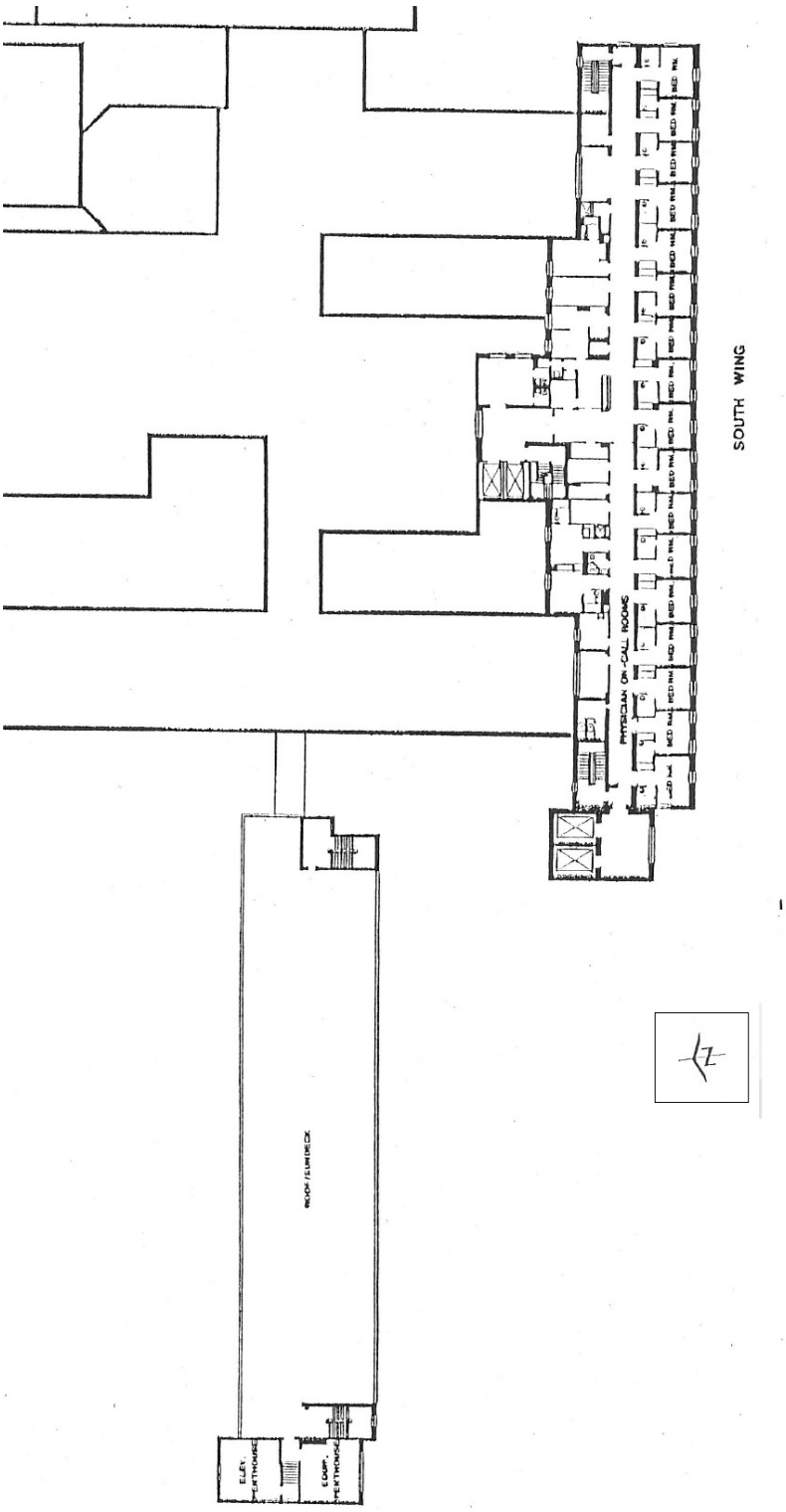

Figure 9: 8th floor plan (source: c. 1991 as-built found on site)

Summary

St. Luke's Hospital Historic District, located at 5535 Delmar Boulevard, is eligible for listing in the National Register of Historic Places under Criterion C in the area of Architecture. It is locally significant as one of only two intact examples of a post-World War II general hospital in St. Louis. In the period after World War II, hospitals responded to medical advances and changes in patient expectations by embarking on major construction programs that resulted in an identifiable postwar hospital building type. Characteristics of the type include consolidated blocks (instead of the previously favored pavilion design), more space devoted to services and less to patient beds; elimination of the multi-bed ward in favor of single and double patient rooms on double-loaded corridors (or, later, racetrack corridors); integrated private doctors' offices, usually in a related building; and the use of Modern forms and detailing. When nursing schools are present they are located in larger buildings. The St. Luke's complex embodies all of these characteristics.

The institution's transformation from a small 1904 hospital to a modern medical center was initiated with a 1949 report which evaluated the hospital's current facilities and future needs. Over the next 16 years, the hospital expanded based on that report's suggestions, although each step in the plan reflected the institution's current needs and the industry's current best practices, and the evolving requirements of the health care industry during a period of intense discovery and change. Construction of major new buildings and additions, as well as complete renovation of the small original facility, took place between 1951 and 1965. In combination, these expansions illustrate significant facets of the postwar hospital building type. The period of significance begins with the construction of the first postwar building in 1951 and concludes with the last step of the modernization program in 1965. The complex is in very good condition and retains integrity.

Background: St. Luke's Hospital, 1866 through World War II

St. Luke's Hospital was founded by the Episcopal Church and opened in 1866.[6] Its first building was located on Ohio Avenue in South St. Louis. The small institution moved four times in the next 16 years, finally constructing its first purpose-built facility in the Lucas Place neighborhood in 1882.

In May, 1898, a report on the hospital noted that the small capacity had resulted in patients being turned away. The call was made for a larger and more modern facility.[7] The present site, located on a then-undeveloped section of Delmar Boulevard, was purchased in 1900 and 1901. Eminent St. Louis architect Theodore C. Link was selected to design the new building in 1901. A year later, Daniel Evans was selected as contractor, and construction was underway.[8] The *St. Louis Post-Dispatch* reported that the new facility would be "up-to-date in all its appointments."[9] Today, although it is greatly obscured by the

[6] E. J. Goodwin, *A History of Medicine in Missouri* (St. Louis: W. L. Smith, 1905). 157. This and many other sources repeat the same story about the founding and early years of St. Luke's.
[7] "Diocesan Convention.: Proposition to Replace St. Luke's Hospital with a Larger One," St. *Louis Post-Dispatch*, May 25, 1898. 2.
[8] "St. Luke's Hospital Annual Report," v. 47, 1913.
[9] "St. Luke's Corner Stone: Will Be Laid Saturday Afternoon with Appropriate Services," *St. Louis Post-Dispatch*, October 29, 1902: 3.

many later additions (see Building 1B in Figure 1 and the center section in Photo 2), the 1904 section of St. Luke's appears to be the second-oldest general hospital building in the City of St. Louis.[10]

The new hospital had 56 private rooms and wards for 54 additional patients. It was sited and constructed so that the wings could be expanded to the north "without destroying its symmetry."[11] The first (and only) expansion in accordance with the original plan came in 1913, when the west wing was extended with an addition to the north (Photo 7; Building 1C in Figure 1). This project increased the capacity of the institution to 184 beds.

Figure 10: St. Luke's Hospital (left) and original Nurses' Home (right, demolished) after 1904 move to 5535 Delmar Boulevard. Source: St. Luke's Hospital Annual Report, 1913.

St. Luke's Training School for Nurses opened in 1889, only the second nursing school in St. Louis.[12] Its first class of seven students graduated in 1892. By 1900, at least 15 schools of nursing were operating in St. Louis; five more opened in the following decade.[13] When the new hospital was constructed, a companion nurses' home was built at the northeast corner of the site. In 1905, the first class of eight

[10] The oldest, Lutheran Hospital, has a section dating from the late 1870s. The City Hospital Historic District (NR 2/2/2001) and St. Mary's Infirmary (NR 4/18/2007) both had sections dating to 1905 or earlier; the City Hospital building was demolished after listing, and all of the medical buildings at St. Mary's Infirmary were demolished in 2015. At least two private hospitals established in single family residences by 1905 appear to be extant. Two extant 19th century institutions, the Insane Asylum and the City Infirmary, served as specialty hospitals at times, though neither was listed as a hospital in the 1905 directory.
[11] "New St. Luke's Hospital Will be Opened To-Morrow," *St. Louis Republic,* May 14, 1904, Section II page 2.
[12] "Training School for Nurses," *St. Louis Post-Dispatch*, September 6, 1889. 2; "The Early History of Nursing in St. Louis," Bernard Becker Medical Library Digital Collection, http://beckerexhibits.wustl.edu/mowihsp/health/stlnursingschools.htm accessed 1/25/2017. "Training School for Nurses," *St. Louis Post-Dispatch*, September 6, 1889. 2.
[13] "The Early History of Nursing Schools in St. Louis."

graduated from its new location.[14] With development of the school and expansion in enrollment, a much larger home was constructed at the rear of the complex (non-extant) in 1917.[15] This move increased the rooms for on-site nurses from 42 to approximately 120.

As St. Luke's was expanding, it followed the best practices in the medical field. A 1922 report on the American College of Surgeon's accreditation program, then only a few years old, listed the institutions which had received its top marks.[16] In 1921, St. Luke's was one of 14 St. Louis hospitals of 100+ beds which received accreditation (with one additional hospital in the 50-100 bed range; smaller hospitals were not evaluated). The report noted that across the United States and Canada, larger (100+ bed) hospitals had an 83% approval rate. Only 41% of the institutions with 50-100 beds were approved. The report noted several reasons that made smaller hospitals less successful, including the lack of significant outside financial support, difficulty attracting interns, and insufficiency of laboratory services.[17] St. Luke's was therefore part of the early trend toward larger and more complete hospitals.

In 1929, St. Luke's constructed an $80,000 boiler house. The building was northwest of the main hospital, connected by a single-story passage. It was designed by LaBeaume & Klein, the same firm which had designed the Nurses' Home in 1917. The new building segregated the mechanical and service functions (including laundry) from the main building. Medical improvements also continued to take place during this period. Among these was the introduction in the 1930s of x-ray therapy, the first generation attempt to cure malignancies with radiation.[18]

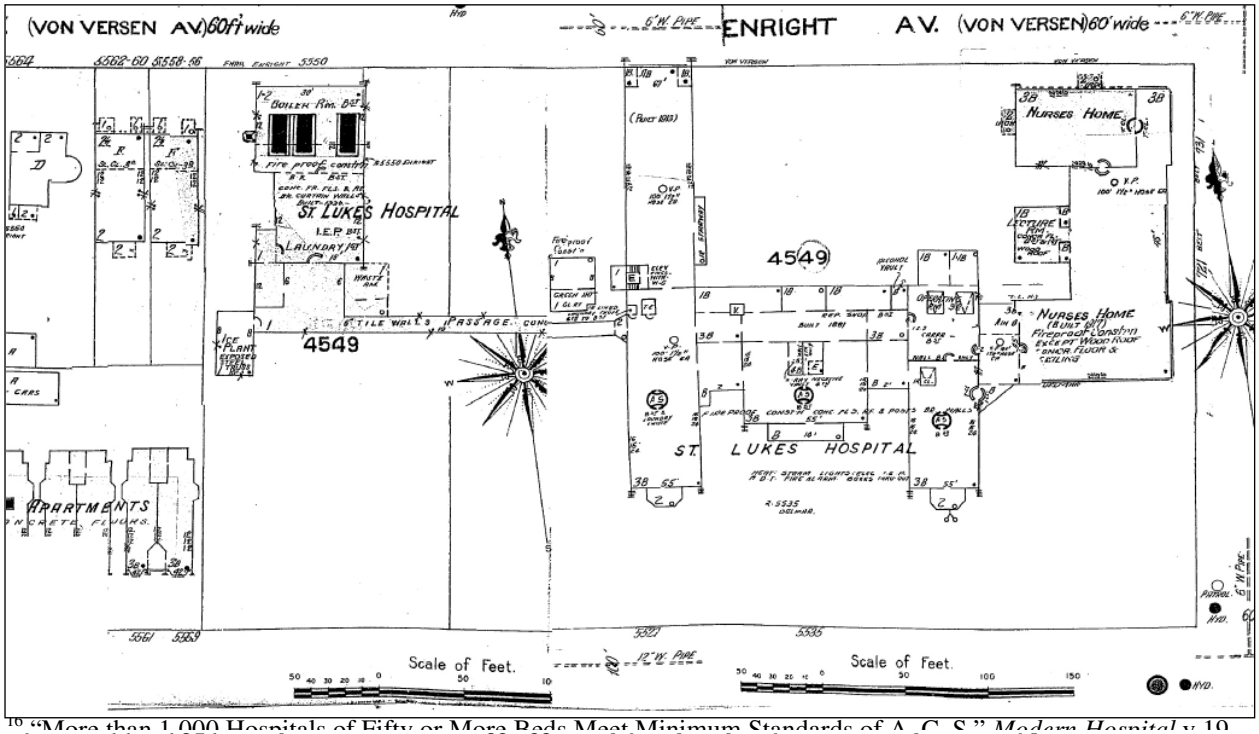

Figure 11: 1951 Sanborn map, pp. 68-69 combined, showing St. Luke's Boiler House (left), Hospital (center), and Nurses' Home (right; demolished).

[16] "More than 1,000 Hospitals of Fifty or More Beds Meet Minimum Standards of A. C. S." *Modern Hospital* v.19 Ibid. 426.

[18] "Visiting Ours" newsletter, March 1957, p1.

St. Luke's, like many institutions, suffered financially during the Great Depression. The annual report of 1933 noted "reductions in salaries and other close economies" had gone into effect, but the institution still ended the year with a deficit greater than $55,000. In spite of this, the hospital continued to accept charity patients whose services were provided at no cost. In 1933, 8512 "free days" were reported (an average of more than 23 beds per day), and 10,272 part-free days.[19] By this time, St. Luke's had also installed an "out-patient" department.

Despite its financial difficulties, a 1935 publication produced for American Hospital Association conference referred to St. Luke's as "one of the most outstanding hospitals in the middle west."[20] The report placed St. Luke's as one of 24 general hospitals in the St. Louis area (including both the independent City and the adjacent St. Louis County). Of the general hospitals, six were under government control and 18 were run as private institutions. In addition to the general hospitals there were twelve types of specialized hospitals, including those for children, mental patients, and railroad employees.[21]

Nationally as well as in St. Louis, relatively few new hospital projects were initiated during the Depression and World War II.[22] But within a few years after the war, many St. Louis hospitals (including St. Luke's) were planning expansions to accommodate new technology and serve the burgeoning population. Other organizations considered starting new hospitals during this period. This was the case with the Presbyterian Church, which investigated the possibility in the mid-1940s. Ultimately, the board of St. Luke's was reformed to make it a joint Episcopalian-Presbyterian institution. This step greatly increased the institution's capacity to plan for and fund future growth.

Background: Hospitals from the mid-19th Century until World War II

Before the last third of the 19th century, hospitals were often little more than open wards for the dying poor.[23] Within just a few decades, an acceleration in medical discovery laid the foundation for the re-invention of the hospital and the practice of medicine. In that period, improvements in curing bacterial diseases, the invention of surgical sterilization techniques, the invention of the x-ray, and the development of new vaccines (among others) required a new type of facility. In 1893, the first "real hospital

[19] "Radium Worth $7500 is Given to St. Luke's," *St. Louis Post-Dispatch,* January 28, 1934.
[20] Ray M. Kniefl, "Our St. Louis Hospitals" (St. Louis: 1935). 30.
[21] Ibid.
[22] There were two notable exceptions in St. Louis. Firmin Desloge Hospital, which opened in 1933, was the first major hospital of St. Louis University and a replacement for the old St. Mary's Hospital. City Hospital #2, later renamed Homer G. Phillips Hospital (NR 1984), was dedicated in 1937. This was a city institution which served the African-American community, constructed with funds from a bond issue and the PWA.
[23] Histories of hospitalization are full of lively turns of phrase for its literally morbid role in this period. Among the most notable is Dr. John Cronin's description of the hospital as "the springboard to eternity." John W. Cronin, "Development Trends in Hospital Facilities in the United States," typescript of talk presented at U. S. Naval Medical School, National Naval Medical Center, Bethesda, Maryland, September 21, 1954. National Institutes of Health National Library of Medicine, https://profiles.nlm.nih.gov/ps/access/RMAAMA.pdf, accessed March 3, 2017.

laboratory" was installed in Paris, but such high-tech approaches were slow to be adopted throughout the field.[24]

As a result of these improvements, according to author Paul Starr, "hospitals moved from the periphery to the center" of medical practice and innovation:

> From refuges mainly for the homeless poor and insane, they evolved into doctors' workshops for all types and classes of patients…. The sick began to enter hospitals, not for an entire siege of illness, but only during its acute phase to have some work performed upon them. The hospital took on a more activist posture; it was no longer a well of sorrow and charity but a workplace for the production of health.[25]

As the practice of medicine increased in complexity, the practice of nursing also transformed. Prior to the 1870s, hospital nursing was considered menial work which was undertaken either as a charity activity or by "women of the lower classes, often conscripted from the penitentiary or the almshouse."[26] By 1870, three schools of nursing had been established in the United States. By 1900, there were 432.[27]

Medical science and hospital practice continued to evolve after the beginning of the 20th century, although the pace did not match the rate of change during the previous few decades. As more patients accepted the idea of medical care taking place in hospitals,[28] more bed space was needed (including maternity space), and the demands of the administrative areas became more complex. Sanitary and mechanical systems were always advancing, and hospitals had new challenges in providing heat, plumbing and electricity. In addition, outpatient departments were developed to treat the poor who could not afford doctor's visits.[29] Staff efficiency, modern recordkeeping, and modern laboratories were all focuses in the period after World War I.[30] At this time, the best arrangement for a large hospital was still considered to be a series of pavilions, often with separate buildings for wards and administration.[31] "The pavilion ward in its definitive form," according to one of the standard histories of hospital architecture, "consisted of a long open hall for patients terminating in a square connected block for services, often of a different width or height."[32] This series of connected open wards, or pavilions, became known as the "pavilion plan." (See Figure 12 for an example.)

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[24] John D. Thompson and Grace Goldin, *The Hospital: A Social and Architectural History* (New Haven and London: Yale University Press, 1975). 189.
[25] Paul Starr, *The Social Transformation of American Medicine* (New York: Basic Books, Inc., 1982), 146.
[26] Starr, 155.
[27] Starr, 156.
[28] The percentage of people using hospital services climbed throughout the 20th century; between 1935 and 1965 it more than doubled from 5.6% of the population to 13.2 percent. Richard Harrison Shyrock, "Nursing Emerges as a Profession" in *Sickness & Health in America,"* Judith Walzer Leavitt and Ronald L. Numbers, eds. (Madison: University of Wisconsin Press, 1978), 210.
[29] Richard E Schmidt, "Modern Hospital Design," Architectural Forum v 37 no 6 Dec 1922. 252-254.
[30] These were the three areas that the American College of Surgeons evaluated in its Hospital Standardization Program. "More than 1,000 Hospitals of Fifty or More Beds Meet Minimum Standards of A. C. S."
[31] Edward F. Stevens, *The American Hospital of the Twentieth Century* 2nd. Ed. (New York: The Architectural Record Company, 1921).
[32] Thompson and Goldin, 130.

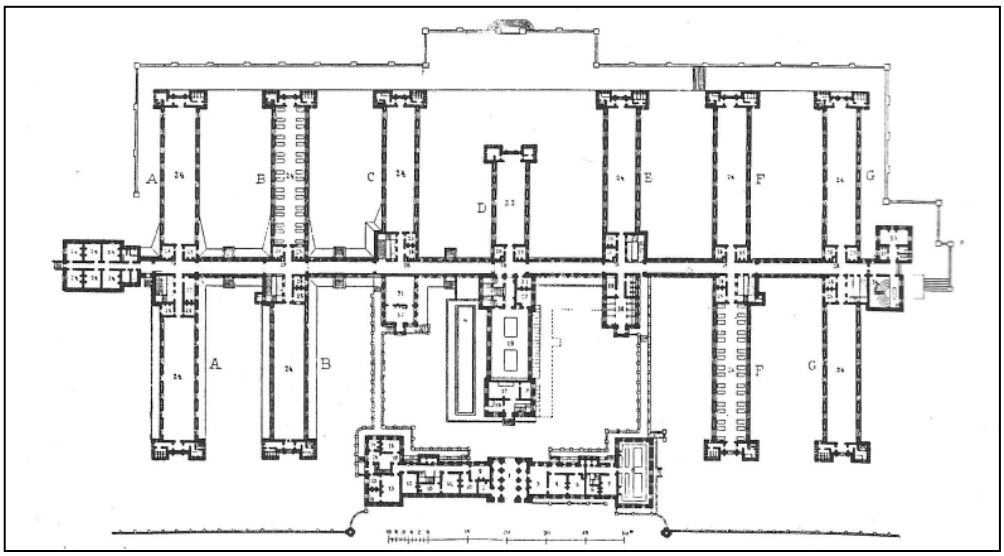

Figure 12: A large hospital using the pavilion plan: Herbert Hospital, Woolwich, England (1859–1864). Source: Thompson and Goldin, 163.

The later 1920s saw the acceptance of a new planning paradigm, the "vertical hospital" or "monoblock."[33] The "dispersal characteristic" of the traditional pavilion plan hospital, designed to prevent contagious diseases, was no longer a planning consideration. In addition, the growing demand for hospitals in urban areas resulted in building taller structures when land was at a premium.[34] This verticalization of hospital functions had many advantages, but early critics warned of the disarray that could be caused by combining every function of the hospital (medical, surgical, support, etc.) in one building. As early as 1910, the seminal hospital planner Dr. S. S. Goldwater proposed a plan for a vertically expandable hospital, but his plan sited the support services in separate buildings. Thompson and Goldin, however, note that in many early examples, the hospital consisted of a single building which contained every function in a skyscraper form, resulting in "a wild jumble" in the elevators.[35]

Beginning with the onset of the Great Depression, American hospitals faced a crisis of funding. New construction slowed almost to a stop, and some 700 hospitals nationwide were forced to close their doors.[36] A period of dormancy that lasted until the end of World War II slowed the practice of hospital design for roughly a decade and a half.

[33] Isadore Rosenfield, *Hospital Architecture and Beyond* (New York: Van Nostrand Reinhold, 1969), 39.
[34] Rosenfield 37.
[35] Thompson and Goldin, 196.
[36] WPA money did help fund some hospitals during the Depression, and just before the war, the Lanham Act (1941) set aside limited funding specifically for schools and hospitals. After the onset of World War II, Lanham Act funding supported hospitals in areas with new populations of defense workers. Harry Perlstadt, "The Development of the Hill-Burton Legislation: Interests, Issues and Compromises," *Journal of Health and Social Policy* v. 6. No. 3, 1995. 83; "The Federal-Aid Program for Construction of Hospital and Medical Facilities: The Objectives,

Context: Development of the Postwar Hospital Type

When new hospital construction resumed in the years after World War II, the hospital and related building types no longer resembled their pre-Depression counterparts. As with many institutional building types, the shift in architectural taste had produced an obvious change from historicist styles to Modernism. More significantly, new functional demands impacted the planning and design of hospitals.

St. Luke's Hospital embodies the postwar hospital type, which is defined by an architectural plan that combined wards and services into single buildings, reduced ward space in favor of specialized service and private room space, relied on double-loaded corridor layouts and embraced Modernist design. Among the factors driving this change were advances in medical technology, the rise of private insurance, the increasing necessity for connected medical office buildings, and new standards promulgated by the federal government. Standards for schools of nursing changed (although not as dramatically as other hospital-connected facilities), resulting in larger nursing schools with need for redesigned academic facilities and dormitories. The type is evident from 1945 through at least 1970, and can be found throughout the United States.

Medical Advances Shaping Hospital Design

While the pre-war hospital emphasized patient wards and surgical facilities, medical advances meant that postwar hospitals required increased space for laboratories, diagnostic facilities, pharmacies, outpatient departments, and specialties such as physical and occupational therapy.

A 1950 article in *Architectural Forum* detailed some of the medical advances that required new directions in hospital design: [37]

- New technology meant that better diagnostic facilities were available. This advanced equipment was only found in hospitals, so more doctor visits had to be transferred from the home or office to the hospital setting.
- The number of surgeries also dropped as pharmacological alternatives became available. Penicillin, discovered in 1928, finally became practical as a result of intensive government and industry efforts during World War II. When it first went into production its civilian use was rationed, but it became generally available in 1945.
- The use of antibiotics and other drugs required an increase in pharmacy capacity, while storage of oxygen for oxygen therapy and anesthetics for surgical use became a larger design consideration.[38] As oxygen therapy became more common, systems were developed for piping in oxygen to patient rooms from centralized locations.
- In cases where surgery was necessary, improvements in care altered the patients' and doctors' postoperative routine. During the war, Army hospitals had adopted the practice of "early

Achievements, and Unfinished Tasks," Public Health Service Division of Hospitals and Hospital Facilities, typescript dated January 5, 1957. National Institutes of Health National Library of Medicine, https://profiles.nlm.nih.gov/ps/access/RMAAEI.pdf, accessed March 3, 2017. p.1.

[37] Robert M. Cunningham, Jr., "Tomorrow's Hospital Must Be Different," *Architectural Forum* v. 92, February 1950. 119.

[38] Ibid. 117-118.

ambulation," (getting patients walking within a day or two of surgery) in order to aid recovery and speed soldiers' return to the field. Design ramifications of this practice included changing circulation patterns, the necessity for more visiting and recreation space, and the continuing substitution of bathrooms for bedpans.

- Another outcome of the war was a new interest in rehabilitation, including physical therapy (or physiotherapy, as it was called) and occupational therapy.[39]

Promulgation of Government Standards

In 1946, the Hospital Survey and Construction Act (generally referred to as the Hill-Burton Act) was passed to allocate federal funding for the construction of hospitals. Since Hill-Burton funds were only released for approved facilities, the government issued guidance to aid in their planning. The United States Public Health Service had first started formulating suggestions to improve hospitals in 1942-1943, after "hundreds of hospital plans submitted to the War Production Board… showed little or no understanding by the architect or hospital administrator of the functional aspects of hospital planning and operation."[40]

In 1946, the Hospital Facilities Section of the U. S. Public Health Service released a 54-page booklet called "Elements of Hospital Design." Beginning the following year, *Modern Hospital* magazine ran a twelve-part series called "The Functional Basis of Hospital Planning," by the same division. These sources were revised and published in 1953 as a standalone volume called *Design and Construction of General Hospitals.*[41] The book introduced general principles of planning the hospital, from site selection to laundry facilities. Flow charts illustrated how circulation should work, and minimum standards for square footage and dimensions were carefully explained. In their introduction to the book, representatives of the American Institute of Architects were careful to note that it was meant as a supplement rather than a replacement for the independent expertise and judgment of the professional architect: "….These findings are just the sort of thing that a conscientious architect might have spent the best years of his life digging up, to form the background of knowledge and experience against which he solves a present-day problem in hospital design."[42] The book served as a how-to guide for inexperienced architects and served as a reference which could be consulted by the profession as a whole.

There has been no systematic study of how the planning and design guidelines suggested in *Design and Construction of General Hospitals* were implemented either in federally-funded facilities (mostly found in underserved rural areas)[43] or in those hospitals which, like St. Luke's, did not receive funding. It

[39] Ibid. 116-117.
[40] Everett W. Jones in Foreword to Public Health Service, U. S. Department of Health, Education and Welfare, *Design and Construction of General Hospitals* (New York: F. W. Dodge Corporation, 1953). vii.
[41] The 1946 book is credited in the Introduction to *Design and Construction of General Hospitals* (p. x) but has not been located for a comparison. The *Modern Hospital* articles appear to include much of the same text as the later book; no analysis has been attempted to find variations between the two.
[42] Ibid, x.
[43] By 1952, 61% of the general hospital projects funded under Hill-Burton were in towns with a population under 5000. John M. Cronin, "Planning for Hospital and Health Facilities," Public Health Service Division of Hospitals and Hospital Facilities, typescript article reprinted from *The Journal of the Kentucky State Medical Association*,

seems likely that the guidelines contributed to a view that hospital designs had become "stereotyped and standard".[44]

Plan considerations for efficiency in the ever-growing hospital

While previous pavilion plan hospitals typically kept equipment, services, and offices in a spine corridor off which open wards branched out like the teeth of a comb, this plan became less and less practical:

> Problems had begun to arise in the United States and overseas when staff began to require so much equipment and allied services in the service support core that the linearity of the open-plan ward … was overwhelmed by a propensity to house more and more machines within the core.[45]

In the 1950s the Hill-Burton guidelines, according to the same source, "virtually mandated"[46] the use of a double-loaded corridor as the standard plan in nursing units.[47] The double-loaded corridor was often part of a T-shaped plan, as proposed by Goldwater at the beginning of the era of tall hospitals, in which the stem of the T held support services for the nursing units along the long crossbar.[48] By the end of the decade, though, innovative designers had found a way to accommodate the ever-increasing amount of equipment and support services at the heart of the nursing unit. The so-called "racetrack" plan (Figure 13) left the patient rooms along two parallel outer walls, but much farther apart so that a core of services, equipment, and sometimes even the stairs or elevator, would be between them.

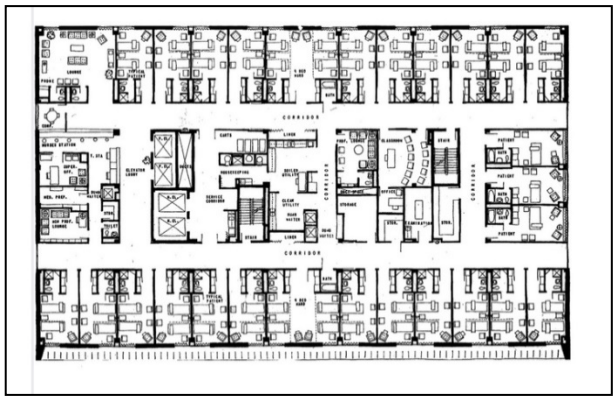

Figure 13: example of a "racetrack" ward, with patient rooms pushed to the outside, and a core of nursing and janitorial services between the two rows of rooms. Source: Verderber, 29.

January 1952. National Institutes of Health National Library of Medicine, https://profiles.nlm.nih.gov/ps/access/RMAAMC.pdf accessed 3/3/2017. 1.

[44] E. Todd Wheeler, *Hospital Design and Function* (New York: McGraw-Hill, 1964). xi.

[45] Stephen Verderber and David J. Fine, *Healthcare Architecture in an Era of Radical Transformation* (New Haven: Yale University Press, 2000), 28.

[46] Ibid, 26.

[47] A nursing unit, in many respects the heart of the hospital's organization, consists of a set of patient rooms and the supporting areas (specifically the nursing station) from which they are tended. A quick search of Google Books does not find the term in use before the 1920s, and it appears to become more common in the 1940s. This reflects the evolution of rooms types as well as the changes in staffing organization in the hospital.

[48] Thompson and Goldin, 193.

At the same time, planners had to determine how the nursing units would be related to other parts of the hospital. An architectural term that came into vogue was the "matchbox on a muffin," sometimes also known as a platform plan or podium plan. In this scheme, a flat section of clinical, administrative, and/or service functions would be organized horizontally at the base of a tower of nursing units. The idea was inspired by new Modernist office buildings like Skidmore, Owings & Merrill's Lever House (New York, 1952).[49] It is not certain how many hospitals were actually constructed with this form, but the concentration of services at the base of the hospital was found to be widespread in the dozens of examples reviewed for this nomination.

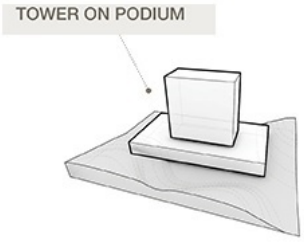

Figure 14: The Lever House office block, left, by Skidmore Owings & Merrill, 1952 (source: http://www.som.com/projects/lever_house); NBBJ architects simple drawing of podium plan hospital prototype (source: http://www.nbbj.com/work/samsung-international-hospital/).

[49] The term apparently originated in England, where a muffin is flat. Hughes notes the similarity between the tower-and-block hospitals to the tower-and-plinth office buildings in Jonathan Hughes, "The Design of Hospitals in the Early NHS," *Medical History*, 2000. 44.

Private Medical Offices Attached to Hospitals

In the *Architectural Forum* article quoted above, the author noted that with the increase in diagnostic technology, modern medical practice became more and more centered around the hospital - "not so much because the doctor wants to transfer his practice from the office to the hospital as because the onrush of medical science leaves him no choice in the matter."[50] By the late 1940s, for the convenience of these physicians, some hospitals had begun to construct adjacent office buildings.[51] By the 1970s, medical office buildings, supported by rent, were common. Another option, offered in the 1953 Public Health Service publication *Design and Construction of General Hospitals*,[52] was to include private offices in the main building.

The Rise of Private Insurance

Another major change to hospital design was driven not by medical advances but by economic factors related to the rise of health insurance. Blue Cross (for hospital care) and Blue Shield (for other medical care) created a network of approved private insurance plans that drove the percentage of insured Americans up from less than 10% in 1940 to almost 70% in 1955.[53] This system of prepayment is considered partially responsible for the decline of open wards. With insurance covering the cost of a semi-private room, paying customers had no incentive to choose a large ward setting.[54] Likewise, by the 1960s "many insurance plans" did not cover the cost of a private room, ensuring continued demand for double rooms.[55]

Nurses' Housing and Education

A 1949 report on expansion at St. Luke's noted that in the postwar period, schools with fewer than 150 students could be an "economic liability."[56] Nursing schools trended larger, but the postwar period did not significantly change the planning demands.

In most respects, the evolution of nurses' dormitory and classroom facilities after World War II is comparable to that of their functional brethren in other areas of housing and education. In a 1953 series on "Basic Steps in Planning the Nurses' Residence and Educational Facility," it was admitted that "The requirements for a student nurse residence are generally the same as those for any student dormitory."[57]

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[50] Robert M. Cunningham, Jr., "Tomorrow's Hospital Must Be Different," *Architectural Forum* v. 92, February 1950. 116.
[51] Basil C. MacLean, William B. Woods and Charles M. Royle, "St. Luke's Hospital: A Study of Need." St. Louis, n.p., 1949. 47.
[52] Public Health Service, U. S. Department of Health, Education and Welfare, Design and Construction of General Hospitals (New York: F. W. Dodge Corporation, 1953). 33.
[53] David Charles Sloane, "Scientific Paragon to Hospital Mall: The Evolving Design of the Hospital, 1885-1994," *Journal of Architectural Education* v. 48, no. 2 (Nov., 1994). 86; Blue Cross/Blue Shield web site. https://www.bcbs.com/node/982. Accessed 1/25/2017.
[54] Cunningham. 121.
[55] Wheeler, 78.
[56] Ibid. 37.
[57] Louise O. Waagen, "Basic Steps in Planning the Nurses' Residence and Educational Facility," Modern Hospital December 1953. 87.

A few of the specifics were unique to nurses' homes, notably the siting of the dormitory to be separate from the public areas of the hospital, but close to the dining facilities (if the hospital dining room was to be used by the nurses).

The Impact of Modernism

No study of the hospital and related building types would be complete without a mention of the radical change in architectural taste that transformed institutional architecture in the 1940s and beyond. While there is no mention of architectural style anywhere in *Design and Construction of General Hospitals*, it is noteworthy that all eleven of the illustrated model hospital buildings are completely Modern with no historicist detailing whatsoever.[58] "After World War II," write Verderber and Fine, "the medical establishment accepted International Style modernism with open arms."[59] The text goes on to describe an understanding among both architects and their hospital clients that historicist styles were no longer acceptable. In the author's review of dozens of renderings and photographs, the postwar hospitals almost uniformly rejected historicist styles and embraced varying styles of Modernism.

Characteristics of the New Building Type

Based on the factors listed above, the post-World War II hospital emerged as a different kind of building than its predecessors. Characteristics of the evolved building type include:

- Elimination of the previously favored pavilion design in favor of more consolidated blocks;
- Proportionately less space devoted to patient beds and more to other services such as laboratory, pharmacy, outpatient services, and physical therapy;
- The elimination of the multi-bed ward in favor of private and semi-private rooms;
- The use of double-loaded corridors in nursing units, evolving by the 1960s into racetrack plans;
- Doctors' offices integrated into the design of the hospital or into a separate building connected to the hospital;
- Where nursing schools are present, larger schools rather than smaller ones;
- Use of Modern forms and detailing.

Examples of the Postwar Hospital Type

A survey of *Modern Hospital* magazine's "Hospital of the Month" features in the years 1953-1954 and 1959-1960 confirms that the most admired hospitals of the period include the architectural characteristics defined above.[60] By the 1950s, all of the featured hospitals had eliminated large wards in favor of private and semi-private patient rooms. Pavilion plans were eliminated in favor of tighter configurations, often in a T shape (as Goldwater had proposed) with elevators at the intersection. Double-loaded corridors were

[58] Public Health Service, *Design and Construction of General Hospitals*, 6-39.
[59] Verderber and Fine, 22.
[60] Medical office buildings and nurses' residence and training facilities were not a focus of the publication.

standard by the early 1950s; the first racetrack plan was found as early as July 1953,[61] and the racetrack configuration was common by 1960.

Renderings of the selected facilities uniformly depicted Modernist buildings. The degree of stylization varied, but most were unpretentious with fairly simple, regulated exteriors. The following description was applied to a hundred-bed hospital in Vandalia, Illinois, but it could have applied to any of the featured buildings: "[The client] wanted the building to imply efficiency, neatness, orderliness, and authentic beauty…."[62]

The hospitals listed in this section were selected on the basis of relevance (general hospitals of roughly 100 – 300 beds) and the readability of the microfilm.

In January 1953, Albert Kahn Associated Architects' **Sinai Hospital (Detroit)** was selected as Modern Hospital of the Month (Figures 15-16).[63] As with many of the larger hospitals featured, this facility was designed to be built in stages. After the construction of the main hospital (at right in the architect's model in Figure 16, below), the plan was to build "an outpatient department, additional patients' wings, a school of nursing and dormitory, convalescent building, auditorium and physicians' building."[64]

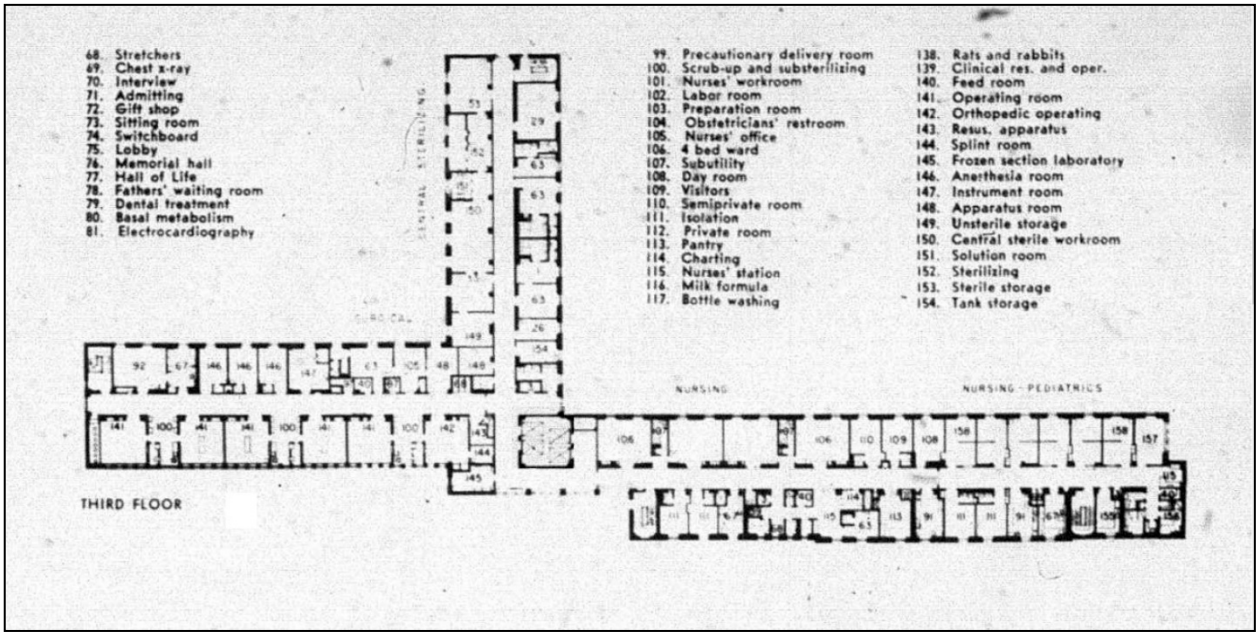


Figure 15: The third floor of Albert Kahn Associated Architects' Sinai Hospital in Detroit. Source: Sol King, ``The Acutely Ill Come First,'' *Modern Hospital* v. 80 #1 (January 1953), 67.

[61] Joe Kreycik and J. Frazer Smith, "Cubed Construction Gives More for Less," *Modern Hospital* v. 81 #1 (July 1953). 55. See Figure 13, above, for an example of the "racetrack" plan.
[62] Morris Hertel and Herman Smith, "The County Got the Most for its Money," *Modern Hospital* v. 81 #2 (August 1953). 55.
[63] Sol King, "The Acutely Ill Come First," *Modern Hospital* v. 80 #1 (January 1953), 67-71.
[64] Ibid, 67.

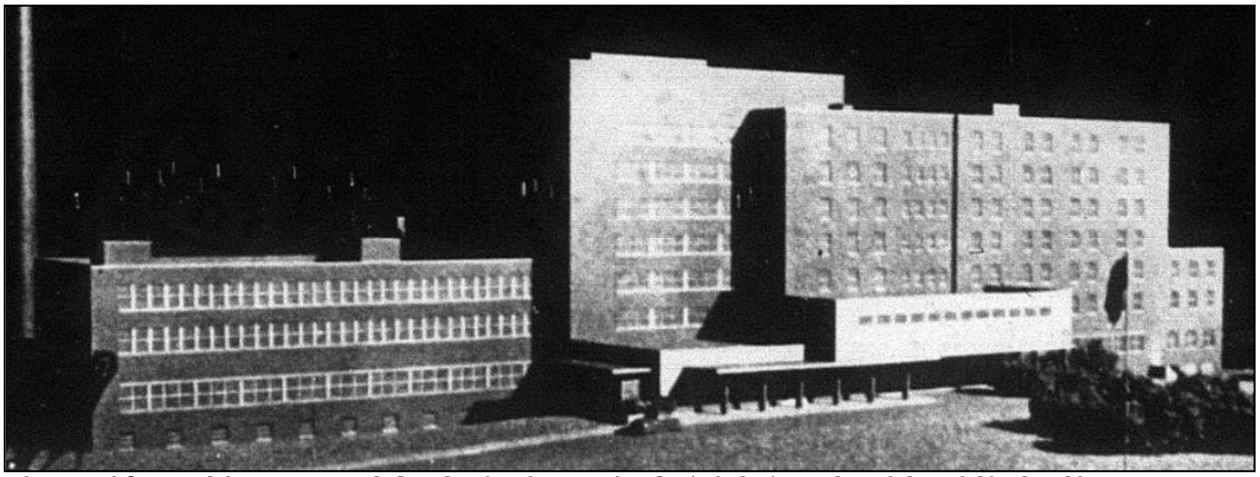


Figure 16: Architect's model of Sinai Hospital (right) and unidentified adjacent building, possibly the future nursing school or physicians' office building.

Rockford Memorial Hospital (Rockford, Illinois) was Modern Hospital of the Month in September, 1953.[65] Perkins & Will's first hospital design conformed to industry standards by placing private and semi-private rooms on double-loaded corridors in a T-configuration. The Modern exterior, arranged into bays by vertical members, appears to be somewhat similar to the exterior of Wischmeyer's later additions to the St. Luke's complex.

Figure 17: Rockford Memorial Hospital under construction. Source: *Modern Hospital* v. 81 #3 (September 1953), 62.

[65] Fred C. Kramer, "A Fresh Solution to a Basic Problem," *Modern Hospital* v. 81 #3 (September 1953), 61 - 63.

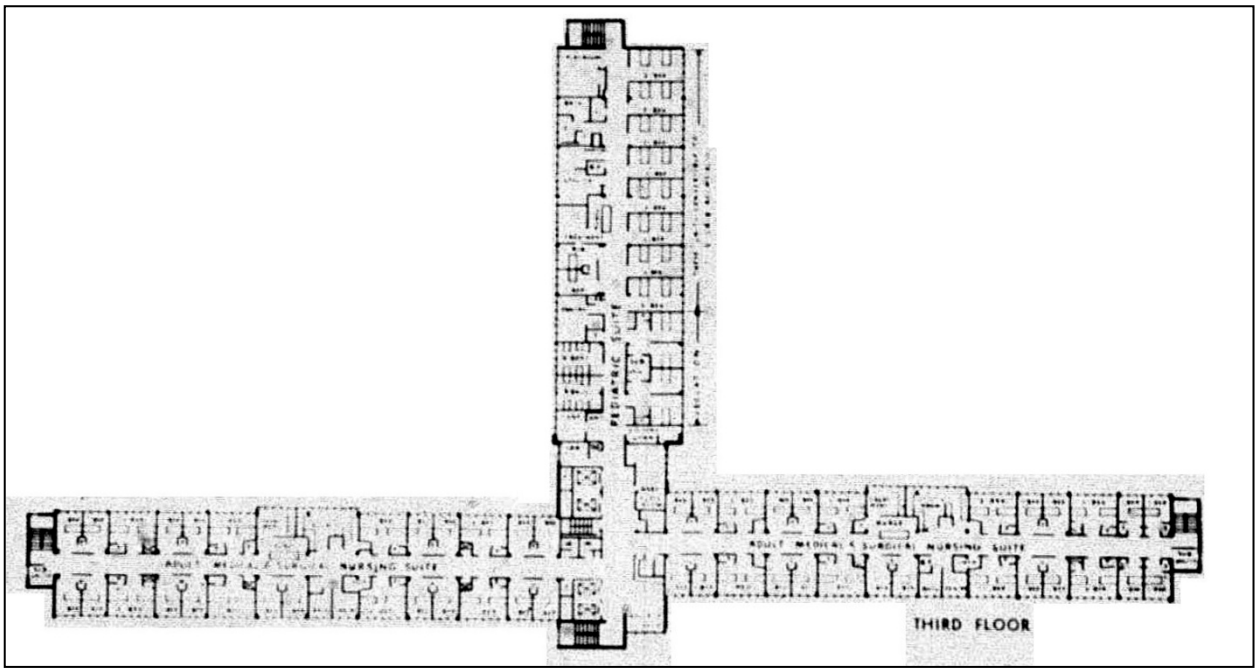


Figure 18: Perkins & Will's Rockford Memorial Hospital, Rockford, Illinois. Plan of patient floor shows the use of private and semi-private rooms on double-loaded corridors. The T-shaped plan became very common after World War II. Source: *Modern Hospital* v. 81 #3 (September 1953), 61.

St. Michael's Hospital (Milwaukee) was featured in the January 1960 issue of *Modern Hospital*.[66] By this time, at least half of the hospitals shown were built with racetrack (or partial racetrack) plans. St. Michael's illustrates that state-of-the-art plans still featured double-loaded corridors when that plan made sense for the needs of the institution. With 220 beds, the institution was comparable in size to St. Luke's.

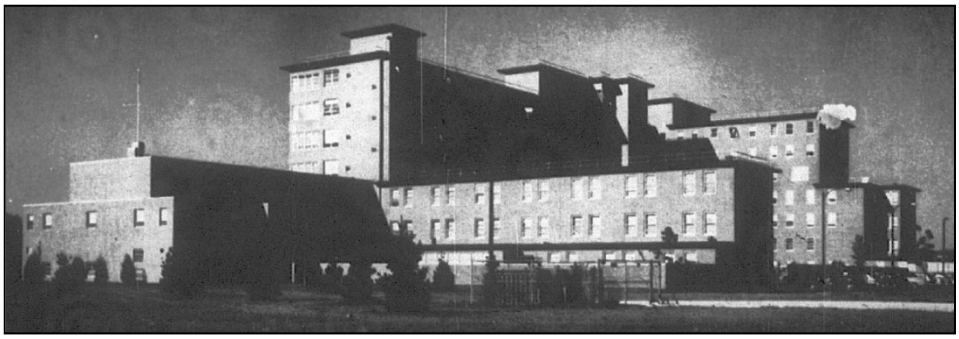


Figure 19: St. Michael's (Milwaukee) shortly after completion. Source: *Modern Hospital*, January 1960.

[66] "Services That Go Together Are Together on This Plan," *Modern Hospital* v. 94 #1 (January 1960), 69-74.

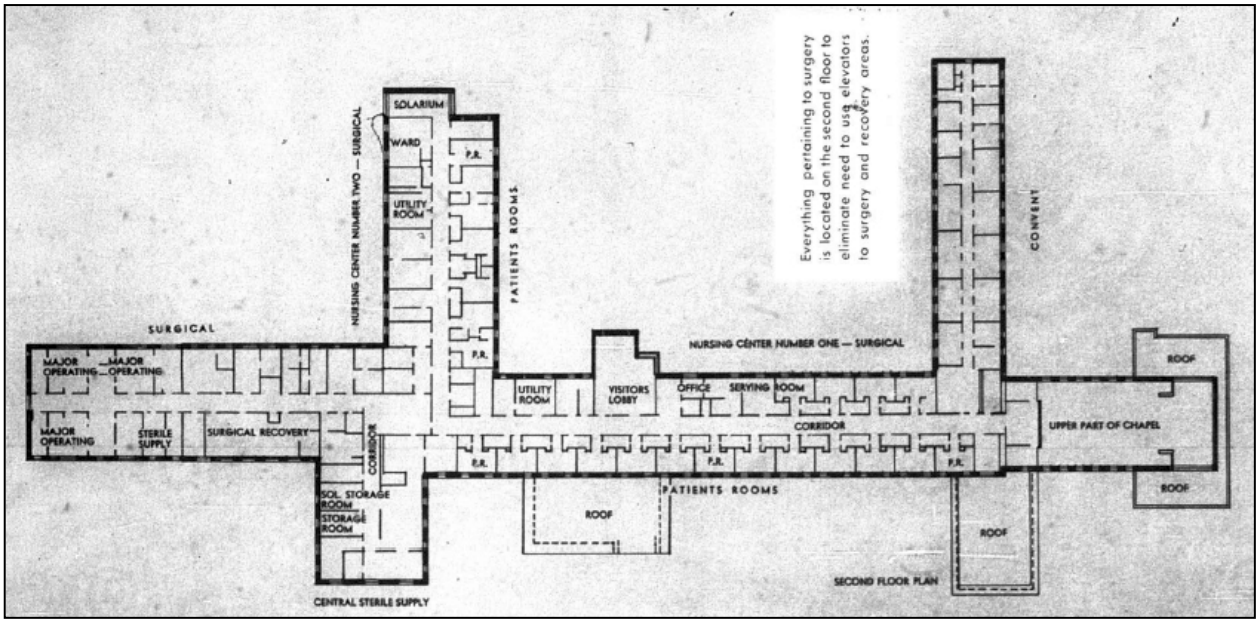


Figure 20: St. Michael's surgical floor plan. Source: *Modern Hospital*, January 1960.

In August, 1960, **Oklahoma Baptist Memorial Hospital (Oklahoma City)** was the featured hospital.[67] This 200-bed institution was designed with a shallow Y-shaped plan which is essentially similar to the T-plans that were common. The short stem of the Y includes elevators and services, separating these functions from the patient rooms as suggested by Goldwater.

Figure 21: Oklahoma Baptist Memorial Hospital shortly after completion. Source: *Modern Hospital*, August 1960.

[67] "This Plan was Prepackaged for Expansion," *Modern Hospital* v. 5 #2 (August 1960), 95-97.

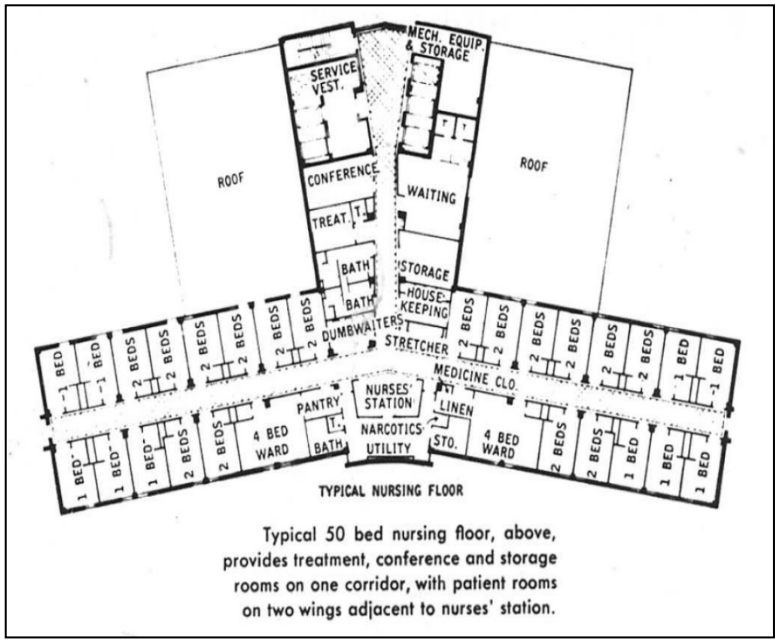


Figure 22: Oklahoma Baptist Memorial Hospital typical nursing floor plan. Source: *Modern Hospital*, August 1960.

St. Luke's Responds to National Post-WWII Health Care Challenges

The MacLean Report

Discussion of expansion at St. Luke's Hospital began well before the first step in its postwar modernization program began. In 1928, St. Luke's received a $1.5 million bequest from Cora Liggett Fowler in honor of her late husband John Fowler. The funds were to be used for "a clinic and research laboratory." [68]

It is not presently known why, with such a large sum in the bank, St. Luke's did not pursue construction right away. There is no doubt that if the desired building had been constructed in 1928, it would have been very different from the wing that Mrs. Fowler's gift supported in the 1950s. Mention of expansion at St. Luke's does not seem to reappear in the press until after World War II. By the beginning of 1948, the intention to double the hospital's capacity was expressed.[69]

In 1949, after more than 80 years as an Episcopalian institution, a major change in governance transformed it into St. Luke's Episcopalian-Presbyterian Hospital. When the merger was finalized, the hospital's new board sought the expertise of one of the field's best-known professionals. To evaluate the current state and future needs of the hospital, they engaged a team headed by Dr. Basil Clarendon MacLean. MacLean, who held both a medical degree from McGill University and a Masters of Public

[68] "Scientific Notes and News," *Science,* V. 68, #1754, August 10,1928. 133.
[69] "Presbyterians Vote to Help Sponsor St. Luke's Hospital," *St. Louis Star-Times,* January 24, 1948.

Health from Johns Hopkins, was a former president of the American Hospital Association. He would later leave his post as director of Strong Memorial Hospital in Rochester to become New York City's Commissioner of Hospitals (1954-1957), and later served as president of the Blue Cross Association (1957-1960).[70]

The study, presented in 1949, examined existing facilities and presented recommendations in line with the new best practices in medicine and patient care.[71] Many of its proposals anticipated the *Architectural Forum* article quoted above. These are some of its major observations and recommendations:

- The use of antibiotics had shortened average stays and caused "a noticeable shift from surgery to medicine." With such improvements, the authors found it inevitable that the patient care would increasingly take place in offices rather than in beds. Such developments were used to argue against a major expansion in bed capacity in favor of other types of expansion.[72]
- The report called for a larger and more modern pharmacy with a storage vault for potentially hazardous supplies such as oxygen and ether.[73]
- It was also observed that the small department of physiotherapy (physical therapy) was closed at the time of the report. Noting the growing importance of rehabilitation in a hospital setting, the authors argued for a "well-equipped, centrally located Physiotherapy Department."[74]
- The report noted the need to provide better provisions for ambulatory patients, stating that "this feature deserves emphasis at this time as hospitals adjust to shifting demands in hospital care."[75]
- The report stated that the hospital's laboratory was well-equipped, but much too small and very poorly located. A "modern centrally located laboratory" was recommended.[76]
- The X-Ray department met with almost no objection, with its modern equipment and a good location. [77]
- The layout of the eight operating rooms was considered "archaic." Recommendations for a modern and efficient operating suite were accompanied by a call for a Central Surgical Supply which would take the place of more remote supply rooms (and the corridors where other supplies were stored).[78]
- The report noted that St. Luke's offered private rooms, semi-private rooms, and wards. In line with current best practices, it was recommended that general wards be replaced with smaller rooms.[79]

[70] "Dr. M'Lean is Dead; Headed Blue Cross," *New York Times*, February 16, 1963. 8.
[71] Basil C. MacLean, William B. Woods and Charles M. Royle, "St. Luke's Hospital: A Study of Need." St. Louis, n.p., 1949.
[72] Ibid. 41.
[73] Ibid. 32.
[74] Ibid. 27.
[75] Ibid. 46-47.
[76] Ibid. 29.
[77] Ibid.
[78] Ibid. 30-31.
[79] Ibid. 14-15.

While the traditional measure of a hospital had been the number of patient beds, the report pointed out that the trends were moving away from this metric. The authors wrote that "it seems inevitable that, with improved technique, more patients will be treated on their feet in offices and fewer on their backs in hospital beds."[80] With 184 beds already available, the authors strongly recommended adding space for all of the new and expanding functions described above before significantly increasing that number. "A logical plan," they wrote, "would provide for a chassis large enough to carry present and future patient loads before increasing markedly the number of beds."[81]

With so much new floor space required and so much modernization needed, the report considered potential new locations for St. Luke's. It was determined that the substantial investment already been made on Delmar would be lost if the institution moved. Furthermore, most of its patients came from the area of the hospital, indicating that no move was necessary (Figure 23).[82]

By the time the report was published, talk about a new wing apparently focused on a site east of the main hospital (probably the site of the southeast parking lot), or on a lot to the north of the main building. In line with current best practices, the report discouraged such a lateral expansion, claiming that "the operating cost of a dispersed hospital is greater and the operating efficiency less than in a more compact institution."[83] Here in the report is the first suggestion that the next addition should stretch across the

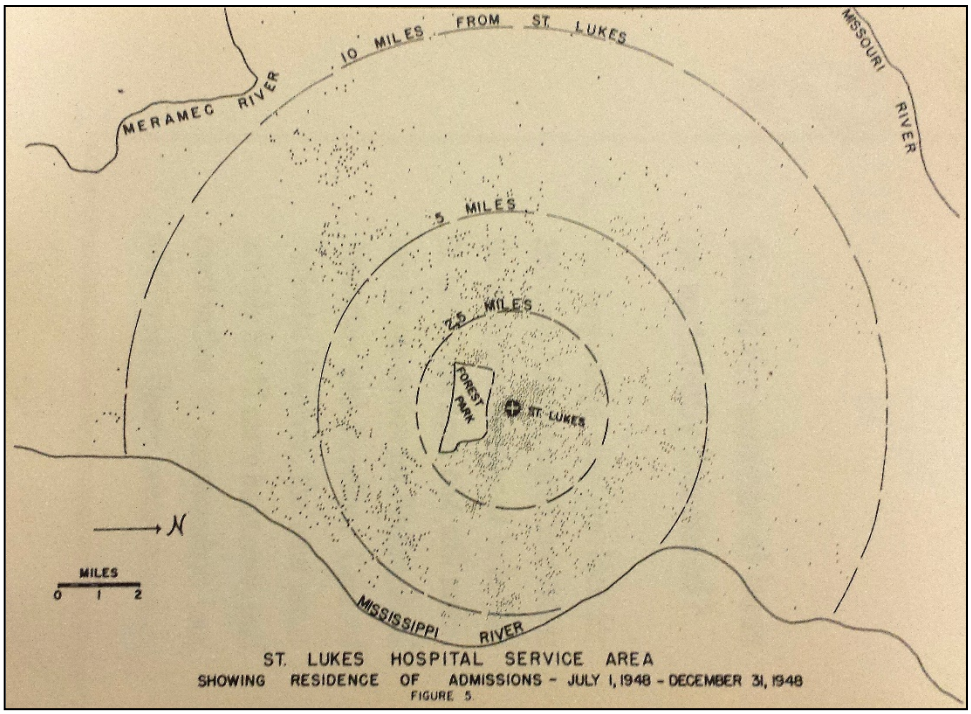


Figure 23: St. Luke's service area, 1948. Original from ``St. Luke's Hospital: A Study of Need;'' reprinted in "The 'Spirit of St. Luke's' " c. 1950.

[80] Ibid. 41-42.
[81] Ibid. 42.
[82] Ibid. 39.
[83] Ibid. 43.

south elevation of the facility, connecting all three wings of the original hospital.[84] This was also the first mention of building the new wing to permit "vertical expansion."[85]

Building for the Future at St. Luke's: First Steps

By 1950, the hospital had accepted most of the major recommendations of the report. The flagship project was the announcement of a major new building to be placed across the façade at the Delmar Boulevard elevation to connect the three existing wings, as the planning report had suggested (see building 1A in Figure 1). The goal, one publication reported, was "to develop the institution in the lines of the current trend, which is away from the small private hospital and toward the medical center."[86] While fundraising for this project was underway, the hospital quietly added a new single-story Service Building to consolidate the existing cafeteria, maintenance shops, and a "new modern kitchen" (Building 5A in Figure 1).[87] Permitted in 1951, the Service Building was designed by the partnership of two firms: LaBeaume and Unland (the successor to the firm that had designed the 1917 Nurses' Home and the 1929 Boiler House), and Wischmeyer & Lorenz.

The same combination of firms was selected to design the new Fowler Wing. Dr. Basil C. MacLean was retained as a consultant on the project.

As design of the Fowler Wing was underway, St. Luke's management had developed an ambitious plan that included remodeling of the east and center wings of the hospital, two stages of construction on the Fowler Wing, a new nurses' home and academic building, and finally remodeling of the west wing. This plan was followed in stages, although a new addition (the North Wing) was ultimately constructed in place of the west wing renovations. "Step 1," according to a 1960 newspaper article, included the construction of the Service Building and the first section of the Fowler Wing.[88]

Pre-planning for the Fowler Wing was linked to fundraising to augment the existing Fowler bequest. It was originally anticipated that the first phase of building would be four stories, with two to four additional stories to be added as need dictated and financing permitted. Funds were still being solicited in 1953 to start with six stories instead of four.

[84] Ibid. 47.
[85] Ibid. 44.
[86] "Plans for Enlarging St. Luke's Hospital," *St. Louis Post-Dispatch,* December 30 1948*;* "St. Luke's to Expand, Modernize," *St. Louis Commerce,* May 17, 1950.
[87] "Partnership in Service to Humanity: The Thrilling Story of the Co-operation of Presbyterians and Episcopalians in the Management and Expansion of St. Luke's Hospital Saint Louis" brochure, c. 1953.
[88] Sue Ann Wood, "Hospital Completes 5th Step in its Expansion Program," *St. Louis Globe-Democrat,* August 14, 1960.

Figure 24: The 1904 hospital is prepared for the Fowler Wing addition, 1954. Source: St. Luke's Hospital photo files.

In the final plan, the hospital compromised with five stories. The new building was permitted in 1954, and the first patients moved into second floor rooms in 1955 (before the upper stories were completed). The Fowler wing fulfilled promises for new x-ray rooms, laboratories, and administration offices – all called for in the 1949 assessment.[89] A state-of-the art surgical division opened in February 1956 on the fourth floor. It featured six general operating rooms as well as a series of highly specialized spaces which had not existed in older facilities: a fracture room, a room for ear, nose and throat cases, a cystopic room, a recovery room and quarters for the long-awaited central sterile supply department.[90] New patient rooms would increase capacity to 233 adult beds and room for 40 infants.

[89] "Cornerstone Laid for Hospital Wing," *St. Louis Post-Dispatch*, November 8 1954, 3C.
[90] "Hospital to Open New Unit," *St. Louis Post-Dispatch*, February 5 1956. 9A

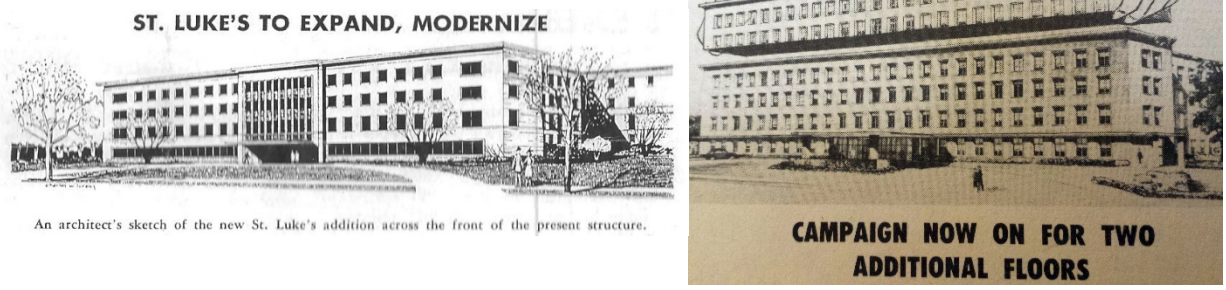


Figure 25: Left: An initial drawing published in 1950 is signed ``Charles W. Lorenz.'' Source: ``St. Luke's to Expand, Modernize,'' *St. Louis Commerce Magazine*, September 1950. Right: This rendering is close to the final design. A campaign sought funds to construct six stories instead of four; the first section of the Fowler Wing would ultimately be built with five stories. Source: "Visiting Ours" newsletter for Employees of St. Luke's Hospital. v. 3 no. 4, September, 1953. 1.

Even before the new space became available, work began on modernization of the east and center wings of the 1904 building. In 1954, the lower story of the east building was renovated into a clinic and outpatient department. In April 1956, a plan was underway to convert the next two stories into "modern single bedroom accommodations" with telephones, private restroom facilities, communication with the nursing station, and state-of-the-art piped-in oxygen.[91] Later in the year, the top story was converted into a modern laboratory suite. For the first time, all of the separate lab units (including Chemistry and Bacteriology) were brought into the same department.[92] Modernization in 1957 included the completion of a new patient wing on the second floor of the center pavilion (adding new patient rooms, nurses' station, treatment room and other facilities).[93]

At the end of 1955, as the new maternity ward in the Fowler Wing took shape, an adjacent area in the central pavilion was adapted to serve as the new nursery.[94] In 1956, the former administration area in the center pavilion was converted into a three-bed room and two five-bed wards.[95]

Throughout the course of remodeling and new additions, advances in technology drove changes in plans. For example, in 1957 an opportunity arose to acquire the latest in radiation treatments, a cobalt therapy facility. This new form of treatment was both more effective and more targeted than older techniques, and St. Luke's claimed to be the first hospital in St. Louis to acquire the extensive (and expensive)

[91] "St. Luke's to Modernize Two Floors in Old Wing," St. Louis Post-Dispatch, April 8, 1956. 1G,12G.
[92] "Visiting Ours" newsletter for Employees of St. Luke's Hospital. v. 3 no. 4, November 1956. 3.
[93] "Visiting Ours" January 1957.
[94] "St. Luke's Lets New Contracts," *St. Louis Post-Dispatch*, December 4, 1955. 1B.
[95] "New Hospital Facilities," *St. Louis Post-Dispatch*, December 30, 1956. 8B.

apparatus necessary for its use. A special room was built for the machine at ground level between the west and center wings of the original hospital.[96]

Other technological changes may have been more prosaic but were just as important to the operation of a hospital. In 1958, the laundry room installed machines that automatically extracted linens from the dryer, ironed them, and folded them. Up-to-date dishwashing machines were installed, and the maintenance department constructed "a time-saving and most efficient venetian blind washer." In the same year, the emergency room waiting area was expanded and the maternity ward was air conditioned.[97]

The addition of the Fowler Wing, with accompanying renovations in the original hospital, fulfilled the 1949 plan's recommendation to focus expansion away from patient beds in favor of supporting facilities, dictated by advances in medicine. The first floor was probably almost entirely used for administration and visitor services, the third floor was the new maternity unit, and the new surgical unit was on the fourth floor (allowing the laboratory unit to expand into the former surgical suite). Patient beds on the second and fifth floors replaced those that were lost in the original building. The net result was a great increase in space for medical equipment and procedures, and a much more modest gain in patient beds (see Figure 26, below).

[96] "Visiting Ours," March 1957 and November 1957. The enriched Cobalt-60 was purchased in small "wafers" from the United States Atomic Energy Commission.
[97] "Visiting Ours," January 1959.

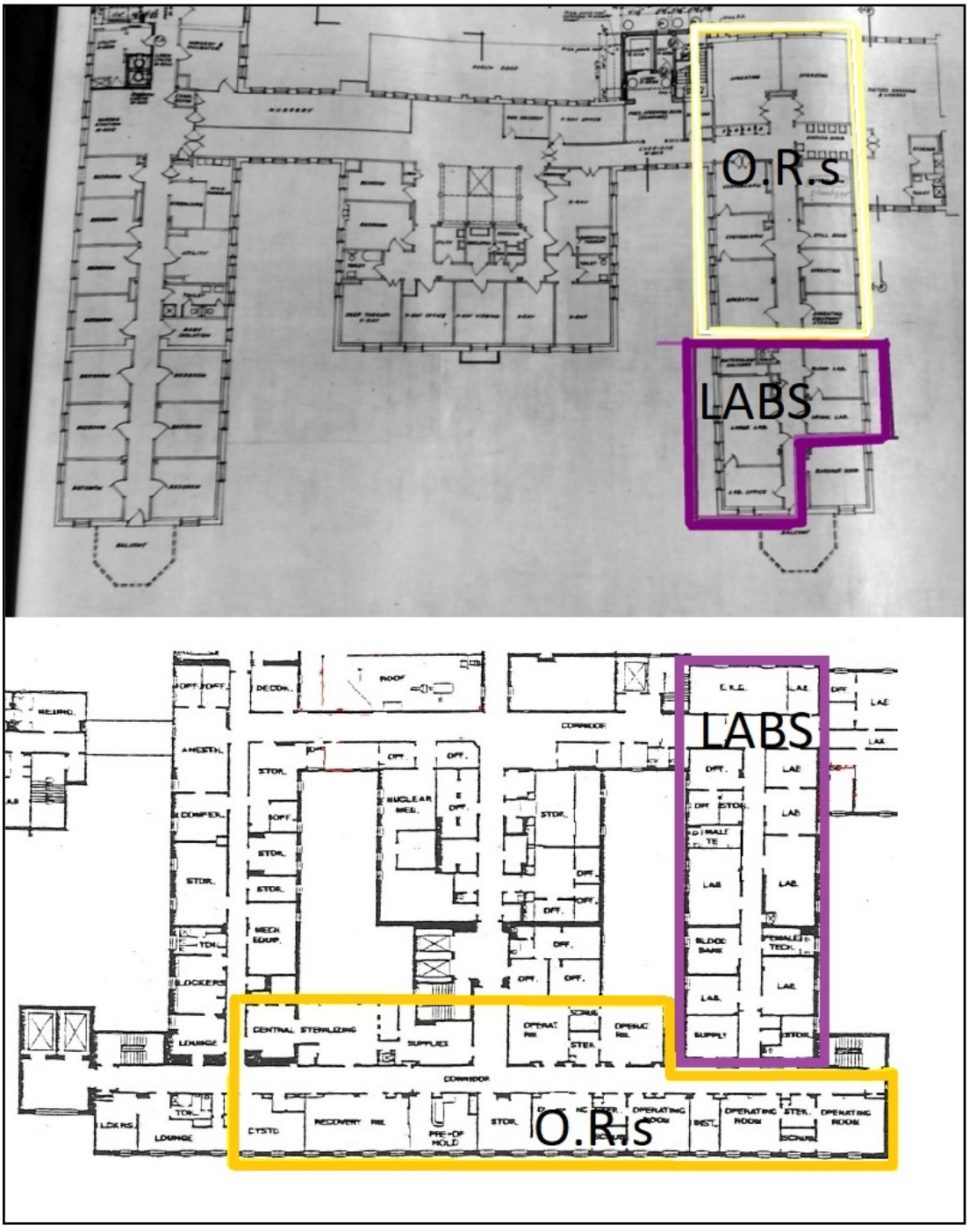


Figure 26: Before and after on the 4th floor: Lab and Operating Room space in the old hospital vs new hospital. Operating rooms and laboratories had been crowded into the same wing prior to the addition. Source: As-built floor plans dated 1951 and 1991.

The construction of the Fowler Wing illustrates both the conformity to and deviation from Hill-Burton architectural guidelines. The Public Health Service had always made a point of explaining that individual designs might vary from the published prototypes, and in this case it appears that the architects trusted their own expertise enough to make variations. Patient rooms exceeded the recommended square footage but not all rooms met the recommended ratio of window area to floor space. Corridors and stairs are wider than the minimum standard, but stair railings are slightly lower. On most floors, wainscots are not made of "easily cleanable materials" (the exception being the 4th floor, which was the surgical division).[98] Doors into patient rooms were slightly wider than the recommended width. The Fowler Wing's main stair (Figure 27) is four inches wider than the federal guidelines suggest.

Figure 27: The Fowler Wing's main stair. Photo: Lynn Josse, March 2017.

[98] Public Health Service, *Design and Construction of General Hospitals,* 48, 53.

New Nurses' Facilities *(Building 5B and 4 in Figure 1)*

Many smaller schools of nursing had closed during the Depression (when nurse supply exceeded demand and the expenses of small schools exceeded their income). Due to this and other factors, the number of nursing schools nationwide declined by more than a third in the two decades between 1926 and 1946 (from 2150 to 1300).[99] After World War II, a serious shortage of nurses resulted, meaning that the larger schools which remained after the Depression faced pressure to become even larger. During this period, St. Luke's remained a desirable school with very high standards. In 1949, 12 of the top 20 scorers in the State Examinations were graduates of St. Luke's.[100]

Figure 28: Nurses' Home. The bridge between the hospital and nurses' home, left, connects the two units while providing visual separation. Dormitory rooms (right) are largely intact.

The 1949 MacLean report did not make in-depth recommendations for the School of Nursing. The report suggested continuation of the three-year diploma course at current enrollment levels, despite the observation that, at 135 students, it was somewhat smaller than most economically viable nursing schools.[101] The Hill-Burton guidelines went so far as to state that smaller hospitals should not operate schools of nursing.[102]

The guidelines instructed that a nurses' home should be separate from the hospital but not too distant, connected by a passageway or tunnel (Figure 28).[103] It was noted that single rooms were desirable,

[99] Shyrock, 208-209.
[100] "The 'Spirit of St. Luke's" booklet promoting expansion, c. 1950.
[101] Ibid. 37-38.
[102] Public Health Service, *Design and Construction of General Hospitals,* 80. St. Luke's was a large general hospital, although not one of the largest.
[103] Public Health Service, *Design and Construction of General Hospitals,* 79.

advice that was echoed in other publication even though they remained uncommon.[104] The guidelines went so far as to suggest that "A sun deck is an attractive feature for a nurses' residence."[105]

In 1958, plans were announced for the construction of a 6-story nurses' dormitory and an attached 2-story building for classrooms and laboratories. The new buildings would vastly improve school facilities and expand housing capacity from 120 students to 200.[106] It would include lounges and kitchenettes at each floor, and, in accordance with the federal recommendation, was to feature a sun deck.[107]

The new buildings were dedicated in October 1960.[108] The expansion was in line with a nationwide trend: in 1966, the hospital's administrator noted that 70 percent of the nation's professional nurses had graduated from schools affiliated with hospitals.[109] The professionalization of the nursing profession, the new degrees and options associated with it, and the need for expensive equipment for training resulted in a further consolidation of educational institutions. Even as the number of trained nurses burgeoned, the number of professional schools of nursing in St. Louis had shrunk to 13 in 1967 (down from roughly 20 at the start of the Depression).[110]

Figure 29: Gymnasium and classroom in the Nurses' Academic Building (location shown in Figure 2). Photos by Lynn Josse March 2017.

Expanding the Fowler Wing

[104] Wheeler noted in 1964 that single rooms for nurses were ideal but "most nurses' residences do provide for two girls per room…" (287).
[105] Public Health Service, *Design and Construction of General Hospitals,* 80.
[106] "Visiting Ours" newsletter, September 1958. The MacLean report of 1949 had placed the number of nurses at 135; the 135 nurses stayed in a residence designed for 120. These were also the first improvements at the hospital attributed to Kenneth Wischmeyer outside of the partnership of Wischmeyer & Lorenz and without the participation of LaBeaume & Unland.
[107] "St. Luke's to Add Two Buildings," *St. Louis Post-Dispatch,* February 1, 1959. During the course of this nomination, the roof was not inspected to see if the sun deck is evident.
[108] "Dedication at St. Luke's Hospital" Photograph, *St. Louis Post-Dispatch*, October 3, 1960.
[109] Annual Report, 1966.
[110] *The Journal of the American Hospital Association*, Volume 41 (1967).

The next step in St. Luke's modernization program was the addition of three more floors to the front Fowler Wing, also designed by Wischmeyer and begun in 1961.[111] Most of the added space was for patient rooms, including planned "premium facilities" on the top floor (such as rooms with full baths).[112] [113]

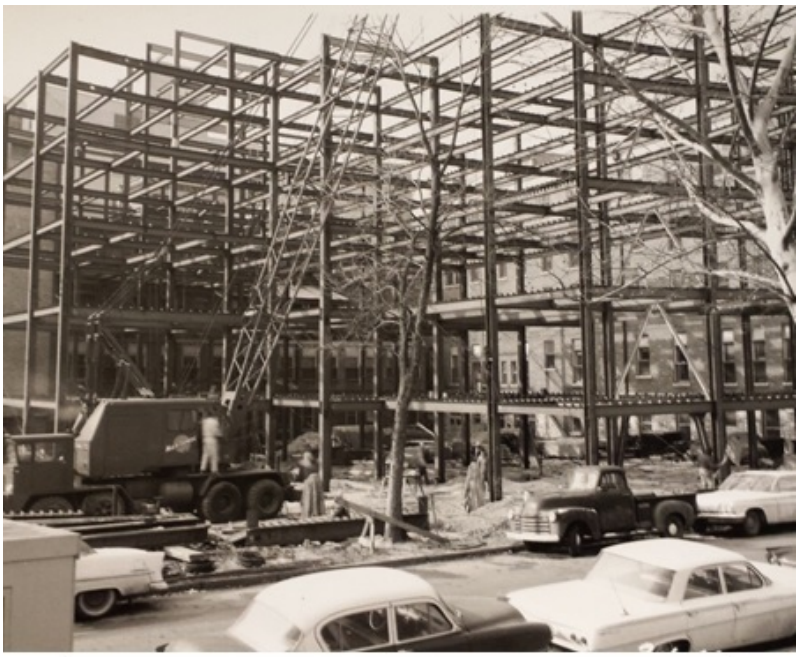
Figure 30: the differentiation of old and new brick above the fifth story is clear in this 1961 photo of the upper story addition to the Fowler Wing. Source: St. Luke's Hospital photo files.

The North Wing Addition *(Building 1D in Figure 1)*

By the time the Fowler addition was completed in 1962, after "exhaustive architectural and engineering studies,"[114] the program for the next step had changed. Instead of remodeling the 1913 West Wing, it was determined that it was more practical to construct a new building. The first plan for the North Wing (also designed by Wischmeyer) was to build three stories over the original parking lot. The final building included the open-air parking lot at the first story plus four additional stories.[115]

[111] "St. Luke's to Add Three More Floors," *St. Louis Post-Dispatch*, June 19, 1960; Annual Report 1961.
[112] "St. Luke's to Add Three More Floors."
[113] Annual Report 1961.
[114] Annual Report 1961. No specifics of the exhaustive studies are given.
[115] Annual Report 1961; "St. Luke's Hospital Plans $2 Million Wing," *St. Louis Globe-Democrat*, August 29, 1962.

The North Wing included a new maternity wing, new pediatric unit, and a new and greatly expanded x-ray unit. It is a sign of the rapid expansion in demand and technology that it was felt that both the maternity ward and x-ray lab needed replacement, given that they had both been part of the Fowler Wing expansion less than a decade earlier. The patient floors of the North Wing (2, 3, and 5) were built with a modified racetrack plan (see Figure 31, below). With this piece of the puzzle in place, virtually all patient rooms were moved out of the original section of the hospital.



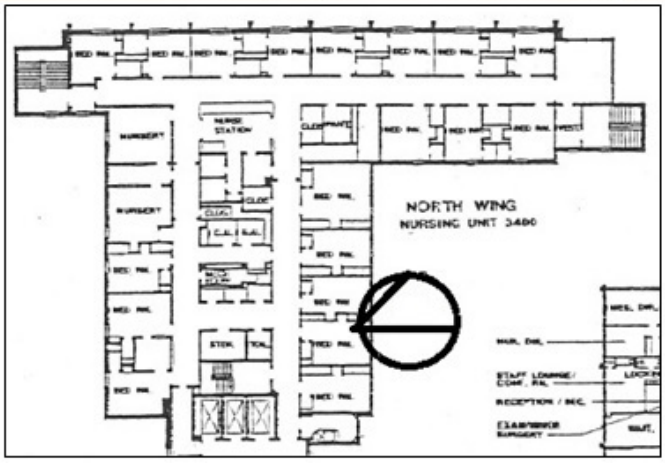


Figure 31:
Top: North Wing under construction, 1963. This photo clearly shows the grid which allowed an open floor plan, a key to the flexibility required for reorganizations to keep up with changing needs. Source: St. Luke's Hospital photo files.
Bottom: 3rd floor plan found on site, dated c. 1991, showing modified racetrack plan. Arrow refers to patient room image, Figure 33.

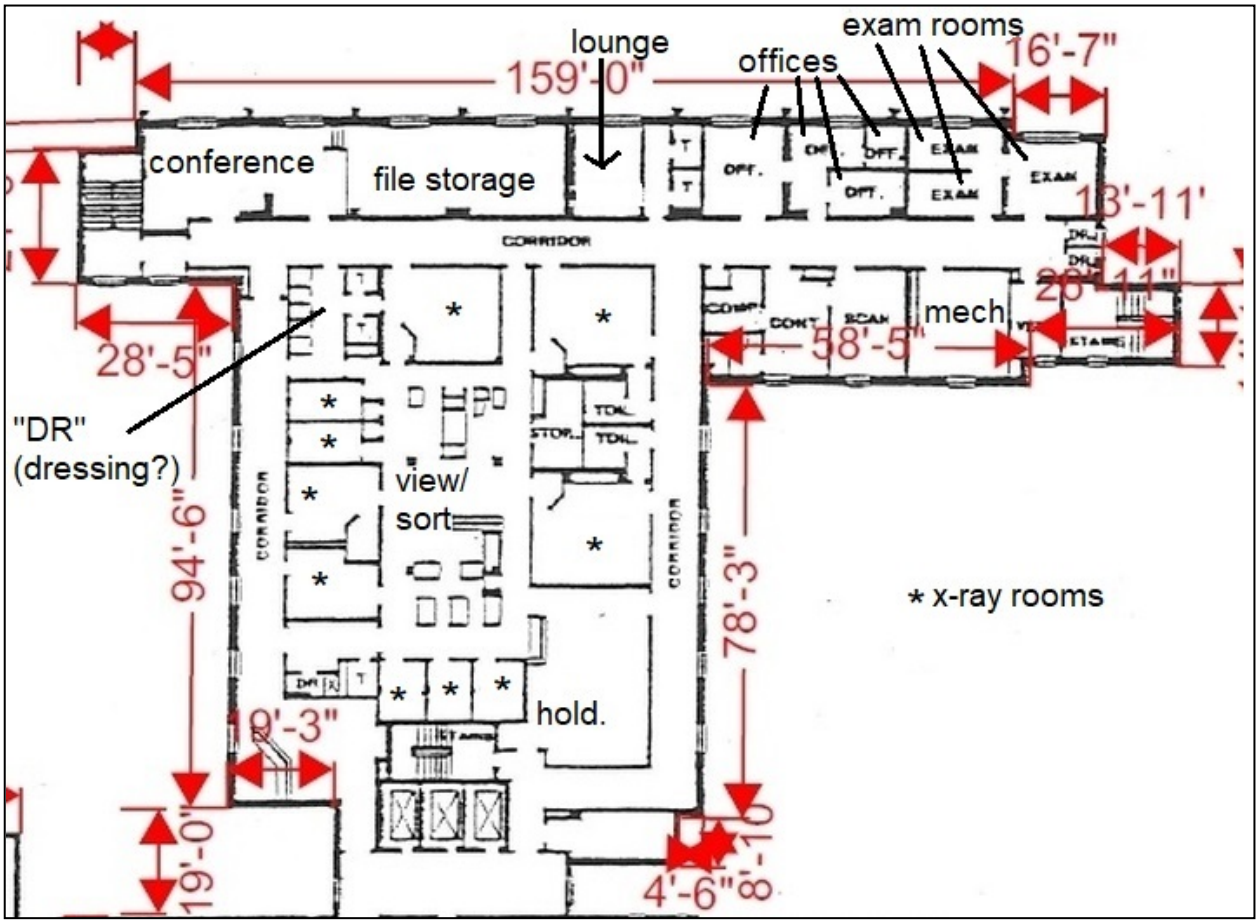


Figure 32: New radiology department, 4th floor, North Wing. Source: c. 1991 as-built found on site, measurements added by Forum Studio and labels by Lynn Josse.

The final piece of the program was the demolition of the top half of the 1913 wing and the complete modernization of the remaining two stories. The major feature of the renovation was the creation of an "intensive-coronary care unit with electronic monitoring equipment and a heart-lung installation."[116] This is an excellent example of what the hospital administrator in 1961 called "the effect of many forces at work to make even more complex the operational problems of the future."[117] The heart-lung installation, or cardiopulmonary bypass pump, had not even been prototyped when the 1949 needs report set the direction for future development at St. Luke's. The electronic monitoring equipment had been developed by NASA for use on astronauts and was the only such installation in St. Louis.[118]

[116] "St. Luke's Episcopal-Presbyterian Hospital" brochure, dated March 15, 1968.
[117] Annual Report, 1960.
[118] Nell Gross, "St. Luke's Hospital," *St. Louis Globe Democrat*, April 12, 1966, p 8.

Figure 33: North Building patient room, left, and telephone booths. Federal guidelines did not go so far as to lay out specifications for phone booths… but they do mention that there *should* be phone booths (*Design and Construction of General Hospitals*, 49), Photos by Elyse McBride, March 2017.

Medical Office Building *(Building 2 in Figure 1)*

The final new construction project in the series was a medical office building. The 1949 report had mentioned this as an amenity demanded by doctors at other hospitals, although there had been no call for one at St. Luke's as yet.[119] As early as 1956, the Board of Directors presented a proposal for a medical office building to the hospital staff. Board President Eugene F. Williams, Jr., believed that "the new building would be one of the most significant developments in St. Louis hospital history." He lauded its "convenience of geographical location, easy and direct access to all the facilities of the hospital proper, and ample parking" as great conveniences for doctors as well as patients.[120]

[119] MacLean et al, 47.
[120] "Medical Building is Proposed," *St. Louis Post-Dispatch*, June 17, 1956. 1I. The rendering in the newspaper was designed by Wells & Wells. The final building was designed by Kenneth E. Wischmeyer, whose association with the hospital began with the 1951 Services Building. Wischmeyer's firm designed the St. Luke's West Hospital in St. Louis County, and his association with the institution lasted until his retirement in the 1980s. Beginning with early projects at St. Luke's, by the 1970s his firm became one of the region's most prominent designers of hospitals, including additions as well as new facilities.

Figure 35: Medical Office Building lobby. Photo by Lynn Josse, March 2017.

It wasn't until 1962 that plans for the medical office building were finally announced. Begun in 1963, the building was part of a growing trend towards moving the offices of hospital-affiliated doctors on site. The 1962 Annual report called it "of great significance in the long-term development of St. Luke's." The section of the building reserved for medical offices (all but the top floor) was self-supporting through rents collected. The top story was used for a major expansion of the laboratory units. Like the x-ray and maternity wards, the laboratory division had grown so much during this period that it required moving twice.[121]

Figure 34: The cover of the 1966 Annual Report refers to "a year of Rededication" because, as the administrator explained, it was the first time in recent memory that no buildings were going up or down. The expansion envisioned in the early 1950s was finally complete. Source: 1966 Annual Report.

[121] Annual Report 1962.

A feature story on St. Luke's Hospital in 1966 described the progress of the previous 15 years as "explosive." "To keep pace with increased population[122] and the many new scientific discoveries, St. Luke's had to grow and modernize. Reluctant to leave its mid-city location… St. Luke's spent more than $12,500,000 that left only the chapel untouched. The project doubled the hospital's size, raised bed capacity from 180 to 380, and provided the institution with the latest space-age equipment to detect and treat disease."[123]

St. Luke's as an example of the postwar hospital type

When the program of construction was completed in 1965, St. Luke's was (and remains today) an excellent example of the postwar hospital building type. Looking at the defining characteristics established above, this is how St. Luke's meets them:

- *Elimination of the previously favored pavilion design in favor of more consolidated blocks*: St. Luke's, like other early 20th century hospitals, had essentially followed the pavilion plan (open wards projecting from a spine of services). The addition of the Fowler Wing beginning in 1954 was specifically designed to create a more compact footprint for the hospital as it expanded.[124]

- Proportionately less space devoted to patient beds and more to other services such as laboratory, pharmacy, and physical therapy:

    - A very rough estimate (based on imperfect available data) indicates that perhaps 5/7 or 2/3 of the three main stories in use before the expansion were dedicated to bed space and related functions. As-built plans from 1951[125] show that perhaps half of the ground-level basement was used as storage; it is assumed that this was also the location of the kitchen. This service area is not counted toward the total.

    - After the expansion, it appears that the amount of floor space given over to patient rooms and related services was less than ½. Although a total of five

[122] While the population of the City of St. Louis saw its first decline between 1950 and 1960 (from nearly 857,000 to 750,000), the County saw an explosive 75% population growth. The St. Luke's Annual Report of 1975 noted that St. Luke's East served the City of St. Louis as well as St. Louis County and parts of nearby Southern Illinois. "Population of St. Louis City & County, and Missouri 1820 – 2010," http://www.genealogybranches.com/stlouispopulation.html , accessed March 12, 2017. St. Luke's Hospital Annual Report, 1975.
[123] Ibid.
[124] "St. Luke's Hospital: A Study of Need." St. Louis, n.p., 1949. 43, 69. In line with the most recent thinking, the report notes on page 43 that "the operating cost of a dispersed hospital is greater and the operating efficiency less than in a more compact institution."
[125] While it is not clear that the 1951 plans reflect the original disposition of all space in the hospital, it is reasonable to assume that kitchen services had always been in the lowest level of the facilities.

stories in the Fowler Wing and three stories in the North Wing were nursing units, almost no space for patient rooms is found in the main building. The entire fourth floor was used for surgery (in the Fowler Wing), radiology (in the north Wing), and laboratories and other functions (in the original hospital's top floor). Many of these spaces appear to remain intact, at least in plan. The Services Building (which housed the kitchen, storage, and maintenance) is not included in the calculation.

- The elimination of the multi-bed ward in favor of private and semi-private rooms, and the addition of private toilets in individual patient rooms.
    - The original hospital had open wards on the second floor (considered the main story at that time) and private and/or semi-private rooms (with shared toilets) on the floor above it. In the expansion project, it was noted that a few six-bed rooms would be part of the plan, but large wards were completely eliminated.
    - Eventually almost every patient room was part of a nursing unit in the Fowler or North Wing, all of which had private toilets.

- The use of double-loaded corridors in nursing units, evolving by the mid-1960s into racetrack plans
    - The narrow footprint of the Fowler Wing lent itself to the double-loaded corridor plan. There appears to have been flexibility in the siting of the North Wing, and the space available made a modified version of the racetrack work well.

- Doctors' offices integrated into the design of the hospital or into a separate building connected to the hospital
    - The five-story Medical Office Building was constructed beginning in 1963 as a separate building. It is attached to the main hospital with an internal access corridor at three of the levels.

- Where nursing schools are present, larger schools rather than smaller ones:
    - St. Luke's School of Nursing had been limited to 132 students by the capacity of the Nurses' Home; with the new 1959-60 facilities, the hospital was able to take a total of 200 students. This move was designed to coincide with the expanding needs of the hospital, and was considered a better number in terms of financial viability

- Use of Modern forms and detailing:
    - The design of the Fowler Wing (1954, attributed to LaBeaume & Upland in partnership with Wischmeyer & Lorenz), the new front of the hospital, rejects historical forms and embellishment. The clean lines and undecorated wall

surfaces are in keeping with the industry's preference for Modernism. The exterior surfaces are blond brick. The material itself is reassuringly traditional, while the blond hue was considered very modern in the 1950s.

- The Nurses' Home (1959), Medical Office Building (1963), and North Wing (1962) were all designed by Kenneth E. Wischmeyer. All three use the blond brick of the Fowler Wing as surface material, but the main elevations are separated by vertical concrete elements which define the bays. This device may have been inspired by the similar concrete piers at Mies van der Rohe's Promontory Apartments in Chicago; completed in 1949, this is sometimes considered the first International Style skyscraper (at 22 stories), and was widely published and known.[126] In 1950, *Architectural Forum* published a hospital design which used a similar device for exterior organization (although with horizontal bands of windows).

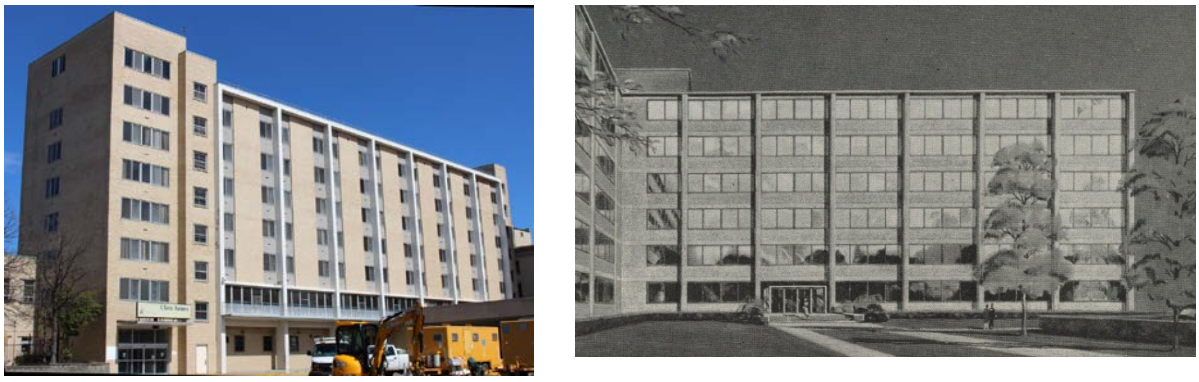


Figure 36: Left: Kenneth Wischmeyer's Nurses' Home for St. Luke's Hospital, 1959. Photo by Lynn Josse. Right: Pace Associates' 1950 drawing for hospital at University of Illinois. Source: ''Modular Hospital approaches tomorrow's requirements with new amenities,'' *Architectural Forum* v. 92, February 1950. 122-125.

Postscript: Later History

By the early 1970s, a regional body had been formed to approve the distribution of hospital services throughout the St. Louis area. St. Luke's received permission to build a West County campus on the condition that it continue to operate the City facility, which became known as "St. Luke's East." Residents of the West End (an underserved community) had "expressed fear that St. Luke's will leave," according to one article.[127] The hospital responded with a series of public meetings to assess

[126] Anthony P. Amarose, Pao-Chi Chang, and Alfred Swanson, "Promontory Apartments" nomination to NRHP, listed 11/21/1996. Posted at http://gis.hpa.state.il.us/pdfs/201012.pdf, accessed 3/1/2017.
[127] Jerome P. Curry, "St. Luke's Announces New Health Care Program," *St. Louis Post-Dispatch*, January 24, 1971.

neighborhood needs. "St. Luke's had promised," another report stated, "…to keep its city location – on which it has spent $15 million in recent years – going, and not to abandon the city as others have done."[128] The hospital agreed to add more services for the low-income population of the area. A professional advisory committee was formed; its representative stated that the committee "was formed to keep St. Luke's where it is and to keep it involved in the Inner City."[129] Despite these assurances, the Delmar hospital was closed in 1984, as the high percentage of low-income clients made the facility financially untenable.

St. Luke's sold the property to Charter Hospital, which operated there briefly. In June 1985, Charter sold the hospital to the City of St. Louis. Within two weeks, St. Louis closed City Hospital and moved all of its facilities to the old St. Luke's. St. Louis County Hospital also closed, and the complex became St. Louis Regional Medical Center, which served both city and county.[130] This institution was replaced in 1997 by ConnectCare, which continued to serve low-income patients.[131] Under ConnectCare a new emergency room was added in 1990 [132] (1E on Figure 1). ConnectCare filed for bankruptcy in 2013.[133] The complex is now completely vacant.

Comparison with other St. Louis Hospitals

St. Luke's was by no means the only hospital to embark on major expansion in the 1950s. In 1954, the *St. Louis Globe-Democrat* ran an article touting the citywide "huge hospital expansion," heralding roughly $30,000,000 in improvements and new construction underway in well over a dozen different institutions.[134] Most of these projects, however took place at institutions that have either been demolished or have lost integrity due to subsequent alterations.

Major projects of the late 1940s and 1950s, along with an assessment of their current ability to convey the period's significant advances in hospital service, are as follows. This list covers all of the major hospitals in the City of St. Louis that were either constructed or expanded during the period of significance.

Demolished:

- **Deaconess Hospital** underwent major expansion in the mid-1950s, notably a $2.3 million wing dedicated in 1956; the entire hospital has recently been demolished.[135]

[128] Marguerite Shepard, "West County Site Is Approved for 2nd St. Luke's Hospital," *St. Louis Globe-Democrat*, January 21, 1971.
[129] Curry.
[130] Margaret Gillerman, "County Enters into Hospital Contract," *St. Louis Post-Dispatch*, October 29, 1985, 7B.
[131] Tommy Robertson and Tim O'Neill, "Regional Officially Under New Management," *St. Louis Post-Dispatch,* August 31, 1997. 1D.
[132] Robert Signor, "Nursing Costs Surprise Regional," *St. Louis Post-Dispatch*, August 1, 1990. 3A.
[133] Jim Doyle, "ConnectCare Files for Bankruptcy," *St. Louis Post-Dispatch,* December 18, 2013. A12.
[134] C. K. Boeschenstein, "Huge Hospital Expansion Program Enhancing City's Fame as Medical Center," *St. Louis Globe-Democrat*, May 11, 1954.
[135] "$2.3 Million Deaconess Hospital Addition to be Dedicated Today," *St. Louis Globe-Democrat,* October 21, 1956.

- **Missouri Baptist Hospital** built several major additions to their campus on North Taylor Avenue in the 1950s, but the hospital moved to St. Louis County in 1965 and the city location was later razed.[136]
- **The Masonic Home and Hospital**, located two blocks east of St. Luke's, laid the cornerstone for its new $2,225,000 facility in September, 1956. This building has been demolished.[137]
- Located behind Saint Louis University's Firmin Desloge Hospital (1930/1986), **Bethesda Hospital** was building or about to build a new hospital in 1954.[138] The site was absorbed into the St. Louis University medical center, and the 1950s buildings no longer exist.
- **Faith Hospital** opened at 3300 N. Kingshighway Boulevard in 1950. The hospital had planned a new building prior to World War II, but the war delayed design and construction. The final design by architects Joseph D. Murphy and Angelo Corrubia was a four-story postwar hospital building. The hospital expanded the building in 1956 before moving to St. Louis County in 1968. The building is no longer extant.

Extant:

- Groundbreaking for **Incarnate Word Hospital** took place in September, 1949.[139] The building still exists at 3545 Lafayette Avenue, although it is no longer in hospital use. The façade is intact, but major additions from the 1970s more than doubled the size of the original hospital.

Figure 37: Incarnate Word Hospital (now St. Louis University Salus Center). The façade (right) is intact, but 1970s additions more than doubled the size of the hospital before it was taken out of use. Photo by Lynn Josse, March 2017.

[136] Missouri Baptist Hospital web site: http://www.missouribaptist.org/AboutUs/History.aspx . Accessed 1/25/2017.
[137] "Masons Laying Hospital Cornerstone," *St. Louis Post-Dispatch*, September 26. 1956. 3D.
[138] Boeschenstein.
[139] "Ground Broken for $800,000 Hospital," *St. Louis Post-Dispatch,* September 27. 1949.

- **Cardinal Glennon Memorial Hospital for Children** (1465 S Grand Boulevard) was completed c. 1956.[140] It is not directly comparable to St. Luke's because it is a specialty hospital rather than a general hospital. The original building is largely intact (although the windows are replacements). Because of major additions at the façade (east elevation) and at the south, St. Luke's is a better example of a midcentury hospital.
- **Alexian Brothers Hospital** at 3933 S. Broadway had a major addition planned to begin in 1956.[141] This $1,250,000 project was later overshadowed by a 1979 addition, so most of the extant complex postdates the period of significance defined in this document. It remains in service as St. Alexius Hospital (south campus).[142]
- **DePaul Hospital** (NR 3/29/1983) was constructed in 1930, and is an excellent and intact example of the vertical trend of the later 1920s as well as the continuing use of historical styles. Like many institutions nationwide, DePaul had to delay some of its building plans until after the Depression and WWII. A long-anticipated Nurses' Home was begun in 1951 as an adjunct to the main hospital at 2415 N. Kingshighway Boulevard. The nurses' wing is substantial, but no other hospital buildings were added during this period. The hospital does not, therefore, represent the post-World-War II building type. [143]
- Buildings for two new hospitals, **Wohl** and **Renard Psychiatric**, along with a new building for the **Barnard Free Skin and Cancer Hospital** and a major addition to **Children's Hospital** were all developed in the mid-1950s in the Barnes Hospital campus on Kingshighway opposite Forest Park. A new $6.5 million medical center for **Jewish Hospital** was constructed nearby.[144] After the merger of these institutions and in part because of their affiliation with Washington University Medical School, they have all become part of an interconnected major medical center totaling roughly six city blocks. While individual sections of the hospital might remain architecturally significant, none of the midcentury buildings that were constructed as freestanding hospitals can be evaluated individually due to late additions and alterations that connect the full complex.
- **Christian Hospital** at 4411 North Newstead Avenue was a small institution. The first building on its present site was opened in 1925. Expansions into the early 1950s expanded the building, and a new wing was completed in 1961.[145] A major addition from 1983 doubled the size of the building, and because of this, most of the complex postdates the period of significance defined in this document. It is now operated as the Prince Hall Family Support Center.

[140] "Extensive Hospitals Expansion Done in '55; More Planned for '56," *St. Louis Post-Dispatch*, January 1, 1956.
[141] Ibid.
[142] The 1979 addition replaced an original wing which was the site of St. Louis' famous 1949 exorcism.
[143] Larry Marks and Esley Hamilton, "DePaul Hospital" NRHP Registration Form, listed 3/29/83.
[144] Boeschenstein.
[145] Christian Hospital web site, http://www.christianhospital.org/AboutUs/History.aspx , accessed 1/25/2017.

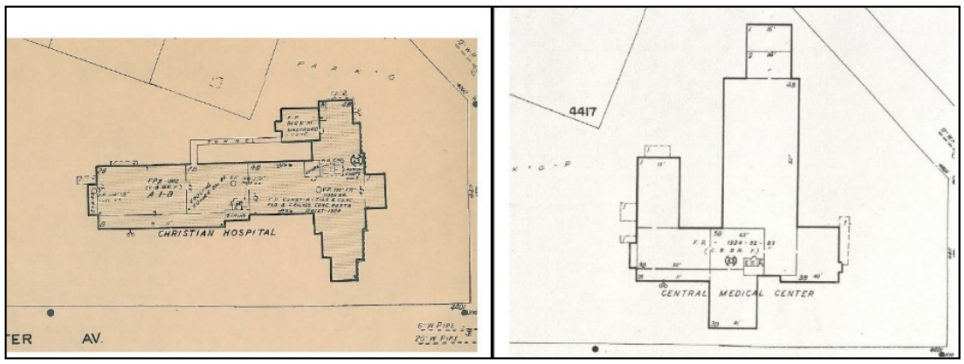


Figure 38: Christian Hospital comparison, 1964 and 1998, showing impact of 1983 addition. Source: Sanborn Map Company.

- **John Cochran VA Medical Cente**r opened in 1951.[146] Designed soon after World War II, the original buildings are generally intact, but have many later additions. The front entrance (at the right in Figure 39) has been reconfigured with a multistory projecting entrance pavilion between the two forward wings. The complex may be significant as a representation of Veterans Administration expansion in the decade after World War II.

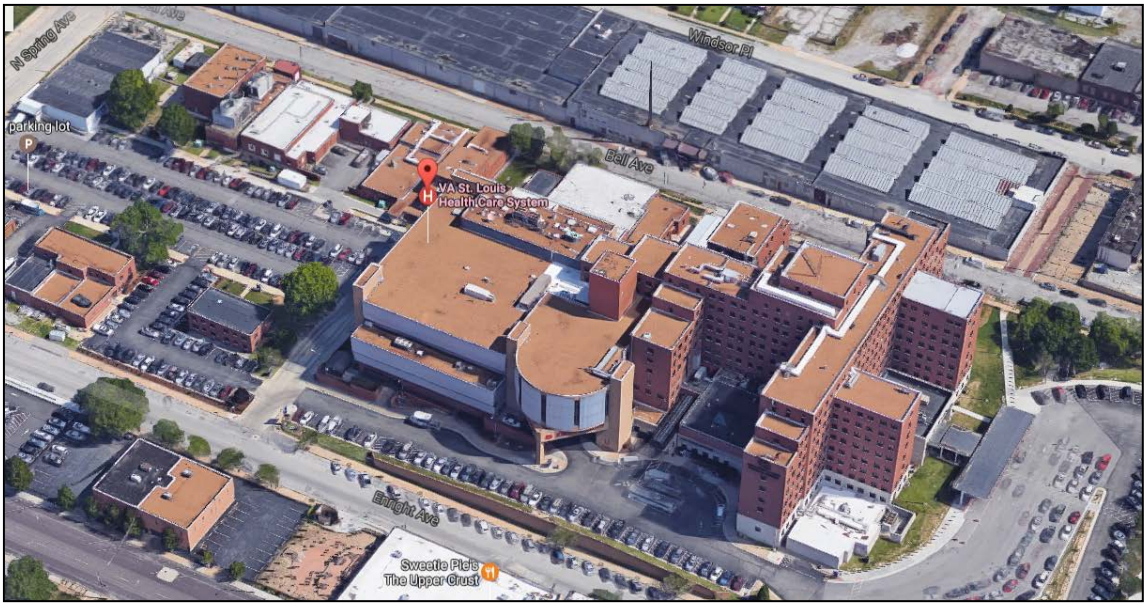


Figure 39: Aerial view of Cochran Medical Center.

[146] Norbury Wayman: History of St. Louis Neighborhoods: Grand Prairie. St. Louis Community Development Agency, c. 1975. https://www.stlouis-mo.gov/archive/neighborhood-histories-norbury-wayman/grand/institutions12.htm . Accessed 1/25/2017.

- **Lutheran Hospital** at 2639 Miami Street completed its new main building in 1955.[147] The complex remains in service as St. Alexius Hospital (north campus); the main hospital building is partially vacant, and part is used by the School of Nursing. This complex consists of separated buildings for the hospital, medical offices, and nursing school. Along with St. Luke's, it is one of the City's two hospital complexes that possesses the integrity to represent the postwar period.

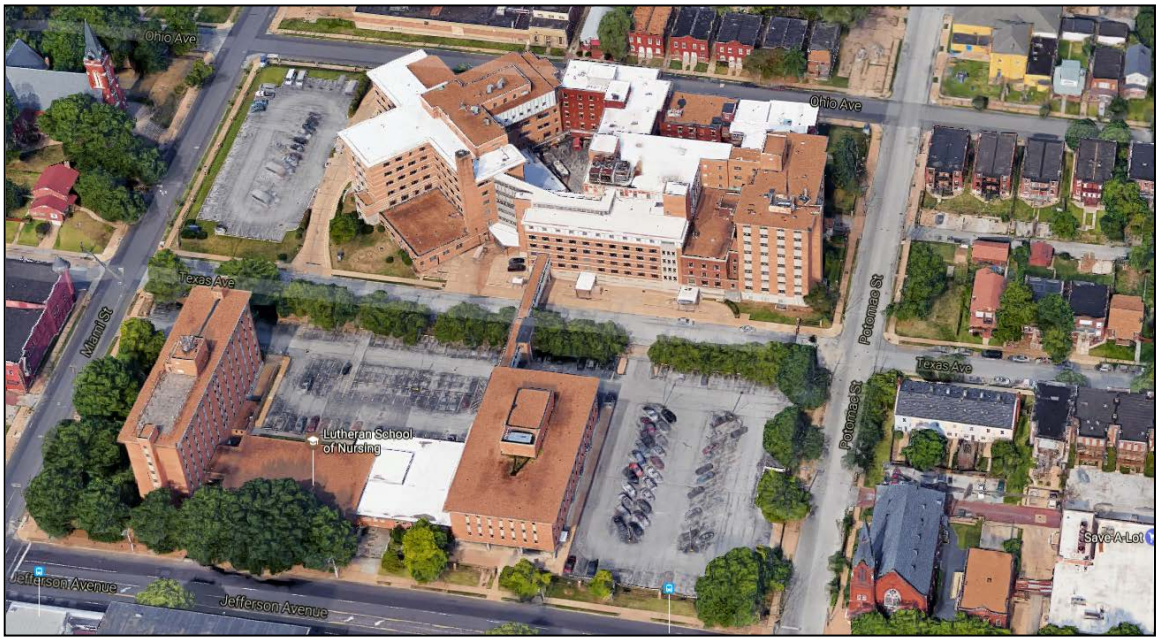


Figure 40: Lutheran Hospital aerial view (source: Google Maps)

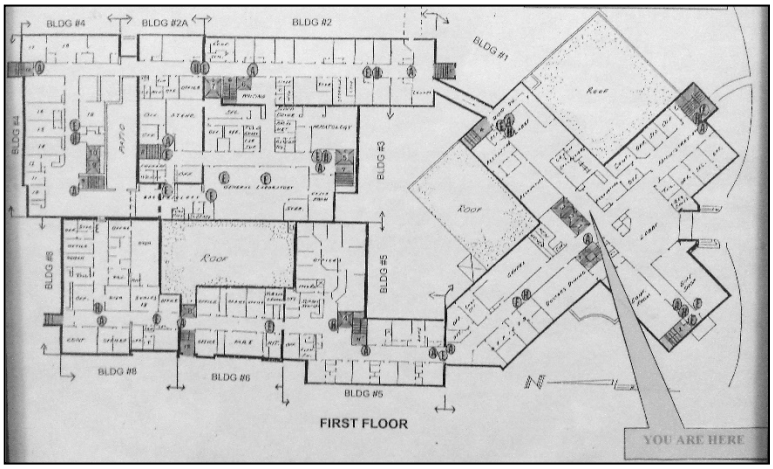


Figure 41: Lutheran Hospital first floor plan (on-site photo by Lynn Josse, September 2017).

[147] "Lutheran Hospital Dedication is Held," *St. Louis Post-Dispatch*, November 14, 1955.

Period of Significance

The period of significance is 1951-1965, starting with the first step of St. Luke's postwar modernization program and ending with the completion of the last step in 1965. Subsequent additions from 1968-1969 are considered noncontributing because they do not fall within the period of significance and were not part of the significant modernization program begun in the 1950s. The final addition, an expansion of the emergency room dating to 1990, was constructed after St. Luke's sold the building and is also noncontributing. In addition, other aspects of hospital design starting in the early 1960s might call for a separate context to evaluate projects initiated by mid-decade. A fascination with the possibilities of hospital floor plans led to experimentation in round, lobed, hexagonal, and other designs from the mid-60s forward.[148] The passage of Medicare/Medicaid in 1965 would also have significant ramifications on hospital design.

Conclusion

By the 1950s, the City of St. Louis was considered a major medical hub. [149] Most hospitals in the City underwent dramatic transformation during the 1950s and 1960s, but almost all of these have either been demolished or undergone major alterations and additions. St. Luke's is one of the city's only intact hospital complexes that embodies all of the major characteristics of post- World War II hospital design, including the use of consolidated blocks (instead of the previously favored pavilion design), more space devoted to services and less to patient beds; elimination of the multi-bed ward in favor of single and double patient rooms on double-loaded corridors (or, later, racetrack corridors); integrated private doctors' offices, usually in a related building; and the use of Modern forms and detailing. The period of significance, beginning with the construction of the first postwar building in 1951 and concluding with the last step of the modernization program in 1965, is represented by a complex of historically significant, intact buildings in good condition.

[148] This is evident in Todd Wheeler's *Hospital Design and Function* (New York: McGraw-Hill, 1964) and comes up in many sources of the 1970s.
[149] Boeschenstein, 1954.

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Verbal Boundary Description

The nominated property consists of the entirety of City Block 4549 in the City of St. Louis, Missouri, bounded to the south by Delmar Boulevard, to the east by Belt Avenue, to the north by Enright Avenue, and to the west by Clara Avenue, as shown in the figure below.

Boundary Justification

The nominated property includes all of the property purchased by St. Luke's Hospital in 1900 and 1901 in order to build at this location, as well as parcels to the west subsequently purchased for the expansion of the complex.

Latitude: 38.654202
Longitude: -90.280576

Site Map with Boundaries

Figure 42: Site plan with boundary line. Source: Bing maps.

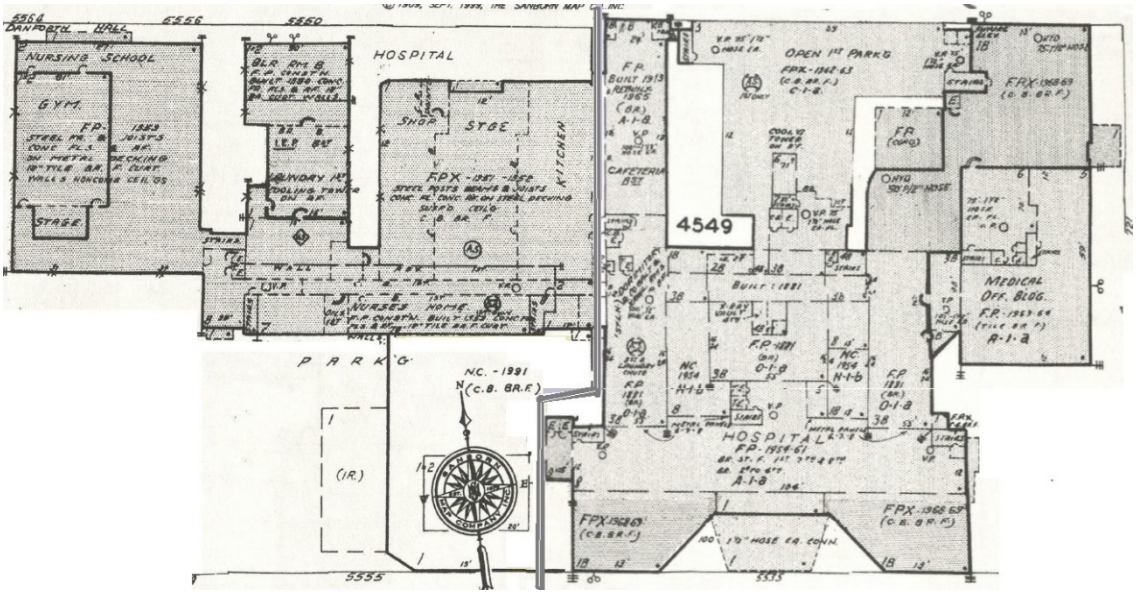

Figure 43: Left and right halves of 1998 Sanborn Map, with a line showing the division between the two pages. Source: Sanborn Map Company, 1998, v. 6, pp 98–99.

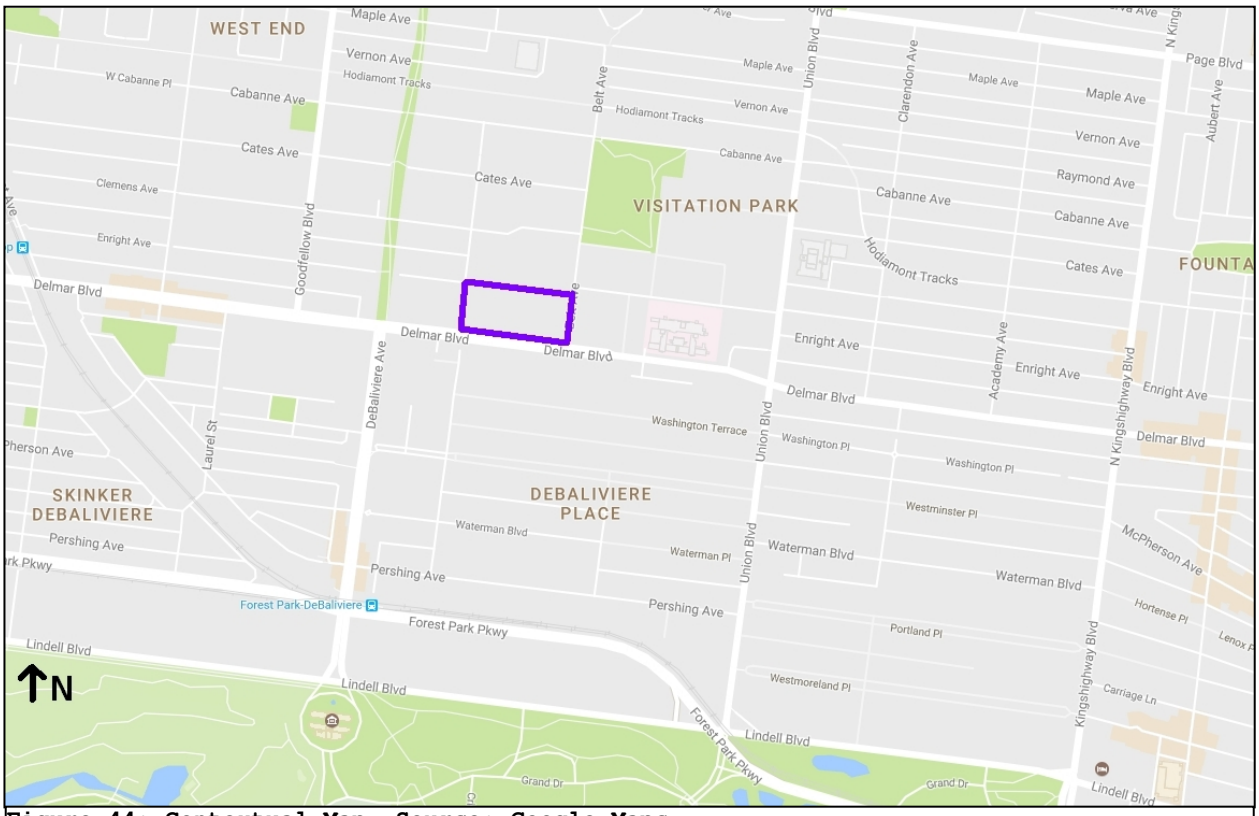

Figure 44: Contextual Map. Source: Google Maps


EXIT
ONLY


Belt Av
Saint Louis
ConnectCare
Belt Parking Lot
For 5535 Delmar BLVD.


Medical Office Building
EXIT ONLY


Belt Annex


Belt Annex


A51


RECEIVING


Clara Annex


Clara Annex
JCB
JCB


THE SMILEY
GERSHMAN
COMMERCIAL REAL ESTATE
Redevelopment Opportunity
314-862-9400