Contemporary Sanctuary:
Constructing an addition to Chestnut Methodist Church,
Newport News, VA

Sarah Louise Rosenthal

Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

Master of Architecture
In
Architecture

Steven R. Thompson, Chair
William U. Galloway
H. Scott Gartner

May 1, 2012
Blacksburg, Virginia

Keywords: Church Methodist Oculus Tent Amphorae Wall Brick
CONTEMPORARY SANCTUARY:
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ABSTRACT

The project offers a design for an addition to a Methodist Church in Newport News, Virginia. The proposal includes a new sanctuary, kitchen, meeting room, and entrance.

Axonometric inquiries, detailed sections, and explorations with 3-d models document the structural configuration and the inner sanctuary walls of the addition.

In addition to the overall design, further investigations include details for seating design, lighting schemes, and flooring specifications.
My work this year would not be possible without the encouragement, support, and energy of Professor Burt Rodriguez. He is an inspiration, and I thank him!

Much thanks also to my committee. Your patience, encouragement, and knowledge are invaluable.

I would like to dedicate this work to Fieldstone Methodist Church in Christiansburg, Virginia. The church members and their dedication to their program are an inspiration. I would also like to thank Pastor Larry Edmunds and Music Director Curtis Snider of Chestnut Memorial United Methodist Church in Newport News, Virginia for their help and support throughout the year.
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constructing an addition to Chestnut Methodist Church. Newport News, VA.

The institution of religion stems from the inspiration to question.

-Louis Kahn, “Talks with Students”
Existing Conditions
Chestnut Memorial United Methodist Church houses a United Methodist congregation in Newport News, Virginia. The pastor expressed an interest in a design for a new sanctuary. The existing sanctuary, though it is much loved by the traditional community, proves to be unsatisfactory for more modern styles of casual worship. The pastor finds the major flaw in Chestnut’s sanctuary to be the disconnection that the stage creates between those on the stage— the choir, musicians, and worship leader—and those watching in the pews beyond.

This thesis tells the story of creating a sanctuary form which both pays homage to the design standards of Chestnut Church, and also allows the designer to create a beautiful building.
The new sanctuary replaces the existing east wing of the church.
Early Ideas for the Sanctuary
In contrast to the linear symmetry of the existing sanctuary, the rotational symmetry of the new sanctuary grows from the structural necessities of the oculus. The tent-like design allows for an open floor plan, free of columns, so the community can adapt the worship space to any desired arrangement.
Early Ideas for the Structure
The Tent-like Structure supports the Oculus.
Early Ideas for the Wall
Section cut through where the old and new buildings meet, looking north.

Section cut through the new sanctuary outer wall, looking west.

Section cut through the inner sanctuary wall, looking west.
Plan looking down at the oculus (left) and section cut through the oculus (above).

Photo of interior of model.
III. Bricks / Wall / Reconsidered

FORM to DESIGN
The form of Roman amphorae comes from its container. Its shape allowed the Romans to maximize the amount of product held in a ship’s cargo hull. A curvilinear module, it becomes an ideal form to base a design for an interior curtain wall, which the congregation experiences as they enter the sanctuary.
An Early Version of the Plan
A paper model folds to become Amphorae-shaped.
Two computer versions of the Amphorae (above and left).
Cut-outs from the paper model become stained glass.
Cut-outs from the paper model become stained glass.
Scraps of amphorae cut-outs become a layered collage. The motif becomes tilework in the church.
Early version of the amphora wall in plan.

Final version of the amphora wall in plan.
A series of ties anchor a steel string chain of the amphorae bricks in place. This system allows for adjustments upon installation, as well as eases the accessibility of any modifications or repairs over time.
Final version of the amphorae wall in section looking north.
View of the entry hallway to the sanctuary.
Elevation looking west.
Elevation looking south.
Two perspectives approaching the new sanctuary from the main street.
Transverse section through existing and new sanctuary, looking north.
Flooring finishings throughout the new sanctuary
Sanctuary Seating Specifications

- Aluminum arms
- Molded glass-filled polypropylene
- Tubular steel frame
- Self-breaking compression caster
  shepherd caster PSC50223BK-U
A  Cable recieving fixture, stainless steel
B  Current-carrying hanging wire, brushed steel coating
C  GE Energy Smart® 20W A21 CFL Light Bulb, dimming
D  Rice paper globe, designed by Daniel Schipper
E  Structural frame, 1/8” steel wire
Church custodian Linwood Richardson helps the director of music ministries, Curtis Snider, set up the chairs for the 11 AM Sunday contemporary service. They anticipate many people will come, as it is Christmas Eve, so they use all the chairs. The architect designed the chairs specifically to be mobile and compact; they have rollers, are made with hollow and light tubular steel frames, and are stackable. They roll the stacks of chairs out from the storage walls located along the amphorae wall. The flooring patterns found in the sanctuary’s wood floors guide Linwood and Curtis to lay out the chairs evenly without needing any other measuring markers. Then they reconfigure the lights, using the pin anchors attached to the ten beams that intersect with the oculus, so that they hang in alignment with the communion table in the center of the sanctuary.
Administrative assistant to the church, Diane Barnes, steps out of the car, carrying a large tray of casserole for the evening potluck and Wednesday night service. When she reaches the new sanctuary entrance, her husband opens the right-side door, as it has the large handle. She steps into the vestibule, but can go no further because of the second set of doors. Her husband enters the vestibule as well, and then opens the left-hand door for her, as it also has the large handle. She enters into the church lobby. The casserole successfully arrives in the kitchen without spilling, thanks to Diane’s husband knowing which door is easiest to open in the vestibule.

The design challenges our automatic action of always opening the door on the same side.
Early Axon Diagram of entry
The new entrance offers an outdoor garden for small discussion groups.
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WORKS CITED

   
   In Kahn’s talks with his students, he often discusses how he worked with his clients. This research helped clarified the way in which I worked with Chestnut Church. Kahn’s notions of beauty, form, and design interested me throughout the project. I also applied his theories on form and design to help me organize the thesis book.

   
   This documentary on public television first introduced me to amphorae. Its visualization of how the Romans used the amphorae inspired me to apply similar principles in my design.

   
   This book was both a valuable visual reference to study how other architects convey their ideas through drawing, and also a wonderful source for quotations from these architects. The quote on page 50 by Hans Hollein is found in this book.

   
   Reading this blog inspired me to use Daviel Schipper’s design for a origami lampshade as the lighting fixtures in the new sanctuary.

*Google Maps was used for satellite photographs.*

*All other photographs by the author.*
Architecture is a spiritual order, realized through building.

–Hans Hollein, 1962