THE PRESENT IN THE PAST:
A NEW BUILDING IN HISTORIC SALEM, MASSACHUSETTS

by Peter Demarest Polhemus
BA, Goddard College, 1973

submitted in partial fulfillment of the requirements for the degree
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Signature of the author

Department of Architecture
16 February 1979

Certified by

John R. Myer, Thesis Supervisor
Professor of Architecture

Accepted by

Imre Halasz, Chairman
Departmental Committee for Graduate Students

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ABSTRACT

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Peter Polhemus

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This thesis addresses the problem of designing a new building in an historic urban fabric. It is the documentation of the author's working-method of designing a community center in historic Salem, Massachusetts.

The thesis begins with a brief history of the physical growth of Salem and a description of the city today. This is followed by the author's design approach to the general problem of a new building in an historic fabric. The design process is described with collages of sketches made during the design process. The final section is a set of architectural drawings which describe the building and an evaluation of the design process.

Thesis Supervisor

Jack Myer
Professor of Architecture
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INTRODUCTION

This thesis is actually a continuation of work begun in a design studio with Richard Tremaglio in the fall of 1977. The studio project was the redevelopment of several blocks in downtown Salem, Massachusetts. We followed the program of the Salem Redevelopment Board which called for sixty to ninety units of housing but added commercial and community facilities as we determined appropriate.

The studio was to a large degree an urban design project. The two and a half blocks which we developed had been leveled in the early part of the nineteen sixties during the "knock it down, build it up again" days of urban renewal. The area never was rebuilt, however, leaving a large hole in the fabric of the city. By the middle of the same decade, however, attitudes began to shift toward an awareness of the importance of the physical past in our built landscape. This happened from the local level up to the federal bureaucracy. One result of this change in attitude was the adoption of an overall plan for the town of Salem done by Collins Dutot of Philadelphia and financed by the Salem Corporation. This plan has to a large degree been implemented: it includes a pedestrian shopping street, curb and facade easements, lighting and signage guidelines and the strengthening of existing pedestrian paths through re-surfacing and planting. It is a plan which intro-
duces new pedestrian amenities while respecting and reinforcing the existing historic fabric at both an urban and architectural scale. What exists in Salem today is a quite skillfully renovated downtown area of several blocks with a mix of historic buildings adopted to commercial and office use and more recently constructed buildings. This fabric suddenly ends, however, and becomes parking lot in the region destroyed by urban renewal.

In our design studio we found the existing fabric, which I will describe in more detail later, unusually continuous on an urban scale and architecturally rich. We sought to strengthen it by continuing the existing patterns through the region which we developed.

In my thesis I have sought to apply a contextual approach, similar to the one which we used as a generator of urban design in the studio, to an architectural problem. I have also utilized additional design tools in the design process.

The architectural problem consists of a community center and an adjacent, to be developed, gymnasium both on a site along a pedestrian way in the several block region previously described. I choose this problem so that the design in itself would be a time-space experience and also be an extension of the urban fabric. What should new building in an eighteenth century fabric consist of? How can it respect its older neighbors and yet represent itself.
In a broader sense the thesis has been an opportunity to explore several design working methods within the context of a specific problem.
DESCRIPTION OF SALEM

Salem proper is a city of several different regions: the waterfront, the central business district and several residential pockets. In most American cities these regions are isolated captives of an unrelenting grid. In Salem, however, there is a degree of continuity and sequence of space which is reminiscent of some of its European forebears.

These qualities are a result of both the physical growth of the city and the urban renewal plan implemented by the Salem Corporation.

Physical Growth

(1620-1780)

Salem, as it was settled in 1620, consisted of a narrow peninsula of glacial outwash plain bounded on the north and south by tidal rivers. The land, free of bedrock and boulders was originally settled as farmland from the western end of what is now Essex Street to Salem neck. North and south of the peninsula lay the north fields and south fields, also excellent farmland. The land to the west, however, was higher rocky land and suitable only for pasture.

Given the excellent harbor created by the deep inlets of the North and South Rivers it was not long before the early settlers turned their attention towards the sea.
The Town Hall Square was erected in 1628 at a point where a narrow strip of land separated the North and South Rivers and provided two good harbors. By 1640, the sea represented the major means of livelihood for the people of Salem.

During this pre-revolutionary war period Salem was a patchwork of small shops intertwined with modest residences. This was to change as Salem became a prosperous seaport.

(1780-1820)
Post-revolutionary expansion brought hard cash into Salem and created a population explosion in the area. The period from 1783-1820 saw most of Salem's great houses erected. The Derby Street section assumed much of its present day appearance during this era.

It was also during this period that many of the high quality Federalist style buildings were constructed in the central part of the city.

(1820-1914)
Shipping began to decline in Salem after 1820 and with it the rapid growth of the previous era. Industry began to appear in the form of factories and tanneries and a new type of development commenced. The old central part of the city being filled, residential growth spread to the northfields and southfields respectively.

The establishment of the Naumkeag Stream Cotton Company created a section of South Salem that was built to rent to workers.
The building of the tanneries near the Peabody line created similar areas in North Salem. An even greater demand for rental property was created with the establishment of the shoe industry and the Derby Street section was rapidly filled with three decker housing built in the gardens of older houses.

This period also saw the railroads construct a series of trestles to enter Salem over its surrounding bodies of water. By 1839, the Eastern Railroad had constructed long bridges over the mill pond from Castle Hill to the center of the city and along the North River toward Beverly. The Salem and Lowell Railroad constructed a route to Peabody over the North River flats. The spaces on either side of these trestles was filled in as demand for railroad purposes grew until the original bodies of water were almost obliterated.

(1914-Present)
The great Salem fire of 1914 in combination with the regional late nineteenth century shift of industry from the Northeast to the South and Midwest essentially terminated Salem's era of industrial development. The fire destroyed much of the development of the industrial era but left in tact the central portions of Salem in which most of the architecture of the seventeenth century, pre-revolutionary and Federal period is located.

The modest growth between 1920-1970 was easily accommodated in the burnt-out sec-
tions of the city so that the central area was left relatively intact. These circumstances provided the Salem Redevelopment Corporation with a unique central area, characterized by buildings and entire streets of historic interest and charm, with which to work in formulating an urban renewal plan for the city. (1)

The Pattern of Streets

The filling in and development of a large part of the North River, South River and all of the mill pond has all but destroyed the sense that the central business district once had of being on a peninsula in close proximity to the water. The existing street pattern of Salem, however, does give strong clues as to orientation, direction and relation to the water. Essex Street, the old main street, is a continuous way in the east-west direction, running parallel with the North and South rivers, establishing the direction of the peninsula and bisecting it. Derby Street which runs along the south shore curving with what once was the shore line and Bridge Street on the north edge of Salem are also continuous in the predominant east-west direction. In the north-south direction only Washington Street, the main connection between north and south Salem, is unbroken. All other north-south streets are either short streets connecting east-west streets or they jog at some point. This is an effect of the primary east-west direction. This pattern not only suggests the predominant direction of the peninsula, but also makes 11
for some interesting places where a north-south street jogs or dead ends into a east-west street.

**Pedestrian Streets**

Perhaps the most exciting aspect of the Salem Redevelopment Corporation renovation is the pedestrian experience which now exists in Salem. It is possible to walk for a number of blocks in both directions in the Central Business District without encountering a motor vehicle. Essex Street, though continuous, has become a pedestrian shopping street from Washington Street to New Liberty Street with brick resurfacing and landscaped resting places. More exciting experientially is the pedestrian way running in the north-south direction from Front Street to Church Street. This pedestrian way ends on Church Street adjacent to the site. The site is more than the extension of the pedestrian way, however, for there are a number of other desire lines which move through the site. These are associated with the new parking complex on Church Street, the housing being built between Federal and Bridge Streets, and the proposed railroad station on Bridge Street.

The current plan is for the pedestrian way to move east just after the old town hall and connect with the waterfront in the renovated Pickering Wharf area.

As it exists today the continuity of the built landscape and sequence of open
space, in conjunction with the resurfacing, pedestrian ways and landscaping, makes for a unique American city.

Pedestrian Way looking toward Church Street
DESIGN APPROACH

In a city such as Salem, where there is a significant amount of quality historic building within a relatively continuous urban fabric it is our task as urban designers to understand that fabric and reinforce it where possible and appropriate. On an urban scale we must comprehend the spatial field, i.e., the pattern of street and passages and relationships of volumes of building to open space. On an architectural scale the dimensional characteristics of the built form, i.e., the height and width of buildings, the height of roof and cornice lines and the pattern of solid wall to opening, are important to grasp. With a combined understanding of these conditions, we can begin to design for a continuity of experience.

I do not mean to imply that a new structural framework, where use deems such an intervention appropriate, cannot be introduced into an historic urban area. By new structural framework I am referring to a structural organization or resulting building closure which includes the space and possibly the functions of several buildings. Such a framework is possible if internally it becomes an extension of the existing spatial field. In other words, it has the qualities and relationships of the existing urban fabric.

In his book Continuity and Change Alexander Papageorgiou defines what he consid-
ers two appropriate ways to intervene in an historic district on an architectural scale. The first is what he calls "harmonic integration." (2) It is designing a contemporary building with the spirit of the traditional buildings which surround it. The new building is usually constructed of up-to-date building materials and has an organization derived from its contemporary use. Where possible, however, window openings, cornice and roof lines and sometimes architectural forms are similar to those of its traditional neighbors. Successful buildings conceived in such a manner are usually well-integrated into their traditional surroundings and yet do not appear static. An example of this approach is Albert Cahan's infill apartment building on the Singel Canal in Amsterdam.

The second design attitude which Mr. Papa-georgiou describes is "harmonic contrast." (3) If successfully executed, buildings conceived as such are completely contemporary structures which strongly contrast yet exist in harmony with their historic neighbors. They may be of a very different architectural style, form, material and yet they are scaled to the existing fabric. An example of this approach is Le Corbusier's Carpenter Center at Harvard University.

I propose that these two design approaches be seen not as distinct choices but rather as a spectrum: the more conservative harmonic integration at one end and the more radical harmonic contrast at the other. In approaching architectural intervention
in an historic district one need not choose one but rather operate within the range covered by these attitudes. From which point on the spectrum one operates would depend upon the specifics of the problem. In my thesis, I have sought to utilize this range of responses in grappling with the specific design problem which I have described.
DESCRIPTION OF PROCESS

A number of design tools were employed throughout the design process. In the conceptual stage the most significant of these devices were:

SITE ANALYSIS: a traditional approach examining street patterns, vehicular and pedestrian traffic flows, sun path, important views and characteristics of existing buildings.

ANALOGUES: a design working method utilizing similar aspects of different references. For example, a climbing rose bush might be an analogue for a housing scheme, i.e., the main stem and branch system being the distribution and the flower clusters the housing units.

REFERENCES: a means of learning ways of approaching a particular architectural problem by looking at the manner in which others have solved the same problem. One might examine Le Corbusier's Villa Savoye as an example of building on a flat open plain. On a smaller scale Cert's brises-soleil give insight into how to solve a sun shading problem.

MASS-VOID: as it implies it is simply an examination of the relationship of building mass to open space in a particular fabric. This relationship has significant urban scale design
implications whether one is seeking to work in harmony with the context or in contrast to it.

ORIGIN-DESTINATION: involves studying the major origins and destinations of the inhabitants of the city in relation to a particular site. This has implications as to opening into and ways through the projected building mass.

I exploited a variety of design tools in an effort to open myself to a broader range of potential solutions to the design problem. I tried not to fix on a single solution or approach before I had explored those design working methods which I have described. Once I had established a diagram for the building I continued to utilize analogues and references. These two design tools were employed throughout the design process as aids in conceptualizing the spaces, sequence of space and definition of the building.
The site (see site plan) is bounded by Federal Street on the north and Church Street on the south. It lies between the old firehouse and proposed housing on Church Street. On Federal Street, Washington Street and the projected housing block comprise its borders. There are 112 feet of frontage on Church Street and 156 feet on Federal Street. The block is approximately 200 feet deep. The site lies on the edge of the renovated historic area described earlier. It is between the commercial heart of the downtown and the new proposed housing to the west and south. Its location makes it ideal for both commercial and office space as well as community activities. The northwest corner of the site was set aside for a gymnasium to be designed later as an additional part of the community center.
The program was utilized to help inform and give life to what was primarily a space-form projection. It is for a community center comprising the following activities and approximate square footages:

- **ARTS & CRAFTS**, painting, pottery, metal work, leather work, etc........ 6,000sqft

- **COMMERCIAL**, several small shops or one larger establishment........... 3,600sqft

- **EXHIBITION SPACE**........ 600sqft

- **FOOD SERVICES**, small restaurant and/or cafe.... 1,200sqft

- **LOUNGES**.................. 400sqft

- **MEETING ROOMS** for community functions................. 1,200sqft

- **OFFICES**, small professional or community services............. 5,000sqft

- **THEATRE**, community theatre of 200-240 seats................ 1,800sqft

- **THEATRE WOODSHOP** for set production............ 1,600sqft
RECREATION ROOM for pool, ping-pong, pinball, etc. .......... 1,800sqft

REST ROOMS ............ 700sqft

CIRCULATION ............ 5,000sqft

TOTAL ..................... 28,900sqft
REFERENCE STUDY 1
PARTIAL SPATIAL MODEL

REFERENCE STUDY (2A)
SECTION 3.11
STRUCTURE
DESIGN DRAWINGS
CONCLUSION

It is extremely difficult to isolate and analyze the various working methods employed in a design problem. The design process is not linear. Information ascertained in one exercise is continually affecting the concurrent explorations. There are, however, observations which one can make about the apparent value of different aspects of the design process.

Perhaps the most fortunate decision that I made in the Salem project was to employ a number of different design tools in the conceptual stage. It was important to overcome the urge to thoroughly develop one approach. In pursuing a more pluralistic working method, I gained insight into the problem which strongly impacted the final design.

The main thrust of the design approach was contextual. The Mass-Void study and the analysis of the existing fabric were most helpful in integrating the building in its context. Likewise, the origin-destination study helped me to reinforce the building's connection to the site vis-à-vis entrances and passage through.

In terms of internal organization and form the analogue study and Carpenter Center reference study were most helpful. The building diagram essentially grew out of these two early studies.

The use of references was helpful through-
out the design in approaching more specific problems such as the open spatial configuration of the building.

I feel that the design is most successful in plan, massing, and elevation. Although the building is of a different typology than those which surround it, it does work as an extension of the existing fabric.

The building is perhaps weakest in the integration of its interior space. More energy could have been devoted to linking the spatial sequence. Most important, however, the thesis has helped me to begin to make a more pluralistic working method my own.
FOOTNOTES


3. Ibid.
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