SOMEWHERE BETWEEN RABUN GAP AND TYBEE LIGHT

by

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(ABSTRACT)

The Savannah River originates in the area of Rabun Gap in the foothills of the Appalachian Mountains in northern Georgia, and flows eastward to the Atlantic Ocean. Where the river opens out to the sea, the Tybee Island Lighthouse stands. A few miles inland, the city of Savannah, Georgia rests on the shore of this river.

Part One of this book, Beginning of the New, analyzes the original settlement of this city. Part Two, Composition with the Old, is a proposal for a square in that urban scheme.

From Rabun Gap to Tybee Light is a colloquism, once used in this part of Georgia, meaning 'all-inclusive'.

This phrase is used here not only to indicate the physical location of this city, but the usage represents my search for a complete architecture- gathering a breadth and depth of understanding in order to build a house or a city. That search is not presented in this volume. What is presented are two vehicles for this search; the analysis and the proposal.

In this search, I am somewhere between complete rescence and categorical mastery. I do not know where I stand, but this book stands there with me.
This thesis is lovingly dedicated to my parents.

My personal gratitude is extended to the following people for their contributions to this thesis:

A special Thank You is extended to someone for whom I have a great deal of respect.
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Beginning of the New

The old is the beginning of the new.

Sverre Fehn
I went myself to the Savannah River. I fixed upon a healthy situation about ten miles from the sea. The river here forms a half moon, along the south side of which the banks are almost forty feet high and on top flat, which they call a bluff. Ships that draw twelve foot of water can ride within ten yards of the bank. Upon the riverside, in the center of the plain, I have laid out the town.

General James Oglethorpe
Founder and planner of Savannah

The city of Savannah has noble beginnings. Not just a few of the original settlers were debtors from England that were to begin a better life in the New World. In founding this colony, Oglethorpe established a plan that was to become a pattern for growth for the new settlement. The people of Savannah made use of this development scheme for over 120 years. When the plan was abandoned, a unique district within the city was defined.

Today, this district, even though a small part of modern Savannah, is the spirit of the city. It is a spirit of community and harmony—a force that has been abandoned for personal interests and fragmentation in the present day. The following is an attempt to see what that original district of Savannah is; what makes it special, and, most importantly, what makes it architecturally urban.
THE INVISIBLE OBJECTS

The basic elements of a city are the street and the square.

The square is produced by the grouping of buildings around an open space. It is symbolic of community.

The street enables a settlement to spread beyond the square. It is part of a network that facilitates movement, resulting in its linear properties.

In the case of Savannah, the street and the square—invisible objects of the city—become the invisible objects of this city through an organizational scheme of modules, called WARDS.
The Ward

James Oglethorpe started with one ward in his mind, but he must have seen that the strength of this (or any) module lay in its repetition. The additive nature of this system satisfied the desire for strength through repetition and controlled growth in an ordered manner. The ward system, in its simplicity, accommodated complexity, producing a city of infinite variety within a strict grid.
The ward can be described as the element of restriction, being the unit that controls the growth of the city by limiting its expansion to defined modules. Certain streets within the plan can be defined as the elements of extension, acting as linear organizers along which the wards can be placed. These streets of extension form a simple grid.

The ward as a unit has its own internal structure as well, consisting of a square and internal streets. The square is the geometric and social center around which the remainder of the ward develops. This outgrowth from the square occurs within the framework of the internal streets.

Where wards meet, these internal streets meet, and become part of a network of spaces whose ultimate purpose is to physically and visually link the interior of the wards and, in particular, the squares.
The streets that run between the wards are the streets of extension, of which there are two types. The typical street is 75 feet wide, running either N/S or E/W. At certain moments, there occur tree-lined boulevards running E/W, parallel to the Savannah River. These boulevards were built as the city grew southward and are demarkations of growth. They measure 150 feet across and are indicated by three lines on the diagrams at the top of the page.

Within the ward, there occurs only one street that runs N/S. This type of street also measures 75 feet across. The axis of these streets bisect the square while automobile traffic loops around the square. This movement slows the vehicle down considerably and is, therefore, used for localized traffic. This situation is in contrast with the streets of extension which lend themselves to efficient cross-town movement. Pedestrian walks on these internal streets cross directly through the square and will be addressed in the context of the square.
There are three types of internal streets running E/W. First, there is the street whose axis bisects the square perpendicular to the corresponding N/S street on axis. These two streets have the same width. Second, there are streets that parallel the E/W axis street, but run to the north and south sides of the square. These streets measure 37½ feet across, and link in with the one way traffic that occurs around the square. The third type of street is actually an alley. These alleys measure 22½ feet across and occur inside the blocks of buildings. There are no pedestrian walks in them as they are intended only for services such as deliveries and pick-ups. The top left diagram shows these three types of streets.

The diagram on the top right shows all of the streets forming the network of movement in the city.
The Square

The square is the essence of Savannah. It is the great outdoor room that, as stated earlier, is the geometric and social center of the ward.

The spatial limits of the square are defined by the walls that surround it. From the walls inward, there is a pedestrian walk, a roadway for vehicles, and then the square proper. All squares in Savannah are organized on a nine unit structure. This structure is a result of pedestrian paths crossing through the site. Although all the squares have this constant nine unit pattern, they are all organized differently within that structure.

Another constant in the square is the vegetation. Much of the floor of the square is covered with low bush growth or grass. But the dominant vegetation is the stately oak trees that rise out of the ground, spreading a canopy of branches and leaves over the square.

The surrounding walls, the pedestrian paths, and the vegetation are the major factors determining the character of the square in Savannah.
The City Walls

The existence of the spatial scheme of the street and the square demands a complimentary system that will allow one to define inside versus outside. This other dimension is the built form. The buildings in this district under consideration are the walls of the streets and the squares and will be looked at for their contribution to the spatial elements in terms of scale, facade organization and materials.

Scale

Height of buildings in this city are generally one to four stories. Except for a few buildings reaching upwards of ten or fifteen stories, the city has maintained this low scale for all of its existence. This simple condition of height is a fundamental contribution to the spatial character of a city.

Facade Organization

Whether a building is two stories or ten, there is a pattern to the organization of the facades in elevation and section. Throughout the district, most facades are composed of:

1) a defined ground floor
2) a cornice
3) a rhythm of windows between the ground floor and the cornice

Materials

Savannah is a masonry city. At one time, the city was constructed mostly out of wood, making use of the surrounding forests. There are two factors contributing to the change to masonry:

1) the hazards of fire
2) accumulated wealth

The city was ravaged more than once by fire and this certainly encouraged the use of a non-combustible material, but the factor that allowed this new masonry construction to occur was the wealth that Savannahians accrued from a booming cotton industry. The cotton industry turned Savannah into one of America’s largest ports in the nineteenth century, allowing the more expensive masonry construction to become a reality through increased revenues.

The most abundant material in Savannah is brick. There are, of course, many kinds, but there is one brick that was produced and used locally. It is called Savannah Grey brick. It is an oversized masonry unit that weathers to a grey tone (hence its name).

Another form of masonry used was Tabby concrete. The characteristic that set this concrete off from others is that sea shells are one of the aggregates used. Along with the normal aggregate, the sea shells gave the material a distinct character. It was used in buildings as well as roads and sidewalks.

The final material that is specific to Savannah is cast-iron. Savannahians used cast-iron extensively for columns, lintels, sills, and balustrades. It was produced locally as well and is an integral element of the image of Savannah.
From the preceding pages, one can draw conclusions as to the conditions that determine what makes or contributes to 'urban' in Savannah. The five significant conditions identified are fundamental to determining the character of this district in Savannah. They are:

1) Contrast of street and square
2) Continuity of walls
3) Continuity of pedestrian paths
4) Buildings into trees
5) Significant materials
Contrast of Street and Square

The street and the square, although unified within this urban scheme, are distinctly contrasted in relation to:

1) spatial dimensions
2) relationship to sky and ground plane

Due to the linear nature of the street, it is a place for movement through the city. The square, however, is, by nature, a more stable place. The physical dimensions do not promote movement, but suggest a place to slow down or pause.

The street’s linear attitude results in a specific relationship one has with the ground and the sky. The ground plane in the street usually consists of a roadway flanked by sidewalks (occasionally, there are trees between these two elements). The walls of the buildings form the two edges of the street. The sky of the street is defined by the top edges of the buildings that line the street. The character of light is determined by the sky conditions and the position of the sun.

The square is composed of the same elements put into different relationships with each other, resulting in a different character. The ground plane, in contrast with the street, is dominated by vegetation, with textured walkways throughout. The walls of the buildings are much farther away from a person in the square, though still visible. These walls are relegated to a less important role due to the vegetation that immediately surrounds one.

The character of the upper limits are not determined, as in the street, by buildings and sky, but by the sky and a canopy formed by oak trees. The tree canopy acts as a filter which allows certain amounts and kinds of light into the square. Looking up, the tree canopy and the sky form a figure-ground relationship, intertwining with each other. The sky conditions, the time of day, and even breezes affect differing light qualities within the square.
Continuity of Pedestrian Paths

The original settlement of Savannah was designed for pedestrians, since, of course, this is what they had the most of in eighteenth century America. Even with the introduction of the automobile, the city still maintains its pedestrian nature.

Man was the measure of this urban plan. It accommodates a walking person through its defined streets and squares. The squares are only about 600 feet apart, making a walk between them through the street a short one. But there is enough of a distance to enjoy the street and what it has to offer (the section on page 12 shows the sequence from square to square).

A person can walk completely across the city on the same walkway. He walks from square to street to square until he reaches his destination (See the diagram at top left showing walks in the city). This condition is especially important in relation to a square. The sequence takes a person through squares, thus experiencing the essence of the city every time he walks in it.

The pedestrian walks, as seen earlier, establish a structure within which a square can be organized. This structure is the nine unit grid made by the walks as they pass through the square.

So the pedestrian paths contribute directly to the aesthetics of the squares as well as to the sequential experience of a person walking in the city. In this sense, the walks are just as indispensable as the squares or the streets in making this urban scheme unique.
Continuity of Walls

The street and the square can only be as strong as the elements that form them. When the walls of the city are disrupted in an improper way, the street or the square are disrupted as well. The continuity of the street and the square rely on the maintenance of the city walls. The decay of these elements can only weaken the definition of these two things that make up the spatial city.

The height of the buildings, the facade organization (the important thing here being not the individual building, but the occurrence of many buildings establishing rhythms and patterns), and the materials that these rhythms and patterns are constructed of are the fundamental issues to deal with when considering the walls of this city.
Buildings Into Trees

The term ‘buildings into trees’ is a condition of perspective. It is an event that is a consequence of this urban plan.

When one looks out of a square down a street, he sees the street and the oak trees that stand in the next square. He can look out in all four directions and will experience the same type of condition. The buildings on the street are the walls that extend away from you until they reach the next square. This termination of the wall just before the square gives this condition of the buildings running into the trees.

The importance of this condition does not lay within itself, but in its application. It is a detail of the city that is repeated many times. The exact situation, of course, does not occur at every square, but variations happen according to vegetation growth and building design.

‘Buildings into trees’ is an important experiential condition specific to Savannah.
Significant Materials

The last condition deals with what the physical environment is made of. A city contains innumerable materials ranging from common substances to rare resources. Many of these materials are common to any city. However, a city will always have materials that have found a special place in its development.

Savannah has three of these. They are not materials that are necessarily common, but are chosen for their specificity to Savannah. These are:

1) Savannah Grey brick
2) Tabby concrete
3) Cast-iron

The Savannah Grays were locally made and are the most common of these three. Much of the present city was built with this brick, although a great portion of it has been covered with other materials.

Tabby concrete is a material that, in its use of sea shells for aggregate, makes it specific to a location near the sea. It is a natural and plentiful choice of aggregate that lends the concrete a distinct appearance. It is appropriate for streets and walks as well as walls.

Cast-iron distinguishes itself in Savannah through its long and extensive use in the local architecture. Locally manufactured, this material lends itself to less structural purposes today (although it is not excluded from this). It can be intricately detailed creating a material that can be visually light compared to the massiveness of brick and concrete.

These materials that are significant to Savannah establish a continuity in the city not only from ward to ward or street to street, but more importantly, from generation to generation.
Composition with the Old

The new is composition with the old.
This section presents a new thing in an old context. It is an architectural project that is, first and foremost, the articulation of a spatial element, the square, in Savannah, Georgia. It embodies what this author sees as the strengths of this historic urban scheme and becomes and integral part of it, while also making its new presence felt within the city. It changes the equilibrium, but maintains the integrity, of the district it is a part of.

Specifically, it is a re-design of Ellis Square. This square has always been the site of the public market until in 1954, the market, was razed and replaced with a parking garage. The square has, therefore, always been a 'built square'. With this in mind, the new design attempts to make a square using buildings to define an outdoor space, associating it with the history of the site as well as becoming, once again, one part in a series of urban spaces in Savannah.

*The location of Ellis Square is denoted by the oval at the top left of the map.*
These diagrams show the development of the site. The beginning is the realization that the square is Savannah’s symbol for community and that a centrally oriented design is appropriate.

Three existing conditions in the city directly shape the plan of the site:
1) the bisecting axes (passing through the site)
2) the pedestrian walks (forming the nine unit grid)
3) the walls of the street (continuing into the site)

The nine units are used to establish a diamond geometry, exploiting the mid-point and the diagonal of the grid. The geometry is given hierarchy in relation to a central space and the city. The curve is introduced as a different formal event in the city, giving this square a special place among squares and effectively contrasting this urban space with the street through the use of geometry. The resulting oval is a response to the dimensions of the site.

Diagonals from the corners of the site begin to organize the central space (resulting in the diamond geometry centered on the bisecting axes), and establishes a relationship between the remote, outside corners and the interior of the site. These diagonals also become major organizing elements within the buildings.
The Center

Savannah belongs to the plain, as its name suggests. The central space on the site is, therefore, flat to evoke the landscape. The raised platform in the center, as an object does not emerge from, but rests upon this ‘built plain’. It is a new plain where the axes of the site can cross.

This crossing—of the two axes provides a place for the platform, a well, and a standing mobile. The well is located on the raised platform at that crossing of the site axes. All squares used to have public wells for the citizens’ water needs and this element is a memory of this important public function. The water flows to the river a reference to the major natural element just to the north of the site. It also, at one point, flows towards the City Hall, an acknowledgement of the public nature of Savannah’s squares.

The standing mobile is situated on the platform with its fulcrum directly over the crossing of the axes. This mobile takes on the scale of this urban space just as the oak tree assumes and defines the scale of other squares in the city. It is a ‘constructed tree’, and just as the graceful oak canopies over the squares do, it stirs with the wind and intertwines with the sky.
Thick Intersection

At the crossing of the axes, the raised platform occurred, then the well, then the standing mobile. One can see this as a growth of elements 'stacking' at the crossing as the beginning of the intersection—things gathering at the meeting of these axes. Then, the oval was placed around these things. The buildings were then positioned about the oval in relation to the surrounding city, and in one move, the entire collection was raised off the ground plane of the city to define its edges.

I came to the realization that the crossing of the two axes is only a physical occurrence and is not important in relation to itself. I realized that the 'crossing in relation to the city' is the intersection and that a square is a thick intersection.

The following pages present a thick intersection between Rabun Gap and Tybee Light.
1. Room
2. Mechanical
3. Balcony
4. Elevator
5. Stair
6. Podium

Entrance level (level 2)
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