

Form Elements of Houses: Investigating the Collective Form of Detached Houses

by
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Submitted to the Department of Architecture in partial fulfillment of the requirements of the degree
Master of Architecture
at the Massachusetts Institute of Technology

June 1989

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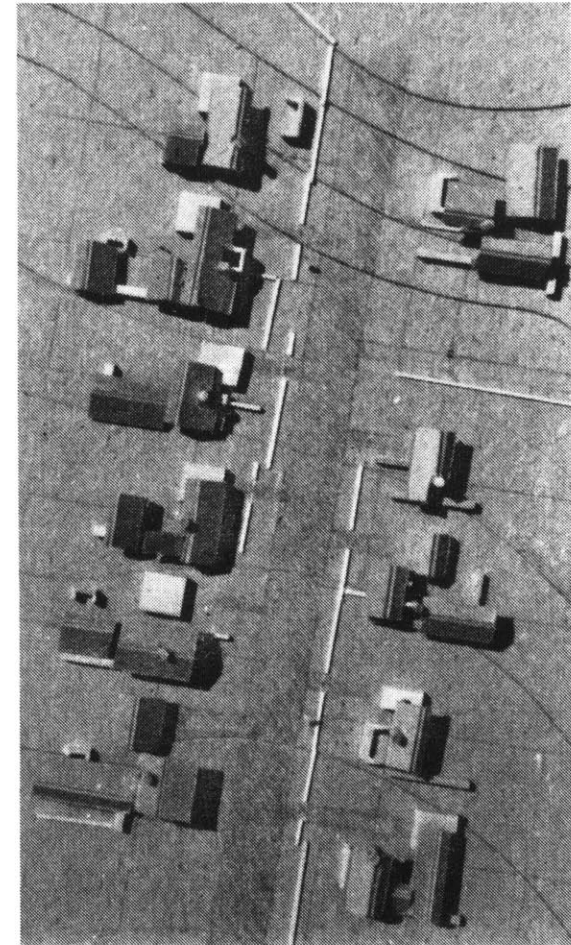
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Department Committee for Graduate Students

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Abstract

This thesis focuses on the collective form of detached houses. A result of the American phenomenon of detached, single family, freestanding houses being the standard type. Through an observation of eight environments of this house type, a theory is developed about a way of designing in the detached house neighborhood. The idea is to consider the design of houses as a group and thus be able to arrange the elements of each to achieve a multiplicity of associations. This would build a collective form that enables the house form to have a high level of individuality.

The thesis is divided into two parts: first, observing systems (elements and their relationships) of existing places and deriving a design method; then, using this method, generate a design.

Submitted to the Department of Architecture on 12 May 1989 in partial fulfillment of the requirements for the degree of Master Of Architecture.

Thesis Advisor: Thomas Chastain

Title: Lecturer

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Preface

This thesis began with an interest in freestanding, independent rural houses found in Kentucky that appear as objects unto themselves. They have no relation to another built form and not even to the land. They sit *on top* of the ground which passes under them. To me these houses are the declaration of an American characteristic of dwelling. The characteristic of individuality – of singularity and independence.

... the frontiers tendency to dilute population and encourage self-sufficiency ... in this country, every person can indeed become personally independent, just as the nation had.¹

... in America each thing is a separate, individual entity that must manage alone. ... We may even say that the factual isolation of a thing means that it must be more itself ...²

The increasing degree of individuality in America today can be attributed to freedom. Each person with the ability to choose how to live.

... freedom implies an 'open' world, distinguished by movement, opportunity and choice.³

In architecture this freedom has been manifested in an individualistic attitude towards buildings. Buildings which are discrete entities. The skyscraper and detached house are good American examples of this. The skyscraper is not so much a necessity in many areas as it is a symbol of a



Martha's Vineyard

singular identity and the house is preferred for its easily identifiable characteristic.

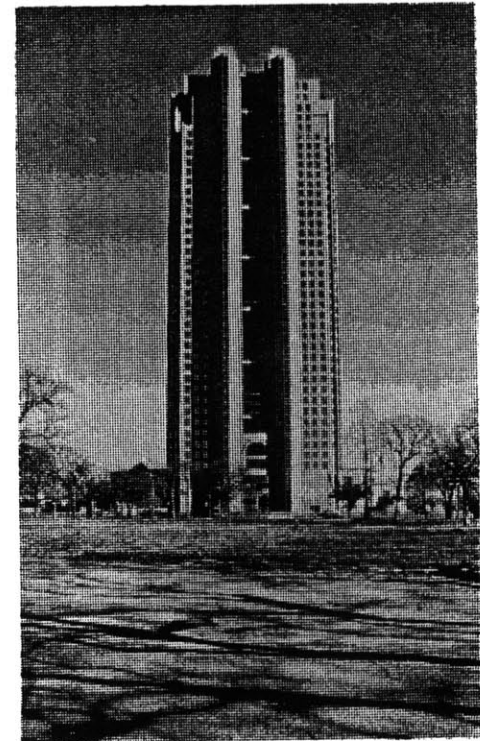
The isolated household became the American middle-class ideal...and it even came to represent the individual himself. As Clare Cooper has noted, just as the body is the most obvious manifestation of the individual and enclosure of a person, so also is the home itself a representation of the individual. Although it is only a box and often the unindividualized result of mass production and design, it is a very particular box and is almost a tangible expression of self.⁴

In this thesis I investigate the phenomenon of detached houses. Still today, the detached house is a strong statement of an American ideal. The ideal that some call the "American Dream." Walt Whitman once wrote " a man is not a whole and complete man unless he owns a house and the ground it stands on." This dream was in a large part the result of the availability of land.

The dream house is a uniquely American form because for the first time in history, a civilization has created a utopian ideal based on the house rather than the city or nation.⁵

In pre-Napoleonic Europe...life was inescapably public...*home* referred to the town or region rather than to a particular dwelling.⁶

The importance in this, is value to which we in the United States give the



Dallas, Texas

house. The house that is most often part of a neighborhood of detached houses. Single houses built together on the open landscape into a relationship with other built forms.

... but I am always impressed with the persistence of the one-story, detached, one-family house ... the row after row of independent, relatively self-sufficient homesteads ... and I see them as urban versions of the very modest farmhouses once so common in the old rural landscape.⁷

The United States is suburban Nation. I accept this fact and I am fascinated with designing in middle America. Investigating the average, typical world of suburbia. And actually, the detached house neighborhood is more than suburbia, since it can be found in even the smallest towns. This also became an environment for me to learn more about a way of designing. A place to apply my education and lifelong experience of living in this kind of environment to architectural design . To question, what does it mean to design detached houses and more importantly what does it mean to design many of these together.

This thesis has certainly not been accomplished alone. There are many to thank for their support.

Tom Chastain for his ability to inspire, educate, direct and support me.

Imre Halasz and Maurice Smith for their always insightful reflection and discussion.

Julie Chang, Susan Dunbar, Tim Smith and Sabina Weitzman for help at the most crucial time.

The Spring thesis group who I spent so much good time with

Bobby Bukowski for his confidence, insight, and love.

Dedicated to my family who with their love and support, have made this all possible

Introduction

This investigation into the collective form of detached houses is about developing a method to design in the neighborhood of detached, freestanding, single houses. It is concerned predominantly with form issues. In particular, it is about the elements of detached houses that define the spatial and physical form of the site.

All forms are composed by elements, and all elements can be seen as forms composed by elements at a lower level.⁸

By identifying these elements at the level below the house size, I propose that they can be used to build the neighborhood. Rather than using the house as the element that is deployed across the site, the lower level elements can be used as the deployable form. What needs to be made more clear is how these elements can be deployed, arranged or configured and what effect does this have on the detached house neighborhood.

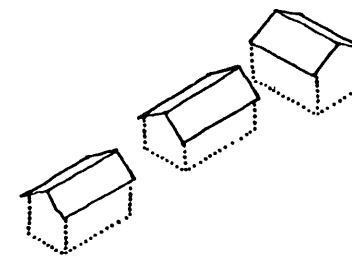
In this thesis, systems are used to discuss form. Systems are classes of arrangements and configurations that obey common rules of selection and distribution.⁹ The use of systems allows ideas to be more shareable because they can be used objectively to show what is happening with the form.

Some biologists dislike the Lovelock-Margulis view of things, ... They dislike the term "Gaia," ... and they dislike the notion of design that seems implicit --- although one way out of that dilemma is to call the arrangement a system.¹⁰

The illustrative design is a deployment of systems of elements that most each house necessarily has (ie. chimneys, garages, roof, walls, etc.). For example, the placement of garages might follow certain rules of arrangement and that is one system. Another system is the arrangement of chimneys. These systems happen at different continuity lengths across the site. That is, they can be recognized as a repeated system for different lengths. The relationships between the systems themselves is part of the specificity of the site. More important, what is the effect the arrangement of systems has on a particular environment. What are the associations that develop from the configuration and arrangement of form?

A range of environments are possible with the same systems of elements and what can make differences is the arrangement of the systems. The arrangement produces the associations between the forms. For example, if a gabled roof (an element) direction is parallel to the street on one house and it is also parallel and a similar distance from the street on the next house, there is a shared association between the two houses. If a third house next to these has a gabled roof perpendicular to the street then the placement makes it discontinuous with the other roofs and thus not clearly associative.

This thesis chooses a multiplicity of associations for the understanding of the environment designed. A multiplicity of associations can bring about



both a collective continuous environment and an individuality of the single house. The associations between the elements of the houses are such that no two houses have the same composition of all the elements even when they are very similar and thus they are more individual.

The community or collective form would not be of the aggregated single houses, but would be of the aggregated associative elements of the houses and thus could allow for each house to be individual not just discrete. A freestanding house is a discrete object and many discrete objects together creates a uniformity. With the design that I have suggested, each house has both a larger (collective) identity and an individual identity. If in fact America is about being individual then simply having a street of single, discrete, or unique houses is not going provide individuality. This is not true when a house is on a large amount of land where it has no proximity relation to another or when it is so different that it truly stands independent. The fact is that both of these are the exception in today's environment. The first is expensive or too far from desired community services and the later is not accepted by most other neighbors or style agreement prevents it. Thus, this idea is for the relatively dense detached neighborhood most typical in America today.

The notion about element association as discussed above evolved from

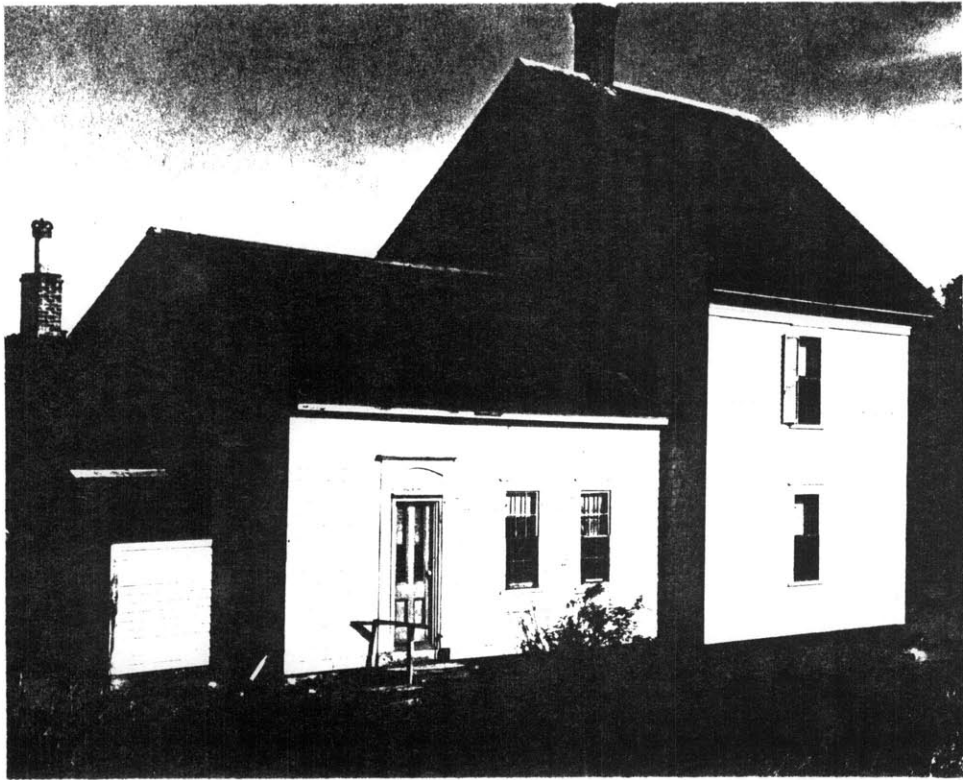
looking at references. Observing systems in detached house neighborhoods. The references are of many styles, built at different times, and in drastically different contexts, but by analyzing underlying form as defined by a system of elements then a more shareable, more usable notion of form generation and observation can be employed. The systems are based on the relationships between the forms and not simply their outward appearance or stylistic similarities. Thus the places are utilized as form references not cultural references.

The observation of references enabled me to expedite my own body of experience. Our experience is what helps us to make decisions.

Observation leaves the world as we found it, and is the beginning of all research. It is not just seeing: it is seeing with detachment - the suspension of knowledge and certainty. It is curiosity, before the question is asked. The answer is the end of observation and the beginning of theory. The theory leads to understanding, and the understanding makes us see the world as we could not see it before. It allows us to see more. More which might lead again to observation.¹¹

Observation was the beginning and is thus the first part of this thesis. It was looking at several detached house neighborhoods and finding that the elements and their relationships were effecting the collective form. In particular, 'Sconset on Nantucket Island, when looked at this way seemed

unique. It had a strong level of similarities like the others and was even more dense than most, but the houses seemed more individual. This was from the multiplicity of element associations that had evolved over time. This led me then to the theory of systems of elements being able to produce individuality if applied with a range of associations. The idea that collective form could be built by element association. The last part of this thesis is an illustrative design of this idea for a small grouping of nine houses along a street.



The Type

In America, the house is the physical manifestation of independence. In a country where the individual is of primary concern, the house stands independent of other houses. What is the character of the typical American house type?

The *single-family detached* house remains the mainstay in North America, accounting for half or more of annual housing starts. Its advantages are well known: it receives adequate light and air from its four exposures and provides room for gardening, play, parking and other outdoor uses. It enjoys direct access to the street and its own private grounds, which can be shielded from noise and view. It can be built, maintained, remodelled, bought, and sold independently. It can be constructed at reasonable cost, using light frame materials, although it is not the least expensive type of housing. In many parts of the world, it is popularly considered to be the ideal house. It symbolizes the individual family.¹²

The single freestanding house is the American standard.

The freestanding, individual house is most often no more than one in a series of houses. The repeated series of very similar forms. This can be found everywhere, in small towns, in suburbs, and even in urban centers. Several distinct houses grouped together with space between. These houses are separate fragments, separated by space. Formally similar they stand free in space.

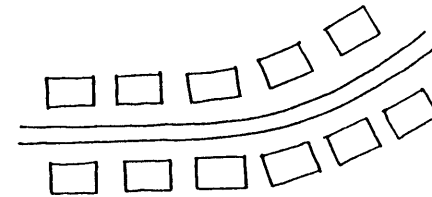
The common collective form of American houses is a grouping along the street. Similar houses aligned up along a street. The street that takes us from the individual world into the public world beyond.

...the street becomes the primary fact, or more precisely, a street without definite ends and limits. ... movement gains a meaning in itself, and the street accordingly becomes a manifestation of opportunity and change or, in other words, of the American condition. ¹³

This is a result of freedom. Freedom of choice and mobility. The freedom to choose other worlds beyond our house. The condition of self-sufficient homesteads aligned along a street.

Today we are a suburban nation. Even when it is not in suburbia, the street of detached houses is often referred to as a suburban environment. But however the terminology is used, the phenomenon of this dwelling environment still exists.

... suburbia has become the quintessential physical achievement of the United States; it is perhaps more representative of its culture than big cars, tall buildings, or professional football. ... The essential similarities in American suburbanization ... The United States has thus far been unique in four important respects that can be summed up in the following sentence: Affluent and middle class Americans live in suburban areas that are far from their work places, in homes that they own, and in the



center of yards that by urban standards elsewhere are enormous. This uniqueness thus involves population density, home-ownership, residential status, and journey-to-work.¹⁴

The suburbs are also known for their architectural similarities and as a factor in the disappearing regionality of style. This in itself is not necessarily a problem, but uniformity in suburbia is.

Uniformity is the repetition of the same relationships. It is the result of designing each house on a one-by-one basis, often disregarding the cumulative effects on the environment of the many individual decisions. The environment then becomes a repetition of discrete objects among other discrete objects or an environment without aggregation. Aggregation is an arrangement of form in hierarchical order. It is an arrangement of relationships that can build collective form.

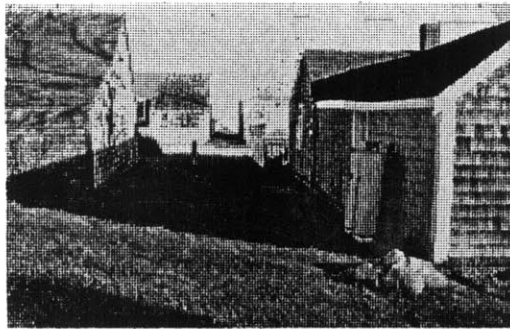
If houses were not considered as a single design problem, as has been traditional in America, then it might be possible to design an aggregation of houses.

Because of the necessity of similar house elements, the neighborhood of detached houses will often produce some sort of a shared environment. To understand what this is, several neighborhoods of the American house type are observed in the next section. The systems of the house elements are identified and studied for their effect on the collective form.

Places Observed

Eight places that were documented and then categorized by systems of elements

Each place is a grouping of detached houses along street



Munger Place, Dallas, Texas
Pre-War houses

'Sconset, Nantucket Island
19th Century fishing village

Oak Bluffs, Martha's Vineyard
19th Century Camp Meeting cottages



Oak Cliff, Dallas, Texas
Post-War houses



Fort Worth, Texas
Cluster houses



Arlington, Texas



Greenland Hills, Dallas, Texas
Pre-war Houses



Bedford, Texas
New houses

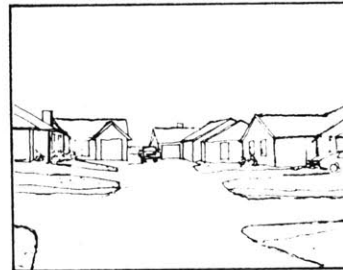
Collective Territories: Spatial Form System



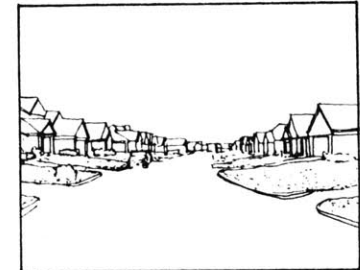
Oak Bluffs



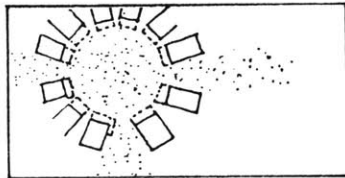
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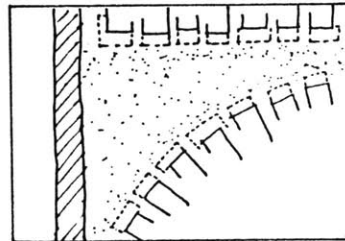
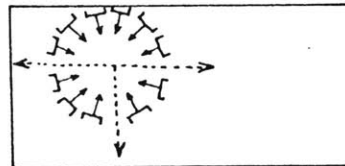
Fort worth



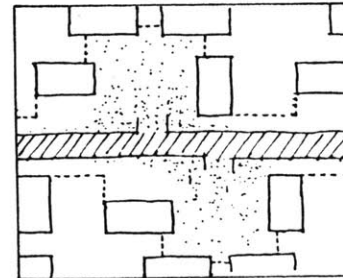
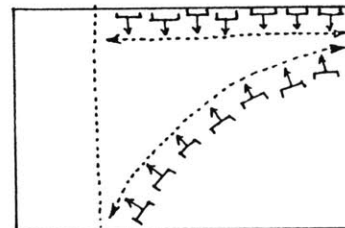
Arlington



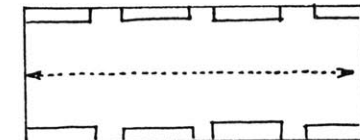
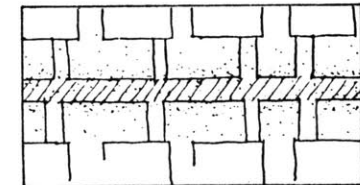
Houses shape a circular yard by their placement



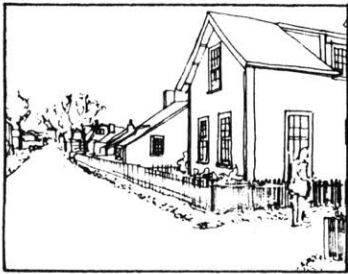
Houses align to shape open yard



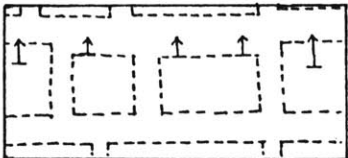
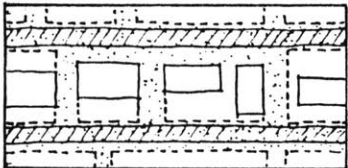
Clustering of houses



The collective territory is shaped by the rows of houses with the street being the public ground of the space (front yards are private ground of the space)

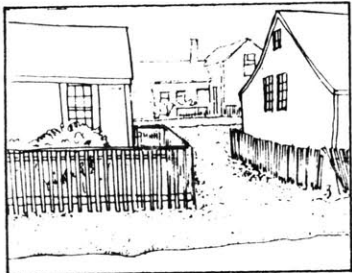


'Sconset

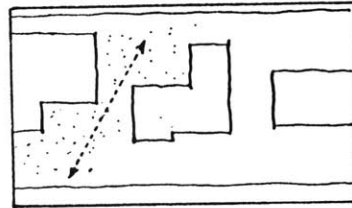
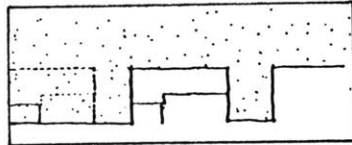


Collective territory is both up and down the street and between the houses in the other. The houses are private containments siting independently in the public territory.

Side Yard Element: Spatial form System



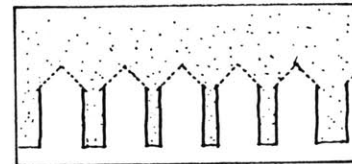
Sconset



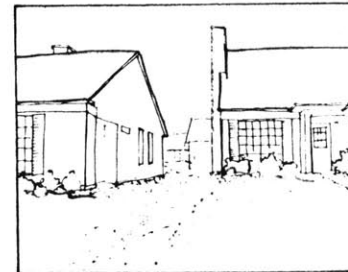
Side yard becomes part of front and back through a diagonal open relationship



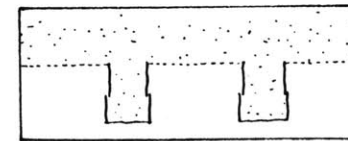
Oak Bluffs



Side yard becomes only a minimal break between the built houses



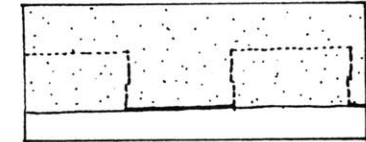
Bedford



The space between is enough to give a clear break between houses that appear as two cut halves of the same form.

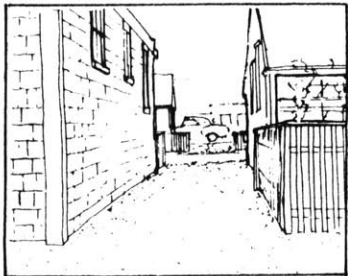


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Space has more dimension than the built and thus the houses do not define a space collectively. Houses are objects sitting in the open space

Access: Spatial Form System



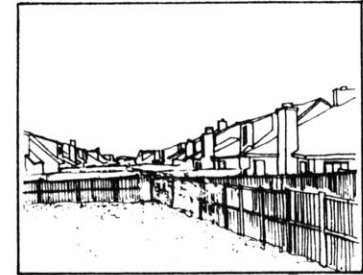
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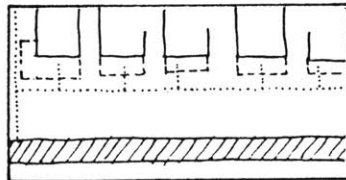
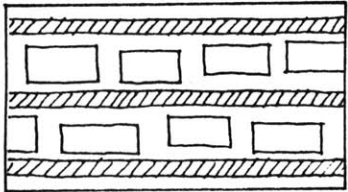
Oak Bluffs



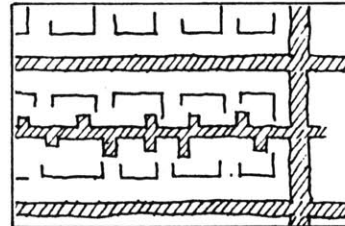
Greenland Hills, Dallas



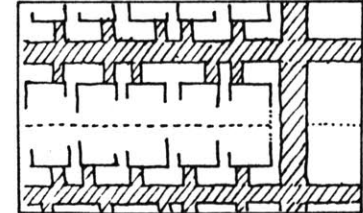
Bedford



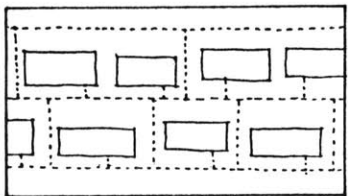
Pedestrian access is near the houses and defines a space between sidewalk and street



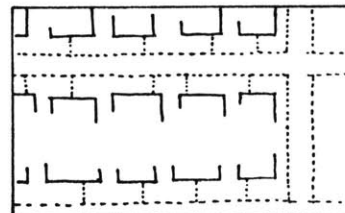
Parking and services access houses from a back alley opening up both the front and the back to public



Access is only from the front street. The back territories are privatized. The front of the house thus becomes the primary concern



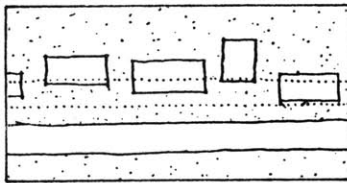
Streets are on both sides of houses with pedestrian access perpendicular and between houses. The houses are containments which sit in the access.



House as Element: Physical Form System



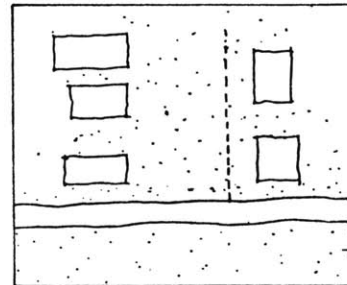
Sconset



Houses registers in a zone. Thus the row of houses is much more variable and each house seems more unto itself.



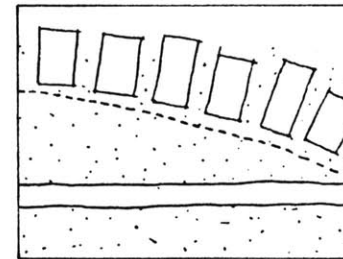
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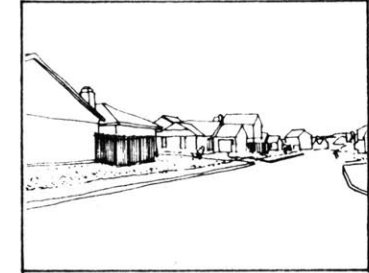
Houses register perpendicular to the street and thus form a highly defined collective yard



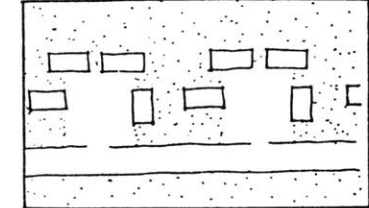
Oak Bluffs



Houses and pedestrian access begin to move away from the street and form a collective space



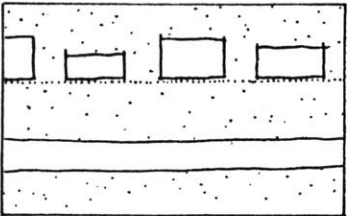
Fort Worth



Houses are clustered together into small isolated groups which relate back to the street. There is no formal exchange between one group space and the next



Bedford

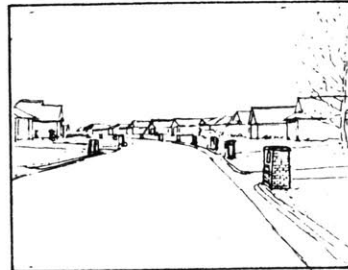


Houses register along a single line. This produces a strong wall affect.

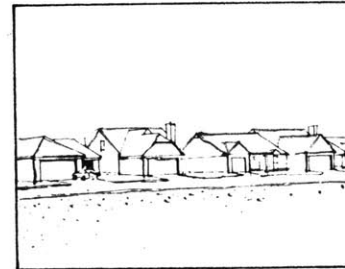
Individual Elements: Physical Form System



Munger Place, Dallas



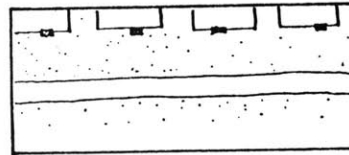
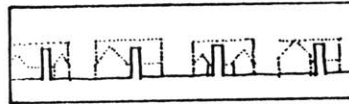
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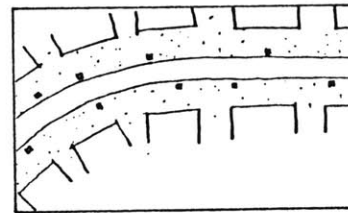
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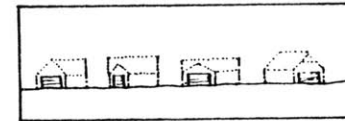
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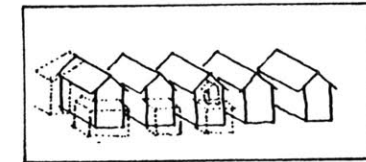
Chimneys
Repetition and same relative placement of chimneys down the street forms a continuity several houses long.



Mailboxes
Substantial brick mailboxes form a repeated continuity with each house contributing an element



Garage Doors
Size and clarity of form make more clear the repetition of this element.



House Form
Repeated figural box makes clear the shared identity of the houses



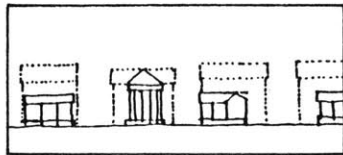
Arlington



Greenland Hills, Dallas



Ornamentation
Stylistic detailing forms a screen that is continued by the next house. A detail of the houses is building a continuity

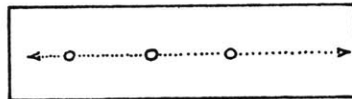
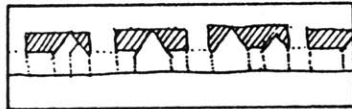


Porches
An element that each house has and even though the porches are very different physical forms the created space is similar and thus they are understood as a repeated element

Roof Element: Physical Form System



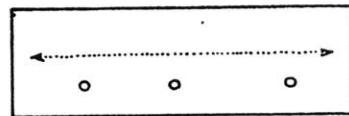
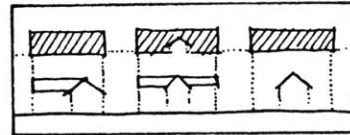
Greenland Hills, Dallas



Main roof has both a continuous direction with other roofs and turns a gable toward the street as a singular gesture



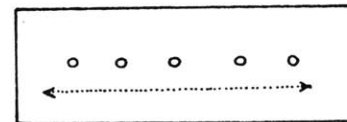
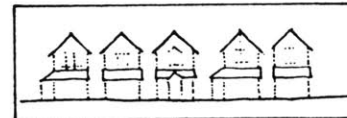
Munger Place, Dallas



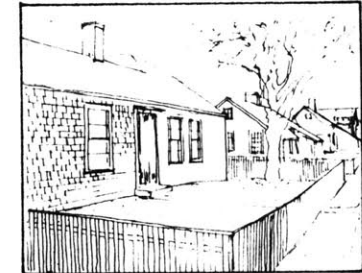
Main roof is in same direction as neighboring roofs and is thus continuous. The porches have a singular shape and are individual to each house.



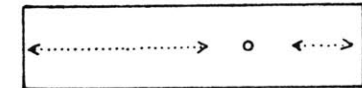
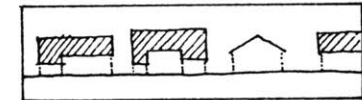
Oak Bluffs



The main roof is singular, individual while the porch is a continuous, shared form.

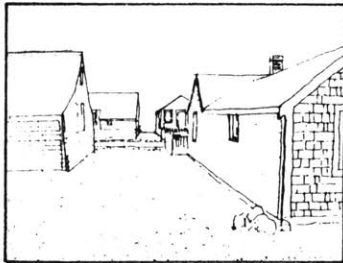


'Sconset

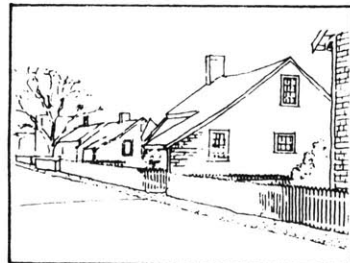


Each house's roof is either continuous with others or is discontinuous. There is not a singular and continuous behavior in the same house roof.

Collective Elements: Physical Form System



'Sconset



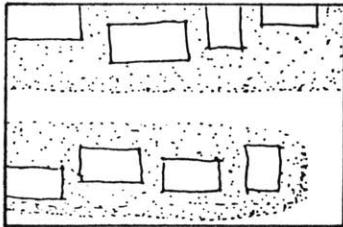
'Sconset



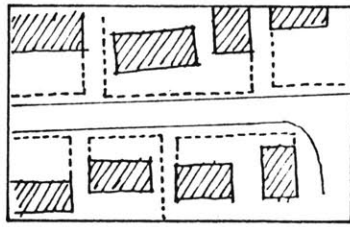
Oak Cliff



Munger Place, Dallas



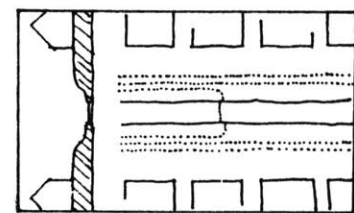
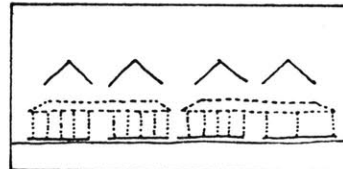
Ground surface
Grass as a continuous carpet
that the houses sit on



Fences
Each private fence aligns
creating a continuous form
larger than any single element



Implied Form
The shape of adjacent porches
implies a pairing of the
detached house forms

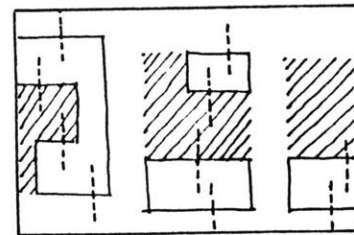
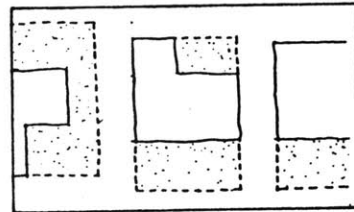


Raised Ground
Hill acts like a wall in front of
the houses developing a shared
element between houses

Exchange Territories: Spatial and Physical Form Systems



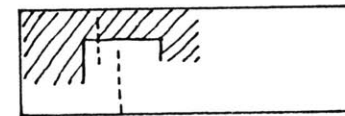
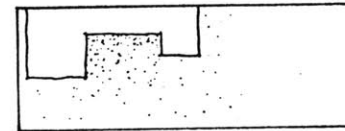
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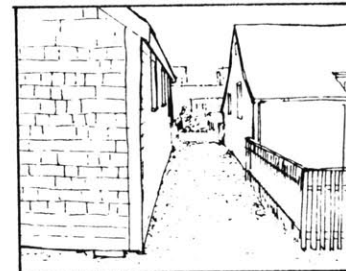
Fences
Private / semi-public territory is defined by fences and is the exchange between house and street



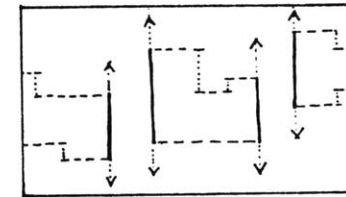
'Sconset



House Form
The shape of house builds a reciprocity between physical form and the space.



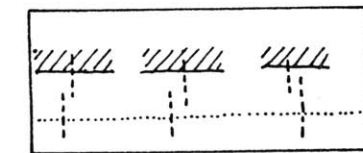
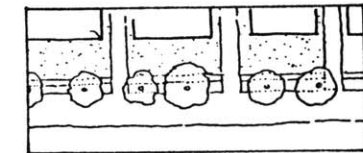
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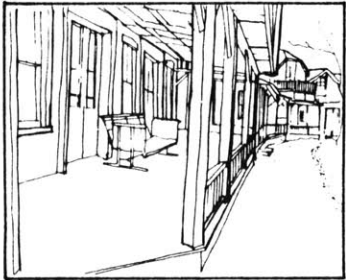
Walls
Walls along sides are registered to one line and on the front and back they are freer to move in and out. Thus, a reciprocity often exists on the front and back sides while not on the sides



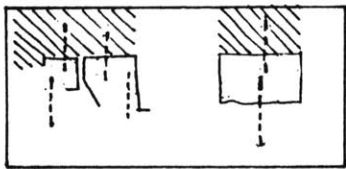
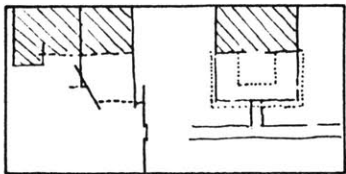
Oak Cliff



Trees
Trees and the house are two demarcations to a semi-public / private territory. When trees and houses are repeated down the streets they build a large collective space.



Oak Bluffs



Porches

Alignment and close proximity of porches builds a continuous collective space between each house

Elements of Houses

Elements of houses is about the idea of collective form being built by the associations between elements of houses

In the neighborhood of detached houses the similarities between houses is far greater than the differences. Each house needs to provide for the same basic uses, so the similarities are expected. What can make a difference between the houses is how we experience the similarities.

Suburbia is an aggregation of repeated elements. And, human recognition of the repetition is key to the experience of the environment.

In this way they mediate a visual world consisting of isolated elements ... The only kind of order which may be attained is based upon the proximity-relation, and consists in a succession of separate tinges. Thinking of order ('collection') later develops into the continuity-schema, when the child realizes that the proximity-operation itself is process which can be repeated *ad infinitum*.¹⁵

Designing in the detached house environment requires an understanding of what the repetition means and what it can do. Does it simply produce a uniformity or can it be used to bring about another understanding?

The similar elements of the houses are shared. I call them the collective elements. The relationships between these collective elements is what can make one neighborhood different from the next. The systems of the elements is operating to bring this about. Differences in style may at first

glance fool us into seeing two environments as different, but any real differences would ultimately have to be with the relationships between the elements of the house form. The distinction is that form is more basic than style. It exists without style, but style cannot exist without form. And thus, the importance of the underlying form. The arrangement of physical and spatial elements of the collective form can be used to bring about the environment desired.

It would be necessary to consider the design of the system as a whole. To in affect design the houses together. They would not have to be all built at the same time, but if and when they were built, it would have to be understood what there contribution to the collective form would be. It is important to recognize the need for the design of the neighborhood to take shape through the shared design of the houses and not through the design of the single house. The field must first be established and then the individual can be free to exist.

I propose a way to design an environment of detached houses. And, that way is to use systems to bring about a multiplicity of form associations between the houses. Arranging the elements in such a way that each house becomes a unique assemblage of the collective elements. Associations would still exist between houses but they would not be the same between

each other or to the street. The house would have its own identity. This is a concept of fragmented, distinct elements producing a continuity or a collective form. Through the use of systems of elements individuality is built into the collective environment.

An example, of this idea is a site with a street and five houses. House 1 could have the same garage placement as house 3 and 5, but then share the same roof direction as 2 and 4. This means that house 1 has one type of association with house 3 and another type of association with house 2. As all the other elements are deployed across the field a large range of associations can take place. A multiplicity of associations.

The system consists of repeated elements. When each form is repeated it also finds itself in a different relationship with other elements of each house. Thus it needs to be a clearly recognizable and distinct element to still maintain the associative relationship with the same elements of the other houses. The elements need to have a identifiable quality to prevent them from become lost in the the house form. Thus, one important formal characteristic of elements is that they be figural.

There are two classifications of these elements. First are those elements that each house has and which are part of the collective form (shared elements). There are physical elements; garages, main roof/upper



territories, entry wall, window configuration, chimney, trees. And, there are spatial elements; front yards, street/access space, collective yards, side yards/space between. The second are elements which are unique to each house form. The circumstantial distortions from the assemblage of collective elements.

The idea of element association proposed above would bring about an environment of detached houses that consisted a collective form. A collective form that is not uniform but one which has a multiplicity of associations. A *collective form* that enables the *house form* to have a high level of individuality.

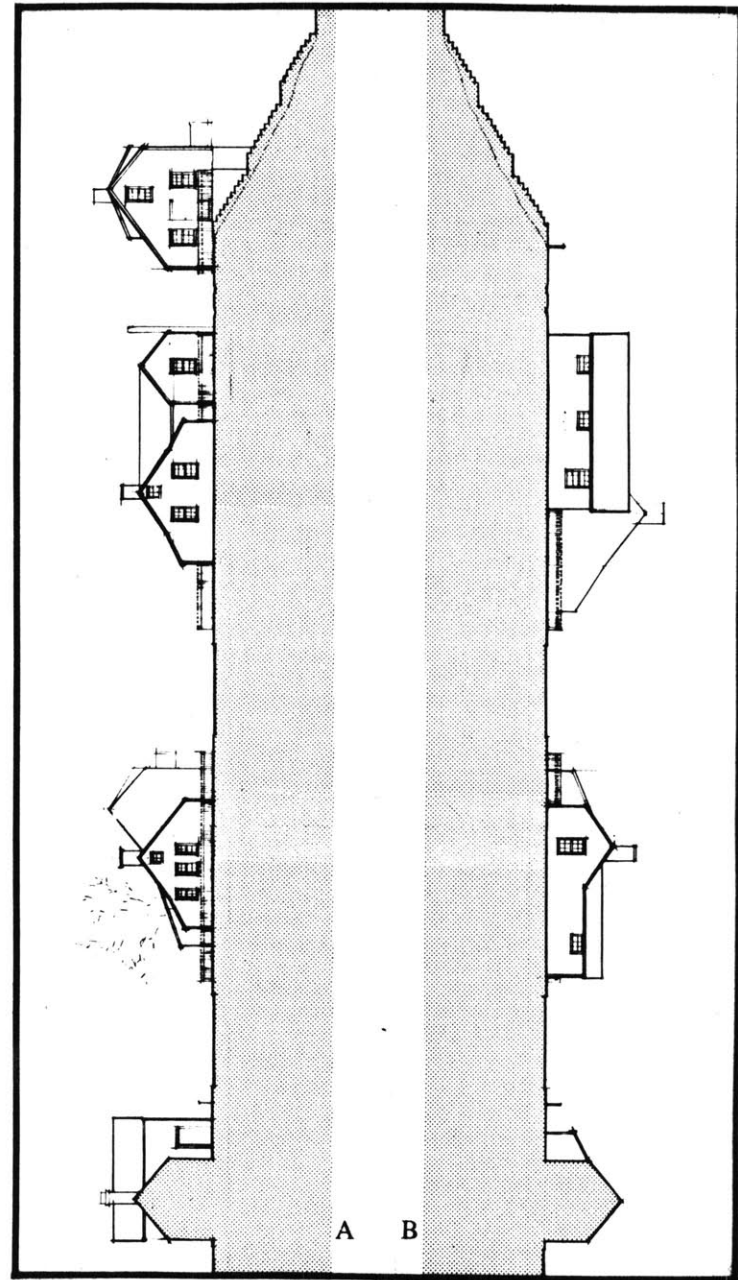
The next section is a closer observation of 'Sconset. It, apart from the other references, is a place where the house elements have a multiplicity of associations. The last section is an illustrative design using the method of element associations to generate a small grouping of nine houses.

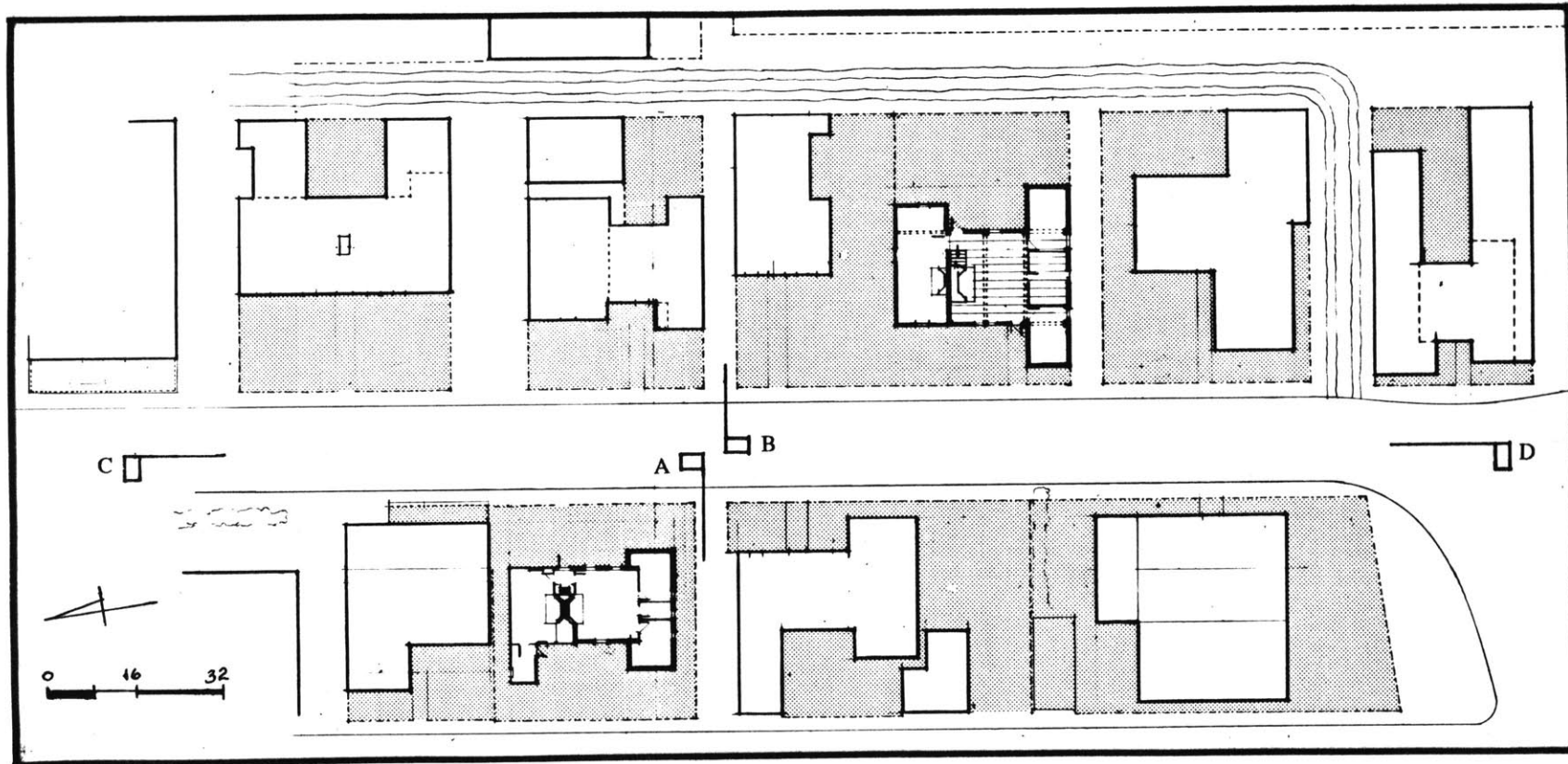
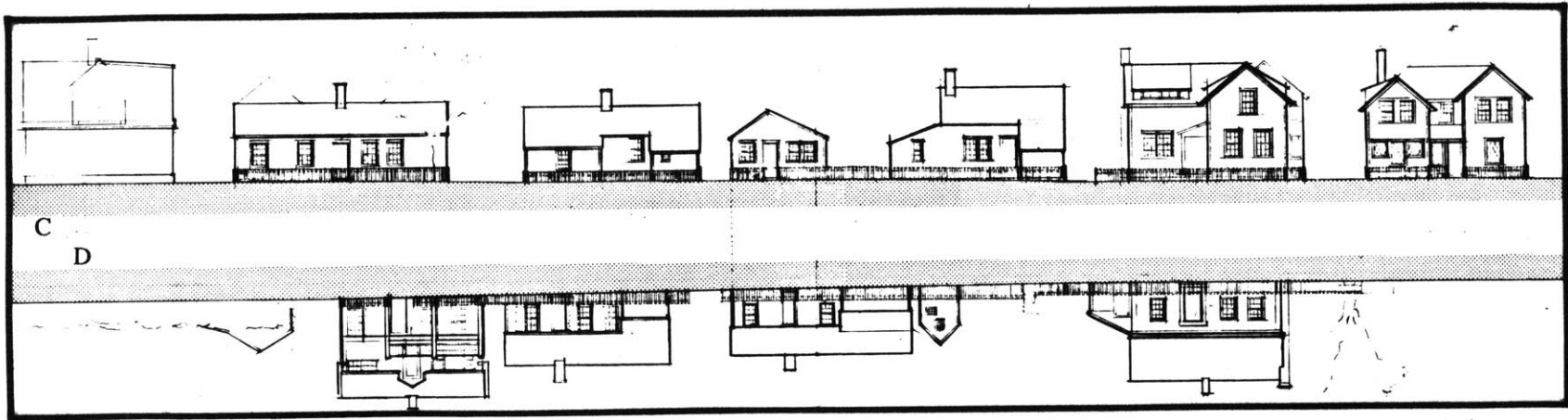
'Sconset, Nantucket Island

Documentation and Observation of the beginning of Broadway Street



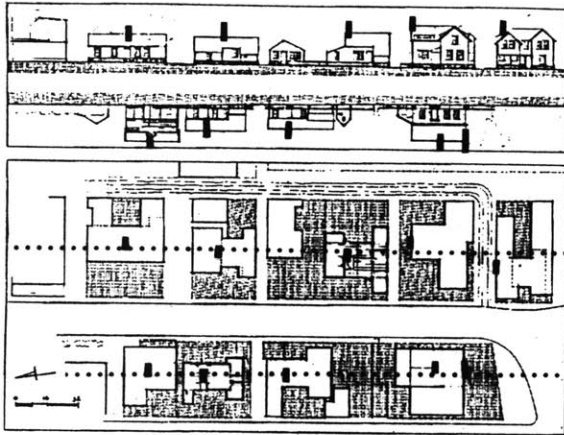
Plan of 'Sconset



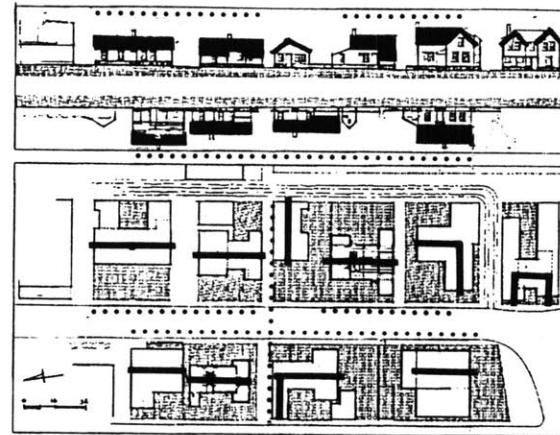
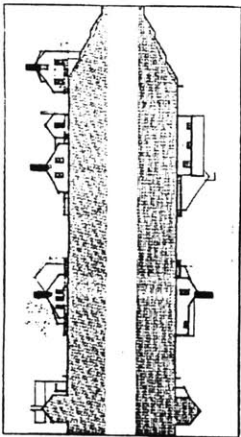


Observation of 'Sconset

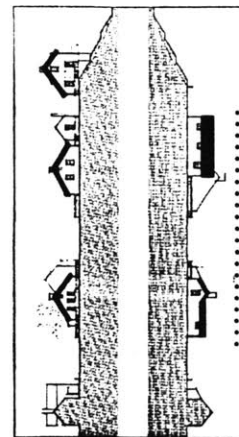
Systems of house elements

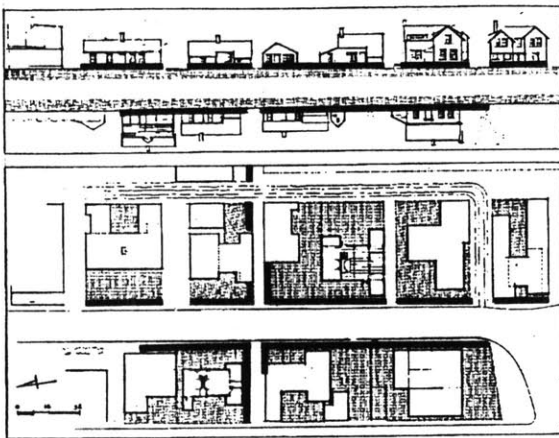


Chimney Element
An element each house has which register in the same narrow zone

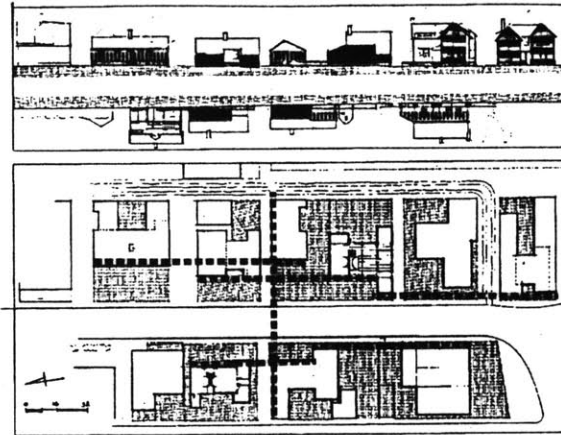
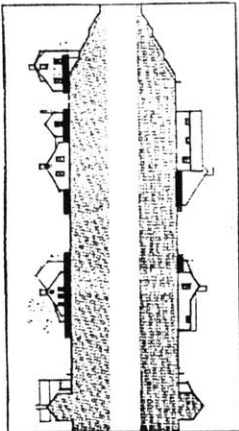


Roof Element
Roof direction changes along one side of street while other side has all same direction. Thus, on one side, the roofs form all one association of elements on the other side there is a grouping of associations

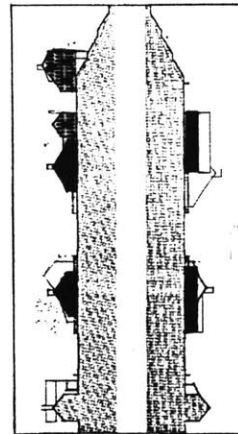




Fence Element
 Each house has fence
 which aligns with the
 other fences. They are a
 very continuous element
 along the street.



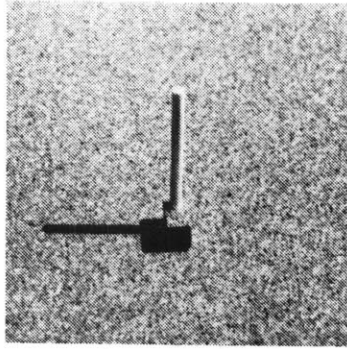
Wall Element
 Walls align with
 different relationships.
 This builds different
 associative groups by
 placement.



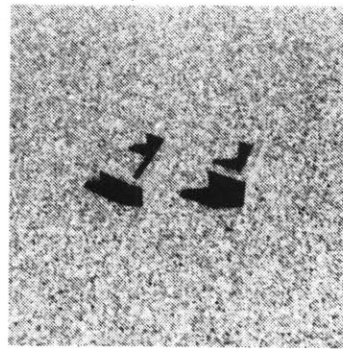
Design

Site Model

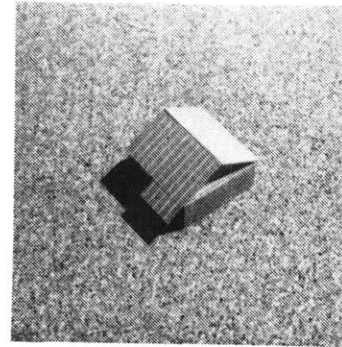
Four types of elements that were arranged to build the collective form of nine houses



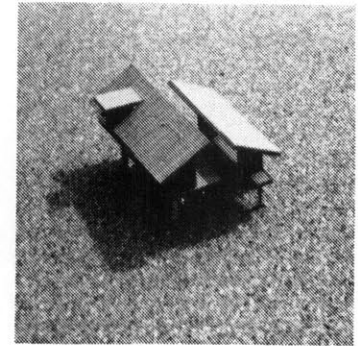
Chimney



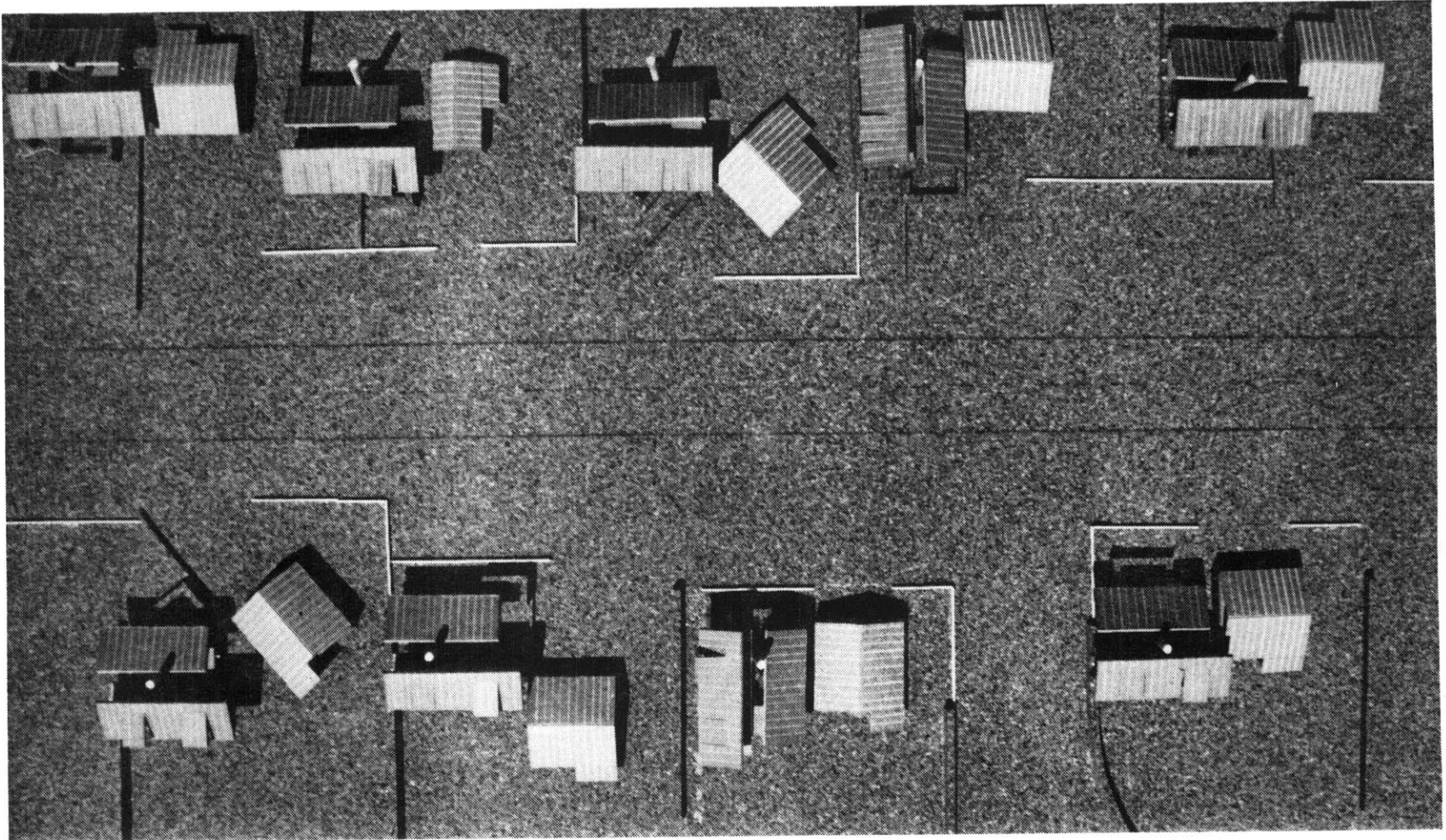
Masonry Walls



Garage

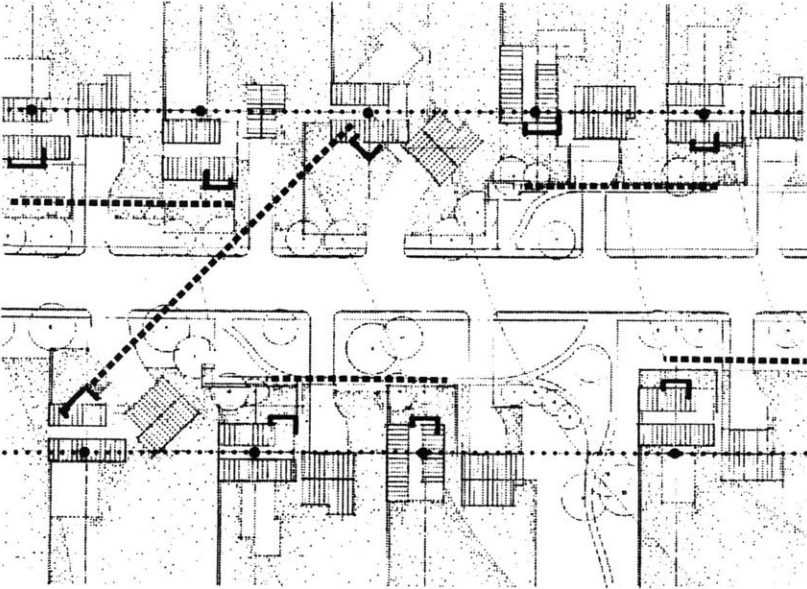


Roof with Upper Floor

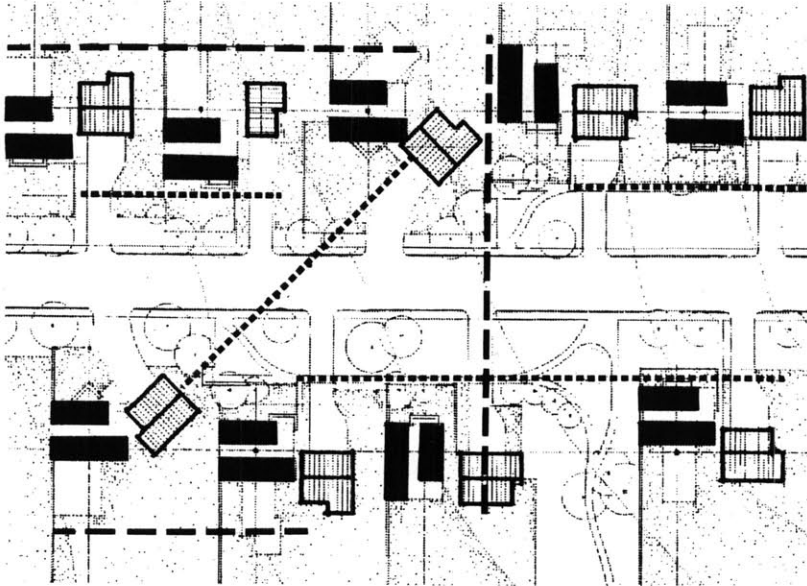


Site Plan

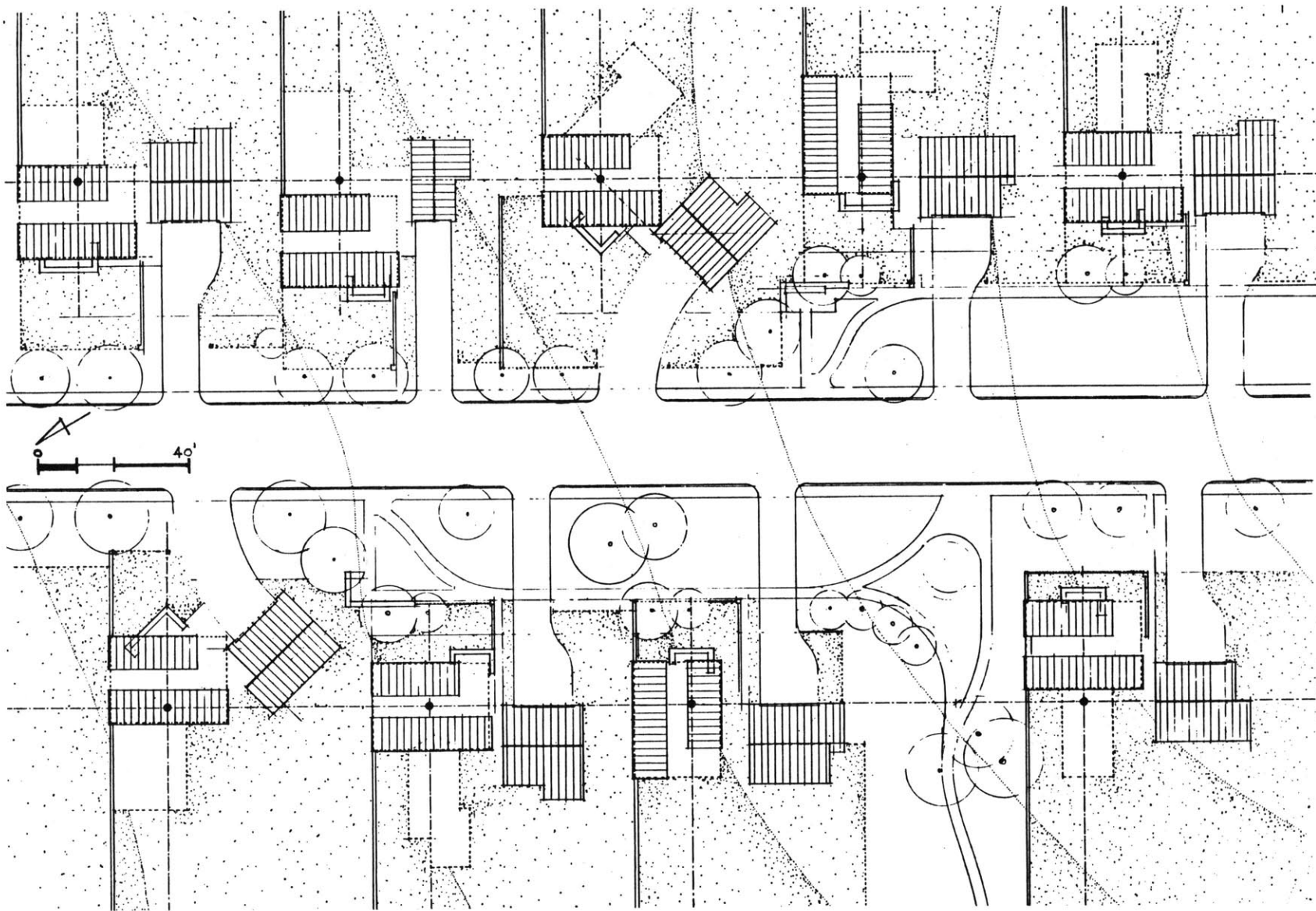
Element Relationships

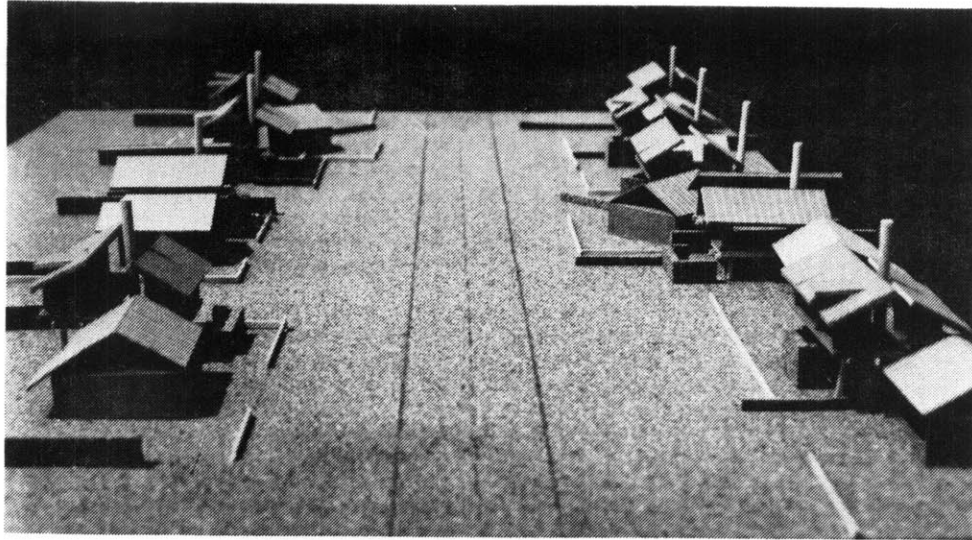


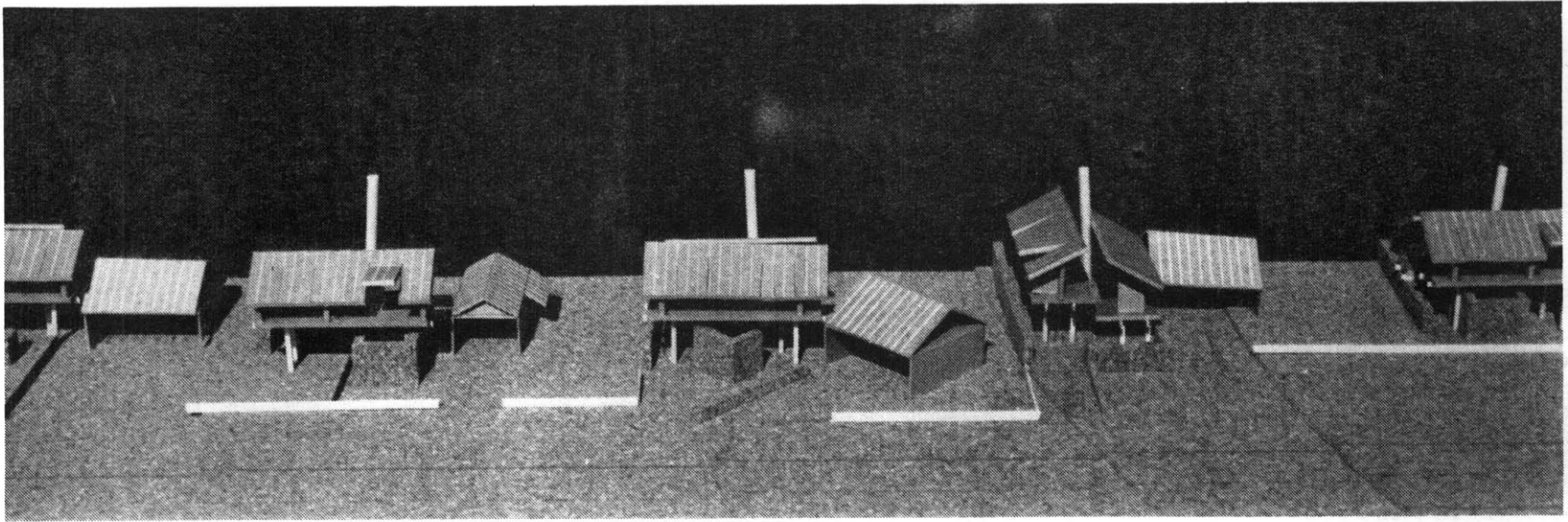
Chimneys and Walls



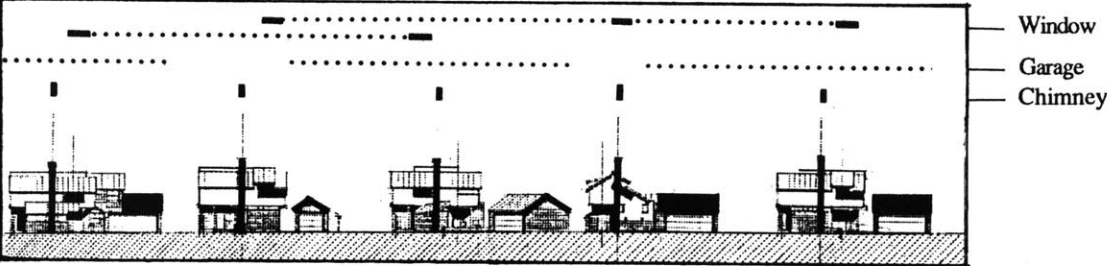
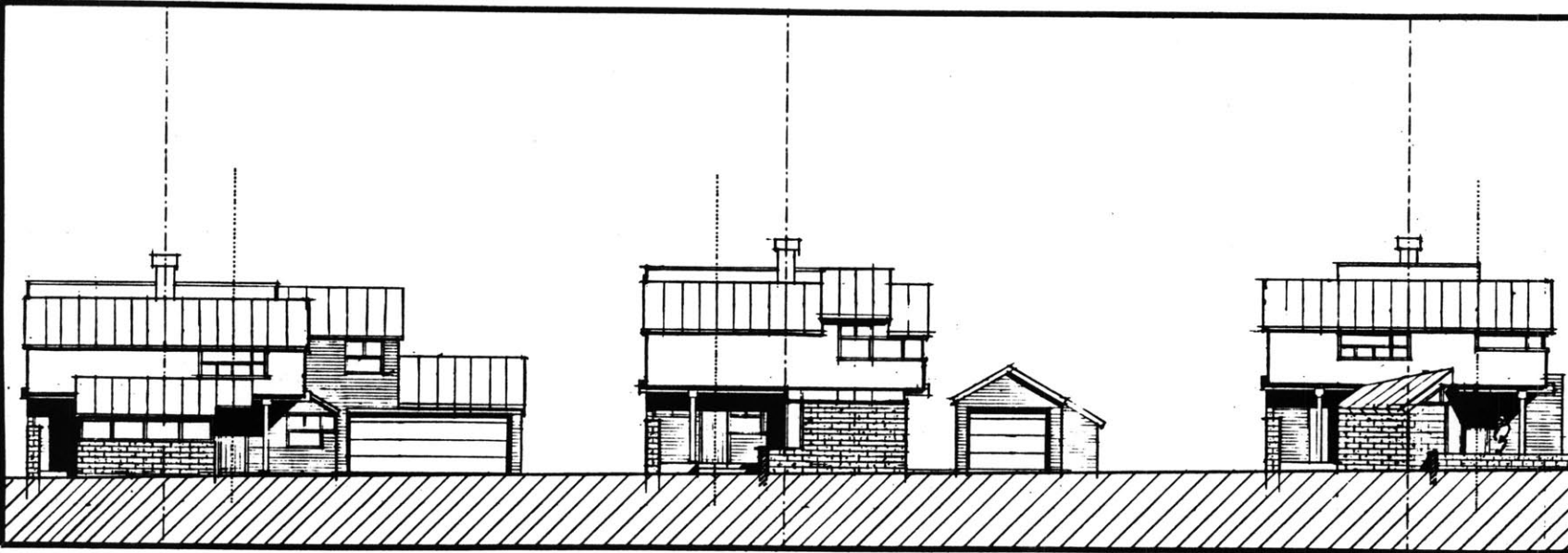
Garages and Main Roof

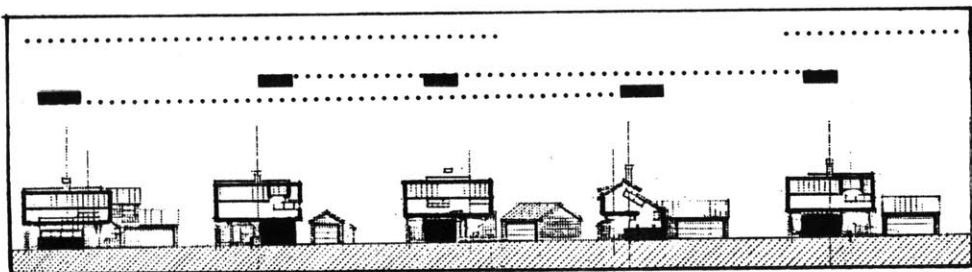
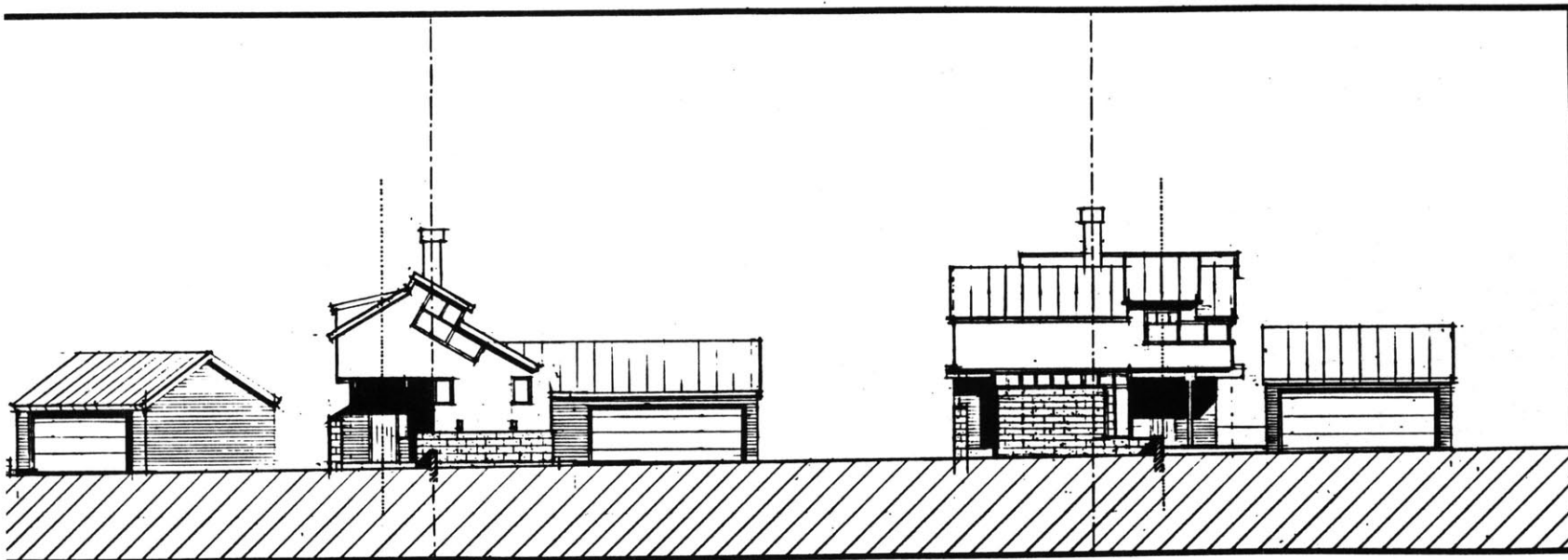






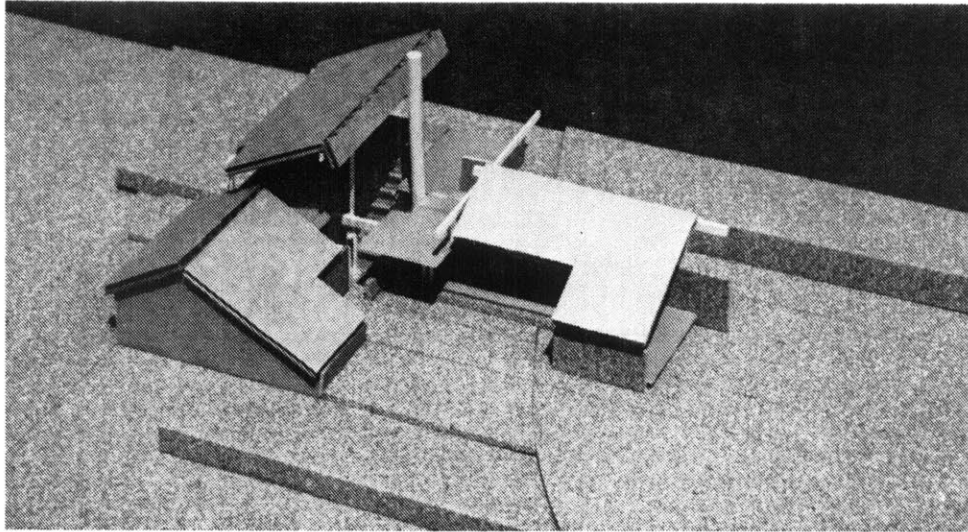
Street Elevation

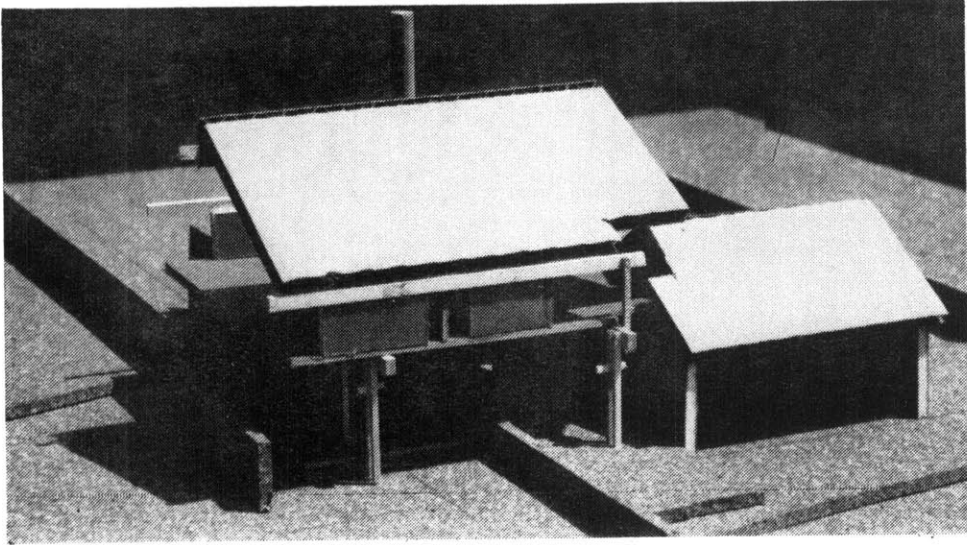




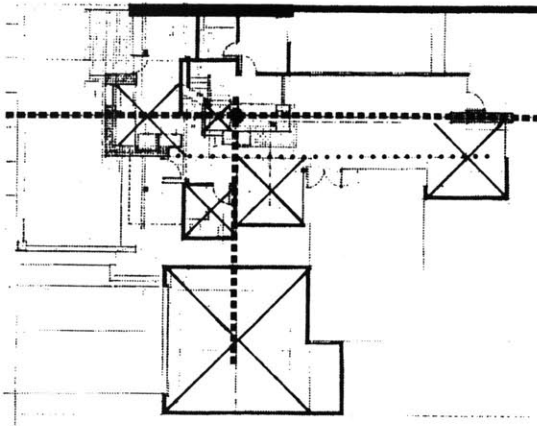
Roof and Upper Floor
Ground Wall

House Model

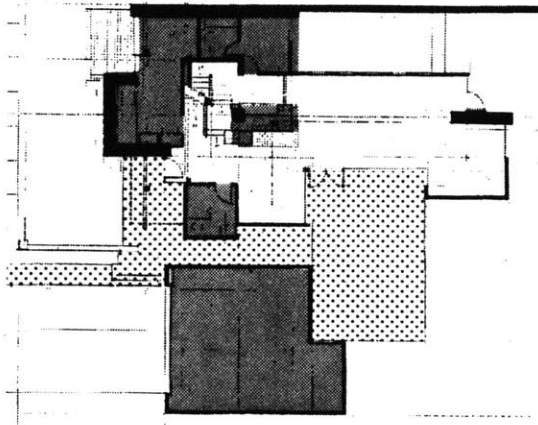




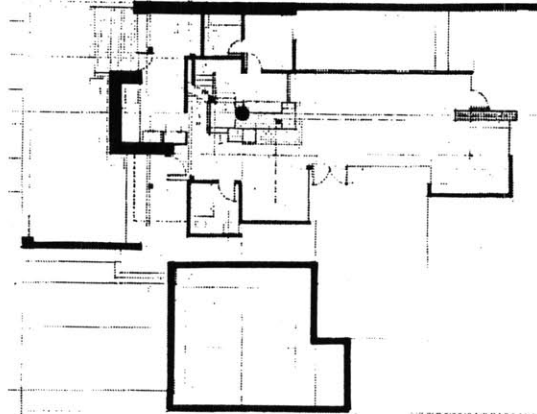
Floor Plan



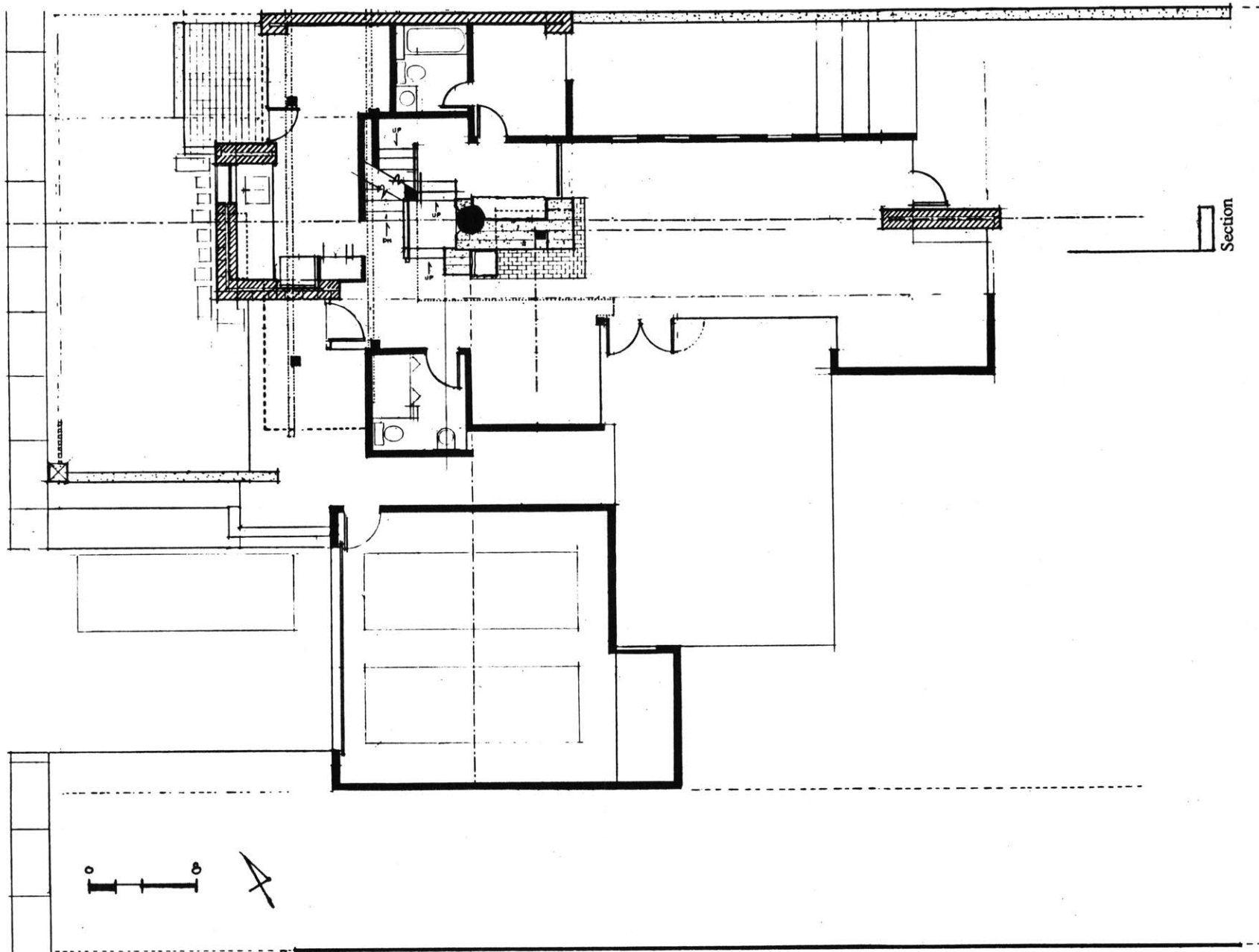
Control lines

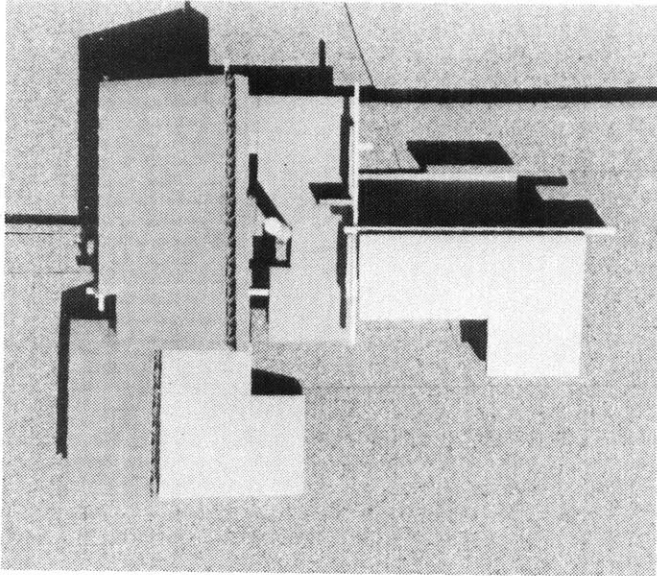


Containments and Access

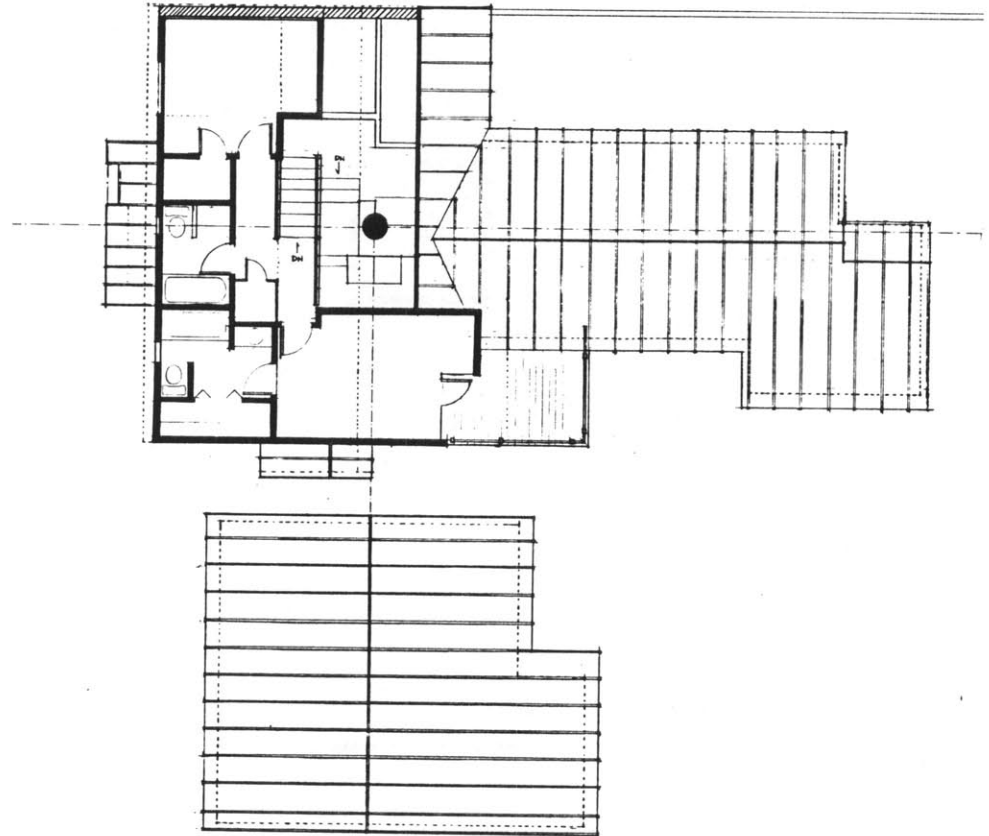


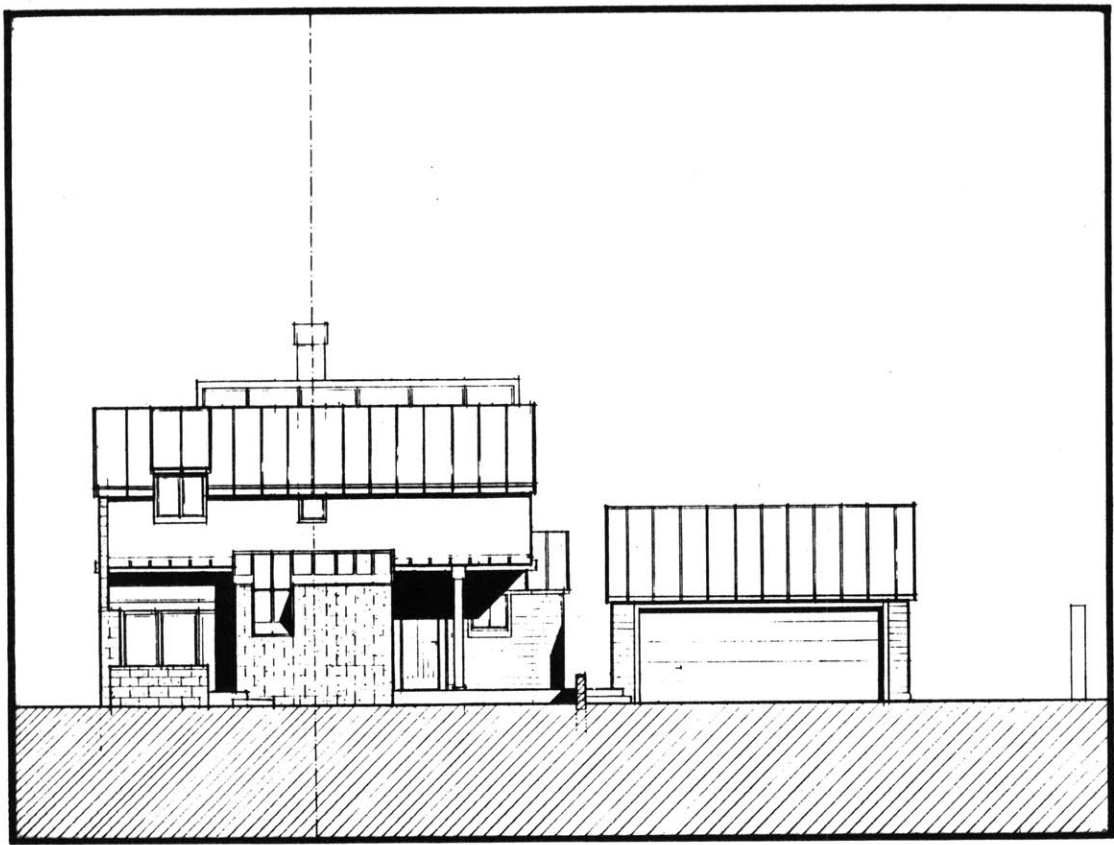
Collective Elements of House



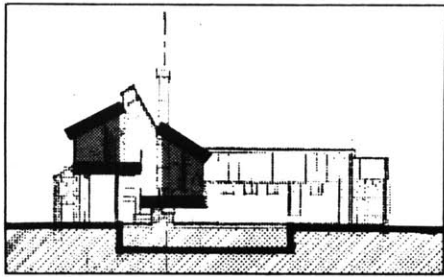


Second Floor Plan

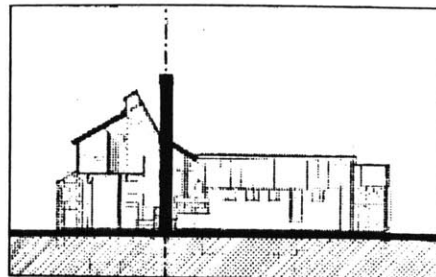




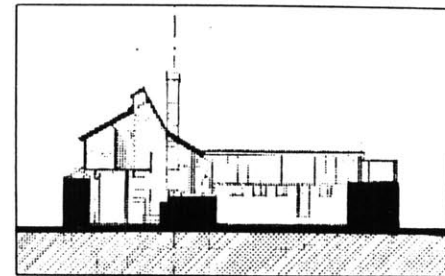
Section



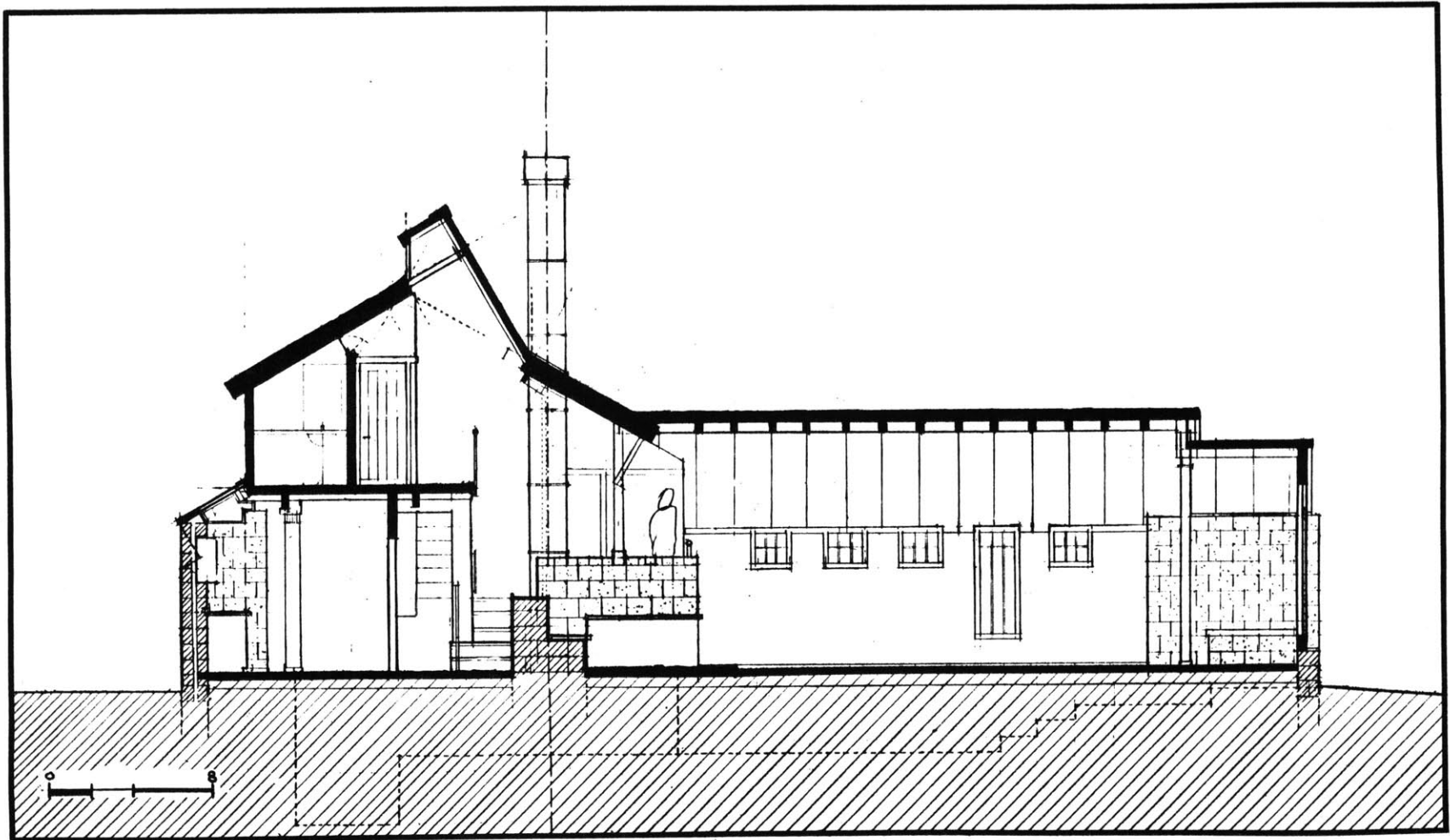
Roof and Upper Floor



Chimney as Center



Wall as Ground Form



Final Notes

1. This is only a beginning of an idea. The idea of designing houses together rather than singularly. The idea to design them in such a way that there is a multiplicity of associations. The idea that element association can build a collective environment as well as an individual identity. The design is only illustrative of the idea and falls short of expressing the potential of the method. Nonetheless, the theory holds true. Also, observations made more meticulously would enable better understanding of how the systems of element associations are operating. I plan, therefore, to pursue continued investigation into what it means to design in the American context and the method of the thesis is an important direction. The thesis was a first step in understanding a way for an architect to design in the American built environment.

2. There is the possibility for this idea of design to include the participation of the initial inhabitant. With some controls of the placement to maintain certain desired relationships the system can be maintained. A greater amount of individuality could be achieved than by the design of the single architect.

One can well imagine an operation in which a group of concerned people would define the major moves in reorganizing the landscape collectively, after which each

one in turn would determine the layout and character of his dwelling. One by one these pioneers then might disappear, being replaced gradually by new inhabitants who would carry on the shared tradition. It is not in any way necessary that such a development should come to fruition in the presence of all its founding inhabitants. The signs of their personal expression in the built form provide a precious continuity, a promise of habitability which encourages newcomers to contribute in their turn. It is the way people care about their living space and express that care that preserves the living continuity of an urban texture, and which prevents it from becoming an alien object place among others of its kind according to an artificial geometry.¹⁶

This could be performed in a similar way to the process used in constructing the design model. A kit of parts could be made which the citizen could place on the ground following rules set up and then see three-dimensionally what was designed. The home buyer would not only choose a house plan, and the finish out of that house, but would take part in the design of the collective environment.

3. Many factors point to a denser environment in the future. We will have to use our resources more efficiently.

the United States is not only the world's first suburban nation, but it will also be its

last. By 2025 the energy-inefficient and automobile-dependent suburban system of the American Republic must give way to patterns of human activity and living structures that are energy efficient. The extensive deconcentration of the American people was the result of a set of circumstances that will not be duplicated elsewhere. ... But the national cultural preference for privacy, for the detached home on its own plot, will not easily be eroded.¹⁷

Contributing to the design of detached houses was not meant to disregard this belief. It is hoped the idea could help in designing a denser environment. It would be a way to maintain the desired individuality and to achieve this in a very dense environment.

4. While working through this thesis, I confirmed notions about the role of the architect. The architect makes many decisions, most which are subjective. Designing involves a lot of individual input. Input of experience. This is what makes something special. If a person is honest to their feelings and beliefs the outcome of what they do will be better. But there is also a responsibility to a larger world. The architect is not designing just for himself. Architecture is not self-expression. What he does must be good for others too. It cannot be like painting or a sculpture, which in many cases gets its energy from the intentions of its maker, but architecture has to be

able to exist on its own, exist separate from the intentions of the architect. The imagination of an architect adds excitement to our lives, but this is not enough for good architecture. The inward design approach leads to inward, personal buildings which most often are not responsive to the responsibilities of Architecture.

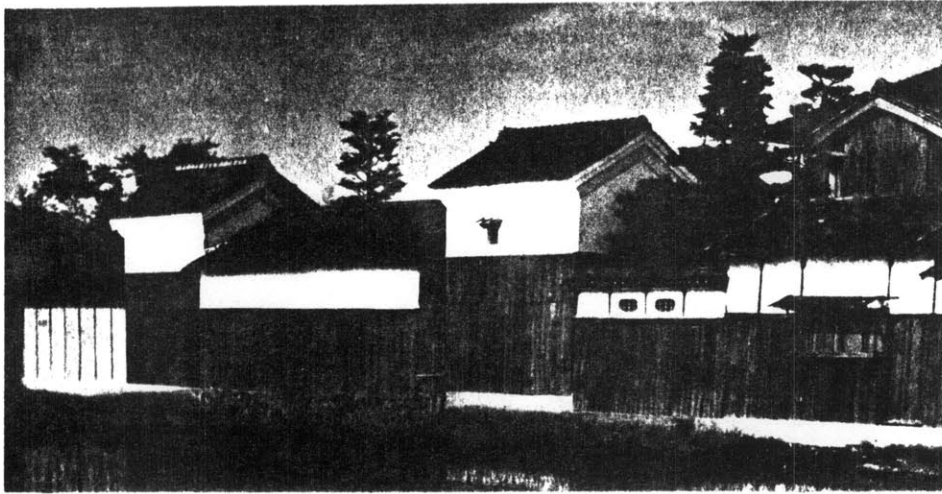
5. An finally this thesis to me is about a celebration of things of ordinary experience. One more quote.

Then again, you may prefer a more recent voice, that of Alan Wheelis, from his gentle and provocative book, *On Not Knowing How to Live*.

"The objective mode is not for me, the detached voice rings false. I must work from the formlessness of my own life, speak in my own voice, however faltering and unsure. What I seek is not to be found in my past, is not to be found at all but achieved, if at all, from the debris and clutter of a flawed and limping life. I admonish myself: Give up this longing for a past of brave adventure from which to work. Heroic experience is hearsay, is not your own. Don't just stand there in lamentation before the junk -heap of memory, the fears and evasions, the missed opportunities, the cautious advances. Wade in. Pick up the pieces. Don't expect to *find* anything of value. This is ore, not metal. Expect only to come upon something - slingshot, love letter, rusted

foil, ancient condom, broken knight from a chess set - from which with effort and courage something of beauty might be made."

Yes, the world is not so much found as it is made, *Homo faber*. Philosophy has been to preoccupied with the eyes, with vision. Return the hands to Philosophy; to touch is to be touched. Extraordinary simply means 'out of the ordinary.' And so it is, for we can make a world out of the ordinary. Do not await salvation while the parade passes by. Surprise and mystery lurk in our experiencing the obvious, the ordinary. Salvation may be illusory, but salving experiences can occur day by day.¹⁸



Endnotes

- 1 Gowans, p.xiv
- 2 Norberg-Schulz, *New World Architecture*, p.8
- 3 *Ibid*, p.7
- 4 Jackson, K., p.52
- 5 Hayden, p.43
- 6 Jackson, K., p.47
- 7 Jackson, J.B., *The Southern Landscape Tradition in Texas*, p. 30
- 8 Wang, p.12
- 9 Habraken, *Transformation of the Site*, p.31
- 10 Thomas, p.75
- 11 Habraken, *Supports*, p.33
- 12 Lynch, *Site Planning*, p. 272
- 13 Norberg-Schulz, *New World Architecture*, p.27
- 14 Jackson, K., p.4
- 15 Norberg-Schulz, *Intentions in Architecture*, p.44
- 16 Kroll, p. 78
- 17 Jackson, K., p. 304
- 18 McDermott, p.xiv

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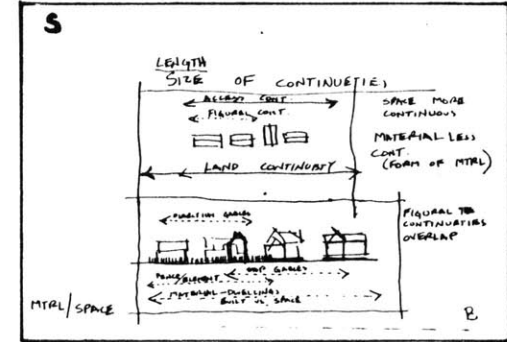
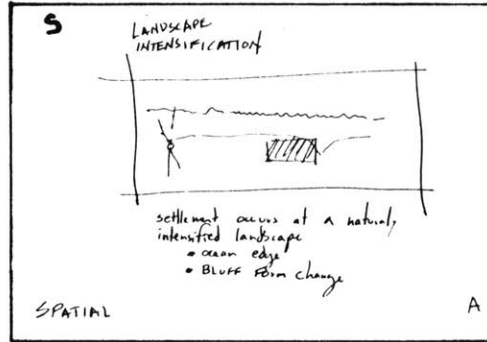
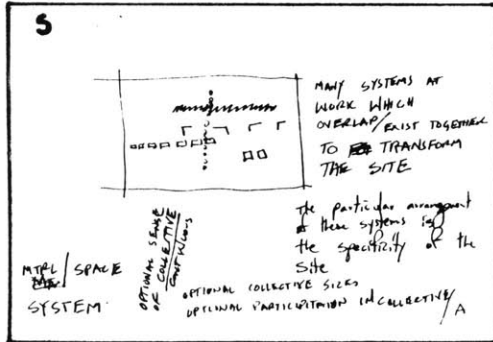
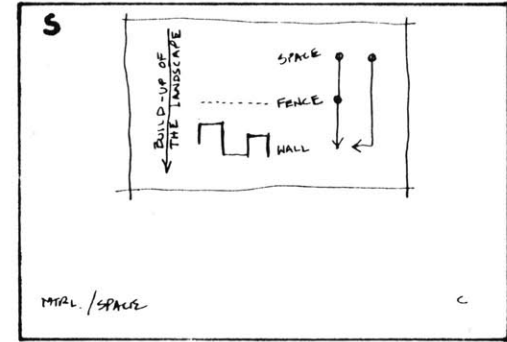
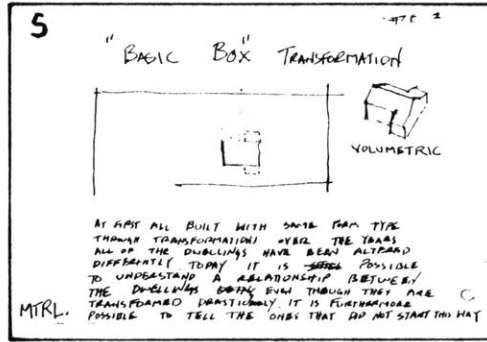
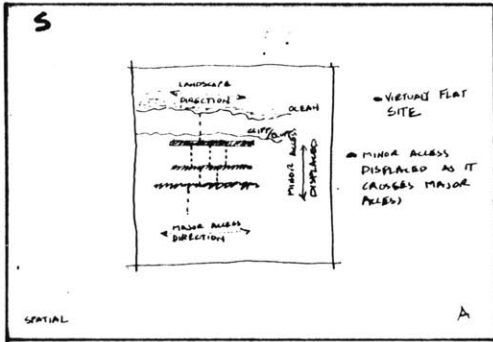
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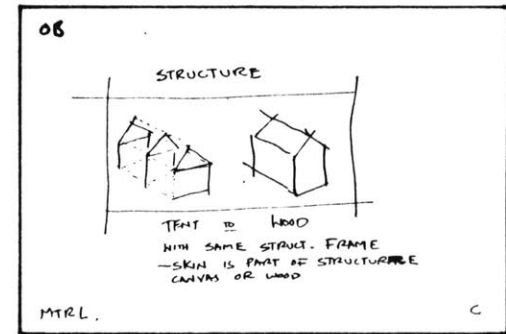
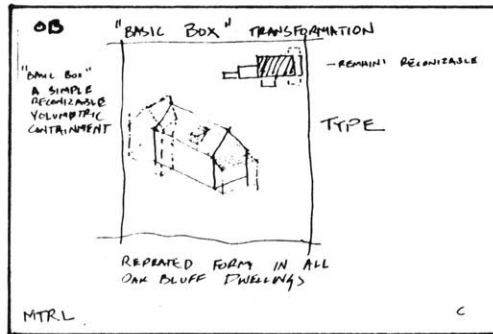
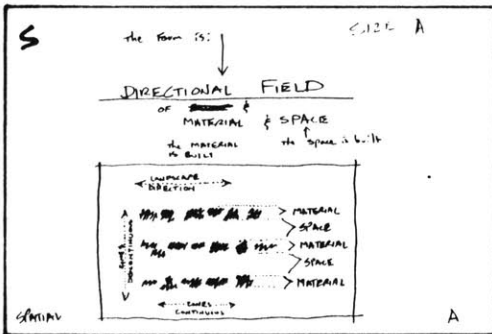
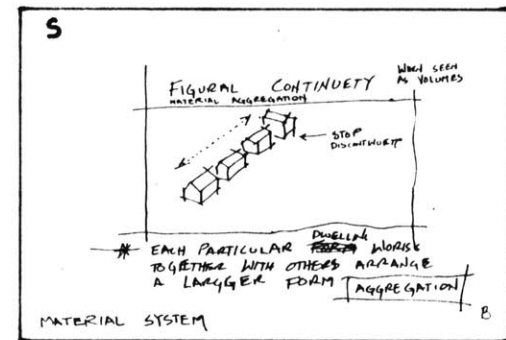
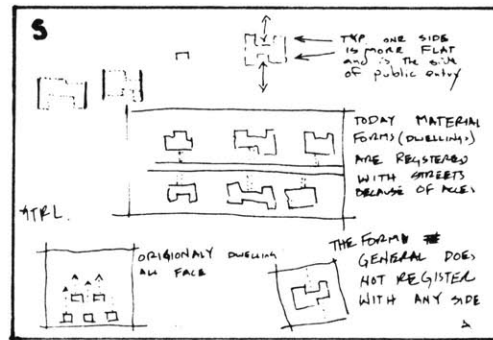
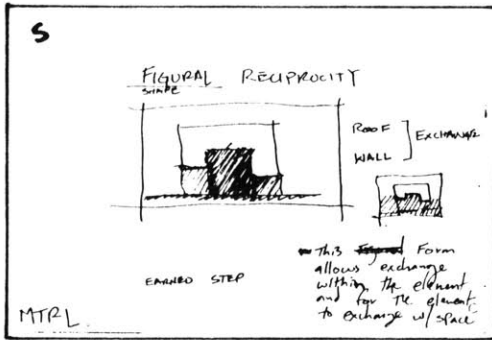
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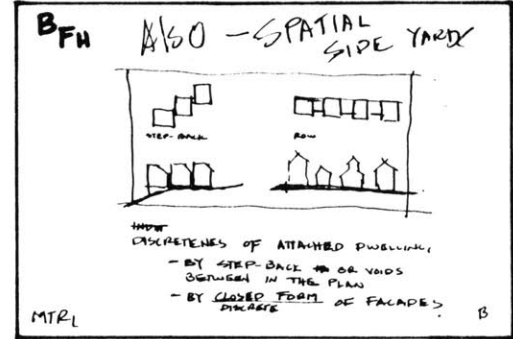
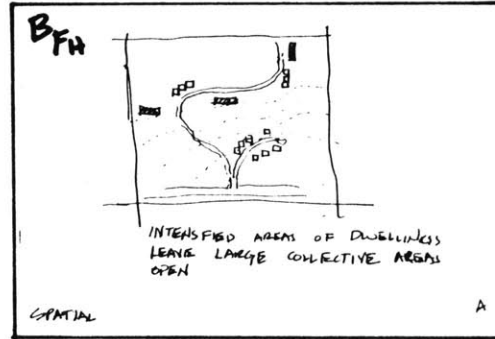
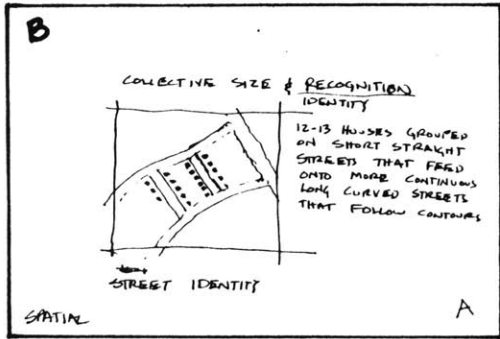
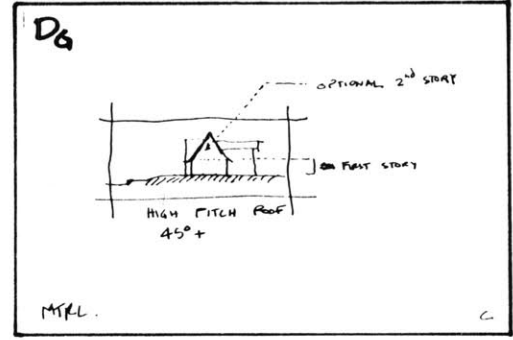
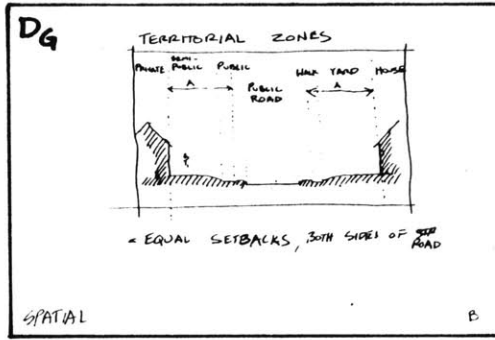
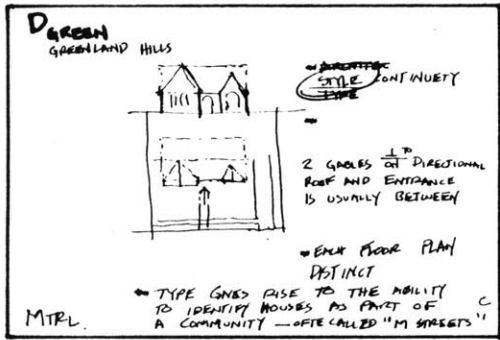
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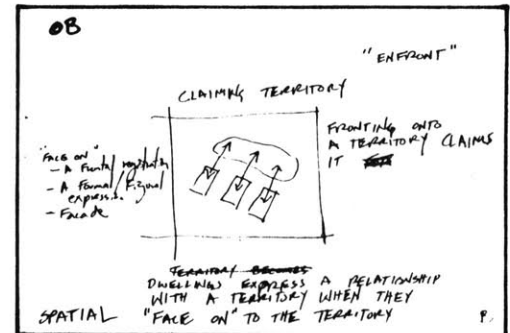
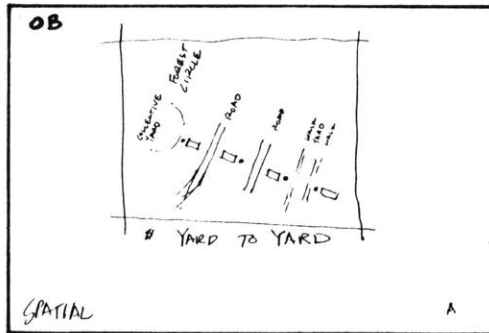
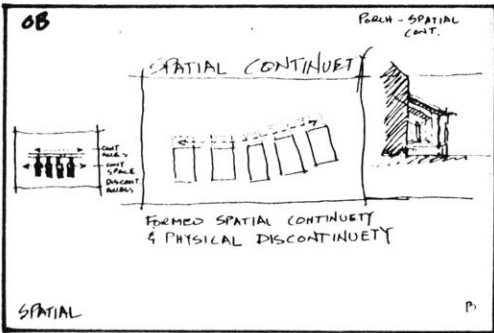
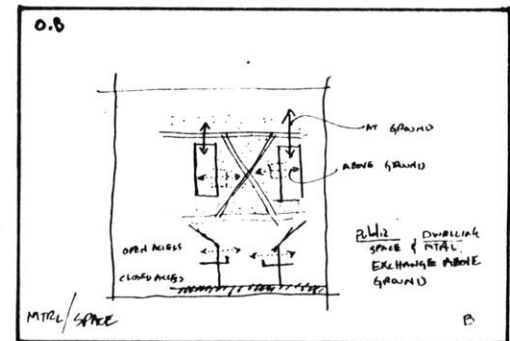
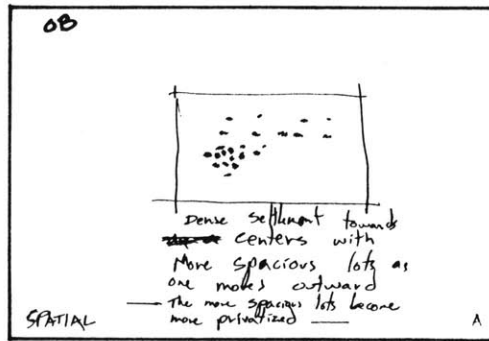
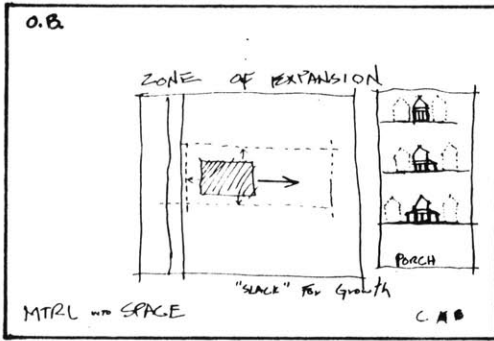
Observation Notecards

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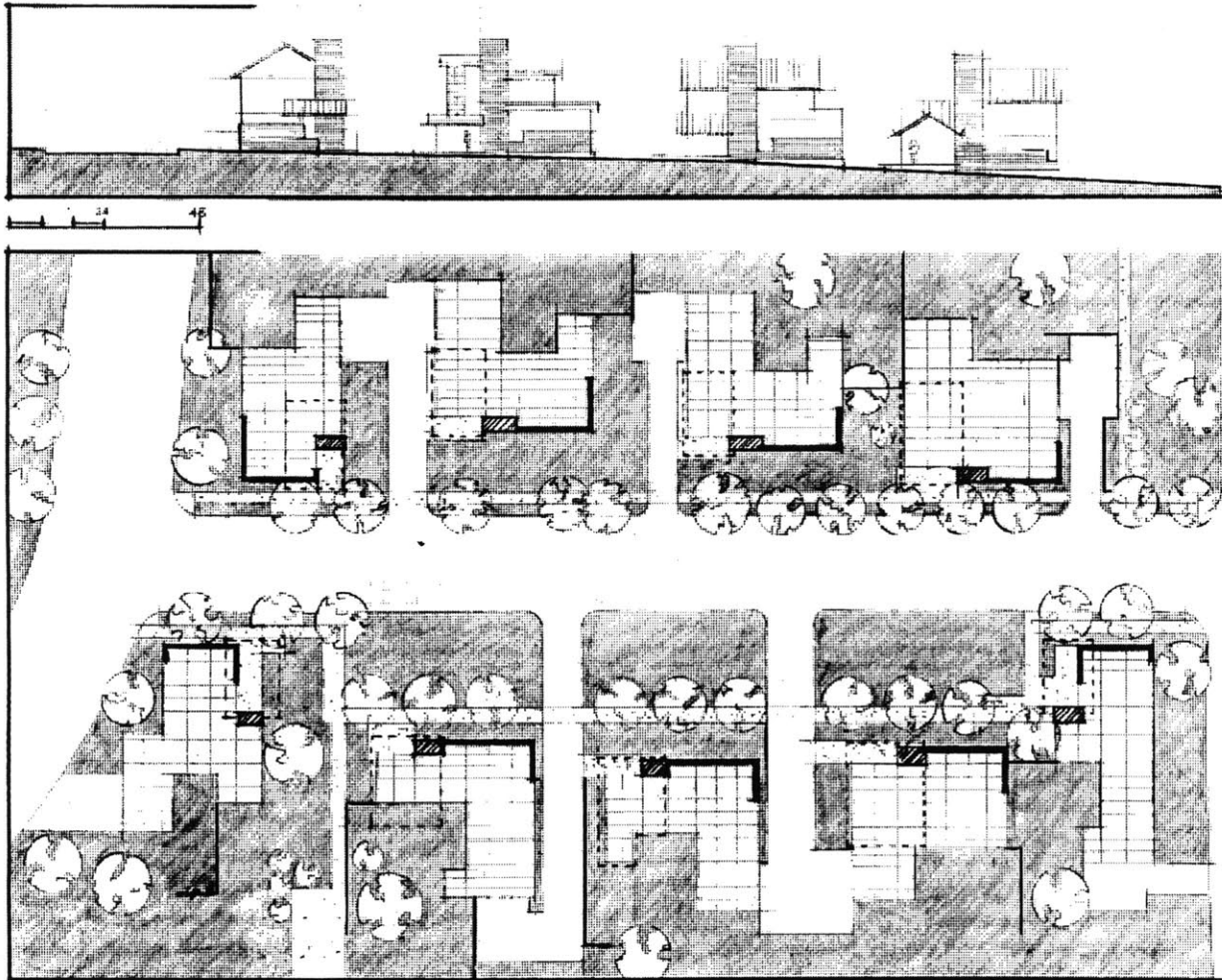




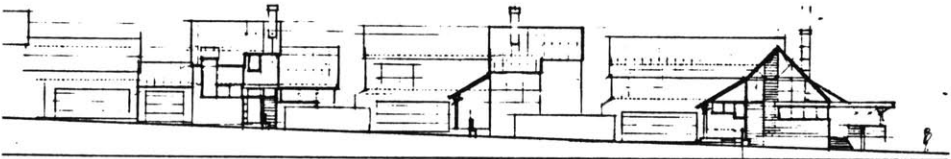




First Design Pass

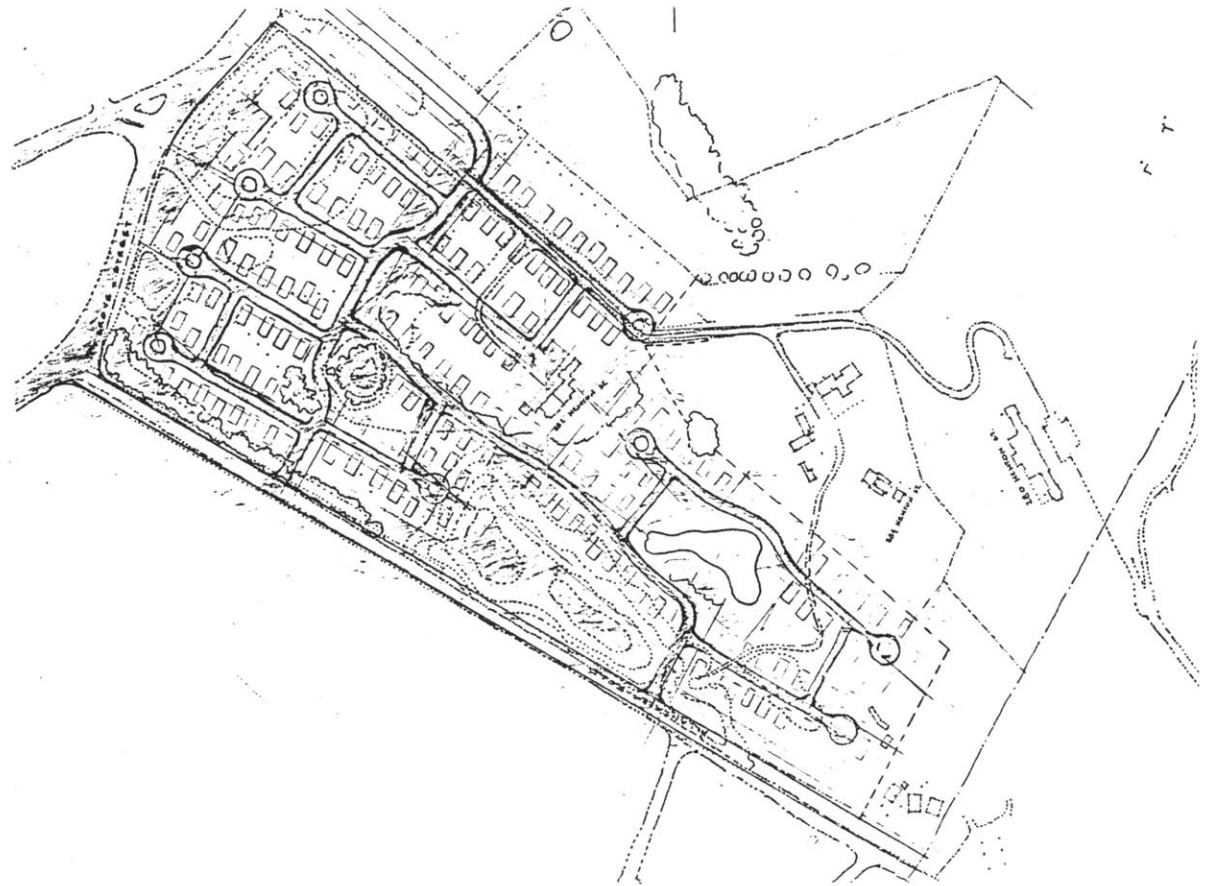


Second Design Pass



Neighborhood Site Design

Allendale Farm Brookline, Massachusetts



Element Continuity Diagram

