

NEIGHBORHOOD GENERATED MIXED-USE

by

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A.B. Vassar College
1978

Submitted in Partial Fulfillment
of the requirements for the
Degree of
Master of Architecture
at the
Massachusetts Institute of Technology
February 1982

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ABSTRACT

Large cities across the United States are currently facing problems of declining areas of commercial concentration.

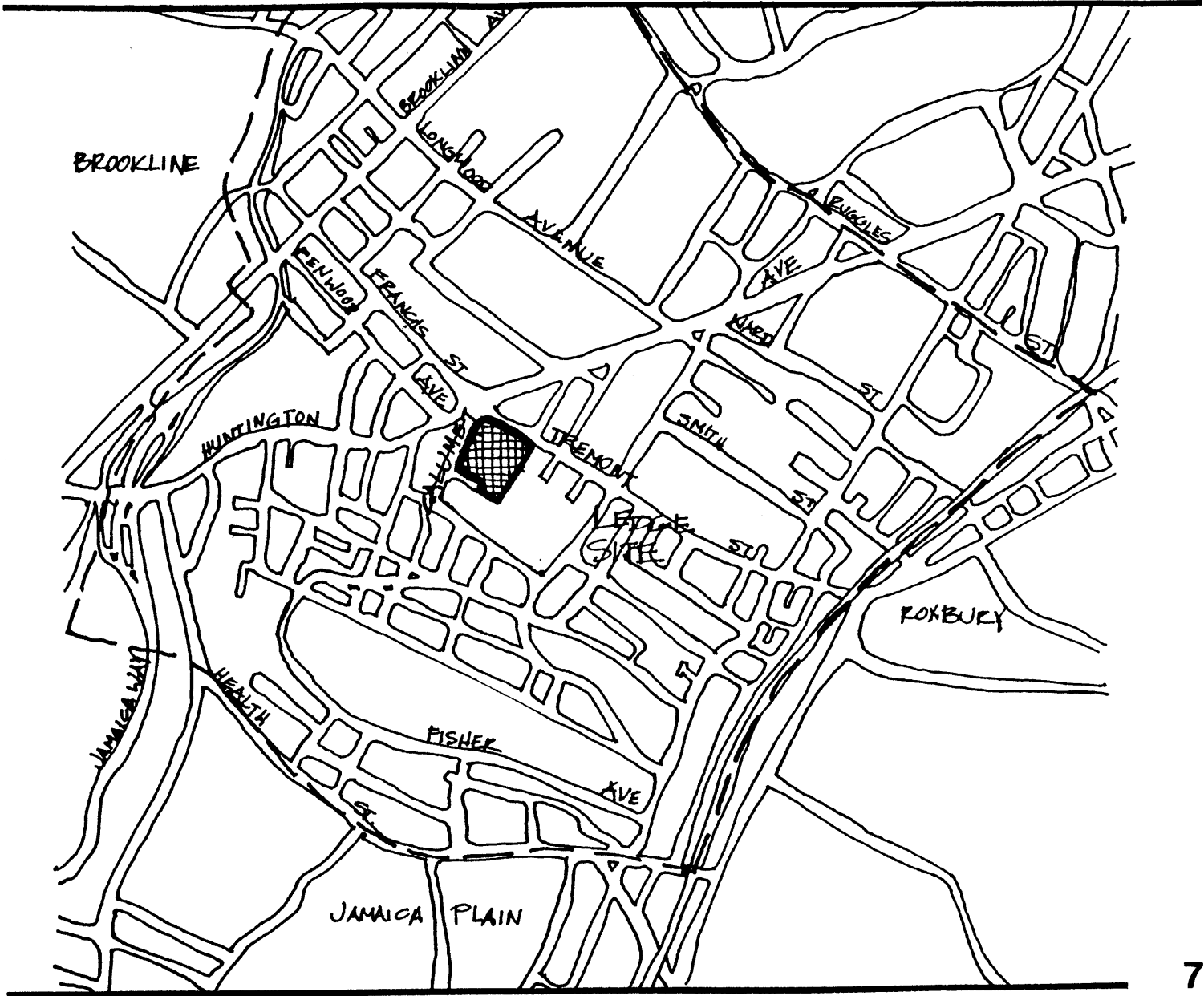
There may be many reasons for these declines. Perhaps the problem lies in a larger surrounding community which has proven unable to meet the zone's financial demands. On the other hand, the originally programmed uses of the spaces may have proven unsuitable for the zone's actualized future demands.

Out of these zones may grow viable commercial nexus which might serve as catalysts for their surrounds. By providing avenues for economic investment, they will attract business, thus adding financial stability to the zone.

Thesis Supervisor: Gary Hack
Title: Associate Professor of Urban Studies and
Environmental Design

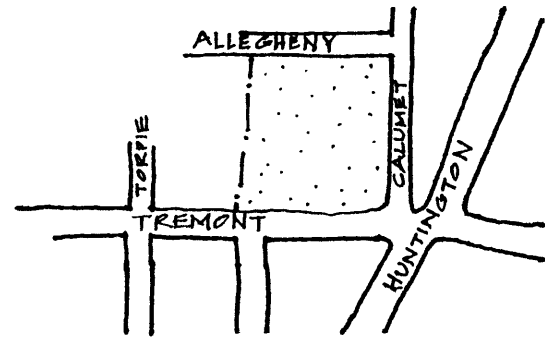
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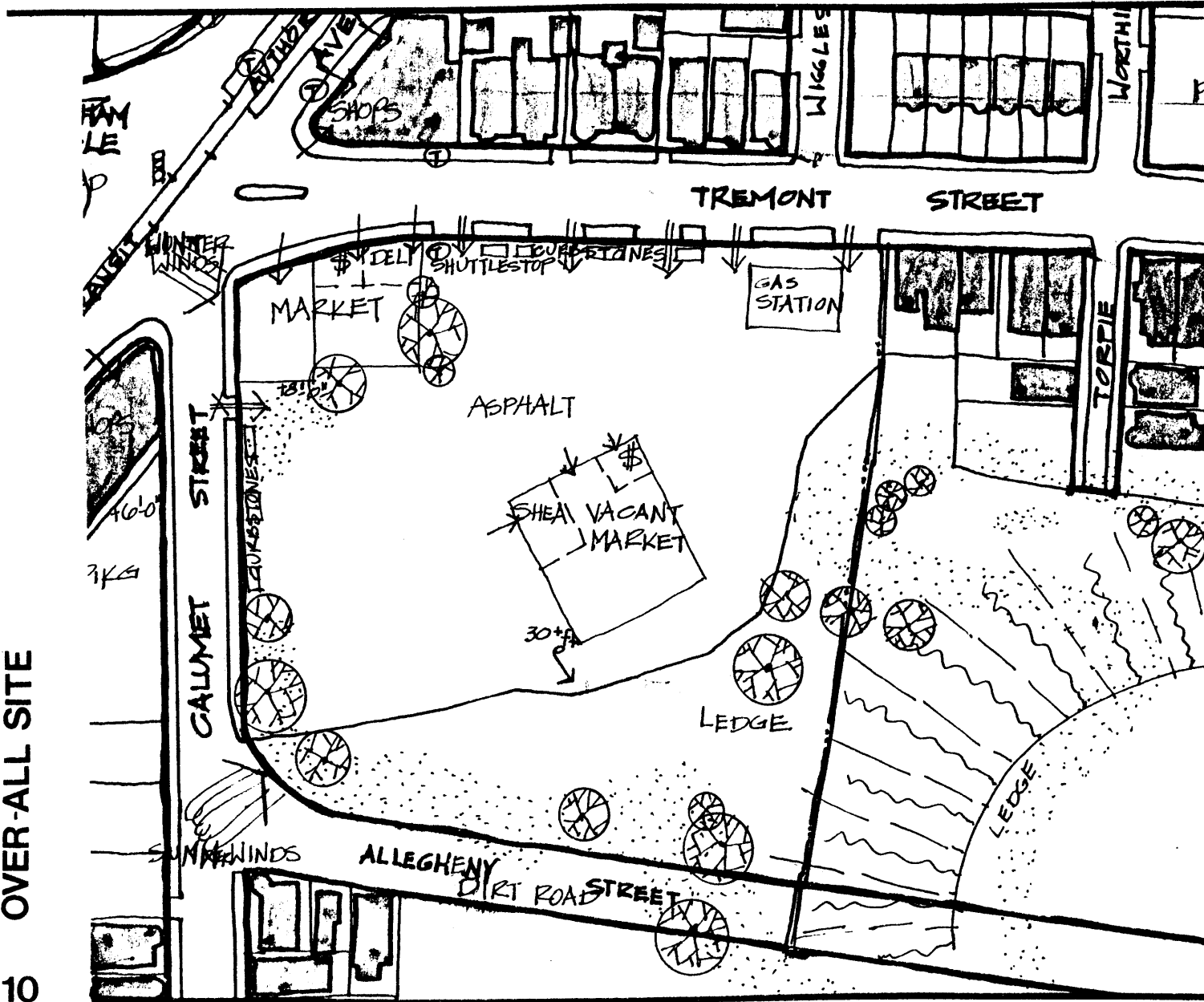
I SITE ANALYSIS

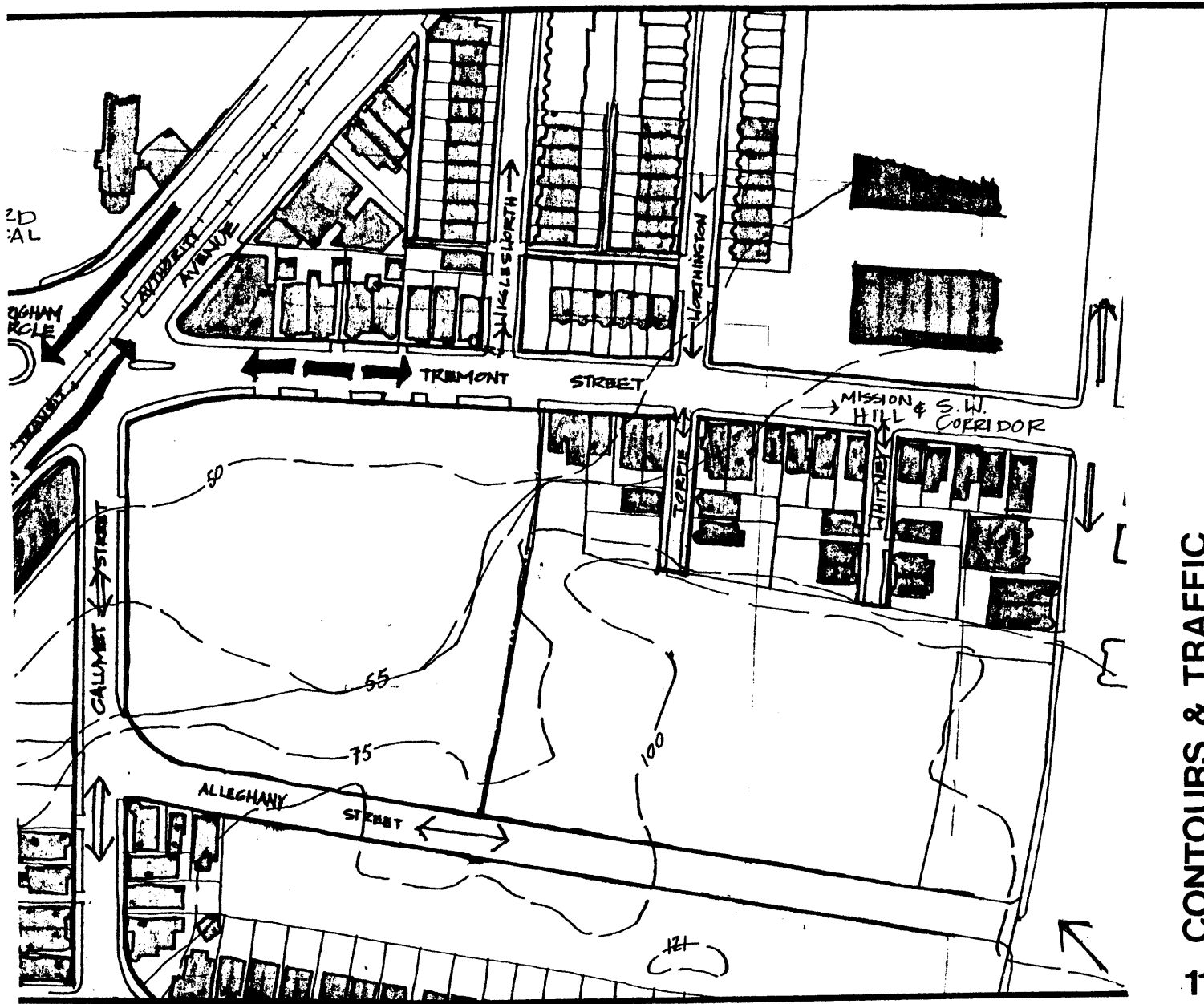
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OVER-ALL SITE

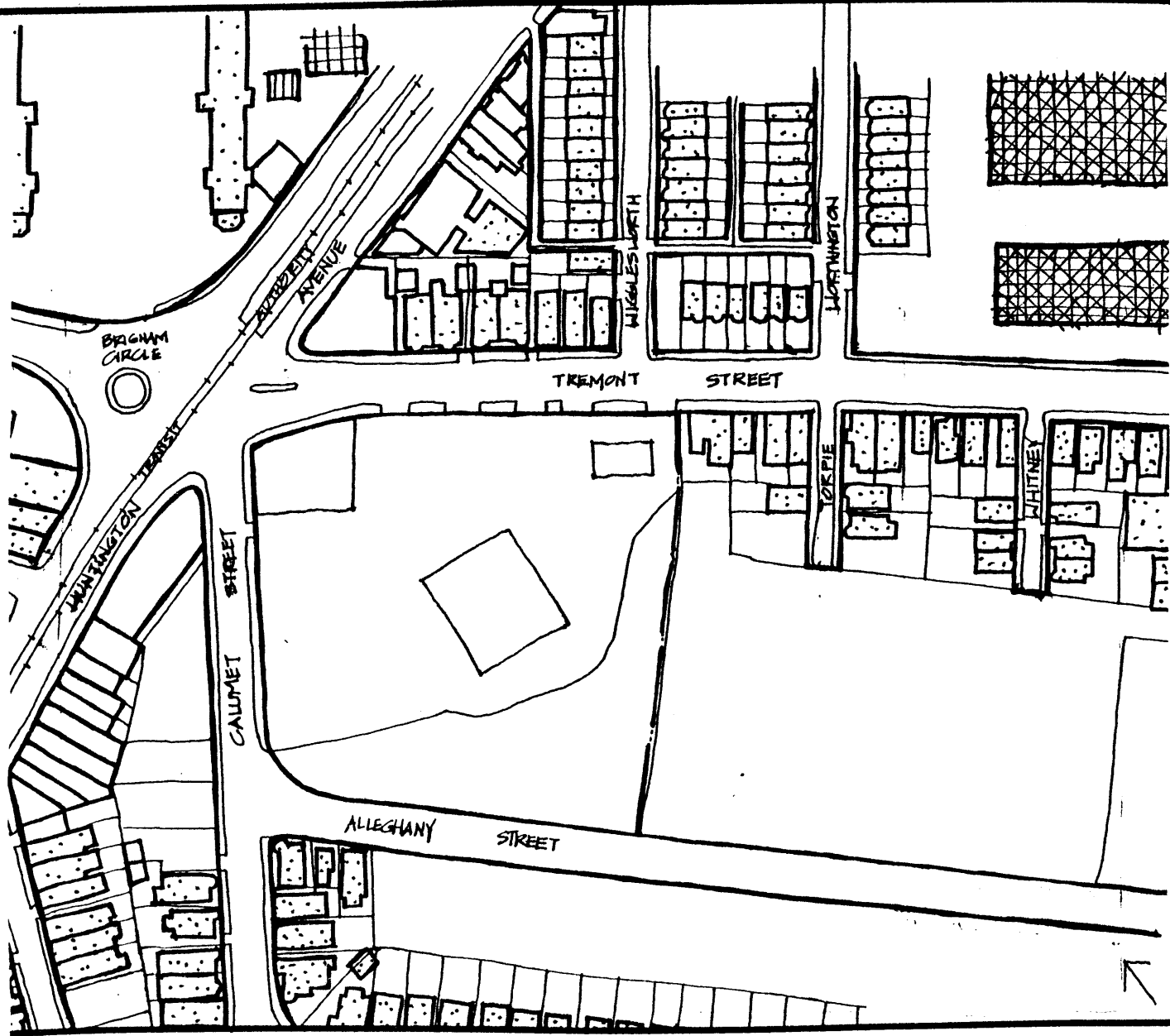
10

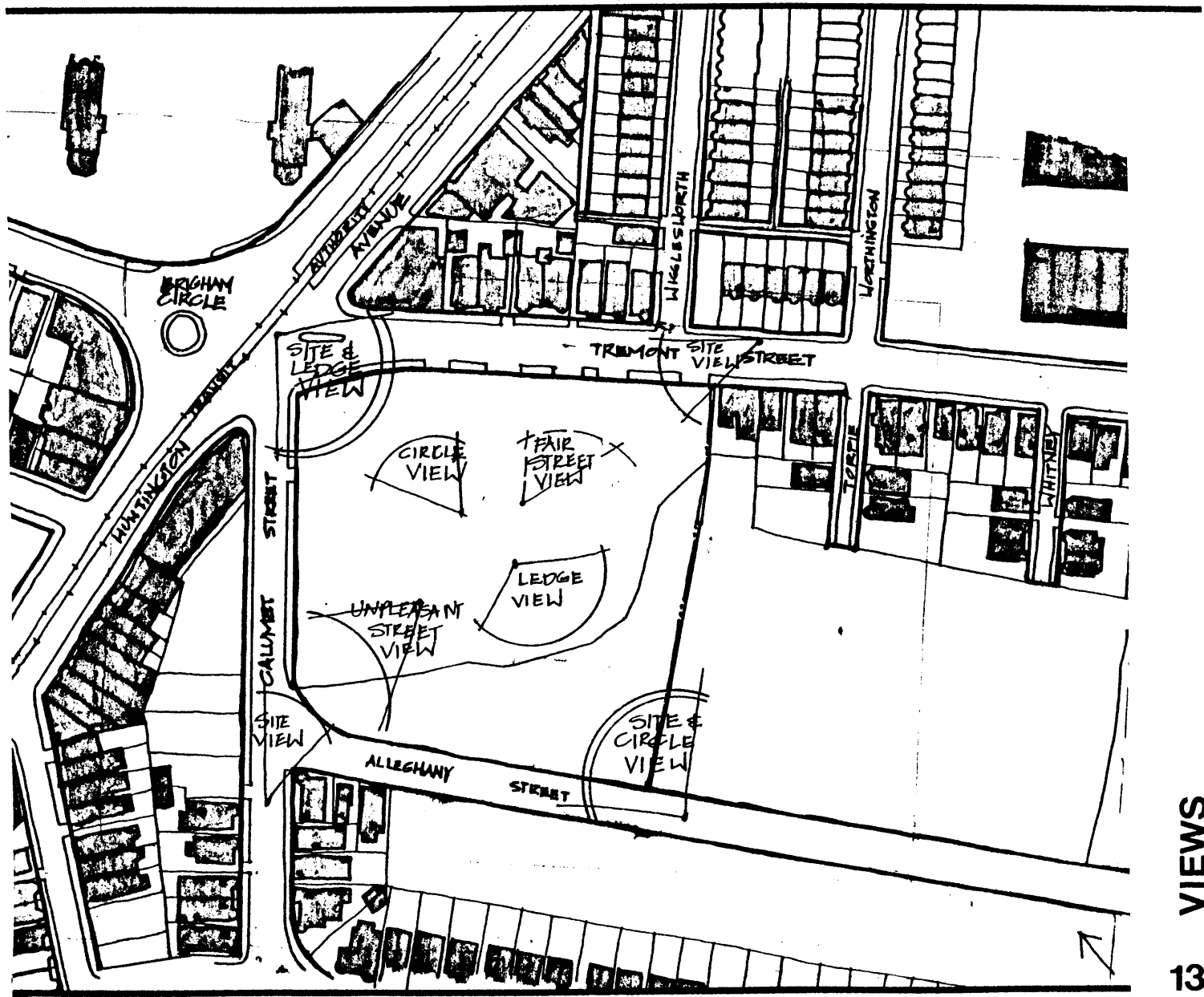




≡ CONTOURS & TRAFFIC

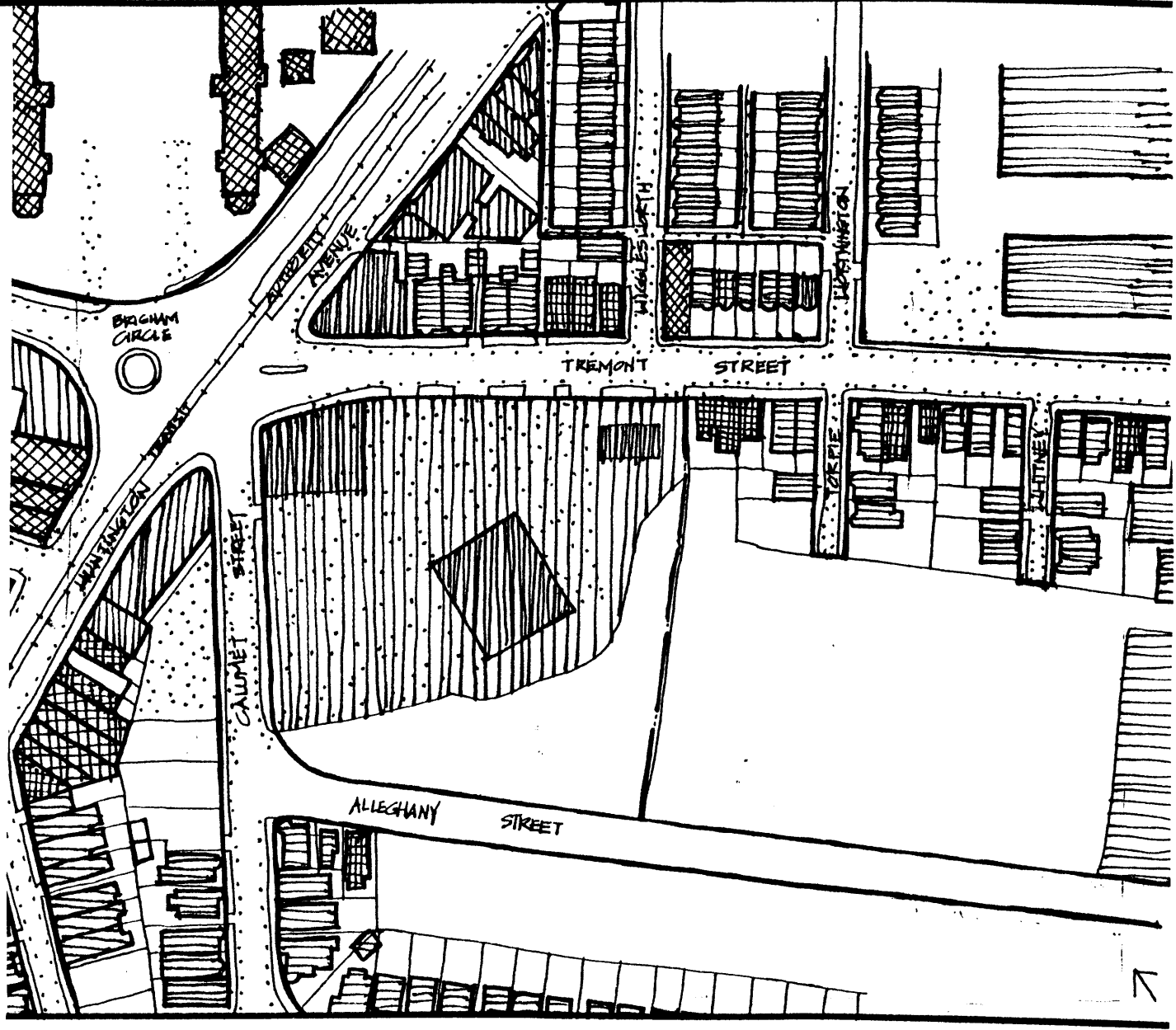
12 DENSITY 1 & 2 Storey — 3&4 ••• 5&6 |||| 7&8 ### 8+ 密





13 VIEWS

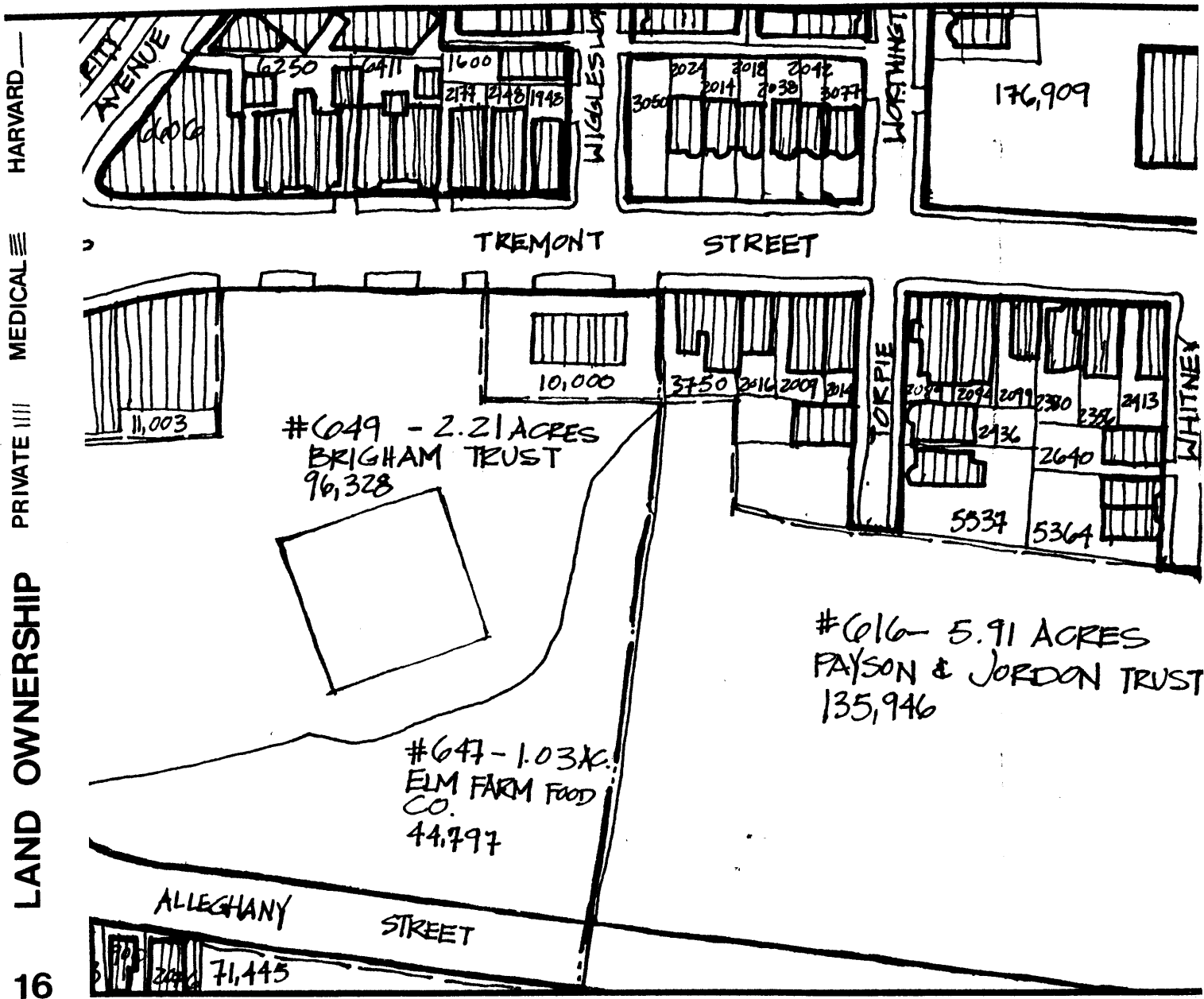
14 LAND USE
 RESID  COMMERCIAL 
 PUBLIC  VACANT 
 COMMERCIAL  PARKING 



EXISTING LAND USES*

	<u>Square Feet</u>
Residential	5,120,807
Residential-Commercial	366,767
Commercial	420,019
Industrial	332,263
Parking	437,360
Institutional	7,310,149
Vacant Lots	1,771,651
Other	2,645,198
	<hr/>
Subtotal	18,404,214
Street Etc.	12,350,000
	<hr/>
Total	30,789,214

*Totalled from BRA's Open Space Management and
Demolition Maps.



HARVARD

MEDICAL

PRIVATE

LAND OWNERSHIP

WIGGLE STREET

TREMONT STREET

ALLEGHANY STREET

WORFING ST

TORPIE

WHITNEY

#649 - 2.21 ACRES
BRIGHAM TRUST
96,328

#647 - 1.03 AC.
ELM FARM FOOD
CO.
44,797

#616 - 5.91 ACRES
FAYSON & JORDON TRUST
135,946

176,909

11,003

10,000

3750

5537

5364

71,445

6250

6411

1600

2177

2148

1943

3050

2021

2011

2038

2097

2077

1400

2094

2094

2099

2380

2386

2113

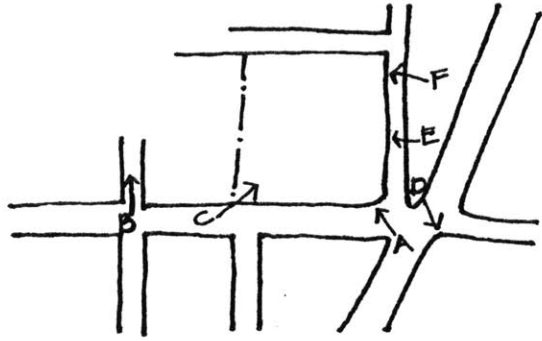
2136

2640

EXISTING LAND OWNERSHIP*

	<u>Square Feet</u>
Privately Owned	5,705,306
Publically Owned	2,980,476
Institutionally Owned	9,718,432
	<hr/>
Total	18,404,214
	<hr/>

*Totalled from BRA's Open Space Management and Demolition Maps.

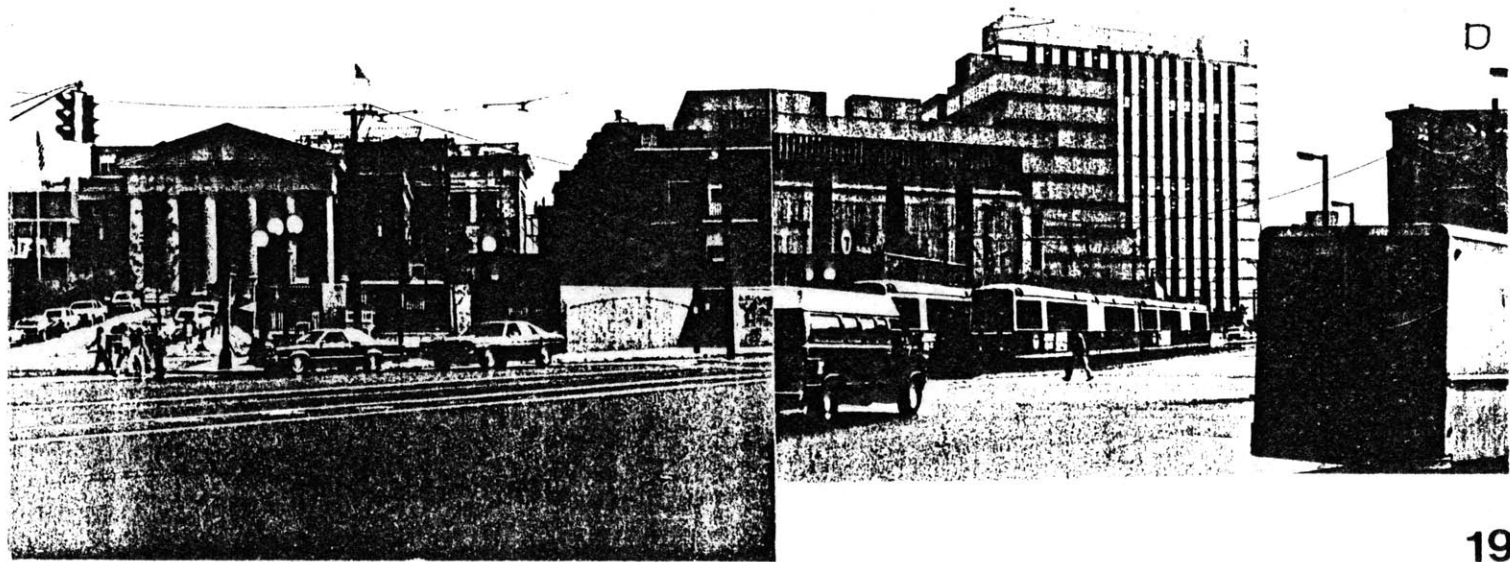


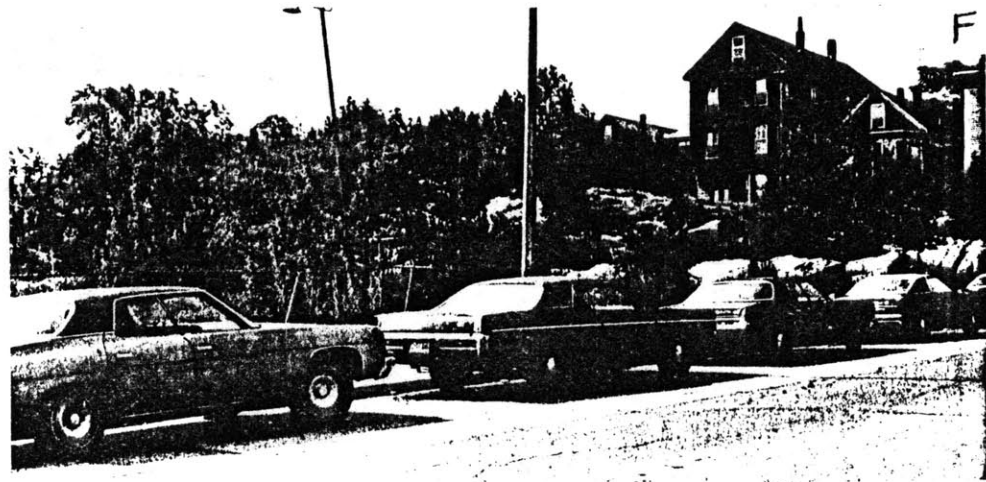
A



B







Based on my site analysis in Chapter I, I find
the following to be important:

DENSITY

SUN

PRIVACY

BRIGHAM CIRCLE

EXISTING VOCABULARY

LEDGE

BUILDING MATERIALS

II PROGRAM

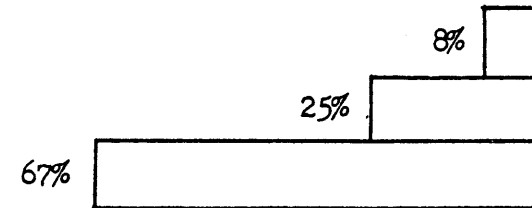
PREVIOUS FINDINGS 24

RESULTING PROGRAM 27

An earlier feasibility study was executed by Andrew Smith in an MIT Master's thesis in City Planning in 1978. Some of his findings are as follows:

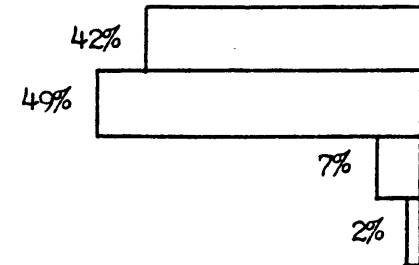
Housing Type

1 - 2 Units
 3 - 4 Units
 5 or more units



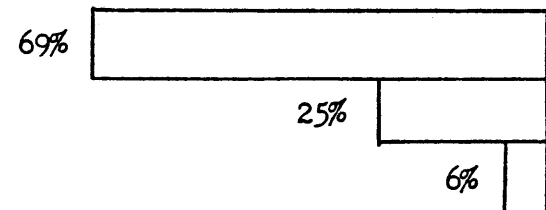
Housing Tenancy
 Owner-Occupied

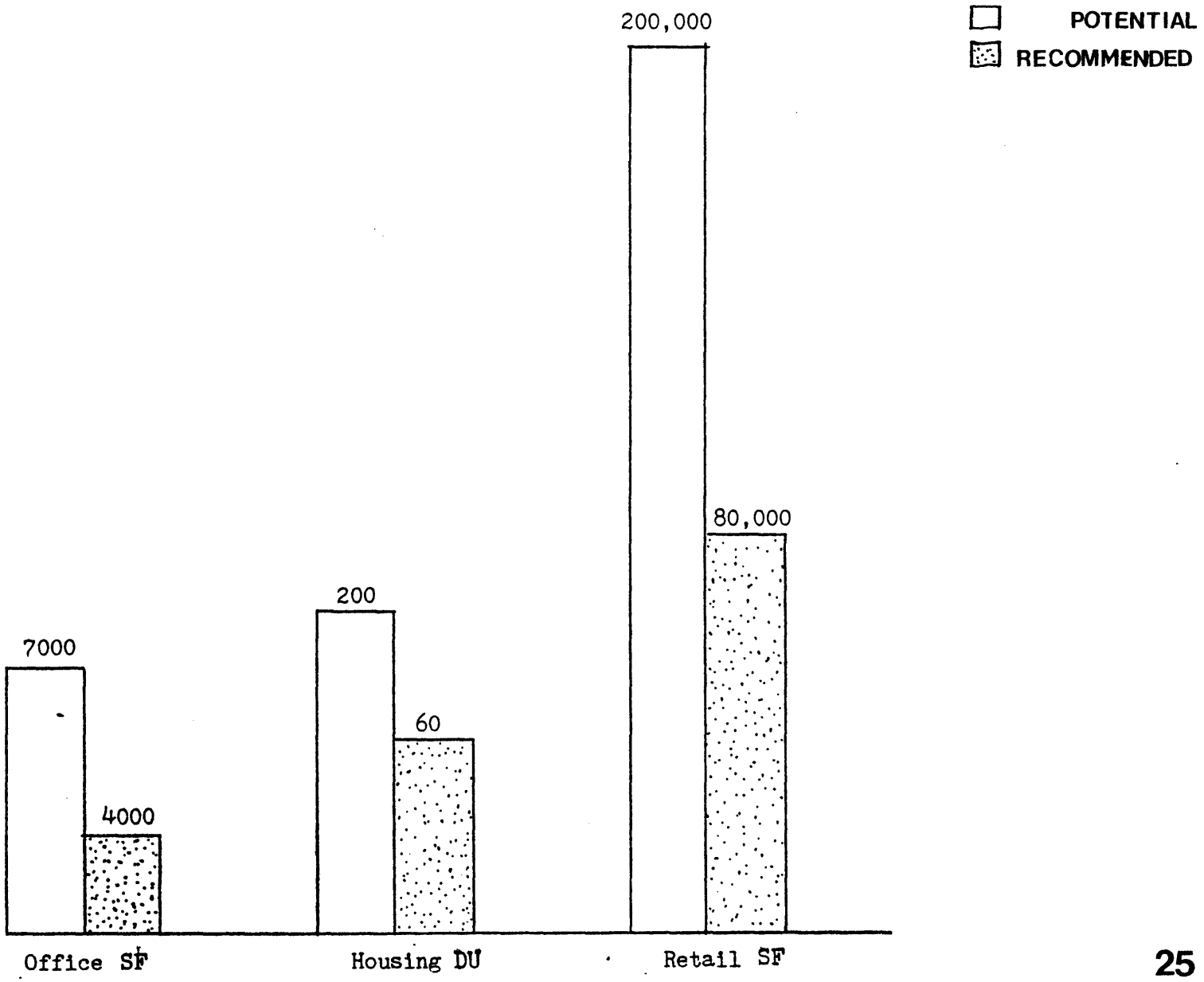
Renter-Occupied
 Boarded or Empty
 Dormitories



Housing Condition

Good
 Fair
 Poor





Based on the findings of Andrew Smith, I have devised the following program:

RETAIL	60K
OFFICE	60K
RESIDENTIAL	109K

III CONCEPT

FUTURE ASSUMPTIONS	32
USE LOCATIONS	33
FORMS	34
LAYERING	35

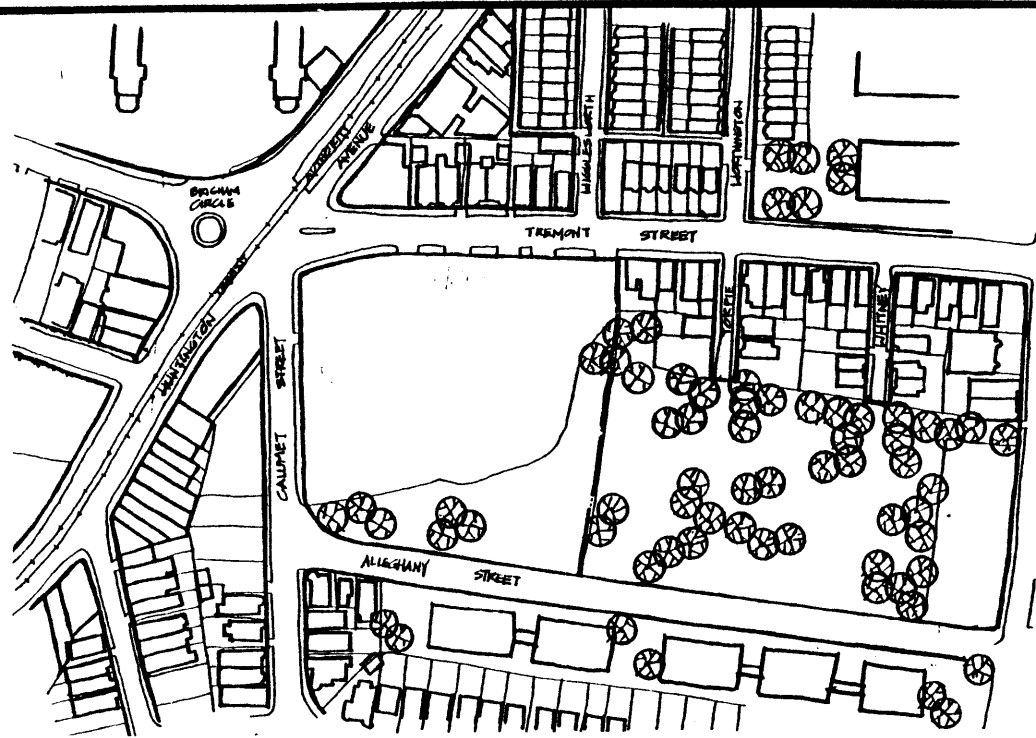
Concept

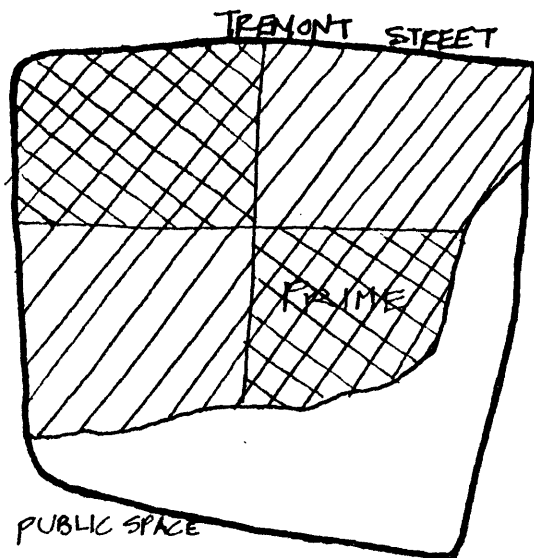
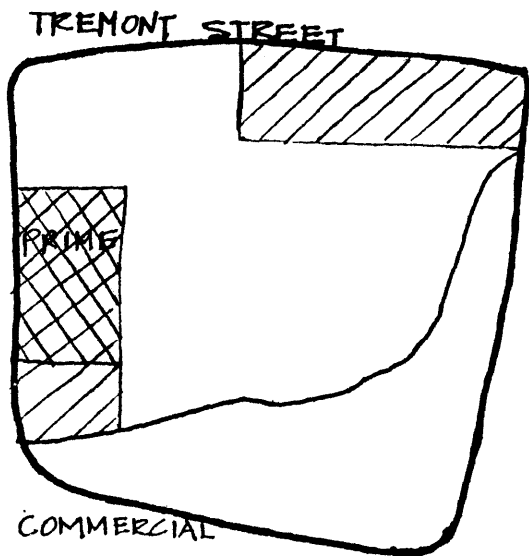
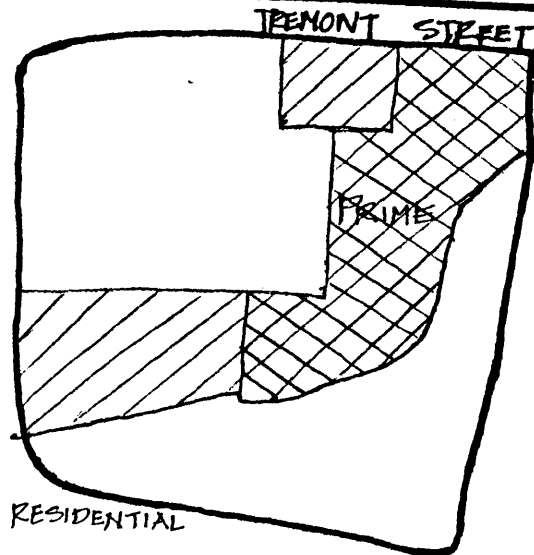
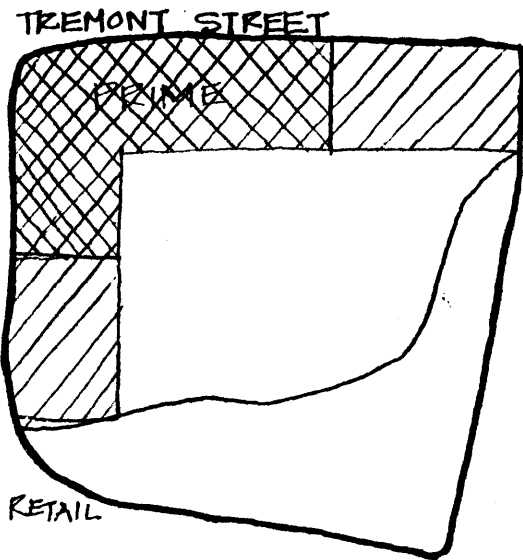
Because of the steep rise of ledge on the Allegheny boundary of the site, my design is based on a system of three layers. The lowest level is retail and parking. The middle is commercial (office) and parking. And the highest is residential.

Because they are low enough to relate to ground level, most roofs are used for seating and plant growth.

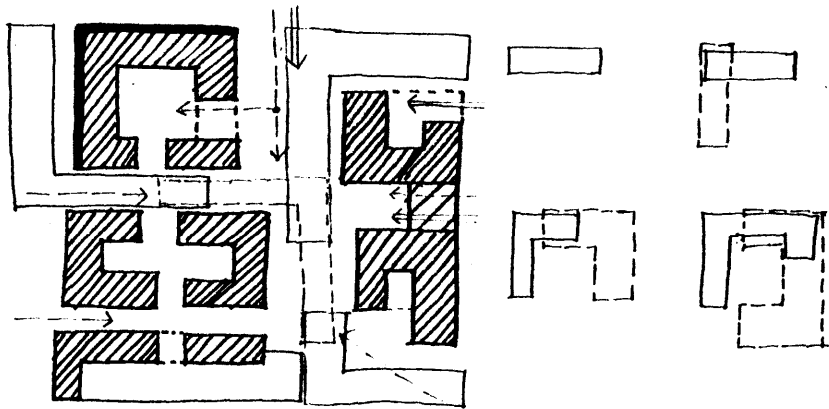
The previous issues of impact, site analysis, and programming lead me to the following assumptions of concept:

FUTURE ASSUMPTIONS





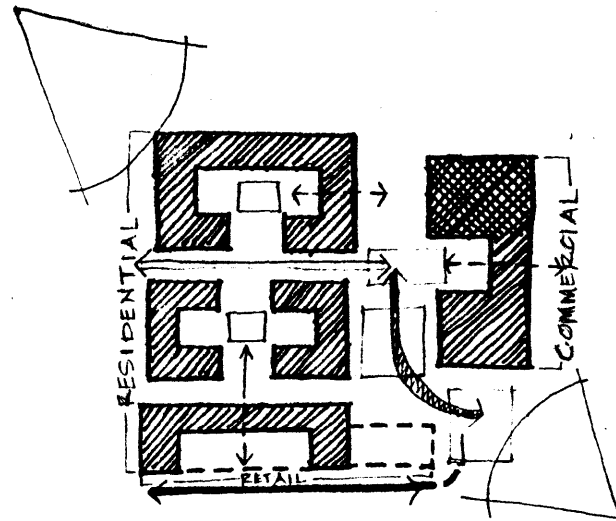
PRIME USE LOCATIONS



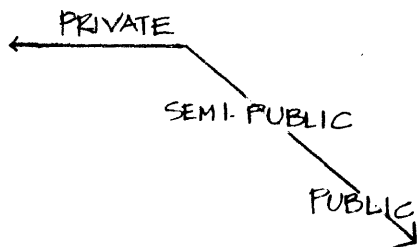
Form Concept

--> Pedestrian Access

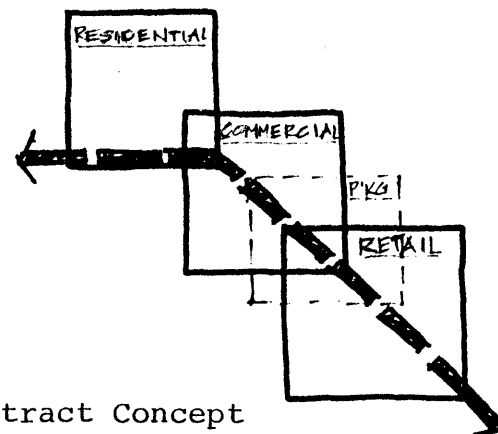
=> Vehicular



Abstract Massing Concept

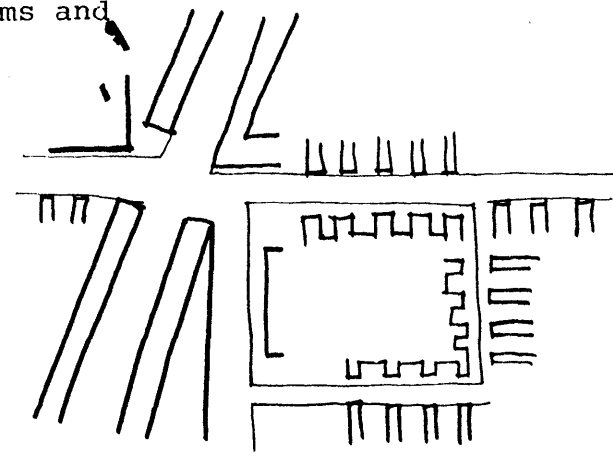


Privacy Concept

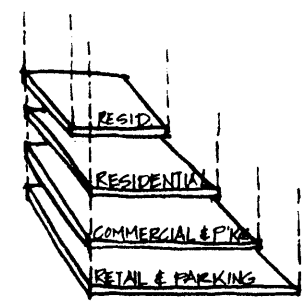
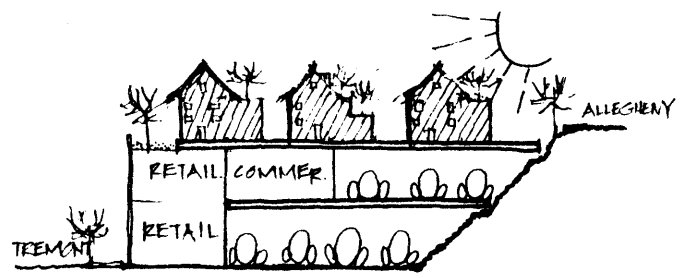
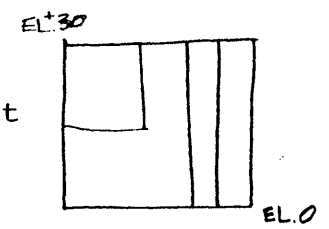


Abstract Concept

Abstraction of Prevailing Forms and
Subsequent Suggestions.

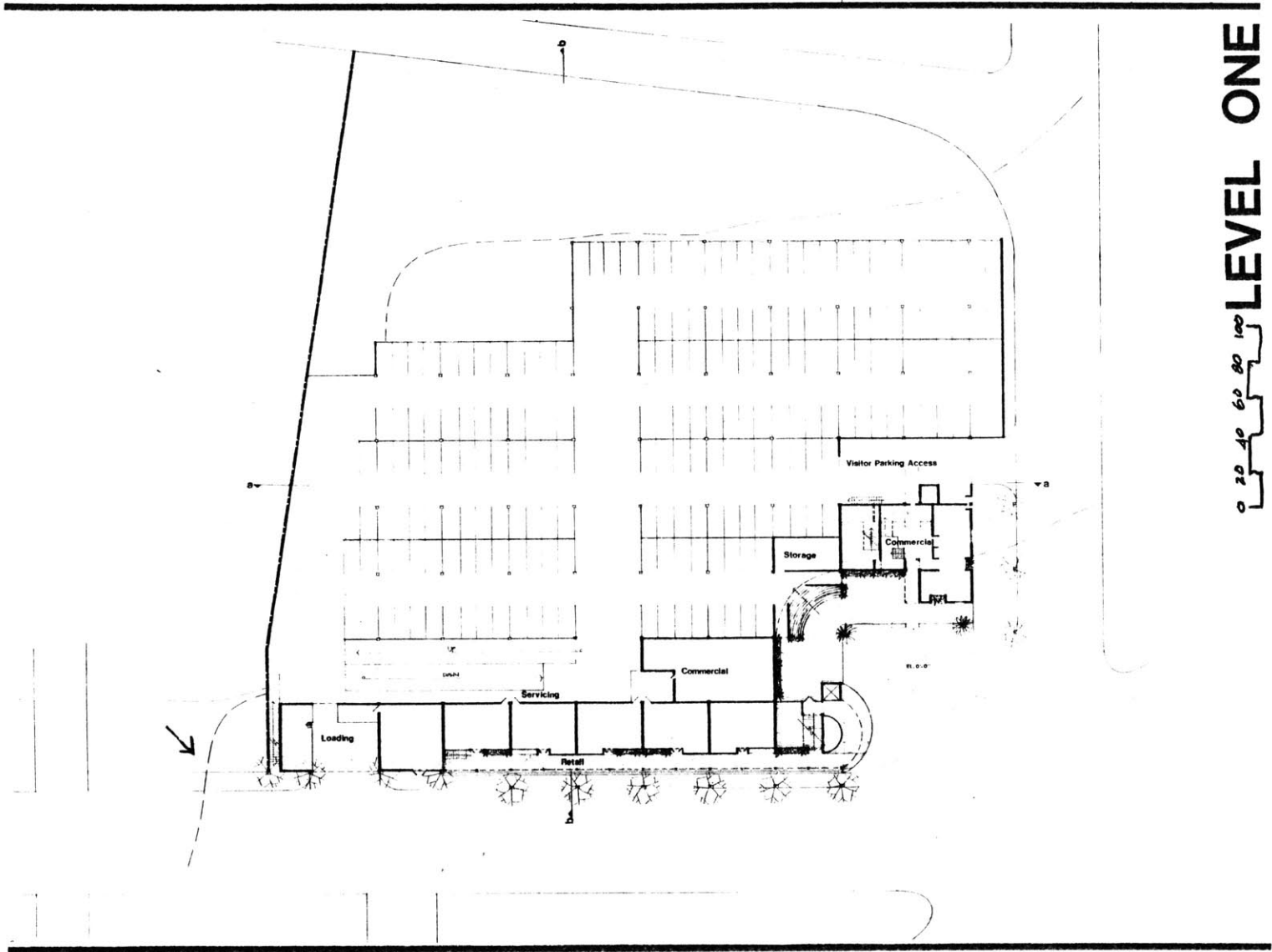


Layering Concept



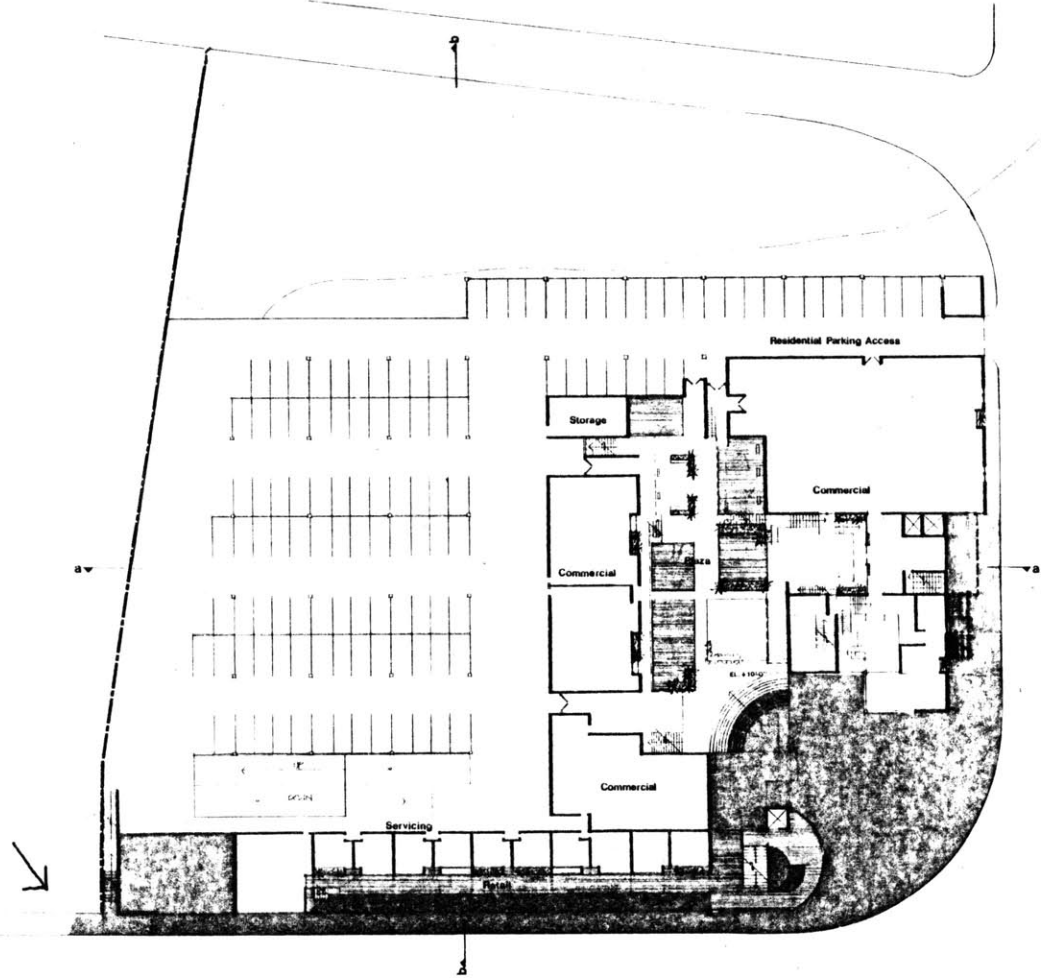
IV DESIGN ILLUSTRATION

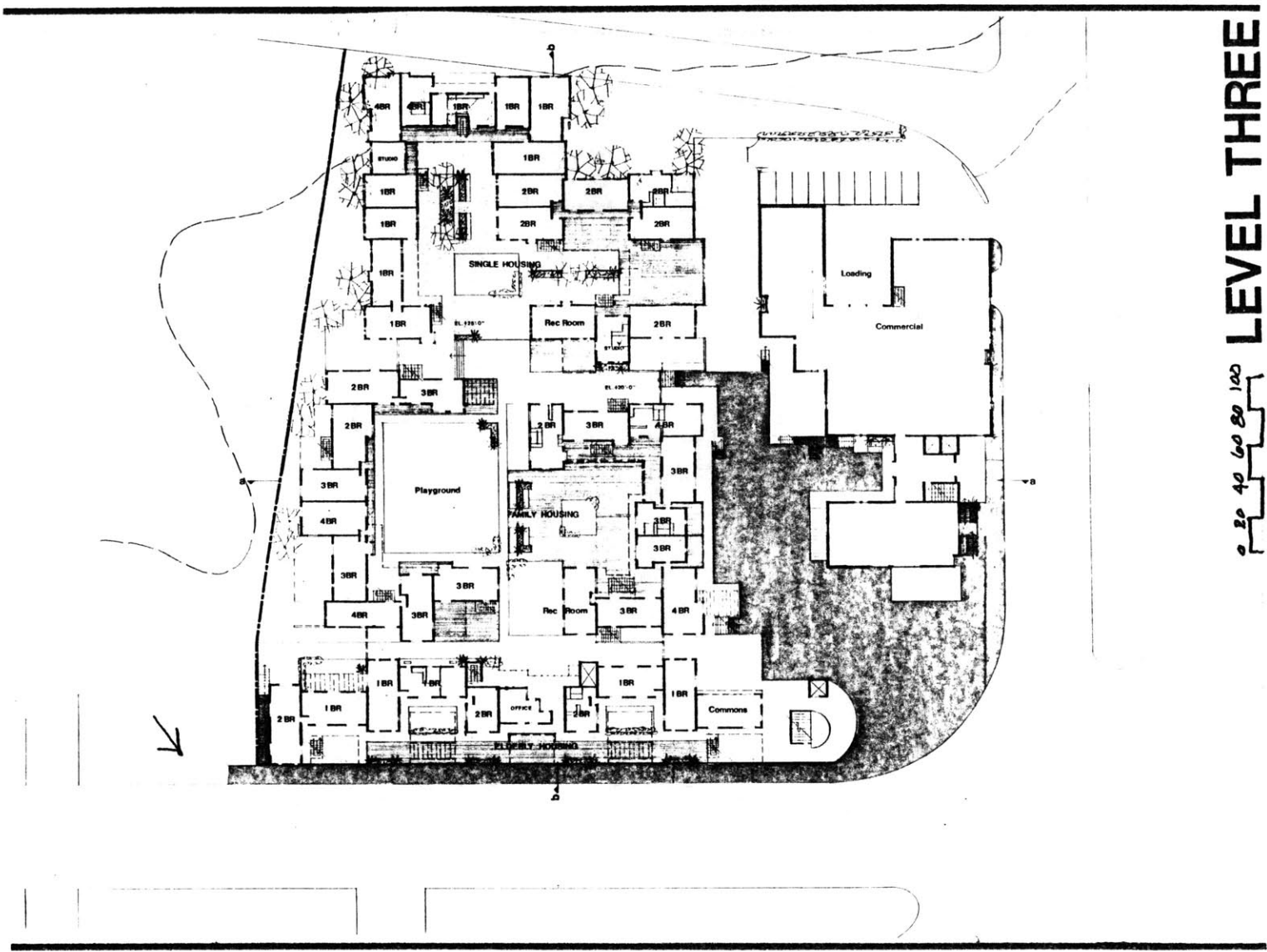
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	2	40
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SINGLES		52



LEVEL ONE

LEVEL TWO

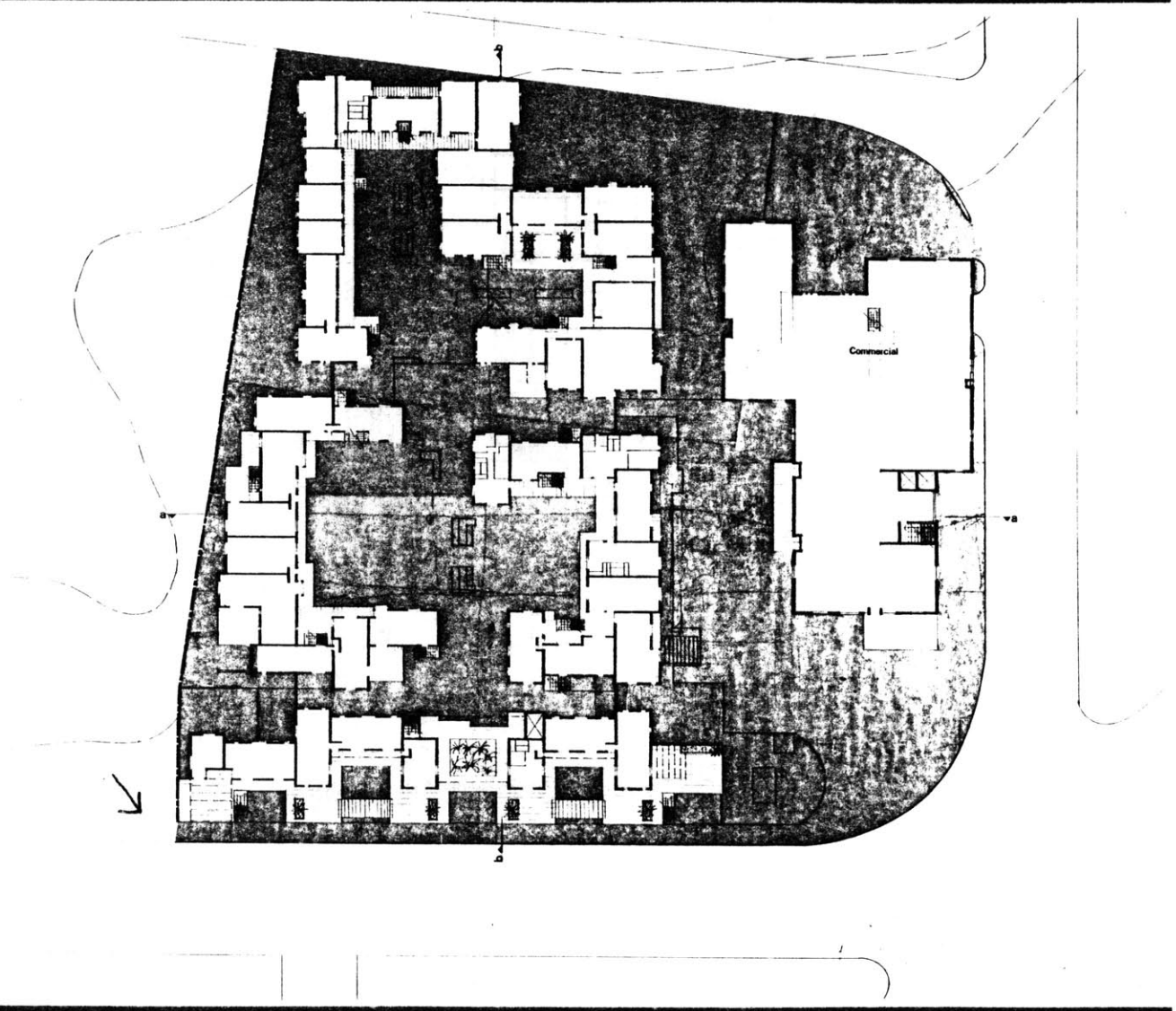


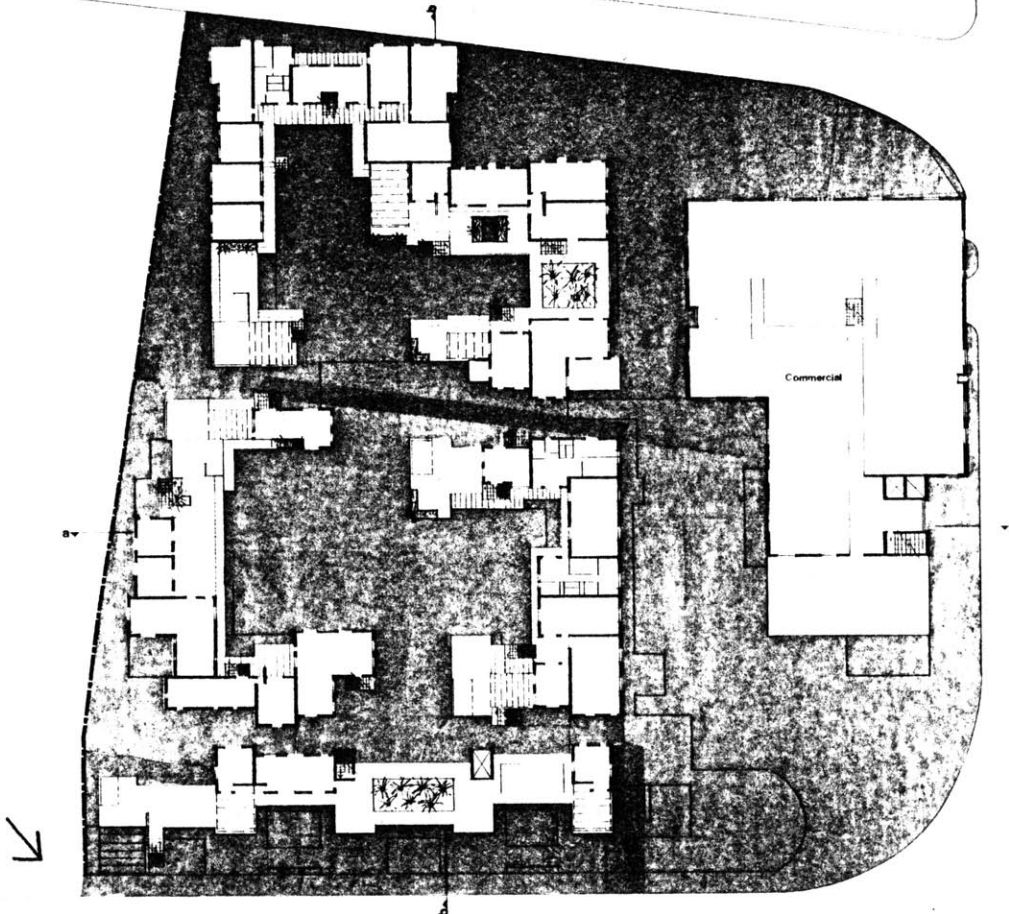


LEVEL THREE

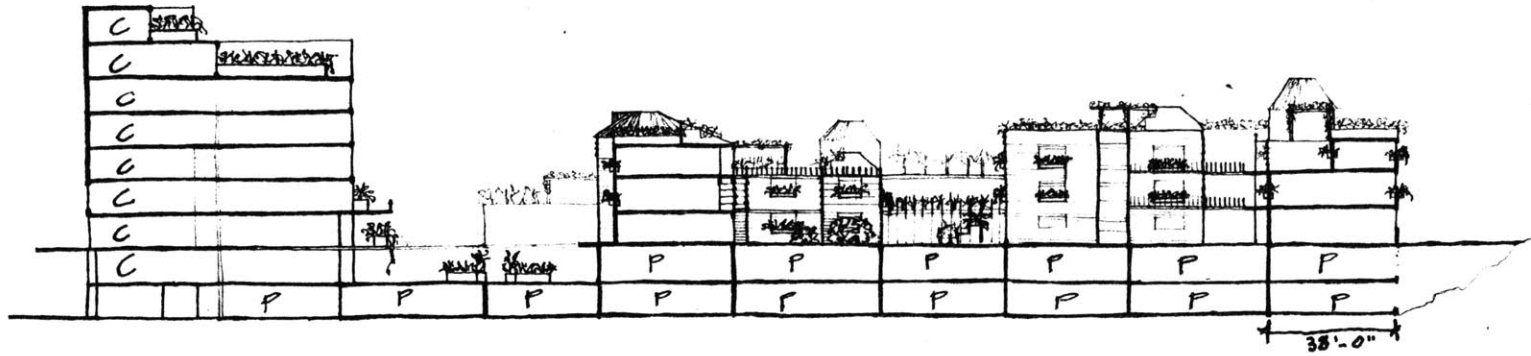


LEVEL FOUR

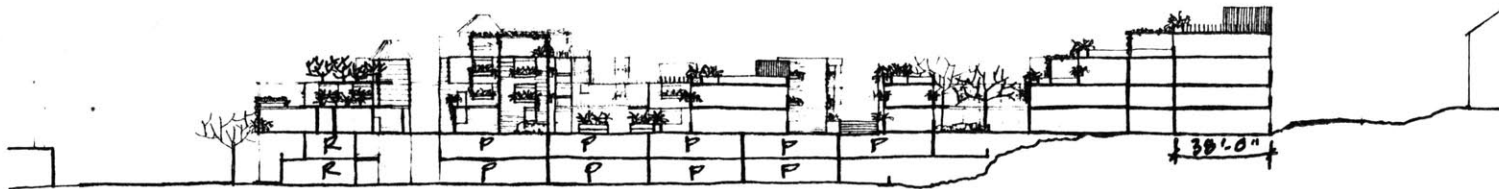




0 20 40 60 80 100
LEVEL FIVE

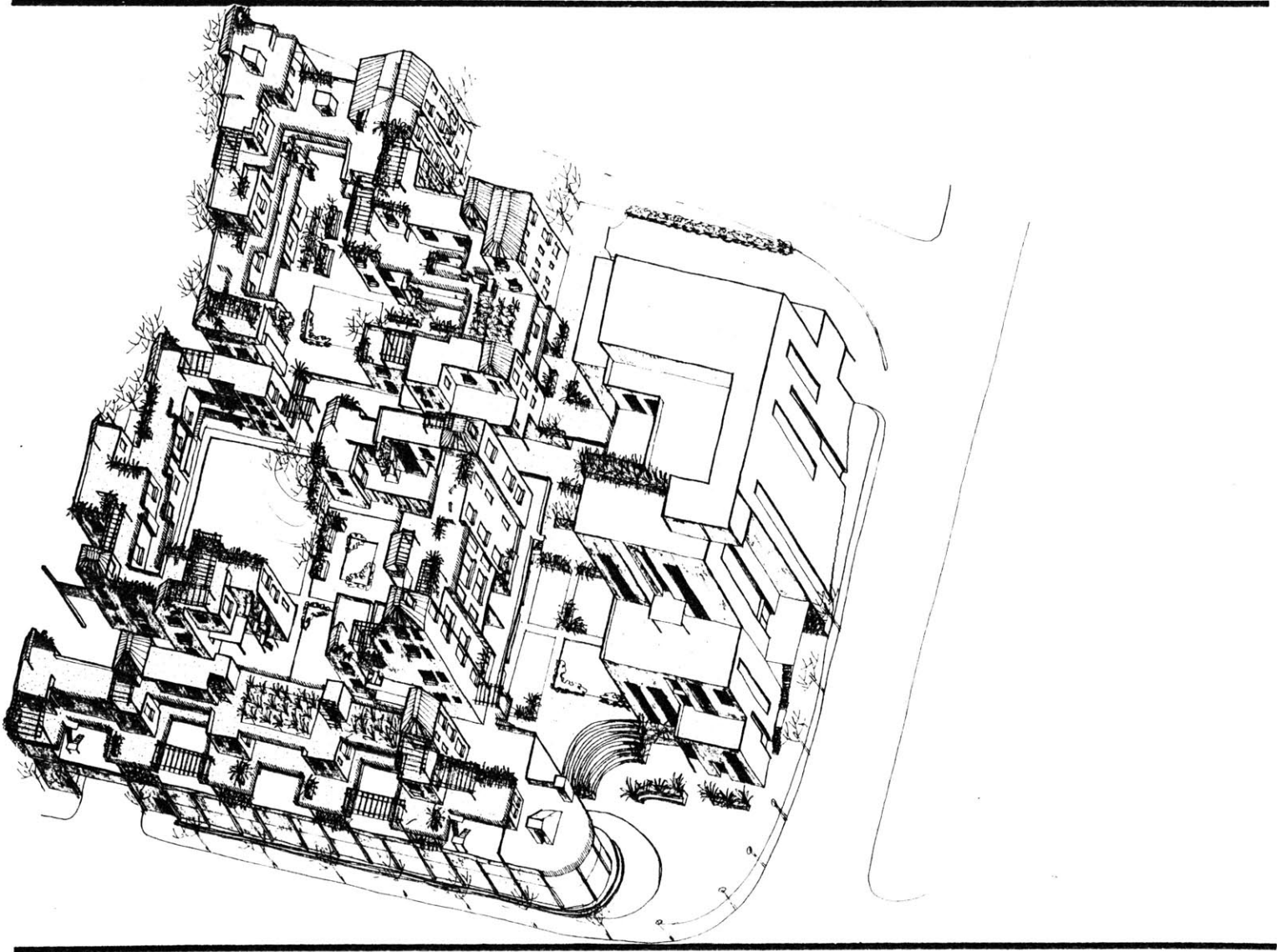


SECTION a-a



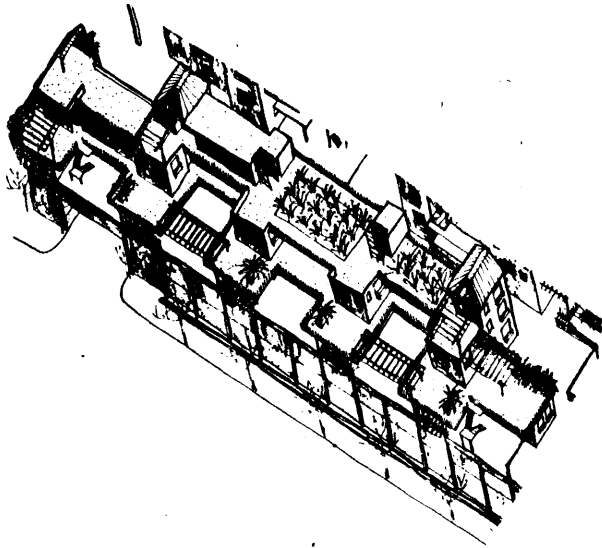
C COMMERCIAL
 P PARKING
 R RETAIL

SECTION b-b



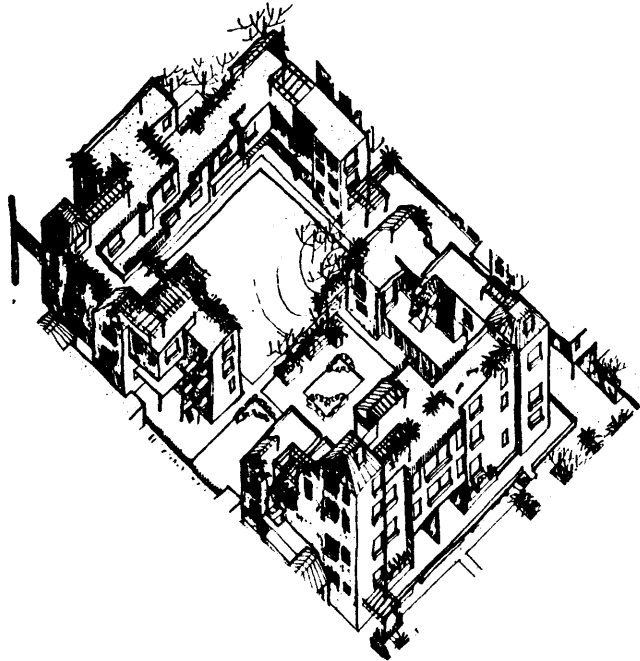
Elderly Housing

Elderly housing is located along Tremont where its residents can take advantage of the view of the local activity. It is provided with a commons room which can serve as laundry, meeting and vending for produce and plants grown on its roofs. In anticipation of an increase in the number of handicap victims among these residents, elderly housing has stairs, elevators and ramp connectors.



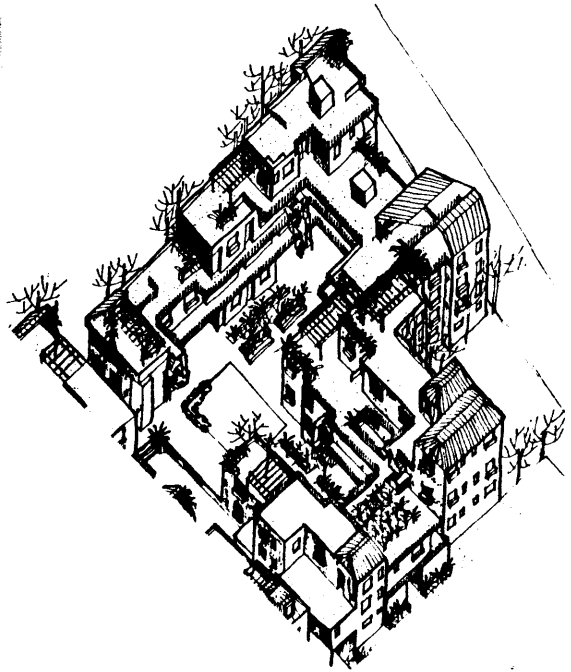
Family Housing

Family units are grouped around a central outdoor space where children can play under adult supervision. Each unit is two or more levels to give everyone direct ground access. There is also a common playroom for use as a shelter during inclement weather or as a daycare center.



Singles Housing

In anticipation of students and young professionals, singles housing is aggregated with a social room for meetings and parties.



V PARTICULARS

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Parking

The bi-level parking structure permits two points of access. At the first level is a public entrance, while the connected second level has a controlled residential entrance. After business hours, residential motorists may park in first level spaces. Additional visitor parking is provided on-grade off Allegheny Street.

The parking demand was based on the following formula:

CALCULATIONS FOR PARKING DEMAND

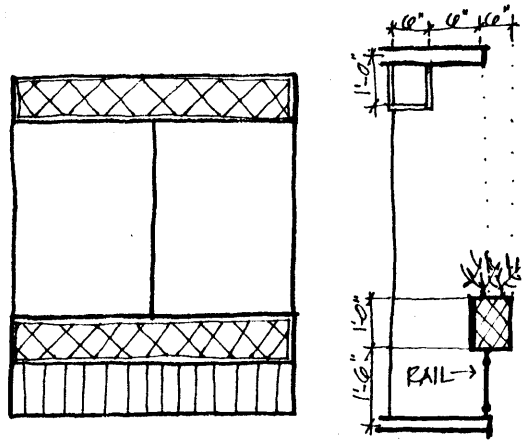
	Spaces/ 1000 Sq.Ft.	Approx.No. of Sq.Ft.	Allotment
Retail	1.5	60K	90
Office	1	60K	60
Residential			
Elderly	0.5	11K	6
Non-Elderly	1	98K	98
		Total	<u>254</u>

PARKING SPACES PROVIDED:

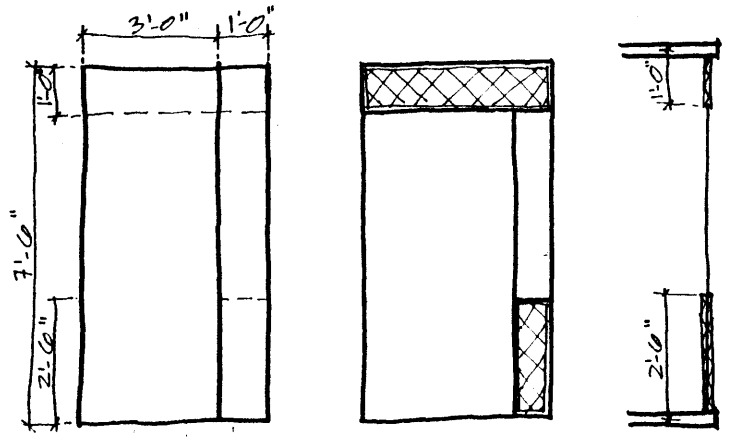
Retail and Commercial	206
Residential	126
	<u>332</u>

Openings: Window and door sizes are based on accepted user-based dimensions. These openings can be doubled or halved, inset or projected.

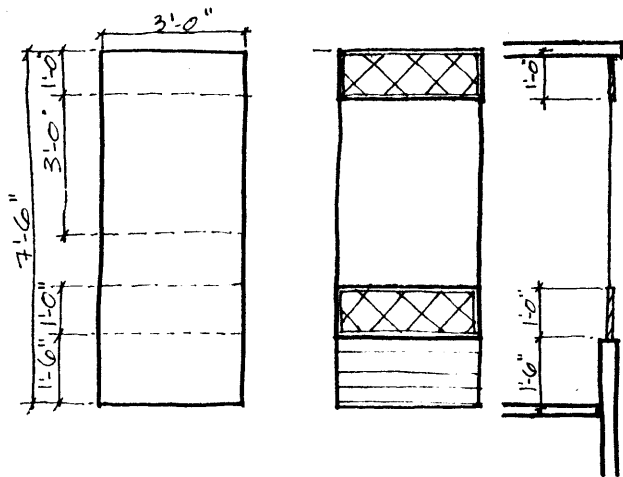
	double window	long single window	short single window	double door	single door
Master bedroom	*	*		*	
Bedroom	*	*			
Dining room	*	*		*	*
Sitting room	*	*		*	*
Living room	*			*	*
Kitchen	*	*	*		
Stairway			*		
Hall			*		
Bathroom			*		



Double doors (upper floors)



Single doors

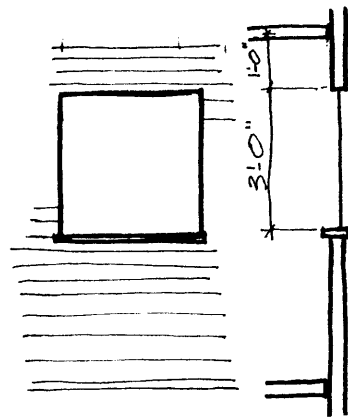


Single long window

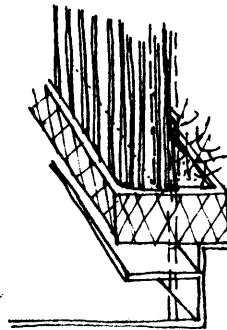
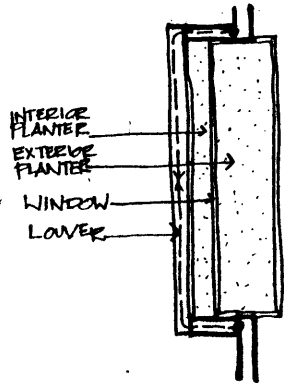
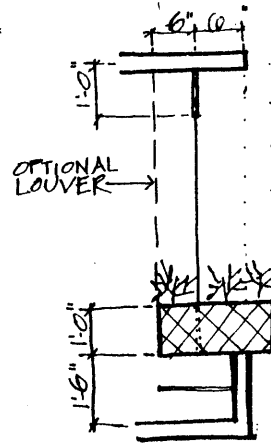
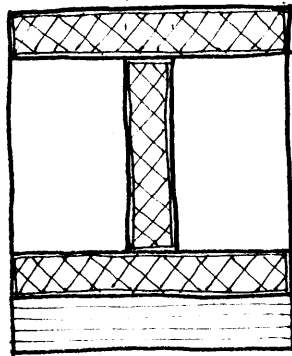
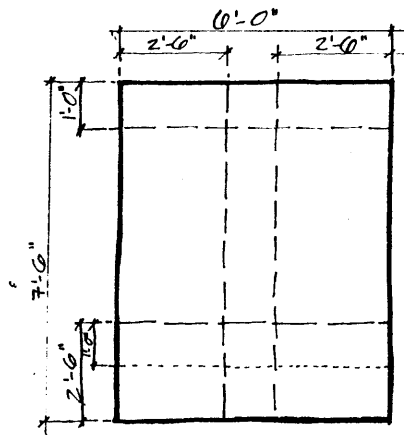
single or stacked

interior or exterior

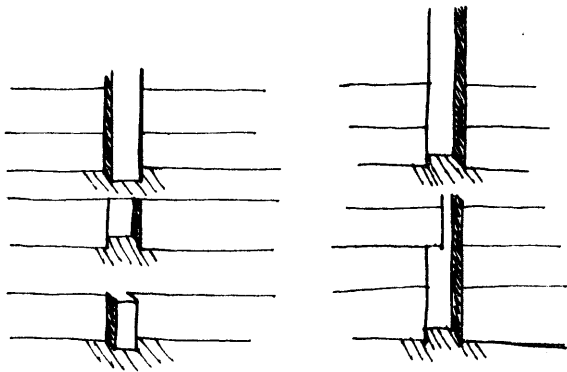
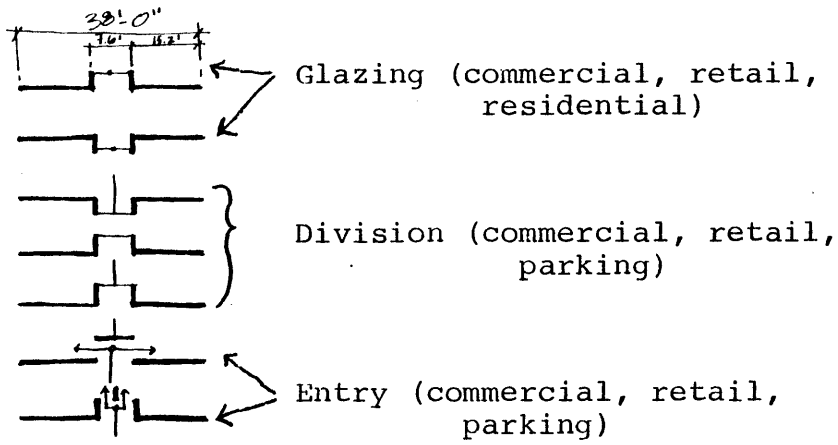
inset or protruding



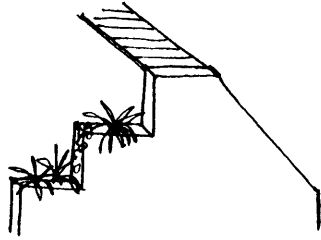
Single short window



Double windows



Roof Shelters



Materials

Materials vary from concrete on the lower levels to support the parking structure to wood at the residential level to relate to the existing neighborhood fabric. Where the two meet at the residential level, the material is brick face which better accepts pedestrian wear and tear than does wood.

VI CONCLUSION

In addition to those covered in my attempts, there are other issues which a more in-depth study should consider.

Proper implementation of this scheme would require a more intensive planning study. There are many community and commercial organizations in the area which have strong impacts on any developments introduced to the neighborhood and their interests must be addressed.

Further, the preserve abutting the site and the strip along Alleghany Street are still underdeveloped and their futures are uncertain.

Finally, zoning ordinances and building codes must be checked for approval.

In an attempt to offer a solution to the ledge site design problem it was necessary to introduce most of the surrounding issues. However, the size of the project prohibited the intense level of attention to detail needed to complete the process. This project might become an extended study for a group of people with planning, development and architectural skills.

Through the design process, a few of my myths were destroyed. The tolerable height of the site was not the mid-rise I expected, but a lower one which better complemented the surrounding heights. This also limited the number of residential units possible.

Further, the existence of a thirty foot ledge

on the Allegheny boundary of the site proved to be neither a hindrance nor a purely visual phenomenon, but an incentive to introduce ascending platforms on which to increase the amount of buildable space.

The ledge site represents a prime opportunity for developers to spur further improvements in the Brigham Circle area. Its consistency should be of retail, commercial and residential uses. Because of its potential, it might serve to unite the two sides of Huntington Avenue.

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1969 "Nine Cities"

1974 "Residential Streets"

1976 "Mixed Use," Jon Abbett & Robert Gladstone.

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Tunney Lee
Ed Robbins
Don Stull

Jenifer

Architectural Resources, Cambridge, Inc.
Architects Boudreaux

Mother and Daddy
Brinn & Linn
Family

Willie

For being supportive
For being flexible

For being there.

SAJ

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