LEARNING FROM TEACHING

A Case Study of a Fourth Year Studio on Urban Design

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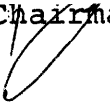Massachusetts Institute of Technology
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Thesis Supervisor

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Chairman, Department Committee

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ABSTRACT

The teaching of design studios is examined through a
case study of a fourth year studio on urban design in a
five year professional degree program (Bachelor of Archi-
tecture). It is based on material drawn from extensive
observations at a notable northeastern Department of
Architecture, Spring semester, 1975, and examines the
teaching of that studio.

Recognizing that changes in society and the ways
environments were being understood and created implied
changes in the practice of architecture and the professional
education of architects, this Department began to shift from
emphasizing a single, "formalistic" approach of architecture
in their curriculum to presenting diverse approaches of
architecture and how to design--a multiple perspective
approach to education.

The students in the observed studio both witnessed and
experienced this shift and the problems of "being freshman
designers every semester" when studios presented different
approaches. Observations in the studio revealed that the
teachers were presenting a different approach to architecture
and how to design than the students had experienced in
their previous seven studios. However the students did not
often use the teachers' prescribed ways of designing while
working on the urban design problem, thus frustrating the
multi-perspective approach.

To investigate why many students were not operating as
intended, the studio's context, the design problem, and the
teachers' ways of designing are presented; a chronological
account of what happened during the semester is reported;
and the teachers' teaching and theories of teaching are
examined. Their teaching was found to contribute to the

students not using the teachers' ways, and to the students missing opportunities for learning, both frustrating the students' learning by doing and their learning from doing-- each essential for the multi-perspective approach to education. Having learned from their teaching, two refinements in the structure of design studios are proposed; the "practicum" to facilitate students' learning by doing, and "working papers" to facilitate their learning from their doing. Teachers and students alike are encouraged to begin to inquire into the theories of teaching and learning evident in their studio practice, when examining their approaches to architecture.

The research on which this thesis is based was initiated by the Architecture Education Study of the Consortium of Eastern Schools of Architecture, and funded by the Andrew Mellon Foundation.

Thesis Supervisor: Donald A. Schon
                       Ford Professor of Urban Affairs
                       Department of Urban Studies and Planning

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PREFACE

This thesis on the teaching of design studios is based
on research initiated by the Architecture Education Study
(AES) of the Consortium* of Eastern Schools of Architecture
and funded by the Andrew Mellon Foundation. The AES
research on the professional education of architects
focused on "Learning in Schools" and "Learning in Practice,"
with the major commitment to "Learning in Schools" being a
research group organized by Professor Julian Beinart. I
was a member of this group.

This group's work began with efforts to establish its
research focus and research design, which included reviewing
previous studies of architectural education (Marian Moffett)
and studies of other professions' education (Roger Simmons),
and analyzing the study proposal and position paper of the
Deans of the Consortium Schools (Florian von Buttlar).
Professor Beinart and the research group also reviewed the
literature on architectural education published since 1960.
The group's review of this material and consultations with
Professor Chris Argyris and the Deans resulted in a consensus

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*School of Architecture, Columbia University; College of
Architecture, Art and Planning, Cornell University; Graduate
School of Design, Harvard University; School of Architecture
and Planning, Howard University; School of Architecture and
Planning, Massachusetts Institute of Technology; School of
Architecture and Planning, Princeton University; School of
Architecture, Yale University.

on focus, method, and products--the design studio, direct
observation, and case studies and essays.

Unlike previous studies of architecture education,
several design studios (the primary arena of design
learning) would be extensively observed and documented from
beginning to end, and those observations would serve as the
basis of case studies. Three studios, each in different
schools and degree programs, were selected by the Beinart
group for case studies following brief observations in
three local studios.

One case study was to be based on an advanced studio
in a five-year professional degree program. The administra-
tion of a notable Department of Architecture offering the
five-year program invited AES into its studios. This
invitation was accepted, and a fourth year studio was
selected for the observation because of its more traditional
urban design problem; the studio's teachers and students
agreed to participate. This studio, selected to be the
basis of the case study, became the basis of this thesis.
(A modified version of this thesis serves as one of the
three major case studies of design studios included in the
Beinart study group report to the Architecture Education
Study.) This studio was observed during the Spring semester,
1975, in the following manner.

Observation began without well-formulated hypotheses
to be tested. This enabled the salient issues to emerge

from the studio rather than be imposed by the research.
Eighteen of the 43 scheduled class meetings were observed
during four visits to the university. In the studio,
discussions, criticism sessions (referred to as "crits"), and
design reviews were recorded on sixty hours of audio tape,
augmented by fieldnotes and sketches for seven of the fifteen
week semester. Contact with the students extended beyond
the scheduled meetings of the studio, including evening and
weekend work sessions, the students' lecture courses, the
school's lecture program, and coffee and dinner conversations.
Selected observations from these occasions are documented in
the fieldnotes.

These observations were augmented with structured
interviews with the two teachers, Hutchinson and Heath
(pseudonyms), at the beginning and end of the semester and
with eleven of the twenty-eight students (referred to as
S1-S11)*. Each of these interviews was recorded and lasted
approximately ninety minutes, adding another forty hours
of tape. Selected segments of the accumulated one hundred
hours of tape have been transcribed verbatim. These
transcripts, the fieldnotes, course handouts, and students'
work comprise the 1,250 pages of material that forms the
basis for this case study.

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*Additionally, ten third, fourth, and fifth year students
(referred to as R1-R10) were interviewed about their
sequence of studio and course work.

While this was an urban design studio, the analysis of the course handouts and the teachers' comments about the design problem indicates that the studio was primarily concerned with how to design. Hutchinson and Heath introduced the urban design problem to the students as a vehicle for learning, and intended that the students use the teachers' prescribed ways of designing during the semester. These ways, which the teachers explained as being substantially different from many of the ways of designing the students had used previously, related to designing regardless of project size and were not unique to the teachers' views on urban design and how to make it. The analysis of what happened in the studio revealed that students, rather than using several of the teachers' prescribed ways, often relied on their own ways of designing when producing the assigned products.

This case study reports what was intended and what happened in the studio and considers several ways of explaining the discrepancy. These ways combine to form a view of studio learning which questions these teachers' theories of teaching. It also suggests two refinements for structuring design studios, especially appropriate for those in a multi-perspective curriculum. The refinements reflect the efforts in this study to learn from teaching.

ACKNOWLEDGEMENTS

Many people contributed to this research and to the
process of creating a thesis out of the collected research
materials; their assistance is acknowledged and appreciated.
The are: the teachers and students in the studio, who allowed
their daily activities to be observed, taped, and interrupted;
the members of my Thesis Committee, Professors Don Schon,
Julian Beinart, and Bill Porter, who provided close scrutiny
of my ideas in their written form each at different stages
of the thesis' development; the members of the Beinart
study group, who provided feedback on the ideas as they
developed, Roger Simmons, Marian Moffett, and especially
Florian von Buttlar, who made considerable comment on earlier
drafts; friends not connected with the research, like Tom
Nally, who repeatedly heard about Hutchinson and Heath over
lunch; Tobie Atlas, who reviewed and edited the thesis; Dena
Feldstein and Maijaleena Elkins, who edited earlier drafts;
and lastly, Jackie Wallace, who remained patient and
supportive throughout the entire project.

Although these people contributed to and assisted in the
preparation of this thesis, the observations, inferences, and
analyses made in this thesis are the author's (unless other-
wise noted), and do not necessarily represent the views of
these people, the Deans of the Consortium, or the Andrew
Mellon Foundation.

A CHANGING PROFESSION: ONE DEPARTMENT'S RESPONSE AS REFLECTED
IN A DESIGN STUDIO

This Department of Architecture, along with many others
in the late 1960's and early 1970's, recognized that changes
in society and the ways environments were being understood
and created, implied changes in the practice of architecture
and the professional education of architects. The Depart-
ment's catalog, 1974-75, explains:

> With the changes taking place in world so-
> ciety, the architectural profession in the
> future will be very different from today.
> This is not to say that architecture will
> abandon its traditional functions but that
> new factors will affect the profession--
> the emergence of regional ecology, the ap-
> plication of the social science, the shift
> from the construction of buildings to the
> whole building process, the evolution of
> design methodology, the revival of large-
> scale design and the emergence of new roles
> for the design profession. In general,
> architects are less and less called upon
> to design for individuals and must see the
> client as society at large. Thus, archi-
> tectural education must assess what the
> total environment asks of the architect.

While the "new factors" expected to make "the architec-
tural profession in the future...very different from today"
are clearly noted in the statement, the differences in the
practice of architecture are not. On one hand the statement
says,

> The architect...[will] not be the exclusive
> designer of the environment, but will per-
> form the task within a total framework and
> in close relationship to other professions.

While on the other hand it says,

> While the larger environmental problems are
> the concern of a number of disciplines,
> architecture as a profession may be more
> narrowly defined in terms of those services
> it performs that characterize its distinct
> role in giving concrete three-dimensional
> form to the physical environment.

Whether the architect is to have the "distinct role" of form-giver in the future or not is unclear, although the statement goes on to describe how architectural education at this school plans to respond to "what the total environment asks of the architect."

> The nature of the field calls for an under-
> graduate education that establishes a broad
> understanding of human values and social
> problems, as well as the theoretical and
> technical base of professional competence.
> In meeting these objectives, the under-
> graduate professional program structures
> the exploration of a wide range of archi-
> tectural issues and scales of involvement,
> and provides the opportunity to develop
> particular emphasis that may become a basis
> for specialized studies at the graduate
> level.

The Department administration's commitment to the "new factors" resulted in a commitment to "the exploration of a wide range of architectural issues and scales of involvement" in their professional program. This, in turn, lead to changes in faculty, courses, and curriculum.

Due to budgetary limitations, the administration dis-assembled the existing design faculty in order to create vacancies for a diversified faculty in specialized areas of architecture (such as Industrialized Building), in comple-mentary disciplines (such as social sciences), and in

approaches to architecture and ways of designing. This shift
in appointments created friction and dissension among the
teachers, students, and administration, and is still a topic
of conversation throughout the school.

The new faculty's efforts to respond to the changing
practice of architecture through the "exploration of a wide
range of architectural issues and scales of involvement" re-
sulted in studios presenting new topics and different ap-
proaches to architecture and ways of designing. As a result,
the studio came under criticism by those who thought it in-
appropriate to deal with some of these topics and those who
thought the design emphasis inappropriate for the students'
diverse professional aspirations. A variety of new courses
was added to the curriculum, including introductory and
theory courses, as well as a number of specialized studios.

To accommodate these new courses, the currriculum re-
quirements were changed. When the faculty had shared a
particular view of architecture, prerequisites were used to
structure the sequencing and simultaneous enrollment of
courses to facilitate the students' integration of the con-
tents. The faculty relaxed some of those prerequisites and
allowed students to select more courses appropriate to their
diverse professional aspirations. Decreasing the controlled
juxtaposition of courses shifted much of the responsibility
for integration to the individual student. The studio,
long regarded as the arena for integrating courses, no longer
functioned in that capacity. The studio teachers advocated

their own particular approaches to architecture, and focused

on developing skills appropriate to those approaches.

The diversification of the faculty and the curriculum,

and the relaxing of course juxtaposition combined to make

studio learning more complex than before. Two of the de-

partment's graduating seniors (referred to as R8 and R9) con-

trasted their experiences with the previous curriculum and

its faculty with what younger students had told them about

the newer program.

> R8: I had a very cumulative design sequence, it
> was very obvious from one step to the next...
> I studied under a clique... [Although] the
> vocabulary of language, as well as the teach-
> ing technique were almost cryptic, we were
> able to communicate because we'd been deal-
> ing with the same vocabularies all along.
>
> But I imagine that if I had been trained...
> the way things are now--where there is an
> amazing collection of different people and
> different ideas--I would be much more contra-
> dictory, or I wouldn't be here. It's very
> confusing...Most of the people now second
> semester, third year students [who] have
> been going through this new curriculum have
> no ability to design. Their work is terrible.
> With each semester they could get a new at-
> titude towards what they are doing, and its
> like they're freshman designers again every
> semester. (Interview)

> R9: Continuity from one studio to another?
> When my class first came to [this school],
> I would say that there was no question that
> it was a very continuous process from fresh-
> man to fifth year...At the present time,
> I think there is no continuity whatsoever
> in the curriculum...as far as design goes,
> which I think is unfortunate.

R9 continued,

> Even though the previous...set of courses
> was maybe a little overbearing, at least it
> gave you a whole set of rules and disciplines
> by which you could design buildings. I don't
> think that this is the case any more. In
> fact, talking to second and third year people,
> I would say they are very dissatisfied with
> what they are going through right now. Be-
> cause they really don't see where one thing
> begins and one thing ends, and whether they
> are in fact building a catalog, or a whole
> set of theories that they can use in solv-
> ing their architectural problems.
> (Interview)

Thus the diversified curriculum posed problems and
dilemmas for the teaching of architecture students not en-
countered in the previous curriculum. While students had
the opportunity to sample several approaches to architecture,
they were to integrate their courses, and synthesize the
diverse approaches, without faculty supervision, as well as
readily shift design approaches from one semester to the
next. As a result the students developed limited competence
in several rather than greater competence in one particular
approach.

This tradeoff of depth for breadth, however, has the
benefits of any multi-perspective approach to education.
The students use and explore several approaches and attitudes
toward architecture, and from their experiences, form or
select those upon which they will act in professional prac-
tice. Another advantage of the multi-perspective approach
is that when undergraduate students choose this school, for
example, they do not necessarily have to choose a particular

architectural polemic.   (Students in the observed studio ex-
plained that they based their selection of this school upon
the reputation of the university as a whole and the distance
from their homes [all students interviewed were from the
same state as the university or a neighboring state]. Few
students had thought that the Department might have a bias;
those who did, were unaware of it when they selected the
school.)

Observations in one of the Department's fourth year
studios, three years after the transition to the more diverse
curriculum, revealed that the teachers, Hutchinson and Heath,
were indeed presenting a different approach to architecture
than the students had experienced in previous studios. This
studio included more structured and less intuitive ways of
designing, a departure in size and scale from the problems
students had done in architectural design studios to the
urban design problem, and the structuring of the "studio as
an urban design firm" requiring students to operate in dif-
ferent ways as designers as well as different ways as stu-
dents. However, the students did not often use the pre-
scribed ways of designing while working with the urban de-
sign problem, nor were they observed comparing these teachers'
approach with those of previous studio teachers.

The multi-perspective approach to education required that
students take a more active role in their professional educa-
tion. They could no longer rely on the Department to determine

which approach to architecture was valid. The Department's responsibility was to provide students with teachers who offered different approaches. It was the students' responsibility to try them in different studios, and to form or select their own attitudes and approaches out of their experiences. When, where, and with whose assistance they were to determine these approaches on which they would act professionally, however, remained unresolved. The Department's response to the changing profession, diversifying its faculty, was only a partial success. Since the students did not readily use the teacher's particular approach, the value of presenting different ones was diminished. As a result, their ability to select their own from experience was substantially limited.

This case study presents the studio's context (Chapter 1); the urban design problem and the teachers' ways of designing, (Chapter 2); a chronological account of what happened during the semester (Chapter 3); and an analysis of both the students use of the teachers' approach and the "studio as a design firm" (Chapter 4). The teaching of this studio is then examined (Chapter 5). The study concludes with two proposals for the teaching of design studios (Chapter 6).

CHAPTER 1

THE STUDIO'S CONTEXT

This Department of Architecture, along with the Depart-
ment of Fine Arts and the Planning Departments (Policy
Planning and Regional Analysis; Urban Planning and Develop-
ment), form one of the major Colleges in this University.
The College's enrollment exceeds 650 with over sixty full-
time and visiting teachers. Over half of the students and
faculty are in the Department of Architecture. The Univer-
sity of 15,000 students is located in a town with a popula-
tion of 40,000, an hour's drive from the closest urban
center. The University is one of the town's major industries.

The College offers a range of degrees too numerous to
list. The Department of Architecture's degrees include a
four-year Bachelor of Fine Arts with a major in Architecture;
a five-year professional degree--Bachelor of Architecture;
and an advanced professional two-year Master of Architecture
degree. Other degrees offered in the College include
Masters of Regional Planning, Landscape Architecture, and
several special topic programs, plus Ph.D. programs in
Planning, the History of Architecture, and Urban Develop-
ment.

The curriculum for the Bachelor of Architecture requires
nine semesters of design studios plus a thesis or a final de-
sign studio. Also required are four semesters of architec-
tural history and four of introductory theory, eight courses

on structures and environmental controls, and a course on
professional practice. The remaining course requirements
are loosely specified electives from inside and outside the
college. Only thirty of the 170 units required for this
degree are to be taken outside the College, i.e., in dis-
ciplines other than architecture, planning and the fine arts.

The fourth year is the first opportunity students have
to select studio teachers or topics. Those in the observed
studio selected the urban design option rather than the
other two in the curriculum (Architecture, and Architectural
Technology-Environmental Science). Their selection was
reportedly based on the topic rather than the teachers. The
design problem was the rejuvenation of New York City's Civic
Center in Lower Manhattan by adding one to three million
square feet of new municipal office space and supporting
functions. (This problem is described in Chapter 2.) Although
several students had done large scale design problems in
previous studios, (such as campus design, the Welfare Island
Competition, the fall 1974 Urban Design Studio), many anti-
cipated that the studio would enhance their distinction
between architecture and urban design.

In addition to the studio, these students registered for
three or four lecture courses. The two required for Spring
semester of the fourth year were professional practice and
the last course on technology which consisted of a weekly
two hour guest lecture on the integration of technology in

design by a representative from industry or architectural
practice. The two electives listed in the catalog for this
semester could be within, or one could be outside the college.
The catalog explains that fourth year students are "expected
to take recommended elective courses that relate to the
studio concentration." However, few students in this studio
registered in related courses. Rather, their electives
ranged from photography to American foreign policy.

The twenty-eight students registered for this studio
were in the five-year Bachelor of Architecture degree pro-
gram; all but seven were in their second semester of their
fourth year. Of these seven, four were taking the studio
for first semester fourth-year credit, two for third-year
credit; and one for fifth-year credit. Only three had trans-
ferred from other architectural programs. There were three
women and five minority men.

The students had completed their first year before the
major changes in faculty had begun, and therefore had a
basis for comparing the two programs. Their opinions on what
they discribed as a "formalist" emphasis in design, character-
istic of the school during their first year, vary substan-
tially. The students' attitudes towards "formalism," the
strategies used to reshape the school, and the new faculty
will be evident in their responses to the urban design
problem, the studio teachers, and the prescribed ways of de-
signing.

Professor Hutchinson, who played a major role in struc-
turing and running the course, had been teaching at this
school for thirteen years. He was a tenured professor,
originally from the Southwest United States where he had
earned his professional degree and taught for two years be-
fore moving to New England to do his Masters in Architecture.
He not only weathered the change in the school, but several
students remarked that he was both an actor and a sympathizer
in that change. By contrast, Heath had been at this school
only two years following two years of teaching on the West
Coast. He was from England where he had earned his profes-
sional degree and worked in urban design and architecture
for seven years with an internationally known British archi-
tectural office. He was one of the "new" faculty who had
been brought into the school. (Students frequently ex-
pressed that these "new" faculty did not possess the archi-
tectural competence of those who had been fired. They did
not consider Heath an exception.) His two-year contract
was renewed during this semester. In addition to this stu-
dio, Hutchinson advised thesis students, Heath co-taught a
second-year theory course, and both worked professionally
on small architectural projects.

Several students in this studio had taken others with
Hutchinson, including his fall semester on redesigning the
campus. None of the students had taken a studio with Heath

(his initial responsibilities were with first and second year courses). Three of the interviewed students had taken the urban design studio, a Convention Center, also in New York City, in the fall semester. Other student projects included housing, schools, retreats for an artists' collective, churches, commercial buildings, museums, and outdoor theaters. The students described several approaches they had used in these projects, three of which they identified as "formalist," "organic," and "design methodology." The teachers described the approach to be used in this studio as "transformation."

The "transformation" approach and the urban design problem implied several changes for the students, including changes in the scale of the problem, the specificity of the problem and program, how students design, the products students produce, the use of criticism sessions and the function of reviews, and the issues to be discussed.

While change was evident in many aspects of the studio, it still seemed traditional: students designed buildings and presented them in conventional means (plans, sections, elevations and scale models); they researched, collected data, and designed and developed various schemes; teachers gave crits during the twelve scheduled hours each week in a large open studio; and work was discussed at reviews by guest critics including other architecture faculty and people affiliated with the design problem. The changes become evident in the more specific descriptions of what was

intended and what happened in the studio. These descriptions

follow.

CHAPTER 2

THE URBAN DESIGN PROBLEM: "THE MANHATTAN CIVIC CENTER"*

New York City's Civic Center in Lower Manhattan provided
this urban design studio's semester long project. The Civic
Center, encompassing City Hall Park and Foley Square (Ill.
2-1) includes federal offices, city offices and court build-
ings, and non-governmental buildings. Many of the structures
have historical and architectural significance, such as the
Tweed Courthouse, McKim, Mead and White's Municipal Building,
and the Woolworth Building. Several are registered landmarks.

In their two page introductory statement describing the
Civic Center, the teachers explained the City's plans:

> The intention of the City is to make this
> area the 'premier civic center in the
> country.'
>
> The main feature proposed to give impetus
> to redesigning the area is a new municipal
> office building.

If the impetus for redesigning the Civic Center was the new
office building, the impetus for the office building was the
city's wish to "consolidate municipal functions and reduce
expenditures on office space." The city, in addition to the
publicly owned offices, leased almost three million square
feet of office space in Lower Manhattan to accommodate

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*All diagrams and drawings in this study are the teachers' or
 students' unless otherwise noted.

Illustration 2-1a: The Urban Design Problem

THE MANHATTAN CIVIC CENTER

The area of Lower Manhattan around the City Hall (built between 1802-1812) is called the Manhattan Civic Center because City, State and Federal Offices are concentrated in this area and relate to two large existing open spaces -- City Hall Park and Foley Square. The wall of buildings on the west side of Broadway forms a clear boundary to the site. Buildings along Park Row close the southern end of City Hall Park. The Municipal Building and the Court Buildings form the western boundary which is decimated by the Brooklyn Bridge ramps. To the north the typically aspatial new Federal Office Building, can be seen standing within the site bounded on the north by the city office building with its clock tower on Broadway and running along the south side of Leonard Street. To the east of the old Municipal Building a number of new buildings have been constructed or are in construction. These include the new Police Headquarters Building, the new Detention Center and the Telco-Downtown Commercial High School.

Chambers Street has developed as a Commercial area relating directly to the Civic Center and implying continuation into the site. The possibility of closing Chambers Street to vehicular traffic -- at least at certain hours has been under study by the City. To the south of Park Row, Nassau Street starts as a linear shopping strip which relates to the Wall Street area. It is already operating as a pedestrian mall between Spruce Street and Maiden Lane from 11 am. to 2 pm. during the lunch hour shopping period.

The Civic Center and surroundings contain an unusually large number of surviving historic buildings for Manhattan. Many of these buildings have been designated New York City Landmarks, or National Historic Landmarks -- among them The City Hall, The Tweed Courthouse, The Hall of Records, St. Paul's Chapel, The New York County Courthouse, and perhaps the most imposing -- The McKim, Mead and White Municipal Building of 1914 which detaches a layer of colonnaded base forming a forecourt skewered by a grand arch on the Chambers Street axis.

The intention of the City is to make this area the 'premier civic center in the country'. Because the area is not permeated by cars since it is out of the regular Manhattan street grid and also since it is not subject to speculative development because it is publically owned, it provides a unique opportunity to create a significant and relatively stable piece of 'urban design' in New York.

The main feature proposed to give impetus to redesigning the area is a new municipal office building. At the present time the City leases nearly three million square feet of office space in Lower Manhattan -- below Canal Street.

They would like to consolidate municipal functions and reduce expenditures on office space.

The site designated by the Office of Lower Manhattan Development for this new building is between Broadway on the west and Elk Street; and Duane Street on the north and Chambers Street on the south. The present zoning would allow for less than two million square feet of office space to be built. The City could conceivably violate it's own zoning if necessary-- or at least for the purpose of this academic problem it could be assumed that the site could be expanded within reason and perhaps an incremental growth system could be developed to allow for present and future needs.

In organizing the office space consideration should be given to placing those those agencies which generate a lot of public traffic where they are not only physically but also visually readily accessible.

Other elements needed on the site are: a post office, a small city museum, a theater-auditorium with meeting facilities for group civic functions; restaurants, and eating facilities, etc.

When completed this area will become even more of a public and tourist area than at present, so proposals which respond ao and capitalize on these needs are in order.

A specific program for the municipal building is not available, however, the intention is to provide as much office space as feasible and to include commercial space as a continuation of the commercial facilities existing in the area.

Although the program is undetermined except in general terms the intention is to make the civic center a functionally cohesive unit, and more importantly an active urban place where the potentials existing in the area are linked into a whole network with a new overall symbolic meaning.

Illustration 2-1b: Orientation Drawings
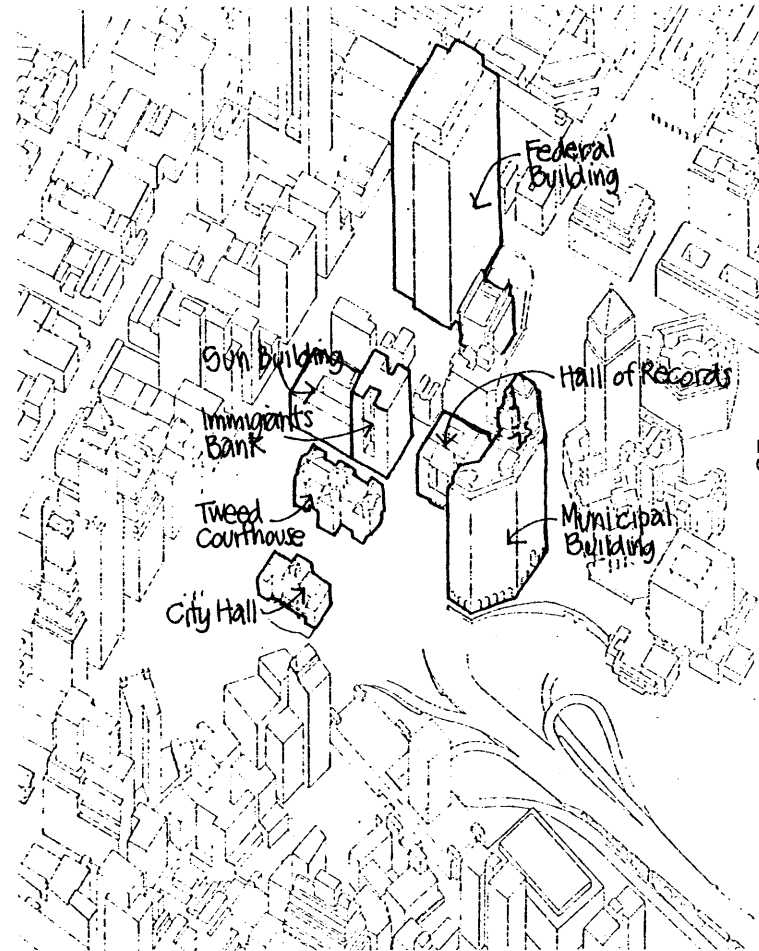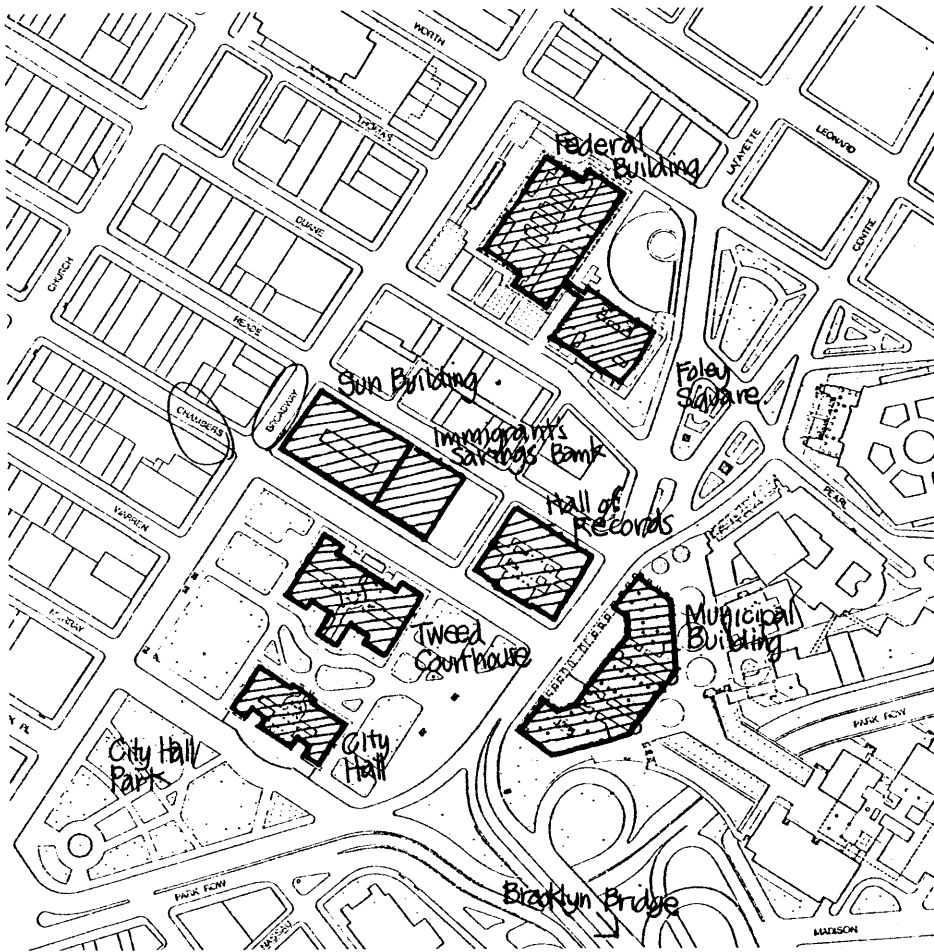
These two drawings are adapted from studio materials by this observer
to illustrate the major existing buildings in the Civic Center.

various city agencies. The new building would bring the

scattered agencies together and hopefully reduce expenditures.

The project was further described as a unique urban de-

sign opportunity.

> Because the area is not permeated by cars...
> and not subject to speculative development..,
> it provides a unique opportunity to create
> a significant and relatively stable piece
> of 'urban design' in New York.

According to the statement, no specific program for the new

municipal office building was available although it did

designate a specific site, acknowledge city zoning restric-

tions (less than two million square feet would be permitted,

if the city did not violate its own regulations), and list

related functions "needed on the site," including a post

office, a city museum and eating facilities. Other comments

suggested that those agencies which dealt directly with the

public should be physically and visually accessible, that

as much space as feasible should be provided, and that

commercial space should be included. The final paragraph of

the statement focused on the Civic Center:

> Although the program is undetermined except
> in general terms the intention is to make
> the civic center a functionally cohesive
> unit, and more importantly an active urban
> place where the potentials existing in the
> area are linked into a whole network with
> a new overall symbolic meaning.

This two page statement began the twenty-six page Introductory Handout distributed to the students the first day of the studio. Illustrated with aerial photographs, plans and axonometric drawings of the Civic Center, it included the "Working Procedure," the "Schedule," "Program Material," and the seven page "Phase I" assignment. The "Working Procedure" and "Schedule" reveal the teachers plans for the fifteen weeks of studio work.

The "Working Procedure" (Ill. 2-2) explained that "as an experiment," the studio would simulate an urban design firm with the teachers as principals, and the Office of Lower Manhattan Development (OLMD) as the client. The students were "to make proposals to the city for the development of the Manhattan Civic Center area." The simulation required that students work in groups, producing information "in digested and concise form and in a specified format." This information, which was to be compiled in a booklet, would help students determine "viable basic alternative" proposals for the Civic Center area. Selected alternatives would then be developed either in groups or individually. The "Working Procedure" concluded noting that the studio's work could be "of use to the Office of Lower Manhattan Development if presented in a structured way." The phases of the work and the expected products began to surface in this one page document.

Illustration 2-2: "Working Procedure"

Department of Architecture ██████████ SPRING 1975
██████
Critics: ████████████████
Problem Issued: January 27, 1975
Problem Due: May 12, 1975 (Noon)

WORKING PROCEDURE

This problem is to be run as an experiment--a simulation of an urban design
office that has been given the commission to make proposals to the city for
development of the Manhattan Civic Center area. ██████████ and ████████
will act as principals in this firm ████████████████████████████.

The rationale for organizing the problem this way is that in urban design it
is clearly not possible for a designer to work entirely individually. It is
necessary to interact with many people in various capacities and interests--
professional, political, economic, social, technical, etc. (See Jonathan
Barnett article: Urban Design as Part of the Governmental Process in
Architectural Record January, 1970.)

Another factor determining the problem structure has to do with mobilizing
the number of people involved (close to 30) in a resourceful way. Since
so many independent factors limit final urban design decisions at a
synthetic level, the range of these constraints that an individual could
generate or determine--let alone encompass is substantially less than that
of a larger group.

As a procedure, therefore, we intend to organize work groups at each of the
first phases of the study that will be charged with the responsibility of
presenting certain things in digested and concise form and in a specified
presentation format. This material will then be collected in a booklet that
will belong to the whole group as a design framework which will facilitate
dealing with the problem on a conceptual level. Once the many factors have
been articulated and made permanently visible their interaction can be
tested in a bounded field rather than an open ended one, and decisions can
be viewed in terms of viable basic alternatives.

At a later phase it will be possible for each student to select a specific
alternate proposal for a more detailed level of development and then to work
individually or in groups for the remaining time.

The overall purpose of this framework is to develop connections between
relevant facts, observations and architectural ideas. Our work could also
be of use to the Office of Lower Manhattan Development if presented in a
structured way.

The "Schedule" (Ill. 2-3) indicated the tasks to be ac-
complished, the alloted time, and the expected products in
terms familiar to an architectural design studio. It began
with "Information gathering, research, analysis and inter-
pretation," referred to as "Phase I" on the assignment hand-
out, including two weeks for work and one week for presenta-
tion of the "Finished drawings," and culminating with a
Review, February 14, during the regular 2:00 to 6:00 P.M.
meeting time. The second phase of work, "Building massing
and site alternatives," was to take two weeks (including
presentation) concluding with the February 28 Review of
"Finished drawings & models" and diagrams listed for the
February 21 Review. Next, the "Precise development of basic
alternative building and site strategies" was to last four
weeks (including presentation) through the preliminary re-
views, until the April 4 Review of "Finished drawings and
models." Following this review, three weeks were to be spent
in "Detail development of proposals," followed by two weeks
for "Final presentation" for the "Final Review--Finished
drawings and models," May 12. The last nine weeks of work
comprised Phase III.

A quick look at the "Schedule" will illustrate the role
of the "urban design firm" metaphor in the setting of the
studio work. The "principals" set a tightly structured
program of work. A review of the assignments in Chapter 3
will reveal the highly prescribed set of specific, collective

Illustration 2-3: "Schedule"

Department of Architecture   SPRING   1975

Critics: ▓▓▓▓▓▓▓▓▓▓▓▓
Problem Issued: January 27, 1975
Problem Due: May 12, 1975 (Noon)

SCHEDULE

All meetings will be in W. Sibley 102 unless announced otherwise.

Work prior to April 7 will be in groups, after April 7—optional individual
or group work.

Jan. 27 – Feb. 7 (2 weeks)	Information gathering, research, analysis and interpretation.
Jan. 27 Mon. 2:15 pm.	Introduction – assignment of topics
Jan. 29 Wed. 4:30 pm.	Meeting to discuss N.Y. trip
Jan. 31 Fri.	New York – Meet at Office of Lower Manhattan Development, 2 Lafayette Street
Feb. 7 Fri. 2:15 pm.	Review
Feb. 10 – Feb. 14 (1 week)	Presentation
Feb. 14 Fri. 2:15 pm.	Review – Finished drawings
Feb. 17 – Feb. 21 (1 week)	Building massing and site alternatives
Feb. 21 Fri.	Review – Models & Diagrams
Feb. 24 – Feb. 28 (1 week)	Presentation
Feb. 28 Fri.	Review finished drawings & models
Mar. 3 – Mar. 21 (3 weeks)	Precise development of basic alternative building and site strategies
Mar. 7 Fri.	Review
Mar. 21 Fri.	Review
Mar. 24 – Mar. 28 (1 week) ·	Spring vacation
Mar. 31 – Apr. 4 (1 week)	Presentation
Mar. 4 Fri.	Review – finished drawings & models
Apr. 7 – Apr. 25 (3 weeks)	Detail development of proposals
Apr. 18 Fri.	Review
Apr. 25 Fri.	Review

Apr. 28 – May 9 (2 weeks)	Final presentation
May 12 – May 16	Final Review* – Finished drawings and models
May 12 Mon.	All work must be turned in by noon. Work will not be accepted after this time.

*Final Review date and time to be scheduled during study week.

tasks and products included in this schedule.

While the "Schedule" used terms familiar in studios to indicate the tasks and products, the terms did not always clearly and completely communicate to the students what was intended. An example is the final studio product which was to be a coordinated range of physical solutions and development strategies for the new municipal office building and the Civic Center. The teachers believed that a range of schemes, supported with the concept and strategy diagrams, would provide the "design firm's" client with a catalyst for decision making about the future of the Civic Center. Rather than having students present competing schemes based on similar assumptions, Hutchinson and Heath felt this would facilitate discussion by decision makers at both the physical and strategic levels of design. While the single coordinated product follows from the "design firm" metaphor, it was not evident in the Introductory Handout, and like the tasks and products in the earlier phases, it was not substantially elaborated in class before the specific work began, nor were there explanations of how the work in each phase was to relate to the next.

In Phase I the groups were to produce and document information as constraints and clues for the schemes. In Phase II they were to produce a "series of massing prototypes" modified by several constraints identified in Phase I. In Phase III they were to architecturally develop a range

of schemes from refined massing studies. Hutchinson explained

the three phases in an interview. He did not, however, dis-

cuss their respective products:

Hutchinson: First of all the square footage is very
              simple. It's a very similar type of space.
              It's not highly differentiated except for
              some of the public functions. So it's
              very easy to sort of mash that into different
              shape characteristics, it doesn't resist
              very much. That's what we are doing [Phase
              I]--to find out what ways it resists being
              mashed. That information has to be furnished
              for the next phases. There the only thing
              that can begin to shape those things, really,
              is some intention.

              What we are trying to do in Phase II would
              be to formulate hypotheses. You start with
              a very broad statement of purpose for any
              given scheme or attitude. [In this case,
              they started with six Massing Types on
              seven sites and added seven categories of
              constraints.] Then one tries to see what
              that implies. As you take it down to further
              questions, you begin to overlay a whole
              series of additional factors on it. It's
              like a testing process. You subject them
              to all kinds of examinations about whether
              they really work on the site. Whether they
              really work with all the internal require-
              ments and so on. We are trying to spin off
              as many alternatives as seem legitimate and
              appropriate. It's a catalogue.

              The third phase is a more selective process
              where there is a range of schemes which get
              a more specific kind of development, real
              architectural development. It becomes more
              difficult at this point because one has to
              shape it with an intention, a purpose, i.e.,
              now we are going to shape it with this
              particular set of attitudes in mind. (Inter-
              view, 2/12)

During this interview Hutchinson discussed the urban de-

sign problem and its phasing along with his underlying ideas.

When asked if the students had been given a similar explana-

tion when the problem was introduced, he responded,

Hutchinson: It has not been as much an explanation of
              the whole process as I would like... We did
              state, the program in fact states, certain
              intentions...

              We talked about that [the urban design prob-
              lem], not extensively though. And in fact
              we have not gone over the kinds of things
              that I'm talking about with you now.
              (Interview, 2/12)

This interview took place on the last class day before the

end of Phase I. Hutchinson explained that he planned to

discuss this more in Phase II.

Hutchinson: In the next phase we are going to really get
              into things which are perhaps different from
              what they have experienced. And then I think
              it's essential that the whole rationale for
              doing the thing that way is explained, and
              that they understand it. (Interview, 2/12)

Hutchinson saw the design problem as a vehicle for learning

and understood that "rationale" meant having the students

understand the ideas underlying the problem.

"The Problem As A Vehicle For Learning"

       Although Hutchinson had not explained much of the

"rationale" to the students during Phase I, many aspects of

the design problem were influenced by his ideas on how to

operate as a designer. He explained his reasons for post-

poning the explanation:

Hutchinson: The problem is obviously a vehicle, and what
              it's a vehicle for you make very clear. We
              tried to, but we could not do it in detail...
              As yet we have not really gone into it. It's

very difficult to do that because sometimes
it's hard for them to see the purpose of any
particular thing that they are doing, until
they get into it. (Interview, 2/12)

In his introduction of Phase II to the class, Hutchinson

noted that the problem was a vehicle for learning and indi-

cated the set of "issues" and "things" for which the problem

was to be used.

Hutchinson: I want to use the problem we are doing and
              explain our attitude towards the problem.
              A problem is obviously a vehicle to get at
              certain issues, to do certain things, or to
              learn certain things that will give you a
              special kind of experience which you may or
              may not have had. Certainly this problem
              is that kind of thing...

              There are certain things that you can do in
              an academic setting that are really distinctly
              different from what you might do in practice.
              Through that you can actually facilitate
              learning how to do it, not just what to do.
              In other words, if one learns certain tech-
              niques, one learns methods of attacking
              problems. (Class discussion, 2/14)

For Hutchinson the problem was to be a vehicle for getting at

"methods of attacking problems." (These "methods," ideas

about how designers should operate, are also referred to as

ideas about and ways of designing in this case study.)

As Hutchinson continued the Phase II introduction in the

studio, he elaborated several of these ideas to the class.

Hutchinson: This [learning of methods] relates to our
              operating on the problem using a kind of non-
              orthodox program and to the notion that there
              are many places where you can enter the design
              process.

              As a rule there is a certain formal behavior
              and set patterns that I refer to as orthodox.
              That tends to be the usual thing to do. For

example, you go through certain motions, do
certain things, then you do other things.
By the time you are in fourth year, it is
a pretty familiar pattern.

In the problem I did last term, I deliber-
ately set it in such a way as to challenge
some of those notions about the sequence
of events which happen in design, in order
to illustrate the notion that I think you
really enter the design process in many
places, and that it does not really matter
where you enter...

This time it is not really that different,
except that we enter the problem at a dif-
ferent place. (Class discussion, 2/14)

In establishing his desire to challenge the students'

notions about "the sequence of events," Hutchinson touched

on two ideas about designing: "there are many places where

you can enter the design process," and the sequence or pattern

of events is not set. In presenting these ideas, Hutchinson

contrasted them with the students' previous design experiences*

and noted their integration into the structure of the design

problem. One can find these comparisons recurring in many of

Hutchinson's comments on designing. In terms of the "methods

of attacking problems," he had planned for the studio to re-

spond to the context of the school and the students' previous

design experiences within the school, as noted earlier. How-

ever, he intimated that this design problem was not of par-

ticular personal interest.

Hutchinson: So in the context of this school the kind
              of problem that I'm giving is something
              that I feel is very much needed by the
              students in comparison to certain other
              kinds of experiences that they have had.
              Although the problem is not necessarily

something that I'm personally enamoured with, i.e., it's not so much my 'thing.' (Interview, 2/12)

Hutchinson continued his introduction of Phase II noting that deciding where one enters the problem "has to do with the nature of the problem." In this problem the "data base" (the Phase I assignment) was an important starting point:

Hutchinson: ...there really isn't much of a Program. What is pretty clearly called for is that we have to build a case for something, whatever it is... There is no tight program that breaks everything down into really fine-grained figures.

One really has to begin to generate a lot of different attitudes about it before you can cope with it programmatically. (Class discussion, 2/14)

The absence of a "tight program" allowed the students to determine the problem and its constraints, unlike previous studios.

Hutchinson: Specifically, I think that students not only need experiences in designing or coming up with solutions to the problem, but they need experience in which they participate to a great extent in determining what the problem is, i.e., what are the constraints on the problem or what are the things which actually shape it. It's not that they haven't had that kind of experience, they have had different experiences, but to a great extent in the lower years this school has been

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*Although Hutchinson contrasted the students' previous design experiences with his own ideas about designing, and the studio was to provide the students experience using those ideas, he never formally documented or analyzed the students' experience. Rather, his interpretations stem from his presence in the school for thirteen years, from knowing the faculty and the design problems they have given, and from exposure to these students in reviews of previous studios.

dealing with product-oriented design prob-
lems in a fairly vigorous manner, including
great expectations in terms of quality pre-
sentations and drawings as well as sophisti-
cation of solutions. This tends to be the
major demand placed on students in the
lower years, so that their experiences have
not tended to be very open, where they would
participate in a different way in the prob-
lem. (Interview, 2/12)

Hutchinson's desire to extend the students' task to in-

clude problem definition is consistent with his model design

curriculum--giving students at all levels complex problems,

but limiting the number of design constraints they can in-

fluence during their first three years. Their influence would

increase until "students in the upper years are not only

determining the variables, but are writing the problem."

In addition to having the students in this studio

determine the problem and the constraints, Hutchinson wished

to expand their range of design determinants, as he ex-

plained in the previous interview.

Hutchinson: Basically, I believe in pluralism. I really
think that people need to understand that
there are a lot of different ways to look at
things and that there are a lot of possible
influences that could be seen as determinants
if one is willing to take them into considera-
tion.

...With the level of complexity of things
that we have been talking over the first two
weeks of the studio...you run into a certain
resistance from some of the students because
they are not quite sure how it will all tie
together. Partly that is because it's not
in their experience. Whenever it comes over
it seems to me that it demonstrates that it's
not part of their experience. They can't
see the relevance of a lot of these things

to what they are going to do ultimately.
That suggests to me...that there is a
certain high degree of arbitrariness in-
volved with a lot of their previous de-
cision making. It has to do with the
notion that there are certain favorite
solutions which you just kind of plug in
to. As if there is a kind of okay things
that are to be tapped when you come up
against a problem.

I think that I believe that also, to an
extent. But I really feel that one ought
to really expand the range and have them
exposed to highly varied models that are
drawn from sources they are not in the
habit of drawing from. (Interview, 2/12)

While this wish to increase students' range of design deter-

minants is certainly evident in the range of topics assigned

in Phase I, Hutchinson also noted an additional way to expand

this range through expanding the students' use of models,

metaphors and precedent.

Hutchinson: I think that as often as not, that one uses
               models other than architectural models, like
               metaphors, which are sometimes more useful
               in developing an attitude or a concept...
               It's a mechanism which can be used to get
               beyond the tendency to just arrange or
               compose elements without knowing the purpose
               of the arrangement.

               The notion of modeling is very strong at
               this school, i.e., the use of precedent. I
               have not always approved of the way it's
               used in the school...it becomes too restric-
               tive and too formalistic. The range is too
               limited. It becomes too much of a one to
               one transfer... [I] think that remote pre-
               cedents are actually more useful than imme-
               diate precedents. A Roman building is much
               more instructive to look at than the work of
               Le Corbusier... You have to reduce it to a
               certain level of abstraction. You have to
               abstract it in certain ways and extract out
               of it those things which have a relationship

> or analogies to what you are working on.
> You can't take it at a stylistic or at a
> functional level. (Interview, 2/12)

Hutchinson was not unaware of objections to this use of models

and precedent.

Hutchinson: I think that architects have had funny pre-
tenses about modeling and the use of prece-
dent. It's part of our whole cultural thing
about originality or proprietorship of ideas.
The notion that the creative process is al-
ways equated with thinking up things that
nobody ever thought of before. That is doubt-
ful. Originality or creativity may be that
you found ways to combine ideas in ways that
nobody ever thought to combine before and is
uniquely suited to a particular set of cir-
cumstances. What could be more creative than
that? But the idea that you also invent
every aspect from beginning to end is just
nonsense.

I think some people are suspicious of the
acknowledged use of precedent. It's like
copying or plagerism. But you have to keep
your mind free because if you don't con-
sciously do it, you will unconsciously do
it... But then you never find a one to one
correlation between a model and your problem.
In his book, How to Solve It, Polya says
the same thing. When you are solving a
problem in mathematics that you have never
solved before, you break it down into sub-
problems which are manageable and for which
you have a precedent. It's just that you
have never done the whole thing before. You
work with subunits that are familiar so you
can cope with it. Well, that's modeling at
it's best. (Interview, 2/12)

Returning to Hutchinson's introduction of Phase II, he

discussed another idea about designing, the design process as

a "loop." This "design loop" not only developed Hutchinson's

ideas about many entry points into the design process and

various sequences of events in that process, but also provided

an approach to determining the constraints of a program not

tightly prescribed by "generating a series of attitudes."

Hutchinson: You could see this whole thing as some kind of loop where you keep moving around from one kind of motor behavior to another. Where you enter the loop is not very important as long as you keep moving around. Right away you have to get to the other points.

One of the fallacies I think that many designers get into is entering into the problem through one door, through one mode, and basically never shifting that mode. Let me give you an example. Many people enter the problem from an analytical base or from a data base. They enter there because it is what they like and what they feel most comfortable with, because it's something they can do in a very clear way. You can collect all kinds of information. You can sift it, then organize it many different ways. But when it comes to that stage where you actually have to start designing or start dealing on a more conceptual level, which accounts for the leap between data and design schemes, people get bogged down.

Or you know the opposite types, who never want to fool around with all that information. They just want to deal with the big ideas, you know? They don't want to talk about architecture on a conceptual level.

Now I think these are essentially complementary modes of behavior. They are usually reinforcing. It's perfectly valid from a problem-solving point of view to have the big idea and look at it in that way. Then rather quickly you have to get an information base in order to test out that idea. Conversely, you can enter the problem by gathering information, looking at it and analyzing it. Then you can use that as a basis of generating a series of attitudes. (Class discussion, 2/14)

Other ideas about designing became evident in Hutchinson's

interview and later class discussions. The integration of

these ideas into the problem will be discussed in Chapter 3.

In addition to seeing the design process as a "loop,"

Hutchinson saw it as a "triangle" through which the designer

cycled. The "triangle" incorporated the use of models

Hutchinson believed students needed.

Hutchinson: In contrast to what I think is too often seen
as an implicitly linear design process that
recycles with its implied entry point and
particular path, there is the triangle. I
think that there are a lot of places you can
enter as implied by the triangle form. The
vertices of the triangle correlate to the
three major territories that you operate in:
Context, Goals, and Models. You can see it
in a global sense. You can see it in a
very detailed, micro level and so on. These
things have this need to be seen in a whole
different series of scales and levels.
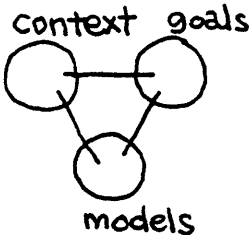
Traditionally, we tend to enter the problem
from the contextual end. Meaning that we
have a site, a program, a client and a set
of building restrictions that all form the
Context in which you operate. But with
this triangle, one only assumes that there
is a problem and that you are taking off
from something. (Interview, 2/12)

The "loop" promoted shifting between data and the physical

design; the "triangle" promoted shifting between "territories"

and "scales."

In addition to approaching the design process through

the "loop" and "triangle" ideas, Hutchinson believed one

should use individual design ideas or concepts to transform

the physical design. This "transformation" approach differs

from the "orthodox" approach, as Hutchinson sees it. "Ortho-

dox" involves simultaneously working with all ideas at once--

a "stew pot" approach.

Hutchinson: The more conventional way is to throw every-
              thing into a big pot, all at once. Then
              stir it around and you try to wrestle your
              way out through this business of saying,
              "I'm trying to deal with all the variables
              in the problem at the same time." (Crit
              Session, S26, 3/5)

Hutchinson continued to explain the transformation approach

in this crit session:

Hutchinson: ...You take something and examine it, keep
              suggesting different criteria. Each time
              you plug in a new criteria, the thing doesn't
              remain the same. It transforms it. It dis-
              torts or deforms it, like a string poloygon.

              ...we could isolate one variable...massing.
              Using that constant as a point of departure,
              I can see as I overlay more and more vari-
              ables, how the mass distorts, how it changes
              in order to recognize those things. I think
              you may discover some interesting things in
              this way, rather than implicitly designing
              in a rather conventional way. (Crit Session,
              S26, 3/5)

In the interview Hutchinson elaborated on how the trans-

formation approach resolved the limitations he saw with the

stew pot approach.

Hutchinson: The value [of the transformation and docu-
              mentation] comes from not having to go back
              to the beginning when you find that some-
              thing isn't working out or some variable
              changes. I think that's one of the big
              failures of much of the traditional design
              method. People are left holding so much
              information in their heads. They have so
              much of it that it is just simply being
              juggled and manipulated. It's only in
              kind of vague things, so if something
              changes which makes that scheme no longer
              valid, the synthesis is no longer of that
              particular formulation. Very often they're

really left with an amazing helplessness.
They have to go back and re-examine every-
thing. They don't realize which variables
are causing the problem and which stuff is
valid. With our approach, one could retrace
a path through all the alternatives and
generate a different scheme while certain
elements would remain constant. This is
again coming to this business of the trans-
formation. I think that essentially that's
what one is doing on his design. You are
testing out the capacity of constants to
change and to be structured in different ways.
It is transformed by a different attitude.

...Traditionally, the things that one was
manipulating were often not really very
clear and the constraints were also not
very clear. If you really get to know those,
I think, it gives you a tremendous amount of
freedom, because then you can test the limits
of the problem; then you have all kinds of
freedom because you readily see the territory
you can operate in and that territory where
you can not operate. You can push the prob-
lem to its greatest capacity and you can
reach a much higher level. (Interview, 2/12)

Hutchinson encouraged a particular use of drawings and

diagrams essential to the transformation approach throughout

the semester. These materials aid in tracing the develop-

ment--transformation--of a design scheme and in clarifying

and documenting the individual ideas which combine to trans-

form it. They also facilitate the making of designs. The

orderly use of drawings allows a student to "retrace a path

through all the alternatives and generate a different scheme"

when "something isn't working out or some variable changes."

It also generates ideas and supports steady production, as

Hutchinson explains:

Hutchinson: It seems that when tracing paper came into existence it revolutionized attitudes towards how one goes about designing with the idea of the successive overlays. You didn't have to destroy your old ideas when you wanted to transform it to try certain changes. I find that I use a lot more tracing paper than a lot of people. But I feel that it is important because I want to keep certain things more or less preserved. So, at the end of the day or at the beginning of the following day, I go back and try to put them in order. That helps you get back into it. It helps you recall the things you did. Sometimes you will even notice things that you had not noticed before because you were so involved in another idea that you had not seen it. I'm not suggesting that you make yourself a highly formalized system, but that occasionally you pull out what you think are the most important discoveries that you are making and make some pronouncement about them in the form of a diagram or drawing. Maybe you even stick them up on the wall. They you can occasionally look up and remind yourself of the thing that you had lost track of. These are messages to yourself about your own biases, your own preferences and your own priorities as they exist at this point. (Crit Session, S22, 3/17)

The particular use of drawings and diagrams can also serve to document ideas in a useful form, as Hutchinson explained to one student:

Hutchinson: Can you tell me what these strange, indecipherable hieroglyphics mean?

S22: Well, it has not been a policy to tell people what I'm doing until I know what I'm doing...

After discussing the ideas in the student's drawing, Hutchinson made some suggestions:

Hutchinson: I think that you need to make yourself a series of diagrams that show exactly what we are talking about in somewhat more

precise terms. I mean really draw them care-
fully. I think if you would sort out the kinds
of drawings you do into different categories
that were serving different purposes...you
would find it useful.

If you always keep your drawing in this very
rough sketch manner, in which things get
overlaid and changed around...they simply
serve the purpose of being vehicles to
think by. But out of them you can then
distill down the essential ideas. Right
on that drawing you begin to do a lot of
ideas that emerge which I think should be
recorded.

You could start pinning them up so that
every time something emerges which is on a
higher level than a vague exploration, you
record it. It's really a process of pulling
out ideas that are of a higher order within
your own priorities... You see what happens
to the ideas. You keep recombining these
units with other ideas. And I think that's
the way it should be. But sometimes you
forget them because in the process of work-
ing you erode them and it gets away from
you. You forget what you started doing. So
while they are relatively clear in your mind
you should actually make these diagrams.

I don't know how these two ideas might re-
late to each other, but I think they are
both interesting ideas. Maybe they are, in
fact, incompatible. One of the ways to ex-
plore the relationship between those two
ideas might be as a next step to imagine
what a section might be through there. And
then that starts a long investigation...
(Crit Session, S22, 3/17)

As a "catalyst" for making designs, Hutchinson explained the

value of diagrams:

Hutchinson: Once you start that process of making a series
             of abstractions or diagrams, which are simply
             statements about the issues and the ideas, and
             attempt to resolve those issues rather than
             physically laying in a lot of different things,
             you have the resources of these physical images

[the diagrams]. There are a lot of ways to
start. One is making diagrams and overlaying
a series of systems on the site, like circu-
lation systems, potential zones for building
and places you don't want to build on. There
will be grey areas and white areas which
according to your own set of biases should
remain intact. Another way to start is to
look at the sets of information organized
in Phase I. Say "what does it mean? How
can I see transforming something? Could I
start with things which have certain phys-
ical characteristics, certain dimensions
or other properties?" Just simply looking
at them helps me identify certain issues.
(Class discussion, 3/14)

According to Hutchinson, after the diagrams are made they

should be displayed. He explained his idea in an interview

during which he described a previous semester's design prob-

lem.

Hutchinson: We drew all these diagrams and made a great
big display of them on the wall. Not be-
cause these were design solutions, but be-
cause it was a way to suggest alternative
attitudes that one could take and to bias
the basic information, like the arrangement
of elements. This served as a catalyst to
get people thinking about and accelerate
their process of really getting into design.
Out of that, people selected certain things,
seeing certain possibilities. It suggested
a whole range of ways that one could then
read different attitudes that one could take
toward a university [the particular design
problem]. (Interview, 2/12)

This emphasis on the use of diagrams is consistent with

Hutchinson's statement that "perhaps the most fundamental

facility an architect needs is a facility with abstraction."

The particular use of drawings and diagrams not only related

to Hutchinson's idea of design as transformation, but to his

ideas of the "triangle" and the "loop."

Hutchinson: I think the way you draw and what you draw are terribly important. On one hand you are drawing issues, not buildings. Then on the other hand, you draw buildings. Then you say, "Well, what does that mean?" If you operate only in one or the other of those modes several things happen. One is that there may be a breakdown in communication between you and those you are working with or between you and me, because we can keep interpreting it in a lot of different ways. So it would be very useful to take these abstractions and begin to interpret them.

On the other hand, if you only show specific buildings, you may not be able to transform them because you may not know what they mean. In other words, you can't see them in any generic sense. You can't see them as be-longing to some set of basic possibilities and attitudes toward the whole building complex, both inside and outside. (Class discussion, 3/14)

You can't just operate at the diagram level. You have to work back and forth from dia-grams to details because, who knows where ideas come from. Some ideas come from the building and some come from the abstractions. (Final review, 5/12)

(This idea was supported by Heath, in an interview during which he purported that "ideas surface from the elimination of information.") Clearly, Hutchinson's ideas on how to operate as a designer were woven into his ideas on the use of drawings and conceptual diagrams, what he called the "artifacts of the process." This will become more evident in the discussion of the assignments.

Hutchinson expressed two additional concerns about the ways students operate as designers in his discussion of the "Charrette Mentality." He explained that he found this

attitude common among architecture students and professionals:

Hutchinson: It's exciting to work all night. I think
               it takes a certain amount of maturity to
               get over that attitude. I think a lot of
               architects have not gotten over that
               attitude. It's what I call the "Charrette
               Mentality." It has to do with (1) not being
               able to work with other people in a reason-
               able way and (2) not being able to work ex-
               cept under pressure. And therefore, not
               being able to keep a steady-state production
               going. Not that there aren't highs and lows,
               that's nature. But I think those can be
               somewhat induced. One has to develop tech-
               niques to do that. You play games with
               yourself. Just little techniques to keep
               yourself involved. (Interview, 5/14)

        In considering the way the urban design problem was to be

used in the studio, one may expect that the class would have

focused on urban design issues and approaches. Indeed, the

students indicated in their initial interviews that they had

selected this studio because of the urban design issues, yet

when this observer asked the teachers about the studio and

the design problem, they spoke little of the urban design

content. Rather, they both talked about their ideas on how

to design, and noted that these ideas were integrated into the

studio and the assigned problem. In other words, while the

curriculum defined the urban design focus of this studio,

the studio reflected the teachers' particular ideas about

designing adopted to urban design. Further, its tie to urban

design was evident in a segment from the Working Procedure

hand out.

> ...in urban design it is clearly not pos-
> sible for a designer to work entirely
> individually. It is necessary for a de-
> signer to work in various capacities and
> interests--professional, political, eco-
> nomic, social, technical, etc.

Hutchinson's concern for collective, collaborative work

reflects his concern that students consider more design

determinants and take various positions on the problem and

constraints.

Hutchinson: I prefer that they [students] work in groups
               because they can just cover a lot more
               material and it also tends to get them in
               the habit of interacting more and not being
               so intensely personal without articulating
               a personal attitude. They are forced to
               articulate a position or they can't really
               agree. I don't think it's possible to act
               totally as an individual in urban design.
               You have to really be able to articulate
               and establish your position.
               (Interview, 2/12)

It is clear that having students determine the problem

and identify the constraints helps prepare them to assume

designers' responsibilities. In the case of urban designers,

the responsibility for setting the problem implies a particu-

lar and central relation to the other actors in the urban

design process.

Another idea, producing a coordinated range of schemes,

reflects Hutchinson's interest in having students take

different attitudes toward the problem, and in having the

studio function as a design firm creating a product useful

to the studio's "client"--OLMD. Students would not be

producing competing solutions to the same program, but pro-

ducing a coordinated professional document which would illus-

trate several approaches to the Civic Center redevelopment.

Hutchinson: I think the range of schemes that we as a
firm uncover and present should in fact in-
clude such possibilities [as] minimal build-
ing with rehabbing and landscaping. At the
other end of the scale, it seems one could
propose schemes which are projected towards
the future you anticipate (either pessi-
mistic or optimistic views of the economy
and of the need for more government)... At
any rate it involves a lot of building and
involves a major transformation of this
area. (Class discussion, 2/7)

Hutchinson intended that the range of schemes vary in imple-

mentation and execution strategies, in addition to ranging

in size and scale. Heath constrasted this product with the

most recent proposal for redeveloping the Civic Center by

architect Edward D. Stone (a physical design for the Civic

Center with new buildings, trees, and paving patterns).

Heath: It's not as if we are trying to produce a
final definitive architectural scheme...

All these alternative schemes or strategies
are merely bargaining tools--tools which
promote discussion of certain options for
the people who really make the decisions.
They are the City Government and ultimately
the people who elect them. (Class
discussion, 2/7)

Heath's ideas were consistent with those in the article "Urban Design as a Governmental Process,"* (handed out in the studio), which attributed the success of the efforts of the N.Y.C. Development Offices to the support of the mayor and the active involvement of urban designers in the political arena.

The students had been in studios structured like architectural design competitions where they had worked individually (if not secretly) to prepare competing design solutions. Working collaboratively, therefore, required most students to operate in different ways. They reported in interviews that their previous group experiences had been unsuccessful; they had learned to avoid collective, collaborative work. The coordination of schemes in this studio meant that not all students would be developing those of their preference as they had been able to do in the past. Instead, they would have to develop schemes important to the collective product.

Whether the teachers' ideas about designing were specifically related to urban design or not, they all seemed to correspond to Hutchinson's fundamental attitude towards operating as a designer, his "methods for attacking problems."

Hutchinson: We have to have some organization about the way we go about designing. (Class discussion, 3/10)

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*"Urban Design as a Governmental Process, "Jonathan Barnett, Architectural Record, January 1970.

In review, the list below contrasts the ways of designing
for which Hutchinson intended the problem would be a vehicle
for learning with what he understood to be the students'
previous design experiences.

+ <u>Many Entry Points and Various Sequences of
Events in the Design Process</u> vs. the orthodox
entry point and set sequence of tasks.

+ <u>Students Determine the Problem and Constraints</u>
vs. the problem, program, and constraints set for
the students by the studio teacher.

+ <u>Designs Informed by a Range of Design Determinants</u>
vs. the limited number of determinants involved
in the students' previous decision making.

+ <u>An Expanded Use of Models, Metaphors, and
Precedent</u> vs. a restrictive use of models,
metaphors, and precedent which is "too formalistic"
and approaches a direct transfer of ideas.

+ <u>The Design Loop</u>--frequent shifting from concept
to the physical design, and from data to design--
vs. working only at the level of the physical
design (or data).

+ <u>The Triangle</u>--a cyclical design process--vs. a
linear design process.

+ <u>The Transformation Approach</u> vs. the "stew pot"
approach, and designing from a "parti" or a
central organizing idea.

+ <u>The Particular Use of Drawings and Diagrams</u> for designing vs. the "heiroglyphic, indecipherable" drawings which are drawn over many times and later discarded.

+ <u>Steady-State Production and Group Work</u> vs. "the charrette mentality."

And the two ideas specifically related to urban design:

+ <u>Working Collectively and Collaboratively</u> vs. working individually.

+ <u>Producing a Coordinated Range of Schemes</u> vs. producing competing definitive architectural schemes.

CHAPTER 3

THE STUDIO CHRONOLOGY

To trace what happened in this studio during the
semester, certain day to day events in each of the three
phases are detailed. The chart provides a chronological
guide to these events and a summary of how the studio time
was spent.

The Chronology of Events

	week	date		D W R	HuHe
PHASE I	1	1/27	Introduction		
		1/29	Planning for site visit		
		1/31	N.Y.C. site visit		
	2	2/3	Discussion of visit		
	**	2/5	Work & crits		4 o
	**	2/7	Preliminary Review		
	3 **	2/10	Review continues		
	**	2/12	Work & crits		3 r
	**	2/14	Phase I Review		
PHASE II	4	2/17	Introduction		
		2/19	First series		
		2/21	Work & crits		4 p
	5	2/24	Second series		2 r
		2/26	Work & crits		r 2
		2/28	Work & crits		
	6	3/3	Work & crits		
	**	3/5	Work & crits		3 r o 1
	**	3/7	Phase I & II Review (OLMD)		

Legend:

**   indicates AES's studio visits.
D W R refers to the use of the studio time; D: Discussion and
       instruction; W: Work and crits; R: Reviews.
HuHe   refers to the teachers' attendance in the studio;
       Hu: Hutchinson; He: Heath; numbers are the hours they
       were absent from the studio; lower case letters
       indicate why--r: another studio's review; p: personal
       or professional; o: other, including faculty meetings.

The Chronology of Events continued,

week	date		D W R	HuHe
PHASE III 7 **	3/10	Introduction;sketch design		2 or 3
**	3/12	Review of one day sketch		
**	3/14	Discussion; work & crits		3 rc 1
8 **	3/17	Crits on using diagrams		
	3/19	Work & crits		
	3/21	Work; early holiday?		4 rr 4
		Spring holiday week		
9	3/31	Preliminary Review-crits		
	4/2	Work & crits		
	4/4	Review-individual schemes (OLMD)		
10	4/7	Groups;commuter mentality		
	4/9	Crits;group problems		
	4/11	Working with groups		4 p
11 **	4/14	Minor review with G10		4 r
**	4/16	Work & crits		r 4
**	4/18	Work & crits		
12 **	4/21	Crits;S2's group		4 r
**	4/23	Preliminary Review		
**	4/25	Review continues		
13	4/28	Presentation;pencil		4 r
	4/30	Work & crits on facades		
	5/2	Work & crits		
14	5/5	Presentation;ink		4 r
	5/7	Work & crits		
	5/9	Work & crits		4 rr 4
15 **	5/12	Final Review (OLMD)		
FOLLOW UP **				
**		Complete drawings		
	5/23	Drawings due		

*Totals
D: 20/172=12%
W:108/172=62%
R: 44/172=26%
Hu:49/172=29%
He:19/172=11%

*The Studio Time: The studio was scheduled to meet four hours
a day, 43 days during the semester, including the Final
Review, yielding a semester total of 172 hours. Of that
172 hours, 44 hours (26% of 172) were spent in review
sessions giving each student 1.5 hours of review time if
distributed equally among 28 students and if used at 100%
efficiency. 20 hours (12% of the 172) were spent in
instruction and discussion, field trips, etc., leaving 108
hours (62%) for work and crits. But Hutchinson was out of
the studio 49 hours (29% of the 172) and Heath 19 hours
(11% of the 172) during the semester. Together, they were
out 20% of the 172 hours [68/2 $\Rightarrow$ 34/172]. Only 8 hours of
the 68 total were for personal or professional reasons.
The other 60 hours, the teachers were fulfilling faculty
responsibilities, primarily as guest critics at reviews
of other studios.

With 108 hours of work and crit time for two teachers,
28 students potentially have 216 hours to be distributed
among them. Removing the 68 hours the teachers were away,
there remained only 148 hours to be distributed. If crit
time was used at 90% efficiency (an optimistic percentage),
then the 148 hours would be reduced to 133. If this time
is equally distributed among the 28 students, each student
would have 4.75 hours of individual time with the teachers
during the 14 weeks of work, twenty minutes per week.
(Roughly the same aggregate time this observer spent with
each interviewed student outside their reviews.)

It would be unfair to both teachers to ignore the
time they spent in the studio and on field trips outside
the scheduled studio time. On different occasions, they
stayed later than the scheduled end of class, came in
extra days, including weekends, and came back in the
evening. But these occasions were not frequent and benefited
only the few students present each time. The extra time
balances out their occasional late arrivals and phone
interruptions.

PHASE I: "Information Gathering, Research, Analysis
           and Interpretation"

The Phase I assignment, (Ill. 3-1) given to students
in the Introductory Handout during the first class meeting,
listed seven topics around which students were to form
groups ranging from "Metropolitan Context" to "Site Model."
The subtopics and lists of information to be gathered filled
four pages; the "Presentation Format" for the material, with
general requirements, group/topic requirements, and a standard
8 1/2" x 11" graphic layout filled three additional pages.
As principals of the "design firm," the teachers prescribed
the topics, tasks, and products scheduled for the first three
weeks and coordinated the students' work.

As explained in Chapter 2, Hutchinson saw the require-
ments of the Civic Center and Office Building as being very
malleable ("it's very easy to sort of mash that into dif-
ferent shape characteristics"), and the program "undetermined."
In Phase I students were to identify and document the con-
straints and clues that could shape the design schemes and
present the design information to allow the students to make
their own interpretation of the consequences for design
schemes. The Phase I work (and the work of the subsequent
phases) was set in the 8 1/2" x 11" format so it could be
easily assembled into a booklet for the students' use.
The purpose for the booklet in Phases I and II was explained
in the "Working Procedure" handout.

Illustration 3-1: Phase I

Problem Issued: January 27, 1975
Problem Due: May 12, 1975 (Noon)

PHASE I: INFORMATION GATHERING, RESEARCH, ANALYSIS AND INTERPRETATION

The class will be divided into groups to gather, research and analyze informa-
tion pertinent to the problem. The material produced will be presented ·
according to the format guidelines attached and assembled into a booklet for
use as a design framework for all members of the class.

In certain cases, sub-headings of the following topics call for "interpreta-
tion" of information as well as its straight-forward gathering. This simply
demonstrates that in urban design there is no convenient separation between
"analysis" and "design". Further interpretation and even information
gathering will be necessary at the later design stage. Personal judgement,
individual initiative and group discussion are necessary at this present
stage to determine the appropriateness and graphic form of interpretative
drawings.

TOPICS

A. METROPOLITAN CONTEXT

For the following categories in this section there should be an emphasis
on the heirarchical breakdown from metropolitan to local scales.

1. **Symbolic** – historic
   – image

2. **Perceptual** – identification of area in its context
   (eg. according to Lynch's categories of
   "path, node, ddge, landmark, district")

   – topographic variation of Manhattan skyline

3. **Use** – major use classifications and distribution –
   commercial, residential, etc.

   – demographic distribution related to uses

4. **Zoning** – illustrate present planning intentions as
   controlled by zoning

5. **Movement systems** – vehicular (private, public)
   – subway
   – pedestrian
   – service
   – other

6. **Major utilities distribution** – water
   – electric
   – drainage, etc.

7. **Grid** – analysis of plan geometry of Manhattan in abstracted
   form.

B. MANHATTAN CIVIC CENTER AREA

1. **Historic** – buildings
   – spaces
   – history of plans for area

2. **Symbolic** – area image
   – image of component parts
   (buildings, spaces, streets, etc.)

3. **Functional** – use of individual structures
   – population according to use of structures
   – use of open spaces
   – zones of activity

4. **Zoning** – FAR (floor area ratio)
   – zoning envelopes

5. **Spatial and perceptual** – interpretation of area in terms
   of its visual and perceptual
   qualities
   – eg. scale, proportion, unity,
   continuity, axiality, asymmetry,
   disintegration, visual corridors, etc.
   – eg. complementarities such as
   closed/open
   concentrated/dispersed
   communal/private
   containers/contained
   centroidal/peripheral
   – means: plans and axonometric drawings

6. **Movement systems** – vehicular (private, public)
   – subway
   – pedestrian: horizontal
   vertical – stairs
   – elevators
   – service
   – include category, degree and time of use

7. **Utilities distribution** – horizontal
   – vertical (where possible)
   – eg. electric, water, drainage, etc.

8. **Groundscape, vegetation, etc.** – textures, materials
   – trees, etc.

9. **Environmental** – climate and micro-climate
   – wind: direction, behavior, etc.
   – sun: angles, shading, seasonal variation, etc.
   – precipitation

Illustration 3-1, continued.

C. **CIVIC CENTERS** - comparative study of precedents

What constitutes a Civic Center?

1. **Type** - administrative
   - cultural
   - recreational
   - commercial
   - mixed

2. **Location** - city context
   - climate
   - region, etc.

3. **Symbolism**

4. **Design concept**

How implemented politically and economically?

5. **Design process** - master plan
   - incremental strategy
   - participatory planning, etc.

6. **Architectural realization** - scale
   - materials, etc.

D. **OFFICE BUILDINGS**

1. **Planning criteria** - anthropometrics
   - planning grids
   - structural grids
   - organizational heirarchy and optimum groupings
   - circulation:
     horizontal - corridors
     - fire codes
     vertical - elevators
     - stairs

Note: a precise and complete study of elevator systems is necessary

   - daylighting standards
   - communications
   - environmental services - ventilation
     - lighting
     - heating
     - sound control
     - cooling, etc.

2. **Planning**

Types - individual offices
   - shared offices

Strategies - cellular
   - combined opened/closed
   - office landscaping
   ("burolandschaft")

Planning components - offices
   - conference rooms
   - storage areas
   - reception areas
   - toilets and staff rooms

Consider - dimensions
   - access, circulation systems
   - lighting

3. **Parking** - structural grid implications
   - compatability with superimposed grids

4. **Codes** - fire - escapes
   - travel distances
   - fire rating
   - compartmenting
   - daylighting

5. **Zoning** - FAR (floor area ratio) - influence of this constraint on depth, height and overall form of typical office structures

   - history - evolution of setback requirements
     - incentive zoning, etc.

E. **PROGRAM DEFINITION AND EXPANSION**

   - Investigate appropriate additional uses for area
     eg. commercial
         recreational
         cultural

   - suggest scale of distribution - square footage

   - suggest possible locations - refer to interpretive area studies

F. **AREA DESCRIPTIVE DRAWINGS**

   - sectional elevations through area
     (block out in pencil before final inking)

G. **SITE MODEL**

   - to scale 1" = 80' 0"
   - sectionalized and demountable
   - materials:

Illustration 3-1, continued.

<u>PHASE I - PRESENTATION FORMAT</u>

- All work to be presented on 8 1/2" x 11" sheets.

- 17" x 22" sheets will also be used and later reduced to 8 1/2" x 11".

- Titles and written material accompanying drawings in 'Para-tipe' lettering - see accompanying specimen sheet. Use 5 sizes of lettering as specified.

- Margins in accordance with accompanying specimen sheet.

- Text in IBM (arrangements to be discussed)

- Diagrams, plans, maps, etc. in black ink line.

- Shading on plans, etc. in 'Para-tipe' coordinated dot, line and grid screens - these to be specified later.

- Students should identify their drawings by pencilling their names in the lower right-hand corner of the back of each sheet. Where more than one person works on a single drawing all names should be placed on back. No names or 'unorthodox' information, no freehand lettering or non-format visual material should be on the drawings designated 'finished drawings'. This "finished drawing" category refers to things to be included in the finished booklet.

<u>PHASE I - DRAWINGS</u>

	SCALE	DRAWING	SHEET SIZE
Group A		plans	8 1/2" x 11"
		plans	17" x 22"
Group B		plans	8 1/2" x 11"
		axons	8 1/2" x 11"
Group C	To choice		8 1/2" x 11"
Group D		mixed diagram/text	8 1/2" x 11"
Group E		text only	8 1/2" x 11"
Group F		sections	fold out? multiple of 8 1/2" x 11"
Group G		model	--
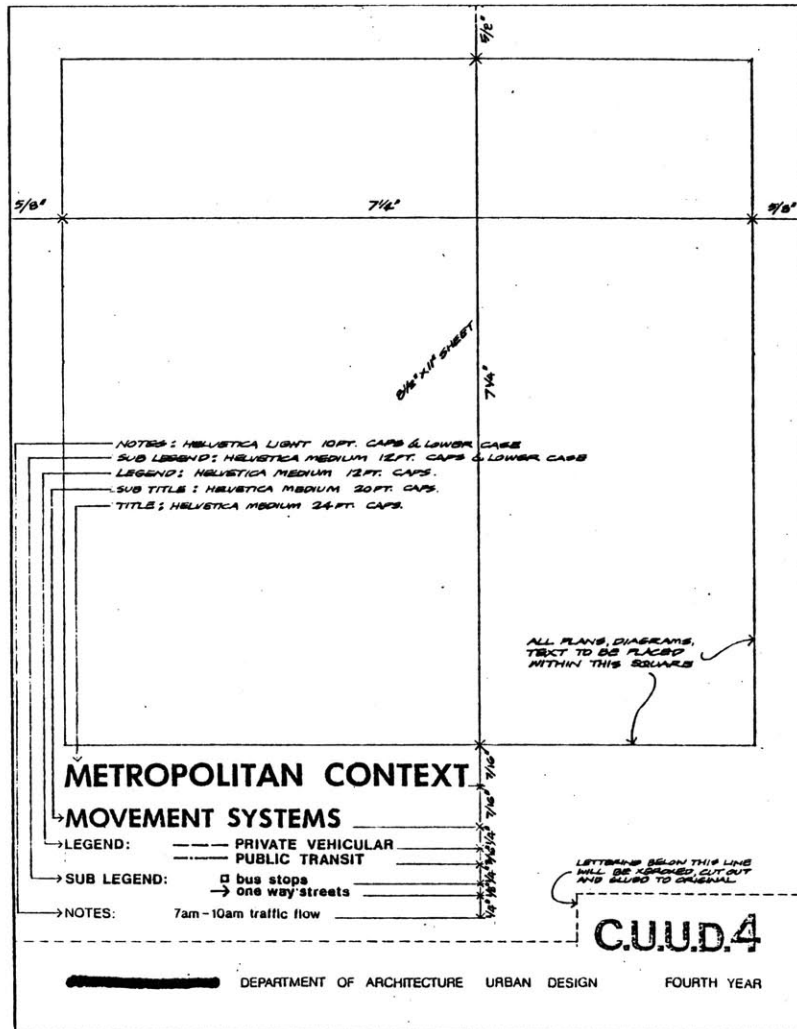
Illustration 3-1, continued.

NOTES: HELVETICA LIGHT 10FT. CAPS & LOWER CASE
SUB LEGEND: HELVETICA MEDIUM 12FT. CAPS & LOWER CASE
LEGEND: HELVETICA MEDIUM 12FT. CAPS.
SUB TITLE: HELVETICA MEDIUM 20FT. CAPS.
TITLE: HELVETICA MEDIUM 24FT. CAPS.

ALL PLANS, DIAGRAMS, TEXT TO BE PLACED WITHIN THIS SQUARE

METROPOLITAN CONTEXT
MOVEMENT SYSTEMS
LEGEND: ——— PRIVATE VEHICULAR
——— PUBLIC TRANSIT
SUB LEGEND: ☐ bus stops
→ one way streets
NOTES: 7am–10am traffic flow

LETTERING BELOW THIS LINE WILL BE XEROXED, CUT OUT AND GLUED TO ORIGINAL

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR

> This material will then be collected in a
> booklet that will belong to the whole group
> as a design framework which will facilitate
> dealing with the problem on a conceptual level.
> Once the many factors have been articulated
> and made permanently visible, their inter-
> action can be tested in a bounded field rather
> than an open ended one, and decisions can be
> viewed in terms of viable basic alternatives...

The Phase I assignment integrated Hutchinson's ways of designing in the studio work. With the malleable requirements and undetermined program, the students could determine the problem and constraints; with the selection of assigned topics, students could expand their range of design determinants and use of models, metaphors, and precedent when selecting constraints in later phases. Documenting each factor separately prepared the design information for later use in Hutchinson's transformation approach and his "design loop" and "triangle." It also reflected his considered use of drawings and diagrams, as did the students' determinations of the "graphic form of interpretative drawings." Choosing to have the students use a common format and share information reflects Hutchinson's attempt to discourage the "proprietorship of ideas." Breaking the design process into specific tasks and phases and having the students work in groups indicates his desire to promote "steady-state production." Hence, the Phase I assignment reflected Hutchinson's entry points, events, and sequence of events in the design process.

(While observation in the studio did not begin until
the end of Week Two, the teachers reviewed these events
of the five class days missed.)

WEEK ONE: INTRODUCTION OF THE PROBLEM AND PHASE I

On Monday (1/27), the class assembled in a high
ceilinged seminar room, where the Introductory Handout was
distributed and discussed, and the problem was introduced.
This rectangular room, used for the reviews until the begin-
ning of Phase III, sat the twenty-eight students, teachers
and guests snugly around four long tables. The walls were
white, three were covered with floor-to-ceiling tack boards,
interrupted only by a wood door at one end of the room and
a window facing north on the opposite wall. The fourth wall
was covered with the blackboard extending the entire length of
the room. The tables and chairs were an office-type furniture
wood-grained Formica, chrome legs and plastic upholstery.
There were bright, buzzing fluorescent lights, with the room
a comfortable temperature from steam and body heat, al-
though conversations were rarely spared the noise of the
pipes. The hardwood floors were obscured by the clutter of
people and furniture. The studio space was a five minute
walk from the seminar room. The first session lasted all
afternoon; the students were formed into seven groups cor-
responding to the seven topics of Phase I based on per-
sonal interest. Just how the problem was introduced is not

not known, but from Hutchinson's comments in Chapter 2, it
is presumed it was presented more as work to be done than
as a vehicle for learning certain things.

On Wednesday (1/29), the class met again in the seminar
room, this time to discuss and plan their site visit to New
York City on Friday. Transportation and meeting arrange-
ments were made, and students were assigned the task of
acquiring certain information from various agencies and
sources in New York. The planning session ended before
5 o'clock, (the studio was scheduled to meet from 2 to 6
o'clock, three afternoons a week).

On Friday (1/31), the site visit began with an 11:00
a.m. slide presentation by the Office of Lower Manhattan
Development (OLMD) on the history of the Civic Center from
an early squatter settlement, through its era as a "center
of commerce" (marked by the Sun Building), to its becoming
the center of government with the building of the City Hall.
The presentation continued with a review of various
plans which had been proposed since Robert Moses, including
architect Edward D. Stone's recent plan for a tower and
plaza. After lunch, students walked the site and visited
notable buildings as the Tweed Courthouse and the Sun
Building; their tour of the City Hall was thwarted by a
bomb scare. The students had the rest of the afternoon to
seek out the information they had been assigned to collect
from the various agencies such as the Landmarks Commission.

WEEK TWO: PRELIMINARY REVIEW

On Monday (2/3), the teachers began with a discussion of
the trip, then spent the remainder of the afternoon working
with each group reviewing the information each had collected,
and noting what had not been available. During these ses-
sions the groups began to organize their materials for
presentation at review on Friday.

On Wednesday (2/5), Heath continued working with the
students on their preparations for the review on Friday.
Hutchinson spent most of the afternoon discussing this
studio and others he had taught with a study director of
the Architecture Education Study (AES). (The AES had been
invited by the administration and this observer to observe
studios in this school, and after discussions with Hutchinson,
the urban design studio was selected.)

On Friday (2/7), the seminar room was teeming with
students by 1:30 who posted their 8 1/2" x 11" sheets
for the preliminary Phase I review. According to one of
the interviews with Hutchinson, this review was to show
how the groups were progressing and to provide assistance
in refining their way of communicating the various types
of information. Several students were busily working to
complete their sheets throughout the afternoon. Most of
the work had been posted by 2:15. Hutchinson began the

session by briefly explaining the Architecture Education

Study and by introducing this observer, who elaborated

on the research approach and asked for the students' coopera-

tion. Heath arrived during this discussion, and Hutchinson

interrupted to introduce him to this observer.

Hutchinson, then shifting the session to the review,

explained that while each group was presenting its work, the

other students could work in the studio if they wished. Heath,

however, suggested that all the students stay so they could

see how some of their work had overlapped with the work of

other groups. None of the twenty-four students present left.

Hutchinson prefaced the presentations by saying that the

work "doesn't have to look like anything right now...

it will give us something to talk about," although he ex-

plained that it would not all be discussed. (Examples of

the finished versions of each topic group's work are Ill.3-3.)

As the first student was about to begin, Hutchinson, reali-

zing that over 200 sheets had been posted on the wall, com-

mented to the class, "We probably won't finish today." Only

seven students would present their work before the session

would end at 6:15.

The review got underway at 2:30 with one student's work

on topic "A, Metropolitan Context."

Hutchinson: Who else is working with you?

    S1: S16 and S26.

Hutchinson: Is this mutual work?

Sl: No, we are all working on separate areas.

Hutchinson: Would you like to tell us what you have done
now?

Sl: I've begun to put my information down on a map.
I'm just trying to find the distinctive areas
of the surrounding New York City.

Hutchinson: Can you explain the breakdown of the work for
the three of you?

Sl: I'm doing the first two, Symbolic and Percep-
tual, and I'm also doing the last section,
Grids. S16 is doing transportation [Movement
Systems], and S26 is doing 3 and 4, Use and
Zoning.

Hutchinson: Do these six categories [really seven] seem
adequate or have you reorganized it?

Sl: They are general enough that you can include
or exclude whatever you want...

In locating them [the distinctive areas], I
picked out recognizable areas, or areas which
are supposed to be recognizable. Those...
which offered something different than other
sections of the city... I've also
plotted the Official Landmarks, some included
in our site...

What I'm trying to find next is what are the
landmarks people use to find their way around
these areas... that's as far as I have
gotten on these first two sections. That's
all I'm thinking I can do.

In his first five minutes Sl gave his progress report

including many details not mentioned above, but like the

presentations which followed, did not explain or demonstrate

the impact his information could have on the Civic Center

design. In the questioning and discussion which followed

for over an hour, the teachers intimated their own ideas

about the data, its relation to the design, and the ways

it should be presented. Their comments to S1 followed a

pattern, which is also evident in their responses to sub-

sequent student presentations. First they asked questions

such as:

Hutchinson: In the way you draw and describe it, you do
               not attempt to organize it hierarchically
               anywhere?

        S1:   Not yet.

    Heath: Do you see any overlap of Districts and Land-
               marks? Are they totally separate patterns?

Following these questions which were indirectly trying to

search for the student's ideas about the relation of infor-

mation to the future design, the teachers again indicated

their ideas about what information was appropriate to the

topic.

Hutchinson: Since you are dealing with the Metropolitan
               Context, it surprises me that you are not
               dealing with Manhattan as a place--thus seeing
               it as having significance for not only the
               whole area [Lower Manhattan] but for the
               country and the world.

               That may seem ridiculous to zoom out to
               that larger frame of reference, but Lower
               Manhattan in that frame of reference is a
               very clear place. If you approach Manhattan
               by air, water, or land, it's one of the images
               people have... The whole notion that it is
               an island surrounded, that this tip is the
               one which presents its face to the world. It
               symbolizes the financial area of the country,
               if not the world.

               That's what I mean by establishing some
               hierarchical notion of this place.

Both teachers went on to comment on the graphics related to S1's topic. During the first twenty minutes, S1 directed his comments specifically to the teachers rather than the whole class. Likewise Hutchinson and Heath responded directly to him. With the teachers' backs to them, most students spent the time in small conversations, some related to the studio work, some not; the background noise made it difficult for the few students trying to listen to hear. The class remained involved in other things as the teachers were generalizing about the presented work.

Hutchinson: In each category it is important to anticipate how you are going to use the information. It's not just an effort to cover the ground and have it done. If it's not something which will ultimately have an effect on the design, then it's not worth including as a perfunctory thing.

The teachers went on to ask more direct questions and make comments suggesting a connection between data and the design, though without giving examples of possible impacts.

Hutchinson: For example, what about the perimeter of Lower Manhattan and the way it has changed? It would seem to me, that would have an enormous effect on the symbolic and image aspects of the whole area.

New York has always had this ragged edge with all the piers, while in Chicago the whole waterfront is a park--a public resource. This whole edge of Lower Manhattan is going to become a public place with promenade, parks, housing, etc... Doesn't that have a major impact on image and symbolic value of this area, if indeed that happens?

S1: Yes.

Heath followed with a similar point suggesting the importance
of the irregular street system in Lower Manhattan. The on-
going interchange revealed the student's lack of clarity
about his responsibilities for this work.

S1: You're asking for value judgments now, not
just information. Our site is between those
two built up areas [Wall Street and the World
Trade Center] and there is no reason it can't
remain that way.

Hutchinson: You could take an attitude toward that area
and peripheral development which might re-
inforce that... You find that the tip
is pretty small but has gotten built out in
successive stages. People...can keep
adding more layers without interfering with
the old patterns.

S1: But do you want me at this point to take
attitudes toward this?

Hutchinson: You don't have to make any judgments about
this at all. Let's say you just present the
idea and values, but you don't have to say
which ones you prefer. But you have to pre-
sent this to everybody, because this belongs
to the whole class.

At this point (3:00), the background noise from student
conversations had reached a distracting level. Hutchinson
rose from his chair, turned to the class, and sternly
proclaimed,

Hutchinson: And since this belongs to the whole class, I
think you ought to participate, keep quiet
or get out!!! S1 is not doing this for him-
self... Whatever comes out should be as
useful to you as it is to him. It's going to
take some time to get that across... I
would like to ask a question. Since you

> have not been working on Metropolitan Context, if there are expectations that you have, they should come out now....

Hutchinson then returned to Sl's questions, and more general comments about the work.

Hutchinson: Is it important to take a position? I don't think you need to take a position. You can show that traditionally that is all ragged edge and old docks... Then show that over time this thing [the tip of Manhattan] has [been] built out in layers...obviously you don't have to displace anything that way... You might say that high density new development and intense development really ought to be taking place on these new layers and not in the old areas, around our site. If you anticipate that, you certainly give us a certain kind of information.

Hutchinson then completed his pattern; he demonstrated how the design might specifically respond to the design information. He demonstrated what it meant to "anticipate," although he did not indicate how one actually anticipates. Another connection between design information and its implications for the design occurred near the end of the next student's (S26) presentation (a discussion of his composite map of parks and paths in Lower Manhattan where pedestrians would not encounter automobiles), although these connections were made infrequently.

> S16 Maybe you should define the interfaces between these two systems [pedestrian paths and automobile paths]?

> S26: That's coming from another group. This is a plan which can be worked on. All these linkages don't currently exist.

Hutchinson: I think what S16 is suggesting is a good
point too. There may be other possible
interpretations, i.e., other systems of
linkage between the existing or proposed
pedestrian precincts.

So maybe you should show the system that
exists with gaps in it. Then people could
choose between potentials for linkage.

Remembering the "keep quiet or get out" warning, the

students began to follow the discussion between S1 and the

teachers, and several added comments during the remaining

40 minutes of S1's review.

Following S1, the review moved to S26 and quickly

through his maps of land use, parks, and urban renewal

projects (20 minutes), then on to S16's maps of the

transportation systems and links (30 minutes). In each

case the teachers' comments followed the pattern established

in S1's review.

During the transition to the next student (4:30), the

teachers expressed concern over the pace of the session.

Hutchinson: Do you think we should take a break?

Heath: We are really running out of time. We had
better decide what we are going to do
about these sessions...

The group reassembled after 10 minutes with five fewer

students. Hutchinson and Heath then suggested ways to

proceed.

Hutchinson: We could spend the first hour on Monday
finishing up the review, but there is a

question of whether we ought to go through
all of it. There is a point of diminishing
returns for reviews. Though it gets bogged
down, a lot of it is useful in that it gets
everyone into the problem and gets people
informed in this exchange of information.
The question is, do you think it's worth-
while to have a formal review of the
finished products as planned [February 14]?...

Some of the responses were:

S6:   We are just spending an inordinate amount
of time on it...

Heath: One way to spend the rest of today is to
work like this in a little group. Put things
out on the table and chart some themes...

S6:   Maybe on Friday, we should just pull out the
crucial issues and talk about them.

Hutchinson: That's why I would like everyone to be here,
because that would come from this process of
going through all the groups and pull them
out as we go.

Without a clear mandate from the class, Hutchinson suggested

that the review continue, and that students leave if they

so wished. But before turning to the next student, he reiter-

ated some of his comments to S1 to the whole class.

Hutchinson: I would like to make some general points
which apply to all these different categories
[topics]. I think that you are trying to
present the information in a rather perfunctory
way, i.e., it's here all transposed into dull
facts... Whatever comes out of the phase
...is not necessarily just conventional
data [design information], but would begin
to establish some frame of reference from
which one can really begin to design. You
anticipate how you use it. You can see it
applied in a case and therefore you focus
it more clearly... Many of those diagrams
are fundamental, but many of them don't get

at the crucial issues. Once you see it
three dimensionally, suddenly things are
more clear than when you see it has lines
on the page which are done at a level of
abstraction which is hard to connect up
with, and look at it in terms of archi-
tectural potential, spatial potential,
use potential, etc.

If you anticipate how you are going to use
it, if you see a problem and you think, "Oh,
wow, wouldn't it be great if...!" This
is what S16 was doing... I think that's
very important--I think it would be better
to leave some of the gaps not filled in.
People can do that in different ways. But
you say here is this whole potential of a
set of spaces which could be linked up into
a whole pedestrian network.

If you can, put something there which shows
how these things are, then leave it up to
the individual to see what connections to
make.

Students had to rely on these explanations of the

Phase I handout as no documents elaborated on the tasks or

their relation to the other phases.

Then after arranging some logistics about library

materials and getting the studio space in order on Saturday

morning, Heath proposed,

Heath: One possibility now is to take one person
         from each of the groups and get him to sum-
         marize what he and his fellow workers have
         been doing. Then if something particular
         comes up, he can pin it up and talk about
         it.

S18:   Some groups aren't working as groups, which
       is a problem...

Heath: Yeah, I know. What about the Site group. Are
         you working as a cohesive group in any way?

S: No, S7 did it.

Heath: S7 did it all?

With S7 ready to explain his work, Hutchinson decided to
have a thesis student, also working in the same area of
N.Y.C. present his materials. He was followed by S9 sum-
marizing his paper on the city bureaucracy prepared for
topic "E , Program Definition and Expansion." Here, again,
much of the 35 minutes was spent with both teachers asking
about and suggesting ways to relate this material to de-
sign possibilities, a discussion which drew intense con-
tration from the class without any verbal contribution.

Next S7 presented his work on topic "B, Manhattan
Civic Center Area," subtopic "5, Spatial. and Perceptual."
It prompted questions among the students giving the teachers
opportunities to talk more about their ideas for the studio.
While S7's neatly drawn diagrams and his presentation dealt
with the spatial qualities of the site, including remarks
like, "relation of the elements to the grid," "Broadway
as a major ordering element," and "Foley Square could even
be organized off Broadway," the students' questions were
on other issues.

> S6:   On a general level, how do you feel about,
> or what are our limits on taking down
> buildings?... Are we going to set some
> rules about which building can go and
> which can stay, or is that up to us? As
> principals of this firm, how do you feel?

Hutchinson's response moved quickly to the "range of schemes"

which the studio was to produce.

Hutchinson: What I suggest is that at one end of the
scale rehab is a distinct possibility, and I
think that the range of schemes that we as
a firm uncover and present, should in fact
include such possibilities. ...one
could propose schemes which are projected
towards the future you anticipate. The
pessimistic view says the economy is bad
and it's not getting any better. You are
not going to be needing all of this
building... A conventional optimist
might say that things are going to get
better, and that we need more city govern-
ment...and it involves a major trans-
formation of the area...

But later when S6 reiterated his question, Heath commented

on another aspect of the firm and the principals.

Heath: You must see the degree to which we are being
unspecific about things like that, [it would]
be inconsistent with the idea of simulating
the office. In an office...you have got
to know what you are doing, and advise people
that you should do this and not that. The
reality...is that the principals in the
firm are in no position at all to say that this
must be done... All these alternative schemes
and strategies are just bargaining tools or
tools to promote discussion of certain options
for the people who really make decisions, who
are the city government, and ultimately the
people who elect them. It's not as if we are
trying to produce a final definitive archi-
tectural scheme...

and later,

Hutchinson: If you take the position that the Tweed
Courthouse must stay, then it seems to me
that you have to demonstrate a scheme in
which it becomes an essential part, otherwise
it would not [stay]...

Hutchinson: You saw the presentation OLMD made which
traced the history...[and] the pro-
posals that had been made by different
professional people... One of them
takes a different attitude toward certain
things like the buildings that are
there... They set their own rules.
It's not as if there is a set of rules
that just exists out there somewhere,
and all we have to do is figure out
how to plug into them. That would make
a much easier problem...

As with the previous presentations, the seventeen stu-
dents who remained for S7's presentation closely followed
the discussion, particularly the last 20 minutes when the
cited comments were made. But unlike the previous presen-
tations, students played a major role in the discussion and
questioning this time. The involvement from the class did
not extend into S20's presentation of additional topic B
material. Five minutes into his presentation the session
had broken into many small conversations, including Heath
talking to the Office Group. By 6:15 the review ended much
the same way it had started.

In presenting and discussing their material, the stu-
dents cited numerous sources ranging from agency reports to
books from the school library. However, only a few were
regularly seen in the studio: the OLMD booklet, Manhattan
Civic Center, excerpts of which were included in the Intro-
ductory Handout, the Plan for New York City* volume on

*Plan for New York City, 1969, A Proposal; Volume 4, Manhattan;
New York City Planning Commission, MIT Press, Cambridge, Mass.

Manhattan, and such standbys as Graphic Standards, Time-
Saver Standards, and Urban Planning and Design Criteria
by DeChiara and Koppelman. (These or additional sources
were not seen frequently during Phase II or III. The
teachers had also posted magazine articles about buildings
or projects they considered useful precedent and brought
additional articles throughout the semester. These
related to office layouts, phasing, large interior spaces,
integration of new facades with classical facades, and
techniques for graphic presentation. (Ill. 3-2)   The
teachers would mention these new additions to the class,
but they would discuss them only in crit sessions. Occa-
sionally particular buildings as the Gothenburg Law Courts
or the National Library for the British Museum project
(Sir Leslie Martin, Colin St. John Wilson) would be dis-
cussed in crits and articles about them would be posted
in a later class.

The next morning, which was Saturday, Hutchinson and
a third of the class arrived in the studio to arrange the
desks and 4' x 8' "Homosote" panels. The room had been
newly acquired from another department on the top floor of
an aging four story brick building adjacent to the main
architecture building. All the interior partitions had
been removed to create space for first and fifth year
studios, in addition to this fourth year one. The other
fourth year studios remained in the main architecture

Illustration 3-2: A Posted Magazine Article
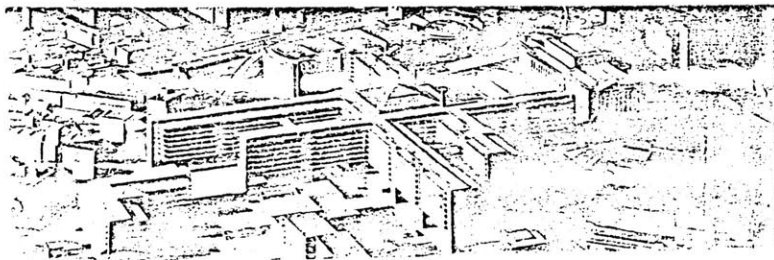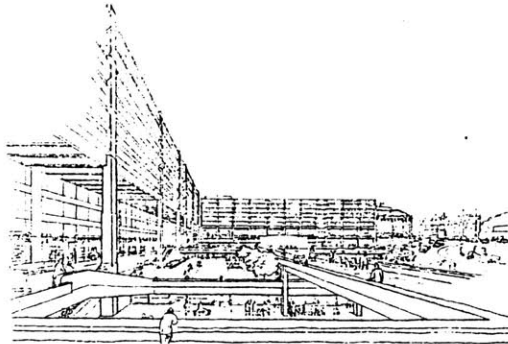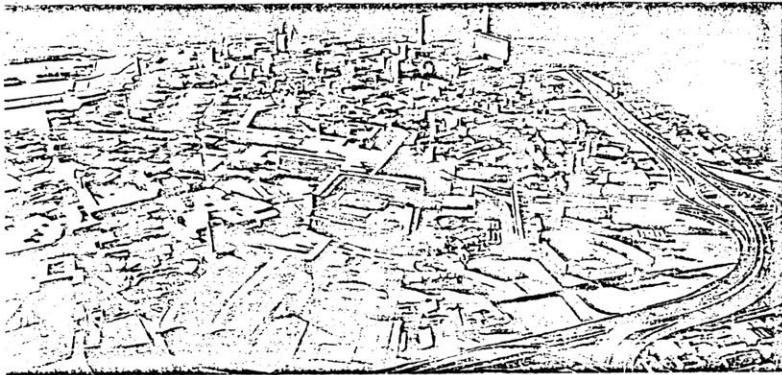
Civic and social centre, Liverpool

Colin St. John Wilson

In 1965 the architect was commissioned to prepare a layout plan for the whole site of the civic centre and a detailed design for the construction of the first phase.

The essential nature and broad requirements for a civic and social centre were set out in Report No. 8 prepared by the planning consultant (Mr Graeme Shankland) in conjunction with the city planning officer.

The elements of the accommodation are as follows: Municipal offices comprising a present staff of approximately 4500 distributed in 22 departments together with the public reception hall.   ▷ 266

1
Model of the civic centre (phase 1) from the north-east showing Lime Street station in the foreground, to the left the five towers of the Strand Street development
2
Perspective of the proposed civic centre as seen from Williamson Square bridge
3
Model of the civic centre (phase III)
Photos 1, 3 John Mills

<265
Cultural and entertainment facilities, shopping, hotel, a recreational swimming pool, licensed premises, restaurants and cafés.

Car parking provision for 750—1000 cars

The replacement of the city's Law Courts by a centralized legal precinct.

The creation of a cultural centre based upon St George's hall which will be freed from its present service as Courts of Law.

In order to establish a detailed programme of requirements the architect and the Organization and Methods Team in the Town Clerk's Department carried out a thorough survey of all Departments between July 1965 and March 1966.

From these studies a list of criteria specifying performance requirements was drawn up. The most significant of these are:

The first requirement both for the convenience of the public and the greater efficiency of the organization itself should be to achieve a proper centralization of building. (There are 43 buildings at present).

The public reception area for information and interview should take the form of a central and easily identifiable hall.

This reception hall should be sufficient for all public business.

Every department should be connected directly to the public reception hall.

Since the reception hall could be sufficient for all public business the department office wings should be freed from the necessity for security corridor planning and should be laid out as economically and conveniently as their various operations require.

Furniture, filing and storage equipment must be related dimensionally throughout the building so that the interchange and replacement of pieces can be economic and rapid.

In order to control temperature, external traffic noise and atmospheric pollution the building should be air conditioned. This provision will also enable great flexibility in the distribution of a wide variety of work spaces in a building of deep cross-section.

The form, structure and service distribution of the building must make possible the expansion of the building. This expansion should be permissible in two ways—either by extension of an existing wing (growth of an old department) or the growth of a new wing connected directly to the reception hall (birth of a new department).

With the exception of those rooms which have a proper claim to being totally enclosed in the interest of confidential business the office floor planning should be as open as possible with working groups being defined by open screens.

The offices for municipal departments must not only be as efficient as possible in their own right but must also contribute to the urban advantage of the community by providing (as a by-product of their basic form) direction, shelter and identity to various recreational activities in the Civic Centre.

The segregation of pedestrians from vehicular traffic should permit the establishment of uninterrupted pedestrian routes across the site both north-south and west-east. Thereby connecting the primary sectors in the area.

These cross routes should be protected from the weather.

They should promote and afford access to those recreational and cultural facilities which constitute the social component of the building complex.
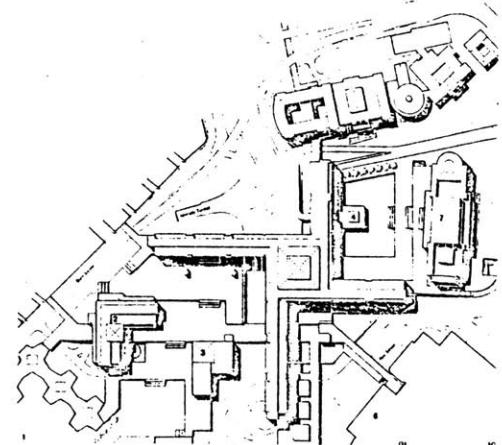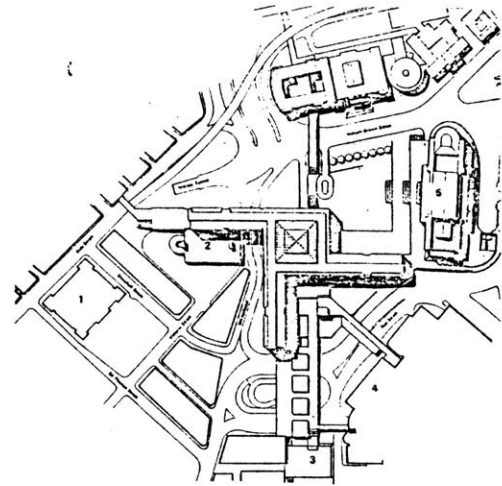
Illustration 3-2, continued.

1
Site plan (phase I)
1 municipal offices   4 Ravenseft
2 car park   5 St George's Hall
3 Williamson Square

2
Site plan (phase II)
1 Temple Victoria   5 Williamson Square
2 legal precinct   6 Ravenseft
3 hotel   7 St George's Hall
4 council chamber

3
Site plan (phase III)
1 Temple Victoria   5 Williamson Square
2 legal precinct   6 Ravenseft
3 hotel   7 St George's Hall
4 council chamber

4
North-south section showing pedestrian and vehicular
circulation

5
Plan at pedestrian level (phase II)
1 Temple Victoria   7 council chamber
2 legal precinct   8 Vip access
3 judge's arrival point 9 St George's Hall
4 hotel   10 Ravenseft
5 public reception hall 11 Williamson Square
6 shops, pubs, etc.   12 registrar (marriages)

6
Phasing diagram

7
Model of the Civic Centre at the completion of phase
II; the Temple Victoria pedestrian precinct appearing
in the left foreground

8
Model of the Civic Centre at the completion of phase
II, including the commercial development of the St
John's precinct

Photos: 7, 8 John Mills

...of the public reception hall looking towards the
enclosed lift tower

...owing typical office layout, all set on a modular
...ith suggested work positions for different
...egories

...of the concourse surrounding the public
...n hall

...if the public reception hall, from which all
...ents open

...opposite, 2 & 3 John Rawson

of increase in staff together with prognostications
of further rates of expansion were necessary.

The target agreed upon for the year 1975 was fixed
at the figure of 5000 members of staff corresponding
to approximately 550,000 sq ft net and a schedule of
accommodation was drawn up accordingly.

The present rates of expansion indicate that allowance
should be made for further expansion. However,
since the nature of expansion cannot be predicted
in either its timing, quantity or type (growth of an old
department or birth of a new) nor could it be taken
for granted that accommodation for 5000 could be
achieved in the first phase of building it became
clear that one characteristic of the form of the building
should be the potential for ordered growth at a variety
of points.

The frequency of movements of staff (and of docu-
ments) between each section within departments
and between departments themselves was recorded.
In order to arrive at the optimum grouping of sections
and departments to minimize such travel an original
research study was made which involved the writing
of a computer programme in collaboration with
members of the Cambridge University Mathematical
laboratory.

The site for the principal buildings for the new Civic
Centre is situated in a prominent position occupying
to the east and north the whole of the frontage to
St John's Lane and overlooking the Kingsway Entrance
to the Mersey Tunnel. It stretches south along the
improved Roe Street adjoining the proposed St
John's Precinct to Williamson Square, and north west
across Whitechapel and Victoria Street to the existing
Municipal Offices and Dale Street.

The total area of property involved including minor
streets and part of Queen Square is 13 acres of which
a considerable proportion is in the freehold ownership
of the City Council.

The topography of the site takes the form of a shallow
valley running approximately along Whitechapel
with principal access points for pedestrians on the
east-west axis at approximately level 70·00 O.D.
(St George's plateau) and 65·00 (proposed pedestrian
bridge across Dale Street) and on the north-south
axis at approximately 65·00 (main floor of the College
of Technology) falling to 28·00 at Williamson Square.
If the desire-lines joining the points are drawn an
important pair of cross-routes is established which
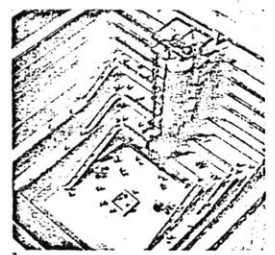
will (on the west-east axis) connect the office sector
of Dale Street with the cultural area of St George's
Hall and (on the north-south axis) the shopping area
of Williamson Square to the headquarters of the College
of Technology and the Picton Group.

The point of intersection of these routes overwhelm-
ingly claims the right to house the communications
centre of the whole complex. Furthermore the topo-
graphical valley-section at this point allows the various
elements demanding space in the centre to be disposed
vertically over each other.

Access to the site by public transport will derive
largely from setting-down points in Williamson Square;
however, there will also be important bus stops at
the point of connection with Dale Street. If the station
for the inner rail loop is accessible on the St George's
Hall side of Lime Street then a major entry-point to
the site will be created for train passengers.

Official and private cars will principally enter the site
from Dale Street along Sir Thomas Street. There will
be covered car-parking space for approximately 750
cars.

Service vehicles will enter the site from the slip-road
and exit along the present line of St John's Lane
entering Roe Street alongside St George's Hall.

Peak-time buses will be sited between the
service yard and the tunnel entrance and will join
the gyratory via a slip road on the line of Whitechapel.

81
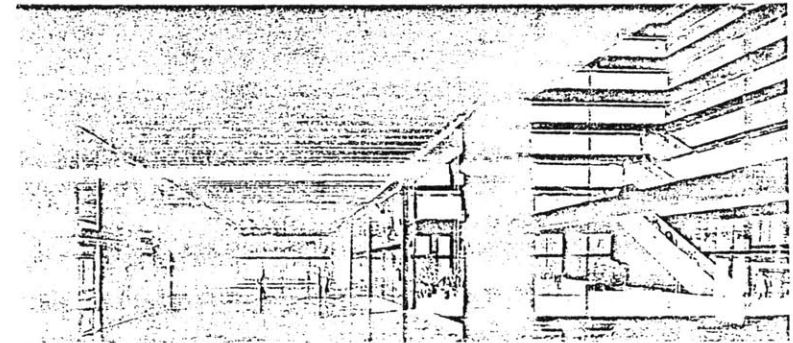
building. The room was unfinished with wall segments of

different light colors recalling the previous offices and

classrooms. This studio occupied the northwest quadrant of the

rectangular space giving most students north light and

a pleasant view. The metal drafting tables were arranged

in rows of three extending from the north wall under large

industrial sash windows. There were a few panels within

the rows which gave a third of the drafting tables tack

space, and further provided some enclosure for the studio.

A rectangular conference area was created from the

panels at the west wall, with one long side of the area

open to the long side of the studio. Students could

either sit around the conference table on a low storage

cabinet between the two spaces or on several of the drafting

tables during discussions and reviews. This set up per-

mitted students to move in and out of reviews with minimal

disruption of the discussion.

The natural grey of the panels and the multi-colored

brick walls remained unchanged throughout the semester. Two

students painted the exposed pipes above their work space

(steam pipes and conduits for the fluorescent lights) pri-

mary colors, but no one else followed suit. Besides

tacking drawings and photographs to the panels at their

desks, the only other changes students made in their work

areas were to bring in wooden footlockers for storing their

books and supplies. Heavy chains secured these lockers

to the drafting tables along with the stools. The studio
space remained organized the way it had been those two
hours on Saturday. (It only became more cluttered with
discarded models and stacks of discarded drawings as the
semester progressed.)

WEEK THREE: PHASE I REVIEW

On Monday (2/10), the preliminary review continued,
but in the newly arranged conference area in the studio.
The review began at 2:30. Eight students were sitting
around the table, others were looking on, and the remainder
of the class was working as they had been since before the
scheduled beginning of the class. Beginning with topic
"B, Manhattan Civic Center," "4, Zoning--floor area ratios
and zoning envelopes"--the review went much the same as
it had on Friday. Hutchinson repeated his points about
the work being for everyone, the students' perfunctory
approach to it, and the need to demonstrate the potential
impact of the information on the later design schemes.
The presentation and discussion, including feedback from
the class, lasted 45 minutes. During this session, three
students were occasionally taking notes.

Realizing they had taken more time than planned, Hutchin-
son and Heath kept the subsequent presentation-discussions under

thirty minutes. Still, the group working on topic "D, Office

Buildings," had to return after dinner. Many of the students

were neither working on their topics nor attending the review

while waiting to present their work. Those who were working

had completed their review and were refining their material.

On Wednesday (2/12), the only class work day between the

reviews, some of the students were putting their material in

finished form within the format, while others were still re-

vising their work. Heath worked with students all afternoon,

suggesting additional ideas for their topics, stressing the

limited time available, and assisting with the logistics re-

lated to the graphic presentation requirements. Hutchinson

was visiting another studio's review session. Students were

in and out all afternoon getting supplies, and getting their

drawings copied and bringing in work they had done elsewhere.

(One student, S1, maintained a desk in another studio in the

main building, bringing his work in for criticism sessions and

reviews. Two other students worked mainly at home.)

During visits to the studio before the Friday review,

a few students were observed working intensively. Thursday

evening and Friday morning were particularly active and

intense.

On Friday (2/14), the last day of Phase I, students

posted their two hundred sheets, in format or not, complete or

not, for the scheduled Phase I Review in the seminar

room, as they had the week before. (Ill. 3-3) This session
began with slide presentations by five students in the archi-
tecture history degree program, who though not taking this
studio, had prepared papers and slides on the historical
significance of specific buildings in the Civic Center.
The reading of these papers with the lights down for the
slide shows became monotonous after the first hour. A few
conversations began in the back of the room and a couple of
students could not resist the opportunity to recoup from
their recent late nights' work. The class took a break
after these presentations, then reassembled at 4:15 after one
student requested, "Mr. Heath, could we get started now?"

What started at 4:15 was not the presentation and review
of the students' Phase I work, but Hutchinson's explanation
of the problem. He had noted in the February 12 interview
that neither he nor Heath had extensively explained the urban
design problem or many of the ideas underlying it to the
class,but they would in Phase II, where they expected the
work to be different from what the students had previously
experienced.

Hutchinson: We really haven't discussed the problem and
             the didactic framework that this fits into.
             I think that some of you have been a little
             confused because I know you tend to type
             cast--you have certain expectations about
             the way you are making progress. What I am
             doing currently is significantly different
             from what I did last term, and I think
             an explanation is in order to give that
             some general meaning. Without elaborating
             I want to use the problem we are doing, and
             explain the attitude toward the problem.

Illustration 3-3: Phase I Work, Topic A

METROPOLITAN CONTEXT

RAILROADS & SUBWAYS

++++ REGIONAL COMMUTER RAILROADS
——— RAPID TRANSIT w DIRECT SITE ACCESS
——— RAPID TRANSIT w INDIRECT SITE ACCESS
— — — PROPOSED SECOND AVENUE SUBWAY

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE URBAN DESIGN   FOURTH YEAR
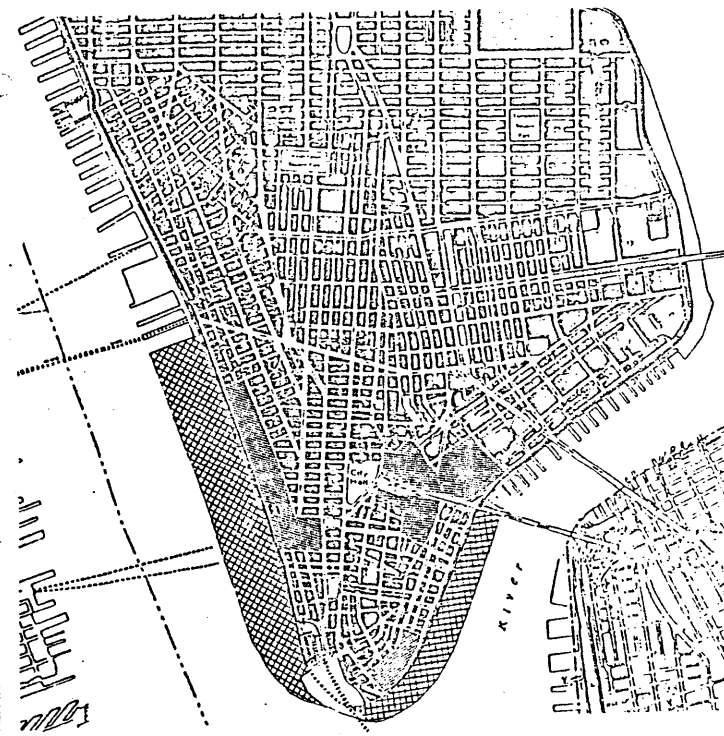
METROPOLITAN CONTEXT

GRID STUDY

The proposed fabric of Lower Manhattan: Continued superblocking, radical change of open/built area ratios

Existing and new or proposed superblocking, generally non-residential
Proposed landfill and superblocking, basically residential

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE URBAN DESIGN   FOURTH YEAR

85

Illustration 3-3, continued, Topic B

CIVIC CENTER AREA
SPATIAL CONCEPTS

LOWER MANHATT N
Conceptual Axis passes through object like buildings

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR
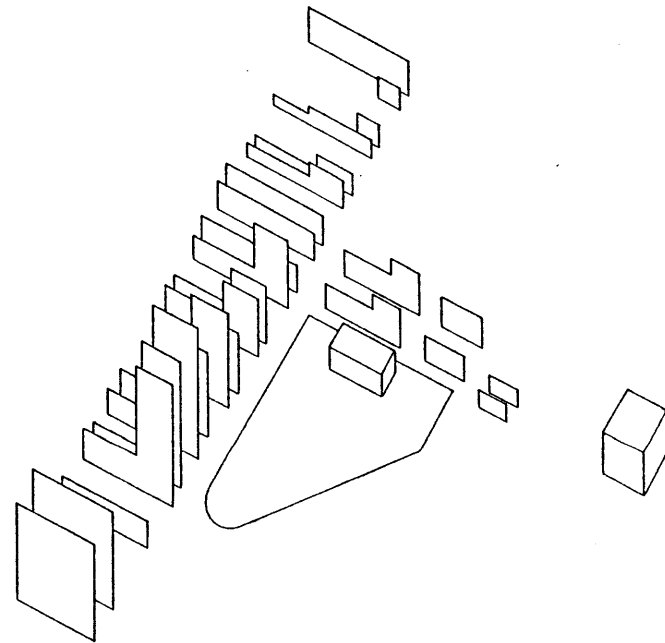
CIVIC CENTER AREA
SPATIAL CONCEPTS

GRID SYSTEM
E-W grid
Continues down Chambers Street
Contains Tweed Courthouse

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR

98

Illustration 3-3, continued, Topic C
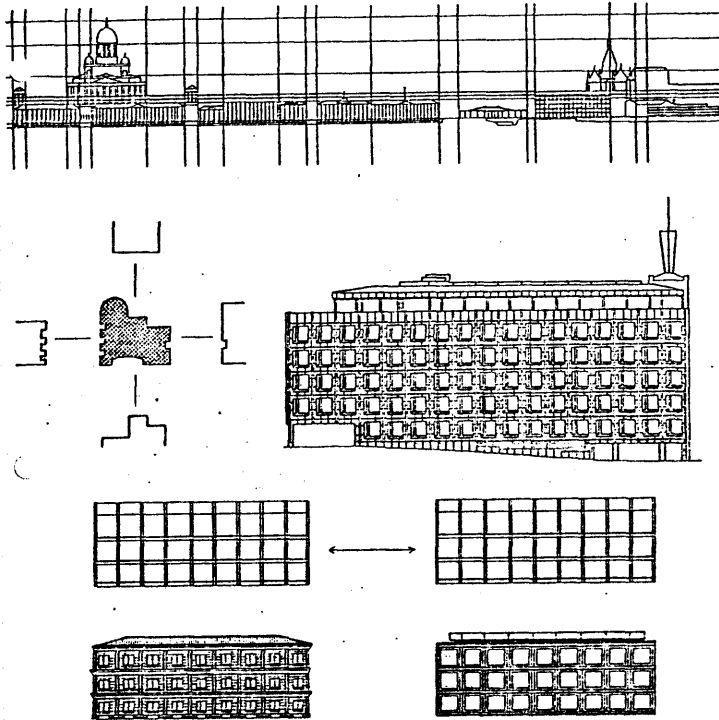
CIVIC CENTER PRECEDENTS
PHYSICAL CONTEXT
LEGEND: ENSO GUTZEIT ADMINISTRATION BUILDING

NOTE: Refer to text at the end of the series for explanation of diagrams

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE URBAN DESIGN   FOURTH YEAR

CIVIC CENTER PRECEDENTS
IMPLEMENTATION
LEGEND: PHILADELPHIA CENTER CITY

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE URBAN DESIGN   FOURTH YEAR

Illustration 3-3, continued, Topic D
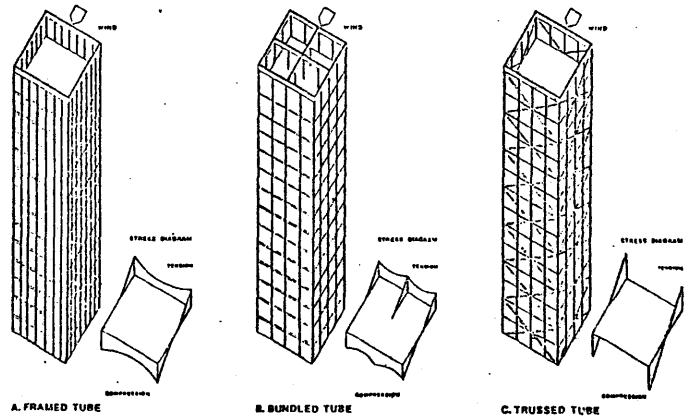
OFFICE BUILDINGS
HIGH-RISE STRUCTURAL SYSTEMS

A. FRAMED TUBE   B. BUNDLED TUBE   C. TRUSSED TUBE

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE URBAN DESIGN   FOURTH YEAR
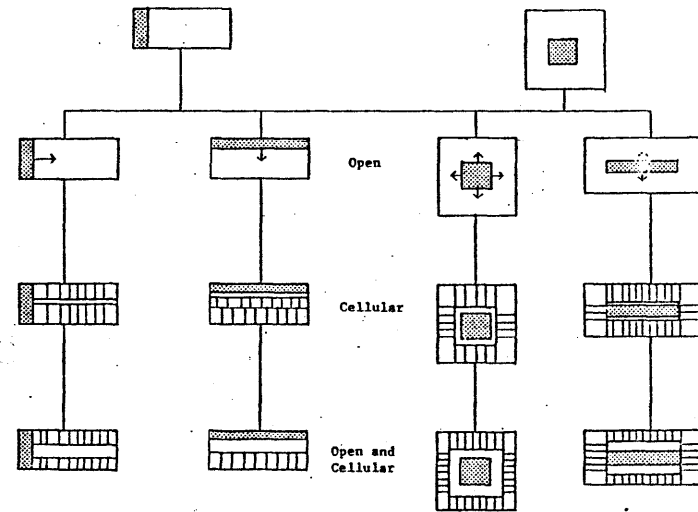
OFFICE BUILDINGS
LAYOUT PROTOTYPES

Open
Cellular
Open and Cellular

CORE
→ ACCESS

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE URBAN DESIGN   FOURTH YEAR

88

Illustration 3-3, continued, Topic E

CULTURAL AND EDUCATIONAL FACILITIES

An integral part of the Civic Center program is definitely the educational
and cultural facilities that it could support. If one views the governmental
complex as an information center, the integration of such facilities is a
necessity. Cultural and educational activities can serve to promote public
interaction with governmental activities. The following facilities could
be provided:

MUSEUMS

A government sponsored museum does not have to be the exhibition
of ancient artifacts, representative of a long gone age that
holds the interest of only old spinsters who once used these
relics. Nor is it necessarily the display of a collection of
painting and sculpture that was rejected by the more established
museums. Actually, the entire civic center complex has the
potential of being a museum. Each governmental agency could
present a display describint its activities. The public could
merely meander through these displays and interact with the
visual presentations describing the governmental process. One
large exhibition space could also be provided for temporary
special exhibits.

AUDITORIUM

A public auditorium with a seating capacity of at least 2000
people is a necessary requirement. It should be able to
accommodate public lectures, political speeches as well as
concerts and performances. A large state and projection and
control booths would therefore be necessary.

CYCLORAMA

A 360° projected theater could be an interesting backdrop for
short visual presentations about government in New York. These
have been successfully operated in many cities in the United
States.

LIBRARY

A governmental library should definitely be included. It should
be able to accommodate complete reference materials for public
and governmental use, with emphasis on the laws governing the
the City of New York.

CONFERENCE ROOMS

A series of small conference rooms are also a necessary require-
ment. They would be utilized for small meetings and presentations.
Direct accessibility to all governmental agencies is an important
consideration.

RADIO AND TV STUDIO

Facilities for producing TV and radio programs are required.
These are to be utilized by the city-owned brodcasting station,
WNYC. Necessary requirements would be 3 administrative offices,
2 recording studios, 2 control rooms, a record library and a
large public studio for audience participation.

MAYOR'S OFFICE

Deputy Mayor	22,000
Office of Labor Relations	10,000
Office of the Aging	8,000
Office of Emergency Control - Civil Defense	6,000
Action Center	-
Office of Apparel Industrial Planning & Development	-
Mayors Council on Economic & Business Advisors	8,000
Criminal Justice Coordinating Council	8,000
Office of Downtown Brooklyn Development	-
Mayors Educational Task Force	8,000
Mayors Council on the Environment	8,000
Mayors Office Office for the Handicapped	8,000
Office of Jamaica Planning & Development	-
Mayors Commission on the Judiciary	-
Bureau of Labor Services	8,000
Office of Contract Compliance/Construction	2,000
Office of Contract Compliance/Non-Construction	2,000
Office of City Mediation	2,000
Office of Labor Complaints	2,000
Office of Minimum Wage Enforce/Labor Res.	2,000
Office of Lower Manhattan Development	8,000
Office of Midtown Planning & Development	-
Office of Neighborhood Government	8,000
Mayors Committee on Pensions	-
Policy Planning Council	-
Mayors Office of Single Room Occupancy Housing	8,000
Office of Staten Island Development	-
NYC Committee for the UN and for the Consular Corps	-
Urban Corps	8,000
Urban Design Council	8,000
NYC Urban Fellows Program	8,000
Mayors Office for Veteran Action	8,000
Mayors Voluntary Action Center	8,000
Mayors Washington D.D. Office	-
NYC Youth Board	8,000
Youth Council Bureau	8,000
Mayors Advisory Committee	8,000
Organized Task Force on Comprehensive Health Planning	8,000
Office on Mental Retardation	8,000
Mayros Committee on City Marshalls	8,000
	216,000

Hutchinson followed with comments (excerpted in Chapter 2) explaining that the urban design problem was a vehicle for learning. He also indicated how this problem and the one he had given the previous semester differed to illustrate several of his ideas about designing--the sequence of design events and the shifting modes of work. Then, introducing Phase II, he continued,

Hutchinson: Okay, we want to shift rather dramatically now to another mode. In other words in our schedule it says that we're going to do massing studies. That sounds banal. Well, what we really want to do is that, plus a lot of other things, meaning we want to shift the mode of operations to a much more conceptual mode.

Now we begin to generate ideas of what this thing is,...and what are appropriate kinds of models for the Civic Center. But rather than just doing it in a bland way, we want to break it down and use the data base [Phase I] to help generate.

For example, I think it is rather important to know how that building mass, the amount of square footage or volume you are enclosing is constrained by these things that we have, because those can limit you in certain ways, seeing the real possibilities on the site...

You really have to bring to it a lot of other attitudes. You might begin by looking at what a Civic Center might be, taking off from other models, whether they are the kind of thing like physical models, social models, the relationship between a space and activities..., or the kind of implementation models, having to do with, who does it, and how they do it...

Before the observer left the discussion, Hutchinson commented on Phase I.

Hutchinson: Part of the reason to have all of this is to
               have it as a conscience... Something that
               reminds you to check out certain things,
               rather than...manipulating things...
               You don't always have those big ideas that
               are floating around zap us on the first day.
               So it may be very good for you to sit down
               and fairly mechanically begin to combine.

Since the Phase I work had not been presented, Hutchinson

asked that it be posted in the studio, so students could read

and review the material for themselves, and question the

originators about ambiguities and omissions. However, few

of the students' sheets of design information had provided

a written explanation of the graphically presented inter-

pretations, hindering such a review.

PHASE II: "Building Massing and Site Alternatives"

The Phase II assignment (Ill. 3-4) structured the exploration of "basic alternatives for developing the Civic Center site," in two series, over three weeks. Students were to group around the six listed "Massing Types," and within those groups, develop massing studies for each of the seven interconnected sites. The first series of massing studies were to satisfy the minimum constraints of limiting dimensions and height to width ratios, while attaining three million square feet or maximum site coverage. For the second series, more constraints would be added "that distort and transform them [the first series] into architecturally developable possibilities." As in Phase I, the presentations were to be in 8 1/2" x 11" format, one sheet for the plan, and one for an axonometric, to be added to the booklet--the "design framework." For the second series, the presentation was to include a one-eightieth scale chip board models to fit into the chip board site model completed in Phase I.

Hutchinson's description of a previous design problem (a university) with an undetermined program and malleable space requirements, further explains this phase.

Hutchinson: We developed a whole series of simple dia-
              grams that would depict the facilities that
              came out of this program, three dimensionally,

Illustration 3-4a: Phase II

THE MANHATTAN CIVIC CENTER

During this phase of the problem a series of studies of basic alternatives
for developing the Civic Center Site is to be explored. Starting from
generic building configurations put onto the site in the first series, the
second series will involve applying to them a range of concepts and constraints
through stages that distort and transform them into architecturally
developable possibilities.

First Series -- Building Massing -- Due Wednesday, 19 February 1975

Seven site alternatives permuted against six basic building massing
types. (All combinations are not possible so discretion will have
to be exercised.)

Site Alternatives

1. Between Duane and Reade -- Broadway and Hall of Records.
2. 1 plus Sun Building site.
3. 2 plus Immigrant Savings Building site.
4. 3 plus 2 Lafayette site.
5. 4 plus available land north of Duane.
6. 5 plus available land south of Chambers.
   (South and east to Park Row)
7. 6 plus available land (including air rights)
   (South and east of Park Row)

Massing Types

1. Object
2. Grid of objects
3. Random arrangement of objects
4. Linear
5. Linear series
6. Grid (grid and objects)

Constraints

Maximum total square footage of 3 million or maximum site
coverage (with maximum square footage shown) -- whichever
governs.

For massing alternatives the dimensions should be limited as
follows:

Buildings --   Minimum 40' double loaded
               Minimum 25' single loaded
               No upper limit

Voids (open courts)

               Minimum 1:1 height to width up to 100' high
               Minimum 1:1.5 over 100' high

Presentation:

All drawings shall be done on 8 1/2" x 11" within the square
standardized format.

Drawing requirements:

Each alternative is to be drawn in axonometric in ink on a
separate sheet.

A plan diagram should accompany each -- drawn on a print of
the base map.

A dark (not black) tone should be put on building in plan.

Illustration 3-4b: Seven Sites

MANHATTAN CIVIC CENTER

This drawing is adapted from studio materials by this observer
to illustrate the Site Alternatives.

in some relationship to each other, with an
absolute minimum of constraints... Then
gradually we transformed these things by
adding more and more constraints...

Then we began to organize into groups, where
each group had a different metaphor or a
different intention. For example, one could
see the university as a supermarket, as a
galleria, as a collector of diseparate
things. We drew all these things up and
made a great display of them on the wall.
Not because these were design solutions but
because it was a way to suggest alternative
attitudes that one could take...

This served as a catalyst to get people
thinking about and accelerate their process
of really getting into design. Out of that,
people then selected certain things.
(Interview, 2/12)

Similarly, alternatives based on different "attitudes"

were to come out of Phase II. From these alternatives,

the intended coordinated range of schemes was to be developed

in detail in Phase III. While the Phase II assignment clearly

reflected this anticipated end product, each of the other

ways of operating which Hutchinson intended students use

in the studio was also evident in the assignment, especially

the transformation approach to designing. Indeed the

assignment was an exercise in this approach. As in Phase I,

the tasks and products assigned for Weeks Four, Five, and

Six were highly prescribed and coordinated by the teachers.

(Observation in the studio resumed in Phase II on

Wednesday of Week Six. As the first campus visit had ended

with the Phase I Review [Friday, Week Three], the following

account of the intervening weeks was reported by the teachers

at the beginning of the second campus visit.)

WEEK FOUR: PHASE II INTRODUCTION AND "THE FIRST SERIES"

On Monday (2/17), the students received the two-page handout which listed the sites and massing types as the transition to Phase II continued from the Friday review. In his two hour discussion, Hutchinson explained the university project from a previous semester, showing samples of axonometric transformation drawings (Ill. 3-5) to illustrate his approach to designing and the Phase II assignment. He then tried to put the Phase II work into the context of the whole semester. The students had to rely on Hutchinson's and Heath's explanation of this approach, as there had not been any articles, papers, or case studies written on it. Heath later reported that most students had found the use of the university drawings "okay," while the more antagonistic ones had found the approach overly simplistic. He felt there was still a problem in getting the students to think about how they would go about designing.

Heath also reported that he had produced a series of graphic charts to explain the approach to the students. The charts (Ill. 3-6) demonstrated the process of combining and transforming ideas and forms, first using abstract patterns and then using the Civic Center. Unlike Hutchinson's samples of finished products, Heath's charts demonstrated the

Illustration 3-5: University Transformation Drawings (composite)
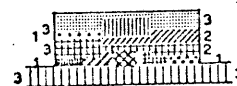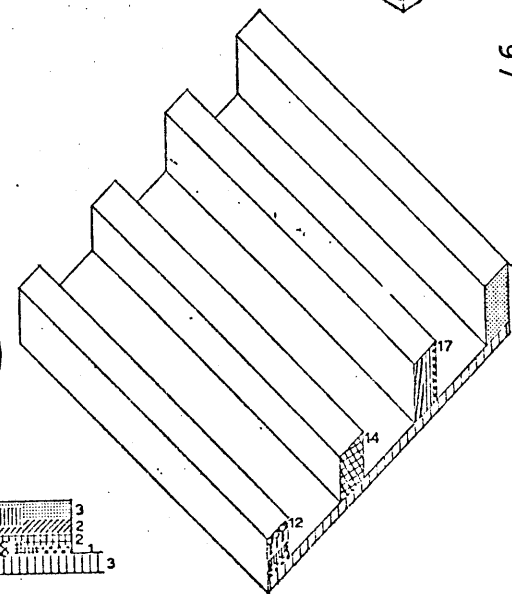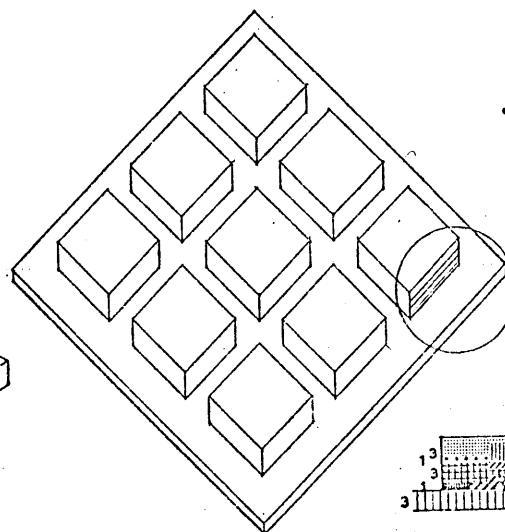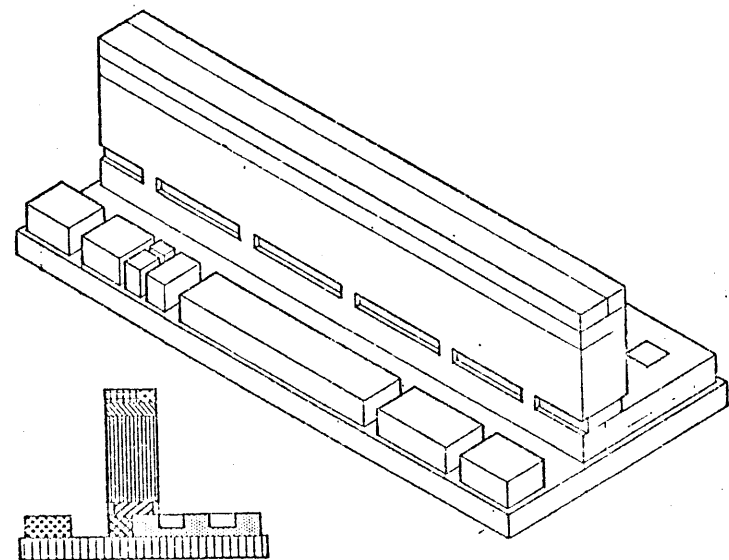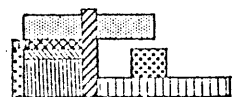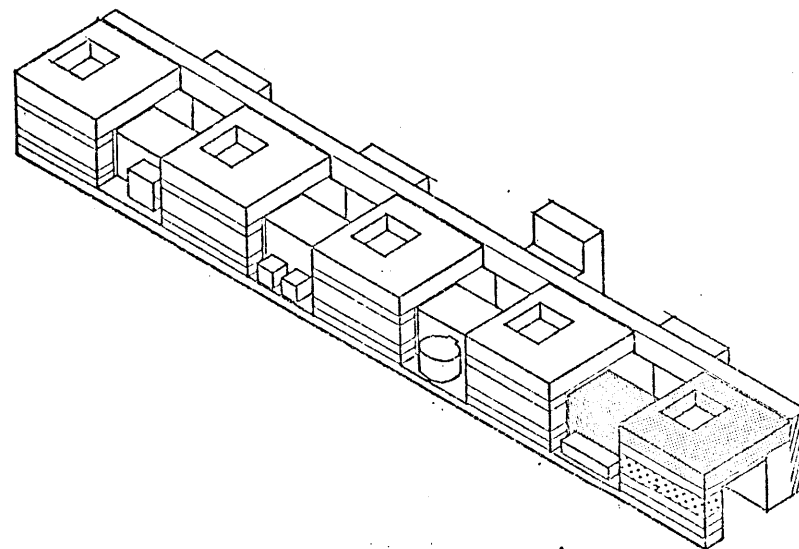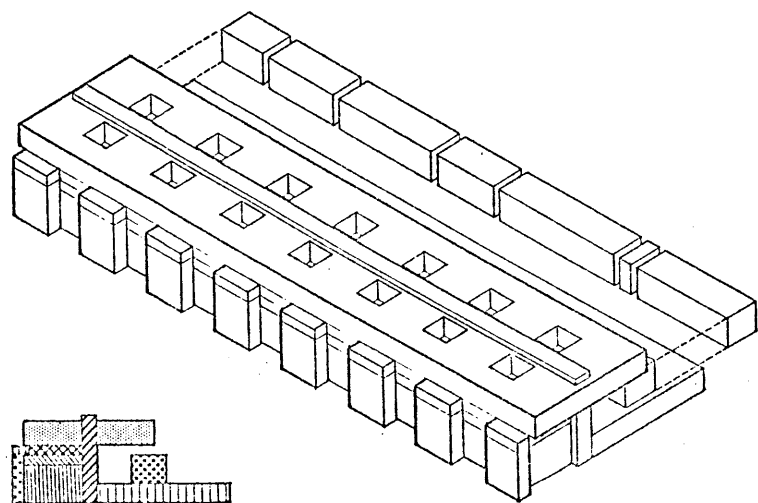
Illustration 3-5, continued.
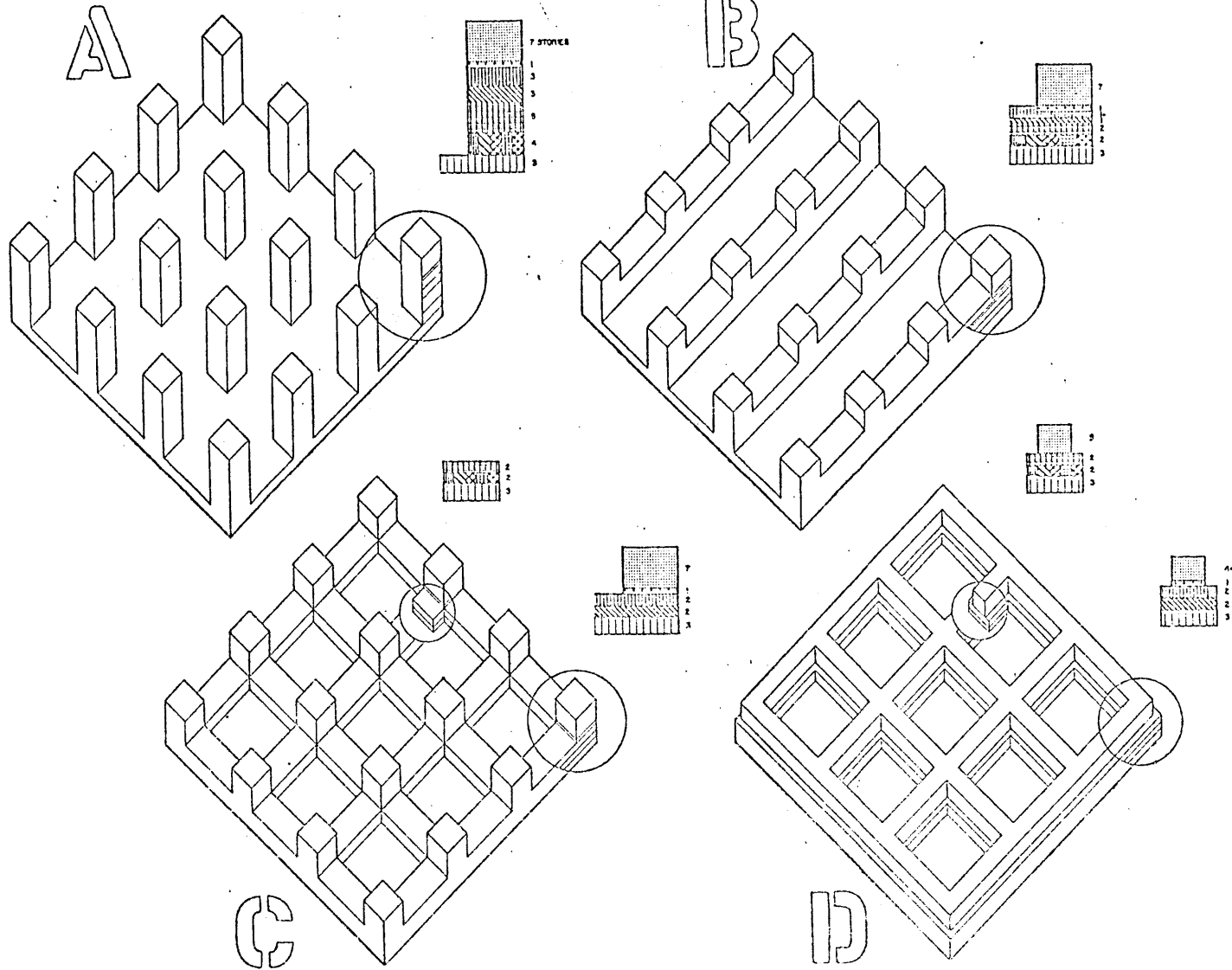
Illustration 3-6: Heath's Charts

COMBINATIONS
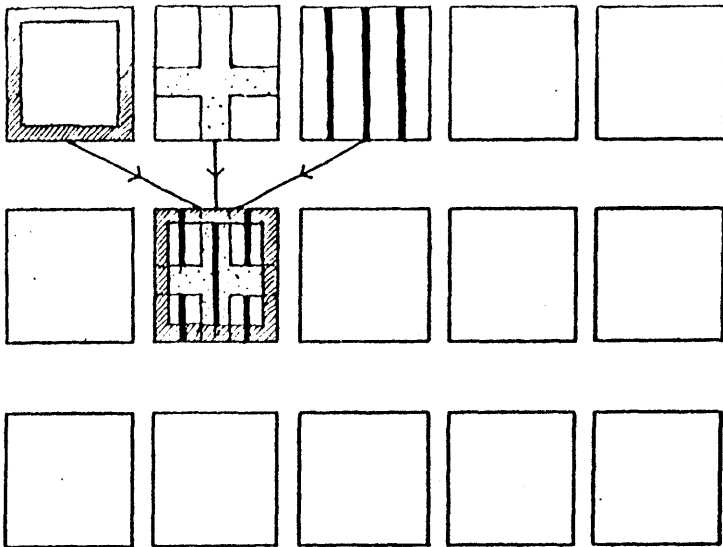
TRANSFORMATIONS
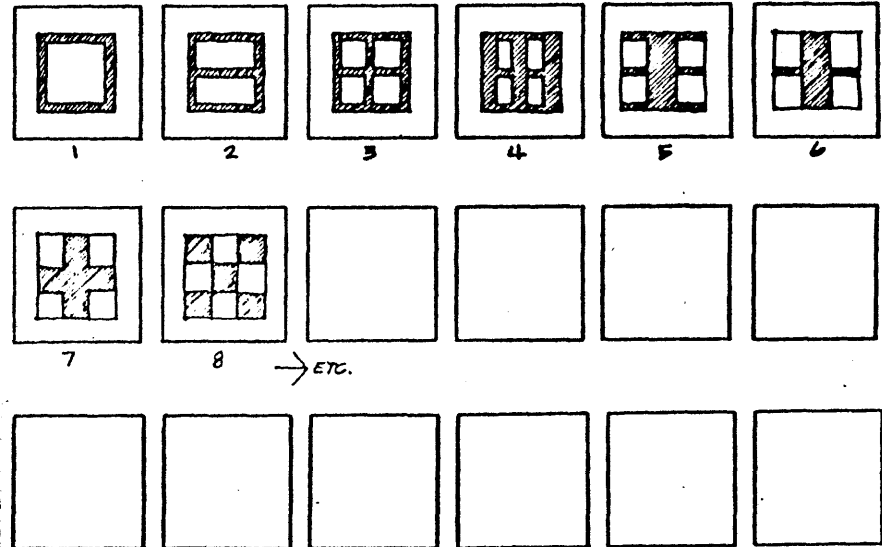
Illustration 3-6, continued.
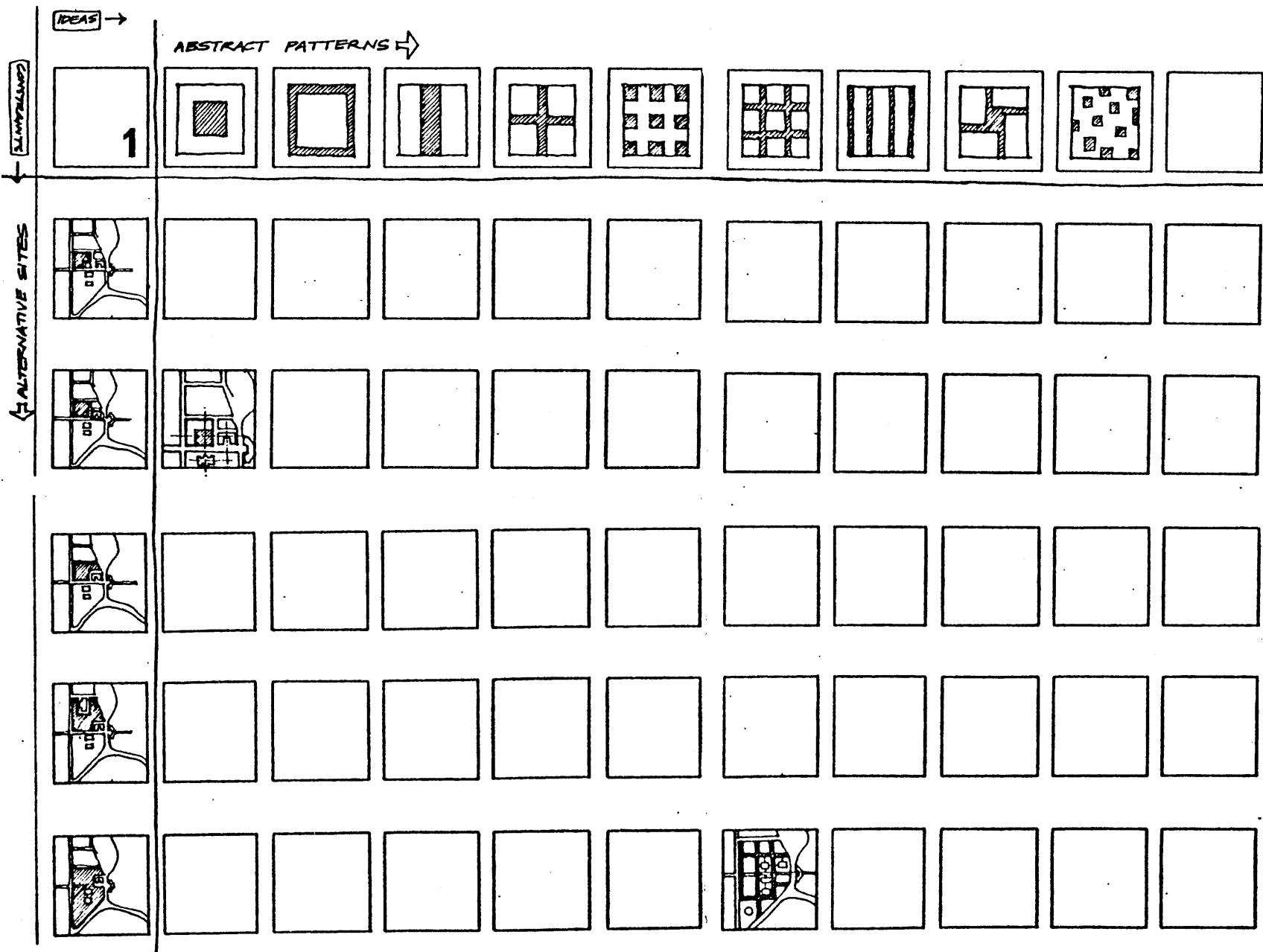
Illustration 3-6, continued.
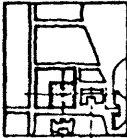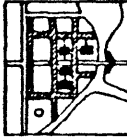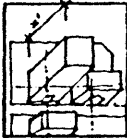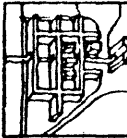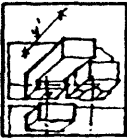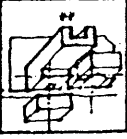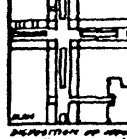
MASSING CONCEPTS ON ALTERNATIVE SITES ⇨

CONSTRAINTS →

2

ACCOMMODATION IN SINGLE TOWER FACING CHAMBERS ST.

GENERAL OFFICE SPACE IN MATRIX CHARACTER OF EXISTING PRIVATE EXISTING GOVT. BUILDINGS

PROGRAM ACCOMMODATION SCHEDULE

2,100,000 SQ.FT. OFFICE SPACE

ZONING SETBACKS

NATURAL DAY-LIGHTING IN OFFICES WITHOUT MALL

DECOMPOSITION OF OFFICES RELATED TO CORE/ NODE

POTENTIAL LINKAGE OF EXISTING SITES ALONG CHAMBERS STREET.

Illustration 3-6, continued.

Illustration 3-6, continued.

GOALS ⇨

4	BEAUX ARTS FORMAL	INFILL/ PRESERVATIONIST	IDEALISTIC/ FUTURIST	CLOSED/ BUREAUCRATIC	ACCESSIBLE/ PARTICIPATORY	TOURIST/ MAGNET	RECREATION- AL			
INSTANT/FIXED										
ADAPTABLE/ RE-INTERPRETIVE										
EXPANDABLE/ INCREMENTAL										

IMPLEMENTATION STRATEGIES
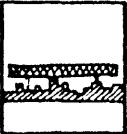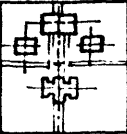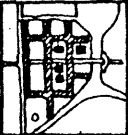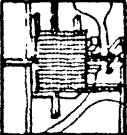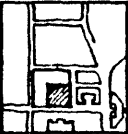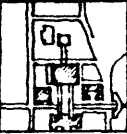
Illustration 3-6, continued.

CITY MODELS

5

MASSING CONCEPTS

ADAPTABLE/ FUTURIST

INSTANT/BEAUX ARTS FORMAL

104

Illustration 3-6, continued.

Illustration 3-6, continued.

A sketch Heath generated in one crit session to illustrate the transformation of a "donut" massing into a possibility for the Civic Center office building.

process while providing a framework for the students' work.

(For example, on chart 1, the abstract patterns combine with

the sites to produce object and grid buildings. And in

chart 2, an object-tower mass is transformed by adding

successive constraints.) But these charts had not been

presented, as Hutchinson felt they would overpower the

students. When Heath had introduced one of the ideas

from the charts into this day's discussion, as he explained

later to the observer, "It bombed. Hutchinson pulled me out

with a discussion of where ideas come from." Heath acknow-

ledged that "some things you can get across in a thirty-

minute class, and some just have to be done over the board,

where it has meaning for the student's work." He noted, how-

ever, that it was difficult to determine which things were

appropriate for either setting. The charts eventually ap-

peared in individual criticism sessions during this phase.

The day's discussion ended with students forming new groups.

They worked the remainder of the afternoon, while both

teachers met with individual groups.

On Wednesday, (2/19), the work continued with both

teachers meeting with the groups, although according to the

handout, the first series of massing studies was due.

Hutchinson and Heath emphasized the need for students to

get the Phase I drawings finished, including titles and

"zip-a-tones."

On Friday (2/21), several groups had not solidified

and were beginning to disperse. Heath talked with students
working individually, not intruding on the two working groups.
He found that those he talked with "did not know what they
were doing."

> Heath: Some students had done three schemes. I
> asked them to take one...and explain
> how they got from here to there [from their
> starting point to their scheme].

He found that students generally did not know how they had
arrived at certain points, though when asked specific ques-
tions, they were able to work it through. Most students,
he discovered, had gone from a "suggestive idea to an archi-
tectural idea [parti]" without the transformation of the
scheme by adding constraints. Heath tried to go through the
students' schemes by taking an early idea and transforming
it using the criteria they suggested. His charts reportedly
helped him explain the process of what he was doing.

The day passed without Hutchinson or the Review of
Models and Diagrams listed on the "Schedule."

WEEK FIVE: "THE SECOND SERIES"

On Monday (2/24), the class shifted to the second series.
The teachers explained the added constraints during the first
hour: "Zoning" envelopes, spatial and formal "Site" concepts,
"Conceptual Strategies and Models," and three "Functional"
constraints--a one-third, two-thirds ratio of public space
to private, the size of offices and commercial space, and a
subway connection which would link the existing stations of
the five lines near the Civic Center. Heath supervised the
work during the rest of the afternoon while Hutchinson
attended another studio's review.

On Wednesday (2/26), the work continued with the
teachers meeting with the groups and announcing a new due
date for Phase II, giving the class more time. The scheduled
"Review of finished drawings and models," Friday, February 28,
the next class day, was changed to the following Friday, com-
pressing the time for the semester's other scheduled events.
Heath was out the last two hours this day attending another
studio's review.

On Friday (2/28), work and group meetings with both
teachers continued.

WEEK SIX: THE PHASE I AND II REVIEW

On Monday, (3/3), work and meetings continued. Students
were reportedly preparing finished drawings in the format of

their massing studies. In addition, each student was expected
to make a scale model of one study of his or her choice.

On Wednesday (3/5), work continued and observation of
the studio resumed. Hutchinson, in his first crit session
of the day, found that one student, S26, working on the
building as "Object" massing type, was "making a wall along
Broadway,...using it to enclose space," rather than an
"Object" in a space, as the City Hall in the park. He had
also not transformed his massing type with the prescribed
constraints. In redirecting him, Hutchinson gave examples
of the "object" and other massing types, and illustrated
the intended approach to the assignment using the student's
work. "I'm just...basically transforming those parts
of the building which begin to differentiate themselves...
in that case, the public and commercial parts." He went on
to explain the "stew pot" and "transformation" approaches
to design. (Segments of his explanation to S26 are quoted
in Chapter 2.) After the session, the student explained.

> S26: I had gotten started designing my own thing,
> and he put me back on track. So I guess it
> (the crit session) was good. I'll get back
> to working on my design next week.
> (Crit session, 3/5)

Following this session, Hutchinson left for the afternoon to
attend another studio's review. Heath talked individually
with students about the massing studies as well as their un-
finished Phase I work until after 6:00. Heath's individual

sessions with members of the same group revealed that many students did not know what other group members were doing. As in Phase I, the groups had divided the work among their members (this time by sites), and gone separate ways. (Examples of students' drawings of two massing types, "Grid of Objects" and "Linear," talked about this day, are Ills. 3-7 and 3-8.)

Although this was the last class day before the Phase I and II Review, only four students remained in the studio one hour before the class officially ended. Two of the students who remained this day explained that others were tired of the project and had lost any enthusiasm with which they might have started the semester. Indeed several students noted earlier in the day, "that they had not gotten anywhere" since the previous visit. One student, S2, explained that she was not looking forward to Phase III starting the next week, as she still did not see it as "designing." Few students were observed in the studio between this class and the Friday presentation.

On Friday (3/7), the last day of Phase II, students began posting their work for the Phase I and II Review in the seminar room before 2:00, for what was to be a long afternoon. As two students inked their pencil drawings at one table, a confusion of people put work up until 2:30 when Hutchinson interrupted this conversation with the guests to explain how the material should be organized on the walls.
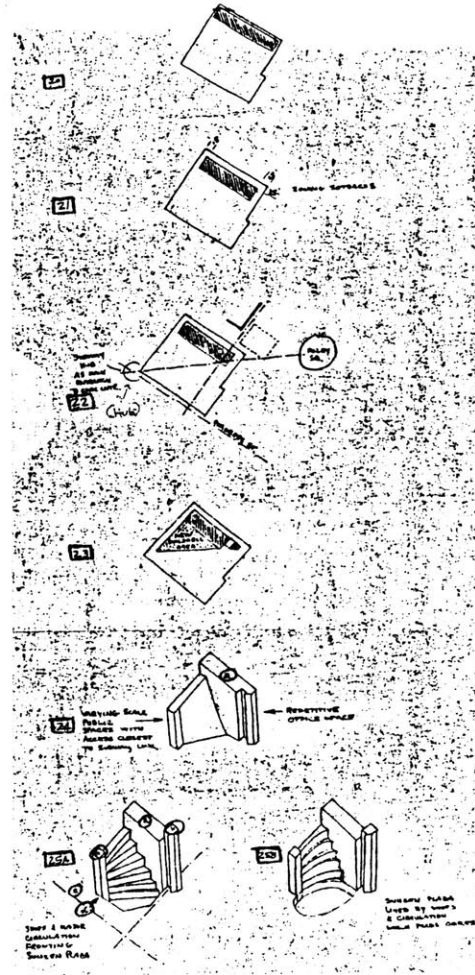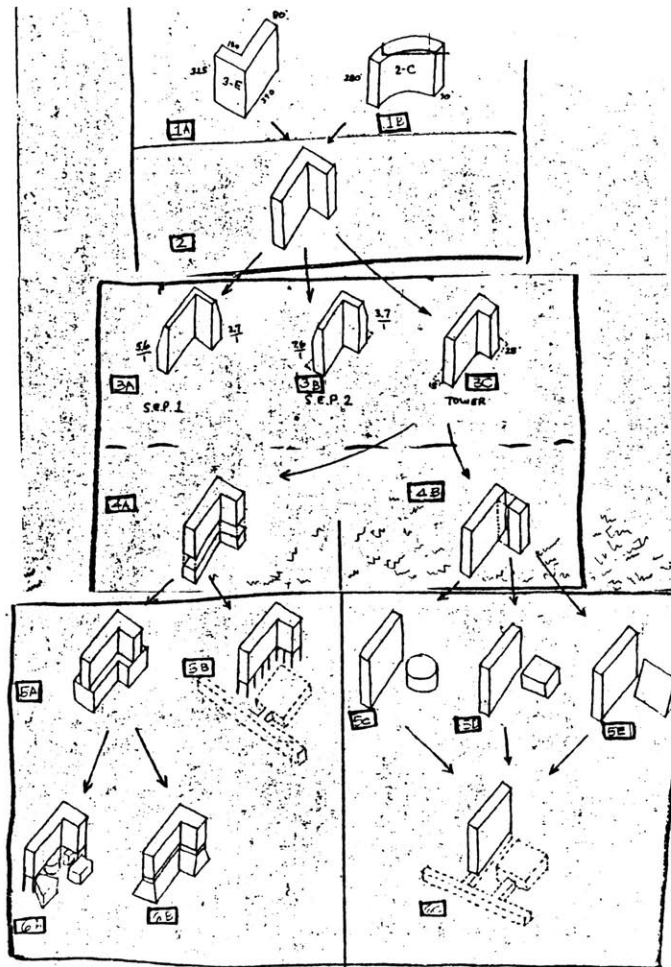
Illustration 3-7: Grid of Objects/S15's Sketches
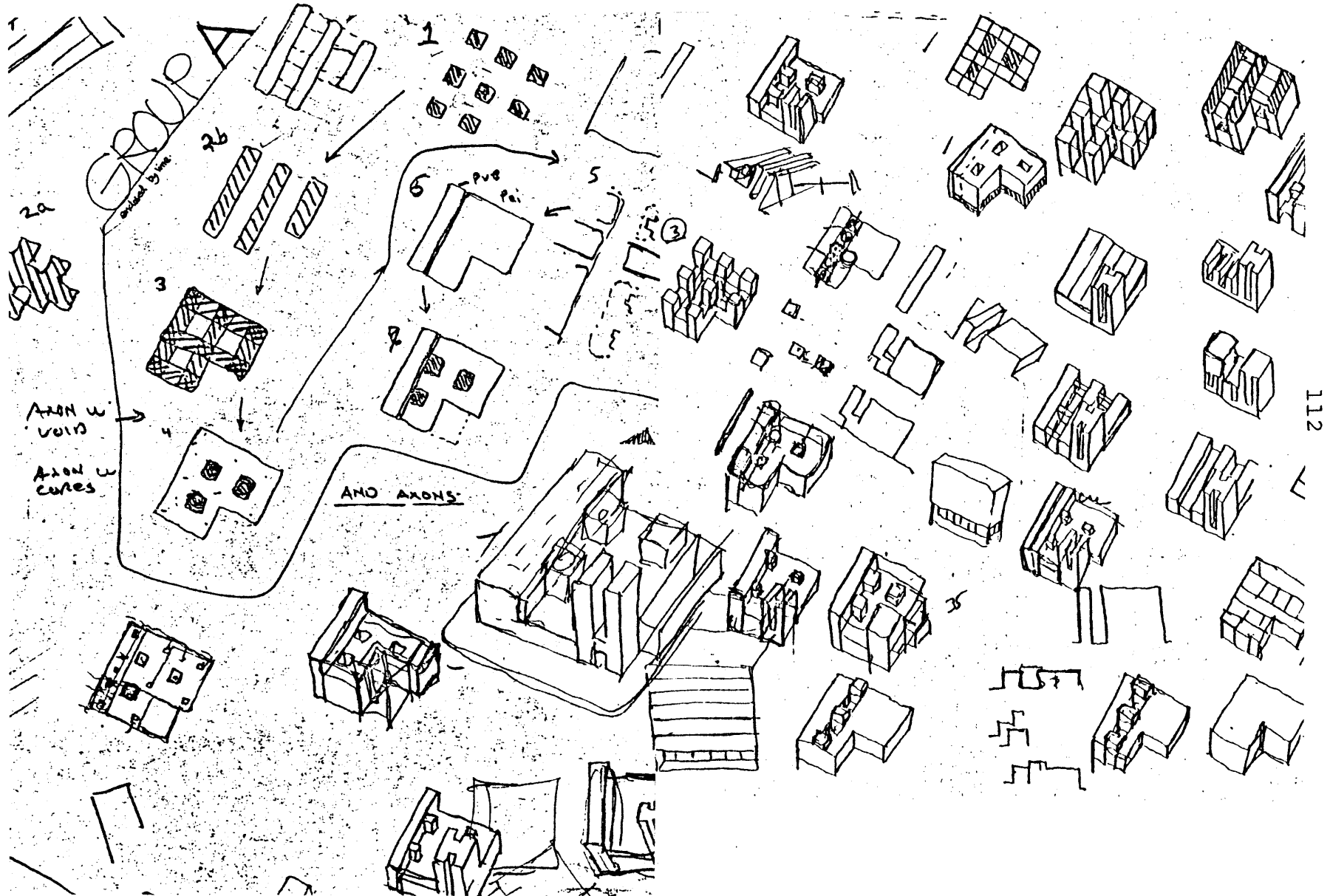
Illustration 3-8: Linear/S8's Sketches

The five hundred 8 1/2" x 11" sheets (Ill. 3-9), placed edge
to edge, literally papered the walls of the 15' x 30' room.

Two representatives from OLMD attended the review as in-
vited guests, along with three faculty members. Both repre-
sentatives were involved in the city's efforts to redevelop
·the Civic Center and had completed their architectural educa-
tion in this Department several years earlier. Of the three
faculty members, two were recent additions to the school.
One (Gl) was currently teaching a second year studio and a
seminar on design methods. The other (G3) was teaching a
fourth year studio on designing with existing manufactured
building parts, and a seminar on Industrialized Building
Systems. The third faculty guest (G2), who had joined the
faculty with Hutchinson, was teaching the studio with G3.

In getting the session started just after 3:00, Hutchin-
son explained:

Hutchinson: I don't think it makes an awful lot of sense
              for people to stand-up and talk about what
              they have done, partly because nobody has
              any real convictions about what is up there...
              It's a bit overwhelming to have that much ma-
              terial up on the wall. That makes for dif-
              ficulty reviewing it.

Later in the day, he explained that the studies were not

schemes yet, though they were "highly suggestive." For him,

the material's use was for designing, not reviewing.

Hutchinson: I hope we can get it all reassembled now
              over in the studio. The real use of it is
              not so much to have a review...but in the

Illustration 3-9: Phase II Work, March 7 Review
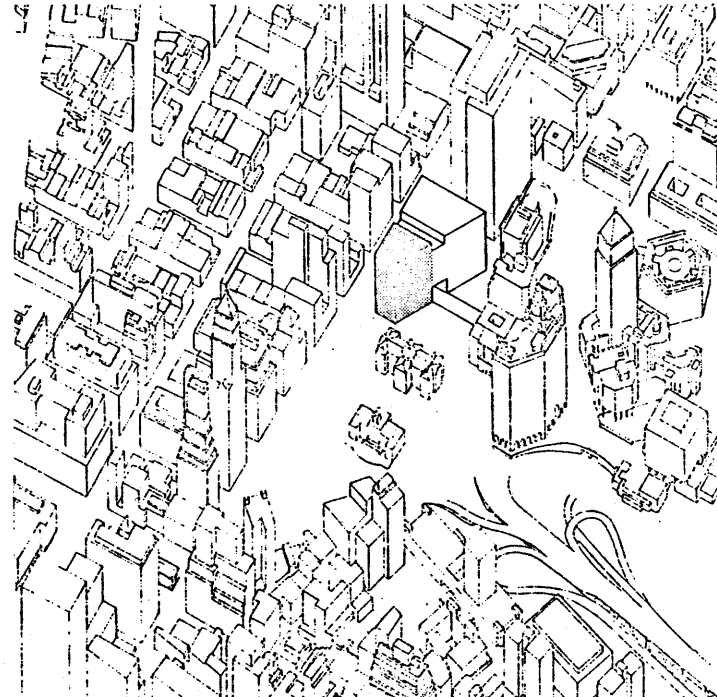
Illustration 3-9, continued, Object
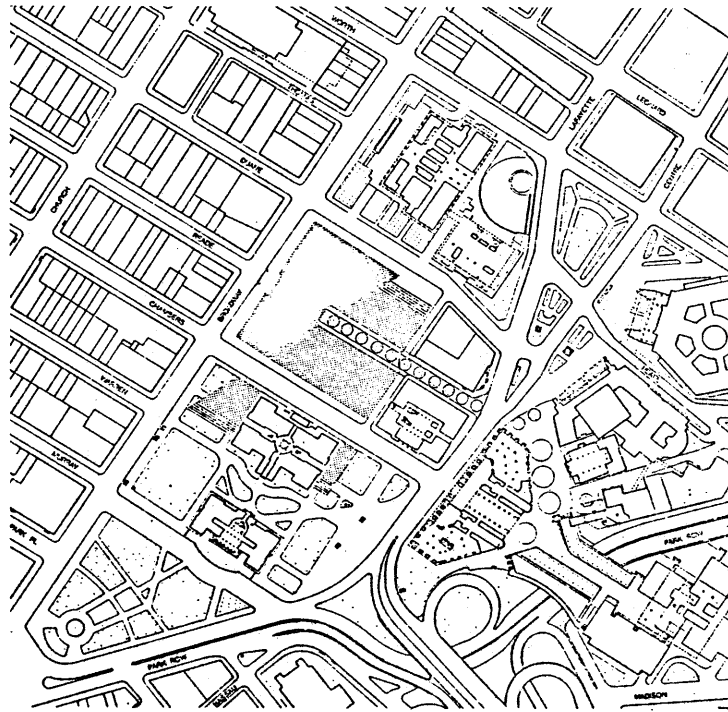

METROPOLITAN CONTEXT
MASSING STUDIES

OBJECT
CONSTRAINTS: PUBLIC-PRIVATE, OFFICES
SITE: 3
TOTAL BUILDING AREA: 1,824,000
NUMBER OF STORIES: __27__

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR
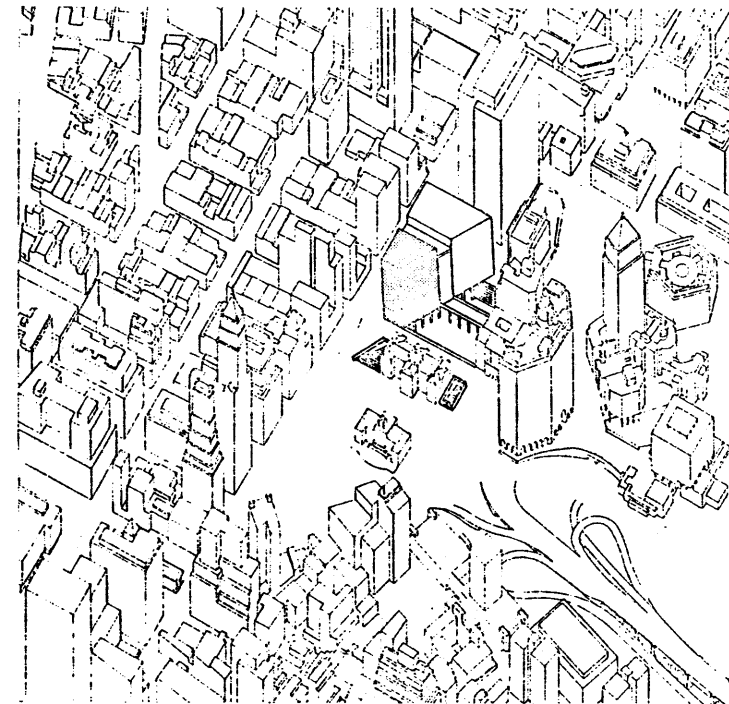
Illustration 3-9, continued, Object

METROPOLITAN CONTEXT
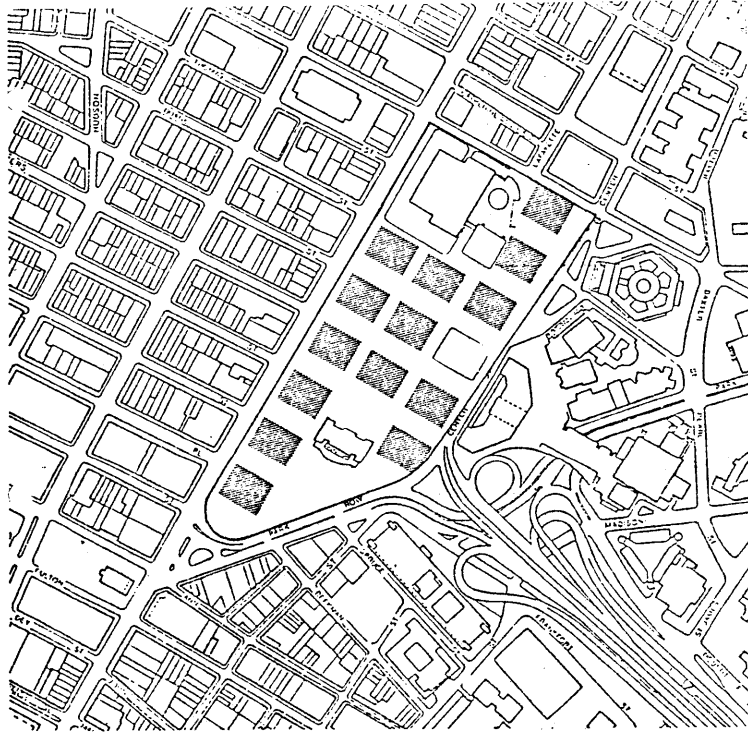## MASSING STUDIES
OBJECT
CONSTRAINTS: COMM., SUBWAY
SITE: 3
TOTAL BUILDING AREA: 1,824,000
NUMBER OF STORIES: 27

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR

Illustration 3-9, continued, Grid of Objects

GRID OF OBJECTS

GRID OF OBJECTS

Illustration 3-9, continued, Grid of Objects

GRID OF OBJECTS
SITE COVERAGE GOVERNS (H:W)
OF STORIES   6
TOTAL SQ.FT.   2,3000,400

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR

GRID OF OBJECTS
SITE COVERAGE GOVERNS (H:W)
OF STORIES   6
TOTAL SQ.FT.   2,3000,400

C.U.U.D.4

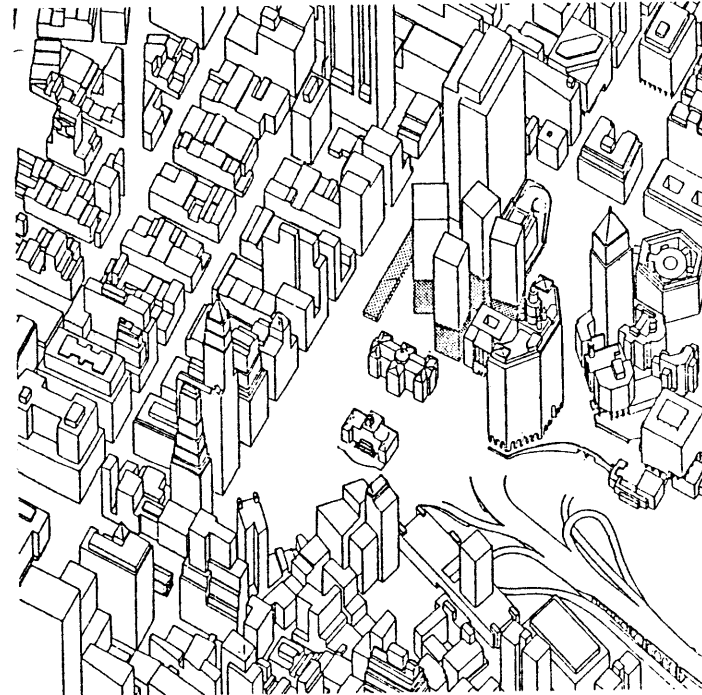DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR

Illustration 3-9, continued, Random Objects

MASSING STUDIES
RANDOM OBJECTS
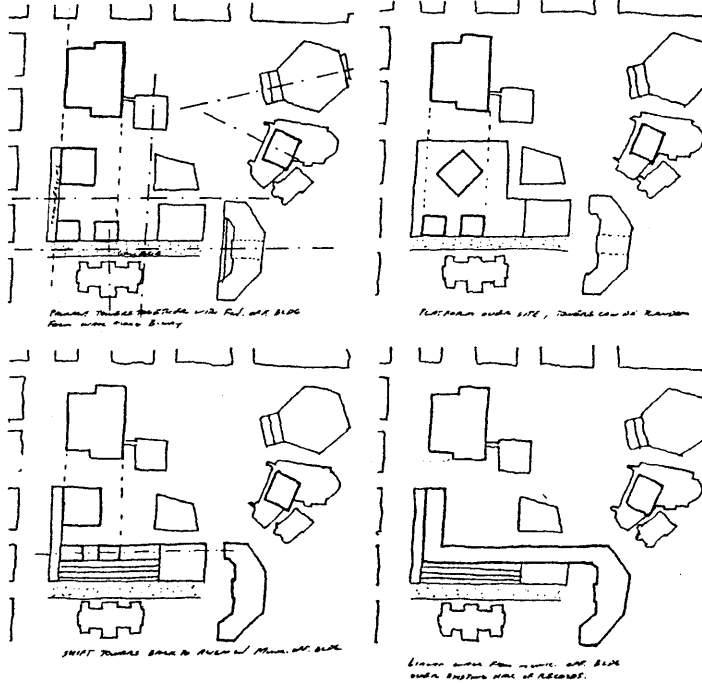CONSTRAINTS:
SITE:
TOTAL BUILDING AREA:
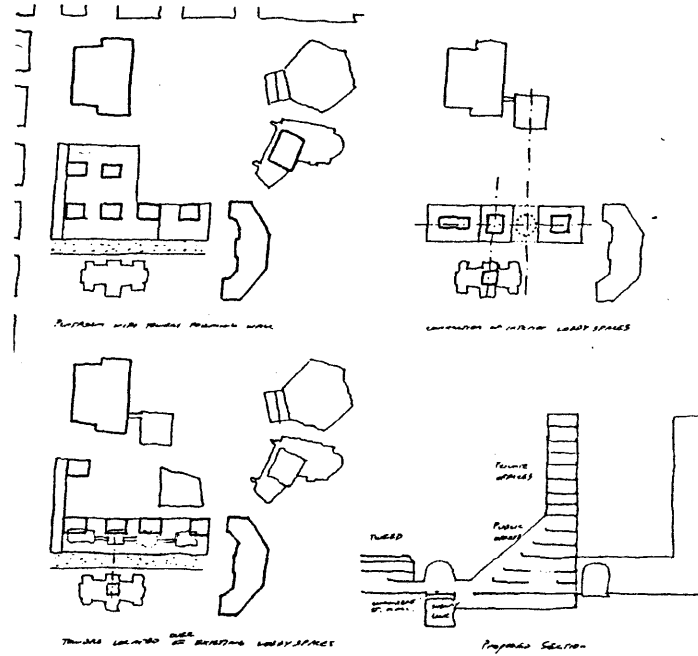 UMBER OF STORIES:

MASSING STUDIES
RANDOM OBJECTS
CONSTRAINTS:
SITE:
TOTAL BUILDING AREA:
 JMBER OF STORIES:

Illustration 3-9, continued, Random Objects

MASSING STUDIES
RANDOM OBJECTS
CONSTRAINTS:
SITE:
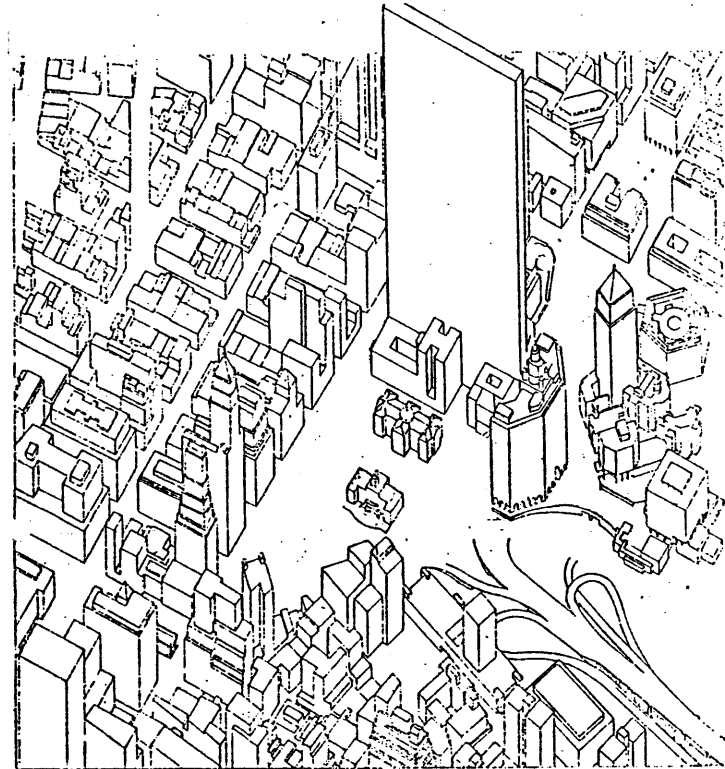TOTAL BUILDING AREA:
 UMBER OF STORIES:

MASSING STUDIES
RANDOM OBJECTS
CONSTRAINTS:
SITE:
TOTAL BUILDING AREA:
 UMBER OF STORIES:

Illustration 3-9, continued, Linear

LINEAR MASSING

LINEAR MASSING

Illustration 3-9, continued, Linear

LINEAR MASSING

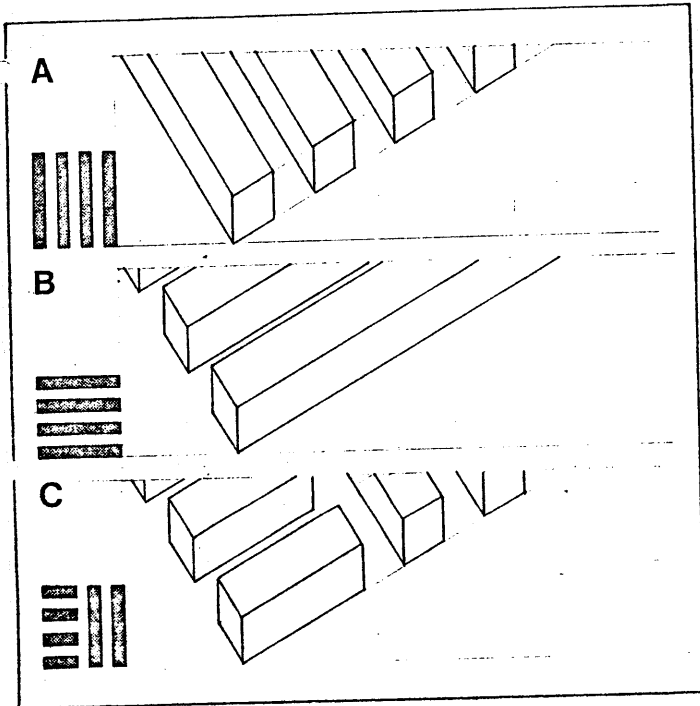G.F. - PROPORTION, SQ. FT.
3 m SQ. FT.
28 STORIES.
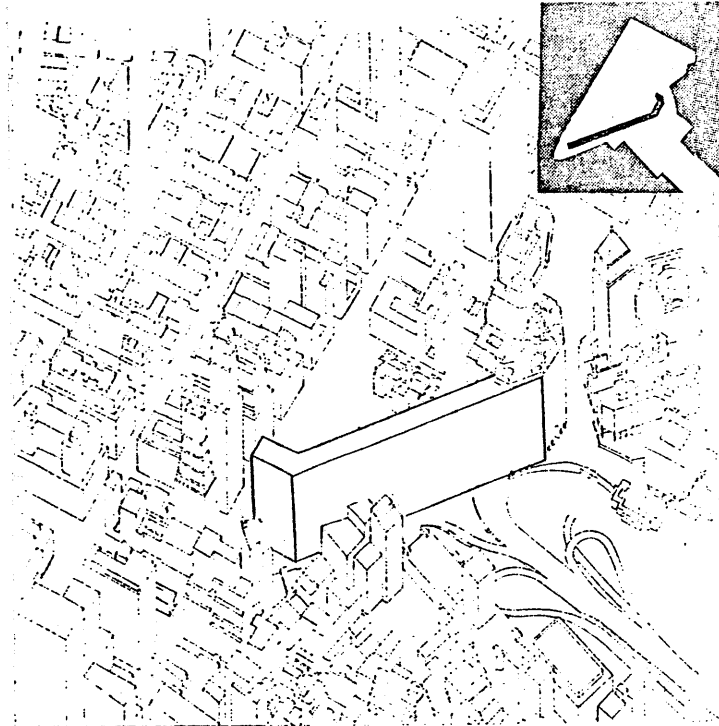
LINEAR   MASSING

Illustration 3-9, continued, Linear Series

LINEAR SERIES

BASIC CRITERIA
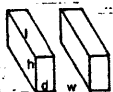
GIVEN: If h ≤ 100' then w ≥ h
If h > 150' then w ≥ 1.5h

ADDITIONAL: d = 75'
l > 2d
l > h
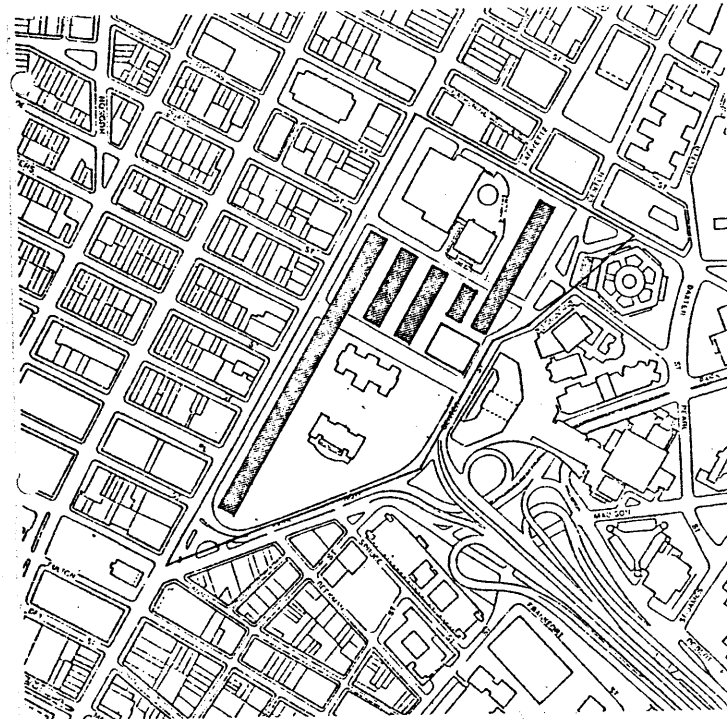
LINEAR SERIES

TYPE A

1.7 mil sf

124

Illustration 3-9, continued, Linear Series

LINEAR SERIES
TYPE B
1.35 mil sf
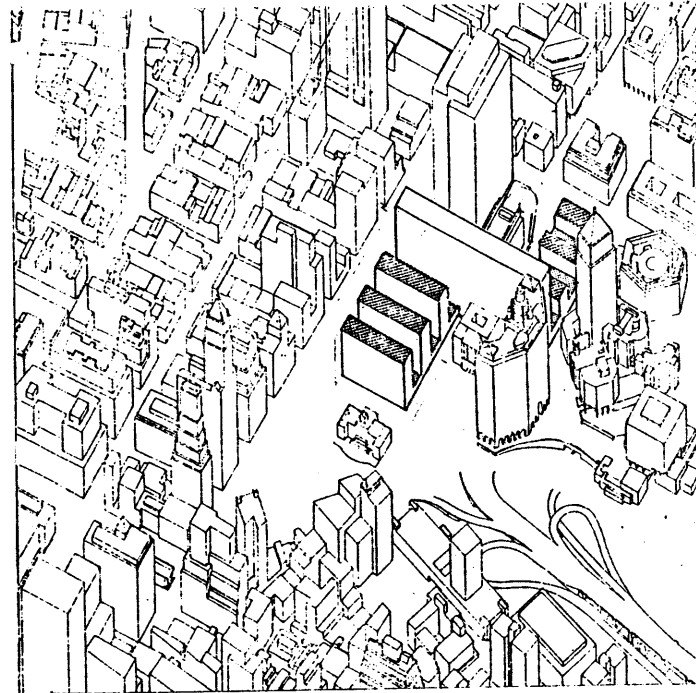
LINEAR SERIES

Illustration 3-9, continued, Grids

MASSING TYPES
GRIDS
TYPE: UNDIFFERENTIATED
COVERAGE: 50%

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR
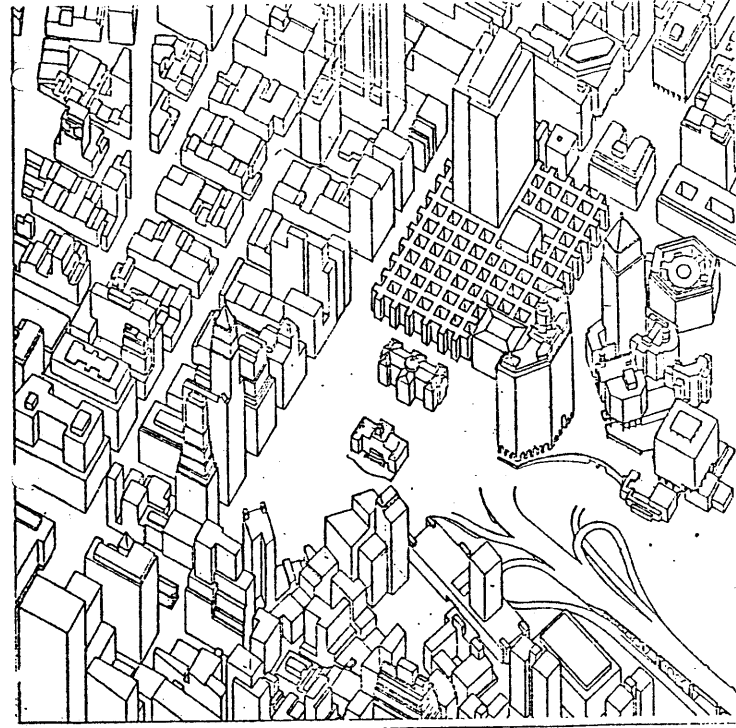
MASSING TYPES
GRIDS

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR

126

Illustration 3-9, continued, Grids

MASSING TYPES
GRIDS

C.U.U.D.4

MASSING TYPES
GRIDS

C.U.U.D.4

> next phase when we actually start designing,
> it is available to make reference to...

But how to review it, and how to use the session or the guests

was to be a major issue all afternoon--one that would not

be resolved.

Going on to explain to the guests what the class had

done, he noted:

Hutchinson: We started in a fairly conventional way, that
              is of taking the problem, dissecting it,
              breaking it down into manageable areas of
              research...

He proceeded to point out the Phase I work and comment on the

different topics which the student groups had researched.

Then turning to the Phase II material, he continued,
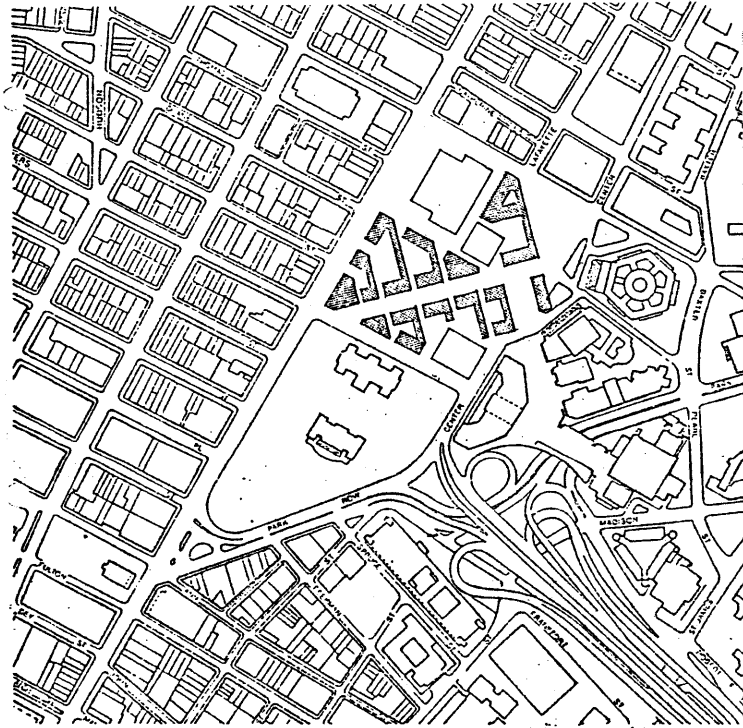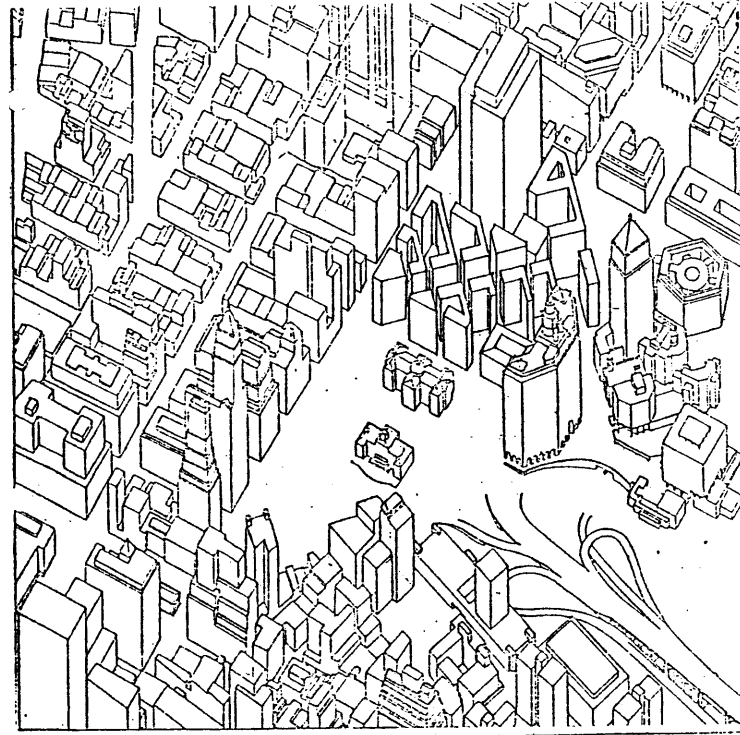
Hutchinson: We decided to study massing alternatives on
              the site. And rather than...the more
              typical way...--to simply start trying out
              different massing possibilities, or being
              I guess lead by intuition to different site
              strategies, and looking at different ways
              you could put that much square footage there
              within the edges--we took what I guess most
              people in the class feel is a somewhat mech-
              anistic beginning or approach...

He proceeded to elaborate on the constraints students had

used to transform the "pure" massing types into "perhaps

viable" alternatives, but which would not be "real schemes

without being transformed quite a bit further."

Then, beginning to set the agenda for the review and

for the guests, he explained,

Hutchinson: For our purposes, I guess the way to use this
              and get something out of it right now is sort
              of the key issue. I think there are several
              things we can talk about...--what inferences

> can be drawn from this, what does it mean,
> what kinds of possibilities for the next
> stage are now at least implicit...and at
> least begin to explore and even exploit the
> kinds of things that are here, either
> blatantly, or very clearly and intention-
> ally there.
>
> I think it is also in order to make a
> critique of the process itself... I can make
> some myself. One has to do with whether
> or not the different groups actually func-
> tioned as groups internally. Whenever they
> did function as groups, it seems to me that
> the things that hang on the wall are more
> meaningful than those where the groups broke
> down and took off as individuals and had their
> own assignments and went off and did it, then
> found that there were conflicting criteria
> with the other members of the group...
>
> Each of the groups, to some extent, estab-
> lished their own criteria in addition to those
> which had been given. The first one, and
> perhaps the most important one is to define
> for themselves this generic massing type...

During these remarks, a few background conversations

like those at the Phase I Preliminary Review began. In an

effort to "draw some students into the discussion"(3:20),

Hutchinson asked S8 to explain his group's approach to

determining what was "linear" for each of the sites. S8 re-

ported that they had drawn a series of increasingly longer

blocks, axonometrically, asked fellow students which were

linear, and then charted the findings. After determining

which were linear, the group found that no linear building

could accommodate three million square feet on the smaller

sites.

In responding to linear massing studies, the guests asked more about the assignment and the process than about the particular studies, as in the following excerpts.

G1: Is there a key which identifies which one fit that maximum three million square feet..?

G2: So I can understand this generally, which came first, this wall [Phase I] or these walls [Phase II]?..

Did you when you selected the proportions of the building, subject that to any other criteria, like... what the proportions are doing to the internal organization, the depth of office space, length of corridor, depth of useable space..? There are some optimal proportions that lend themselves to specific building types. Also...how much actual wall and foundation footage is needed in order to produce that building, would be interesting overlays...in a study like this...

If you prove that the linear building won't work in terms of the criteria of square footage, etc., was there any attempt to make composite studies--...a grid building with a long building?..

G3: For my own understanding, is what you are producing there sort of a morphology of forms first that are predicated on set back requirements and some approaches to site coverage? Is that tied into a functional morphology, saying that long buildings are only good for single loaded corridors, and therefore only good for certain office uses? Or is it broader than that--that certain buildings could be for mixed use?

Hutchinson and Heath responded to these and other questions with more elaborate descriptions and explanations of the assignments and of the transformation process. This prompted more discussion among the guests, including comments about the "amount of office space in Manhattan that is going

begging." The background conversation recurred during these discussions.

Then, at 3:40, G1 tried to direct the discussion to the task at hand.

> G1: If we accept transformations, our problem really is to begin talking about evaluating those...or at least to start talking about the different possible parameters there might be. If for instance, we are talking about the maximum of three million square feet, we should talk about what that implies, what kind of development it is, what type of situation would be desirable, and try to typecast the project itself... Perhaps there are a limited number of project types and alternative massings. And we have to decide on what parameters are to filter those out...

But G2 lead the discussion into office prototypes, suggesting that these students develop one for New York City which was more responsive to market and energy needs than office towers. Hutchinson responded that the class was trying to simulate an office doing a feasibility study which demonstrated a range of strategies, not one or two. Then referring back to G1's comment, he noted,

> Hutchinson: We have to try in the next week or so to filter out the basic types, and hopefully that's what this kind of stuff can help to generate.

The proposal by G1 was only one of eight made by the guests and teachers in search of a way to deal with the wealth of student work. After the diversion from G1's comment, G3 suggested in order to filter out those basic

alternatives, one could either "apply criteria to the schemes" or "take a prototypical solution from each group and evolve it to its best use." But G1 reiterated his proposal, explaining that if they could list the categories of criteria, and set limits within those categories (like 300,000 square feet), then "we could start looking around the room, and criticizing schemes on the basis of those parameters...and try to pick out the good schemes," and then repeat that with a different list of parameters.

As before, the proposals were delayed by more discussion before they could be tried. The comments included still further explanations of the assignment and process by both teachers, and suggestions of categories and parameters by all. One OLMD guest stressed his concern for how much to build, given the 15% vacancy rate in Lower Manhattan office space, and recognizing that some amount of building would improve the Civic Center, while too much would have a negative impact on the adjacent areas (though he could not say how much was too much). G2 expressed a concern for energy consumption and suggested creating a "hierarchy of constraints." G1 suggested five categories to get things started: staging strategy, demolition-preservation, total square footage, imagery (as in background building), and heat load and cost as they relate to a building's surface. Then within these categories, he "randomly picked" a set of parameters

which the guests commented on. Hutchinson restated and

elaborated the assigned constraints to extend G1's list,

and made a rare comment on the political reality of such

an urban design project.

Hutchinson: I think a comment that was made earlier when
               talking with [the OLMD guests] before we came
               in...would be very useful... My own para-
               phrasing or interpreting is that everything
               is self-cancelling in a case like this. For
               any scheme that you come up with, you will
               find some interest groups, which have a sub-
               stantial interest, for which that is not a
               scheme--for which there will be major opposi-
               tion. This is the nature of politics, and
               the nature of all kinds of complexity of
               civic government and organization.

And both guests from OLMD added their political perspectives.

    OLMD 1:   Taking G1's parameter, would an administra-
               tion spend a great amount of its capital funds
               to build an anonymous, background building?

    OLMD 2:   There is a whole opposite argument--building a
               new Civic Center is a politically delicate
               question because it is taking public money
               away from essential services to build additional
               office space for an expanding bureaucracy.
               Conceivably an anonymous building would be the
               politically expedient solution. The more
               doable one.

In this thirty minutes since G1's first proposal, the room

had become hot and smoky, and the students' increasingly rest-

less. Their efforts to add to the discussion by raising their

hands had gone unrecognized until S11 broke in during a lull to

explain that "the guests have criteria I never thought of," and

to ask that they review them so a list could be made. As ways

of doing this were being discussed, Hutchinson initiated the

last series of proposals for looking at the work. It was now

4:20.

Hutchinson: Shall we actually start quickly looking at these...taking these criteria..? Are there a couple of linear models to put into the site?...

As the group rearranged themselves around the site model in a burst of conversation, S11 placed his linear study model-- an elongated E shape in plan--on his site. The group settled as G1 began the comments.

       G1:   If this is the one we are dealing with, I'm not sure what everyone else is thinking, but it seems to me that this one is very hard to think of in terms of a staging strategy... I don't know how you want to do this? If we were to eliminate those buildings which don't fit any of the criteria, we wouldn't be talking about this proposal... I would like some response from other people. Do we look at this building and see what can be done with it to deal with those criteria, or do we eliminate it?

       S1:   I think if we explain the process that we went through on each one, that will let you cover more of the different schemes instead of getting stuck on one building that was slapped together in a couple minutes... Shouldn't we really criticize the process?

       G1:   What I was suggesting that we do, is to pick out buildings that essentially fit these criteria and talk about them. And then we talk about other issues...

Hutchinson: In terms of picking them, may I make a suggestion? That is that the students who did this series select the ones thay would like to have picked...

       G3:   I thought this was for a proliferation of ideas and was non-judgmental. So how can you go now and criticize those? We haven't even fixed the criteria.

S1: They do have some judgment to them...

G3: Well what you are suggesting then is whoever puts a building into the model tells us what the criteria are...

Hutchinson then turned to the drawings to review for the guests how the linear schemes were arranged from smaller to larger sites, and from the most simplistic to the most developed. Picking up on the development of those schemes, G3 asked,

G3: Couldn't the group explain how they arrived at a certain solution, or what the process was by which they arrived at that solution?

Hutchinson: Yeah, I think that would be appropriate, if you want to do that. S1, you're not in this linear group are you?

S1: Yes, I am. I'm in site 5.

G2: Stand-up.

Placing his model on the site, S1 began presenting his scheme, explaining what he had tried to do spatially. This presentation at 4:30, the first of the day, was to be just another false start, however. G3 interrupted him after a few minutes, explaining over the noise of background conversations,

G3: Excuse me, but I thought you were going to be the spokesman for the whole group.

S1: For the whole group? No, just for myself.

After a bit of laughter, S1 continued explaining how his scheme had developed. Five minutes later, Hutchinson

interrupted him to ask that he present the scheme in terms

of Gl's criteria. Then, unsatisfied with the presentation

which followed, he interrupted again.

Hutchinson: Can I just make a comment on that? We can't
               address ourselves to all of the issues important
               to you... We can't have everybody go through
               their process... We have to try to find some-
               thing that cuts across this process and has
               value for everyone for getting the best feed-
               back at this stage from the people that we have
               here... There is no need to defend something
               that is really not a scheme...

The guests then proceeded to ask Sl questions about how his

scheme complied with the criteria. The rest of the students

were becoming anxious, and shortly after, one interrupted to

make his own suggestion of how to deal with their work.

       S9:   Mr. Hutchinson, I would like to make a sug-
              gestion that would be time saving. I
              think that rather than having representatives
              from each group stand-up and discuss the
              schemes,...since most of you people have not
              really examined the schemes, I think it
              would be much more useful if you people
              would just get up and take ten minutes look-
              ing at them.

Hutchinson and everyone agreed enthusiastically, recognizing

that it implied a welcome break and asked that each guest

select one scheme to talk about when they reassembled.

       They reassembled at 5:15 with Gl taking the floor. He

had selected the diagonal grid schemes of S18 and S20 (in-

cluded in the drawings which follow) as ones which related

favorably to his first set of parameters, and proceeded to

ask the students about their schemes' response to those

parameters. His fifteen minutes of comments and questions were virtually uninterrupted, unlike earlier. He concluded by asking if another guest would like to go through another scheme, however that did not happen.

Instead, the session returned to the general discussion among the guests as earlier in the day. They commented on S18 and S20's grid schemes, on the relative difficulty of making different massing types work, and on the various parameters. Their occasional references to specific schemes referred to the student's models rather than the more detailed drawings. G3 reiterated his concern for "the way we tend to judge these," because using a single set of parameters contradicted the intent to be "pluralistic." G1 agreed, noting that he had simply selected one set to get the discussion started.

The OLMD guests made few comments during this discussion. At 6:00, however, they took the floor for the last twenty minutes of the day. They explained several ways the city government worked that could help shape the schemes, for example, the needed proximity of agency heads to the mayor. They reported on an incomplete and out of date attempt to determine the square footage needs of the city agencies, and on the movement to decentralize city government into "little city halls." They restated their concern for the urban design implications of what was to be built, especially on

the public and private sector surroundings, and their interest

in seeing shops, stores, exhibition space, eating establish-

ments, and an information center uesd to enliven the Civic

Center. They were asked what strategies they would use if

making a proposal which would "have a reasonable chance of

getting built," though they might not resolve all the issues.

They suggested that the fewer the square feet, the more

"doable" the proposal, because there would be less cost

and less impact on the surroundings. Most of the students

were attentive during this discussion, despite the time

(two were taking notes).

These client comments, the most extensive of the day,

ended at 6:20 as another guest and a few students left the

review. The session then broke into little discussions around

the model. Before the group disbanded at 6:30, Hutchinson

reiterated his request that the work be posted in the studio

on Monday, and Heath asked that students make copies of each

sheet for the booklet to be assembled with this material.

This ended the Phase II work.

PHASE III: "Precise Development of Basic Alternatives"--The
            Range of Schemes

Using the "data base" assembled in Phase I, and the catalog

of massing studies produced in Phase II, students were to archi-

tecturally develop a coordinated range of schemes in Phase III.

According to the "Schedule" handout, this development was to

occur in two segments over nine weeks: the "Precise develop-

ment of basic alternatives and site strategies," and after

several reviews, the "Detail development of proposals." How-

ever, with the extra week taken to complete Phase II, only

eight weeks remained.

Unlike in the earlier phases, the handout did not elaborate

the scheduled assignment. Instead it listed the presentation

requirements for two reviews (Ills. 3-13 and 3-16) and were not

distributed until later in Phase III.

Hutchinson had explained earlier (Chapter 2) that when

taking a scheme to "a more specific kind of development" in

Phase III, "one has to shape it with an intention, a purpose,

...with a particular set of attitudes in mind." In selecting

those attitudes, the students would be determining the con-

straints on their designs. The schemes were to be developed

by transforming basic alternatives in response to those

attitudes or constraints. The other ways Hutchinson had in-

tended students operate were also integrated in this phase's

work, especially group work. The "Schedule" noted that, "Work

prior to April 7 will be in groups, after April 7--optional

individual or group work." (This coincided with the scheduled

beginning of "detail development.")

(Observation in the studio continued from Phase II until Monday of Week Eight, then resumed for Week Eleven and Week Twelve, and again for Week Fifteen, the Final Review. The accounts of the intervening weeks are from teachers' and students' reports.)

WEEK SEVEN: PHASE III INTRODUCTION & SKETCH DESIGN

On Monday (3/10), the students began posting their materials from the Phase I and II review on the panels in the studio as requested on Friday. At 2:40 they had finished, and began assembling in the conference area for the teachers' introduction to the Phase III work (quoted here at length since no handout explained the assignment.) In Hutchinson's absence, Heath began.

Heath: We can talk a little about the discussion that we had Friday, and how much of that was redundant and boring and unnecessary in a second, but right away [I want] to give you an idea of what we have in mind for this week and then for the subsequent two weeks...

This week we [want to] just try to pull together some ideas from this tremendous array that we have here in terms of what are viable "partis" or viable ideas... In my mind that doesn't mean that one would be able to run up to the wall and put your finger on one solution as it appears in its present form... It's very clearly much less simple than that.

We really have to come to resolution of what are a set of viable options on this, by a certain amount still of group discussion.

This week working still within groups, hopefully in a very schematic model form--rather

than drawing--by the end of the week, [we
hope] at least to have some kind of notion
about the zoning down of options to the
things we feel will provide the basis for
development.

Now, whether that subsequent development is
group or individual, it's still a little
early. We want to remain somewhat flexible
on that. What we don't want to happen at
this point is the individual--already within
his group...used to working on his own and...
developing his ideas--to rush off developing
what he has in detail as his solution. We
still would like to keep it, during this
week, as a group project. Now that doesn't
necessarily mean that the groups remain as
they are...

Having these things cleaned up.., we can re-
cap what happened on Friday, and then begin
to...discuss in groups, the things which are
really important, bearing in mind some of what
was discussed at the end...on Friday, with the
people from OLMD.

But before the recap, Hutchinson arrived.

Hutchinson: The biggest question as far as I'm concerned
is, how do we narrow down the range of schemes
by the end of the week, and at the same time
work out a framework in which there is...a
minimum of overlap. If everybody takes off
individually at this point, we just simply
cannot do that... Everybody will find that
you're off in the corner and doing the same
thing that somebody else has gone off to do
in another corner.

Why the range of schemes was to be reduced should be evi-

dent to the reader from previous explanations, but it was not

evident to several students.

S3: I understand that we want to narrow these things
up, but I don't understand what we are trying to
accomplish by doing this.

Hutchinson: I think we've talked about it several times.
One discussion is that we would try to come
up with, by the end of the term,...a series

of separate schemes, which represent a range
of different attitudes toward the site and
towards issues like preservation. Meaning
that at one end of the spectrum,...no, or very
few buildings have to be done--perhaps involv-
ing rehabing old buildings and maybe land-
scaping. At the other end,...we would deal
with schemes...up to three million square feet.

Okay that's one set of wholes which has to do
with the amount of building. Now, interwoven
with that are obviously issues like questions
of preservation, and attitudes towards exist-
ing fabric...

S3: Well, is what we're doing, planning several
different attitudes that could be acceptable
budget positions for the site, and then with
those attitudes we are determining exactly
what can and can not be done?

Heath: We're certainly doing that,and a bit more,
rather than making some kind of optimum
selection from what we've got here...

To use this as a kind of catalog of schemes
which are in themselves just simply worth
developing as they exist now, I think that
would be the wrong way around. I think it
would be better...to try to identify some
attitudes, some realistic possibilities for
the site... And then use this stuff...to
develop that range...

Hutchinson: Yeah, that's what we need to determine...Hope-
fully by the end of the week we'll actually
have some clear set...

I think we need some props...By taking some
bits and pieces of stuff from models here,
[we can begin] speculating on different
attitudes that one might have in regard to
putting things into the site and what that
might mean in terms of the whole series of
issues.

Another way to do it is to let people respond
based on what biases they've built up so far
to the issues and the problem. Hopefully there
might be enough people who'd be willing to
take different attitudes.

We could establish a number of different levels
at which the problem is attacked. This might
be a rallying point for groups rather than a
particular form...

I've said all along that I wanted ultimately
that people would be happy with what they're
doing--not stuck with something that they
can't believe in. How many people would be
willing...to assume an attitude of building
a lot of stuff here, perhaps an incremental
growth scheme... Are there people willing to
do that?..

The teachers not only explained what they were trying to

accomplish, but generally how they could begin, taking the

responsibility for organizing the work as they had in both pre-

vious phases. As Hutchinson redescribed the two extreme solu-

tions, and reiterated that he did not want to force anyone,

another student inquired about what he was trying to accomplish.

In responding, Hutchinson noted several of his ideas about de-

signing, including the most fundamental--having some organization.

S24:   Are you trying this week...to present a certain
        range of alternatives to make some people maybe
        re-evaluate their biases towards the problem?

Hutchinson: No, I wasn't trying to use this as a sort of
               group therapy. I was really trying to see if
               we could really get the thing going in the
               next phase, where we actually start to design.
               But we have to have some organization about
               the way that we go about designing.

               Whereas in a normal problem, people just now
               take off and start doing their thing, we'd
               like a framework in which that happened. I
               think people ought to be able to individualize
               their efforts, but...I think it's very re-
               dundant, because people are always very pro-
               tective and sort of mother-hennish with their
               ideas. Then at some point, they get off the
               nest and all the chicks are exactly alike,...
               in all the different nests.

S24: How exactly would you have people working in groups?

Hutchinson: Well, I have an idea about doing it, but it's negotiable...What I had thought was that maybe this week, we could generate a whole lot of props that we could plug into this model, and then we'd have something to talk about on Friday. We'd get everybody around and talk about it, and even combine them in different ways... I think a lot of the things come out of what you have.

But Hutchinson's answers proved unsatisfactory for a third student, who expressed his own uncertainty about the work.

S18: I just think it sounds a bit nebulous. I'm not sure that I can really grasp what we're trying to get to.

Hutchinson: Okay, we've got two things working at cross purposes. One is people's individual wishes, and the other is the need for a range of schemes. They may not serve the same purposes. In other words, it may be that all the schemes come out alike. I guess that's what was nebulous about it.

A fourth student then argued for doing the task individually, to which Hutchinson surprisingly agreed. Presumably his concern for students being "happy with what they're doing," was extended to groups, at least for the moment.

S-: I wanted to say something before about the procedure for this in terms of the groups. I don't know how we were going to decide on that. In terms of this cataloging process of coming up with biases, I think it would be a lot better if you disbanded the groups and worked individually, for two reasons. One being that you might have found through your work in a particular group that your biases are definitely not within that group.

Hutchinson: I really agree with this. I don't think we need to keep the old groups. When I said that a minute ago...it was just a point of departure for organizing.

What I think in a way might be the best would
be right now for everybody to go off to his
own table and do a scheme. Quickly, very
quickly, a one day sketch. And come up with
a model which depicts as near as possible
something that you could assemble out of all
the things that were done--assuming it has
had some meaning for you, and that out of it
you've drawn certain conclusions and you have
certain ideas. Then we'll just bring it all
back and compare notes and maybe out of that,
we could begin to structure something. What
do you think about that?

S-: It's a good idea.

The one day sketch would allow students to work individually
and begin identifying attitudes to structure the range of schemes.
Apparently, Hutchinson had no single way ready to assign as in
the previous phases. In this situation, he seemed more concerned
with the outcome--"the attitudes"--than the ways for identifying
them. But one student was not convinced about the sketch.

S7: ...I don't think that's as valuable as going
through and picking out issues, overlaying
them and coming up with a solution that way.

Hutchinson: Okay, I agree and the reason I said that a
minute ago ...is that if you put a slab in,
it has certain consequences. You get the low
buildings, they'll have different consequences...

I think what S7 is suggesting is that one really
ought to make your private or personal review
of the things that have been done, to try for
yourself. Determine what you think are the
most important issues and what are the most
important emerging ideas that you can get out
of that. Then try to synthesize those very
quickly...with a very simplified model...Look,
when do we get back together?...

Perhaps we could do it at 2:00, Wednesday, and
then everybody goes back to work...Then it's
just whatever you want to present, except
that I think everybody ought to have some kind
of model and accompanying drawings, diagrams,
colored spaghetti, or whatever.

Heath: This is a way of getting at certain issues...
it's not just every man for himself for the
rest of the semester...

So the week's task was set and the Phase III product was
discussed, yet two other items on Heath's agenda had received
little attention. What the teachers had in mind for the sub-
sequent two weeks received no comment, and the previous Friday's
review was only mentioned briefly.

Heath: Before we split, we really on Friday didn't
do it as one might normally do it as a review--
saying to someone "Well, get up and describe
what you did and how you went through it."
A number of people afterwards came up complain-
ing about the fact that we've done all that
work and it never even got discussed. Are
there any sort of issues here which people
want to talk about? We can sort of come back
to it when it becomes more useful and valuable.

Hutchinson: Well, it's here and it's available and you can
look at it. And I think you should. It may
be a very good way to accelerate getting into
it. Look quickly at all this stuff and you
may be able to zoom in a lot faster than if
you just go back there and start trying to
dream up all of the things you think...are
important.

As the students returned to their desks, Heath left for
another studio's review, and Hutchinson collected plastic boxes
and other model pieces from around the studio to use as "props"
on the site model. He then began to arrange these pieces in
different patterns and to talk about the consequences of each,
as six students looked on. After a few minutes, he began talk-
ing to individual students at their desks, while several sets
of students fiddled with the "props" during the next half hour.

Hutchinson's individual sessions were interrupted around
4:00 by a secretary reminding him of a meeting he was to attend.

Hutchinson left and the students continued to work for some time, but by 5:30 only three students remained in the studio, and only two of them were working on design.

The following afternoon there were eight students working in the studio, three fiddling with the "props" while talking of shaping the exterior space, and the others making drawings and models at their desks. On Wednesday morning, four of those eight students were back working after their Professional Practice course at 11:00.

Wednesday (3/12) afternoon at 2:00, many students were roaming the studio, looking at others' models, while some were still gluing cardboard. Before reviewing the "one day sketches," Hutchinson elaborated on his comments about the Phase III work from Monday, (2:30).

Hutchinson: Let's talk a little about how we take it from here, in forming groups and so on. Heath and I were talking about maybe this afternoon trying to make a notation about different basic schemes and also the different approaches. Because they probably ought to be sorted out... and when we finally get groups together there should be several factors involved.

One is that there is no major bad vibes within the team. Another would be that there are certain sets of issues that people should agree upon...and perhaps some generalized stategy for how you approach...We are not going to try to form the groups this afternoon, but I think we should keep in mind what would constitute the basis for a group.

Anyway, this afternoon I thought we would simply look at the schemes and respond to them and talk about them.

Up until now these things have tended to be Heath's and my imposition on you. From here

on, it's going to be less and less of that.
It will be more things that will be determined
by you. This was just to try to get things to
coalesce and get accelerated into the problem...

Heath: From next week on, we would like this to be
over the board crit business quite frequently.
We haven't had too much immediate contact with
you in the studio up until this point because
we tried to impose a certain structural notion.
Now that that has happened, it's important to
have more contact...particularly the work in
groups...

Following these introductory comments the review began with

S9's presentation. The sessions went quickly. Students crowded

around the models and made frequent comments, unlike the pre-

vious reviews. Many of the teachers' and students' comments and

questions dealt with the issues and attitudes, including the Phase

II constraints, which the students' designs were trying to re-

flect. But Hutchinson was not pleased. He stopped the review

after two hours and twelve students' presentations. Responding

to S19's drawings and model, he explained,

Hutchinson: I find myself really getting depressed. Yours
isn't anymore a depressant than the others. I
feel there is so little connection between the
kind of massing you really put in there and the
way the thing really works. Either you are a
good formalist or you are good, at least, at
making it work. Most of these...are neither...
Ideally you would like to merge these two...

Hutchinson was interrupted by a student, S18, taking

seriously the comment that "more things...will be determined by

you." He expressed his confusion about the teachers' expectations.

S18: From my point of view, I would like to just
sit down for a week and just design. To have
time to sit down and look at the thing from
my point of view.

Hutchinson: Okay, you will have a week, alright? What we are doing now is quickly responding to what I think is an impulse or need to design...that is what this is supposed to be...

S18: Maybe a lot of people were confused and I was confused then because I thought we were still fooling around with what we have done.

Hutchinson: Well, dammit, you didn't listen--we said it, I don't know how to say it more clearly than the other day--you were now designing.

You were actually now making schemes, making "partis." You are not necessarily wed to what you had been doing before--that [Phase I & II] was all a resource... You can look at it, study it, get ideas from it. But you aren't continuing from it. You aren't working in groups anymore, necessarily...

What I'm really saying is that within a very short time, one day, one afternoon, people at this point should be able to come up with single but viable ideas...There is a clear notion about what it is that sets an intention... some of these... have begun to do that. They [students] said, there is a clear idea of how the thing works and what it is supposed to mean on the site, spatially.

Heath: Not only spatially but also meaning in other terms, too. We have discussed this a number of times. I didn't think any one person has gotten up and said, "this is my concept of what this is in this particular space"...

Hutchinson: It surprises me that people are not quicker in response, given the opportunity now to move out of what is a more mechanical process, to begin to behave more individually and more personally to what you see as the more crucial issues, and what you would really like to do...

This was only the first of several important interchanges in the forty-five minute discussion which revealed both the teachers' expectations and the students' understanding of those expectations and ability to operate within them.

In the next comments, one student (S12) acknowledged his

problem with designing without a fixed building program. Hutch-

inson, while astounded, explained the necessity of doing such,

especially on a project of this type.

Hutchinson: I think there are a lot of...necessary steps
               between what was supposed to have been done
               here...One [is] where people are on the site
               and...the points that need to be connected
               up. I thought it was obvious but apparently
               it is not obvious because people don't respond
               to it.

The student was concerned about another necessary step which

had been overlooked.

        S12:   ...I don't think you can make any sort of
                scheme...without knowing any of these things
                [like functions]...and a whole set of other
                things...

Hutchinson: [S12], do you really believe that the only
               way to design a building is to know every
               room which has to go in the building? Is
               that what you are saying?

        S12:   Well, that's all I've ever been exposed to.

Hutchinson: You never learned about Zoning or Packaging...
               about Generalizations, drawing Conclusions

        S12:   Yeah, but we don't-

Hutchinson: We have certain generalizations and people
               basically are not even working with those--
               about the notion of highly public kinds of
               space as opposed to kinds of spaces which
               are highly repetitive...

      Heath: Really your question implies that we are back
                to square one, where we have to have a lot
                more information before we can really do this...

Hutchinson: I would like to hear some other comments about
               this, because if this creates as much of a
               paralysis as is implied...then I'm really
               disturbed about your future...

> Believe me, about 95% of the time as an
> architect, you will not have the things you
> are asking to be given...
>
> I think one very important point which may
> not be really established well enough....the
> city bureaucracy is constantly changing...
> That is, it's nature...

After explaining why design must happen without detailed programs

(they are often unavailable or unreliable) each teacher went on

to briefly explain a strategy for dealing with such uncertainty.

Hutchinson: So in fact what you are trying to do is to
              make a very generalized space based on
              criteria which is not necessarily that which
              is given to you by the occupants themselves.

Heath: What one is really designing in a situation
         like that are the non-programmatic elements...
         like lobbies, pedestrian movement systems...
         they become like a backbone, a skeleton or
         organism which things can grow onto or wither
         from.

         One must make some generalizations from what
         program we have. It may be something to do
         with 10-15,000 square feet as being a reason-
         able figure for some type of subgrouping of
         offices, cluttered about a major entrance
         point.

In the comments which followed, Hutchinson became increas-

ingly frustrated with the students' work as he considered what

should be done next.

Hutchinson: I really feel like we ought to recycle this
              until it begins to yield something. I don't
              think that the idea of just having people go
              off into their own individual selves now is
              going to yield much. I really don't!.. It
              looks to me as though you had not individually
              determined your own constraints on that site
              and on the program.

              It's as if anything goes... You single out one
              guiding notion or constraint or objective or
              bias or whatever, and to hell with everything
              else... It's much more complicated than that!

He reiterated what the students were to have done.

Hutchinson: You would be advised to organize these things
              hierarchically--set priorities,...saying these
              are the things I see as legitimate alternatives
              in terms of interpreting the site, meanings of
              buildings...the ways agencies are set up...

              There are at least four or five of these which
              you can't ignore as a starting point. We have
              been over that. The schemes...[from Phase II]
              already introduce these things. It's not as if
              we have not gotten there yet.

Then he became very angry and criticized their performance as

designers and as students.

Hutchinson: I think we ought to do this again on Friday,
              as painful as it may be--until we get somewhere.
              I'm not going to throw in the towel, dammit!
              I'm not going to say go and do your own thing.
              No! Absolutely! We are going to do this
              until people make it mean something...Now I'm
              very much aware that a lot of you are simply
              not participating. Neither do you ever put
              anything in here, nor do you make a remark...
              Why don't we go to work?

     After a comment by Heath, Hutchinson apologized to S19, ex-

plaining that his frustration had built up looking at all the

schemes, not just his. He then proceeded to tell the class what

he felt they needed to do to be better students.

Hutchinson: I really think that you have to get more serious
              about trying to develop some kind of notion, and
              become truly more independent. Independence is
              very closely connected with a sense of respon-
              sibility. It's not something that someone can
              just lay on you any more than they can lay on
              you a sense of responsibility.

     Another interchange followed, shifting the comments to the

teachers' approach to design and the students' understanding of

it.

Hutchinson: I think you ought to demonstrate not only your
              scheme or series of schemes, but what Heath

suggested, which has to do with what are the
systems you are trying to connect up. What
is the problem? You have to demonstrate a
problem before demonstrating a solution...
This whole inferential thing, "Oh, isn't
this nice," sometimes misses the point...

S4: It seems to me that, from what you present,
the methods are going to define the problem.
I really don't feel these massing studies de-
fine the problem [enough] to go ahead and do
what you want us to do now. And even if it
does, these massing studies never meant much
because we didn't even delve into what those
massing studies meant except in a very few
cases.

Hutchinson: That's a very good point. The reason for
having made this kind of jump is that...
people were feeling very much impatience,
and they need to get on about doing something
on their own. What I had hoped, and it
didn't materialize, was that people would
in fact go up and look at these things.
Make studies of all the first phase stuff,
and draw some kind of conclusions...

S4: The massing analysis delving into all of the
problems of precedent, civic form, internal
function, and all these things which seem to
be circulation on the site,...all that syn-
thesis wasn't really present in these massing
studies.

Hutchinson then asked S4 if he would like to have a pre-

sentation or discussion of the Phase I and II material again.

S4 replied no. Hutchinson then reiterated that it was now

necessary for students to personally establish their own set

of constraints from their studio work, their site observations,

and their "own ability to...intuitively know what kinds of

things you think are important." He argued that since the

schemes were "operating at a rather primitive level," the

earlier work should be re-examined.

Hutchinson: It requires now that either you...go back through
all this stuff step by step, and even have all
of the first phase stuff presented to everyone...
I'm perfectly willing to do that, if people feel
that is necessary, now. I thought people would
be able to do that on their own.

Heath felt that the students had a limited understanding of

the Phase II work.

Heath: I think that one of the problems of that process
is the meaning of a particular set of transfor-
mations is not necessarily evident from what is
pinned on the wall.

S4: My only point is that personally I feel that to
deal with this problem, you can't just deal
with massing models, but you have to deal with
plans, sections, abstract diagrams, and with a
much wider range of things. Our bias in the
last four weeks has been to deal only in mass-
ing, and only at that level of detail. Now when
we are supposed to interject all these things
from the first phase, the bias is left over from
the previous four weeks.

Heath: I think there is a misunderstanding of this pro-
cess. I think you have a very minimal attitude
to the transformation. In your mind the trans-
formation is merely to manipulate these things
at a formal level so that this one looks nicer
than the last one.

Hutchinson: Again there is a disparity... Some schemes are
very mechanical and others actually began to get
into the problem.

Heath: The most successful ones, the ones which looked
the most sophisticated, are the ones which mean
more...

Avoiding the ambiguity between schemes looking "nicer"

and looking "sophisticated," Heath restated the need for

students to develop their "own point of view," using the

transformation work as a "springboard." Hutchinson explained

his understanding of the use of the massing studies as

abstractions, and their importance to the architect.

Hutchinson: I think that the intention with regard to
             massing studies had to do not with those purely
             formal issues, but seeing them as abstractions,
             as diagrams which would abstract certain issues
             because perhaps the most fundamental facility
             that an architect needs is that facility with
             abstractions...

Both teachers elaborated on the use of diagrams in design and in

this urban design problem before the comments turned to how one

actually should proceed.

In the last interchange before the students went to their

desks, ways to review the previous work and to form groups were

suggested.

S1: Is it possible that we can...work on this again...?

Hutchinson: That is what I am saying. I would like to re-
             cycle this.

S1: Well, you were talking about discussions of the
     earlier stuff.

Hutchinson: There was some discussion about going through
             all this massing thing...and precedent studies.
             Do you think we need to go through it?

Class: NO!

S4: If groups would have discussions of the ideas
     from this early stuff,...who would collectively
     decide how they are going to perceive and
     analyze and collect information, then--

Hutchinson: I think that's an excellent suggestion. Do
             you want to form such groups spontaneously?

S-: I think it should be for people who want it.

Hutchinson: I think if people want to go ahead, as we have
             said all along, if people want to work indivi-
             dually they are free to do it. If you want to
             form groups to do it, fine. I think that should
             coalesce. We don't need to formally set them up.
             We could just let people do it because they
             obviously work much better if you do it that
             way...

S5: I also think there needs to be more personal
     feedback as far as schemes go.

Hutchinson: Why don't we do this? On Friday, Heath and I
             will simply start working with whoever wants
             to come over and put things in the model, put
             some drawings up, and we can talk about them.
             It doesn't have to be a whole class thing.
             Everybody doesn't have to participate except
             when they are ready. Okay?

Agreeing with this suggestion for forming groups and for

Friday's agenda, the students dispersed to their desks around

5:15. Both teachers talked individually with students until after

6:00. (Apparently the teachers' desire to reduce their imposi-

tion on the students outweighed Hutchinson's dictum that he would

not "throw in the towel." Students could work individually, and

could go about designing a scheme, presumably as a way of estab-

lishing their own sets of constraints. Also they were still

responsible for reviewing and making use of the Phase I and II

material themselves, despite their previous disregard of it.

The sorting out of the basic alternatives that Hutchinson men-

tioned before reviewing the schemes would presumably have to wait

for students to determine their sets of constraints.)

On Friday (3/14), twenty students were cutting cardboard,

actively working at 2:00. Ten minutes later Hutchinson arrived

and without notice began giving S6 a crit. As they talked, the

five students with adjacent desks began to listen, and the crit

became a class discussion. Late arriving students took positions

at the desk cluster, as did some students who had been working.

After ten minutes, ten students listened. By 2:40, sixteen

listened. Heath and a few students were still arriving as the

discussion was coming to a close.

Hutchinson's comments centered on the use of diagrams and
the related ways of designing he had intended the students use.
As an example, he explained how a thesis student was designing
his project with diagrams. He sketched several diagrams as he
talked. He then suggested that these students use the same
approach in their work (several of the ways of designing were
noted in Chapter 2).

Hutchinson: I think, now, that the way to begin to isolate
             strategies is not so much to draw specific
             buildings, but to draw, to make abstractions of
             sets of issues in a very generalized way. It
             helps, for example, to always keep in mind the
             potential underground link along Chambers Street,
             because that can keep being materialized in
             different ways...

He went on to elaborate on the use of diagrams when abstract-
ing those issues (quoted in Chapter 2), and then noted how such
diagrams were used in crit sessions.

Hutchinson: I don't personally think there is any preferred
             way to do this...You do this partly by your
             own preferences, by your own mode of operating.
             But when I come around to talk with you, it
             would be extremely useful if you had the kind of
             sets of diagrams I am talking about, rather than
             saying, "look at my neat scheme only." Okay,
             that I want to see, too... But I would really
             like to see in what way you can put the problem
             in some perspective for yourselves. You can
             identify those issues you feel take a higher
             priority... those issues will [not] in fact
             remain, because you can be influenced by me or
             by your own development... You always have to
             keep the possibility open that you can be in-
             fluenced by ways to resolve the things you could
             not see initially. That is called recentering
             the problem.

He then explained why "the way you draw is terribly im-
portant." The students were to draw issues, not buildings.

Having commented on the approach, he turned to S6's scheme and discussed the connections and responses of the new buildings to the existing ones and the spatial definition of the Civic Center --creating a "wall" as a "backdrop for the Tweed," and needing to "somehow integrate Foley Square." He quickly drew diagrams of these ideas as he talked. Before concluding, he indicated his current attitude toward group work, and announced the agenda for the next week--Week Eight, the last week before the Spring holiday.

Hutchinson: I don't know if you have had a chance to try to get together in groups or [what]...but that is strictly up to you at this point. I would just state my preference that you would not all work totally individually, if you can find compatibility in approach.

S10: Don't you think it is best to work individually to feel your way through the thing, and then begin to work in groups once you begin to have it together?

Hutchinson: That's just fine. Some people may already know they have some similar things they would like to work on. Others may need to sit for a while to get your own thoughts going. As far as I'm concerned, next week can be a working week with criticism, okay?

S24: There will be over the board crits then?

Hutchinson: Yes.

As the group dispersed, Hutchinson conversed with S6 before leaving to spend the remainder of the afternoon at another studio's review. As the students started working (3:00), Heath began a crit session with S9 around the site model while four students listened and added comments. He was interrupted by a second year studio teacher seeking guests for his studio's

review that afternoon. Heath declined as Hutchinson was
already out of the studio.

Moving back and forth from the site model to the students'
desks, Heath conducted sessions with three students working
individually and two students who had been working together
since Phase II. He talked to these students about their
design ideas and helped them to diagram them. One student,
S2, used a schematic diagram to present her ideas to him, but
not separate diagrams of the ideas and issues evident in her
schematic (Ill. 3-10). Heath responded by extracting several
ideas from her work and drawing them as diagrams. He also
helped her refine the schematic diagram and the ideas it
represented. Several students who had been waiting with
their drawings and models in hand to see Heath but were
unwilling to stay, left by 4:00, leaving only ten to twelve
students in the studio. When Heath left at 5:00, two groups
and three individuals (nine students) remained working.

The week ended without "narrowing down the range of
schemes" and without students developing their own sets of
constraints in order to formulate the range.

WEEK EIGHT: CRITS AND DIAGRAMS

On Monday (3/17), the day after the annual Spring Costume
Ball, the afternoon was filled with over the board crits by both
teachers. Hutchinson arrived around 2:30, as did several stu-
dents, and found two-thirds of the class working individually
or in pairs, and Heath giving S4 a crit.

Illustration 3-10: S2's Diagrams (facsimiles)
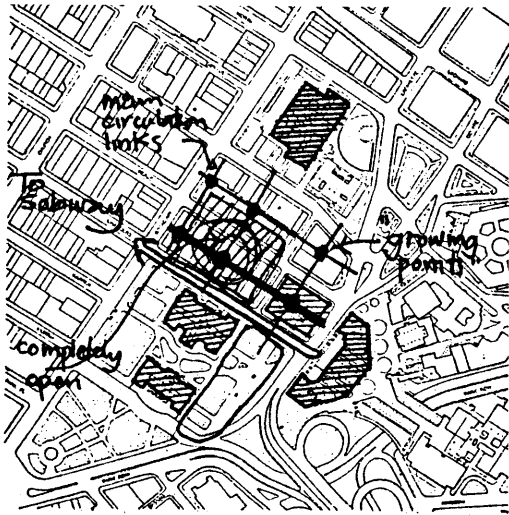
A. S2's Drawing

B. Heath's Drawing

C. S2's Drawing
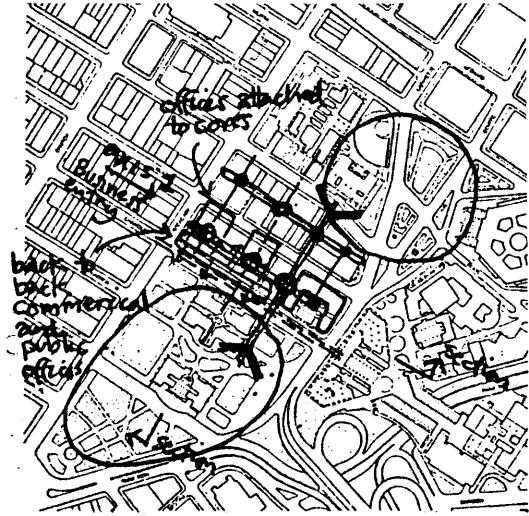
D. Heath's refined version of C.

In spite of Hutchinson's explanation and arguments for
using diagrams the previous Friday, only two students (S11 and
S24) were observed preparing or using diagrams of single
issues. Hutchinson reiterated his comments from Friday in
crit sessions while making diagrams of the students' ideas
and demonstrating how the diagrams could be used.

In one crit Hutchinson found S22 making a drawing almost
completely covered with lines (Ill. 3-11a is a segment), repre-
senting a physical scheme. In response to his request that the
student explain the "strange indeciperable hieroglyphics,"
S22 presented the mesh of ideas in his scheme. Hutchinson
drew several diagrams (Ill. 3-11b) to disentangle and clarify
S22's ideas. While drawing, he suggested how to proceed.

Hutchinson: I think that you need to make yourself a series
of diagrams that show exactly what we are talk-
ing about in somewhat more precise terms... If
you always keep your drawings in this manner, a
very rough kind of sketch, things get overlaid
and changed around... But out of them, you can
then distill down [your ideas]--say "okay, there
are certain things [which are more important]."
Right in the little drawing you begin to do
these, a lot of things emerge, which I think
should be recorded.

He then reviewed several of his arguments for using diagrams
(quoted from this crit with S22 in Chapter 2) in the remainder
of the twenty-five minute crit, while continuing to draw dia-
grams of S22's ideas. (He also discussed the student's unfin-
ished Phase I work on Topic "E, Program Definition and Expan-
sion.")

In another session, Hutchinson found S2 using a schematic
diagram of her physical design, rather than diagrams of single
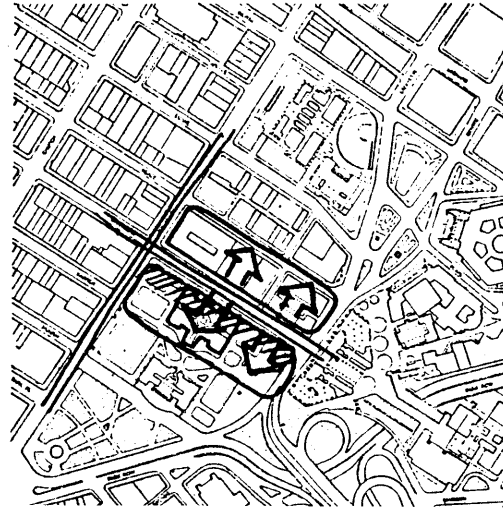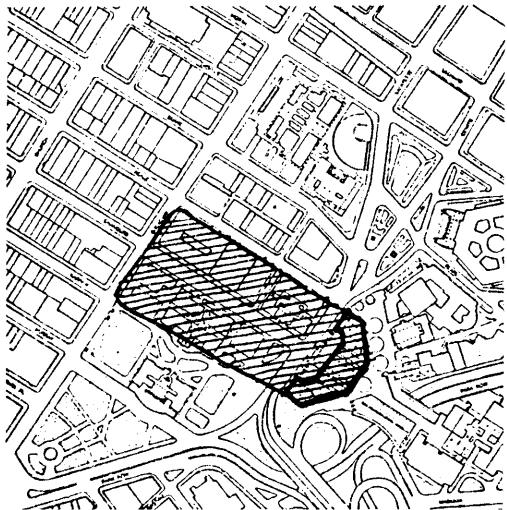
Illustration 3-11a: S22's Hieroglyphics
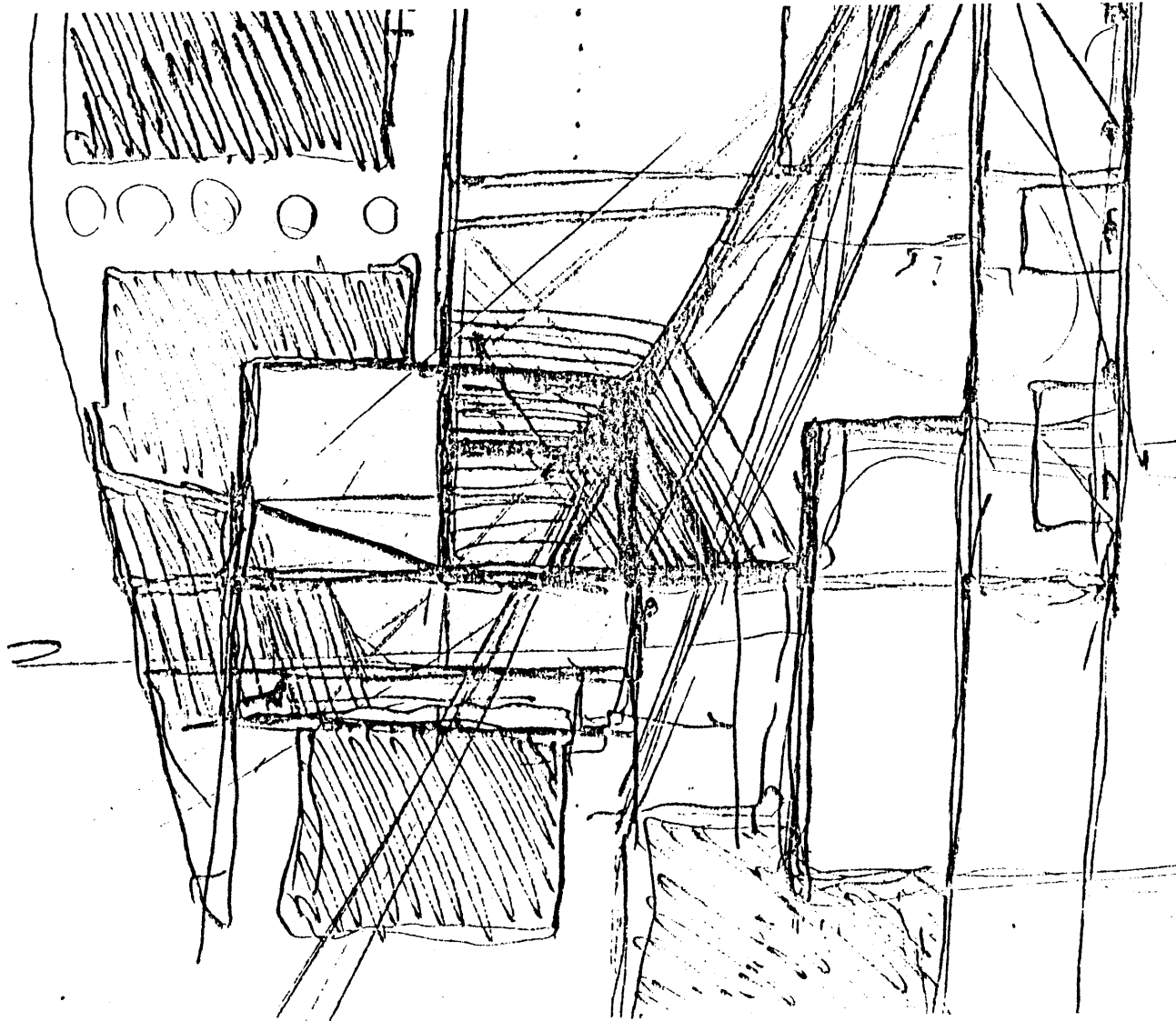
Illustration 3-11b: Hutchinson's Diagrams of S22's Scheme (facsimiles)
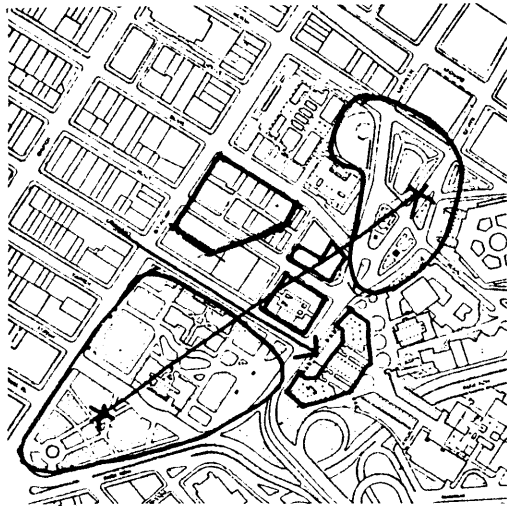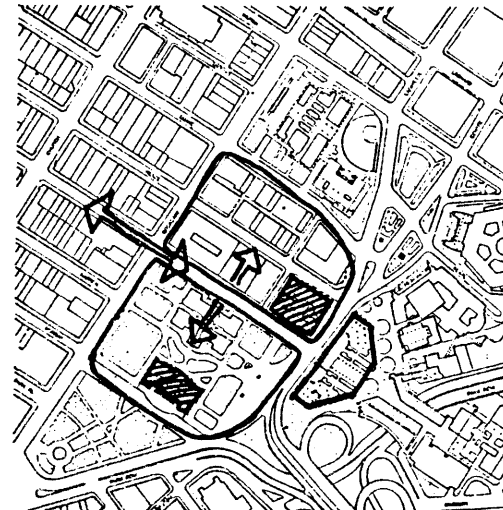

A. City Hall Park-Foley Square Link

B. Circulation Off Chambers Street

C. Zone Extended From Office Bldg.

D. Circulation Links Two Larger Zones

issues or constraints, although Heath had demonstrated their use

in his crit with her on Friday. She was reluctant to talk with-

out a workable scheme.

> S2:   I'd really rather talk on Wednesday...Right
>   now I'd be talking to you about things that
>   I really haven't sorted out in my mind.

> Hutchinson: ...It doesn't have to be at any particular
>   level...to talk about it...You don't neces-
>   sarily need to talk about schemes that are
>   fairly comprehensive...[those] dealing with
>   all possible aspects.
>
>   We can talk about partial ideas or partial
>   notions about the problem or some aspect
>   of it...Sometimes it's a...bit dangerous
>   to try to get everything to coalesce at once.

S2 explained that she was trying to create a spatial linkage be-

tween City Hall Park and Foley Square but had found two problems:

the Hall of Records was in the way and "I don't even know if it's

a good idea." Hutchinson commented that "it's a very useful way

to look at it," and continued:

> Hutchinson: Well, it is in fact a spatial thing. It
>   potentially is a functional thing because
>   those are common lines of potential movement
>   between those elements, so it's carried
>   simultaneously perhaps on a number of
>   different levels of the problem; functional,
>   spatial, and so on. So that when you make
>   a discovery like that, it restates the pro-
>   blem for you, right? I think then that you
>   have to begin to make it explicit.
>
>   First, it's very abstract...there is this
>   phenomenon. Now, what does that mean? Well,
>   I would diagram it... I would differentiate
>   between things that are of greater and lesser
>   importance to you.

As with S22, he moved quickly to talk about the use of diagrams.

> Hutchinson: We would have drawings of those things...of
>   importance. These drawings are...still sketches,

but they are done carefully on a separate
piece of paper. They would be protected,
preserved and perhaps form a basis for a
series of overlays.

...When someone comes around to talk, instead
of...wade[ing] through..layers and layers of
drawings that are sort of undifferentiated,
you could pick out the artifacts of the pro-
cess [the diagrams] which are inherently im-
portant, right? Because they have already
articulated themselves. It's like organiz-
ing your own activities in design... Certain
things become more important to you...

One of the problems that people have is that
they don't keep a graphic record of those
things, and...[ideas] have a funny habit of
getting dissipated, lost, or [lie] around...
in all these little sketches. Where that
sketch may be totally unimportant to you now,
there are some things in here that are really
still very important to you... If those get
pulled out...even redrawn, and they're revised
and transformed according to new inputs,
suddenly the thing means something different
to you...

So rather than talk about schemes, I really
think that right now it's more important to
just talk about that [constraints, issues].
And then when we do talk later...it will
facilitate that discussion.

Let's continue that process of saying that on
the one hand there are things that are very
abstract and implicit and then you have to
gradually make them more explicit...[and]
you translate them into alternatives. I can
see it as this but...also as...that.

So, you make those things [diagrams] instead
of trying to make all these schemes or build-
ings, okay?

Another student, S9, who was also reluctant to discuss an in-

complete scheme, talked about his ideas though he preferred not

to draw or diagram them.

Hutchinson: Why don't you draw it? Why don't you quickly
              sketch it for me?...

S9:   All right...I could talk to you about it
      Wednesday, then I'll have it all down....

Hutchinson: No...why can't I see you later this afternoon?

S9:   Because I've been working on this idea all
      weekend and I'm not getting any further...
      I'd like to see you on Wednesday...

Hutchinson: Well, what's so formidable about it that you
              can't make me a sketch that we could at least
              talk about?

S9:   Mainly, because I'm not a good sketcher.

Hutchinson responded in much the same way he had to S2.

For students like S2 and S9, using diagrams in the ways

Hutchinson explained meant not only they would go about designing

in a different way, it also meant they were to use their crit

sessions differently. When Hutchinson found students with the

intended diagrams, he discussed the single ideas they had

communicated and how to combine those ideas. (Ill. 3-12) These

sessions were also time consuming, however. After three and a

half hours Hutchinson had talked with only eight students

(including two hours spent with one student, S24, who had the

diagrams).

(This was the last day of the observer's second campus

visit. The accounts of the days which follow until Week Eleven

are based primarily on the teachers' reports.)

On Wednesday (3/19), the over the board crits stressing the

use of diagrams continued.

On Friday (3/21), both teachers were attending other

Illustration 3-12: S24's Diagrams

MAJOR ISSUES TO DEAL WITH

ACCOMMODATIONS OF SCALE
    VARYING BETWEEN
        ENORMOUS & INTIMATE
CHAMBER STREET CONNECTION
MIXING OF DIFF. SPATIAL TYPES
SEPARATION OF CIRCULATION (DIAGONAL THRU SITE)
CONCEPT OF GOV'T
BROOKLYN BRIDGE
3-D IMAGERY IMPORTANT

BUILDING UP
OF SCALE
ON EXISTING SITE

OBJECTIVES

1) UNIFY SITE VISUALLY & PERCEPTUALLY
2) CREATION OF UNIQUE PLACE DIFFEREI
    FROM GRID
3) ORGANIZATION STRUCTURE TO TIE BUIL
    FORM TOGETHER
4) INTEGRATION OF OLD-NEW

b BROADWAY

NATURAL
ENTRY ONTO
SITE

EXISTING SITE	VISUAL UNIFICATION OF SITE	3-D CIRCULATION STRUCTURE	LOW PROFILE GROUNDSCAPE	BUILT FORM
		SUBWAY FEDESTRIAN VEHICULAR	COMMERCIAL CIVIC CENTER ACTIVITIES	ENHANCE RELATIONSHIP BETWEEN OLD-NEW
		CREATE HIERARCHY	CREATION OF GREEN SPACE	RESPONSE TO SPECIFIC SITE PRESSURES

INTERNAL STRUCTURE vs. EXTERNAL SITE PRESSURES

CONTOUR ROOFSCAPE

studios' reviews. The review originally scheduled for this day was postponed until the Monday following the Spring holiday week (3/31). (The students may have started their holiday a day early with the teachers out for the day.)

WEEK NINE: PREPARATION FOR THE APRIL 4 REVIEW

On Monday (3/31), the preliminary review took the form of crits. Before starting, the teachers held a brief meeting about the upcoming April 4 Review and handed out the presentation requirements, "Abstractions of your priorities," and building models and drawings (Ill. 3-13). According to the "Schedule," this week was a week for presentation of finished drawings and models, concluding the first part of Phase III, "Precise development of basic alternative building and site strategies."

On Wednesday (4/2), the work and crits reportedly continued.

On Friday (4/4), students posted twenty-five schemes in the seminar room for the Review which would last from 2:30 until 8:00. The two representatives from OLMD were again the guests, and reportedly ran the session. Heath had been preparing a "briefing document" to bring the guests up to date, but it had not been completed. Hutchinson described the schemes presented as "arbitrary" and "naive," responding mainly to "formal and site issues." Discussion focused on the models rather than the detailed drawings. Many of the students had not provided the abstractions and drawings requested. Hutchinson also reported that the students had not demonstrated an understanding of the

Illustration 3-13: Requirements for the April 4 Review

████████████████████████

Department of Architecture   Spring   1975
████████

Critics: █████████████████

Presentation for Review   Friday, 4 April '75

THE MANHATTAN CIVIC CENTER

██████████████ of OLMD will be here for the review scheduled for Friday
afternoon, April 4. In order to get the most benefit from his comments
a certain minimum amount of presentation is needed.

Each group should have the following material:

1. Abstractions of your priorities at both the site and building
    levels. Indluded should be diagrams of:

    1.1. Lower Manhattan context issues
    1.2. Civic Center Site issues.
    1.3. Programmatic end activity zoning.
          (Public - private, commercial, concourse, etc.)
    1.4. Circulation -- pedestrian, vehicular, service, subway.
    1.5. Spatial -- formal strategies.

2. Presentation Drawings (in format).

    2.1. Model 1" = 80'.
    2.2. Building plans -- ground floor and typical floors in
          17" x 22" format.
    2.3. Building -- site sections at scale of section reductions
          (These will be only non-format drawings).

Several alternative schemes in diagram and model may be useful.

Please make readable-professional drawings either freehand or mechanical.

possibilities and constraints of their schemes. The guests

raised questions about "circulation and traffic studies," and

buildings being wide enough to be efficient office space. Their

major concern, as they had expressed at the March 7 Review, was

over developing the ground plane ("landscaping, texturing, and

shaping" evident in architect Edward D. Stone's proposal) to

make the Civic Center a more visually cohesive and identifiable

place. Most schemes had reportedly ignored these issues.

Hutchinson later noted that "it was obvious they had only

scratched the surface. They have a big piece of work to go yet."

WEEK TEN: FORMING GROUPS

On Monday (4/7), the teachers began a week of organizing stu-

dents into groups and getting them to develop certain basic

schemes, although it had originally been scheduled to be the

first of three weeks of "Detail development of proposals," the

second part of Phase III. The afternoon began with Hutchinson

discussing whether groups could be organized around a scheme

or a set of issues, and how interpersonal problems influenced

design work. He moved quickly to his concern about the stu-

dents' "commuter mentality." He expressed disappointment with

their progress, and became irritated over their "lack of

commitment and lack of time in the studio." He said that by

their fourth year students should have made a major commitment

to architecture, but that this entire fourth year class seemed

less involved than those in recent years. He felt

their commitments to sports, fraternities, and similar activi-
ties were dissipating their architectural commitment, but he
acknowledged to the students present that the most flagrant
offenders were not there. Students later reported they did not
find these accusations appropriate, citing the teachers' own
attendance this semester.

The teachers tried to organize groups, disregarding the note
on the "Schedule" that after April 7 groups would be optional,
but the students were reluctant to cooperate. Those who had had
similar schemes or sets of issues at the Friday review eventually
came together and continued their work. They created "marriages
of sorts," in Hutchinson's words, in the crits the remainder of
the afternoon.

On Wednesday (4/9), the teachers spent the afternoon in
crits. These revealed that several groups were not staying
together, usually because students disagreed on the collective
scheme or were unwilling to compromise their own schemes. This
resulted in "marriage breakups" and the teachers became
"marriage counselors" by their own account. They also found
that certain basic schemes were not being developed (although
no actual list had been compiled), and tried to redirect
certain groups in order to expand the range of schemes. In an
attempt to have the students working alone join groups,
Hutchinson and Heath asked each group to chose which of these
students they would be willing to work with. This was met with
some resistance, and by the end of the day eight students con-
tinued to work alone, including two of the three women students.

On Friday (4/11), Heath continued efforts to form and solidify the groups and to get them to shift their schemes in his afternoon of crits. Hutchinson, who was ill, later noted that this week was "emotional and painful, not having much to do with architecture."

WEEK ELEVEN: SETTING THE SCHEMES

On Monday (4/14), students worked individually and in groups until 3:30, when a distinguished visiting lecturer from Great Britian (G10) joined the studio at Heath's invitation to review some of the students' schemes. Hutchinson was attending another studio's review this afternoon, but had explained in a conversation with this observer earlier this day that:

Hutchinson: What we hope to accomplish this week is to get the groups firmly decided on a scheme and do design development.

As the guest arrived, eighteen students assembled in the conference area to hear S18 and S20 present their schemes and G10's comments. The discussion was on physical design; visual corridors, light angles, responses to the style of the existing buildings, urban spaces within a street grid, and the Tweed and City Hall as "garden ornaments." During the hour G10 sketched his ideas and frequently referred to built precedent (including his own work) for examples. Because of the highly-detailed comments, the session was tedious, and as few as ten students were present at any one time. The class reassembled as the next two students (S4 and S25) posted their drawings,

but only six remained after fifteen minutes. Before leaving

for the day, the guest commented on a third scheme. In con-

centrating their scheme between Chambers Street and the Federal

Building, S14 and S15 had depressed the automobile traffic on

Broadway and placed an office building and pedestrian bridge

over the depressed street. (Model photographs of later versions

of this scheme and others critiqued this week are with the April

28 Review events.) G10's response to this scheme was:

> G10: I think that works well, but there is no
> vocabulary to do that. If you don't have
> something to crib, what are you going to
> do? It takes five years to invent something.

(G10 would be a guest at the Final Review.)

On Wednesday (4/16), Hutchinson discussed the upcoming re-

views with the class and gave crits to different groups and

students working alone. Heath attended another studio's re-

view all afternoon. S9 began his crit with Hutchinson by ex-

plaining his precisely drawn floor plans (on yellow tracing

paper) including the two zones of the building, the recessed

plaza, and the location of shops. Hutchinson questioned and

commented on S9's terracing the building above the plaza, his

use of entrance imagery, his choice of thirty foot office bays,

and his not aligning its facades with those of the existing

buildings. He also noted:

> Hutchinson: You are always so hard to give a crit to be-
> cause you never have any tracing paper. I
> always have to find little corners to work on.

> S9: That's what I do.

S9's desk was so cluttered with stacks of yellow tracing paper

and study models that one could not have drawn on more than a corner of a sheet if one had the paper.

At 3:00, Hutchinson assembled the students to announce plans for the April 28 Review and the Final Review.

Hutchinson: Heath and I have talked about the logistics and we decided we would have a review, but not the kind of gang review, next Wednesday [4/23]. The reason is that we could use the remainder of next week to recoup and get things revised or whatever is necessary to take into consideration the things that are mentioned. And with three weeks before the Final Review, the time really becomes short.

We have also decided to...call for the problems and have the Final Review May 12. We think that the best way--the only way is to have the review at the time the projects are due.

The "Schedule" indicated that the work would end May 9, leaving the weekend to rest before the Review on Monday. Students complained that Hutchinson's new plan would not give them time to "physically recoup," but Hutchinson argued that some students would work right up until the last minute regardless of when he collected the drawings and models. He explained:

Hutchinson: Look, if we set our sights on that now, then there is no reason why you can't do it as well.

Then S3 asked,

S3:   Do you really expect to cover all the projects in one day?

Hutchinson: Well, maybe not...I still don't know how many we really have. I don't know how many groups have broken up... I would prefer to have a session run until late Monday night and finish it...

He then returned to the April 28 Review.

Hutchinson: A week from today we would like to have a review with each group separately. That doesn't

mean if people want to come and sit in, they
can't. But basically it's pretty cumbersome
to have twenty-eight people sitting around the
room waiting to talk about their project. It
also becomes fairly wasteful at this point.
So what we will do is make a schedule and try
to stick to it as much as possible.

We will want the people to have site plans and
building plans, sections, site sections and
elevations. And I would say a minimum of
three site section-elevations... Then basically
the same kind of thing could be asked for again.
In fact, you could look at that set of
presentation requirements and see very much
the same kind of breakdown--strategy formation,
analysis,...and study model--[for the Final
Review]. However for the final, we want
models which are very finished...

If you don't really take this review Wednesday
seriously, I think that it's going to be just
about impossible to finish up in good shape
for the Final Review. Some of you have not
really... Like the last review, quite a few of
you did the kind of drawings that we asked for,
but there were a lot of people who did not.

As the discussion continued, the more detailed requirements

(as the scales to be used for the drawings) were sorted out,

and Hutchinson asked the class who they would like to have as

guests during the next review. They asked for G2, G6, G7 and

G15, all of whom were members of the faculty with "formalist"

learnings before the transition began. Hutchinson readily

agreed, then explained that he would be giving crits to groups

this afternoon.

He then moved to the adjacent tables of S8, S3, and S12

to review their scheme, at the time in diagrammatic plans and

1/16" scale sections. Their tables were covered with layers

of tracing paper with elevations, sections and plans, and parts

of several models. Most of their seventy minute crit was spent

on the design of their multi-story lobby. Hutchinson suggested

they have "trays" cascading into the space with shops and

tellers on the lower level and administrative functions above,

and kiosks on the main floor for "quick turn over" functions.

He sketched a section through the lobby as he talked. Before

going on to the next group, he asked this group how they were

going to proceed. As S8 began proposing how the work could be

divided, however, Hutchinson told him to "resolve that among

yourselves," but not to wait for each other to make design

decisions in order to continue.

Hutchinson's crit with S14 and S15 followed at 4:30. He

covered in sixty minutes many of the same points discussed in the

two earlier crits.

Hutchinson's last session of the day was with S22 and S24

(5:30). They had created bans of subterranean offices covered

with an undulating "groundscape," readily acknowledged as

inspired by the Oakland Museum by Roche and Dinkeloo. Small

office blocks were set above grade (Ill. 3-14). They talked

mainly about the model, using the diagrammatic plans to clarify

their points. In the forty-five minute session, Hutchinson's

comments included concern for the "visual relationship" between

the circulation system above grade and the system underground,

and the small office blocks and the ground surface. He con-

cluded by encouraging S22 and S24 to make scale drawings, ex-

plaining that everything could not be resolved and then drawn.

Illustration 3-14: S24's Drawings

PRIVATE OFFICE
CORES/ENTRY

EROSION OF
PUBLIC OFFICE

II B4

II B2

ZONING

INTEGRATION

VERTICAL CONNECTION
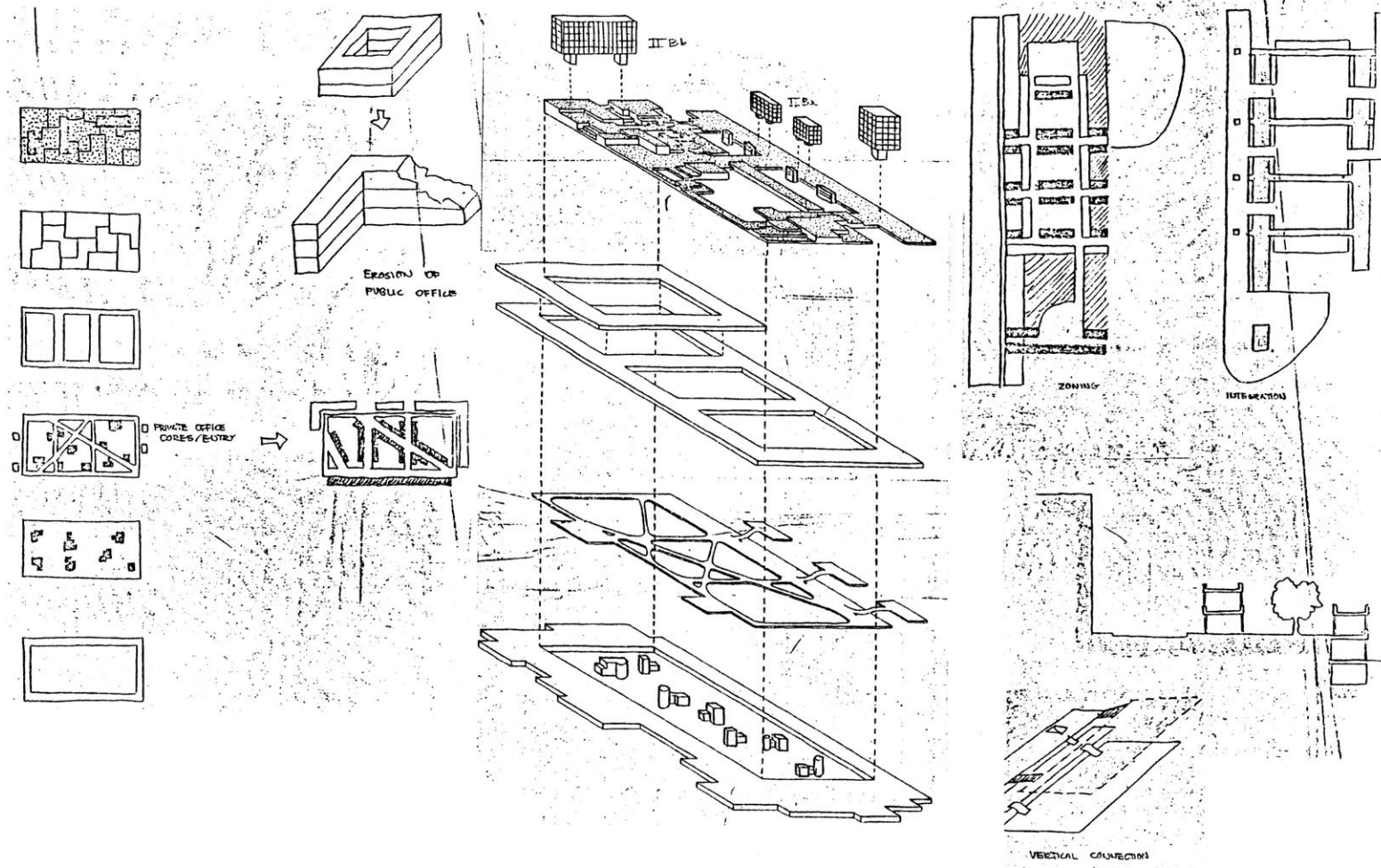
(S22 and S24 did not have scale drawings as they had been working out their ideas in their model.)   They agreed to start drawing and Hutchinson departed at 6:15.

Despite these long sessions, Hutchinson was able to work with three groups and one individual, half the students in the studio this afternoon.   Only fourteen students had remained after the review plans were discussed.

On Friday (4/18), both teachers gave crits, usually each an hour long.   They arrived in the studio around 2:30 and found eighteen students present and working.   Hutchinson went directly to S6 and S7's tables, where they began explaining their 1/64" scale plans and sections (Ill. 3-15).   Hutchinson chose their multi-story, glass-roofed lobby space to address his comments and sketches.   Sketching an overlay of their section, he suggested other roof configurations referring to the IDS building in Minneapolis, and other arrangements for the trays projecting into the space.   He also asked how they would detail the roof structure, and what the grid on their building facade represented.   He then reformulated his question and asked:

Hutchinson: If you are the urban designer, what architect
                would you want to do it?

He went on to discuss how to articulate the building's systems to clarify its expression, and how their auditorium would "deflect circulation" through the site.

Heath talked with S4 and S25 about the incremental growth of their scheme, referring to the posted articles on the British Museum National Library project, and about getting service to

Illustration 3-15: Drawings from Crit, S6 and S7's Section
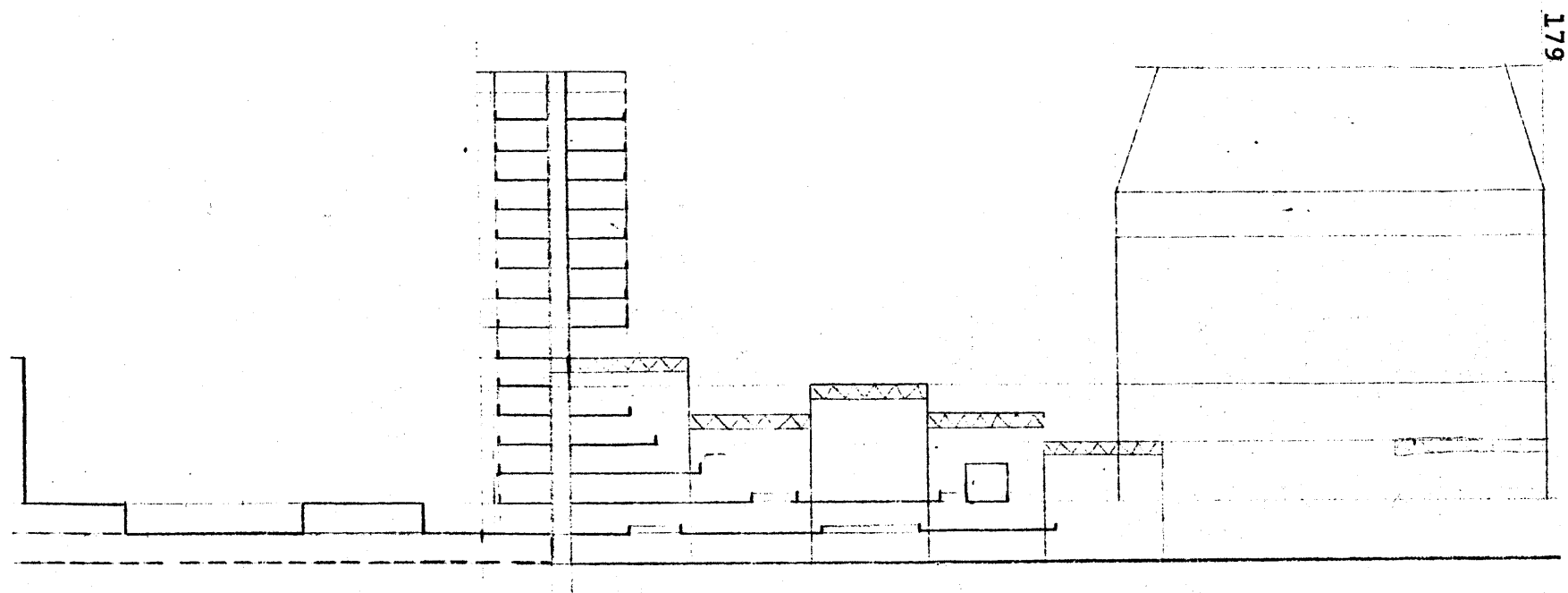
Illustration 3-15, continued, Hutchinson's Overlay Sketches
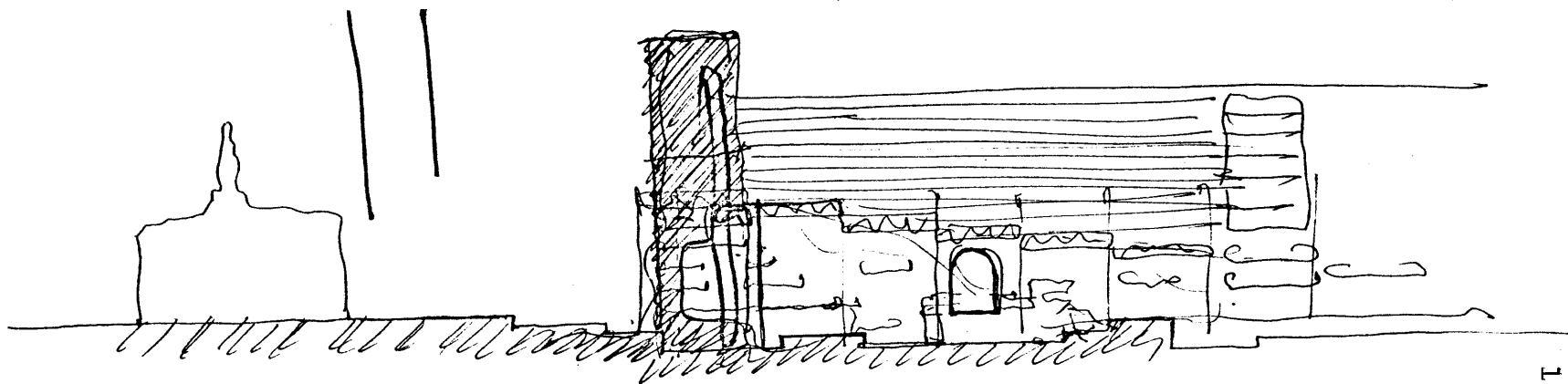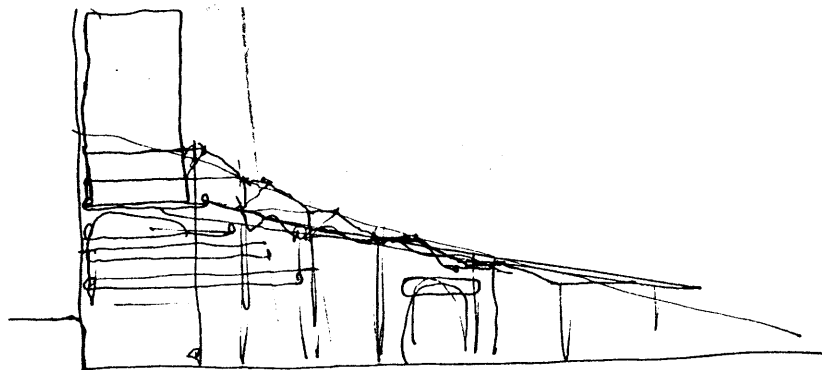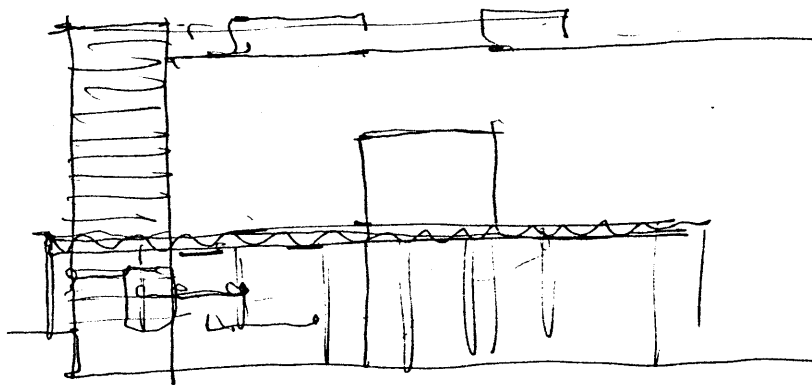
Illustration 3-15, continued, Hutchinson's Overlay Sketches
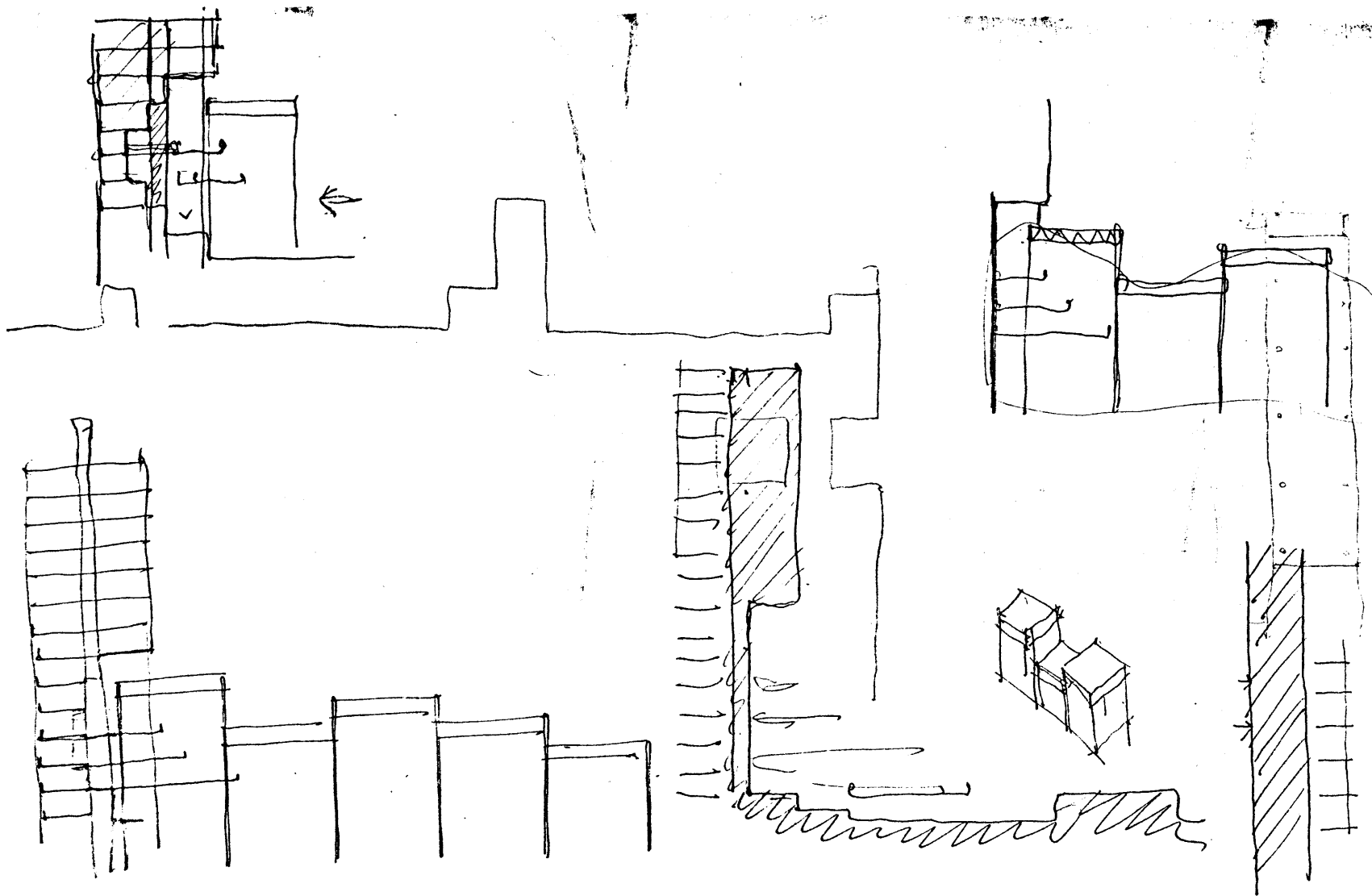
the shops in their underground mall, referring to Toronto's malls.

Hutchinson stayed until 7:00 and talked with S11, S14 and S15, and S18 and S20 about their schemes' treatment of circulation in the Civic Center. He also cautioned S21 that she needed to get more drawn to have a good crit.

WEEK TWELVE: PRELIMINARY PHASE III REVIEW

On Monday (4/21), Heath gave crits to two groups and two individuals, half of the twenty students working this day, while the others occasionally listened. Hutchinson was attending another studio's review; several students commented on his own apparent "commuter mentality." With S9, Heath discussed details in his plans and elevations; with S8, S3 and S12, he responded to their facade drawings; and with S4 (his partner S25 was not present), he talked about interior and exterior circulation and their connections. Each of these sessions lasted an hour. His session with S2, S5, S17 and S23 (students who had been reluctant to join a group, but who Hutchinson had formed into one) constituted their first crit as a group. In their ninety minutes, their problems of operating as a group were evident and Heath tried to assist. Forty-five minutes into the session, Heath explained:

> Heath: It's a strong idea... By this point I would have made innumerable sections to study potential relationships with the buildings, subways... If that's your proposal, then that's what you should be studying. You seem to be thrashing around here. You don't seem to know how to take a certain aspect of this problem and develop it...

One problem is that you are asking me to
discuss this at the level of architecture and
I don't see any proposals so far that I could
talk about. Up to this point, I've had to
talk about it at the level of general concepts.

Also, you divide up the work before you have any
common understanding or a scheme. S2 is to
look at the relationship with Foley Square
and City Hall Square while you are dealing
with this. How can that be looked at separately?
...it would be so much easier to have a
scheme to look at...

S5: Maybe I made it seem that all the work was
separate. At the stage that we broke off,
Hutchinson had suggested to get the most
out of all four of us that we have to work
separately on different things and then put
it together. So we had general notions, like
the underground tube.

Heath: So shouldn't one or two people very quickly
sit down and begin to design that thing,
because it's so crucial?

S23: Yeah, that's what we thought. We have a lot
of internal problems, to put it mildly.
(laughter)

Heath: But given internal problems, you know, gee,
you live with somebody, you work with some-
thing. There are always problems, problems,
problems. But you have got to be able to do
it. You have to be able to sit down for two
days and do it. You have to take responsibility
for yourself..."I will design it. This is the
way we are going to do it."

S5: That's what we did and that's what we were
discussing when you came over...

We have been working closely together, trying
to make important decisions. (laughter)

S23: Putting that building together didn't take
long. We sat down and hashed it out. Putting
in the bar, the core, etc...because the way
we started the whole group was putting that
in, then we sat down and did it. But it didn't
work out that way.

Heath: Oh, God, I'm unwittingly in a crisis situation. Where you...don't you know what the hell you are doing?

S2,S5,S23: YES!!!

S23: We thought we would bluff our way through it, but...I don't know where to go or what to do. Hutchinson was going to come up, but he is at a review. I spoke to him Friday about it and at that time all four of us were not here.

Heath: I don't know what your feelings are. You have got to sort out whether you guys really can work together. If it's internal relationships that are spoiling everything, then...

S2: Then what?

S5: It's too late to go tell someone to start walking.

Heath: ...but if you just can't pin down...if there are competing ideas here...

S5: We have too many ideas.

[S17 returns to the studio from an errand]

Heath: Is it egos? Are you strongly ego-oriented?

S23: No...let S17 present his work on Chambers St. He is part of our group.

S5: Then why isn't he here?

S2: S17, bring your stuff over.

S23: This is the major portion of our design, the crux of the whole thing.

S17: Well, what have you been talking about?

S23: We went over the other drawings.

S2: We want to find out what is happening on Chambers St. Tell us.

S23: We each did our brief. It's your turn.

S17: Immediately I concerned myself with hard lining the plan and section of this underground tube

in its initial phase...as strictly a subway
connector. [Shuffling drawings, he shows a
simple plan and section at an intersection.]

S2:   Where is your other section?

S17:   Multi-level tube pay bypasses...

Heath: Have you looked at any of the Market Street
        stations on the BART system?

        Is this the only section you have drawn? We
        have been talking about the whole thing. I
        seemed to have walked into some kind of hornet's
        nest. You seem to be having some problems
        and I guess...if that's as far as you have
        gotten, just making one section through there,
        if the rest of you are working at that pace
        it will take three years time. The point about
        this [drawing]...these kind of studies, of
        which this partly finished drawing would be
        just one small part...with plans, sections,
        elevations, etc., you could work at it as a
        problem. It would seem that a key set of
        decisions stem from the way that you have
        started and it would affect the way you deal
        with the rest of the problem.

        Look, I tell you, if you guys were working
        in my office...two years ago, we were working
        on an urban design problem in the office and
        a set of guys had recently been in school.
        One hadn't done an urban design problem before.
        One was building his own house. It became
        evident to me early on that they weren't
        strongly, efficiently functioning parts of
        the team who could take certain aspects of the
        design, develop ideas out of them and feed
        them back in. Two of the five got fired very
        soon. The other three gradually began to
        produce because we really rode them and said
        "look, you guys are not just draftsmen, just
        because you are being paid less and are sitting
        in the other room...you are important parts of
        this whole set up. We are dealing with urban
        design here. It's not something that one person
        can slip out of his sleeve and do a big master
        architect job on it and some people draw it
        out in the back room..."

        We are in an academic situation, but I don't
        see the situation in the studio differently...

if I really wanted to play that role, I would
kick you all in the ass and tell you to sit
down and make some crucial decisions. And I
don't mean waving your arms about. I mean making
sets of drawings.

You have a set of very general conceptual
ideas here that are developable and strong.
It seems to me to be a part of a really
consistent urban design approach, rather
than making more architectural statements
which are unrelated...

If it's interpersonal dynamics that are at
fault, for Christ's sake, in the next few
hours either sort it out or go your separate
ways and say "I'm going to design this" and
make some drawings of something. To just
flounder about like this...or is there a
drawer full of drawings that you don't want
to show me?

A couple of times in the last week in various
people's schemes, I got very excited about
their thing both at an urban design level and
an architectural level, simply because three
people sat down and they simply sunk their
differences if they had any. They had really
begun to make drawings, for Christ's sake.
Do the things that architects do and out
of that we start to have these really optimistic
sessions. We did overlap about what if you did
this...the adrenalin flows. It doesn't flow
if you just sit around feeling sore at the
other person. It's ridiculous. You just get
it together, otherwise...

You have to do the job of the people I was
describing to you, as well as coming up with
the big idea...Somebody had to make specific
sections, specific studies of something, and
bring it back and say "this is what I found out.
Let's put it together or make a model and see
what it looks like." Then the decisions would
be made by the people. But you couldn't make
the decisions at the various levels unless
those people had taken the responsibility
and initiative to make those kinds of drawings.
If they wait around for someone to tell them
what to do, Christ, you know.

As Heath left, the four were discussing what each would do.

S23 announced his intent.

S23:   I'm going to do a lot of this stuff that I
       wanted to have done all along. I'm going to
       sit down and draw that plan that goes from
       Battery Park to Chambers St. at three levels,
       and make the connections at the subway station...

On Wednesday (4/23), the preliminary review, planned the

previous Wednesday, began at 1:30 p.m. in the conference area.

Each of the guests who the students had requested attend

cancelled in the morning. The groups and individuals presented

their schemes (Ill. 3-16) to Hutchinson, Heath and a visitor

from the faculty of another Northeastern school of architecture

and planning, while other students worked.

Although the teachers had posted a sign-up sheet for

twenty minute review sessions, they typically lasted forty to

eighty minutes. The more complete the drawings, the more

discussion they generated. At 7:30, only seven schemes had

been presented. During these sessions several of the fifteen

students working in the studio listened to parts of the

discussions.

Most of the schemes had the drawings and models the

teachers had requested, though only a few students included

diagrams. The extent of detail and graphic quality of the

drawings varied substantially.

The visitor's questions differed from those of the teacher's

and the previous guests. He asked more about the students'

approach to urban design, than about their physical designs.

For example, he told one student that the view of the client

evident in his description of his scheme was that of "employee"

and "consumer" but not that of "residents," although many

Illustration 3-16: Models/April 23 Review
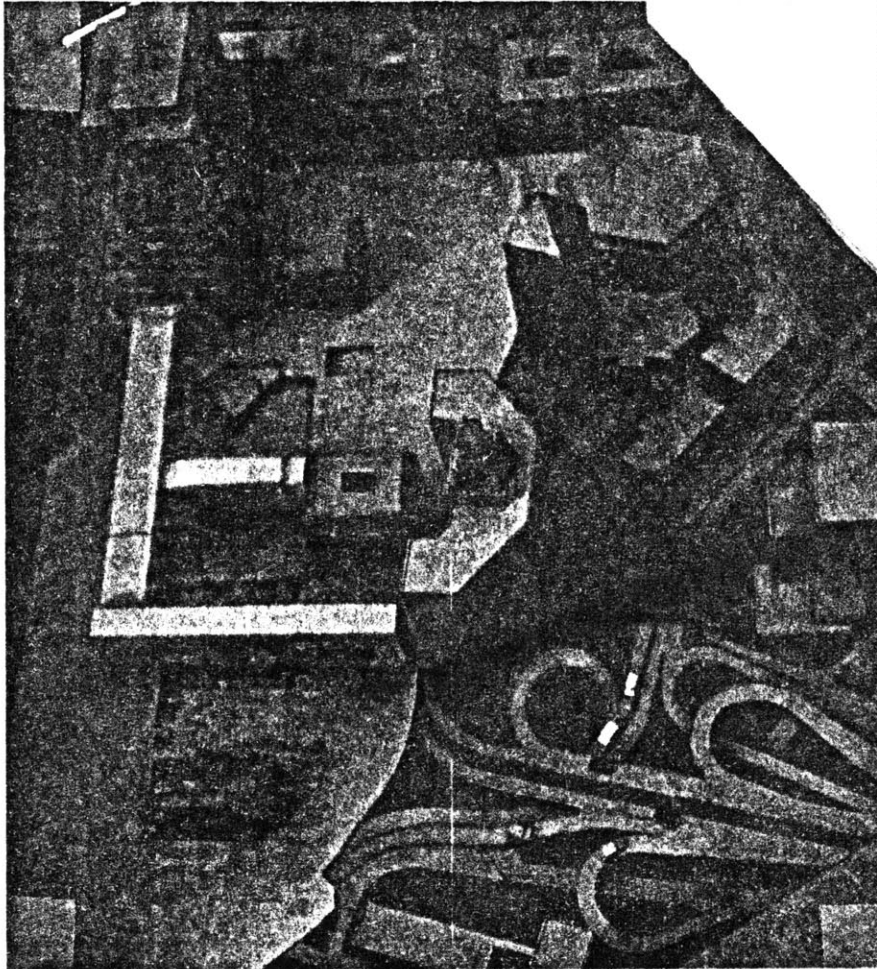
S6,S7
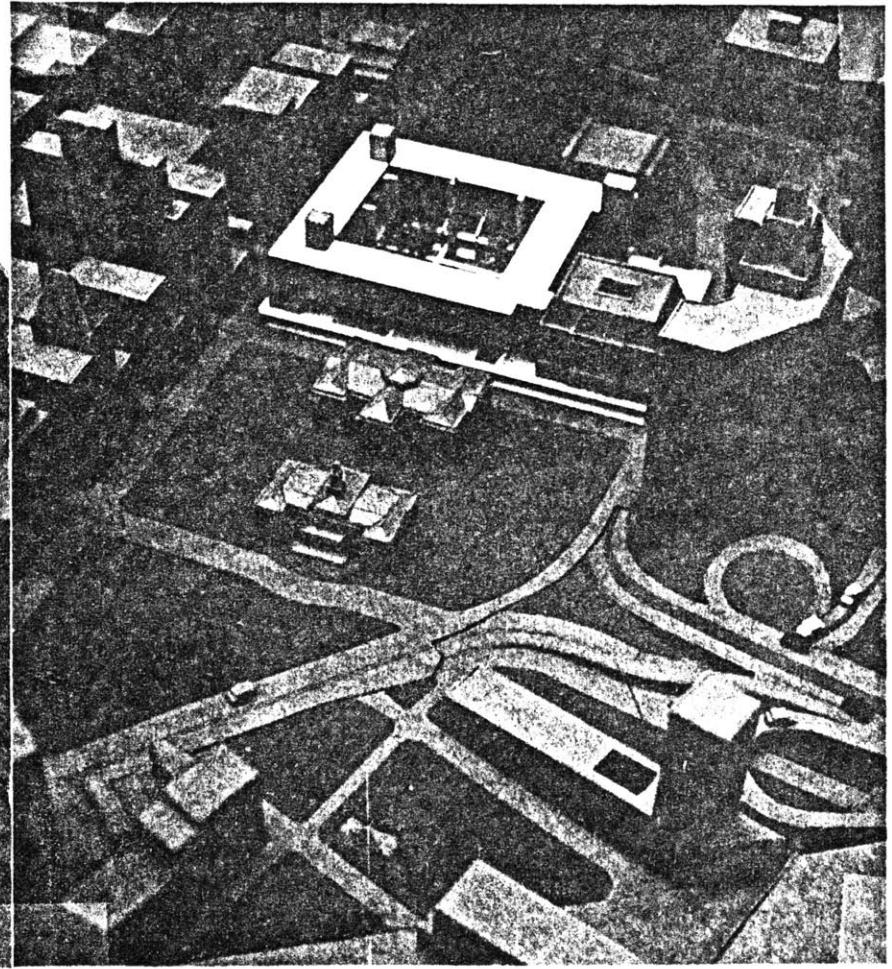
S8,S3,S12

Illustration 3-16 continued

S9 An Earlier Model
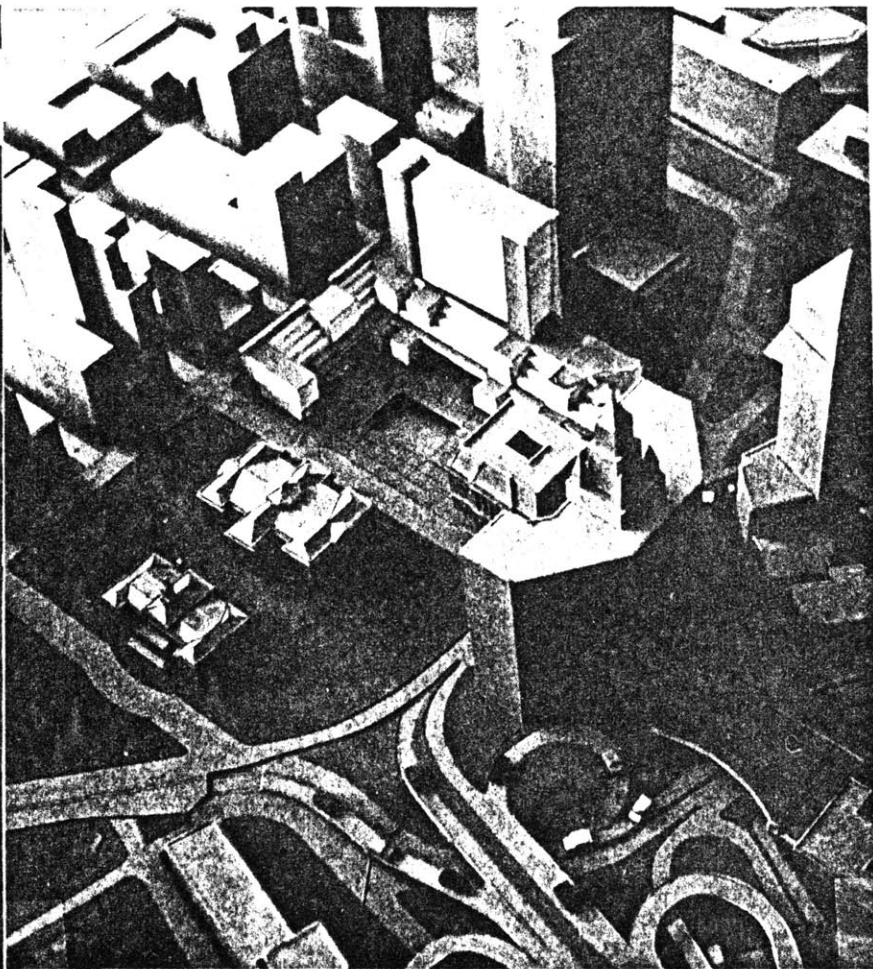
S9

Illustration 3-16 continued
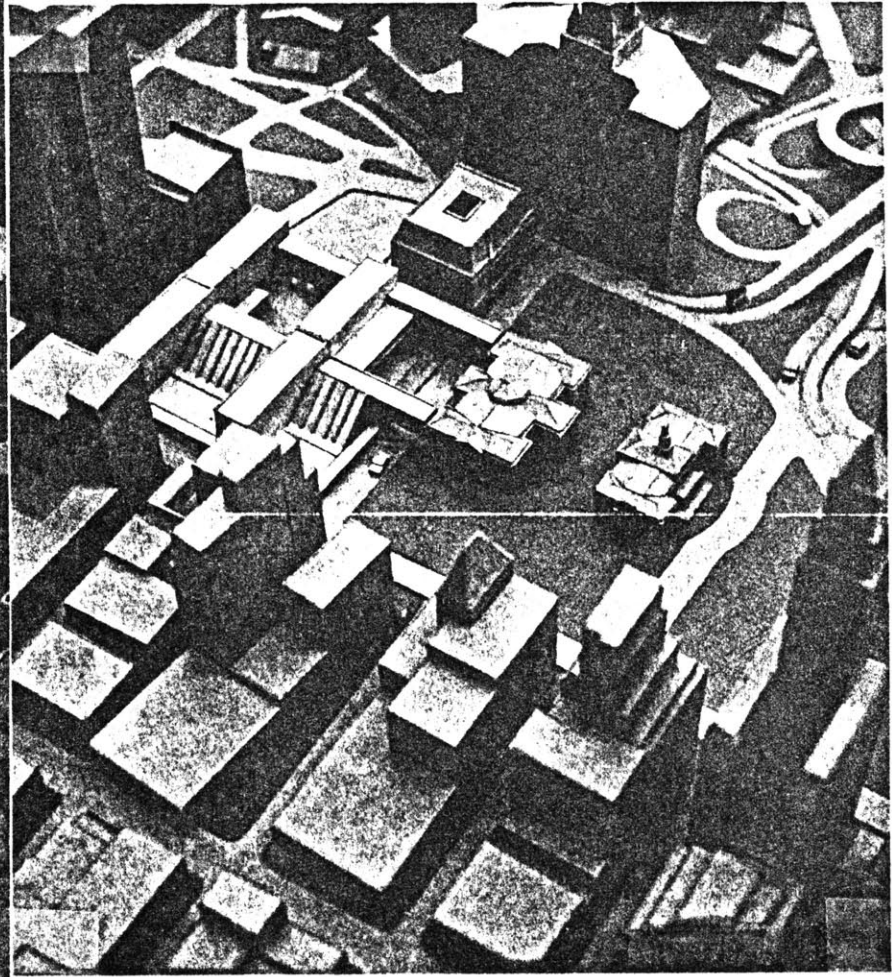
S-
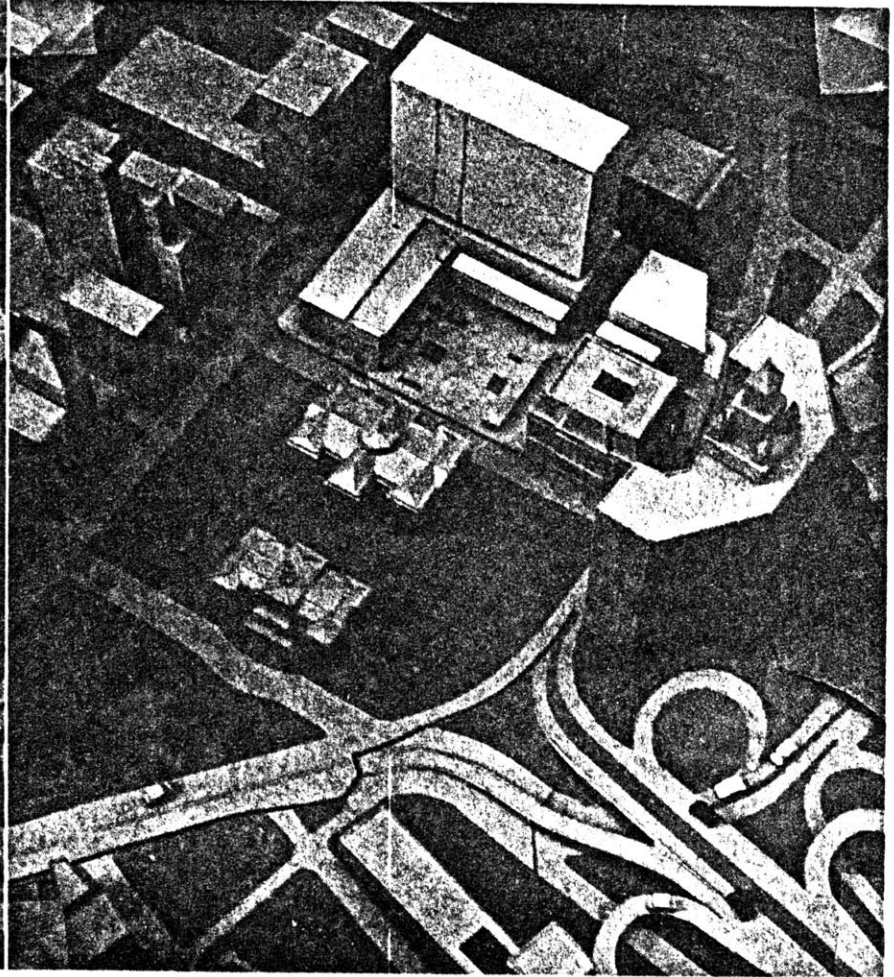
S10

Illustration 3-16 continued

S11
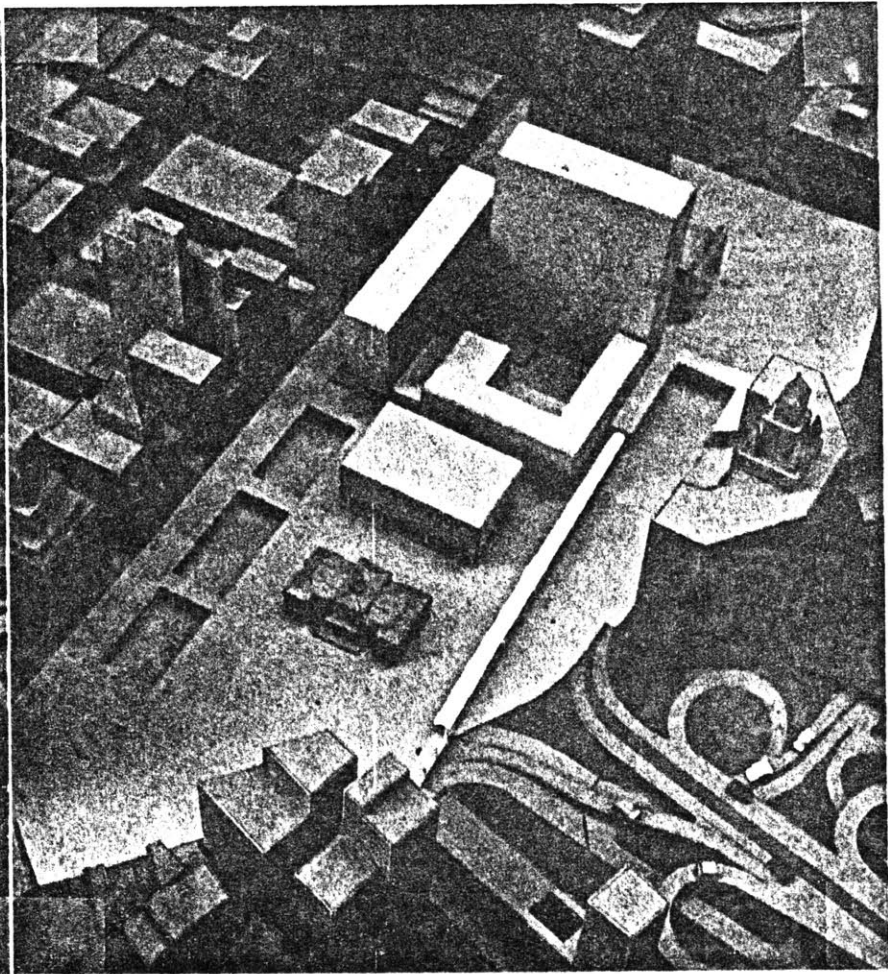
S14,S15

Illustration 3-16 continued
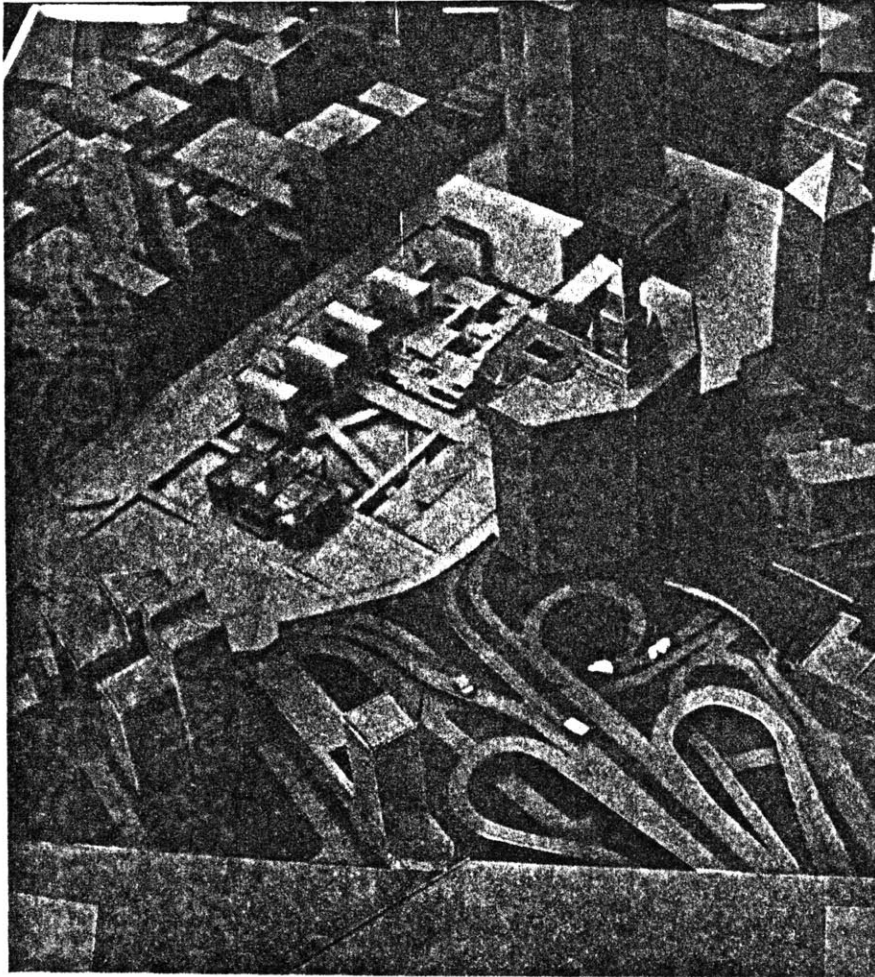
S22,S24

S28

people lived in that part of Manhattan. He gave an example of a client group who had been similarly ignored and had stopped another project in New York City. Hutchinson and Heath responded to these remarks by helping the students present and defend their schemes, and by explaining the earlier phases of work to the visitor.

At 6:00 Hutchinson announced that the review would continue on Thursday at 2:30. (The visitor was also involved in reviewing the two schemes presented that afternoon.)

On Friday (4/25), the review resumed at 2:30 with Hutchinson and Heath. Their comments about the four remaining schemes were more like those in their crit sessions than those in the Wednesday review. Again, fifteen students were working in the studio. Both teachers worked with these groups and individuals after the reviews ended at 5:30.

WEEK THIRTEEN: FACADE DESIGN AND PENCIL PRESENTATION DRAWINGS

Monday (4/28), which began the last two weeks of work before the Final Review, was scheduled for "final presentation" of the schemes. This week the teachers wanted students to focus on designing the facades of their buildings, and laying out their presentation drawings in pencil to be reviewed before they were inked. Heath handed out the "requirements for final presentation" specifying the concept diagrams, abstractions, model, building plans, and site sections for each scheme. Additional requirements were listed for those working

in groups (Ill. 3-17). He began reviewing the student's draw-
ings, but saw only part of the class. Hutchinson was attending
another studio's review all afternoon.

On <u>Wednesday (4/30)</u>, both teachers continued reviewing
the students' drawings, and discussing "strategies for making
facades" as they talked about designing their building facades.
After the April 4 Review, two students, concerned about the
progress of their schemes, talked to the teachers about dropping
the course, although they had done satisfactory work in Phase
I and II. One student did drop the studio to continue his
computer graphics work, but the other, S13, was convinced to
stay in the studio and be responsible for coordinating and
assembling the booklet of the students' work. She agreed and
arranged with a reproduction company to get a discount on the
reduction of the students' drawings to the booklet's format.
Today had been the day scheduled for the drawings to be done,
but they were not ready and S13 saw her efforts as wasted.

On <u>Friday (5/2)</u>, the teachers' review of pencil drawings
and facades continued, although they had to work in the studio
over the weekend in order to see everyone.

<u>WEEK FOURTEEN</u>: <u>INKING PRESENTATION DRAWINGS</u>

On <u>Monday (5/5)</u>, Heath continued to review students'
drawings while Hutchinson attended another studio's review all
afternoon. This week had been set aside for inking the
drawings and diagrams and making finished models. The erratic
work schedule established the previous week continued with

Illustration 3-17: Requirements for the Final Review

DEPARTEMNT OF ARCHITECTURE
██████████████

SPRING 1975

CRITICS: ██████████████████████

Final Review: Monday 12 May 2 p.m. ██████

Manhattan Civic Center

Requirements for final presentation will be graduated according to team size.

All drawings will be 'in/format' either 81/2" x 11" or multiples thereof. A reduction of any drawing over 17" X 22" must be provided by the students after the final review.

Prints shall be hung - trimmed to format (no tracing paper) Zip-a-tone should be used to make drawing read, i.e. tones over commercial areas, voids in plan, shadows in sections -- elevations, etc. no color (everything is to be printed in a booklet)

A Graphic scale should be provided on each drawing.

Requirements:

1. One person
    1.1 Concept diagrams -- precedents, metaphors, etc. to be included.
        81/2" X 11"
    1.2 Abstractions of your priorities at the site and building levels
        81/2 " X 11"
        1.21 Manhattan -- lower Manhattan context issues.
        1.22 Civic center issued
        1.23 Programmatic and activity zoning
        1.24 Circulation -- Pedestrian, vehicular, service, subway
        1.25 Spatial - Formal Issues

    1.3 Model 1" = 80' Showing buildings in more detail than blocks and
        site development including landscaping.
    1.4 Building plans -- subterranean, ground, typical floors, etc.
        Ground floor plan should show entire site development.
        1.41 Diagram alternative office floor layouts.
    1.5 Site sections - Elevations showing surroundings 1' = 64'

2. Two persons - requirements for one person plus:
    2.1 Building sections - elevations at a scale larger than 1" = 64' (with
        shadows)
    2.2 Roof plan with shadows showing entire site developemnt - 17" X 22" format

3. Three persons or more: requirements for two persons plus:
    3.1 Axonometric of major interior space.
    3.2 All drawings and model should be done in more detail

students working whenever possible regardless of the regular
studio times.

On Wednesday (5/7), both teachers answered students'
questions on the presentations and on details in the designs.
While some students had worked outside the studio or outside
the regular meeting times, they all sought out the teachers
during this last week of class work.

On Friday (5/9), the students continued their presentation
work, as they did through the weekend until it was posted on
Monday. Both Hutchinson and Heath were attending other studios'
reviews all afternoon.

WEEK FIFTEEN: THE FINAL REVIEW

On Monday (5/12), the semester's work was to be complete.
The groups and individuals posted their thirteen schemes in
the large lecture room used for their professional practice and
technology courses, as well as the Department's lecture series.
The edges of the rectangular space were busy by 2:00 with more
than fifty people (students from this and other studios, wives,
teachers, and guest critics) posting and viewing the drawings
and models, while the jumble of chairs for two hundred in the
center held books, coats, and a few exhausted students. By
2:30 the schemes were posted though in no particular order, and
Hutchinson opened the session.

Hutchinson: I think the way we are going to run this today
             is pretty well known by now. I think we commun-
             icated to most everybody, but I wanted to just

> mention it. Instead of have it run where we
> take a scheme and students get up and present
> it, then we move to the next one and so on. From
> experience, that really takes a long time and
> also begins to get fairly tedious. We thought
> we would split the guests into two groups and
> explain the projects. You (students) can stick
> around if you want, if you want to go away and
> shower or eat, its not a matter of excluding you,
> and come back around 4:00. By that time we will
> have had a chance to...look at them, and then
> have a discussion around 4:00. The jury [the
> guests] then would ask questions, and make comments.
> You can ask questions or feel free to defend your
> own position or whatever you want to say about
> your project. We are not trying to exclude you.
> We are just trying to keep the thing moving more
> quickly. So now, if you want to split or stay--
> by 4:00 we can assume we will get back together.

As some students began to depart, Hutchinson took five

guests to one end of the room and began explaining the students

schemes, while Heath, three guests, and several students began

at the other end (Ill. 3-18). With Hutchinson was OLMD 2,

a third year studio teacher with "formalist" leanings (G6),

a planner/architect from the school's planning department

faculty (G12), and two representatives from New York City's

Historical Commission (who left before the discussion began).

The guests with Heath were OLMD 1, the teacher of the fall

urban design studio (G8), and G10, the British visitor in the

studio April 14. This visitor and the representatives from

the OLMD were the only guests to have previously reviewed any

of this studio work.

As the guests went around the room, the teachers spent

five to ten minutes explaining their sense of the central

ideas in each scheme. This technique followed from Hutchinson's

generalization about students' presentations.

Hutchinson: The way people describe what they do is very
              interesting. What they choose finally to say
              about what they do is very revealing. I always
              want to intervene and say but isn't really what
              you are doing this, rather than what you say
              you are doing... They are doing one thing and
              talking about something else. Or they are
              doing one thing and not realizing what they
              are doing had certain underlying assumptions.
              (Interview, 5/14)

The drawings and models around the room were precise

and pristine, although many of the schemes did not have all

the materials required. The "concept diagrams" and "abstractions"

were most typically omitted. (The schemes of S9, and S8, S3,

S12 presented more of these than others.)

Illustration 3-18: Phase III Work, S6,S7
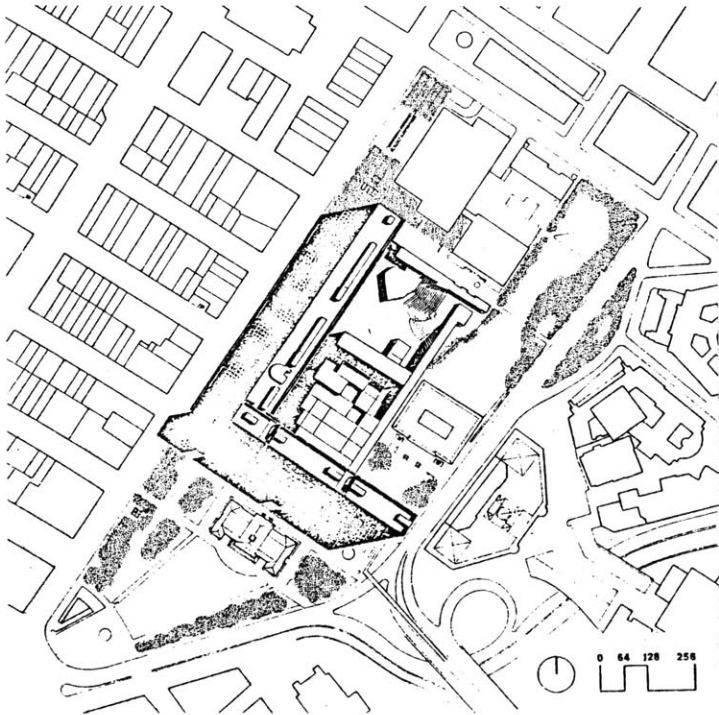
MANHATTAN CIVIC CENTER

PLAN: SITE

MANHATTAN CIVIC CENTER

PLAN: G.

LEGEND:

———— VEHICULAR TRAFFIC

- - - PEDESTRIAN TRAFFIC

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE URBAN DESIGN   FOURTH YEAR
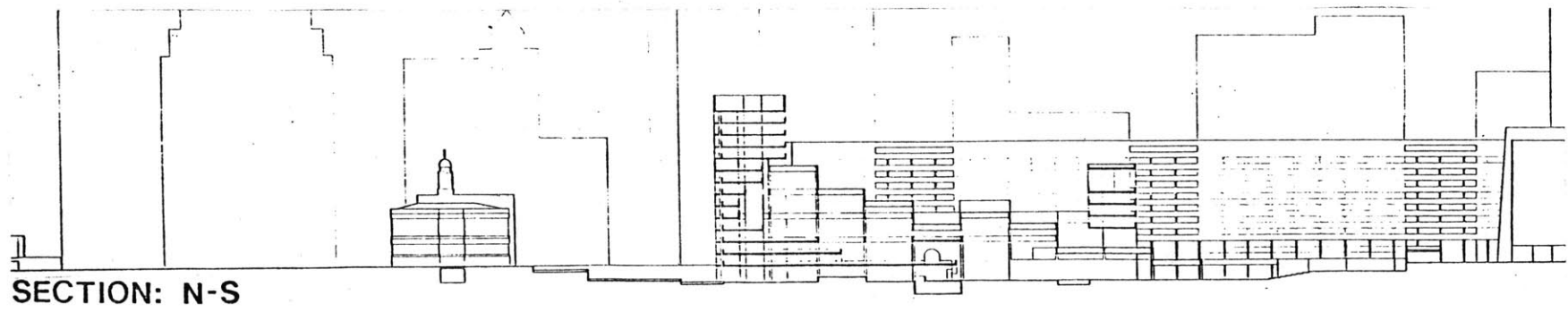
Illustration 3-18, continued, S6,S7
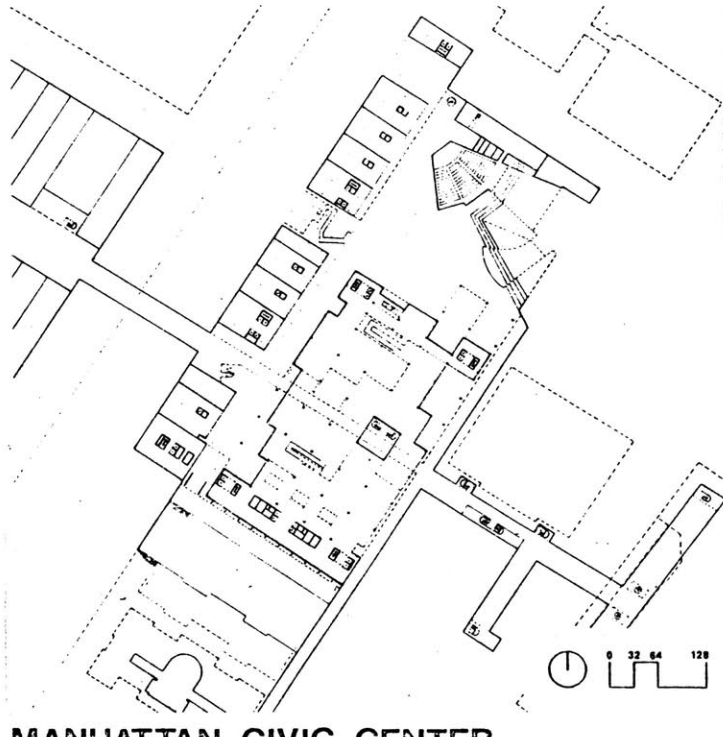
MANHATTAN CIVIC CENTER

PLAN: -1
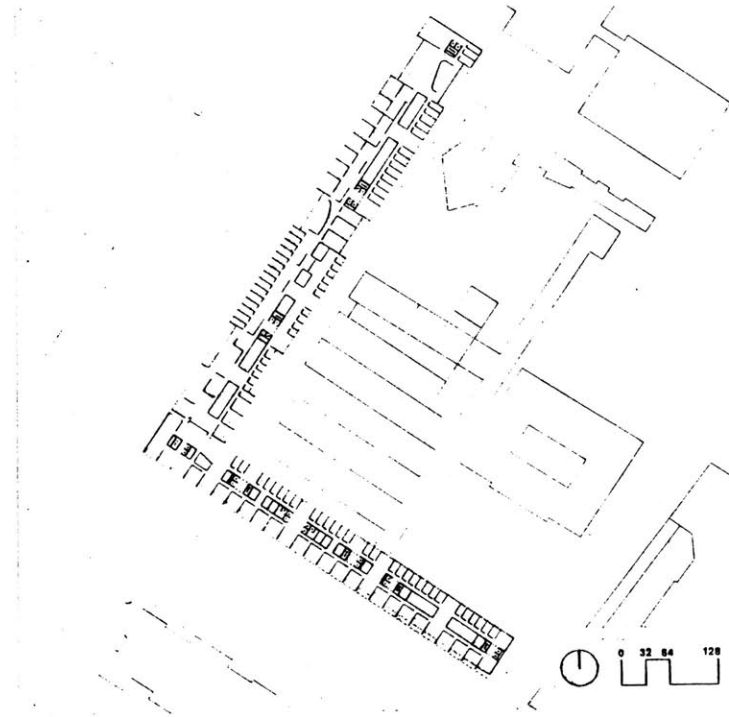
MANHATTAN CIVIC CENTER

PLAN: TYP.

Illustration 3-18, continued, S6,S7

SECTION: E-W   0   25   50   100

SECTION: N-S

Illustration 3-18, continued, S8,S3,S12
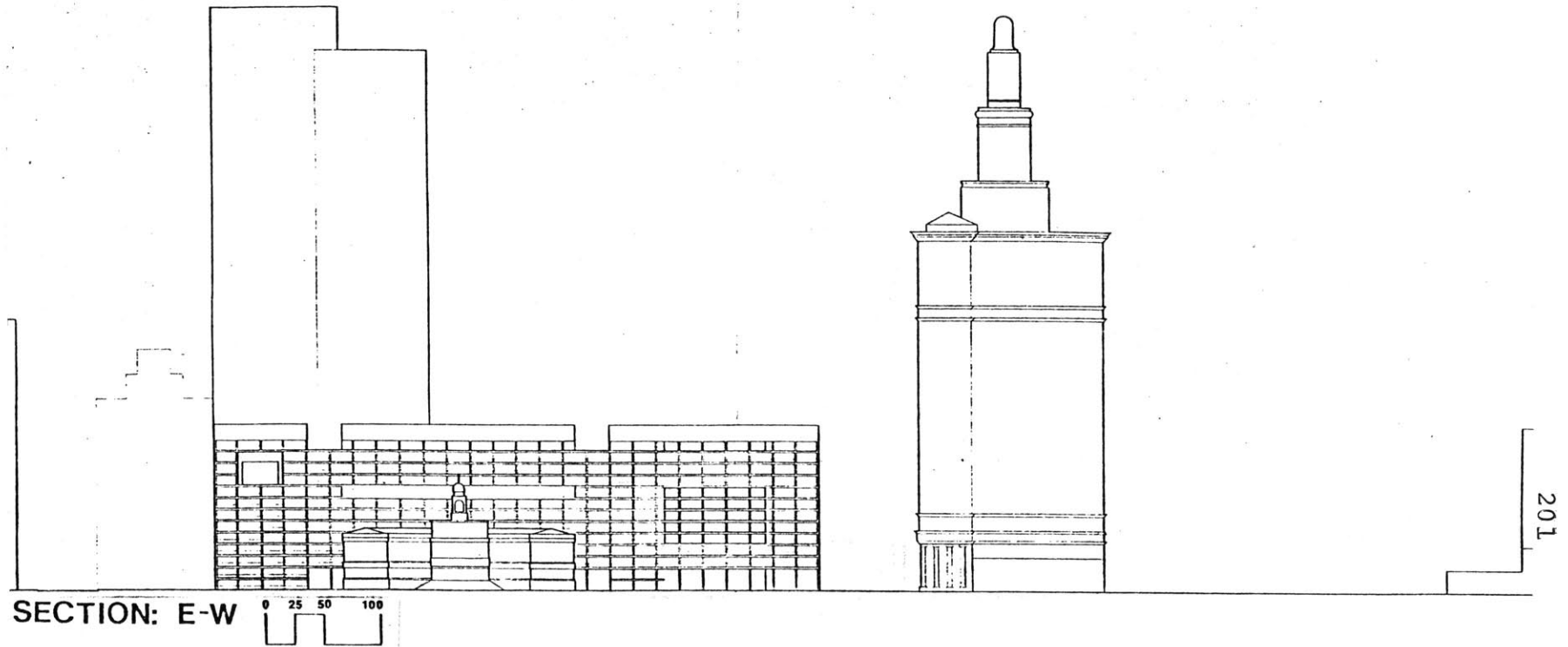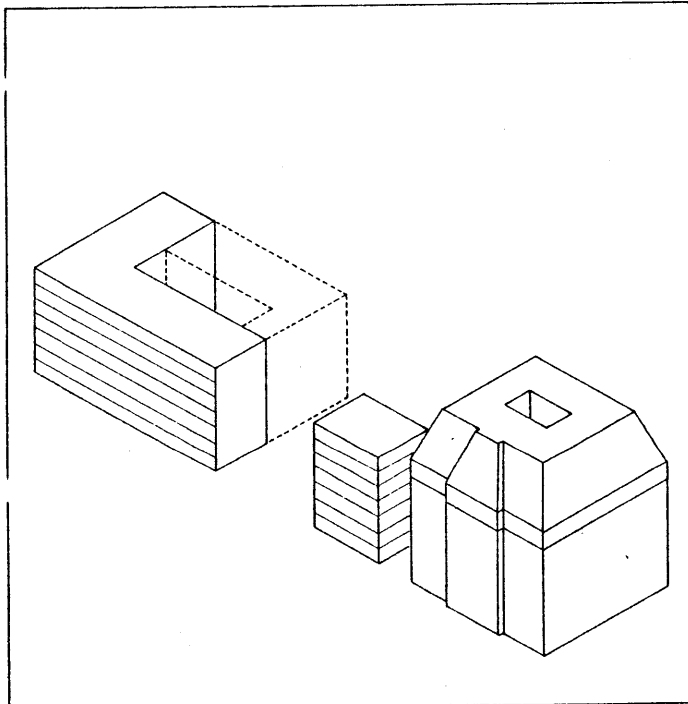
PRESERVATION
response

Restoration and reuse of portion of Sun Building
Partial facade transplant from Reade St.

C.U.U.D.4

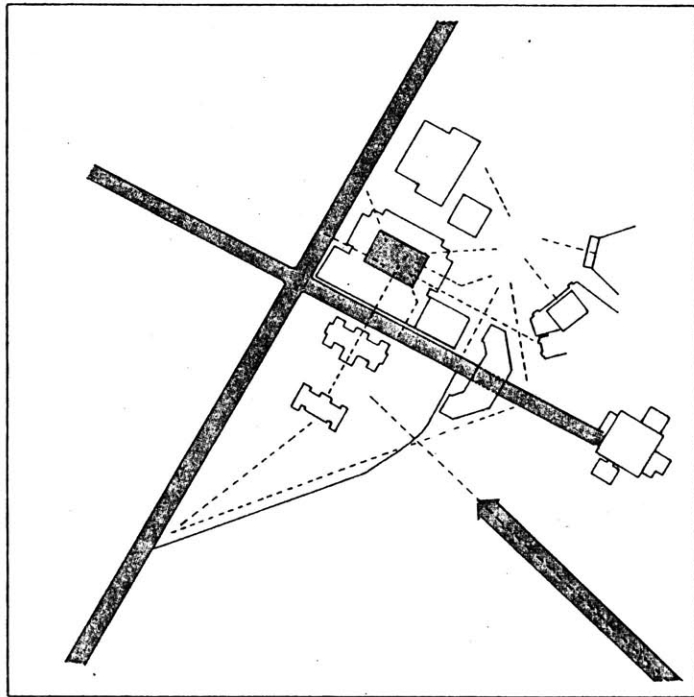DEPARTMENT OF ARCHITECTURE   URBAN   DESIGN   FOURTH YEAF
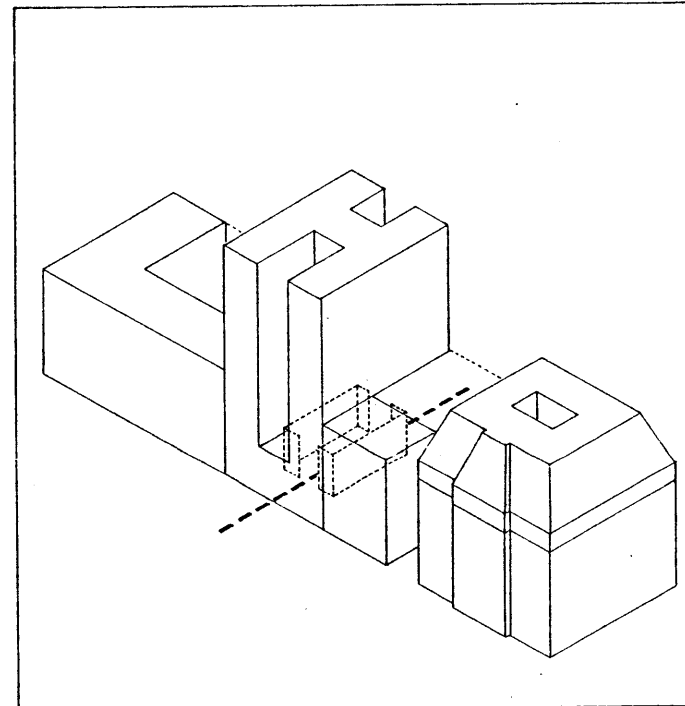
PRESERVATION
response

Integrated use of Emigrant Savings Bank Building
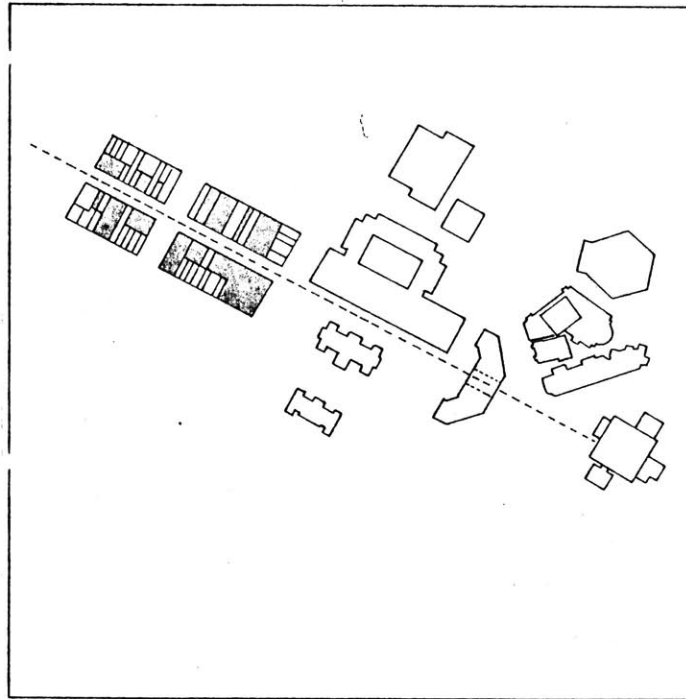Redesignation of use for Lobby

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR

Illustration 3-18, continued, S8,S3,S12

AXIAL RELATIONSHIPS
response

Recognition of major and minor axes
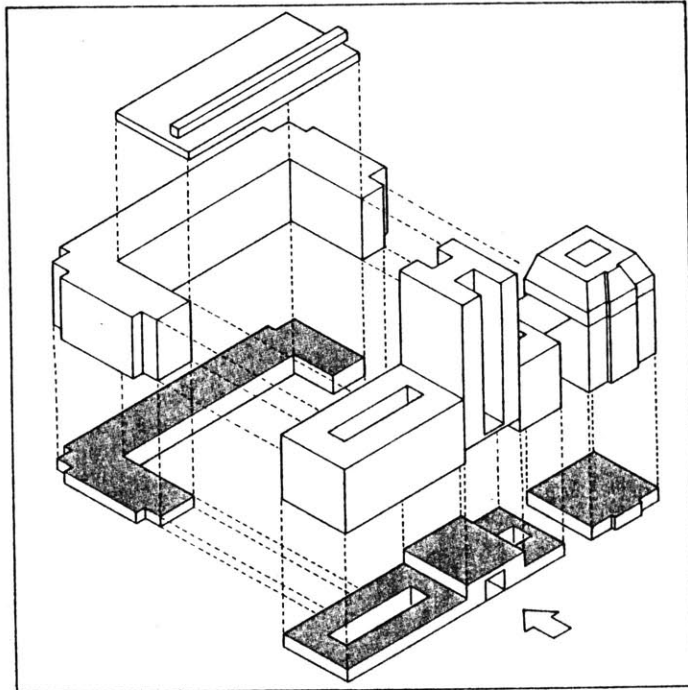Reinforcement of centrum through introduction
of major interior space

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN   DESIGN   FOURTH YEAR

FUTURE EXPANSION
response

Building acquisition and new building infill to tie in
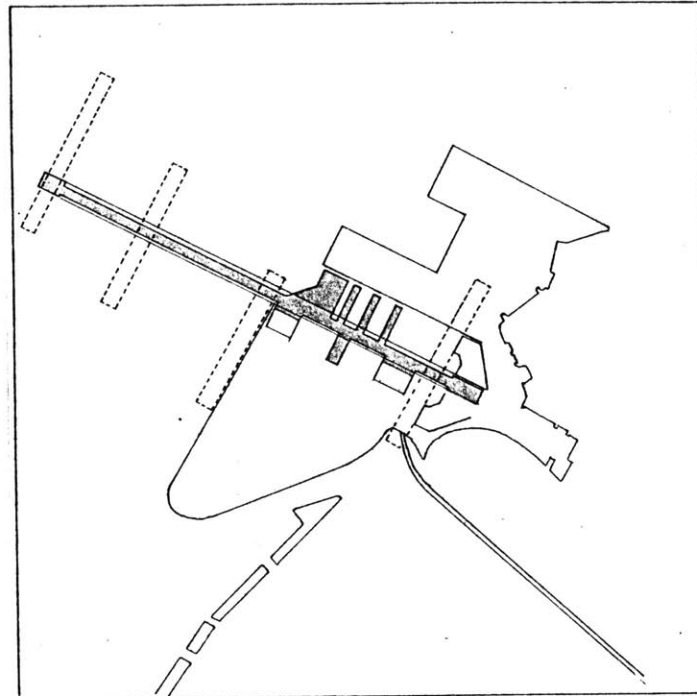with Chambers St. link

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE   URBAN   DESIGN   FOURTH YEAR

Illustration 3-18, continued, S8,S3,S12

ACTIVITY ZONING
response

C.U.U.D.4

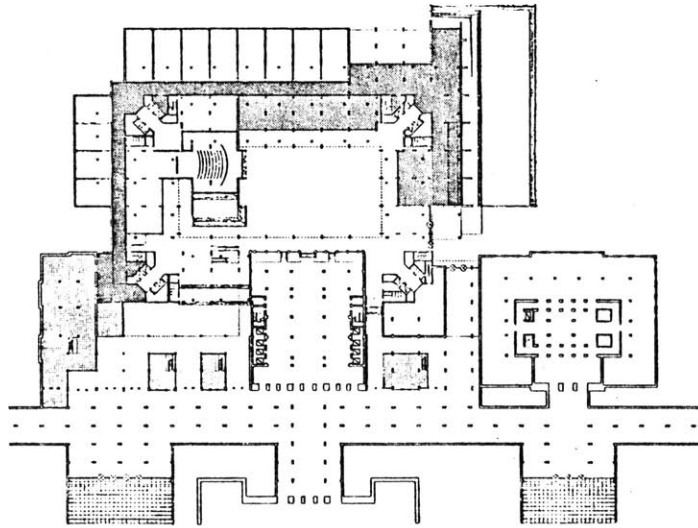## PEDESTRIAN CIRCULATION
response

Introduction of sub grade pedestrian link
Redefinition of pedestrian zones

C.U.U.D.4

Illustration 3-18, continued, S8,S3,S12

MANHATTAN CIVIC CENTER

PLAN—ATRIUM, SUBWAY LEVEL

- PUBLIC-ACCESS OFFICES
- COMMERCIAL
- SERVICE
- AUDITORIUM

MANHATTAN CIVIC CENTER

PLAN—LOBBY LEVEL

- PUBLIC-ACCESS OFFICES
- COMMERCIAL
- PUBLIC LIBRARY

C.U.U.D.4

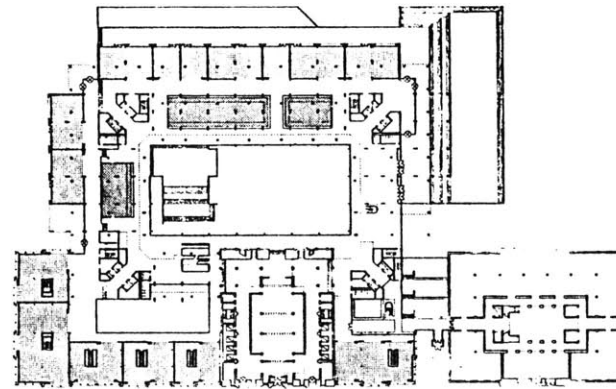DEPARTMENT OF ARCHITECTURE   URBAN DESIGN   FOURTH YEAR

Illustration 3-18, continued, S8,S3,S12
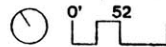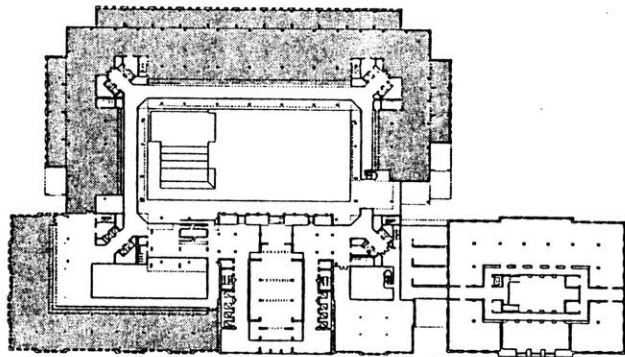
MANHATTAN CIVIC CENTER

PLAN—LEVEL 2
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▢ PUBLIC LIBRARY

0'   52
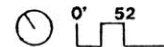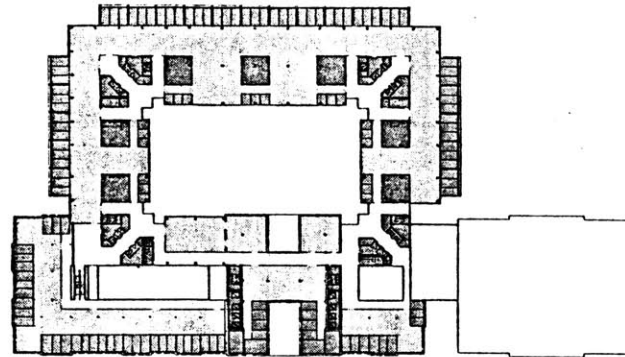
MANHATTAN CIVIC CENTER

OFFICE ZONING, TYPE 'B'
▢ OPEN OFFICES
▢ DIVISIBLE OFFICES
▨ CLOSED FUNCTIONS

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Illustration 3-18, continued, S8,S3,S12
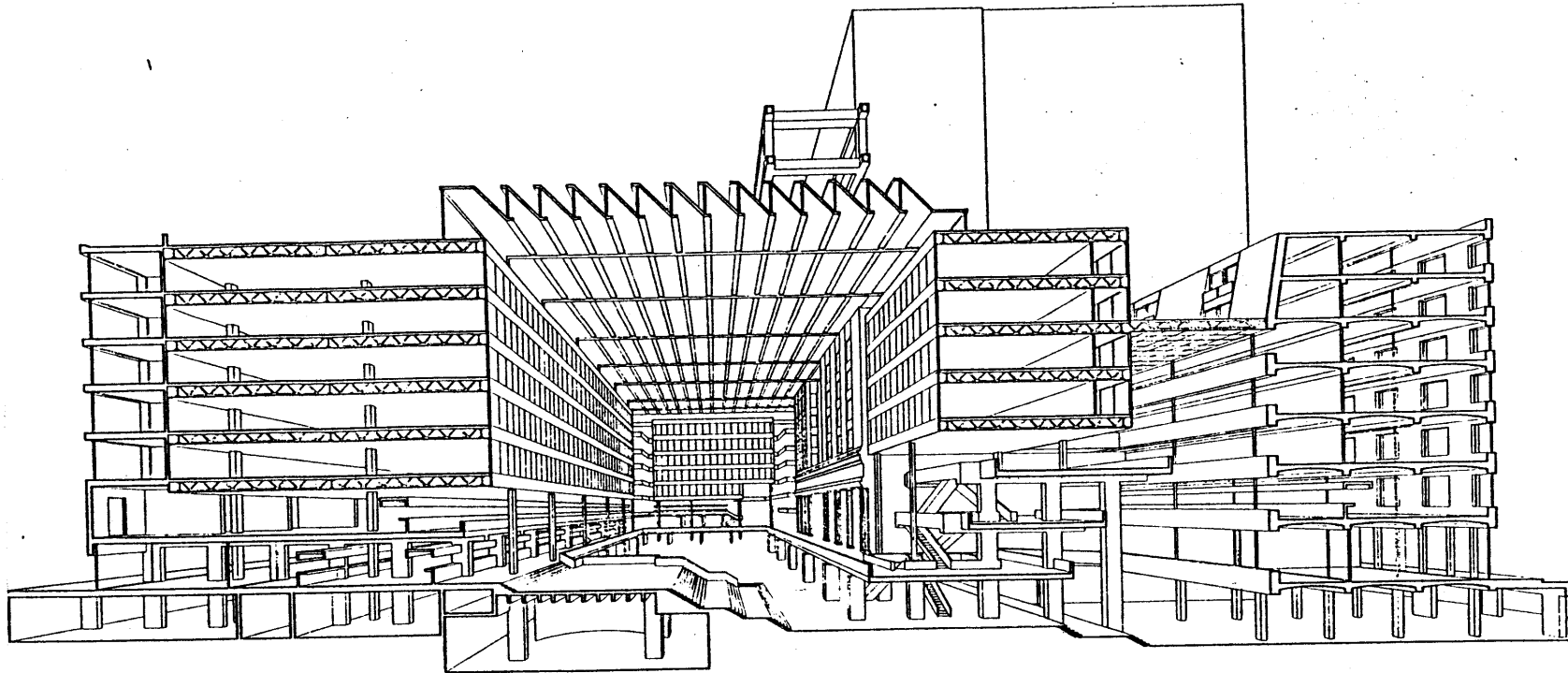
MANHATTAN CIVIC CENTER
SECTIONAL PERSPECTIVE

Illustration 3-18, continued, S9
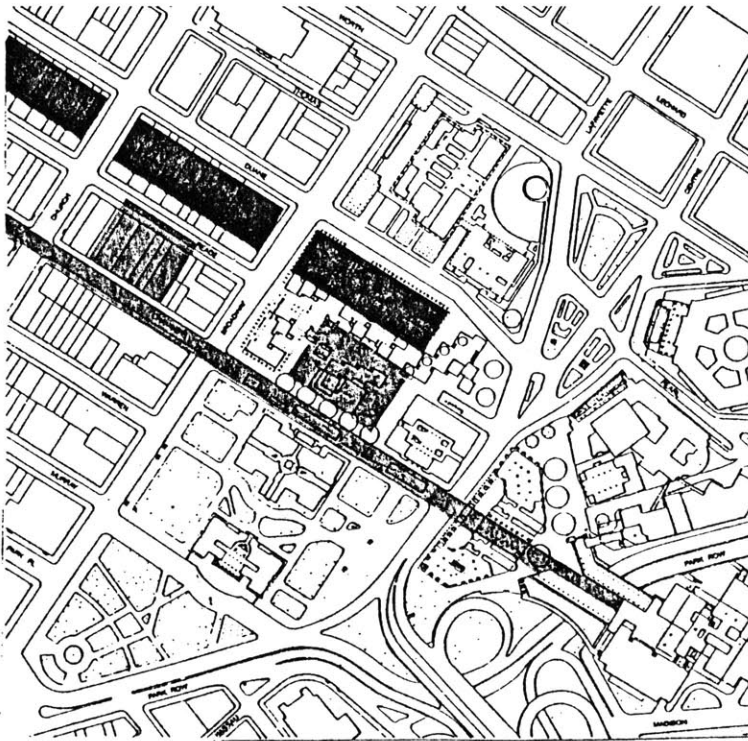
MANHATTAN CIVIC CENTER
CONCEPTS 1

THE IDEA OF THE CHAMBERS STREET MALL PROVIDES THE IMPETUS FOR
A SERIES OF PEDESTRIAN SPACES THAT COULD INTERRELATE WITH THE
MALL.

THE CHAMBERS STREET WALL OF BUILDINGS WOULD BE BROKEN INTERMITTANTLY
TO PROVIDE PLAZAS THAT WOULD SPONSOR PUBLIC ACTIVITIES. FUTURE
GOVERNMENT BUILDINGS WOULD PROVIDE THE BACKDROP FOR SUCH ACTIVITIES.
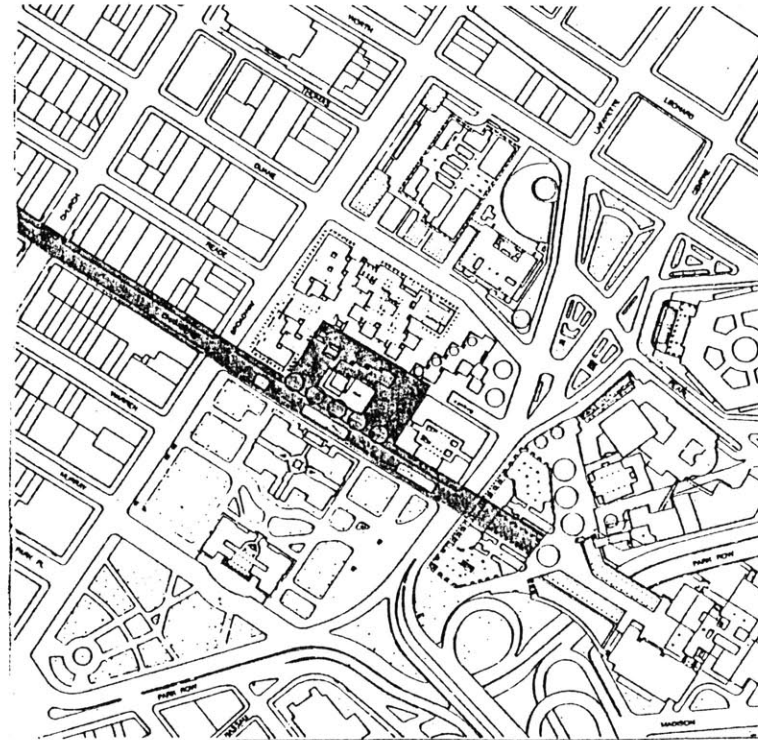
MANHATTAN CIVIC CENTER
CONCEPTS 2

BENEATH THE MALL WOULD EXIST A CONNECTOR OF SORTS WHICH WOULD
INTERRELATE SUBWAYS AND OFFICE BUILDINGS ALONG CHAMBERS STREET.
THIS IN FACT WOULD HAVE OPENINGS TO CHAMBERS STREET. CUTOUTS
IN THE ROAD WOULD MAKE CHAMBERS STREET A TWO STORY MALL WITH
COMMERCIAL ON BOTH LEVELS. THE LOWER LEVEL WOULD BE ABLE TO
TRAVERSE EXISTING ROADS RUNNING PERPENDICULAR TO IT WITHOUT
DISRUPTING TRAFFIC.

Illustration 3-18, continued, S9

MANHATTAN CIVIC CENTER
CONCEPTS 3

THE UTILIZATION OF THIS SCHEME DERIVED FROM THE CONCEPT OF INTER-
MITTANT PLAZAS ALONG CHAMBERS STREET. THE SCHEME WAS VIEWED AS ONE
IN A SERIES OF SIMILAR ORGANIZATIONS ALONG CHAMBERS STREET. IT ALSO
HAD THE ADDED RESPONSIBILITY OF FUNCTIONING AS A CONNECTOR BETWEEN
FOLEY SQUARE AND CITY HALL PARK. THE POSITION ON THE SITE REFLECTS
THESE CONCERNS.

MANHATTAN CIVIC CENTER
CONCEPTS 4

THE BUILDING'S EXTERIOR RESPONDS TO EXISTING SITE CONDITIONS BY
ITS ATTEMPT TO REINFORCE THE GRID PATTERNS OF THE AREA.

Illustration 3-18, continued, S9
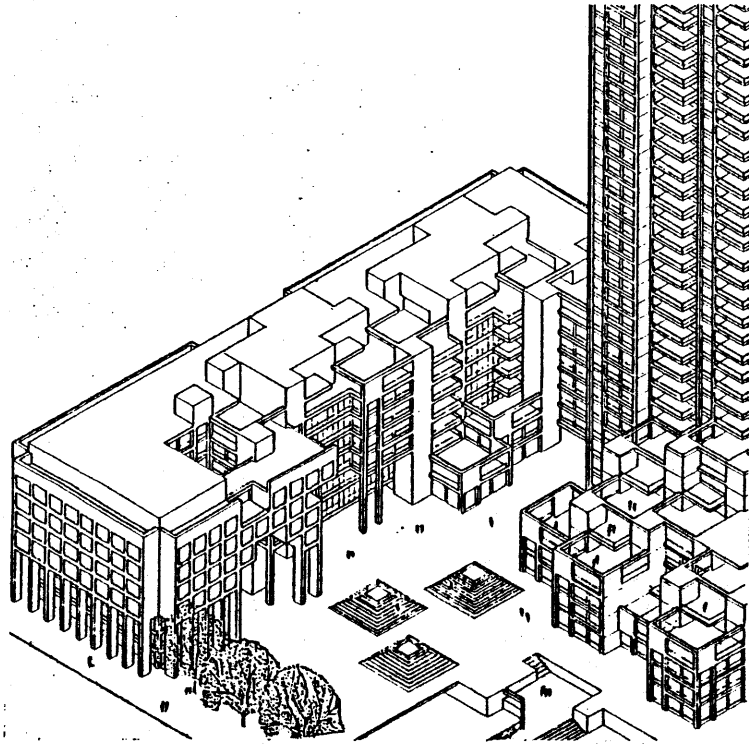
MANHATTAN CIVIC CENTER

Axonometric
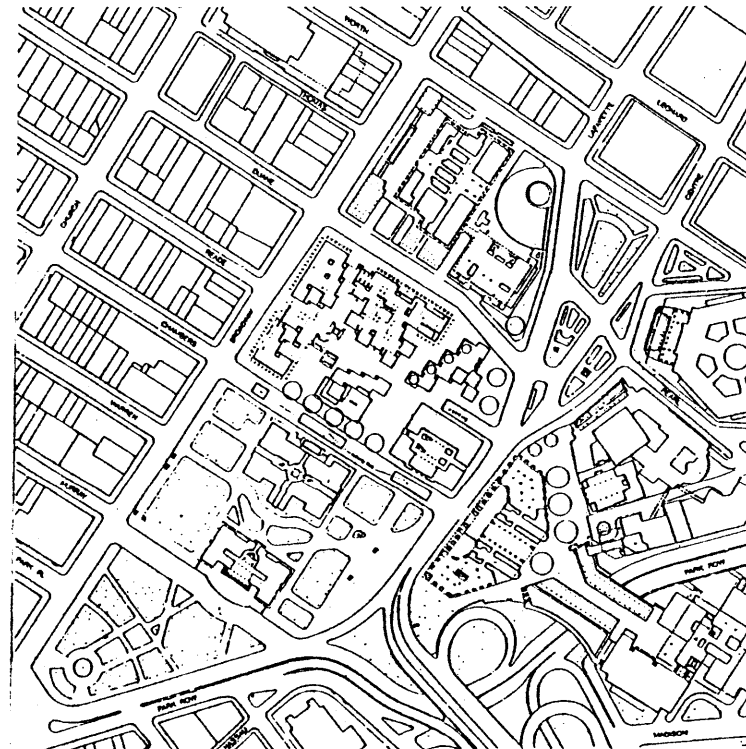
MANHATTAN CIVIC CENTER

SITE PLAN

Illustration 3-18, continued, S9
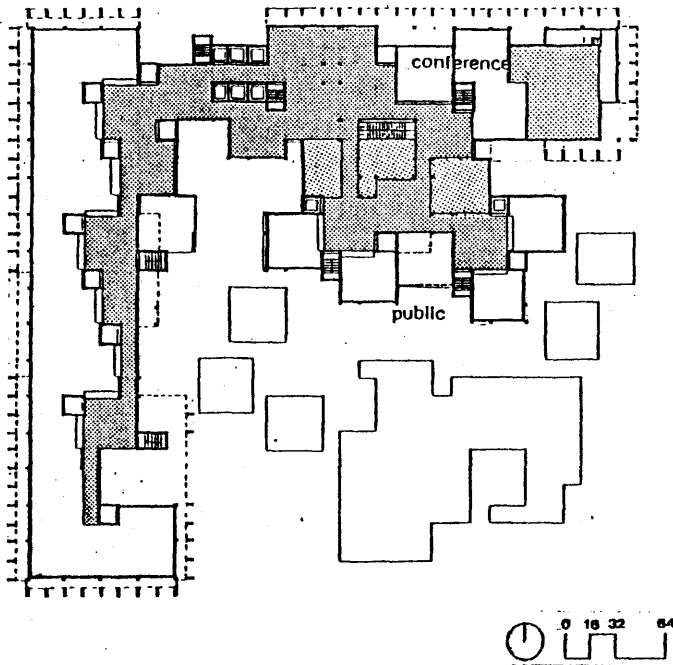
MANHATTAN CIVIC CENTER
2nd FLOOR
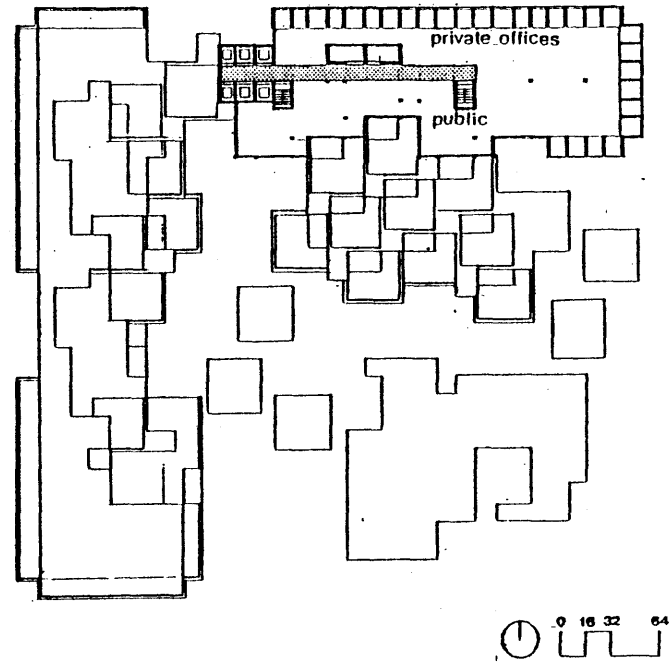
MANHATTAN CIVIC CENTER
TYPICAL TOWER PLAN

Illustration 3-18, continued, S11
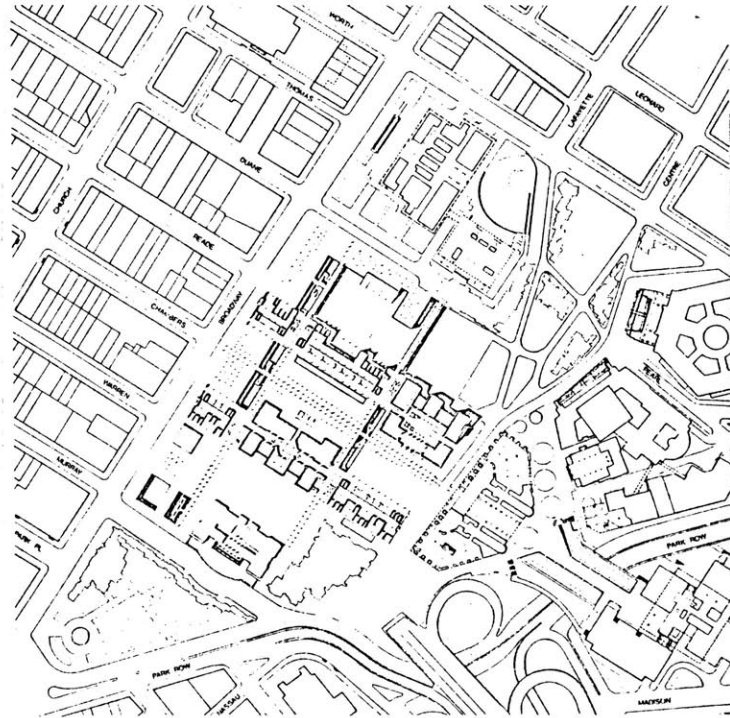
MANHATTAN CIVIC CENTER
GROUND LEVEL PLAN

MANHATTAN CIVIC CENTER
TYPICAL OFFICE LEVEL PLAN

C.U.U.D.4

DEPARTMENT OF ARCHITECTURE URBAN DESIGN   FOURTH YEAR

Illustration 3-18, continued, S11
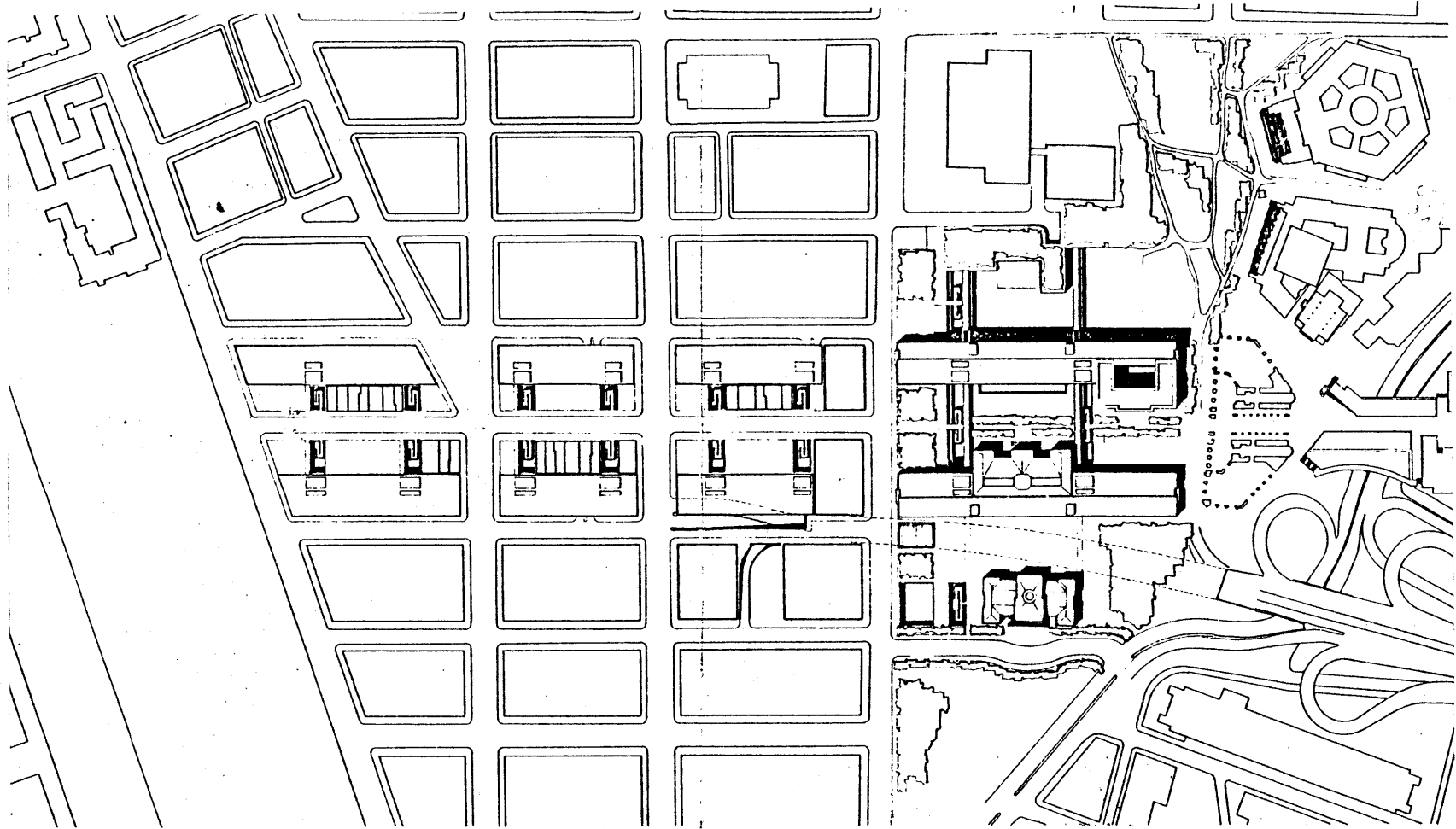
MANHATTAN CIVIC CENTER

CONTEXTUAL SITE PLAN
LINEAR EXTENSION OF CHAMBERS ST. INTO A MAJOR COMMERCIAL EXPERIENCE

Illustration 3-18, continued, S16
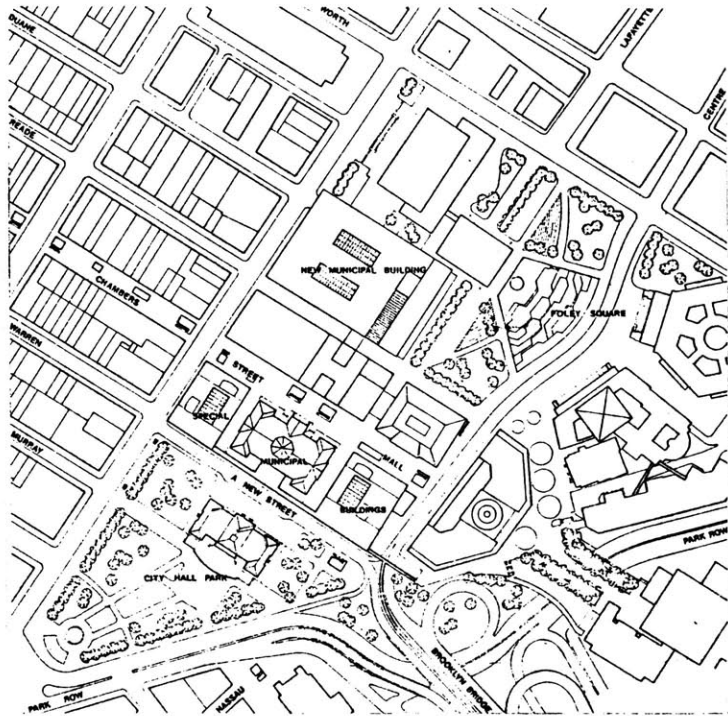
MANHATTAN CIVIC CENTER

SITE PLAN
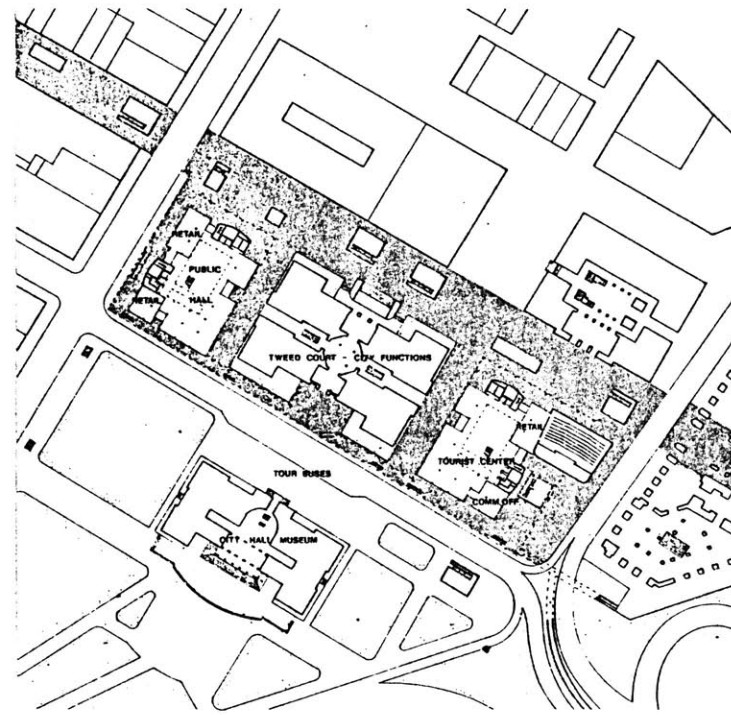
MANHATTAN CIVIC CENTER

GROUND LEVEL PLAN

THE MALL

Illustration 3-18, continued, S16
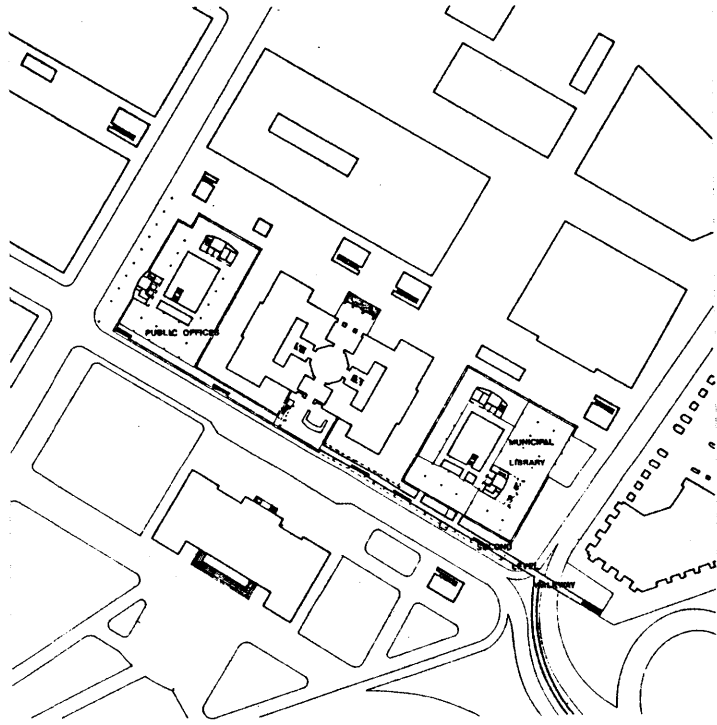
MANHATTAN CIVIC CENTER

SECOND LEVEL PLAN
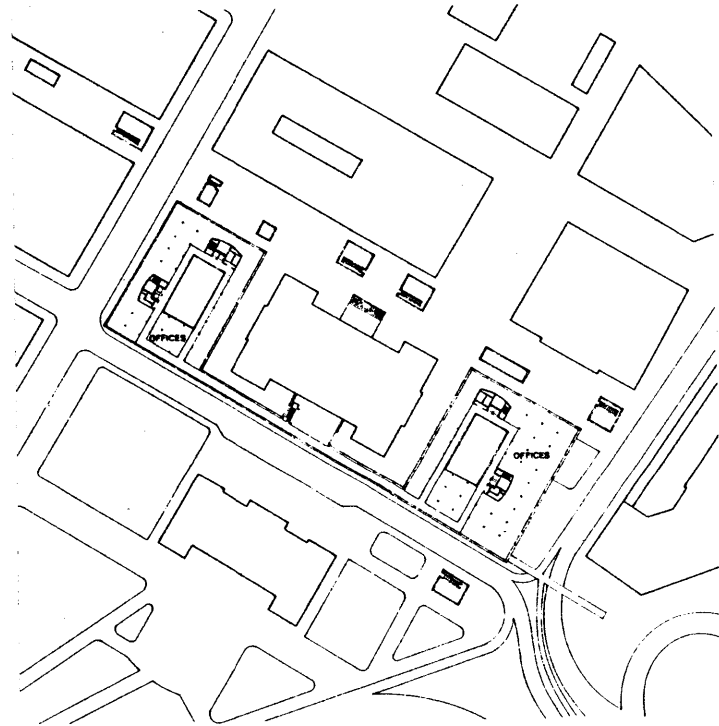
MANHATTAN CIVIC CENTER

TYPICAL UPPER LEVEL PLAN

Illustration 3-18, continued, S16

BROADWAY

TWEED COURT / L.S.B. BUILDING

FOLEY SQ.CITY HALL PARK CONNECTING GALLERY

HALL OF RECORDS

CENTRE ST.

MUNICIPAL BUILDING
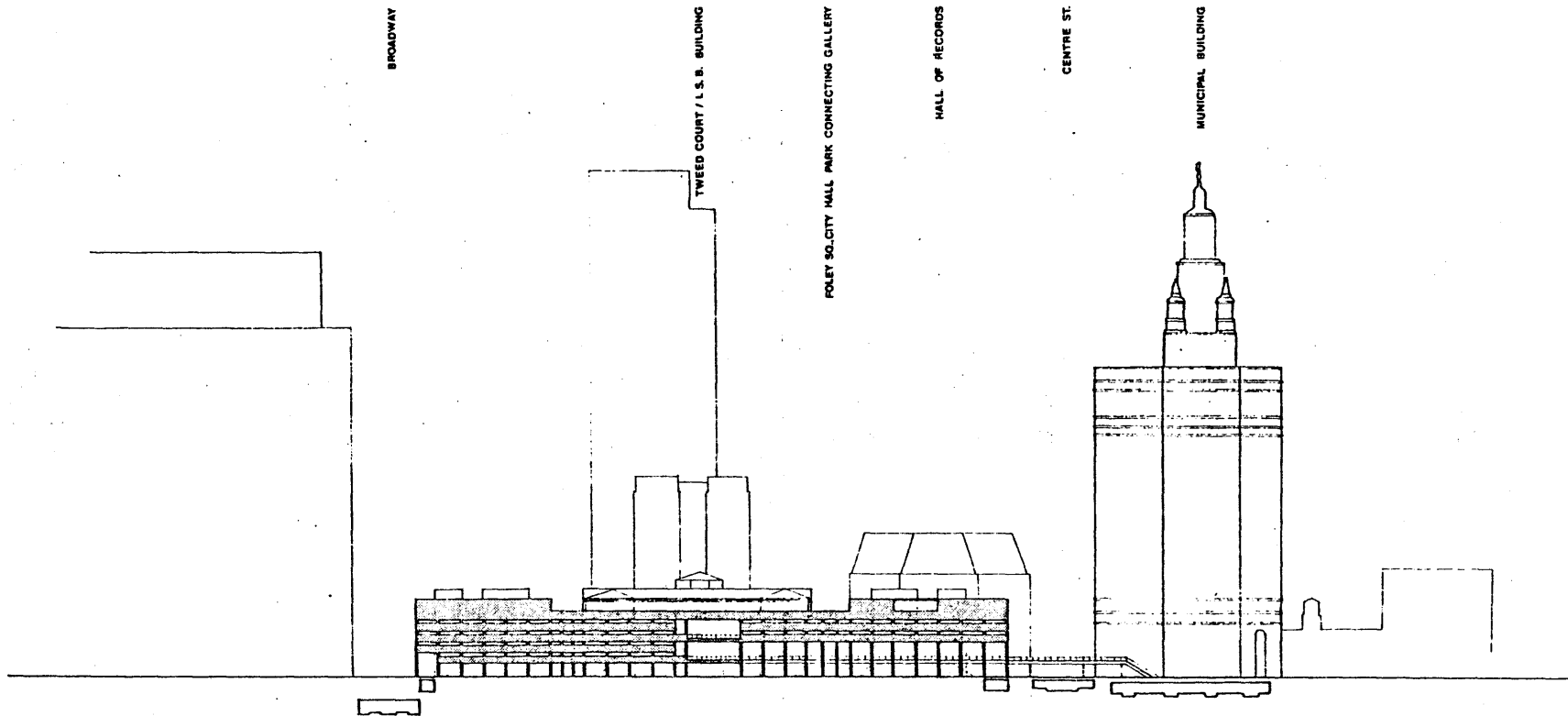
MANHATTAN CIVIC CENTER

SECTION THRU NEW STREET

0 32 64 128

Illustration 3-18, continued, S16

MUNICIPAL BUILDING

CENTRE STREET

FOLEY SQ.CITY HALL PARK CONNECTING GALLERY

TWEED COURT

BROADWAY

217
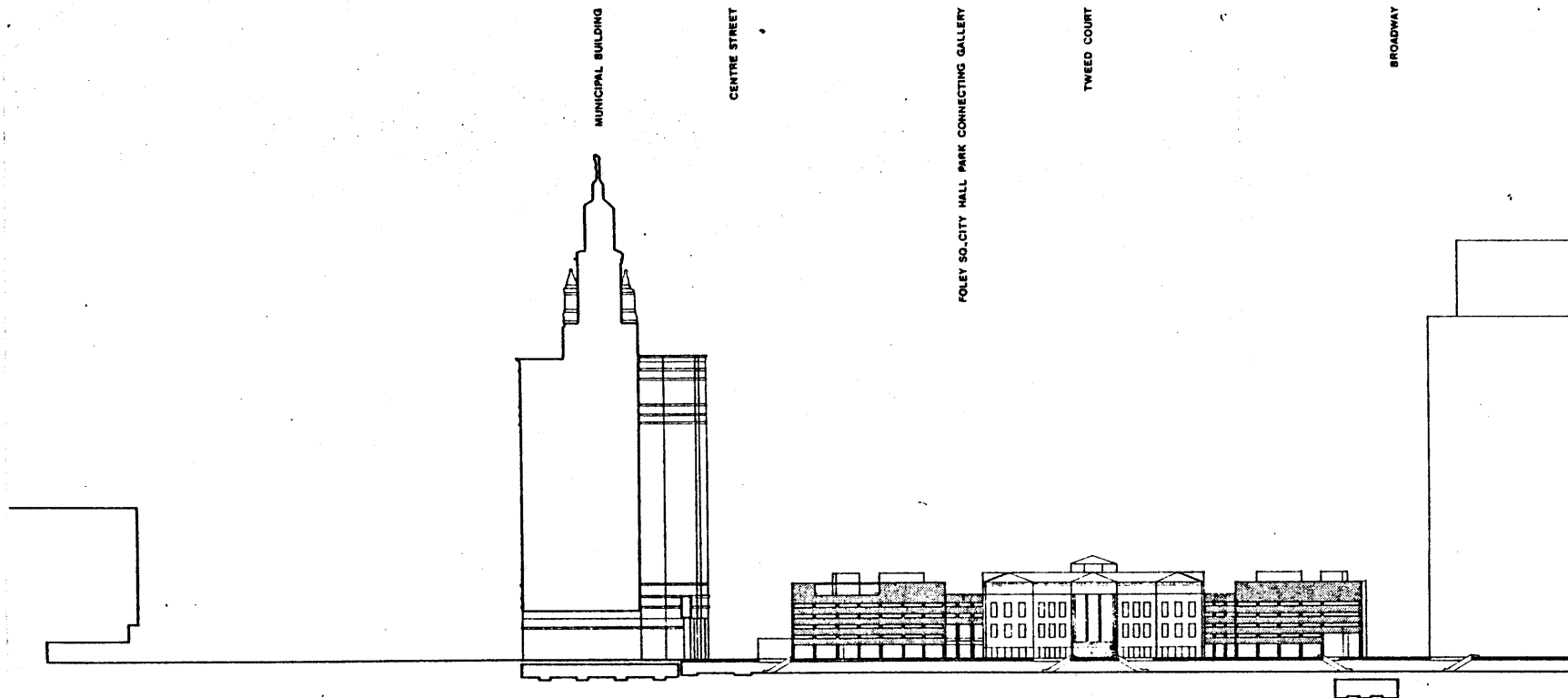
MANHATTAN CIVIC CENTER
SECTION THRU CHAMBERS STREET

0   32   64   128

Illustration 3-18, continued, S18,S20
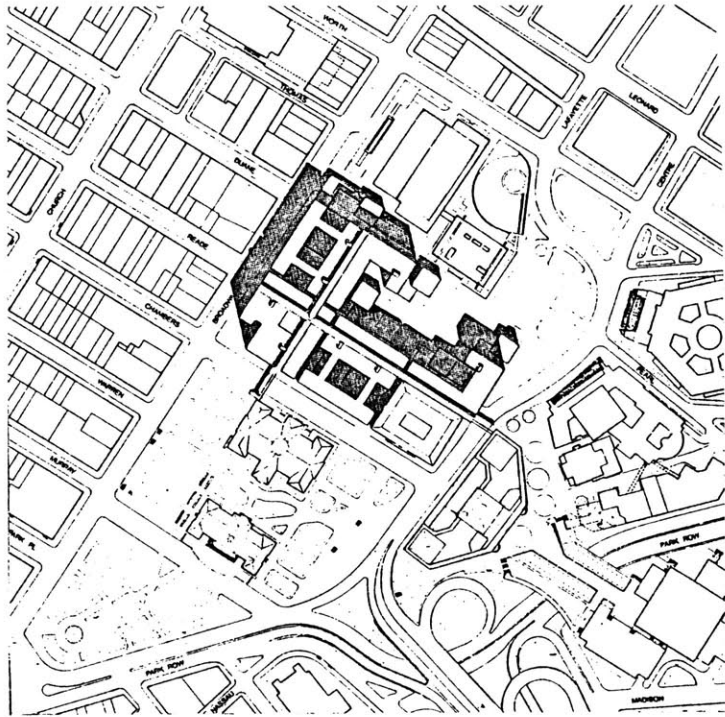
MANHATTAN CIVIC CENTER
SITE PLAN

MANHATTAN CIVIC CENTER
TYPICAL OFFICE PLAN

Illustration 3-18, continued, S18,S20
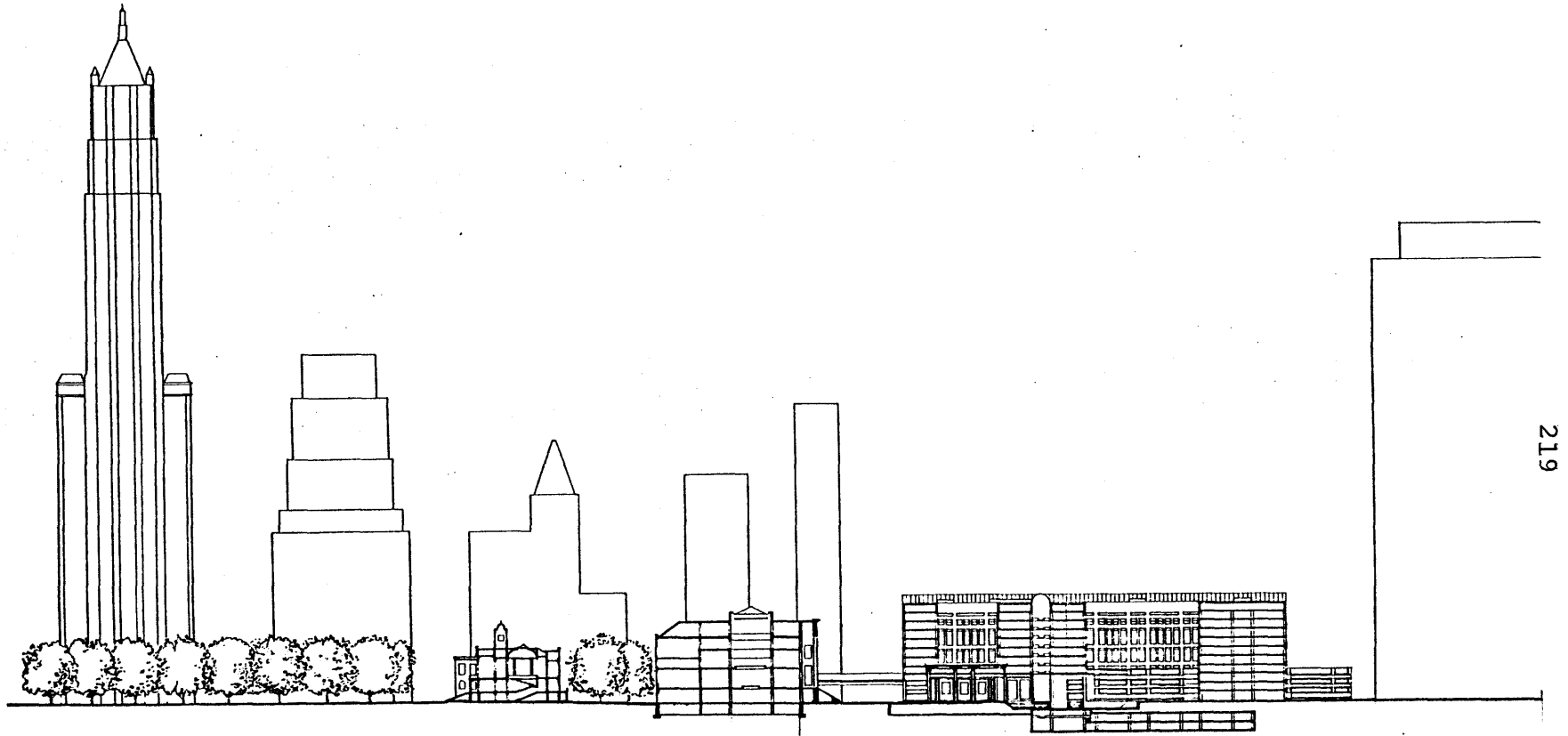
MANHATTAN CIVIC CENTER

N-S SECTION

Illustration 3-18, continued, S18,S20
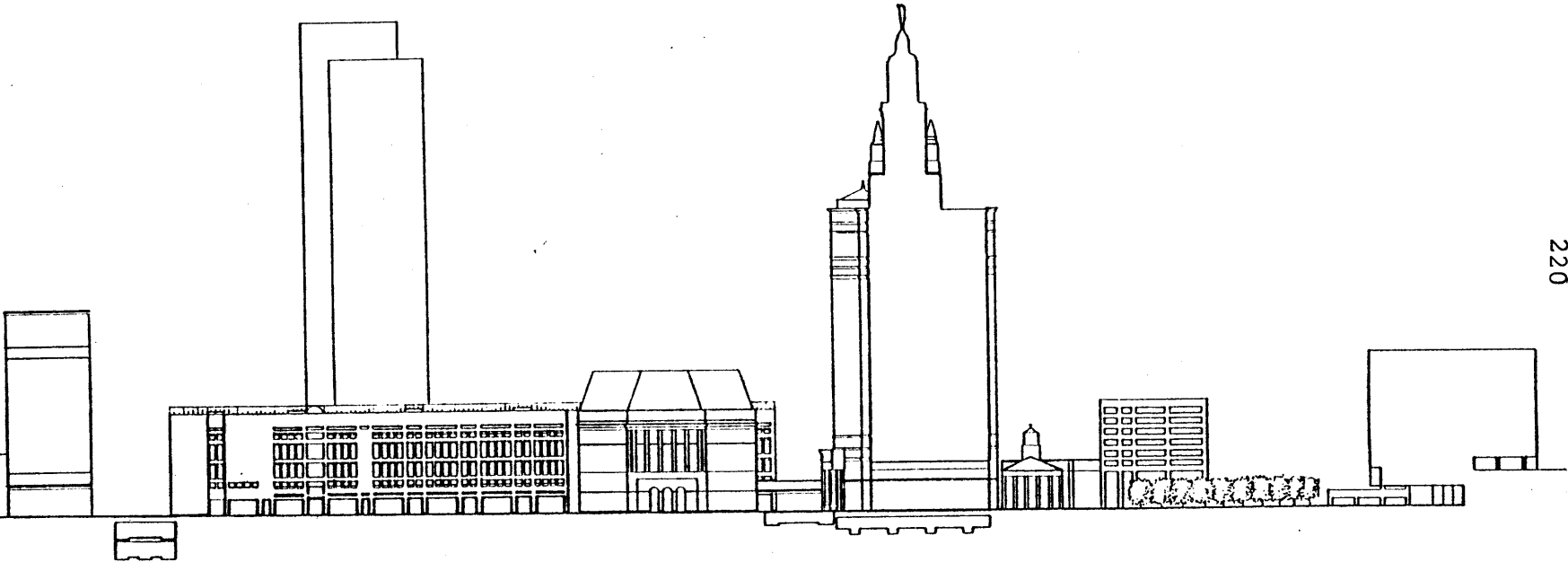
MANHATTAN CIVIC CENTER
SOUTH ELEVATION

Illustration 3-18, continued, S22,S24
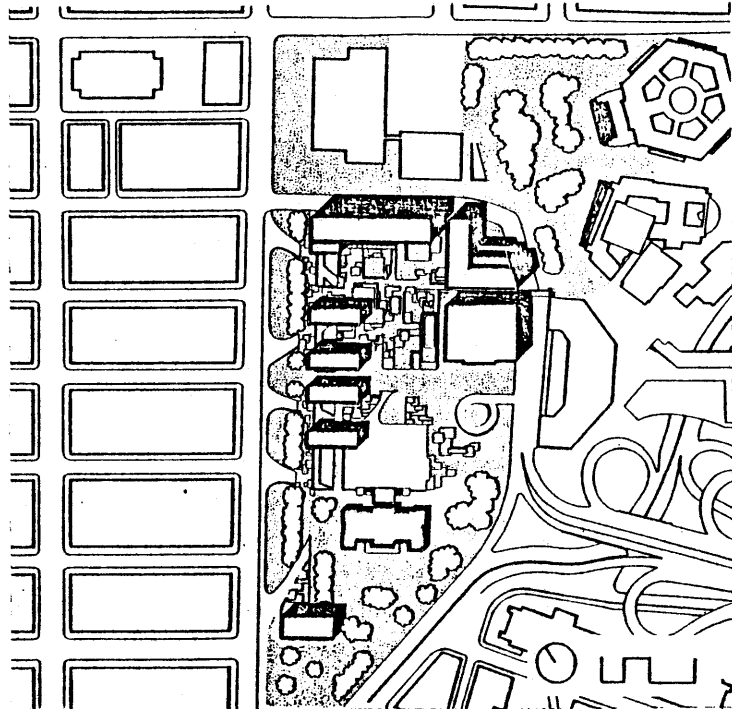
MANHATTAN CIVIC CENTER

SITE PLAN
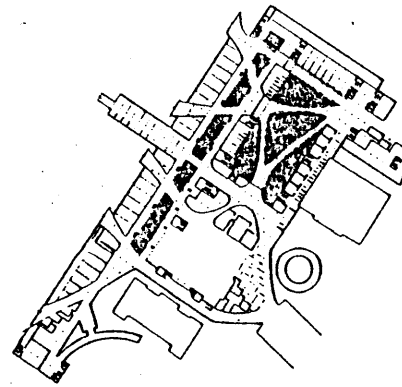
MANHATTAN CIVIC CENTER

-1 FLOOR PLAN

Illustration 3-18, continued, S22,S24
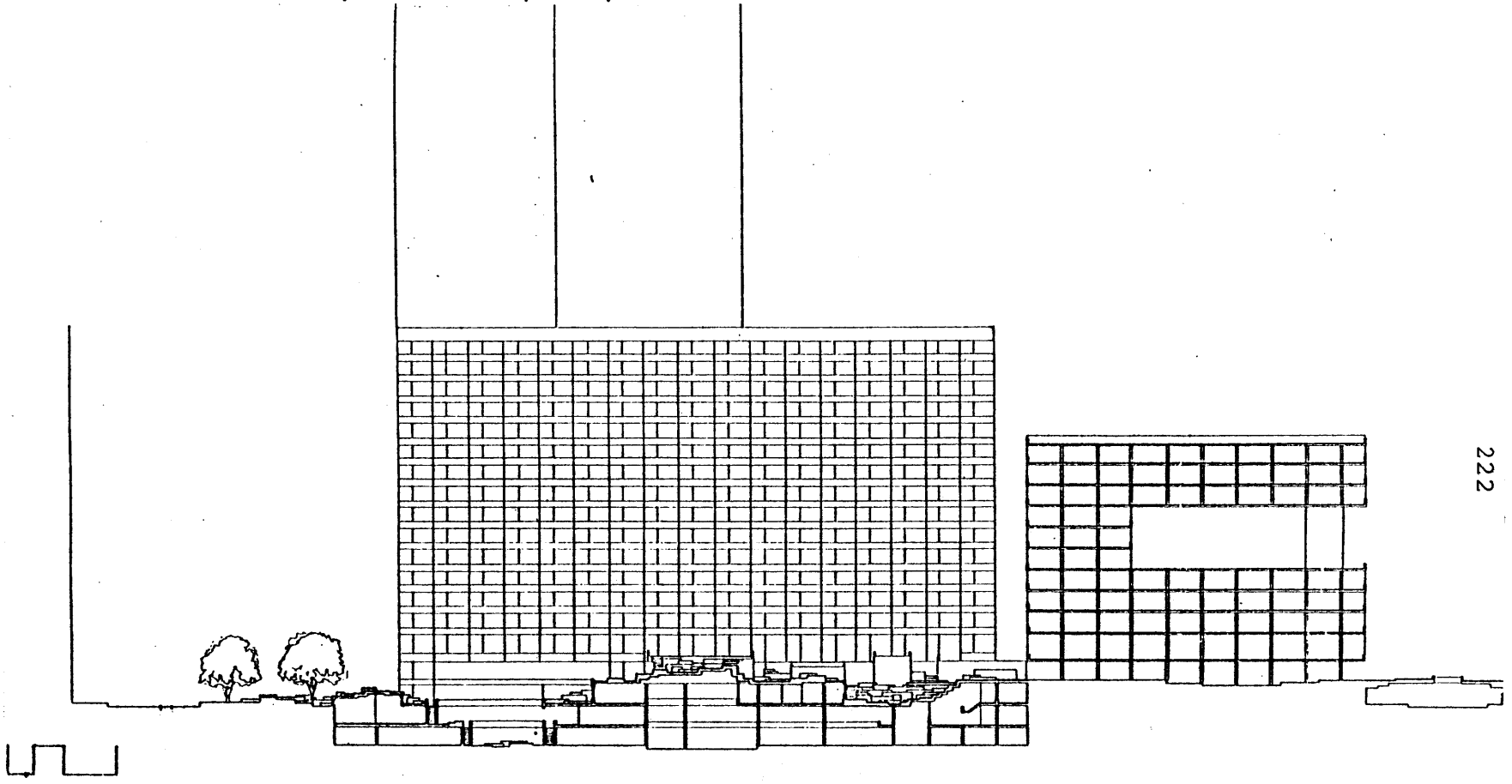
MANHATTAN CIVIC CENTER

E-W SECTION BB

By 4:15 the guests had completed their previews, and the

students had returned. Hutchinson invited the guests to

comment. Their comments, quoted extensively here, reflected

concern for the design problem and its approach to urban design

as well as the students work.

Hutchinson: I think that most every scheme has been looked
               at now and we wanted to get everybody back
               together. I'm sure not all of your schemes will
               be fully understood from the [material posted]
               so if you would like to have an opportunity to
               explain your scheme, I'm not going to give it
               to you now, but the opportunity might arise
               in some of the discussion. If it doesn't
               you make the opportunity yourself, okay, between
               now and the end of the time.

               Now to some kind of discussion, I thought we
               might ask our guests from OLMD to make some
               kind of remarks at the beginning. So what-
               ever they want to bring up as questions or
               issues... Please feel free to inject your own
               questions or comments about things which you
               think might be overlooked or misunderstood
               Okay?

OLMD 2:   One difficulty I have in looking at the various
               schemes is being able to determine the differences
               in them, quickly. Perhaps one way to solve that
               problem...it's a problem we have at OLMD--how
               to present something to someone who may or may
               not be familiar with the problem--you never know
               in City government if the people you are dealing
               with know anything about the problem or not... While
               drawings are very good, it's difficult to deter-
               mine the differences in the various schemes
               very quickly. Even with the models you can't tell
               what things are being kept, what are not. One
               issue was preservation. It would have been good
               to see a diagram of what you consider your site
               to be; one building site or the whole civic
               center. Then given that framework, what build-
               ings are you keeping; what buildings are out.
               And having that info catalogued on a sheet of
               paper that would also give the size of the
               building and maybe some indication of how you

arrived at that programmatic decision...
They [most people] don't articulate what the
rationale for their particular program is, even
if it is only in verbal terms rather than some-
thing they can fully justify. I don't think
you can fully justify the programs in these
schemes without a good deal more knowledge.

Two other things which are particular problems--
this is again something which could show up on
the drawings or certainly on 8 1/2" x 11"'s
rather than full sheets. One is a diagram show-
ing what you consider to be the main pedestrian
circulation routes through the site. The other
thing is vehicular circulation. There is a
particular problem with traffic to and from the
Brooklyn Bridge in rush hours--we wouldn't ex-
pect you to be traffic engineers and come up
with a solution which is highly successful.
But if you have thought about the problem, in
relation to the building you are proposing,
you might begin to see where the problem would
lead and what implications it would have...

Some of the questions I think that relate to
the Chambers St. crosstown [subway connections]
are questions having to do with how development
takes place and how do you pay for the partic-
ular improvements you are talking about. Some
schemes suggested that you build the subway
connections first, that would in turn sponsor
the development. But generally what we do in
the city is go get a developer who is develop-
ing a particular building to incorporate that
improvement, the subway connection or something
like that, and specify through the zoning or
through leasing agreements or whatever, so that
a particular project pays for the improvement
at the same time, and the city taxes are not
burdened. The city has problems raising the
money for the transit improvement it has
scheduled now.

Other than talking about particular schemes,
these are the general comments I have.

OLMD 1: I just have a more general comment which is
that the problem as presented to you from the
start, in a sort of nebulous way, was a planning
problem and an urban design problem which had
the goals to articulate and identify the Civic

Center, and to reinforce its identification and to rationalize the planned circulation through the site. At the same time it was presented as a problem of designing a building which would allow the individual citizen to be able to deal with the bureaucracy and provide nice office space for the people who work in the civic center itself. In looking at all the schemes I don't see any which really succeed at both. I don't think it is possible to succeed well with both those goals. But I wonder if everyone has really thought about which one they are really focusing in on. So when we go around and look at the schemes I would like to talk about functioning as a building which is easy to understand to the public and which is a nice work environment. At the same time look at the solving of the urban design and planning problems of the Civic Center by creating the buildings. Those seem to be two separate things.

Heath: ...They are separate things but presumably by what you say you don't mean they are mutually exclusive...

OLMD 1:   ...It seems to me that all the buildings are low rise. Nobody has built a low rise building in NYC in a long time, because buildings function better as towers with 40% coverage. They are usually cheaper to build. That issue comes up, does it function as an office building? Then the issue of buildings being articulated in response to site pressures. But often there is not an identifiable main entrance to the building which is important to the general public in their dealings with the city. To be able to have one place to go to get information. That's looking at the problem the other way -- as a building not an urban design problem.

I feel most of the schemes are focused at the level of urban design. I feel they are not worked out enough as buildings. I say that as a person who works in urban design, I probably couldn't work them out as buildings. I feel the buildings are much too concerned with response to site pressures and not enough concerned for the functions of an office building.

I think at some point the notion of urban design should be carried through even broader. They

haven't dealt with the whole site - they
started to branch from the original site
but they never quite developed the entire Civic
Center as it was defined in the problem, to
include City Hall Park.

Hutchinson: Do any other members of the review want to make
any counter remarks or...do you actually want
to go around and look at individual schemes and
talk about them?

G12: I want to make a few general remarks. One has to
do with pedestrians. This is one of the places
in NYC that not only focuses on pedestrians
but pretends to focus on them as people who are
enjoying the fact that they are predestrians.
There has been a tremendous amount of attention
paid to pedestrian circulation, but a lot of it
in circumstances where the architectural treatment
of that space would either be very expensive or
very dreary or possibly both...

The other point was that several schemes have
created rather large spaces that don't seem to
have pretty definitely required functions. It's
a pretty big piece of Manhattan -- I remember a
couple courtyards rather large and extensively
produced and I wasn't sure what would go on in
them.

The last minor point -- I understand it wasn't
until rather late in the project that you really
got into the possibility that anybody lived down
here. I'm not sure whether Manhattan would ever
want people to live down here but in a couple of
schemes it would be very easy to do it. Just
generally speaking as a city planner, I would
welcome any attempt to bring some living back
into spaces like this. People living here twenty-
four hours a day, helping to keep it from being a
slum or a desert.

Q10: Well, I don't know how you had the nerve to
begin. I have difficulty at this stage of
assessing any...Frankly, I find most of the
solutions repulsive if you are judging them as
places to work in and walk about it. But I
think that it's hardly possible to operate in
this way. It may be that it has to end up like
a zoning solution in which you do the two bits
you think you can afford within the five year

cycle. Then try to design those in some ways nicely. There is far too much badly designed architecture. The pop architecture. My heart bleeds for the client. But then I would have never dared do the problem, except if the pedagogic intention was to demonstrate what I have just said.

Hutchinson: But let me ask a question. I probably agree in some ways but how are you going to deal with something called Urban Design? Or who is going to deal with something called Urban Design? These two people [OLMD 1 & 2] deal with it professionally all the time. It isn't as if it isn't being done. Somebody is going to do it. Who is it going to be?

G12: That's what G10 is saying, you have two alternatives. You can give a problem which is nearly enough manageable so you can ask students to manage it and criticize it the way they can. The other alternative is to take a problem like this, which is probably as complex an urban design problem as the mind of man could conceive, with circulation, subways, office buildings, private space and everything else. What they end up doing is realizing the utter frustration of the practice of urban design in one sense but begin to understand very sharply what its real problems are.

Hutchinson: ...But that seems to be the major reason for being in a studio. I think that one doesn't expect perfection but one expects an honest attempt to grapple with certain kinds of issues.

G12: ...I'm not expecting perfection, I'm only saying that there are so many variables and so many inputs and so many problems, that it is really fairly hard to ask anybody to state clearly exactly what their priorities are. Maybe that's all you can have them do is have them state what their priorities are. When you design something to a very large degree with his own set of priorities you have to accept them you can't go out and ask him why he didn't do some other things. And that's what we are doing as we go through this thing. When anybody does anything, we are saying why didn't you do something else?

Hutchinson: I think so, too. I think it is a big problem...
But I wonder to what extent it is not because
of the scale and not just because it is too
complex inherently. I think a building is
just that complex inherently.

G10: But isn't there a difference if you take a con-
vention... Suppose we take a house at the other
extreme. It has to be a very rare house where
certain of the things are not convention, i.e.,
timber, bricks, doors. But as far as student ex-
ercises are concerned you can identify the blocks
of real things from which the design is assembled
or the profiles are cut from. Well the difficulty
with this kind of thing is that is said certain
of them are conventional. If you take half a
city block, and say under the building code cer-
tain reconfigurations are possible, but in fact
the block is set like a brick is set, you know
you can turn it over within certain laws. You
can have certain sorts of brick or have certain
bits knocked off. But in fact it's easier to
handle mentally... You haven't got any free-
form because the society hasn't grown up with
free form building blocks which are generally
acceptable. You don't have brick-equivalents.
Therefore, you have to invent the brick. If
you take the subway as a skeleton, you have to
invent the way that it is to be profiled before
you could put it in. You have to invent the
brick, as it were, before you can locate it or
even think about it. It's so many degrees of
abstraction it is impossible for me to handle.

To go back to Le Corbusier, if you look at the
first project of anything he does, its always
the last project. The first scheme of any new
scheme is the last scheme because that is the
building block you can handle at the time. He
gradually evolved into a different block and
a different configuration which responds to the
mood of the technology that changed since you
last did it. But if you are a student, you
don't have one of your own buildings or one
of your own urban schemes which you can use
as shorthand while you work out how to deal
with it. You tend to fall back on diagrammatic
configuration. For example, the first stage
of the Free University was based in the diagrams
which were developed for the Frankfort scheme.

Then it took five more schemes before it
achieved the building block characteristic
where things were possible. Then you began
to handle it per Urban Design. But my idea
of Civic Design doesn't exist. Urban Design,
this is sort of Urban Structuring, dealing with
zoning and flow, etc. Beyond that, you have
to jump straight into architecture, otherwise
you miss the building block business and you
get pile upon pile of abstractions which in
the end you can't handle. I think the analogy
of a chair is equally difficult... It has no
building blocks...

Hutchinson: I would agree that it has a lot to do with the
conventions that you accept as elements that you
have to work with. Now any student is put at a
disadvantage with regard to having these blocks.
Basically, he is working with them as given or
he has to try to invent them. I think what you
see, for the most part, are schemes working with
given blocks. These are working with, as well
as students understand, certain conventions
about buildings.

But given the complexity of the problem, the
likelihood is that people are going to accept
conventions of one kind or another and work
with them, rather than reinvent the pieces.
If the conventions are inappropriate or if they
don't work out, it really throws the student to
a position where he either has to go back and
find another convention or he has to try to
invent it. But to invent those things are very
difficult, based on the amount of experience and
the number of design experiences students have.

Then G12 tried to move the group back to the specific

schemes but this was delayed by G8 and G6's comments.

G12: Perhaps its reasonably clear as you look around
the drawings that these students...did have
priorities that became reasonably clear when we
understand that you encouraged one to do one kind
of thing and one to do another. If we simply
look at them as illustrations of different
priorities and criticize them in terms of the
priorities accepted by the students, that would
be the most useful thing we could do. There

was at least one that said, "let's focus on
presentation," and another one that said
"let's focus on making that office building
have a character that particularly related
to the fact that it is a gathering of political
reference offices." One said, as I looked at
it, the way to presume the character is to
build a three-way reflecting mirror that
happens to be an office building.

Hutchinson: I think it would be very useful to go around
and just talk about the priorities in regard to
different schemes. Then relate those priorities
to relative success. There is always a tempta-
tion to lay over a different set criteria.
That, of course, is the dilemma that any archi-
tect...has to face... No matter what you are
going to do on that site, you are going to
alienate some substantial group of people.
In fact you may get strong opposition from a
substantial group of people.

G8: I want to make a comment. I think that problem
of seeing these drawings as representations of
buildings as opposed to urban design or what-
ever they are, is really generic to the whole
issue of urban design. When you tackle an
urban design problem, then the question is
whether you come up with broad strategies,
diagrams as it were, which are then subject to
interpretation into buildings or whether you
actually are making specific buildings which
then respond, once and for all, to the situation
you are dealing with. I would tend to think that
behind each of these drawings, they are so
particularized as to give the impression of
very specific buildings. You almost have to
be specific and particular in order to bring
up the idea, but that also nails you, because
it obscures the diagram. If in any given
scheme, one could entertain the possibilities
of that being actual buildings that were
being hinted, one could entertain a matrix
that resolves issues of separation, etc.
I think it is possible to discuss the schemes,
even though they may appear to be very
particular buildings. I don't see a lot of
these schemes as buildings. I see them as
interpretations of strategies or diagrams.

G10: But when you get into an area of buildings where 2/3 of those buildings are likely to remain fixed, it tends to have to be particularized, doesn't it? Because its a building to building process...architectural game...I think it is a fantastically different problem!...

OLMD 1: ...whether we treat them [architecture and urban design] as separate professions or separate problems or not, separating them out especially in a complex problem, like this, it is very helpful. If instead of looking at drawn up buildings, we were looking at circulation systems or planes through space, it might be a lot easier to look at it as an urban design problem.

G10: But they are being pushed toward the architecture because you are suspicious of the diagram unless part of it is worked out.

G6: It goes back to basic urban design problem of criticism, where if you are lucky you get a figure-ground plan and if you are super lucky you also get a 3-D representation. And that is even open to speculation whether it is even worth doing. So, it leads you to a cyclical process where you are involved with particular on one hand and a continual testing that out against the generalization. I have the feeling, I think everyone else does. It's partially the presentation and partially the shortness of the cycle and being seduced by what you feel that you have to do. The generalizations don't come through as clearly and as strong as they might because they are in fact heavily loaded with architecture... One wishes that instead of spending time putting shadows on a pretty awful SOM elevation one had spent time on something that yielded something more in terms of fundamental concepts of the buildings. I think there are some things which could be dealt with on a detail and on a general level--in that there is a very strong bias. You have almost succeeded in making it go away. But there is a very strong bias in the class--to counter G10's comment there is an anti-Corbusian thing, which is anti that Federal Building which is a bastard cousin of a bastard cousin and so on of the original King. Almost nowhere in the class is there a "tower city"

solution. You tend to either get "wall"
buildings which stretch the office building
notion too far, or you get "deep warehouse"
buildings that make a big mass of texture or a
cut out. Or they may get to the point where
they reconstitute Modern Architecture thin-
walled-elements by making slide buildings.
I think the problem can be dealt with on that
level but its an awful lot to expect in one
semester to get conveniently through the cycles.
But the big lesson is to have a clear generaliza-
tion at this stage of the game; you are not
building. It is an exercise--to have a clear
strategy of how you are going to deal with it.
As you investigate more detailed levels of the
thing, you use that generalization as a vehicle
to test these things out. At some point you have
to make the judgement--is it going to transform
this thing from a camel to a cactus plant, or
am I going to say that's just one problem I
just can't solve at this stage? For the most
part they generally suffer from trying to deal
with too many issues at the same level of
intensity. I personally would much rather see
them as an academic thing, dealing with a few
things and doing it rather well.

At 5:15 after each guest's opening comments were made,

Hutchinson asked how they should proceed.

Hutchinson: If we are going to look at them we should move
around and look. Do you want to continue a
general assembly? What is the general feeling
about that? I get the feeling from S9 that he
thinks most people are too tired to go on.

S9:   Generalized discussion, we can't deal with.

Hutchinson: He says they can't relate to the generalized
discussion. [Student yells "knock down, drag-
out"] You want to go individually? You can
at least take a series of examples. We are
going to have to have some kind of format for
it. Either, we move problem to problem or we
take up certain kinds of issues and look at
schemes which deal with those. What about
preservation? Maybe we ought to start with
preservation issues.

Look, I'm not going to take the responsibility
to be sure that everybody's scheme gets talked

about. You are going to have to do that
yourself. If you dealt with an issue and you
are being ignored, speak up.

Who are our preservationists? S1.
Maybe we will just start talking about the
scheme, okay?

Obviously they set as a very high priority the
preservation of existing buildings. I would
like some comment on that.

No wait a minute. I'm not the guy that is
going to organize this. This is your review.

S1:   Do you want me to start?

Hutchinson: I just thought people could ask questions or make
comments. Theoretically everybody has looked
around and seen all the schemes. I should think
they could be making comments. If there are
gross misinterpretations, then students should
speak up.

Hutchinson then identified three other schemes which had

dealt with the preservation issues, and Heath began to compare

their different responses. Quickly the review format changed,

and for the next hour, students presented these four schemes.

At 6:15 the general discussion resumed.

Hutchinson: Does anyone want to bring up other issues?

G12:   There are more issues than we can possibly
deal with.

Hutchinson: It seems too that a review like this is only a
way to peel off different issues and begin to
discuss them. I don't know how people feel
at this point about bringing up new issues.
Frankly, we have not touched on a lot of
things people have spent a lot of time doing.
I personally feel that there are a lot of
levels of accomplishment that students have
been involved in. I don't know what the
expectations are for the review. There is
a question of whether it is sort of a

judgemental thing or some opportunity to
talk about a lot of things which have been
dealt with. I don't see it as judgemental.

G12: Do you see any particular points that you two
know were struggled over that we ought to react
to?

Heath: Well, the complexity and the tremendous number
of variables, specific ones as making a
relationship between urban design issues;
they occupied a large part of the semester to
some extent to the determinant to some of the
solutions. OLMD 1 talked about how do you
design an office building. We tried to address
both ends of the spectrum. This site is froth
with so many issues one could go on for another
three or four semesters and never solve the
problem of site.

G12: That was surely a given from the beginning -- that
there were not going to be any good solutions.

G6: Well, not that there would be no good solution
but not one which encompasses everything.

Hutchinson: There are a couple of general points having to
do with strategy of the relationship between new
things and old things, and the whole spatial
organization with regard to the reading of that.
Whether you see the site as a big V shaped "field"
with objects that stand, with the exception of
the wall along Chambers St. which several schemes
pick up and reinforce and rebuild or destroy that
wall. Many schemes destroy that wall. Then
you ask what is the attitude about these old
objects -- what do you do with those buildings?
Here, its clear that objects are still objects
that stand on this large park. But these are
strategies which are more difficult, maybe not
more difficult, but at least have a certain
validity. I think that's what S11's scheme
does, by identifying a whole set of issues.
One has to do with the curious relationship
between that row, that row and that row, all of
of which exist on the site, this being an
important axis for the spatial organization of
the site. What this series of diagrams
suggests here is that one really compresses
this organization on the site, while at the
same time reinforces that. Meaning that you

> detach the site from the surroundings. It's
> like taking the site defined, like that, and
> putting a large element in the middle which then
> recenters this. Personally, I think that's a
> perfectly valuable assumption as well. It's
> more difficult to resolve at a detailed level,
> because it ultimately involves literally joining
> new and old buildings together, which is a big
> problem when someone really tries to develop
> those buildings.

With Hutchinson having made his own general comments,

the discussion continued until it broke into small conversations

at 7:00. These conversations contained several important

segments.

Heath: That's one problem with the whole thing. One
would like to see some typology of different
approaches.

G10: We are always back up against this fantastic
business that if you don't live there, you are
actually very unaware of what you would see.

OLMD 2: The advantage of working on a scheme in an office
like ours is that you begin to get familiar with
the area over time. A lot of the things which
are just abstractions on a plan mean more to
me than they do to your students.

Hutchinson: That's the distinct disadvantage of doing some-
thing called Urban Design in [a town of 40,000].
What problems do you actually select?

Hutchinson: I was talking to G10 in the men's room a few
minutes ago and he said "you know, the more I
looked at the work the more I think you are
right." Then I said, "I have a notion about
design, that you can't just operate at the
diagram level. You have to work back and forth
from diagrams to details, because, who knows
where ideas come from. Sometimes ideas come from
the building and sometimes they come from
diagrams." He said, "I agree. I think you are
right."

Heath: He has a real danger of running himself into a
conceptual cul-de-sac.

Hutchinson: I think he was overwhelmed by the...

Heath: Heroic design on the wall. But what did he know of the process?

Hutchinson: And that is the problem. You know what we ought to have in a case like this? Instead of having a review by a group of people who come in and sort of talk about the work, one really ought to have a client. You get a group of people. They follow you through and keep up with you. So there is not a matter of people being able to abdicate responsibility for a whole decision-making process but they actually get involved in it.

Hutchinson: On the review...nobody was reading out things in the drawings. It was such a picky thing. The powers of generalization and the powers of observation and perceptions seem to be kind of a cutting through--never looking up or down.

I have come to expect this from reviews.

G20:   Another difference was that you really didn't present the project and state the issues that you were responding to. So they really couldn't criticize you or a project in particular not knowing the issue, exactly.

Hutchinson: I think partly it is the fault of the way we presented it.

Heath: It didn't work.

Hutchinson: Because, one really has to, no matter how many times you do it and people really are tired of hearing it -- you really have to recycle through all the basic issues and the process and that takes too long. That's why I think it would be nice to have a client. If you have a client they could be going along with you and the thing. Then you wouldn't have to do that each time because they would know where you were coming from.

Heath: I wanted to sit down and talk about this to the jurors, but how can you?...
These frustrations are similar to those presenting schemes to clients. It was like a project we worked on last year-- total misunderstanding because of inadequate preparation of the people,

inadequate time, and sheer bias on the part of
public people. It was a total misconstruction
of what it is all about.

Heath: At least we have had some very different sorts of
juries, that is for sure. Whether that is a func-
tion of the state of the problem, a function of
the personalities on the jury, day of the week,
etc., who knows? But it is an intriguing thing.
Maybe that thing [review] is not by its nature
sufficiently stable as an educational vehicle
for it to carry on... This is a forum where
people share their ideas about the project.
The question is to create the right kind of
critical mass of observations or ideas which
begin to spark something.

With that, Hutchinson announced that students would

not have to turn in their work today as scheduled but could

have until Friday, May 23 to complete their drawings and

models, and that groups and individuals could meet with

Heath and himself before then for a critique of their schemes.

But 7:30 the room was empty; it's walls bare.

(The booklet of students' work anticipated all semester

was not compiled until the following fall and then was

abbreviated because of cost, according to Heath. The 100 pages

contained work from each phase, selected to include examples

from each student. It did not contain a typology of the

students' schemes.)

CHAPTER 4

THEMES

In reviewing the events of the semester, several impres-
sions of what happened in the studio come to mind. One is
that although the teachers' ways of designing were integrated
into the studio work, the students frequently did not use
those ways when doing the assigned work. Another is that
the "studio as a design firm" produced changes in the studio
institutions, such as the criticism sessions and the reviews.
Other impressions of the studio come from the events, but
only these two will be discussed.

The Problem as a Vehicle; Reconsidered

Evident from Chapter 3's account of what was intended and what happened in each phase of the design problem is the impression that students frequently did not operate in accord with the prescribed ways of designing when doing the assigned work. This impression questions the effectiveness of these teachers' use of the design problem as a vehicle for learning, especially for learning different ways of operating as designers. It also questions the theories of studio teaching evident in their structuring and managing of that studio learning experience. What was intended and what happened in each phase are briefly summarized in this theme.

In Phase I when students were to collect, interpret, and present the design information listed in the assigned topics as a basis for determining the problem and its constraints in Phase III, interpretations were infrequent. Interpretations of how the design information could effect Civic Center designs were rarely evident in the graphics or in the explanations, despite the volume of material students produced. These interpretations were to have been argued out by the groups. However, the students divided the topics and worked individually, occasionally duplicating efforts. The assignment included an expanded range of design determinants and use of models, metaphors, and precedent. The diagramming of the information prepared the way for the students' use of the "design loop," the "triangle," and the "transformation" approach to designing.

In Phase II when students were to begin trying and using the "transformation" approach with two sets of constraints, they completed the task (while completing the Phase I work) though they were anxious to "get on with design." Those constraints focused more on functional, internal, and zoning issues, not reaching the use of models such as "railroad concourses," precedent such as Boston's Government Center, or the interpretations of other collected design information to "transform" the building masses. Again, students divided the group assignment into individual tasks and did not follow or discuss the work of other group members.

In Phase III students were to design a coordinated range of schemes with the Phase I and II material as a resource. They did move quickly to designing schemes, but did not use the assembled material or the "transformation" approach. They persuaded the teachers to relax the collective, collaborative work requirement for several weeks. Some students did post diagrams when required for presentation but they seldom used them when designing. They determined the problem and its constraints within the limits set by the teachers yet the design determinants and the use of models, metaphors, and precedent evident in the final schemes did not extend the problem beyond architecture to urban design. The variations in the students' problem definitions and selected constraints were evident in the diversity of the final schemes. The guests at the Final Review, however, did not find that the schemes constituted a coordinated range or an observable typology.

In all three phases the students "charretted" before deadlines rather than working steadily throughout the semester.

Indeed, the students frequently did not use the ways of designing incorporated into the studio assignment, but relied on their own ways, many of which Hutchinson had attributed to them, when doing the assigned work.

Admittedly the distinction between a vehicle, itself, and what was to be learned from its use was often subtle in this studio. To have students "work collectively and collaboratively" is not substantially different than to have students "organize work groups in each of the first phases." But the distinction is essential, since completing a vehicle such as a specific product does not necessarily mean that the intended learning has occurred. Hence, when considering a design problem as a vehicle for learning, the completion of the vehicle should not be confused with affecting the intended learning. Therefore, these teachers' use of the design problem as a vehicle for learning different ways of designing needs further consideration —their theories of teaching will be examined in Chapter 5.

The Studio as an Urban Design Firm

Setting up the design studio as an urban design firm with
the teachers as "principals" facilitated the integration of
Hutchinson's and Heath's ideas on designing and urban design
in the studio work. From this position they were able to
determine the products and the program of work which the stu-
dents would follow. However, during the semester, references
to the studio as an urban design firm were infrequent. Only
two aspects of the metaphor were mentioned in studio discus-
sion: principal/designer (employer/employee) responsibilities,
and client/firm responsibilities.

In its use to clarify the teachers' role as principal
(employer) and the students' role as designer (employee), the
metaphor came into play in the early review (2/7). One stu-
dent, S6, asked the teachers for a specific decision regarding
the urban design problem, and was told that "principals" were
not in a position to make design decisions.

>   S6: On a general level, how do you feel about...
>   or what are our limitations on taking down
>   buildings... I just want to know, are we
>   going to get some rules about which build-
>   ings can go and which can stay? Or is it
>   up to us? As principals of this firm, how
>   do you feel?

Hutchinson responded by discussing the idea of a range of
schemes as the studio product, and noting that they would not
be working in an "excessively large area" or "taking down all
sorts of buildings outside" the designated site. In response
to a further inquiry by S6, Hutchinson reiterated the site

boundaries, and explained "awfully strong arguments" would be required to operate outside the site. S6 was still searching for an answer to which buildings could be removed.

> S6: Okay, then within the site, can we have a drawing that shows exactly which buildings must stay?

> Heath: I think "must" is the wrong word. You must see the degree to which we are being un-specific about things like that. "Must" would be inconsistent with the idea of simulating the office. The office is different from school because you [the designer] have got to know what you are doing and advise people about what you should do. The reality of this is that the principals in the firm are in no posi-tion at all to say what must or must not be done.

Thus, in this "firm," the principals were not the final arbi-tors of design decisions.

The subsequent class discussion dealt with supporting designers' decisions to retain buildings, not with other ways the traditional studio roles "would be inconsistent with the idea of simulating the office," i.e., other aspects of the teacher/student--employer/employee relationship modified by the "design firm." While the metaphor did begin to clarify the students' role in this studio, it did not inform the students about the intricacies of working in a firm like the one being simulated. For example, as teachers set the studio's work program, did that mean that employers set the firm's work program?

Reference to this employer/employee aspect of the meta-phor was observed in the studio on only one other occasion.

One group of four students was having problems with an un-

equal production of work. Heath recounted a professional

experience to elaborate his emphatic comment, "Look, if you

guys were working in my office..."

> Heath: Two years ago, we were working on an urban
> design problem in the office [with 5 recent
> graduates]... It became evident to me early
> on that they [2] weren't strongly, efficiently
> functioning parts of the team who could take
> certain aspects of the design, develop ideas
> out of them and feed them back in. Two of
> the five got fired very soon. (Crit with
> S2's group, 4/21)

The message was clearly that principals could fire designers.

But in terms of the studio as design firm metaphor, what did

that mean if the teachers were disapproving or dissatisfied

with the students work?

The metaphor was also used to clarify the client/firm

responsibilities in the class discussion which followed

Heath's comments on the principals' role in design decisions.

> Heath: One responsibility to your client is not to
> just say that the Landmarks Commission says
> that the City Hall must stay and Tweed
> Courthouse must go, so we scrap it. You
> should show as one possible alternative
> how the Tweed could perform a very important
> function in relation to some new kind of
> building.

Hutchinson further explained that designers should develop

schemes to establish the quality and longevity of their design

decisions.

> Hutchinson: ...you have to demonstrate a scheme in which
> it becomes an essential part, otherwise it
> would not stay...if your move isn't convinc-
> ing enough, then someone could come in later
> and...take that building. (Class discussion, 2/7)

Hutchinson's and Heath's concern for the students' understanding of client/firm responsibilities was also evident in their inviting of representatives from OLMD to all the major reviews. But as it was, the role of the clients in the urban design process was not established beyond that of a critic, despite Hutchinson's desire for greater client involvement expressed during the final review. Indeed, the two OLMD representatives functioned more as additional design critics than as clients. Also, although Heath's notion that the clients could benefit from a "catalytic document" established certain underlying ideas about the client's role in the urban design process, the client/firm responsibilities were not discussed with regard to the client's role in the production of the professional document.

The metaphor which was used to structure this studio was not used to explore the actual distinctions between the aspects of this studio that reflected the simulated design firm and those that reflected the "design studio." Clarifying those distinctions would have illuminated the qualities of each and facilitated the students' learning about the intricacies of working in a design firm. That use of the metaphor would have been consistent with the teachers' intention to "expand the students' use of models, metaphors, and precedent." However, Hutchinson's and Heath's use of the metaphor in this studio evoked several changes in the studio institutions. The roles of the teachers and students, the criticism sessions,

the reviews, and the studio products each realized some change.

Heath's comment that the teachers, as principals, were not the final arbitrators of design decisions though they could establish the nature of design arguments indicates changes in both the students' and teachers' roles. The "firm" metaphor was used to shift the responsibilities of setting the problem and its constraints from the teachers to the students. The intention of having students determine the problem and its constraints, as well as the distinctions between the principal/ designer responsibility and the design firm metaphor, required that students become increasingly independent as designers and more responsible for their design decisions. This shift in the student's responsibility implied a shift in the teacher's main role from one who validates design decisions to one who validates arguments. The teachers still had a role in suggesting ideas, extending the students' ideas, and selecting contexts for evaluating these ideas, but it became secondary. The coordinated products of each phase implied other changes. The teachers assumed the overall coordination of the students' work in their role. The coordinated work reduced the students' sense of control. This prompted one student to note in his final interview that "only the last four weeks of the semester had been design." These new roles and responsibilities influenced changes in the norms of the crit sessions and the reviews.

The crit sessions focused less on design ideas and more
on where to get data, how to interpret it, and how to communi-
cate it in a useful manner to other co-designers (Phase I).
Design ideas were discussed in the interpretation of design
information and in the massing studies in Phase II, but the
main focus was on transforming the mass to respond to various
constraints (again, less on the acceptability of the idea,
more on the process). In Phase III, crit sessions included
discussions on how to use a critic, how to present ideas
conceptually, and how to diagram ideas. Again, design ideas
were discussed, but more as an element in the process than as
a validation of those ideas.

The reviews reflected a greater change in the studio's
operation. Twenty-six percent of studio time was consumed
in major and minor reviews. Several minor reviews were
organized so that students could present their schemes for
comment, but at the major reviews the work was presented as a
collective product. The Phase I review (2/14) was dominated
by a slide lecture on the historical significance of buildings
in the Civic Center, and by Hutchinson's explanation of the
design problem and the next phase of work. The students' work
was posted though it was not discussed.

Similarly, the work of the first six weeks was posted for
the Phase I and II review (3/7), but the students themselves
did not present it. Instead, three faculty reviewers and two
OLMD representatives spent three hours discussing how they

could usefully comment on the work. The teachers had intended
to use the review to begin the selection of schemes to be
developed architecturally; instead, students heard reviewer
after reviewer talking in very general terms. When the dis-
cussion did focus on the schemes, it revolved around 1"=80'
scale models rather than the more detailed drawings. The
next class day Heath acknowledged the students' discontent
with the review, but rather than discuss that, Hutchinson ex-
plained that the materials were posted in the studio and
students should use them in Phase III.

As schemes were developing in Phase III, students pre-
sented and defended their work in minor reviews. For the final
review, the faculty presented the schemes to the guests in the
absence of the students. The guests then offered general re-
marks upon the students' return. However, the students,
somewhat dazed from their shortage of sleep and the last few
days of hard concentrated work, expressed dissatisfaction with
the reviewers' general discussion. They asked for the tradi-
tional critique of their groups' schemes. A few groups pre-
sented their schemes which were criticized by the guests.

The structure of the final review, which the students
found unsatisfactory, was consistent with the design firm
simulation: the principals presented their designers' work.
At the review, however, Hutchinson noted that the structure of
this review was a response to the "long time" and "tediousness"
which he associated with reviews where students presented each

scheme. The consistency of the review structure with the simulation was not acknowledged in the class or in interviews by teachers or students.

Reviews are an essential arena of evaluation for students. In their interviews students explained that the quality of their visual presentation and their success or failure in the review tended to influence their reputation in the class and their image of themselves as designers. Information about how students perform is especially important from guests as it is not modified by the more personal relationship between student and teacher and it provides evaluation from fresh perspectives. Furthermore, by designing a final review which did not crit- icize the individual schemes, one of the students' main sources of feedback and evaluation was cut off.

In their interviews, students also described the review as the setting where they learned most from other students. Their designs demonstrate alternative approaches to dealing with the same problems; presentations reveal new graphic techniques; and the guests' comments evaluate the various approaches and provide insight into the schemes by comparing several solutions with precedent or other frames of reference.

Thus, the set-up for the final review prevented students from hearing these presentations. As a result the critical evaluations of each project by the guests were less meaningful since the students were not aware of what each design team had done. They also mentioned that in other studio's they had been

familiar with others' schemes, but that this semester they had

found themselves surprisingly unfamiliar with and unable to

characterize the various schemes. However, they were given the

opportunity to have critiques of their schemes by the teachers

in the two weeks following the review. Less than half the

students reportedly took advantage of this offer. While these

opportunities did provide criticism for specific groups

scheme, students were not able to learn from other groups'

work.

The new product, a coordinated range of schemes, meant

students would not be designing and presenting competing

schemes. This changed the studio norms by modifying the

mechanism which students used to establish their individual

identities and statuses. In interviews they mentioned that

their design reputations among other students were established

by the quality of their individual designs and presentation

graphics. This coordinated range of schemes with compatible

graphics that would come out as a single professional document

meant that the identity and distinctiveness of each student's

work was minimized, perhaps even lost. Reputations established

by this document were attributed to the working group, i.e.,

the firm, not to individuals as in previous studios.

While certain aspects of the studio institutions were

changed others were not, among them the role of the client.

The OLMD remained passive in the design process, and many of

their comments remained disregarded.

In summary, the metaphor of the studio as an urban design firm was central in structuring the studio and had a major impact on what happened during the semester. The changes in the studio institutions which it evoked influenced the students' ways of designing and their ways of operating as students. However, had the teachers and students used the metaphor to investigate urban design practice, the students could have gained a better understanding of urban design, and how one should operate in the studio and in professional practice. But the metaphor's potential was not realized.

CHAPTER 5

WHY WHAT WAS TO HAPPEN DID NOT?

The review in Chapter 4 of what was to happen in the studio that did not, indicated that rather than operate as the teachers had intended, many students had operated according to the ways Hutchinson had attributed to them. If students' experiences trying and using a different approach to architecture, and different ways of designing are to be the basis for learning the approach, it is important to understand why many students did not use the one prescribed by these teachers. This is especially important when one recognizes that those experiences are the basis for examining several approaches from which students will form or select those they will act on professionally.

Several studio incidents suggest three ways of explaining the students' action. These explanations provide one interpretation of the studio events, and the assertions they imply combine to form one view of studio learning.

In Phase I when the students were to work in groups, they worked individually. The "Schedule" and "Working Procedure" handouts indicated that they were to work in groups, and the Phase I assignment outlined the seven topics around which they would form their groups. Yet, at the Phase I Preliminary Review (2/7) students were not presenting group work. When Hutchinson inquired of one of

them, (S1), "Is this mutual work?", the student responded,

"No, we are all working on separate areas..." and went on

to explain which subtopics each group member was doing.

Tackling the subtopics individually, as done by all

the Phase I groups, is one approach to group work. However,

Hutchinson had intended the students argue out their

individual positions and decide on a collective one. While

the handouts had explained why students were to work in

groups, the explanations were equally valid for the

students' approach. The handouts had not explained in

specific terms how the groups were to function, and the

students had not shared the teachers' understanding of

group work.

In the preliminary review when the teachers were

confronted with the students' negative responses to "Is

this mutual work?", and later, "Are you working as a

cohesive group in any way?", the discussion returned to the

students' design information. The teachers did not

interrupt the presentations to inquire why the work was

individual or to explain their desire for groups to argue

and take positions. Even when students in the same group

presented overlapping and duplicate work, as happened with

topic "E, Program Definition and Expansion," the students'

approach to group work was not discussed. By contrast, the

teachers did interrupt the presentations to remind (or

inform) students that presenting information without establishing its importance to the design of the Civic Center was inadequate, and occasionally they gave examples of how it was to be done. By taking no action to correct the way the students were working, nor to inquire why they were not operating as intended, nor to explain their understanding of the assignment, the teachers did not indicate that there was a misunderstanding. (Taking no action may also have indicated to the students that working in cohesive groups was not important enough for the teachers even to acknowledge it.)

Hence, by presenting the assignment in unspecific terms and by not taking action to correct the situation when students did not operate as intended, the teachers frustrated the students' awareness of how they were to operate and whether their approach was incorrect. So, one way of explaining the students not operating as intended is that they were unaware.

This lack of awareness was not limited to group work, or to the first part of the semester, as the following segment from one student's final interview indicates.

> Observer: What do you think were the teachers' intentions for the course? Did they want you to learn particular architectural concepts, or ideas about the process of design, or about learning to learn?
>
> S7: Right now, I just don't know--I just can't tell and I think that's bad. It's part of the

> professor's job to lay out what he wants to do.
> He has to let his students know what he wants
> to teach them or else they can't learn it.
> (Final Interview)

That the teachers did not take any action suggests another way of explaining the students operated as they did; they were having problems operating as intended and were not receiving effective assistance. In this review the teachers did indicate in their feedback to the students that they were not presenting their design information as intended, and their inquiries about "mutual work" may have carried the same meaning for the students' approach to groups. Furthermore, the teachers provided little help. Their comments were more toward creating an awareness of what was to be done and how, rather than toward resolving the students' problems with using their intended approach. This lack of effective help in the face of these problems was particularly acute in Phase III where students were developing schemes in groups. Heath in his crit with S2, S5, S17, and S23 (4/21) discovered they were having problems designing together, but did not provide more helpful comments than "...in the next few hours either sort it out or go your separate ways." Referring to others in the studio he noted "...they simply sunk their differences if they had any." Referring to two urban designers in an office where he had practiced, he explained, "...they

weren't strongly, efficiently functioning parts of the
team" and they were "...fired very soon."

A third way of explaining the students operating is
evident in Phase III where students were supposed to use
conceptual diagrams to present and to design their schemes
and many did not. The sets of diagrams required for
presentation were listed in the handout for the April 4
Review, expanded in the handout for the Final Review, and
were discussed in class March 31 and April 16. It is
presumed that from these handouts and discussions students
were aware of the intended use of diagrams. In Phases I
and II they had complied with the presentation requirements.

The students' use of diagrams in the April 4 Review
was reportedly minimal; when observation of the studio
resumed (4/14), diagrams were evident in the work of only
two students (S11, S24). For the April 23 Review, which
Hutchinson had described to the class as being a test run
for the Final Review, only three of the thirteen schemes
presented during the three days of continuous review were
accompanied by any of the diagrams required three weeks
earlier. The Final Review was different. No posted scheme
was without some accompanying diagrams, although only one-
third of the schemes had all the "abstractions" minimally
required. One student, S9, remarked in his final interview
that "the most important thing I did to explain [to others,

the concepts that] I was trying to deal with" was to use the conceptual diagrams, but admitted that they had been done "at the last," rather than being developed along with the scheme.

While the teachers had relied primarily on the handouts to make students aware that diagrams were required for presentation, they relied extensively on comments in criticism sessions and class discussions to make students aware of the what, how and why of using diagrams when designing. Especially notable was the class discussion April 14. There Hutchinson explained that students were to use diagrams when designing, especially when developing basic strategies and positions on the issues. He described examples of how diagrams are developed and used, and demonstrated this by extracting single issues from one student's scheme and diagramming them. He explained the importance of diagrams to his ideas about designing, to the use of the Phase I and II material, and to their use in criticism sessions. But even with this discussion only two students (S11 and S24) were observed using diagrams the following day. In crit sessions that day Hutchinson reiterated his April 14 comments and demonstrated how to make and use diagrams employing ideas from the scheme being critiqued. Hutchinson's conversation with S22 about his "strange, indecipherable hieroglyphics," his conversation with S9 who

wanted to talk about ideas but not draw them, "Mainly, because I'm not a good sketcher," and his conversation with S2 who was using a schematic diagram of her physical design, but not of the issues and constraints, all happened this day. When Hutchinson found S24 with the intended diagrmas, he immediately shifted to discussing the ideas contained therein and how to combine several of them.

Even after this individual help most students were still not using diagrams as intended when designing. During the observations between April 14 and April 25 diagrams in any form from single issues to schematic diagrams of plans or sections were observed in only five schemes (S24 and S22, S11, S18 and S20, S8's group, and S2).

Why did the students not use diagrams for presentation and design? The handouts, discussions, and criticism sessions suggest that the students should not have been unaware. The observed students' use of diagrams, though limited, does not indicate they were having production problems and not getting assistance. Indeed, much of their Phase I and II work had been presented in this manner. Hence, a third way to explain the students' action is that the students decided not to operate as intended.

The comments by students about situations in this and previous studios where they or others did not operate as

intended support this explanation. The reasons and circumstances which the students explained had influenced their decisions are many, but, interestingly, they all relate to either the intended ways of designing, the teachers, or the studio situation. (Their comments illustrating that they, indeed, on occasion decided not to operate as intended are presented in the Appendix.)

Studio Learning

The assertions implied in the three ways of explaining the students' action combine to form one view of studio learning. The first assertion is that students must be aware of how they are to operate, as clear descriptions and illustrations can provide. The second is that students must try and use the teachers' ways of designing. The third is that students need feedback on how they are doing when trying a different way, and help if there are problems that need to be corrected. Without description, feedback and help, students would have to guess what they were to do and how successful they were. Therefore, it is possible to suggest a view that awareness, trying, and feedback and help together are central in students' learning well-defined ways of designing.

AWARENESS

FEEDBACK
and HELP

TRYING
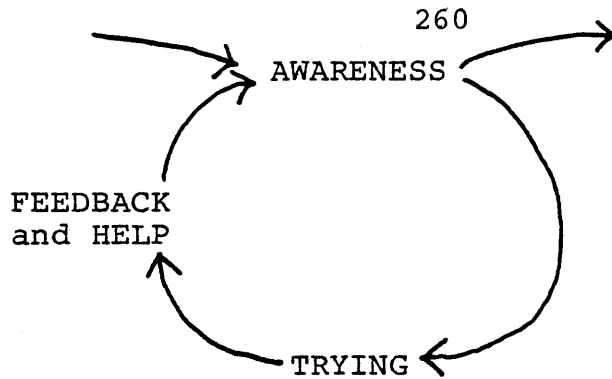
This view recognizes that in design studios (noted
for their use of "projects," not texts) learning grows
out of doing projects and out of discussing those projects
with teachers, guests, and other students. As Hutchinson
has noted, design problems are vehicles for learning.
Hence, the experience doing certain tasks is an essential
source for their learning.

This view of learning particular ways of designing
reflects one way learning in studios grows out of doing,
"learning by doing." It is "you show me how and I will try
it." It is appropriate when tasks and products are well
defined, and the goal is the students' demonstration of
competence. For example, "You show me how to diagram an
idea, size a beam, or construct an axonometric drawing, and
I will do it as you did." It is as much a process of
discovering what one is to do, as it is a process of
learning to do it.

When students readily try the particular ways, the
diagram of learning by doing is straightforward, even in

acknowledging one paradox: students can not try the different ways without an awareness of what they are to do; their awareness is derived from their own trying.

In this studio students were to learn by doing--they were to try and use the ways of designing prescribed by the teachers. However, their infrequent trying and using of those ways limited this approach to learning, and suggests that the link between awareness and trying in the diagram needs to be explicated. Implicit in that link is a fourth assertion that students decide to try either tacitly or not.

AWARENESS

FEEDBACK
and HELP

DECIDING

TRYING
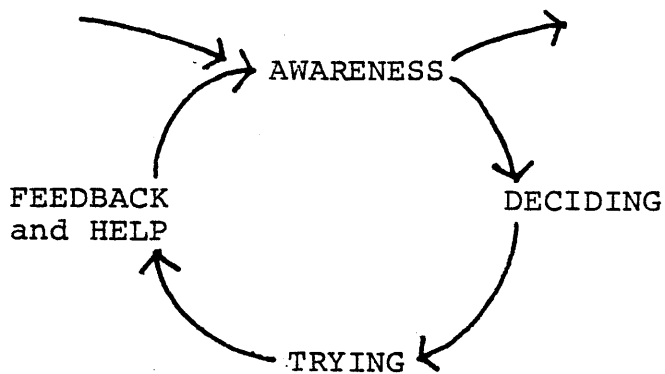
Hutchinson anticipated that some students would decide to try his ways of designing. As he noted in his initial interview, "they accept anything you do." However, if students are deciding not to try certain ways as a response to their attitudes about them (as argued in the Appendix), their tentative acceptance of those ways will have to preclude trying them. They may even have to accept ways of designing in general as legitimate for studio

learning. Some students in this studio did not feel "learning a method" was legitimate.

This interpretation suggests two responses to the students' deciding and accepting. One is to challenge them to inquire into their understanding of why they are trying different approaches in different studios. They may not understand the curriculum's multi-perspective approach to education, or how trying facilitates learning in that framework. The other is to accept the interpretation and work to gain their acceptance as if the intent were change.

Both responses would take time but could be useful to even those students who do readily accept and try. Both can extend the students' understanding of the multi-perspective approach to their professional education.

To facilitate gaining acceptance, the teachers should be clear and specific about their approach and ways of designing, and put the students in positions to go through the same processes as the teachers have when forming their own convictions about how to operate as designers. Students must examine their own experiences as designers and decision makers to identify the ways of designing they have come to use and the problems they have found when using them. If problems become evident, they may make a tentative decision to reject one approach and search for or invent another to try.

In the studio teachers would acknowledge that students had certain ways of designing when they entered. Thus, gaining acceptance of different ones might sequence from the students identifying their own ways, examining their use of those ways for problems and successes, tentatively rejecting ones with which they have problems, searching for alternatives, and tentatively accepting different ways to try.

AWARENESS

Students identify their ways

Examine those ways

Tentatively reject
ones with problems

Search for alternatives

Tentatively accept other ways

FEEDBACK
and HELP
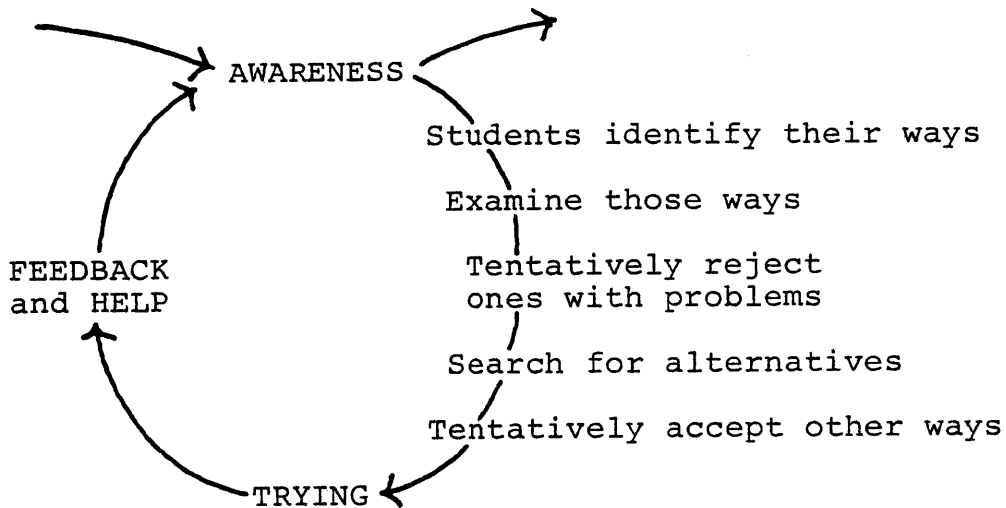
TRYING

Hence there would be a shift in the learning context from students being assigned different ways to having them examine their own ways and then trying the teachers' ways as alternatives. By focusing on change* the students' task shifts to that of the multi-perspective approach to

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*This discussion draws on the writings about learning and change by Donald Schon, Chris Argyris, Ed Schein, David Kolb, and Larry Greiner cited in the Bibliography.

education using their experiences with different ways of

designing as a basis for forming their own personal approach.

This approach to gaining students' acceptance

reflects the second way learning in studios grows out of

doing, "learning from doing." Learning that occurs when

students go beyond doing and examine what they are doing

and their simultaneous experiences. One student in the

studio demonstrated the problem with not going beyond.

Hutchinson: S12, do you really believe that the only way
to design is to know every room which has to
go in the building?

S12:   Well, that's all I've ever been exposed to!
(Class discussion, 3/12)

S12's technique for solving design problems was useful for

only a limited set of problem types.

Learning from doing can facilitate students'

learning about how they solve problems, what arguments they

use, how they operate in problem solving groups, and which

circulation concept organizes their design scheme. It

requires that students document, abstract, conceptualize,

and explain their "doing." This allows the learning to be

applied in other situations or other designs and facilitates

the sharing of learning and the examination of the conse-

quences of the students' own decisions and actions.

Learning from doing is what Don Schon calls "discovering

what you know," hence, discovering from doing describes

this learning equally well. Kolb's "Experiential Model

of Learning"* best describes this experienced-based learning

in operational stages.

Kolb's Experiential Learning Model:

Concrete
experiences

Testing implications
of concepts in
new situations

Observation and
reflections

Formation of abstract
concepts and generalizations
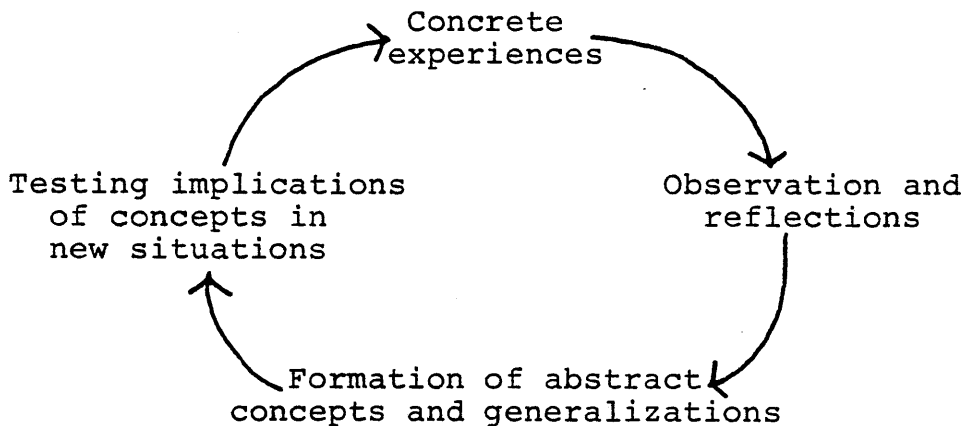
Briefly, Kolb's model conceptualizes learning as a

cyclical process beginning with the students' immediate

"concrete experience." These experiences provide a basis

for "observation and reflection" from which "abstract

concepts and generalizations" are formed or understood.

These "abstract concepts and generalizations" have impli-

cations for action in new sitautions which must be tested.

This testing brings the student into the realm of the

"concrete experience" and the cycle continues.

One hypothetical example of a design student's cycle

would be that while designing interior office layouts for

the municipal office building (Concrete experience), the

student stops and asks him/herself, "Wait, I'm doing

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*"Individual Learning Styles and the Learning Process," David
Kolb, Working Paper 535-71. Sloan School of Management, MIT,
Cambridge, 1971.

architecture here, but this is an urban design studio... But
how is doing urban design different from doing architec-
ture?" The student may compare this studio with previous
studios to see how the treatment of urban design and
architecture differ (Observation and reflection). The
student may formulate his or her own distinction, for
example, that architecture deals more with the building and
fitting it together internally and with local site conditions,
while urban design deals with several buildings and fitting
them together externally with an existing set of urban
conditions (Abstract concepts and generalizations). The
student may then determine that he does not need to do
furniture layouts but only general office and circulation
layouts to establish that the proposed building envelope
can work as an office building, and that internal circulation
connects satisfactorily with the exterior circulation
network, leaving the other interior work for the architects
(Testing implications). The student urban designer then
begins work on another aspect of the urban design project
(back to the Concrete experience).

   While Kolb's diagram is useful for conveying the
sequential relationships of the four elements in his model
of learning, the sequence will vary. For example, students
could be reading about a theory of designing (Abstract
concepts), which reminds them of the studio work they are

currently doing (Observation and reflection on their
Concrete experience). This could in turn result in their
gaining a new understanding of what they were doing (new
Abstract concept), or in their reformulating how they would
work (Abstract concepts), which they would try (Testing
implications) and evaluate (Observation and reflection).

While Kolb's model describes the process of learning
from what one does in any setting, it is particularly
appropriate for studio learning in a curriculum presenting
multiple approaches to architecture and how to make it.
The model describes the process by which students try the
various approaches and examine them in use, while forming
their convictions about the approaches they will act on
professionally. But this model does not address the
previously discussed concern for awareness, deciding-
acceptance, and feedback and help associated with trying.

(Learning from experience, one's own as well as
others, is not only appropriate for learning in studios,
but for learning in practice. In professional practice
designers' own experiences and the experiences of others
form an important basis for learning about successful design
strategies and physical environments, as well as for learning
about operating with clients and other professionals. For
designers learning from experience is seen in their
intuition and in the constraints and issues considered
important in their designs. Thus, learning to learn from

one's experience and the experience of others is an essential
part of one's studio preparation for professional practice.)

Having presented the view of studio learning that
students must not only learn by doing, but from that doing,
the interrelated strategies which facilitate the students'
awareness, acceptance, trying, and feedback and help need
elaboration.

Different strategies can be used, but their effective-
ness will vary with their appropriateness to the specific
student and the specific situation. Consider the importance
of students' experiences with the ways of designing for
which they have developed a preference. Novices with
limited awareness, experience, and proficiency may be
easily persuaded to try different ways, ignoring their
own. The advanced student, with experience to support
preferred ways, and strongly committed to those ways, may
be unwilling to give them up, or even to examine their
effectiveness. Thus, tentative acceptance may be more
easily achieved with the novice than with the advanced
student. One student, S2, recounted in an interview the
ease with which she surrendered her suburban house images
of residential design the first week of her first year
studio. However, in Hutchinson's studio, she did not use
diagrams as intended, did not use the transformation
approach, and was an uncooperative group member in Phase III.

One set of strategies is primarily based on students'
trying before teachers' explanations or demonstrations.
The students' awareness and acceptance comes from their
trying and from the teachers' feedback and help. That help
may include individualized explanations and demonstrations.
The students' success with the new ways can yield acceptance,
if the results of their trying is sufficiently convincing.
One student's apparent success may reinforce or encourage
acceptance by others. This strategy is most effective
with ways which are quickly and easily accomplished. When
developing proficiency requires perseverence, this strategy
may not carry the student beyond tentative acceptance.
Even when students are committed to the new way, extensive
problems in trying them can bring their acceptance into
question. This strategy, a form of advocacy through
practice, asks students to by-pass deciding-acceptance to
try new ways.

Another set of strategies is primarily based on
teachers' advocacy--gaining the students' tentative
acceptance through persuasive explanation and demonstration,
or one without the other. This would be most persuasive
when presentation and demonstration are integrated, i.e.,
using both levels of advocacy, and shifting from one level
to the other--the "design loop" in operation. Here
students understand more about what they are to do, and

how and why they are to operate, before trying. Hence, less explanation comes in the form of feedback and help. This strategy would be most effective if a student were searching for alternative ways of designing.

Neither of these sets which reflect the "learning by doing" approach asks students to examine the alternative ways in contrast to ways in previous studios. They also do not ask that students consider other ways of designing.

A third set of strategies incorporates the students deciding-accepting, and reflects "learning from doing." Teachers can help students identify and examine their own ways of designing, as suggested previously, by suggesting alternative ways and offering their own interpretations. However, the final analysis must rest with each student. If teachers identify and examine the students' ways for them, and are the source for the new ways, several problems can occur. The students' conceptualizations of their own ways may contradict those of the teachers. Further, the students may not find their ways of designing inadequate, especially inadequate in the manner which the teacher explains. If students do find their own ways inadequate, they may still not accept an alternative advocated by the teachers; the teachers' alternative may not resolve the perceived inadequacies or may not deal with the same inadequacies the students have identified. Hence, the result of keeping the identification and analysis of their

ways and the resolving of their inadequacies out of the

students' hands, could be an insufficient student commit-

ment to both accepting and trying those ways. Thus, the

source of the critique and the source of the alternative

ways can play an influential role in students' accepting.

Before students can effectively examine their ways

of designing they must accept the constellation of

related ideas as legitimate and important. Constellations

of ideas, like ideas about designing, are sets of ideas (or

theories) which are related by common concerns, such as in

this studio, how to operate as a designer or how to operate

in groups. Constellations include complementary and

contradictory ideas, theories, concepts, ways of operating,

expectations and measures of success. The process of

gaining legitimacy for a constellation is the same as

gaining acceptance for new ways of designing, as both are

influenced by the same factors.

Gaining students' acceptance of different ways of

designing is the process of helping students to legitimize

ideas for themselves. If involving students in identifying

and examining their own and other ways is effective, it

will not be for convincing them to use the teachers' ways for

the long term.   It is not a teaching technology with

which students can be persuaded regardless of the approach

being advocated. Quite the contrary, this view puts

students in charge of their learning. They form their
convictions based on their experiences with a range of
approaches. Hence, it addresses the dilemma in learning
that students can not know what a teacher will teach or its
importance until they have learned it. Students can
understand their role in multi-perspective education and
develop the capacity to alter the ways they operate as
professionals based on their experiences in school and in
practice. This approach to studio learning is no less
important for students in a more mono-perspective curri-
culum. Those students must also reconcile the approach to
architecture and ways of designing being taught with their
own perceptions of architecture and the world around them.
The objective in a design studio, then, would be not only
to develop students' competence with particular ways,
but to use their experience with those ways to understand
their own, and those of others. (This view of studio
learning questions the teachers' and students' theories of
teaching and learning evident in the studio and the Chro-
nology. However, only the teachers' theories are examined
here.)

These Teachers' Theories of Teaching

Hutchinson's explanation for the students not operating
as intended centered on the students—their unwillingness
to work and to suspend disbelief. In his final interview

he indicated that a number of students had been unwilling, and he questioned their understanding of studio learning.

Hutchinson: You get people who are very committed to what they're doing, who are willing to work and who realize the direct relationship between their own input and what they get out...

At the opposite extreme you get a very substantial number of people who have never understood that and probably never will... I get the general feeling that there is a substantial amount of the class that would really like to absorb it without ever having to do any work--the goof-offs...

There is always that problem of their willing suspension of disbelief... There is no way you can educate someone without their willing suspension of disbelief. They have to be able to take something on faith up to a certain point. That doesn't mean they don't question but that they have to be willing to go along with it...on faith that it will produce something that's worthwhile.

You still get an enormous resistance from people even in the fourth year who are inflexible. They do not see the immediate payoff coming from the time that they are investing... The more that they believe it's not going to pay off, the less it pays off. (Interview, 5/14)

Further, Hutchinson noted that several students had worked diligently, but had not been willing to suspend their disbelief. His impression was "that they put in too much work in relation to what they got out."

While Hutchinson's explanations placed the responsibility for the students' action on the students, as he had also done during the semester (notably the April 12 Review and his comments about the students' "commuter mentality"),

the three previous explanations shift much of that

responsibility to the teachers, calling their theories

of teaching into question. Hutchinson explained in

interviews several theories upon which he based his action.

Regarding the students' awareness he indicated that

only abstract explanations of what is to be done and why

it is to be done can be made before students begin work

(trying). Hence, awareness comes from trying, relating

it to other experiences, and getting feedback with

explanations.

Hutchinson: I think we can make a general statement about
our purpose and method. But then, until they
really begin to deal with it and react to it
and find themselves involved in it, you can't
really explain it except on a very abstract
level. Once they begin to experience it
themselves and relate it to their other
experiences, then the whole dialogue starts...
When they can't fall back on the familiar,
there can be frustration. When that begins to
happen, you try and put that into perspective.
(Interview, 2/12)

Regarding deciding and accepting, Hutchinson indicated

that some students would readily accept while others

required more explanation.

Hutchinson: Some students will accept it. They accept
anything you do. Others will either question
me, or at least want a further explanation...
I usually [give that] on an individual basis...
it becomes meaningful in that way, because of
the way they relate to their own experience...

Even within the school, their experiences
have been quite different... I think too much

> teaching really ignores that... One takes
> these people where they are.
> (Interview, 2/12)

He also indicated that students must try the teachers'
ways before they can find them useful.

Hutchinson: ...Sometimes it's hard for them to see the
              purpose of any particular thing that they are
              doing, until they get into it.
              (Interview, 2/12)

And that teachers gain students' tentative acceptance for
trying by asking them to "suspend their disbelief" in what
they are asked to do.

Regarding trying, Hutchinson indicated that the
problem was to be a vehicle for learning (quoted in Chapter
2). The problem, then, would give sutdents the opportunity
to try and use his ways of designing to gain awareness and
acceptance.

Hutchinson did not comment on his approach to giving
feedback and help, other than it could include individual
explanations.

In accord with these theories Hutchinson and Heath
created opportunities for students to operate in a different
way through the assignment (problem as a vehicle). In
structuring the studio they unilaterally decided how the
students should operate as designers, anticipating that
the students' own ways would not be as effective. They
asked students to "suspend disbelief" in their ways in order
to try them and find them useful. From students' trying and

the teachers' feedback and help, the students' awareness
was to grow, and their successes with those ways were to
encourage their acceptance. The set of strategies used to
implement these theories, then, relied primarily on the
students' trying before the teachers' explanations of how
or why, as in Phase I where the students' "perfunctory"
presentation of design information was the basis for
explaining and demonstrating how the information was to be
presented (with interpretation) and why.

The limitations of these theories were evident in
their implementation during the semester. Further, they
are not consistent with the learning by doing/learning from
doing approach to studio learning. First a look at the
theories related to students' awareness.

Hutchinson's theory that students' awareness and
understanding grows out of their trying poses a paradox.
Students must try in order to understand, but they must
sufficiently understand and be aware of what they are to
do, how they are to operate, and possibly why, in order
to try. In the studio, Hutchinson's presenting of those
ways often did not provide this understanding and thus
complicated the students' efforts to try.

When presenting the assignment, Hutchinson explained
in general terms what was to be done and how students were
to operate--the ways of designing they were to use. The

handouts were no more specific. Without more operational
explanations (like those he gave in interviews), students
began to work using their understanding of such terms as
"interpreting design information" and "group work" rather
than the teachers' particular meanings.

The handouts used traditional terms to describe these
teachers' "non-orthodox" approach. Hutchinson, himself,
pointed out the disparity between the assigned "Building
massing and site alternatives" scheduled for Week Four and
his intentions.

Hutchinson: This [use of models and metaphors] will become
             much clearer in the next phase of the problem.
             Although it says in the outline or schedule
             that we would be dealing with massing and
             alternative sites for the building, there is
             an intention which is very specific with
             regard to that which has to do with modeling.
             In other words, what we're going to, instead
             of just having people look at the thing as
             buildings on the site and the ways that you
             can put these buildings on the site, we're
             really going to try then to view it on a more
             conceptual level. Like what are different
             attitudes that one can take toward this place,
             that would become like a metaphor for it, you
             know, one sees it as something, as a great
             sort of archetypal architectural thing like
             a railroad concourse, for example, or one
             could see it as a supermarket, for another...
             Once you look at it that way, it's no longer
             just buildings that you are building, it's
             no longer just elements shifted on the site
             compositionally.   (Interview, 2/12)

This further confused the students' understanding of what
they were to do. The assignment appeared to be similar to
students' previous problems in spite of the differences.

S7: I had just come out of a semester of urban
design in the fall with another critic.
Hutchinson had talked about this problem in
much the same way the critic last semester
had talked about it.
(Final Interview)

The teachers presented the assignment as a professional

problem, minimizing their comments to the students about

their underlying pedagogical intentions and about their

intended ways of designing. Even the Introductory Handout,

despite its length, did not explain that the ways of

designing integrated into the studio work were different

from those familiar to the students, nor what the problem

was to be a vehicle for learning. Rather the problem was

presented as work to be done.

S7: I feel like I don't really know that there
is anything that we are trying to get at. We
are just trying to arrive at a final product,
and we are going to do the typical sort of
look at the site...

But I have this feeling that Hutchinson is
trying to say something but I can never
understand what it is he is trying to say.
He talks all around something, but I don't
know what it is he is talking about.
(Initial Interview)

As Hutchinson explained he preferred to share

information about how to operate and why, to demonstrate

his ways, and to explain his pedagogical intentions after

students had gotten into the work--"when students needed

it"--and individually rather than to the whole class at

once. When he saw a problem with how they were operating,

he would discuss it somewhat in crits, class discussions, and reviews. Though noting in class that the "problem was a vehicle for learning" certain things, Hutchinson specified few of these things to the students. Occasionally he would discuss the ways of designing integrated into the work, referring to urban design or his own ideas about designing for support. In crit sessions he elaborated and demonstrated these ways as they related to the individual student's work. But given that each student in the studio potentially had 4.75 hours of individual crit time with the teachers during the semester (twenty minutes a week), it seems unreasonable that each student had similar access to adequate explanation and demonstration of the teachers' several ways. Indeed, the teachers were observed giving extensive explanations to only a few students.

When Hutchinson did elaborate the work to individuals or to the class, he focused on the work at hand rather than how it related to the whole semester, and did so when he saw a problem with the students' work, and often not when the students inquired.

> S7: One of the problems I'm having right now [is] I really don't know where I'm going in the course. I have a feeling that the course is going toward putting out a building via a method... When you ask questions about what we are doing now and what we will be doing next,...there is this response that there is no boundary; that everything melts together... (Initial Interveiw)

S2:   I don't know how they are handling this
      semester. Every once on a while they will
      say, "Ah ha, you don't know what we are doing
      next," or "When we get to the next phase..."
      It's a very planned semester. We are not
      exactly being kept in the dark...
      (Initial Interview)

In reviews Hutchinson's emphasis on creating students'

awareness through feedback and help was evident in his

explanations of how students were to operate and why when

they failed to operate as intended. But his comments were

circuitous. He began with subtle and indirect inquiries

about the work, not revealing that it was inadequate and

not specifying the work in more operational terms. Out-

right statements that the work was inadequate came only

after extensive subtle and indirect inquiries failed to

shift the students' operating. (In the February 7 and

March 12 reviews, where this pattern was observed, the

outright statements began two hours into the review.) At

these points he gave a more specific and operational

explanation. Indeed, his explanations became more specific

and operational as the semester progressed. When they did

not get beyond the subtle and indirect inquiries (as

occurred regarding group work at the February 7 review),

the teachers appeared to be taking no corrective action,

either as feedback or as help, when students failed to

operate as intended. At other times the teachers pointed

out to the students that they were not operating as

intended, but only repeated their general explanation without specifying how they were to operate, and without providing additional help (as with the problems S2, S5, S17, and S23 had working together in Phase III).

Aside from the problem of explaining how students were to operate after the work was done, when students had no other opportunity to comply, this circuitous approach often consumed much time and diverted attention from the intended message. In the February 7 review one student expressed his frustration with the review and his anxiety about not doing design to Hutchinson while he was using the subtle approach.

> S6: We are just spending an inordinate amount of time [in this review]. The point gets made then repeated twenty times. I don't want to spend my next week redrawing, my minimum dimensions for fire stairs.
> (Review, 2/7)

S6 was referring to the teachers' comments on what information was needed which were "repeated twenty times," and not the implicit message about how they were to be operating as designers.

Often the teachers' feedback was directed to the whole class in reviews and in class discussions. In these sessions Hutchinson would invite student comment, however the comments were infrequent and from only the few more vocal students. The collective feedback did not allow many of the students who were failing to operate as intended to

realize that the feedback was intended for them. At times
those students were absent from the class, as with the April
7 discussion of "commuter mentality."

One avenue of feedback that the teachers did not use
was grading. The final grades, the only ones given,
aggregated many concerns which were neither specified nor
evaluated separately.

The teachers' presenting of the assignment and the
intended ways of designing in general terms, disguised as
"orthodox," and as feedback and help, can also be inter-
preted as a response to the resistance they anticipated
from the students. Hutchinson thought that students would
resist his ways if they saw them as a "method" for
designing. Indeed, most of the students interviewed were
adverse to any method for designing. If the students'
resistance to producing group design schemes at the beginning
of Phase III is any indication of their attitudes, the
students' resistance would have been more evident had they
understood at one time what the assignments implied.
However, by not being explicit about their ways, and by not
revealing that the constellation of ideas shaping the studio
was about designing, the teachers did not confront this
resistance (so it could be resolved), and they did not
establish their ways or this constellation as legitimate

content for a studio on urban design, thus, perhaps,

reinforcing its illegitimacy.

The implementation of this theory also had consequences

for Hutchinson's "try it and find it useful" approach to

students' acceptance. With students often having to guess

what they were to do, how they were to operate, and why,

as well as how well they were doing, their chances for

having success with the teachers' ways and for finding them

useful were limited. Yet, without persuasive results in

trying and using those ways, the students may not accept

them. Consequently, in this studio one would expect to

find the "try it" theory ineffective except for those

students who understood the prescribed ways, who tentatively

accepted them, who had given them sufficient effort and

time to find them useful, and who needed little assistance

to use them successfully.

Hence, Hutchinson's theory of only presenting abstract

explanations before students began working was not

adequately implemented; his explanations were not adequate

for students to begin to try, and the feedback and help

often occurred too late for the students to try and use

those ways. Also, it is not clear that students related

these ways to their own experiences other than to note the

differences, or that Hutchinson put the students' experiences

or his ways into "perspective," or that students'

understanding was increased by trying except by trial and error. Hutchinson's theory was not consistent with the learning by doing/learning from doing approach to studio learning; the teachers did not make it clear to the students what the problem was a vehicle for learning, what their pedagogical intentions were, or what constellations of ideas the studio was to focus on. Especially inconsistent were their disguise and witholding of this information in the face of anticipated student resistance to the assigned work. In addition to these consequences for the students' awareness, the implementation of this theory had similar consequences for the students' acceptance as Hutchinson approached it.

Hutchinson's theories that students' acceptance grows out of trying, and that students can "suspend their disbelief" in his ways in order to try them are consistent with the learning by doing/learning from doing approach as far as they go and if adequately implemented. As Hutchinson explained, students "have to be able to take something on faith up to a certain point" when trying something new. Thus, one confronts the dilemma in learning of how students can know they want to learn something before having learned it. "Willing suspension of disbelief" is not sufficient in theory or practice.

During the studio Hutchinson asked the students to

"suspend disbelief," and he noted in his final interview

that the students who had gotten the most out of the studio

had been those who had "suspended their disbelief," but

recognized that they were few in number. However, the

teachers' only assistance to students during the semester

had been to admonish them to "suspend their disbelief" and

to try the prescribed ways of designing. For those

students who were unable or unwilling, help was needed,

but not forthcoming, either as help to become more willing

or able, or as an alternative way of achieving tentative

acceptance.

The "willing suspension of disbelief" without comple-

mentary theories ignores the students' own ways of designing

and isolates them from the process of changing the ways in

which they work. They are not even asked to "suspend

belief" in the ways they prefer when "suspending disbelief"

in the teachers' ways. Students who could "suspend

disbelief" would by-pass identifying, examining, and

possibly rejecting the ways they preferred, and would avoid

searching for alternatives included in the deciding-accepting

link of the learning by doing/learning from doing approach.

Rather than help students identify their preferred

ways as a base to build from, and then identify the

inadequacies of those ways and suggest different ways which

might resolve those inadequacies, Hutchinson did all this himself. He did not consult the students to determine if they thought they were using the ways he had attributed to them, or if they had experienced the inadequacies he had attributed to their ways. He did, however, on occasion describe to them some of the ways he expected they would use, noting the inadequacies he had identified. For example, students were occasionally confronted with Hutchinson's description of the "stew pot" approach and its limitations and the virtues of the "transformation" approach. However, they were not asked about how they operated as designers or what limitations they had encountered while designing.

By ignoring the students' preferred ways the teachers were asking them to be novices and were indicating that the ways they had developed over three and a half years in architecture school were unimportant as well as inadequate. These advanced students, whose preferred ways had gotten them through studios until this one, may have been more reluctant to examine those ways given the circumstances, and more likely to discredit the source of the devaluing. This devaluing of their experiences put them in a position of defending their experiences and their ways which further inhibited bringing those ways into contention.

"Suspending disbelief" also does not address the need for students to legitimize the constellation of ideas (how to operate as a designer) with which they were to deal. To reiterate, both the course handouts and the teachers' explanations of the studio and the design problem to the students focused on urban design and not on ways of designing.

While this assessment of Hutchinson's theories regarding acceptance argues that in the studio he minimized the importance of the students' deciding and of their preferred ways, his interview comments suggest otherwise. Earlier in this chapter Hutchinson was quoted on the importance of students relating their current work to their previous experiences when learning. When discussing his desire for students to design in groups in Phase III, he noted that he did not want to make any "shotgun weddings" (although they later acknowledged doing so) because:

Hutchinson: ,...invariably...you get some people who just don't do anything or so very little... So I don't like to force group things.
(Interview, 2/12)

As he explained the virtues of group work the dilemma between "forcing things" and missing the benefits of group work experience became evident. The same dilemma is also evident in his proposed strategy for getting a range of schemes in Phase III.

Hutchinson: ...though I would still want to insist that
               there is a range and that they don't all pick
               the same thing...I think we have to plan for
               part of that too, and influence again, not by
               force, but just by saying "Okay, let's try
               to get some representative schemes. Who is
               willing to work with this idea?" I think
               generally that works pretty well.
               (Interview, 2/12)

While Hutchinson's comments are consistent with the

learning by doing/learning from doing approach, his actions

in the studio were not, especially those related to

"suspending disbelief."

Hutchinson's "design problem as a vehicle for

learning" certain things is consistent with the learning by

doing/learning from doing approach to studio teaching.

However, that the students did not try or use several of the

teachers' ways of designing indicates that they were not

using the problem as a vehicle for learning different

ways of designing, or for learning more about their own

ways. Therefore, students were not operating in accord

with the multi-perspective curriculum. In the studio the

students were simply doing the assignments--Phases I, II,

and III--and using the ways they knew (the ones Hutchinson

had attributed to them). Indeed the students' assignment

did not include any parts for which using one's experience

doing the design problem would be the basis for the

students' learning--the assignment was to create design

schemes in a prescribed manner.

Here Hutchinson's theory of "problem as a vehicle,"
and the theory of teaching embedded in the multi-perspective
curriculum were not adequately implemented. Here, too, when
students were not operating as intended as students
(rather than as designers), the teachers did not make them
aware of what these theories implied for them as students.
Also, the teachers did not provide help other than
occasionally giving students feedback on their performance
as students by admonishing them to work more in class, to
try their ways of designing, or to be less disruptive in
reviews. They did not elaborate on the theories which
underscored the teachers' approach to the studio, nor
did they comment on the students' compliance with the
theories in their feedback to the students. Here the
learning by doing/learning from doing approach has
implications for learning to operate as students as well
as for learning to operate as designers.

The teachers' implementation of the "design problem
as a vehicle for learning" had additional consequences
for the students' studio learning, especially their
learning from doing: students missed opportunities for
learning.

Missed Opportunities for Learning

Although the teachers had envisioned this design problem to be a vehicle for learning, their theories of teaching evident in this studio were contradictory. They gave a very evocative design problem, rich with opportunities for learning, yet they did not follow through on many of the issues which the problem and the studio situation evoked, and thus missed those opportunities. This can be seen in virtually every aspect of this urban design studio, as the following references to studio incidents document. The opportunities for learning evoked or introduced by the design problem are distinct from those evoked or introduced by the problem-solving situation in the design studio. However both groups include opportunities the teachers had intended (Chapter 2) and opportunities the teachers did not express but which can be seen by examining the situations they set up for the students.

First, the opportunities evoked by the urban design problem and the "urban design firm" should be noted. The problem assigned different products, tasks, and design constraints than those required for the architectural design problems students had experienced in their previous seven studios. The different products and tasks implied that what urban designers do is different from what architects do. Yet these and other differences (or

similarities) were rarely discussed, and several students noted in their final interviews that they were unclear about them. One student, S9, reported that he had suggested to Hutchinson in the course evaluation that several slide presentations about urban design would have helped clarify the differences between architecture and urban design. For this student these differences were observable in the physical environments rather than in how the environments were made. Opportunities for the students to learn about urban design had been missed.

The assigned urban design tasks were to be done collectively yet the student groups subdivided the assignments into individual tasks, and encountered problems collectively designing a group scheme in Phase III. Still, the fundamentals of working collectively were not discussed, although the necessity of working collectively had been noted in the "Working Procedure" hand out. The design problem had set up situations for the students to work collectively but it wasn't carried through. An opportunity for learning had been missed.

The article, "Urban Design as Part of the Governmental Process" by Johathan Barnett (Architectural Record, January 1970), which was distributed to the class, could have afforded several opportunities for learning. While the teachers had not compared the new studio products associated

with urban design with products associated with architecture,
they had consistently presented the purposes of the new
products for the urban design problem. For example, Heath
discussed the importance of the final product, the
coordinated range of schemes, to urban design for a
public agency--to facilitate discussion and action among
the political decision makers. This use of the final
product was consistent with Barnett's article, but other
issues in the article relating to public sector urban
design including the importance of planners participating
in the governmental process in order to gain political
input and support, the role of Community Planning Boards for
community participation for building a "constitutency to
assure implementation," and the role of political power in
achieving noted planning and city design successes, never
surfaced in the observed studio discussions. The article
was handed out, but not discussed. Several opportunities
were missed.

While the role of the urban designer in the develop-
ment process, evident in Heath's description of the final
product's use, differs from the typical role of the
architect, and while Barnett's article suggested a political
role for the urban designer, the role of the urban designer
in the development process was never examined during
observed studio discussions. In addition to urban

designers, one other set of actors in the development

process was introduced into the studio, the OLMD represen-

tatives. However, the role of the public client in the

development process was not discussed, nor were the roles

of the agency's representatives or the workers they

represent. Rather, the representatives, present in the

studio only during reviews, assumed the role of critic

along with the other guests. Although Heath's and Barnett's

comments related to roles, and the introduction of the

client into the studio set up the situation to discuss

the roles of the various actors in the urban development

process, this was not discussed. Another opportunity was

missed.

The "urban design firm" metaphor brought another set

of roles into the studio, the roles of principals and

designers (employees) in the firm, and the attendant

responsibilities for coordination and management. While

the teachers did on occasion refer to the "firm" to make a

particular point, opportunities to discuss strategies for

managing twenty-eight employees of equal status, strategies

for coordinating the production of a range of schemes, the

respective roles of the actors within the "firm," and the

dynamics of the employee/employer relationship were missed.

Of particular importance is that the metaphor was not used

to distinguish "studio" and "firm," or to resolve the

conflicts between them. For example, who was responsible
for the coordination of the schemes in Phase III, the
designers or the principals? The principals had coordinated
the work in Phases I and II. Also, who was responsible
for creating the typology which indicated the characteris-
tics of the range of schemes? (The lack of a typology of
schemes resulted in missed opportunities for learning. Had
there been a typology it could have provided valuable
information for the students to determine what constituted
a significantly different treatment of a design constraint,
and the consequences that treatment would have for the
design and for the other constraints. If the typology had
been developed as schemes were taking shape early in Phase
III, and had been posted as it developed, it could have
served to make the process of coordination more obvious
and easily understood.)

In the design problem the building program and the
constraints for the municipal office building were loose
and undetermined, but strategies for dealing with indeter-
minant programs and for establishing constraints, frequent
occurrances in professional practice, were rarely discussed.
Another opportunity was missed.

Second, the opportunities for learning evoked by the
problem solving situation in the design studio should be
noted. One student, S10, complained in his final interview

about how certain students had been given more crit

sessions than others during Phase III. He reported getting

only one during the first five weeks of Phase III.

Hutchinson reported that when he would stop by S10's desk

and make his standard overture, S10's response usually

indicated to Hutchinson that he did not want a crit at the

time.

Hutchinson: I don't like to...force myself on people. If
I don't detect a certain receptiveness, I
usually soft-pedal--like looking over and
making some casual remarks like "How are you
doing?" If they immediately start asking me
questions and getting involved and wanting
to show me things, I sit down and start.
But if they stand there and say "Oh, okay.
I'm doing alright," then I maybe take that
to mean that they are at a stage that they do
not want criticism... Very often, I will talk
with them a while, and then go away. That
happened any number of times with S10.
(Interview, 5/14)

Despite these problems, how to get a crit was not discussed

in the studio, and how to use a crit was only discussed

with a few students. Some students, nevertheless, not

only determined how to get crits but how to get their own

concerns addressed (after Hutchinson had elaborated his

concerns). Opportunities for learning how to operate as

students were missed in this situation, as well as in the

teachers' use of the problem as a vehicle.

Given the interpretation that the teachers' intent

was to change the ways students design, change, how one

changes, and how one finds one way of designing better than

another could have been discussed. However, neither change
nor the process by which Hutchinson determined his ways to
be better than those he attributed to the students were
discussed. Another opportunity for learning evoked by the
studio situation was missed.

While the design problem and the problem-solving
situations in any studio evoke or introduce opportunities
for learning a broad range of issues, the intent and timing
of the studio may not allow a thorough investigation of all
the issues. How are the issues which fall outside the
limits of the studio to be dealt with? There are at least
two possibilities. One is to explicitly confront the
issue, acknowledge its relative importance, and make an
operational assumption for use in the studio. An example
would be to acknowledge that various interest groups would
be affected by the proposed municipal office building,
notably the office workers and the owners of currently
leased office space throughout Lower Manhattan, and that
they and others should be involved in the early planning
stages, following Barnett's argument for community
participation. The limits of time and distance make such
community involvement impossible for this studio, however,
therefore, "Let's assume that the community groups will be
involved in the evaluation of our range of schemes through

the OLMD." Different assumptions are equally possible and probable.

The second possibility is to deal with the issue implicitly or ignore it, the implication being, of course, that what is ignored is unimportant. Hutchinson explained in a formal interview that he took this approach by default because of the limited time available in the studio.

Hutchinson: This whole business of issues, particularly on something like urban design, is so complex that it is necessary to narrow down the range of things that you can ultimately try to deal with in a semester. That doesn't mean that the other issues are totally ignored, it just means that if there were more time, you could find ways to synthesize them. (Interview, 5/14)

The situations in this studio in which the teachers ignored or implicitly dealt with the evoked issues have been described as missed opportunities for learning. There are further consequences of this approach.

Submerging the evoked issues through lack of discussion could result in misconceptions about many issues. These include the complexity of the design problem, strategies for approaching design problems in practice, and the role of the urban designer and other actors in the urban design process. These misconceptions are created or perpetuated because the problem is simplified for the studio, important influences and contexts are not recognized as important, and

basic assumptions and strategies which describe professional action are not recognized or discussed.

Without discussion students may continue to act on assumptions and strategies of professional action which are inappropriate or inaccurate. Students may neither be aware of the inappropriateness of the assumptions, strategies, etc., nor be aware of them at all. The lack of discussion inhibits both the discovery of these assumptions or strategies and the evaluation of their appropriateness.

Another consequence of the lack of discussion is that the importance and legitimacy of the evoked issues may be diminished. Students in this studio perceived certain issues to be legitimate and others as illegitimate and unimportant. Types of office arrangements were introduced in Phase I and were discussed explicitly by the teachers, but were considered illegitimate by some students. If students discredit issues that are explicitly discussed, how will they respond to issues which are dealt with implicitly or ignored? The lack of attention given issues by the teachers certainly discredits them if the opinion of the teacher is valued by the students. The students' perceived legitimacy of issues is consequential for the students' future learning. Learning to work collectively is a good example of an issue which when used ineffectively in the studio prejudices future investigation. Learning

to work collectively was not introduced as something one
could learn about, the students' assumptions formed in
previous studios (avoid working in groups) were not examined,
and the students' problems working effectively in groups
were ignored in the studio. As a result, not only did
they fail to learn to determine which were legitimate
issues or concerns, they also were inhibited in learning
from their own experiences--learning from their doing.
Students were denied the experience of moving from a
personally experienced problem to conceptualizing the
problem and acknowledging it as a legitimate concern, that
is, something which could be learned. This experience
would establish students as the sources of significant
concerns and establish their ability to learn from their
own experiences. This discovery and recognition of
legitimate concerns from one's own experiences directly
reinforces one's role in learning. The lack of recognition
devalues a student's experience as a source of knowledge
and inhibits his or her direct involvement in present
and future learning.

The emphasis on the students' experience as a source
of learning requires that it be acknowledged that a design
studio does not provide actual professional experience from
which to learn.

Hutchinson: The method of teaching architecture is basically
              simulation.. You are always simulating something
              that is not real.
              (Interview, 2/12)

The studio is a simulation of professional practice. As

such, the studio offers opportunities to learn from the

experience of others as well as one's own. While certain

aspects of a studio can be described as "simulated"

(though often treated as "real," like a building program),

other aspects are "real," i.e., provide real experiences.

This distinction can be parallelled to the two groups of

opportunities for learning. The opportunities evoked by

the design problem are "simulated," for example, the

simulation of students working as design professionals

executing the design problem under contract for profes-

sional services. In contrast, the opportunities which are

evoked by the problem solving situation are "real:" the

students' experiences with the teachers, with other

students, and with confronting a design problem and the

limitation of their ways of designing.

This distinction between "simulated" and "real"

aspects of the studio is important in the urban design

studio because the teachers and students focused more on

the "simulated" aspects, such as the Phase I Information

Gathering, or the professional drawings, (the "vehicles"

for learning), than on the "real" aspects, such as

operating as designers, using different ways of designing

or working collectively, (the intentions underlying these "vehicles"*). Indeed there was no evidence that anything other than the quality of the students' professional work would be the major basis for their final grades. The result of this focus was that students were not encouraged to use their "real" experiences in this studio as a source for learning about how to operate as designers** or as students. Further, they were not encouraged to use their "real" experiences as sources for learning about their "simulated" experiences, such as, how the OLMD representatives' role in the studio reflected the agency's role in urban design work. Therefore, students missed opportunities to learn from their experiences, to learn how to learn from their experiences, or even to learn that their experiences were an important source.

Hence, in this studio, the teachers' theories of teaching evident in their action not only inhibited the students operating as intended (learning by doing), but also inhibited the students learning from their experience (learning from doing).

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*Clearly, the professional work is a "vehicle" for other intended learning about urban design which were important to this studio, although these intentions were not emphasized by the teachers in their formal interviews.

**Although the students may have been using their "real" experience with the physical environment as a source for their learning about urban design.

CHAPTER 6

LEARNING FROM TEACHING

When students are given a design problem as a vehicle
for learning a different approach to architecture and
different ways of designing, and they do not use those
ways, some action needs to be taken. When the teachers'
theories of teaching are found to contribute to the students
not using the different ways, and to their missing oppor-
tunities for learning, the action to be taken should
reflect what has been learned from their teaching. Central
to this learning is that studios should reflect both
learning from doing as well as learning by doing. The
implementation of this can take several forms in both the
structure and day-to-day management of a studio. These
were the two areas in which Hutchinson's theories were
evident. In this chapter two refinements in the structure
of design studios are proposed: the "practicum" and the
"working paper."

The structure and management of the observed studio
emphasized learning by doing, the problem as a vehicle for
learning prescribed and well defined ways of designing.
The students, however, were not always aware of those ways,
and occassionally when they were aware of them they
decided not to try or use them. Hence, to facilitate

learning by doing, a greater emphasis on advocacy* of
these ways is necessary to make the students aware of the
ways they are to try, how they are to operate, and why
they should use these ways and not others. This includes
the teachers being clear about the constellation of ideas
on which the studio will focus, and how other constellations
evoked by the problem will be dealt with. Furthermore,
students should be helped to see these ways in terms of
their experiences in other studios, and should be aware of
the educational agenda of the studio and curriculum--
where trying and using different approaches to architecture
is the basis for forming one's own approach.

The "practicum," a format from management schools
where students learn to put theory into practice, would
facilitate this advocacy. When adapted to design studios
such as this one, the "practicum studio" would have two
somewhat separate parts: the first would emphasize the
students' understanding, awareness, and acceptance of the
approach and ways of designing to be tried; the second
would emphasize developing the students' proficiency with
the approach and its ways through practice (trying),
feedback and help. This advocacy could take the form of

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*This emphasis on advocacy and a subsequent emphasis on
inquiry borrows from Argyris and Schon's (1974) use of
these terms for characterizing interpersonal theories of
action.

lectures, demonstrations, case studies, or exercises, but would not rely on students' understanding growing solely out of their doing the design problem. This would most appropriately come at the beginning of the semester, perhaps the first several weeks. With a clearer understanding of the approach and ways to be tried, the students should need less help, should go in the wrong direction less frequently, and should be able to help each other more often. Thus, more of the teachers' limited time with each student could focus on criticism.

This "practicum studio" would be most useful where teachers have a particular approach to architecture and can effectively present, demonstrate, and explain it, and give assistance to students day-to-day. Teachers wishing to examine their own advocacy and assistance giving could adapt the second refinement proposed for the studio for their use.

The "working paper," the second refinement, is intended to facilitate students' learning from doing, through personal inquiry into their experiences. It adapts some of this studio's highly structured professional experience (the three phases) to the learning experience. This additional studio product complements the traditional drawing and design (professional) products of studios. The professional products indicate the quality of the

designs which the students produce, while the "working papers" help students understand what they learned while producing those designs.

Learning from doing relies on the students to learn from their present experiences as well as their previous ones. In the discussion of missed opportunities it was noted that students were doing much more than design schemes with unfamiliar ways. They were also working in groups, using different kinds of design arguments, engaging in criticism, involved in a process of change (personal and professional), acting in simulated professional roles with clients and principals, and much more. These are opportunities for learning from one's present experiences.

The students' previous studio experiences were not used in the urban design studio as a source of learning. Hutchinson did not ask them to examine the ways of designing they had used in light of those to be used in this studio, nor were they examining them outside the studio. Although this school's response to multi-perspective education had been to diversity its faculty to have students experience different approaches, this response did not include assisting students in learning from their experiences with those approaches. If students are confused by the different approaches (as in the quotes in the Introduction), and are not examining their experiences

to form or select the approach they would choose to act
upon professionally, then, the school and the teachers need
to expand their responsibilities to assisting students in
this task in the appropriate setting--the studio. Writing
"working papers" would help students identify and understand
approaches to architecture and ways of designing from
previous studios, and the problems and successes they
experienced with them. (In the practicum studio this could
begin in the advocacy segment, as a contrast to the
approach being presented.)

Whether students are focusing on their present or
previous experiences, the "working paper" is one form in
which students can be assisted when learning from doing.
For students to use their experiences as a source for their
learning, an understanding of the process of learning from
experience and some tools to document that experience
would be helpful. Students' drawings of their schemes and
its development document part of the design experience.
But to document other aspects of the studio, like getting
crits, working in groups, problems and successes when
designing, or how several schemes reflect different attitudes
about specific issues, and more, other documentation such
as written notes, tape recordings or diaries, are
necessary. The age old "journal" some professors request
of students is one such example. But these journals

rarely go beyond documenting the experiences and spontaneous observations. To learn from experience, students often must do more than record what happened in notes, drawings or tapes. They must examine and reflect on that experience and document their considered observations and conclusions (including proposals for new actions). Kolb's Model suggests one framework for this inquiry, Argyris and Schon's (1974) framework--identifying one's own interpersonal theories of action, and assessing the correspondance between one's "espoused theories" and one's "theories in use," and determining the consequences of each--suggests another.

If design problems are to be vehicles for learning, the students' assignment should include a focus on that learning. "Working papers" can provide this focus and can facilitate learning from the "real" and "simulated" aspects of the students' present and previous studio experiences. The following are some examples of topics that could be pursued in a working paper.

> "What is the urban designer's (and others) role in the urban development process, as reflected in this studio?"

> "Problems of Designing in Groups, and Some Solutions."

> "What is the Professor's Approach for Giving Criticism and Help?"

"A Comparison of Students' Strategies For
Learning Design."

"Problems with the Way I Design."

"The Influence of Non-studio Courses on My
Design."

"A Typology of the Class' Preliminary Design
Schemes."

"Translating Design Information into Physical
Decisions."

Hence, "working papers," depending on the topic, could
help recover missed opportunities and aid students in
their examining of the approaches to architecture and in
selecting or forming their own approaches.

These working papers can be produced along with the
professional products during the semester, or in a block
of time at the end of the semester, perhaps two weeks.
In studios such as this one where they typically have their
final review at the very end of the semester, students
spend all the allotted time on doing the problem. If these
reviews occurred earlier, some of the allotted time could
be spent on learning from that doing. This would mean
less time for designing, but more learning from that doing.

The "practicum" and "working paper" proposals present
two ways to implement the learning by doing/learning from
doing approach to studio teaching. They focus more on the
refinement of the studio structure than its day to day
management. Yet for this approach to be effective, it must

also be implemented in the day to day running of the studio

and dealing with students. In order to accomplish this,

teachers must invent their own proposals, and indeed they

might also invent other structural refinements. However,

by beginning with these two proposed refinements, multi-

perspective education can be facilitated. They respond to

some students' desire for increased advocacy and inquiry

in design studios which grows out of their studio

experiences, as the following comments from a graduating

senior at the school indicate:

> R1: Studios should be more academic...more
> expressive of theories of architecture...less
> trial and error.
>
> (On her first year studio)... It was like a
> guessing game, everybody knew (what architecture
> was) except for the students... Students came
> in and sat around and wondered what the point
> of the assignment was.
>
> (On her third year studio)... It would have
> been nice if he could have been clearer in the
> beginning...(but) by the end of the first six
> weeks, it because clear what he wanted and it
> turned to be...a very worthwhile semester.
>
> (On her fifth year studio)... This year the
> critic was clear about what he wanted to
> accomplish...made a point of it... I wish
> the whole school would.
> (Interview)

Whether or not these two proposed refinements are

used, students should be aware of the multi-perspective

education which their studio and curriculum embrace. The

strategies effective for presenting approaches to design

can be equally effective for presenting approaches to
studio learning. For students to operate in accord with
the learning by doing/learning from doing approach, they
must understand and accept it as legitimate for studio
learning. As with approaches to architecture, students
need help to understand the approach to learning and
assistance in learning to learn. Once this awareness is
achieved, if students are not operating appropriately
(for example, deciding not to try), teachers (or another
student) can give feedback on how well they are doing,
inquire if they agree with their assessment (resolve any
disagreements), and help them to learn from their own
experiences. Each is essential for proficient production
as students.

In conclusion, design problems provide rich oppor-
tunities for learning in design studios as vehicles for
learning from doing as well as by doing. These opportunities
for learning and the objective of multi-perspective
education, however, remain unrealized if students do not
use their experiences--past and present--as bases for
their learning. Hence, teachers and students alike should
begin to inquire into the theories of teaching and learning
evident in their studio practices when examining their
approaches to architecture. They will be learning from
teaching once they identify their theories and their

problems and successes with those theories, and begin to invent or consider alternatives that further realize the studio's potential.

APPENDIX: STUDENTS' REASONS FOR NOT USING THE TEACHERS' WAYS
OF DESIGNING

In interviews with students about their studio experiences,
they explained that on occasion they had not operated in the
ways they believed the teachers had intended. The reasons or
circumstances which influenced their decisions were related
either to the teachers' ways of designing or to the teachers.
This was inferred from students' comments about the following
situation, reported in the Chronology.

On March 5, the class day before the Phase I and II Review,
only five students remained in the studio at 5:00, and only
three at 6:00. Three weeks earlier, before the February 14 Re-
view, students had been observed working energetically during
the full class time and preparing for the review outside the
class. Two of the three students remaining at the end of the
day, on March 5, were asked by the observer why others were
not working during class and after class for the review as
they had three weeks earlier.

Both S2 and S8, responded in separate conversations that
"people were losing interest--they didn't like what they
were doing." There were other problems with the work. S2
found it unexciting and slow. This opinion was supported by
other students who reported they "had not gotten anywhere" in
the past three weeks. Furthermore, S2 was not expecting Phase
III to be an improvement, as she did not see it as design.
The students' attitudes toward this work and the teachers'

ways of designing contributed to a decrease in their productivity.

S2 noted that students were not in the studio during class time this day because Hutchinson was at another review. Heath was giving a crit to the other remaining student at the time of S2's comment. While more students were not in class when only Heath attended, many students were in class on days when only Hutchinson attended. The marked change in class attendence indicates that the students preferred Hutchinson and argues that their negative attitude toward some teachers may have also caused a decrease in their productivity.

These two influences will be examined.

Ways of Designing

From their comments in interviews, it can be concluded that the students' performance in studios and their willingness to try the teachers' ways of designing were influenced by their attitudes toward those ways and the ideas underlying them. One student, S9, chose not to use conceptual diagrams when designing.

> S9: A lot of people do extensive analysis but that is not the way I operate... I was almost apologetic because I saw the way a lot of people in the class did extensive sheets and sheets of analytical and descriptive information in the first phase [and second phase]... I had five or six study models throughout the semester. Those schemes operated as my basis for analysis.
> (Final Interview)

S9 did not try the teachers' ways because he had had success with his own ways in previous design studios and did not find any problems with them. Another student who did not

use diagrams as intended noted his success and confidence about

designing based on his previous experience.

> S7: My work has been good... I've had good experiences
> with juries... I've worked for some firms and they
> have respected what I can do. I think architec-
> turally I have more confidence than I do personally.
> But as I'm designing, I'm sure that what I'm doing
> is basically okay. (Initial Interview)

Previous success was only one of the several factors affecting

the students' attitude toward specific ways of designing.

Another factor suggestive of a negative attitude was an un-

productive and unsatisfying experience in previous studios

(such as working in groups).

> S7: On other projects that I've collaborated on I
> think it would have come out just as well if
> I had done it alone. (Initial Interview)

Yet another factor was the approach to architecture these

ways of designing implied. Students had made decisions based

on the approach prior to this studio.

> S6: It's often joked, but it may be true, that my
> class is the last class of "formalists," visually.
> It's something we have been doing for 4 years,
> except for some kids that have just ignored it.
> A lot of kids in my class have said that they
> don't believe in this type of thing.
> (Initial Interview)

> S7: I have come around to realize I can't give the
> formal development of a scheme the highest
> priority. (Final Interview)

Students' prejudices against certain approaches had also affec-

ted their selection of studio teachers.

> S7: Some of the issues they [the teachers who where
> not selected] feel are important are ones I do
> not feel are particularly important or I'm not
> interested in them, or I feel I can learn later.
> (Initial Interview)

Students found the structure of the teachers approach incompatible with their ideas about how to design. They complained about postponing design until Phase III. S4 noted that only four weeks of the fifteen-week semester had really been design. Students complained that the Phase I "Analysis" and Phase II "Transformations" had not been helpful in designing the Civic Center.

> S10: We wasted eight weeks on analysis...and research
> [Phase I and II] which amounted to zero... All
> that Random Object and Grids [Phase II]...was
> totally useless... The real essence of what we
> were doing was never established.
> (Final Interview)

Many students thought they should start designing by making physical schemes; a few students did not wait until the designated time to begin sketching these schemes.

> S10: Analysis has its place and once you...see its
> value, people get tired of it...so one night I
> wanted to sit down and start designing and put
> my thoughts on paper because I was getting
> apprehensive... Some of the things in that
> sketch are still in my design. (Final Interview)

In addition to not finding the Phase I and II work useful, students found the effort required to produce the material from those phases in booklet form unproductive.

> S10: We wasted eight weeks with this stuff, putting
> it into the format and Xeroxing it just to make
> a final product. I hate that... Half the semester
> was concerned with producing a product or book-
> let. That was a waste of time. (Final Interview)

(This perceived low regard for the value of Phases I and II can not be mentioned without noting that few students were observed using these posted materials during Phase III as had been intended. S8 remarked that other students had asked him for information during Phase III which had been posted for weeks.

Often he had not even worked on the topics of their inquiry.)

Having a tightly scheduled work program was incompatible with S22's ideas about designing, as evidenced by a small yet conspicuous sign at his desk: "You can't schedule creativity."

At least one student thought that by fourth year students should determine their own structure.

> S7: Maybe by fourth year we don't need a structure.
> Maybe we should have our own way of approaching
> problems and be able to divide it up ourselves.
> The professors are trying to put the boundaries
> on this and let us go. (Initial Interview)

Another factor affecting the students' attitudes was the students' intentions for the studio. Some found ways of designing conflicting with their reasons for choosing this studio option.

> S7: I had just come out of a semester of Urban
> Design in the fall, with another critic...I
> particularly wanted to get into the architec-
> ture of the urban design scheme--last semester
> we remained at a purely urban level...No, it
> didn't happen, because...I was immediately
> steered off course by five weeks of supposed
> analysis...I'd call it bullshit...(Final Interview)

Lastly, the students' attitudes toward the ways of designing were influenced negatively because they usually implied changes in the studio institutions. Students were to work steady, not charrette. They were to discuss ideas and diagrams with critics, not just trial solutions as they had before. The homogeneous graphic style required throughout the semester removed an important mode which the design students had used to establish their reputation in a class--distinctive graphic presentation.

<u>Teachers</u>

From their comments in interviews it can also be concluded that the students' performance in studios and their willingness to try ways of designing were influenced by their attitudes towards the teachers.

One student, S2, explained her attitude toward her first-year studio critic, G7.

> S2: ...As a critic, he is excellent, because he cares. He wants his students to learn. G7 cared, you had to produce for G7. You had to work, you had to try...I did well with G7 as far as grades. Obviously, if you don't get along with the critic..., you don't want to do anything for them. You want to do things for G7. You want to show him that, yes, I did learn this example. (Initial Interview)

For this student, her perception that the teacher cared that his students learn was a positive influence on her performance. Further, her axiom regarding getting "along with the critic" indicates the influence of the interpersonal relationship between the student and teacher on the student's performance. From S2's comments, one can assume that her performance was primarily a response to the teacher and not to the work itself. However, it should be noted that in retrospect she felt that the task G7 had set for that studio was both valid and successful.

> S2: He [G7] made a serious, honest and very hard and very excellent attempt to take us from our mostly suburban environments...and teach us how to perceive, how to see, and what architecture was... And I think he did it.

If S2's attitude toward her teacher in the first-year studio had a positive influence on her performance, her attitude

toward her second-year studio teacher, Gl, had the opposite

effect.

> S2:   I went from a semester with G7 [in first year]
>   to a methodologist, Gl [in second year]. It
>   was a waste of my time and his time. I didn't
>   do any work...I didn't like Gl. I didn't like
>   what he was trying to do. To tell the truth, I
>   don't know what he was trying to do. I didn't
>   want to know.
>
>   I didn't do anything all semester...I figured
>   that I was going to get kicked out of school.
>   But I got credit for the course with the same
>   grade as everybody else, C. My whole idea after
>   that was that they don't care.
>   (Initial Interview)

In accordance with her axiom S2 did not get along with her

critic and therefore did not want to do anything. Her atti-

tude toward the teacher was so negative that she "didn't want

to know...what he was trying to do," and did not work even

when she expected the penalty to be suspension.

S2's axiom and comments supports the importance of the

interpersonal relationship between the student and teacher

on the students' performance. Other student's recognized the

importance but took different courses of action.

> S6:   [My enthusiasm was also generated] from the
>   enthusiasm that he [G7] showed to me personally
>   as a student. I did get a little better treat-
>   ment than some...
>   (Initial Interview)
>
> S4:   It's a real accidental thing how teachers and
>   students can react. It's strongly interpersonal.
>   (Initial Interview)

Even if accidental, some students were alert to the teacher's

personal qualities in selecting a studio.

S7: The reason I selected this section [studio] was because of all the critics, Hutchinson would be the best for me. Of the [five choices] I respect two [Hutchinson and G2]....I was not impressed with them [the remaining three]. It was either Hutchinson or G2, but G2 is too aggressive a character for me to deal with. (Initial Interview)

Even after being selective, some students believed they could direct their interpersonal relationship with the teacher by adjusting their own interests to complement those of the professors.

S6: It seems to me that the teachers take a personal interest in students who are responding along their personal lines. People like G7, he watched my progress very closely. People have taken an interest [in my development], people like Hutchinson. (Initial Interview)

Another student, S7, who worked with S6 this semester, explained the results of such a strategy.

S7: He [Hutchinson] has an interest in our scheme... Maybe more than in some of the others...we got more [crits] than average. (Final Interview)

This strategy and its success did not escape other students attention, although many chose not to use it.

S10: S6 and S7 have become the sort of pet project of the semester which is only because of the way they design. They are very "formalistic"... Hutchinson really eats that stuff up...They have had two-hour crits when...[others] wanted to have crits, too. He [S7] doesn't disagree or talk back or say "I don't like that" --Hutchinson tells them what they should do and they are doing it...[even when S7 admitted to S10 that] "Hutchinson says we should do it [a structural detail] another way...and I hate it, I don't like it." I don't like it when people do that. (Final Interview)

A teacher's relationship with different students will vary, but does the relationship between the teacher and one student

influence another student's performance? S10 did not improve

his performance because of the supportive relationship between

the teacher and S6 or S7. S2 was equally alert to Hutchinson's

favoritism and support of other students in the studio.

> S2: Hutchinson walked out on S21 at one point. She
> was presenting to the April 23rd jury, the final
> jury beyond which we would start inking. S21
> was presenting her project and Hutchinson got up
> and walked over to S8's desk to give him a crit.
> That was wrong for him to do.
>
> When Hutchinson came in there were certain
> groups he would go to first...One of his favorite
> groups was S8's group...Once he said to them that,
> "I'm glad somebody is going to have something
> this semester." (Final Interview)

In addition to interpersonal relations, the students'

attitude toward the teachers was influenced by the teachers'

previous reputations and the way they operated in the studio.

The teachers were respected for what they had accomplished

professionally and their particular architectural polemic or

dogma.

> S6: I respected him [G7] for what he had to teach
> and for what he had done. He has built...a
> lot of the teachers here talk but just haven't
> built any place. He has ideas and makes them
> known. (Initial Interview)

(It had not escaped the students' attention that G7's

buildings had been published in cover stories in the U.S. pro-

fessional journals, thus reflecting his professional stature

and the recognition of his work and ideas.)

The students' attitudes toward the teachers were also in-

fluenced by the reputation of the group with which the students

associated each faculty members within the Department. One such

group was the "new faculty."

S8:   I'm displeased with the qualities of the new
       professors being recruited... If they come to
       a jury of one of the older professor's studios,
       they either agree with what is being said or
       they go off on tangents that are irrelevant...
       [or] were about things that I already know...

       The comment that I respect at a jury is...a
       comparison of ways of accomplishing something
       or suggesting a better way to accomplish a
       given idea. The new professors on a jury don't
       give any insights. (Initial Interview)

The ways the teachers operated in the studio were as important

to the students' attitudes toward them as their reputations;

if not more important. As S8 indicated in the previous quote,

the teachers' performance on reviews influenced students' per-

ceptions of the teachers' value. The importance to S8 of a

"comment giving a comparison" indicated the significance of

the form of the teachers' statements. This was reinforced by

other student comments.

S8:   I wouldn't mind if they were staunch repre-
       sentatives of certain methodologies. So if
       you took a semester with them...either you
       like it or not, but you know about it.
       (Initial Interview)

The form of the teachers' statements were also important

in crit sessions.

S7:   When someone [Heath]...timidly comes to your
       board and suggests that you do something, by
       fourth year, you don't put up with that. You
       have to have someone come over and if they
       really have an idea, they have to say, "God
       damn it, this is right." Then you at least
       give it some consideration. (Final Interview)

S8:   At the beginning of the semester, I would have
       questioned if he [Heath] had any good ideas at
       all. I had him on juries and was not impressed
       with his comments. After having a couple of
       crits from him, I realize he does have some
       good ideas. But his approach in making sugges-
       tions or perhaps even his personality is not as
       conducive to acceptance as Hutchinson's. (Final
       Interview)

Students wanted to know what the teachers' intentions

were for the studio, for they saw it as important to their

learning. Hutchinson and Heath, however, did not list them

for the students, and few students figured them out for

themselves.

> S7: The faculty's intention for this course--I
> don't know. I just cannot tell and I think
> that is bad. It's part of the professor's job
> ...to let his students know what he wants to
> teach them or else they can't learn it.
> (Final Interview)

The teacher's ability to manage the studio was seen as

important in S10's critique of this semester.

> S10: I just think this semester has been a total
> wipe out. Just the way the semester has
> been run; what the professors have done,
> where the emphasis has been put; the schedul-
> ing of the thing--it's just been a disaster.
> (Final Interview)

Students found the teachers inequitable in their distribu-

tion of the crit time.

> S10: During the semester I was put off by the fact
> [that] he [Hutchinson] was able to ration his
> time with a few people and neglect the majority
> of the students...
>
> They [S6-S7] have had two-hour crits when
> people in the class were actually getting mad
> because they wanted to have crits, too.
> (Final Interview)

When discussing good teachers, several students used the

teacher's ability to motivate the students as a major criteria

of evaluation. They depended on the studio teacher to generate

some enthusiasm.

> S2: What comes out [of crit sessions with G7]
> mostly is the enthusiasm. He likes what
> he is doing. (Initial Interview)

S6: The enthusiasm which I got was generated
by his [G7] enthusiasm for architecture.
He [G7] would just get up and lecture with
slides and say, "Isn't this beautiful the
way it..." You really got gung-ho. You
couldn't wait to get back to the drafting
board and do it.

In third year...G6 [was] just passively
viewing one's work. Not generating the
excitement. Maybe once or twice you get
a comment like "Wow, your scheme is really
beginning to fly!" It was good. Then he
could get into it.

While he [G6] follows the same dogmatic
lines as G7, he wasn't a positive influ-
ence...we did an art museum...the thing
never really got off the ground. He
just wasn't around enough to help out.
He didn't seem to take the interest.
Perhaps he was relying on us to generate
our own momentum. (Initial Interview)

Did Hutchinson and Heath create a sense of enthusiasm

in the class?

S10: At this point [three weeks prior to the
final review], 100 percent of the stu-
dents are not motivated. I feel depressed,
I don't feel any inspiration from
the professors. I don't feel motivated
by the professors.

They [the teachers] just don't care much
now. There hasn't been any impetus.
Nothing that makes the students want to
work or really get into the project.
(Final Interview)

S6: Hutchinson has this monotone, very subdued...
I just feel the teacher should generate
enthusiasm...G7 ranted and raved, he really
got me going...This semester just hit a
slowdown. (Final Interview)

Hutchinson and Heath did not provide much enthusiasm in

the students' evaluation; they did not see it as their

responsibility.

Whatever the students' reasons were for deciding not to

operate as intended, whether they were related to the ways of designing or the teachers, their decisions prevented them from the experience of trying and using different approaches to architecture--the experiences that were to be the basis for their learning.

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