

AN OFFICE BUILDING IN PARK SQUARE

thesis report submitted in partial fulfillment of the requirements for the degree of Bachelor in Architecture.

Massachusetts Institute of Technology
April 2, 1963.

F. Monroe Labouissé, Jr.

.....
Lawrence B. Anderson .
Head of the Department of Architecture.

2 April 1963

Pietro Belluschi
Dean, Department of Architecture
Massachusetts Institute of Technology
Cambridge, Massachusetts.

Dear Dean Belluschi:

In partial fulfillment of the requirements for the degree of Bachelor in Architecture, I respectfully submit this thesis, AN OFFICE BUILDING IN PARK SQUARE.

Yours truly,

F. Monroe Labouisse, Jr.

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ABSTRACT

For an architect, the design of a good building unit is of utmost importance. But it must not be forgotten that the ultimate role of architecture is to create an environment for men to live in. It is difficult to appreciate a well-designed building or indeed to acknowledge that it is well-designed, unless its environment too is well-designed. Today there is a tendency among architects, and the corporations which are their clients, to consider office buildings as discreet objects which sit in isolation from even their immediate surroundings, as kinds of "diamonds in the rough." In today's urban environment, this is the only sensible approach to office building design, when one is dealing with a single job on a specific site. Since there is no sense in conforming with mediocre surroundings, the obvious direction is to use the environment as a backdrop to set off a sophisticated pearl.

Such a classical tendency is made necessary by the architect's lack of power to affect anything other than the land included within his constricted property lines. But the tendency itself should be regarded as only a necessary expedient, and it should be hoped that the conditions making it necessary will be short lived. Otherwise, the downtown area will degenerate into a multitude of focal objects, which have no framework to be the focus of. Each building will attempt to dominate the composition of its neighbors, and the result will be an impasse. If every corporation could afford

a Seagram Building, the result would be a gigantic, monumental impasse.

The direction which architecture must take now, if it is to fulfill its purpose as the power which brings visual order and beauty into man's environment, is to deal with areas larger than the lot size. The day of the specific commission on the specific lot should come to an end, because the solution which fulfills the complex requirements of urban design must be the architectural composition of large areas, in which individual buildings act as elements in the greater design, and have more than a perfunctory relationship to one another.

A plea for this kind of design scope is no longer unrealistic in Boston. Urban renewal is a popular issue, and is becoming a booming business. The B.R.A. occupies two whole floors in the City Hall Annex. The Government Center and the Prudential Center are noble beginnings which will usher in a new design era. Many talented people are now working on designs which are city-wide in scope, and there has been some agreement among them.

It is proposed, then, that this thesis deal with the design of a specific building on the terms suggested above, i.e., that the building's form be dictated by its position as a willing subordinate to a larger scheme, a scheme which seeks to provide dignity for its elements by means other than their conspicuous individuality.

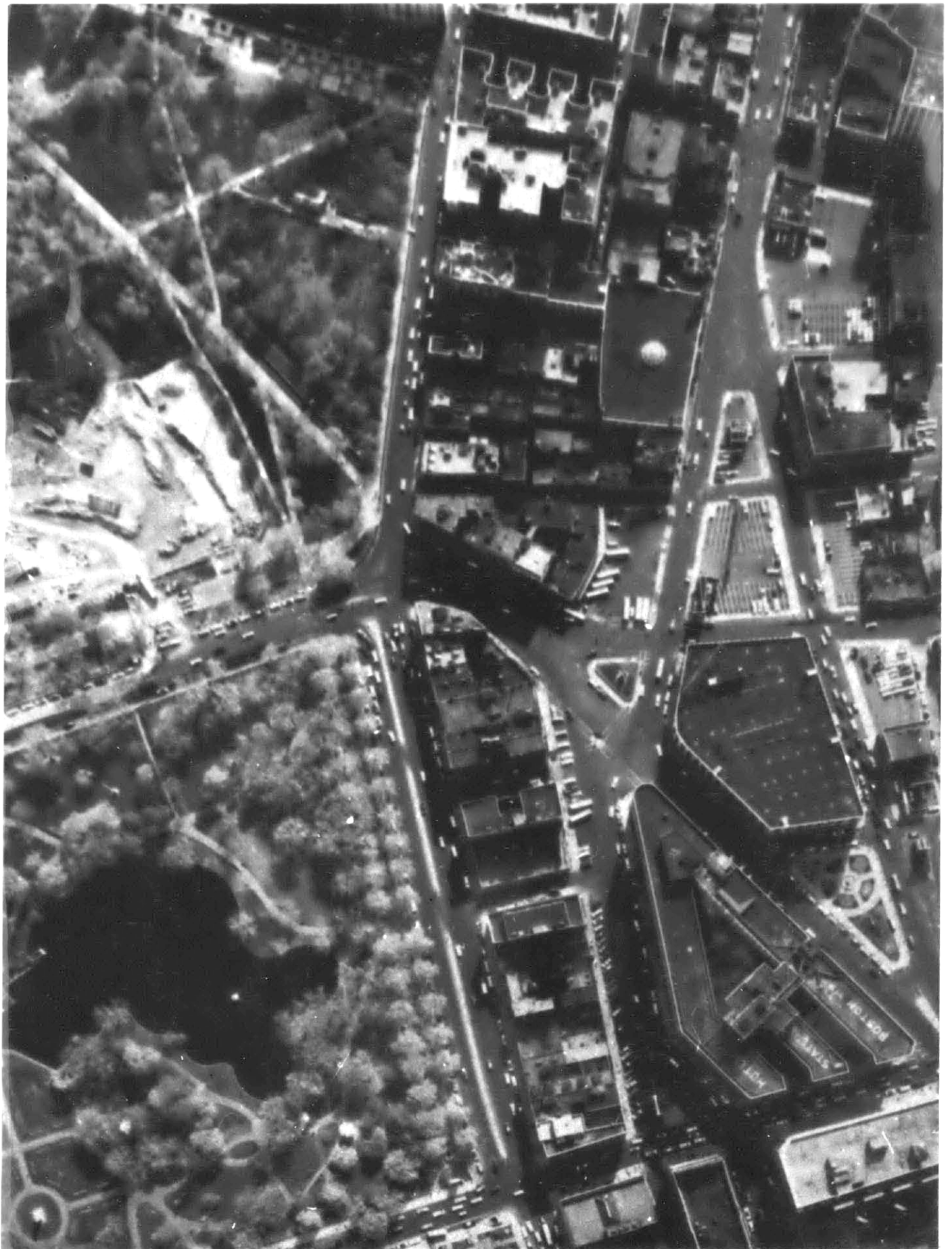
BACKGROUND TO THE PROJECT

The title of this thesis is AN OFFICE BUILDING IN PARK SQUARE. The project is concerned with two subjects, the site and the building, primarily as they affect each other, but also as considered separately. For purposes of exposition the two subjects appear most clearly when considered separately.

The Existing Situation in Park Square:

The Common is one of Boston's most cherished public possessions. However, two of its sides, the Tremont and Boylston St. sides, are in deplorable condition. The Park Square area, defined as the area bordered by Arlington, Boylston, Tremont, and Stuart streets, is immediately adjacent to the Boylston St. side of the Common. The fact that this area is run-down is particularly unfortunate partly because of its important position as part of the Common's frame, and partly because it contains one of the most important street intersections in the city.

What is there now is grossly ugly, and is completely out of scale with the importance of its location. Aside from the six buildings deemed by the B.R.A. to be substantial, the area is a motley assemblage of small commercial, retail, and entertainment buildings, each of which is exceeded in bad taste only by its nearest neighbor. These buildings appear to be climbing all over each other in order to gain precedence in the eye of the fickle consumer. Their facades are the victims of multiple, faddish improvisation,





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and the entire assemblage is dirty and uncared for. A downward spiral seems to be operating in the whole area, and the only prescriptions that can cure it now are the demolition of most of its buildings and a new master plan for its rebuilding.

The B.R.A., Boston's official renewal agency, is foggy on what is to become of the area. Their most recent master plan for the whole C.B.D. (1960) is very obscure as to Park Square's fate. It contains only the following significant information on that area: 1.) That the entire area except for the Statler-Hilton Hotel block is in their lowest assessment bracket (\$0-\$39 per sq. ft.). 2.) That only the following buildings are "substantial": The Statler-Hilton (Arlington St.), the Little Building (corner of Boylston and Tremont), the Colonial Theater (Boylston St.), the Eliot Garage (Stuart St.), the Motor Mart Garage (Stuart St.), and the building containing the Gary and Saxon movie theaters (Tremont St.) (Actually, due to under-dimensioned spiral ramps, both parking garages are obsolete for today's sized cars. Further, they along with the movie theaters, are extremely ugly). 3.) That the land use designated for the area in the future is an obscure mixture of retailing and consumer services, offices, and parking facilities.

The truth of the matter is that the B.R.A. has been concentrating on projects in other areas of the city and as yet has no definite ideas as to what is to become of the Park Square area. One of the tasks of this project will be to determine what should ultimately happen to Park Square.

The Company and Its Building Needs:

The specific building studied in this project is a state headquarters building for a medical insurance company. The client is the Blue Cross-Blue Shield group. (The fact that this group has a relatively new building in Federal St. is ignored for the purposes of this thesis, and it is assumed that they have just decided to vacate their original quarters in rented space, and have undertaken negotiations with the author as to the design of their new building).

This building is to be their new headquarters, and should be tailored to fit their exact needs. However, as a spokesman for the company has pointed out, the building must have a high resale value, i.e., it must be easily converted into general office use. The company only attempts to foresee what their activities will be ten years in advance, and may find it necessary to vacate even this building after a ten-year occupancy. Initially, however, the building will be occupied and controlled by one organization only. The characteristics of this particular organization will affect the design, from the extent of their influence on the public interior spaces, to the whole aspect and character of the building's exterior.

Blue Cross-Blue Shield is not an ordinary insurance company, in that they are not as competitive as most. As a matter of fact they seem to be regarded by the people of Massachusetts as some kind of public institution, subject to probes just like the registrar of motor vehicles or the police department. Blue Cross has a virtual monopoly on medical in-

insurance in Massachusetts, so their advertizing and sales promotion are intended only to make the people aware of new programs or ways of getting more complete coverage than they already have. This has an affect on the design of their offices in that they are quite unconcerned with creating a corporate image through architecture as an advertizing gimmick, as so many companies located on Park Avenue in New York have done. Of course, the company is happy to have a favorable public image, but wants it to be because of the complete and economical medical coverage they provide more than because of a display of strength and dependability in their architecture. They are willing to give the impression of dependability, but are anxious not to make a lavish display of wealth, lest that bring on a public outcry for lower premiums rather than chic buildings. Further restraint against rich treatment is provided by the nature of the company's selling process. This is done in hospital and by mail, thus the building does not have much public traffic in and out of it. It is primarily a working place for the clerical and executive staffs, and does not have to be a selling showcase.

Although little emphasis is placed on customer impression, employee comfort is a main design consideration. Practically the entire staff is clerical workers. These workers are young, simple, high-school graduated females. They are interested in brightness, pretty desks, air-conditioning, a good cafeteria, wall-to-wall carpeting, closeness to the M.T.A., closeness to Jordan Marsh and Filene's, and as many other fringe benefits of this nature as possible. The Director of

Operations points out that these seemingly trivial considerations are actually extremely important to the success of the work operation. They go so far as to dictate where the building site must be, and to influence the building's design. Blue Cross is in stiff competition with the banks and other large offices in the area for the best quality from this class of workers, and must provide the environment they like in order to attract and hire them. The desired result is good office morale, i.e., increased efficiency.

The nature of the work carried out inside the building is mainly paper processing. This is done in several independent linear hand-to-hand routes, and also with the use of machines. Circulation patterns, however, are not a primary consideration, at least not to the extent of dictating that large clear areas must be had on one level. A mass of forms is operated on by a small unit department, then passed in a bundle to the next unit department. The work is not passed hand-to-hand, paper-by-paper, from the beginning to the end of the process. Since no unit department covers more than 5,000 sq. ft. of floor space, it makes no difference whether the units are arranged side by side or stacked vertically and served by dumbwaiters.

The use of business machines is playing an increasingly large part in the company's work process. However, strangely enough, the increasing dependence on these machines does not require increasing amounts of floor space to accommodate them, as increased work loads are absorbed by improvements in the machines, without a significant change in their size. It is

also found that increased dependence on the machines will not tend to deplete the human office staff, as all the human jobs require some degree of judgement. The accommodation of large computers requires special architectural treatment, however, due to their large size and weight, and due to the amount of heat given off by them.

Due to the peculiar nature of this company, there will be practically no future expansion except as the population grows, and this can be absorbed by the machines. Blue Cross claims that they have nearly everyone in Massachusetts who is eligible for their service covered already. Consequently, the company's size and work operation seems frozen at a definite level, which is generally described in terms of a building program as follows:

	<u>Sq. ft.</u>
Lobby and Circulation Space	3,000
Dining Facilities and Kitchen	7,765
Auditorium	8,000
Open Office Area	75,500
Private Office Area (by private office is meant both offices inhabited by one man and offices inhabited by a small number of men).	20,306
Business Machines	10,000
Storage and Dispensary	11,775
Mechanical Equipment	20,205
Service Functions	(1,000/per floor)
	approx. 18,300
Ground floor rentable for shops	10,000
	<u>Total: 184,000</u>

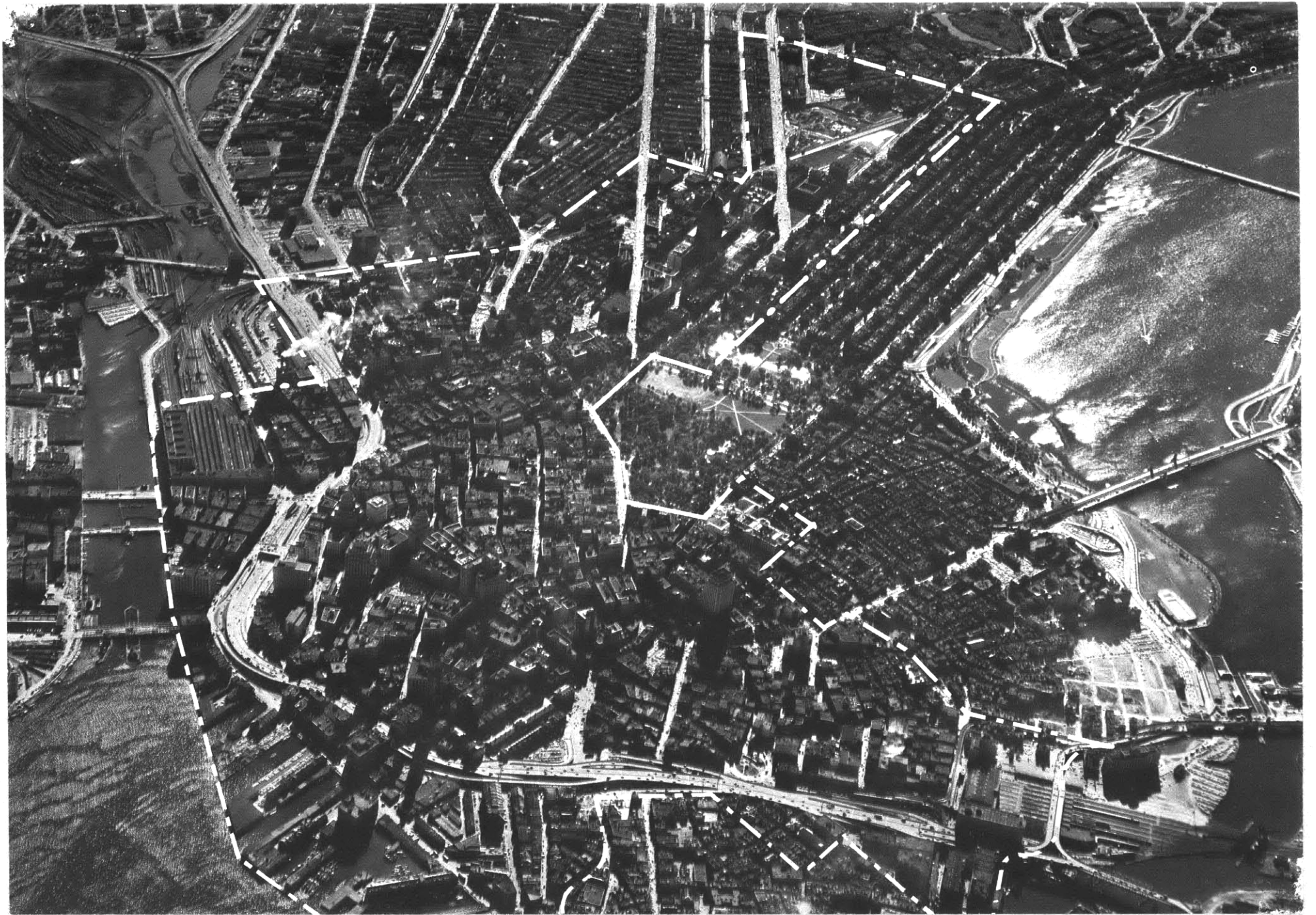
(A list of the complete space requirements is contained in Appendix A).

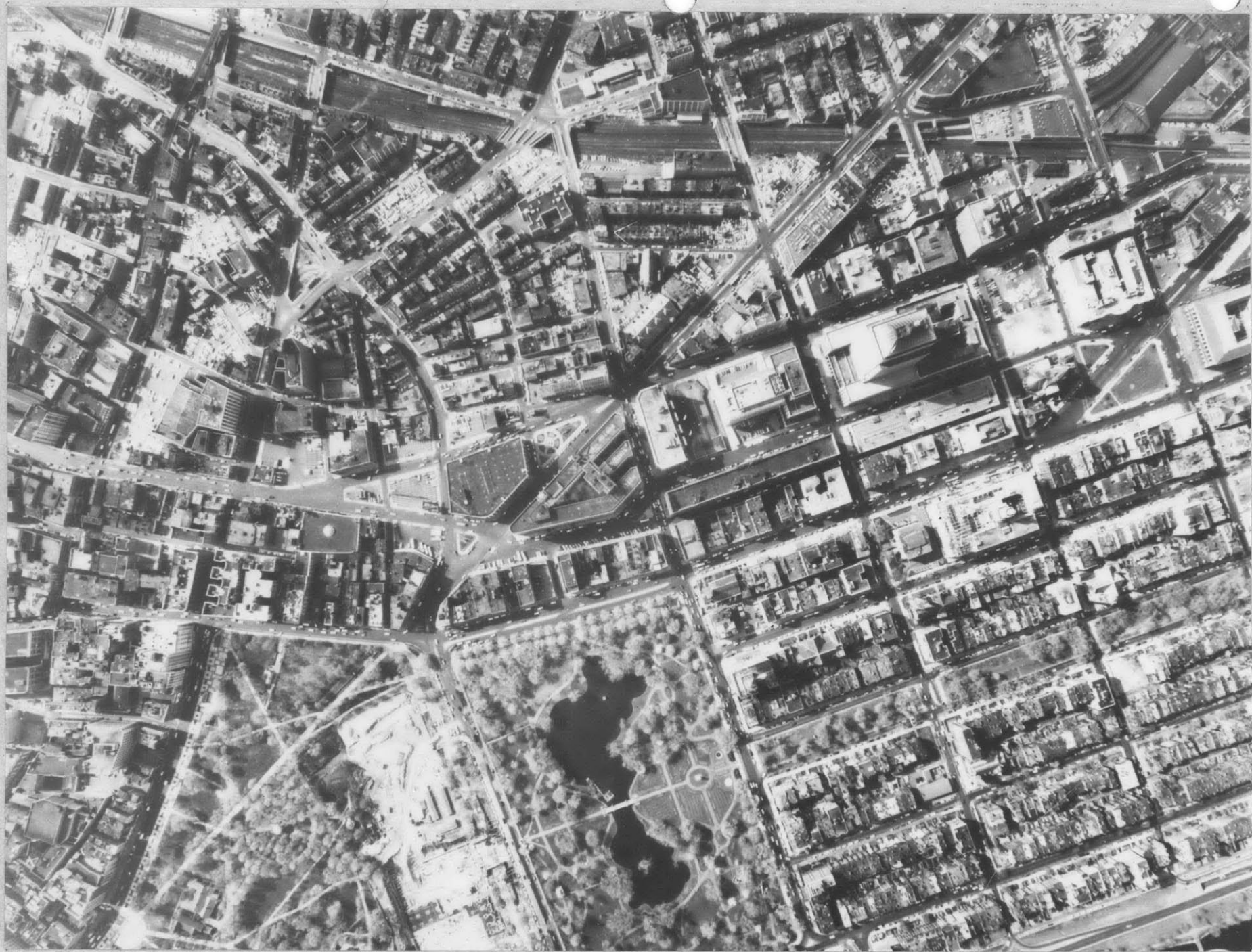
SOLUTION TO PARK SQUARE'S DILEMMA

The Park Square area is unique in several respects. First, it forms the south wall to the Boston Common. Second, it presently includes the intersection of Columbus Avenue and Charles St. with Boylston St. This is, and will become even more so, a critical intersection. Third, it is the area known to city planners as the "hinge," i.e., a thin neck connecting the downtown portion of the C.B.D. with the Back Bay portion.

When observing the physical characteristics of the area, one becomes strongly aware of several things. Most important, it is the place where three city-wide geometries intersect. The Back-Bay has a strongly linear, rectangular geometry, with Boylston St., Beacon St., and Commonwealth Avenue serving as its spines. Downtown Boston has a kind of radial geometry, dictated originally by the shoreline of the Shawmut Peninsula. The strong diagonals cutting through the edges of Back Bay and coming from South Boston along Huntington, Columbus, Shawmut, and Harrison Avenues, and Tremont Street, form the third geometry. Huntington Avenue intercepts Boylston St. at Copley Square. Columbus Avenue intercepts Boylston St. at Park Square, where it intersects with Charles St. This corner is the pivot point of the two directions. Thus the south wall of the Common is a slight wedge, the point of which gains extreme visual importance.

There are two strong characteristics about the surrounding areas which must be taken into account. First, retail spines





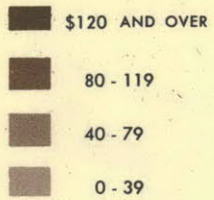


Diagram Showing the Shape
of the C.B.D.

exist along Boylston and Newbury Sts. (losing strength at the edge of the Park Square area). Second, a definite spine is implied in building massing along Boylston St. At the moment this is caused by the Prudential Center and by the buildings between Stuart and Boylston Sts. in the area of the John Hancock Building. This massing is picked up again in the downtown office area. It should be noted, however, that in both use and massing consistency a gap exists right at the Park Square area.

Certain projections as to the street pattern have to be made in order to understand the area more fully. First, the Massachusetts Turnpike is being extended in along the New Haven Railroad cut and will terminate in an intersection with the Southeast Expressway at South Station. This extension will pass about two blocks south of the Park Square area. Because of this fact, two further street changes are proposed. It is proposed to discontinue Columbus Avenue where it intersects with the turnpike, so as to purify the otherwise rectangular street geometry between Stuart and Boylston Sts. It is further proposed to extend Charles St. south in practically a straight line until it intersects with the turnpike and with Tremont St. in the same vicinity.

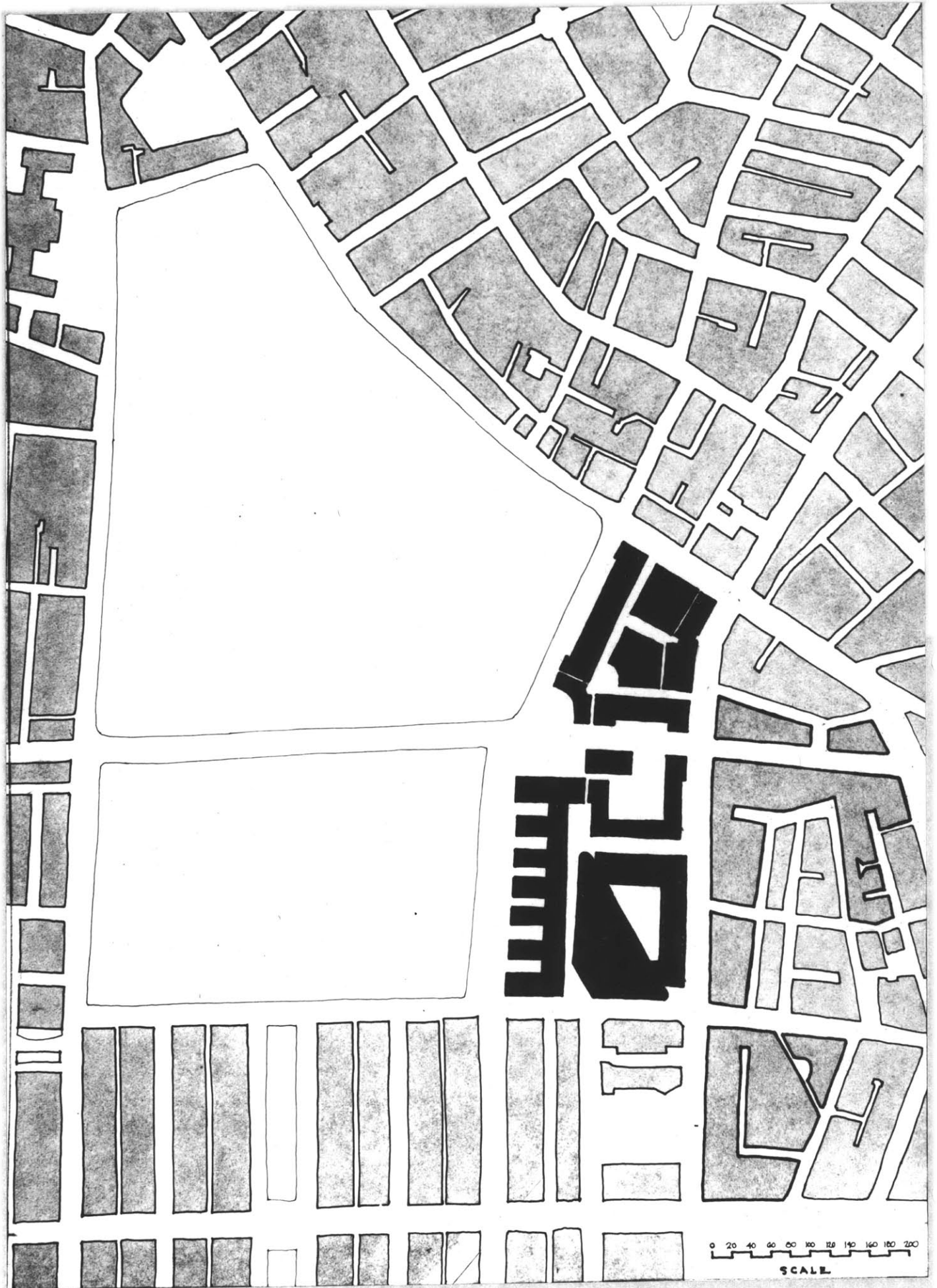
The implications of these proposed street changes are strong. First, the triangular pieces of property originally formed by the diagonal of Columbus Avenue cutting through the otherwise rectangular Back Bay geometry will become meaningless from the turnpike on. This is particularly important

when regarding the Statler-Hilton Hotel, presently the dominant building in the Park Square area, which is triangular. The other triangular buildings thus formed are to be demolished and rebuilt so as to follow the rectangular street pattern. Second, the extension of Charles St. will necessitate the demolition of the wedge shaped block in Park Square now occupied by the Trailways Bus Terminal. Further, Charles St. will then carry heavy traffic through the area, coming from the turnpike and re-routed from Columbus Avenue into the area, and leaving the area in the direction of Tremont St. and south Boston. The resultant street geometry of the Park Square area is greatly simplified. The area becomes two large blocks. One is rectangular, bounded by Boylston, Charles, Stuart, and Arlington Sts., the other is trapezoidal, bounded by Tremont, Stuart, Charles, and Boylston Sts.

With these observations in mind, the re-design of the Park Square area may be undertaken. The following characteristics should be emphasized, or created by the new design. The spine implied by both building use and massing along Boylston St. should be continued until it meets its counterpart in the downtown section, thus tying the C.B.D. together into one recognizable unit. It is important that the building massing be particularly strong at Park Square because it is the hinge between three larger areas. The use character of the spine should be continuous along its length, so that the C.B.D. is not split into two similar but disconnected areas. Since Charles St. will carry so much traffic into the Common

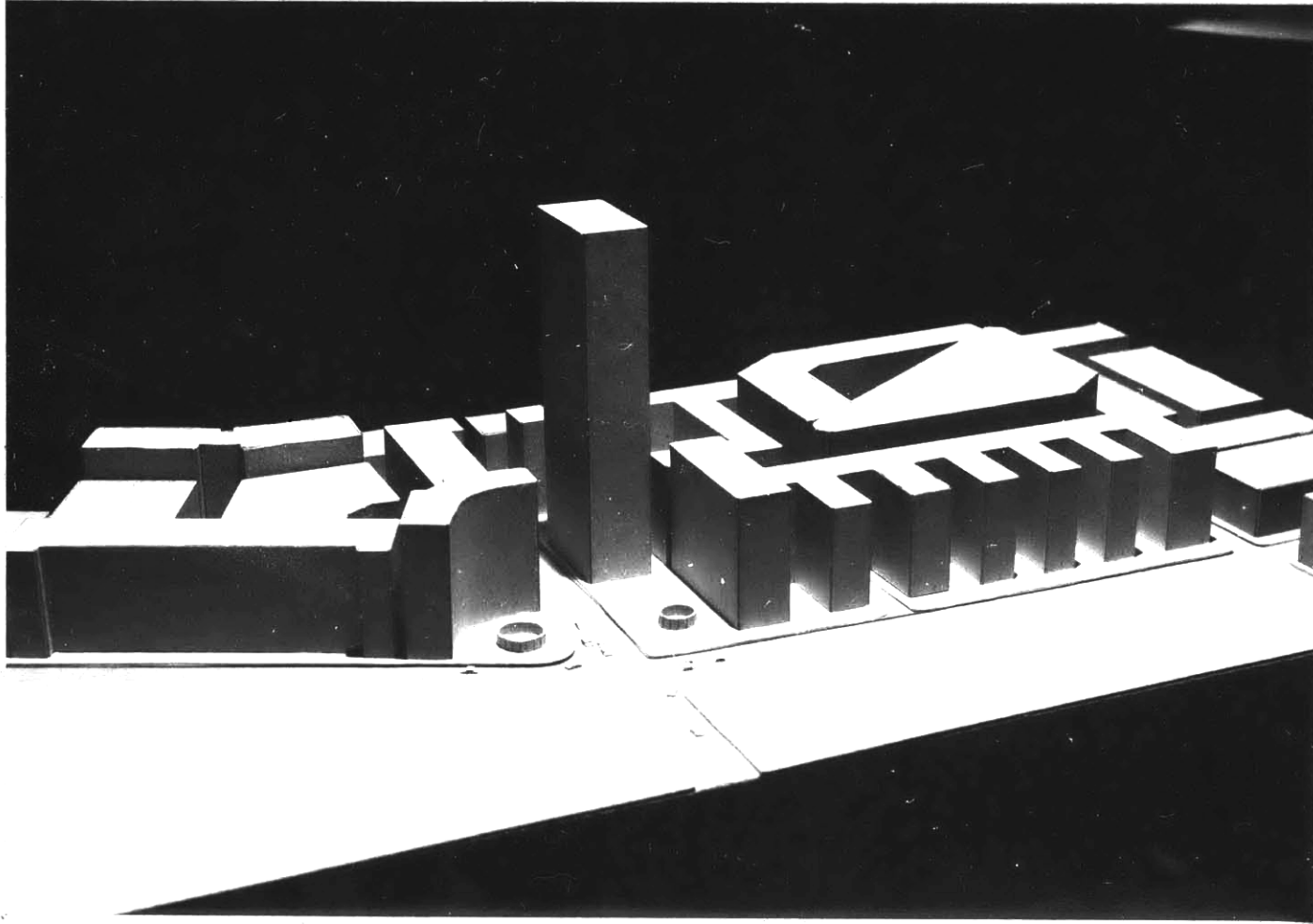
the idea of entry into such a large space must be sensitively treated. Also, the idea of entry into the building massing from the large space, at such a crucial place as the point of the wedge, must be carefully treated. Since the scale of the Common is so large, and since the importance of the location of Park Square is so great, as the pivot point for three large areas, the buildings forming this hinge should likewise be large in scale. The corner of Boylston and Charles Sts. is in a dominant position with respect to the Common, being centrally located, and being one of only two places where a street running through the Common meets its edge. Since the Common is a very definite space, this should be emphasized by its having a strong edge. Such a strong edge already exists along Beacon and Arlington Sts. The idea of Boylston St. being bounded by a high wall of buildings thus seems appealing, especially since a view of the Common from the south side is a valuable asset and should be taken advantage of by as many tenants as possible.

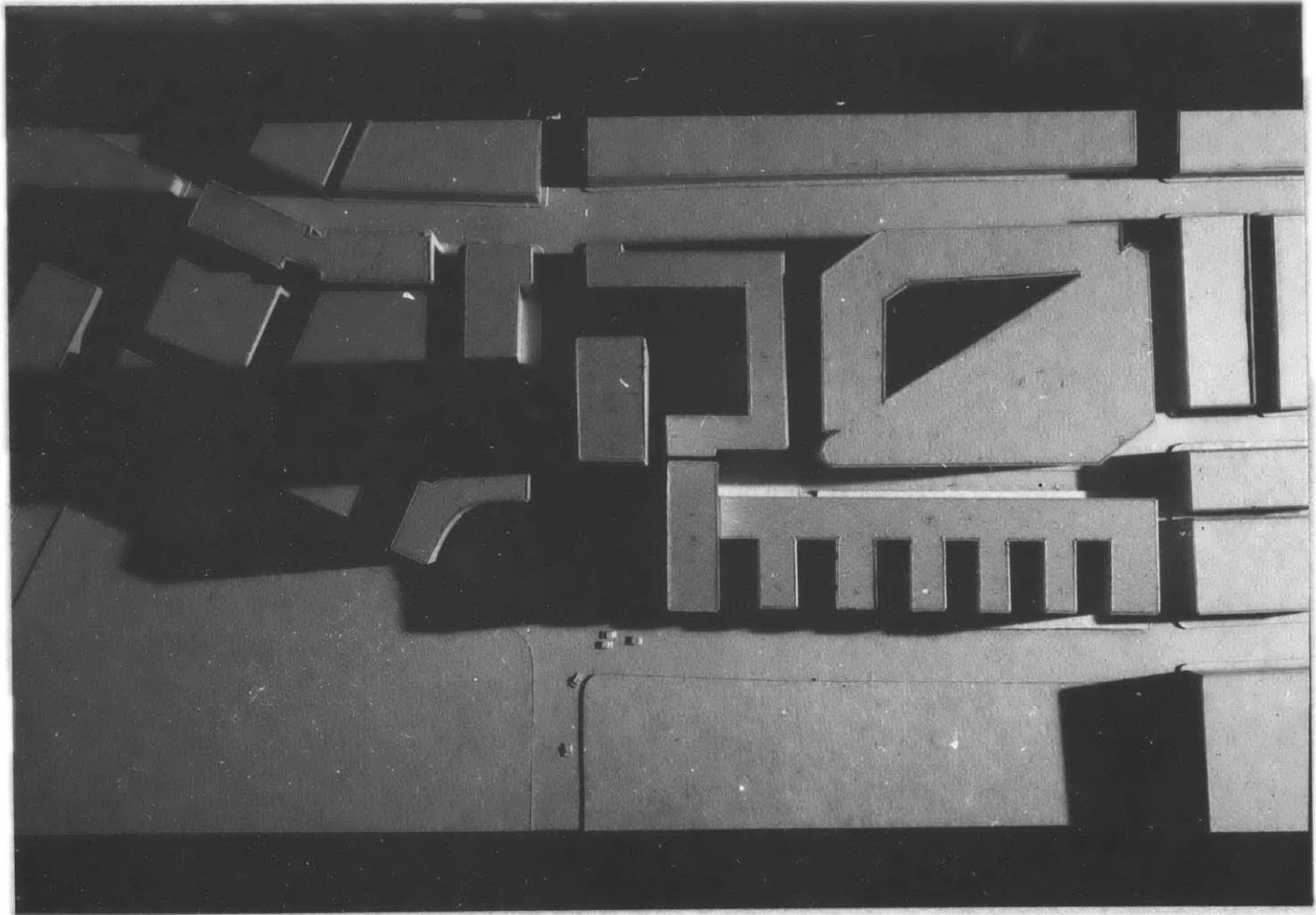
The redevelopment scheme arrived at takes the above considerations into account. The retail/office spine is made continuous by the construction of unbroken high office buildings down Boylston St., with shops and restaurants occupying the lower two levels. The office space acquired becomes premium rental space because of the excellent view provided of the Common. The building massing spine is also made continuous down into the downtown area. The hinge or pivot-point nature of the area is emphasized by the construction of a 40-story

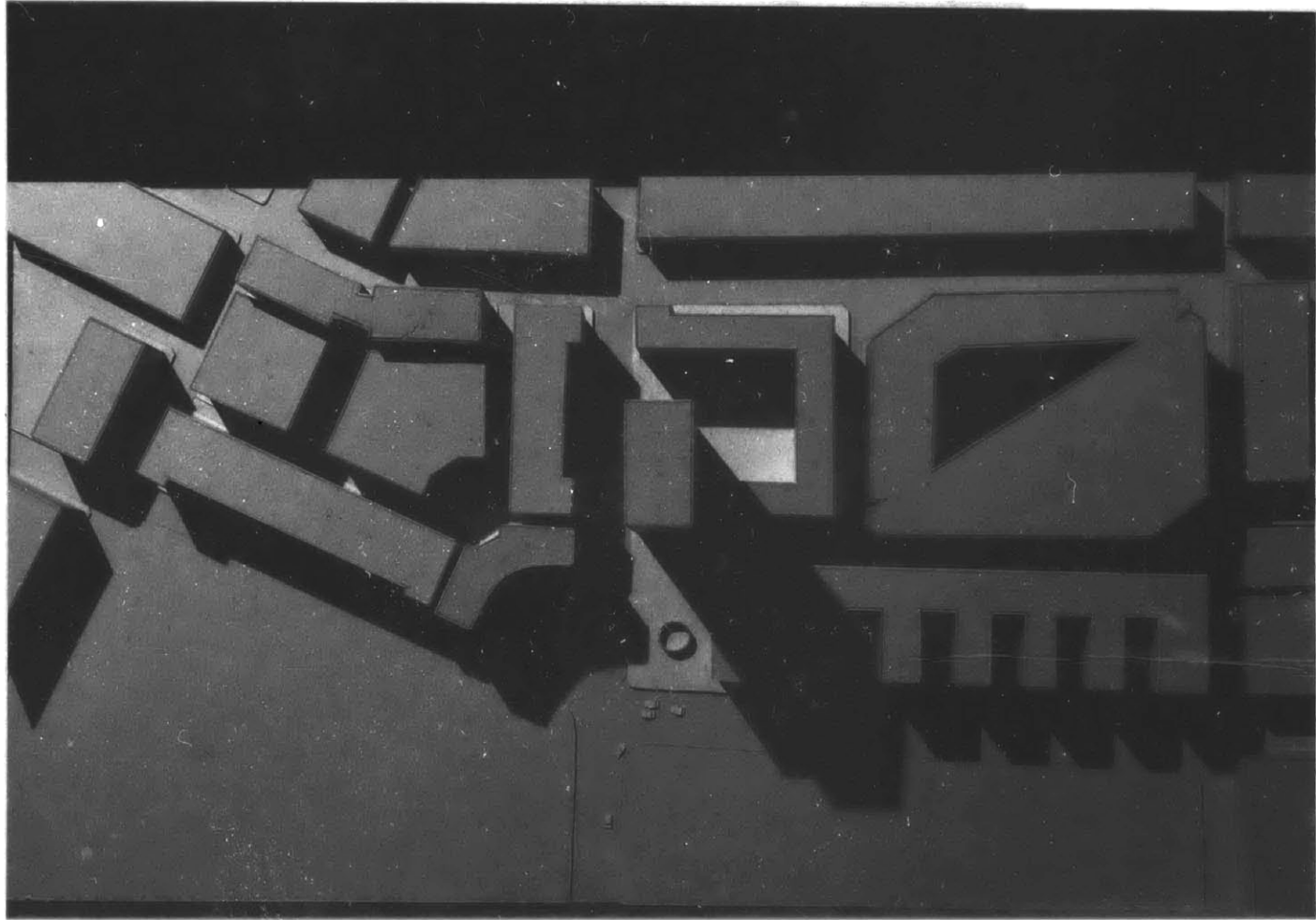


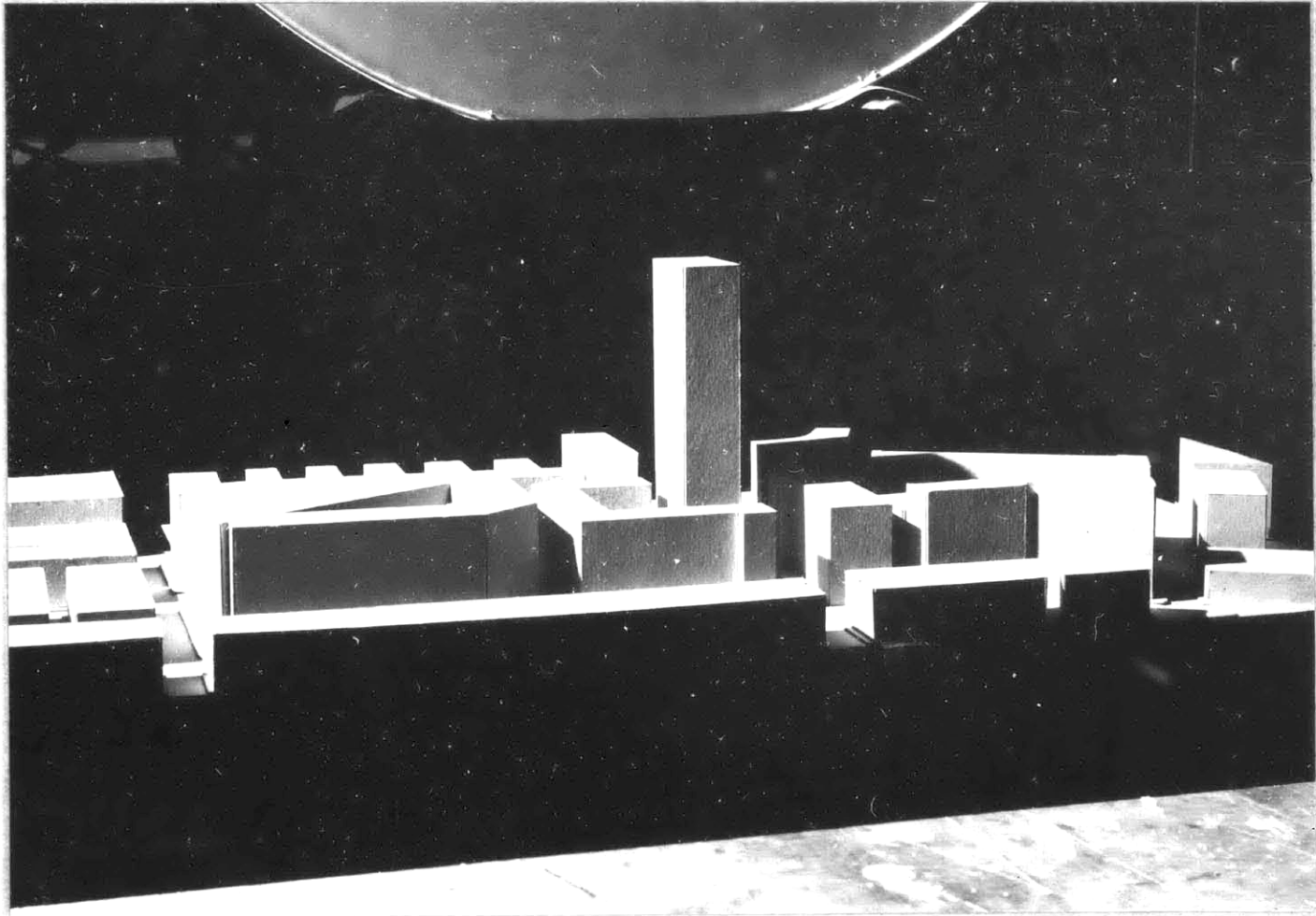
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office tower at the point of the wedge. The angle is actually turned by a crescent shaped building on the downtown side of the intersection of Boylston and Charles Sts. The entry into the Common along Charles St. is prepared by a small open space just behind the tower, which serves as a foyer and gives a foretaste of what is to come. The entry into the building mass from the Common is affected by a deep recess where Charles St. penetrates the buildings. This recess further emphasizes the importance of the Boylston-Charles St. intersection. The triangular shape of the Statler Hotel is improved by an addition to the building, thus giving it a sensible relationship to the new rectangular street pattern.

The new Park Square becomes a highly significant area. It has noble spaces. Its buildings occupy a certain privileged position in the city. Yet, none of the buildings stands out particularly except for the tower, which becomes a beacon symbolizing the area, which can be seen from any point in metropolitan Boston, thus fulfilling the role of Park Square as an important joint between two large areas. The spaces within the new square are strongly felt because they are not simply that which is left over between building objects, but are considered important as objects in themselves. The new design is a balance between definitely shaped spaces supported by indefinitely shaped buildings, and definitely shaped buildings supported by both spaces and indefinitely shaped buildings. The monumental character of the new square is in keeping with its important setting within the city, and also with the functions it is supporting.

SITE SOLUTION FOR THE OFFICE BUILDING

As pointed out earlier, there are several peculiarities of the Blue Cross-Blue Shield group which may influence their building's design. These have to do both with the location of the site, and with the positioning of the building on the site, not to mention the specific design of the building itself. The strongest of these influences has to do with providing attractive working conditions for the employees.

The employees are interested in the following location criteria: closeness to the M.T.A. and closeness to retail stores such as Jordan Marsh and Filene's for lunchtime shopping. They also like to have the feeling they are working for an important company (i.e., important location).

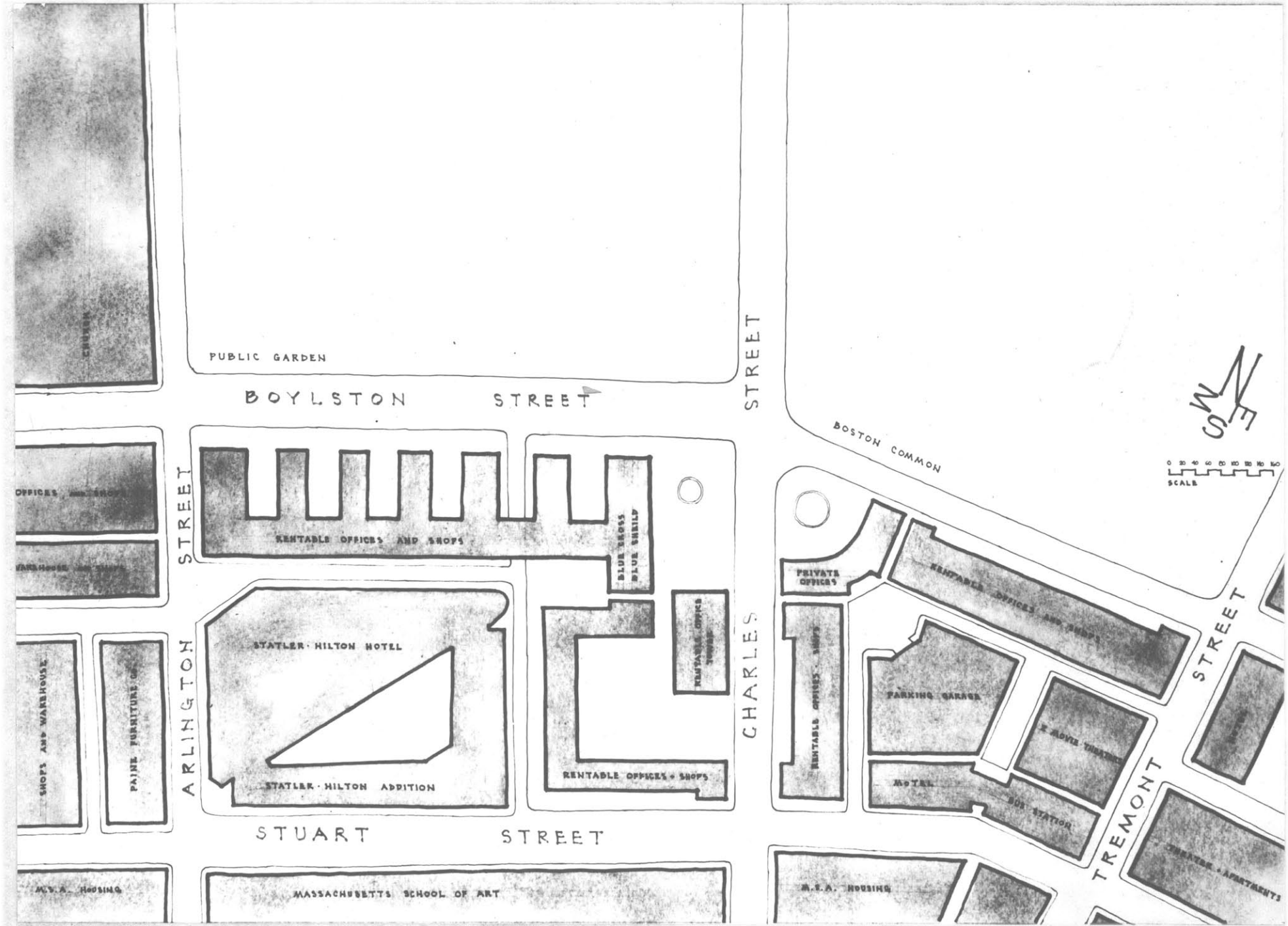
It was pointed out that the company is interested in having a favorable visual identity of some sort, but that they wanted to avoid giving the impression of opulence, or of having indulged in anything lavish. It would seem then that they would prefer to have an inconspicuous building in an important location.

The attractiveness of working conditions inside a building is completely determined by its interior treatment except for one thing: what comes in through the windows from the outside. What comes in through windows is light, air, and view. It would seem then that a good view would increase the attractiveness of an office building to prospective employees.

The fulfillment of only the above desirability requirements by the new Park Square area would seem sufficient reason

for siting the new building there. The area is close to both the Arlington and Boylston St. M.T.A. stations. It is an easy walk from Jordan's and Filene's, and will probably include equally attractive shopping places within its own limits. The view of the Common from the south side is particularly attractive because it is glare-free. Further, the design of the new square gives dignity to each of its buildings because of the spaces around them, without making any of them conspicuous except for the tower. Thus the new Park Square area is an excellent location for the new office building.

Within the new square, there are several places the new building could possibly go, but because of view criteria, the necessity for a certain identity, and space-type requirements inside the building, there is one site in particular which is ideal for this building. That is the southwest corner of the Charles-Boylston St. intersection. There is a building which terminates a rhythm of similar buildings, so it has a certain unique quality as well as a sense of connection within a larger framework. It is similar to six other buildings, yet slightly more distinguished than the others because it is the end building, and because it fronts onto the entry space into the square. It does not take on a lavish and domineering character, however, because it finds itself dominated by the adjacent tower. This location provides views for the building in several directions, and most of its faces are exposed to particularly dramatic views. This is the logi-



cal location for an office building with a particular distinction, i.e., occupied entirely by one company as opposed to being rentable space. Its location is so strong that it need have no address to be found, and the distinction so gained makes it a highly desirable place for status conscious employees to work.

The building is shown as a slab, with a link connecting it with the rhythmic wall along Boylston St. The conditions of the site dictate that it be a slab for several reasons. The first is its essential role in framing the definite entry niche into the square. This niche is needed as the strongest possible articulation for such a significant joint between the city's geometries. In this role as frame, the building becomes a wall rather than an object, which suits best the company's preferences on degree of "presence." Second, since the view has preferential directional qualities, the slab form should be used because, positioned at the edge of its site as shown, it exposes more wall area toward the best views than does any alternative scheme. Further, on a site with such views all around it, it is desirable that interior spaces with no outside exposure be kept at a minimum. This is best achieved with the slab form.

Thus it has been shown that placement of the office building on the corner site in the new Park Square scheme satisfies all of the company's location requirements, and provides the character desired to the building even before it is designed. It is left to the building design only to provide a satisfactorily workable housing for the company's operations, and to live up to the character of its site.

DESIGN CONSIDERATIONS FOR THE BUILDING ITSELF

In addition to the problem of siting, the two remaining design considerations are the building's workability, and its architectural expression. The consideration of workability involves organization, or space planning; communication, or circulation patterns; and flexibility, or the placement of mechanical services and structure so that they best implement organization and communication. Architectural expression is concerned with the visual aspect or character of the building, particularly as seen from the exterior.

The three aspects of workability should be designed so as to fit together in the most economical way. The structural module should be derived from the work-group desk layout module, from the degree of flexibility required in the creation of private offices by removable partitions, and by the dictates of mechanical service circulation paths. Likewise, the components of the mechanical systems should be selected to fit and penetrate, in the least complicated way, the building's skeleton. Human circulation routes should also be designed so as most clearly and simply to penetrate the structural and partitioning systems. Structure, mechanical devices, and circulation paths are all servants to the actual work spaces, where the company's purpose is fulfilled. These spaces should be considered as inviolable by servants, and as units should be designed to foster the production of a maximum amount of work per unit area. To accommodate

these spaces is the object of the building. The supporting spaces and elements are to these spaces just as the brick wall is to the discreet space it encloses.

The building's work space is divided into open office areas, and private offices. Since there is four times as much open office area as private office space, the supporting spaces and elements should be designed to best accommodate the open type of work space. The modules selected should fit the open office work function perfectly, the private offices being expected to adapt themselves to this. In addition to work spaces there are several special space requirements, an auditorium, a cafeteria and kitchen, rentable shop space, entry space, and space for the accommodation of business machines. (A detailed description of the special requirements of these spaces in addition to those of the work spaces, is contained in Appendix B). These are special either because their size requirements cannot be accommodated by the regular building module, as in the auditorium; because their nature requires a finer touch, as in the cafeteria; or because they possess functional characteristics which require special location or mechanical treatment, as in the cases of the business machines, the entry space, and the rentable shop space. These special requirements must be housed in adjuncts to the main system housing the normal work spaces. These may be either separate structures, attached structures, or superimpositions of separate structures onto the regular structure. The handling of these extras falls into the realm of architectural expression.

The problem in the visual design of this building is to express in as economical a way as possible what role the various elements are playing toward the accomplishment of the company's functional ends. The building should be dignified, due to its important location and the importance of its occupant, but should not be extravagant so as to evoke strong emotional responses. The degree of richness with which its facades are treated is really determined by the above considerations, since today sun and light control can be adequately treated in so many ways that the choice of devices for this purpose becomes purely a sculptural consideration. This company does not desire "eye-catching" treatment, but would prefer structural and mechanical clarity, and fineness of detail, as means for achieving architectural quality. An impression of high quality is their main aesthetic end.

Treatment of the entry (s) is a special problem of architectural expression, which gains particular significance in the case of this building because of the need for providing rentable shop space at the street level. The question of a proper balance between the spaces allotted to these two functions, so that the entry as a symbol of the company responsible for the whole building is not unduely suppressed by the mere "guests" occupying the street level, is a very delicate one. The provision of rentable shop area cannot be dispensed with altogether because of the building's role in forming a part of the new Park Square area, one of whose functions is to provide continuity to the office and retail

use character of the Boylston Street spine. That the building is an element in the major design of Park Square should be remembered also in the design and location of the special space requirements mentioned earlier. It is important that they be accommodated in such a way that the simplicity of form and wall-like character of the building, as a modulator of large spaces, not be compromised.

APPENDIX A: COMPLETE SPACE REQUIREMENTS FOR THE OFFICE BUILDING.

<u>Function</u>	<u>No. of Sq. Ft.</u>	<u>Totals</u>
<u>Main Lobby and Waiting Area</u>		<u>3,000</u>
<u>Dining Facilities and Kitchen</u>		
dining room	4,200	
lobby	1,150	
coatroom	90	
kitchen	1,320	
manager's office	60	
chair and table storage	235	
freezer lockers	300	
compressor rooms	70	
canned goods storage	120	
employee toilets	220	
		<u>7,765</u>
<u>Auditorium and Ancillary Facilities</u>		<u>8,000</u>
<u>Open Office Area</u>		
accounting division		
accounting	(12 desks) 930	
cashiers	(15 desks) 1,160	
public information	(40 desks) 3,100	
group accounts	(130 desks) 15,100	
individual accounts	(37 desks) 7,870	
		<u>28,160</u>
claims division		
subscriber records	(72 desks) 10,580	
hospital service	(90 desks) 12,600	
medical service	(118 desks) 14,140	
		<u>37,320</u>
staff functions		
general services	(58 desks) 4,500	
special services	(1 desk) 75	
hospital relations	(7 desks) 525	
actuarial-statistical	(17 desks) 1,320	
research	(6 desks) 455	
budget and audit	(6 desks) 455	
methods and systems	(5 desks) 375	
underwriting	(19 desks) 1,475	
field assistants	(6 desks) 455	
staff assistant	(1 desk) 75	
		<u>9,985</u>

<u>Function</u>	<u>No. of Sq. Ft.</u>	<u>Totals</u>
<u>Private Office Area</u>		
executive area		
blue shield executive director	380	
secretary	180	
closet, shower, toilet	100	
blue cross executive director	380	
secretary	180	
closet, shower, toilet	100	
board room	1,200	
coat storage	24	
blue shield assistant director	270	
assistant director of enrollment I	270	
assistant director of enrollment II	270	
assistant director of operations	270	
comptroller	270	
administrative assistant	270	
secretary pool (6 desks)	600	
assistant director of hospital relations	300	
secretary	100	
conference room (private dining)	300	
pantry	90	
waiting area	950	
		<u>6,514</u>
offices for lesser executives		
secretaries to lesser executives		<u>5,500</u>
staff offices		
infirmary		
consultation	180	
treatment	135	
nurse	130	
doctor	30	
waiting	200	
rest rooms	100	
quiet room	90	
bed rooms (4)	180	
		<u>1,045</u>
personnel		
clerical	450	
waiting area	250	
interview cubicles (3)	162	
assistant personnel manager	190	
personnel manager	240	
		<u>1,292</u>
purchasing department (counter)		<u>450</u>

<u>Function</u>	<u>No. of Sq. Ft.</u>	<u>Totals</u>
district liazon		
Boston central (22 desks)	1,710	
Boston north (24 desks)	1,860	
Boston south (25 desks)	1,935	
		<u>5,505</u>
<u>Area for Business Machines</u>		
electronic data processing	7,650	
programming machine systems	1,400	
observation area	330	
department manager's office	250	
customer engineer's office	180	
tape storage	100	
computer part storage	90	
		<u>10,000</u>
<u>Storage and Dispensary</u>		
bulk paper storage	5,000	
paper record storage	3,650	
maintenance supply room	1,270	
mail room	1,450	
receiving room	340	
freight elevator	65	
		<u>11,775</u>
<u>Mechanical Equipment</u>		
mechanical equipment below	7,500	
mechanical equipment above	9,730	
electrical room	310	
switchboard room	475	
telephone equipment	650	
sewerage ejector room and pit	70	
fan rooms	1,000	
shop	400	
elevator machinery	70	
		<u>20,205</u>
<u>Service Functions</u>	<u>per floor</u>	
elevators (4) and foyer	436	
stair cores	224	
toilet cores	340	
duct and pipe cores	150	
dumbwaiter loading room and dumbwaiter (no. of floors approximately 15)	70	
		<u>18,300</u>
<u>Rentable Area for Shops</u>		<u>10,000</u>
<u>Sum Total of Building Area Requirements:</u>		<u>184,816</u>

APPENDIX B: DESCRIPTION OF THE USE REQUIREMENTS FOR SOME OF
THE BUILDING SPACES.

Open Office Space:

Open office spaces are used for large numbers of clerical workers who are operating as part of a paper-processing route. There is no need here for individual privacy, or even for ideal conditions for concentration. However, the expression of work-group identity is desirable where possible. The main design consideration in this area is the selection of a proper desk-arrangement module, so that an efficient utilization of the available space is effected. Since there are very few partitions here, the structural system is determined more by the desk arrangements than by the need to move partitions.

Private Office Space:

Private offices are used by the company executives, by those of the staff who are in a supervisory capacity, and as central headquarters for the area liaison men. Private offices should provide conditions for concentration, when necessary. Some of them are occupied by only one man; some, as in the case of liaison men, by several men who are in only for short periods of the day. Three basic office sizes are needed to accommodate those uses. A large size of about 500 sq. ft. accommodates the top executives (with such extras as a shower and a private toilet). The large size is also used by several liaison men. A medium size of about 270 sq. ft. houses the regular executives. A small size of about 140 sq. ft. is

occupied by staff supervisors. Only the degree of flexibility necessary to make these three office sizes is necessary in the building.

Cafeteria:

The cafeteria should be one of the most pleasant spaces available, so that sedentary employees will have a chance to be re-invigorated during the lunch hour. This is especially important for those secretaries who occupy interior spaces with no outside exposure. As a dramatic panoramic view of the Common would seem the best available means for providing an exciting atmosphere, the roof is a logical location for the cafeteria.

Auditorium:

The auditorium must be a larger span space than can be accommodated inside the regular building's frame, except on the roof. The roof is ruled out as its location, however, due to the inconvenience of entry and exit for a large number of people through an elevator system designed for much lighter use. The auditorium must then be separated from the regular structural system, possibly located below the street level, and lighted by skylights.

The auditorium will be used for large company conferences, but it will also be rented out for public use, as is New England Mutual Hall. Consequently, its entrance must be clearly placed so that traffic in and out of it does not conflict with normal business traffic.

Area for Business Machines:

Special treatment is required for the all important computing machines. The machines are very heavy, and they exude high amounts of heat. Their weight dictates that they be located somewhere as low as possible in the structural frame, perhaps as low as the basement, where areas ordinarily supported by wide span beams can have additional column support. The machines' heat characteristics further dictate that they be serviced by supplementary package air-conditioning units, locally placed. However, exterior architectural expression based on the presence of these machines is unnecessary.

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