A Report On

A Proposed Development Of

THE NEW TECHNOLOGY

At

Cambridge, Massachusetts

by

Stephen Child '88

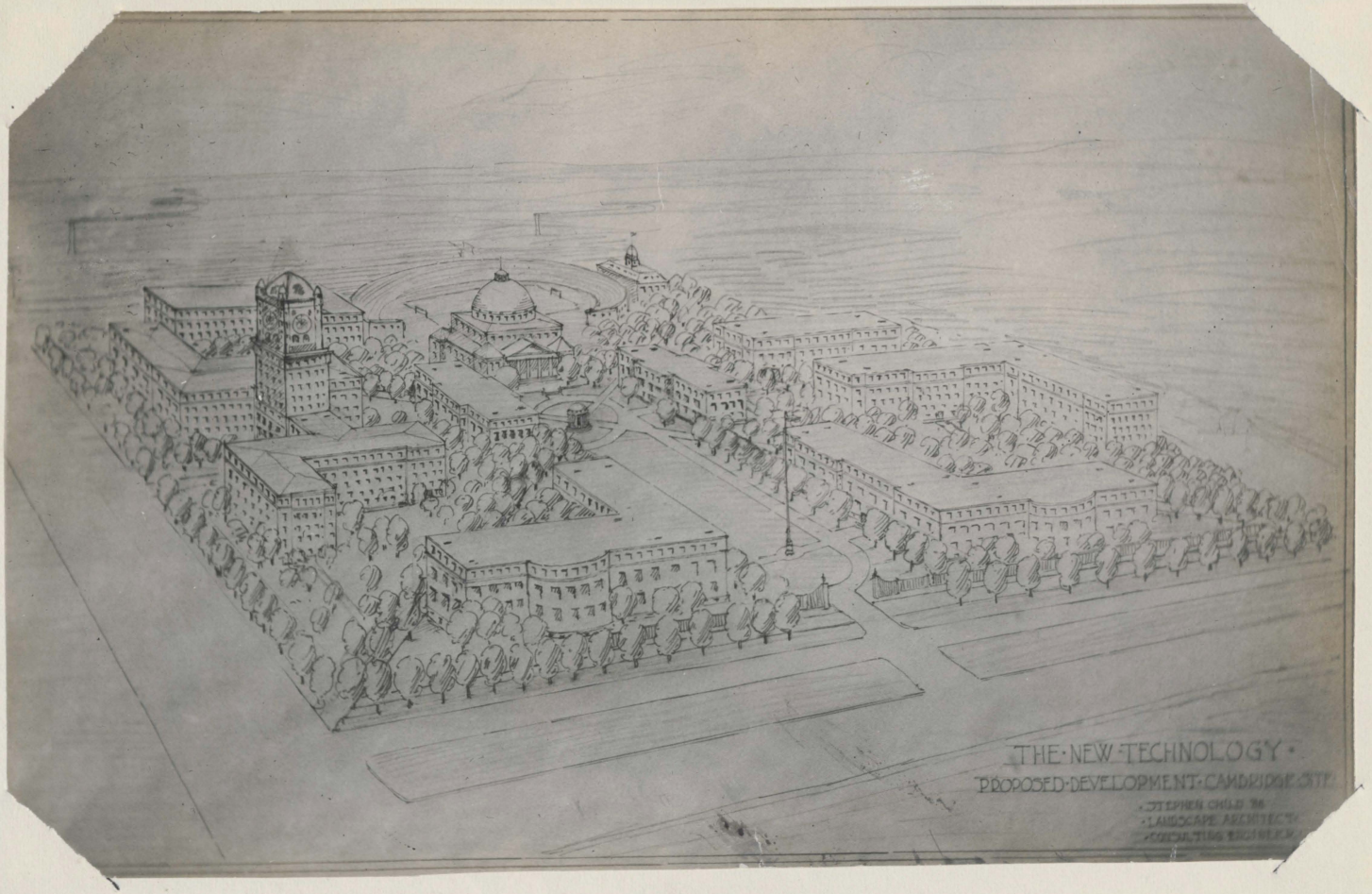
Landscape Architect—Consulting Engineer.

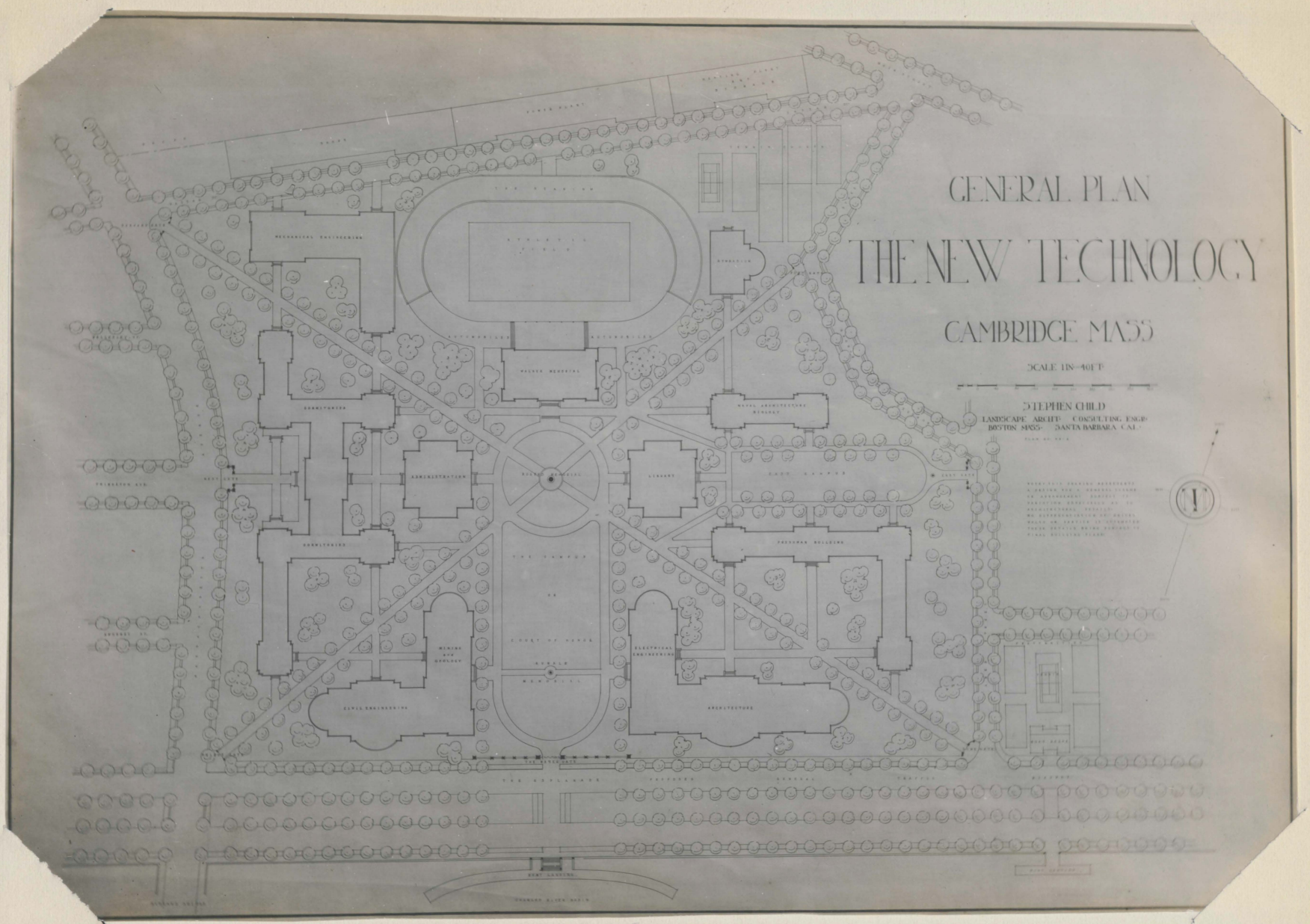
Boston, Mass.—Santa Barbara, Cal.

Submitted to

President Richard C. Maclaurin

December 30, 1911.


THE·NEW·TECHNOLOGY·
PROPOSED·DEVELOPMENT·CAMBRIDGE·CITY
·STEPHEN CHILD '36
·LANDSCAPE ARCHITECT·
·CONSULTING ENGINEER·


GENERAL PLAN
THE NEW TECHNOLOGY
CAMBRIDGE MASS
SCALE 1IN=40FT
STEPHEN CHILD
LANDSCAPE ARCHITECT CONSULTING ENGR
BOSTON MASS SANTA BARBARA CAL
MECHANICAL ENGINEERING
WALKER MEMORIAL
DORMITORIES
ADMINISTRATION
LIBRARY
EAST CAMPUS
FRESHMAN BUILDING
COURT OF HONOR
MINING AND GEOLOGY
ELECTRICAL ENGINEERING
CIVIL ENGINEERING
ARCHITECTURE
THE ESPLANADE
EAST CAMPUS
CHARLES RIVER BASIN

Member
American Societies
Landscape Architects
and Civil Engineers
S. B. Mass. Inst Tech.

Stephen Child
Landscape Architect Consulting Engineer
Main Office
Beacon Building, 6 Beacon St.
Rooms 217-218
Boston, Mass.

Winter Office
The Farmer Studios
Plaza De La Guerra
Santa Barbara
California

Dr. Richard C. Maclaurin,
President Massachusetts Institute of Technology,
Boston, Mass.

My dear Dr. Maclaurin:

You will remember I trust some pleasant interviews and conferences which you had with the writer during the past summer in regard to the new home for "The Institute" and after the selection of the Cambridge site your stating that you would be very glad to receive any suggestions I might make as to its best development. Following our last conference therefor and prior to my departure for my California office I made several visits to the new site, studying it carefully and taking numerous photographs of existing conditions. Your office supplied me with an accurate surveyor's map of the tract and also with a carefully prepared list of the various buildings desired showing the ground areas or floor space needed. With all this data in hand here I have been studying the problem carefully and have prepared and take pleasure in submitting herewith plans and sketches showing a possible and I hope the best ultimate development of this new home for our Alma Mater.

DESCRIPTION OF THE SITE.

The tract secured has an area of very nearly 2,000,000 square feet with a fine southern frontage of 1760 feet on the Charles River Esplanade. There is a western

frontage of 1150 feet on Massachusetts Ave. Along the northerly border of the tract are the tracks of the B.&A.R.R. and the easterly boundaries are the existing Ames St. and a proposed border street separating us from some uninteresting manufacturing buildings. There is also a very important but short frontage on Main St. not far from the beginning of the new Cambridge Subway and but a few steps from the beautiful new Craigie Bridge. As at present laid out there are several streets crossing this area all of which except Vassar St. it is proposed to close. The latter is not only not being closed but is to be extended easterly from its present dead-end, through to Main St.; in itself a very desirable improvement for this part of Cambridge. The entire property is "made-land" secured by filling over what was not so many years ago tidal flats. The tract therefore is practically level, the only variation being the depressions or sunken areas between the graded streets. Except for some very good formal planting of trees and shrubs along The Esplanade there is nothing growing here now and absolutely no natural features of interest to be preserved or taken into account in the lay out, as far as the land itself is concerned.

VIEWS FROM THE SITE.

Looking north or east we find uninteresting buildings many of them factories but along Massachusetts Ave. there are being or already built a number of quite attractive apartment houses. The views to the south across the Charles

River Basin show the back of the residences on the water side of Beacon St., so far removed however as not to be particularly objectionable, with here and there a church spire or tower breaking the monotony of the skyline. As it stands today it is clearly not an inspiring site, the inspiration must come largely from its development. I am sure however that this can be made not only inspiring but a great benifit to the whole metropolitan community, rescuing the Charles River Basin from its present neglect and preventing it from being lined with factories and cheap tenements.

ONLY ONE GOOD DISTANT VIEW.

At the south-east Beacon Hill crowned by its gilded domed State House dominates the distant view. This is the only existing feature of any particular interest or attraction and it is one that should most assurely be taken advantage of in any development of the site. How it is proposed to do this will be noted later.

ESPLANADE FRONTAGE MOST IMPORTANT.

Very naturally and properly the long straight frontage of the Esplanade and Basin dominates the situation and the design. All the buildings should orient themselves to this principle frontage and the view of the ensemble from the Basin and the opposite shore will be as planned most impressive.

STATE HOUSE VIEW SHOULD BE RECOGNIZED.

As noted above however I believe Beacon Hill and its gilded-domed State House, the only other existing feature of importance, should be recognized in the design

and that there is a particular appropriateness in thus being able to recognize this feature. Are we not the Massachusetts Institute of Technology and have we not in the past received not only our charter but much else that makes it possible for us to be, from that source. As an institution we should recognize and acknowledge this in every proper way. We owe much to our State Government and will I am sure continue in the future as in the past to return an ever increasing measure of service to this the very source of our existence. I believe the Massachusetts Institute of Technology should and will have some such dominating influence in the varied interests of our State Government as is now so effectively taken by the University of Wisconsin in that State; to mention only one very good instance of helpful cooperation between institutions of learning and the State.

THE STATE HOUSE VISTA

With these thoughts in mind I propose as indicated on the plan a main diagonal path starting from what I term "The Harvard Gate" at the corner of Massachusetts Ave and Vassar St. and I would have this path laid out so that it will center on and have as its terminus the gilded dome of the State House. I would so arrange all the buildings near this path and its planting of shade trees and other details that this State House dome is always in view at the end of the vista.

ANOTHER DIAGONAL PATH.

I would have another important diagonal path start from the corner of Massachusetts Ave. and the Esplanade ("The Bridge Gate") and proceed in a direct line to the angle in the proposed border street("The Port Gate") whence the new street leads direct to the corner of Vassar and Main Streets and to the Subway entrance.

THE ROGERS MEMORIAL STATUE THE CENTRAL FEATURE.

Where these two main diagonals intersect , as a matter of fact almost in the exact center of the tract, I would have a memorial portrait statue of the founder of the Institute, William Barton Rogers. This should be within the most beautifully designed canopied structure that art and architecture can produce; not massive but a fitting shelter for the delicate physique and great intellect that conceived our school secured from amidst indifference and opposition its incorporation and partial endowment, directed its affairs through poverty, hardship and great trials to the fitting end of his noble career on the platform at its graduation exercises in 1882. Seated here beneath such a shelter facing the broad campus Rogers would be the central inspiration of the Institute, dominating in all the future as in the past its life and aspirations.

THE WALKER MEMORIAL.

North of this Rogers Memorial I would place that of our next great president selected by Rogers himself, Francis

Amasa Walker. The form of this memorial has long been happily decided upon and funds subscribed by our alummni for a building to house all the many varied social interests of the Institute. It goes without saying that this structure also though in a far different way should be nobly beautiful, in keeping with the life and work of President Walker and I have placed it, I believe appropriately, at the head of the broad campus as a strong and fitting background for the Rogers statue, just as Walker with his more vigorous active physical make up became in life a fitting and most appropriate successor to the less robust Rogers.

THE CAMPUS.

Extending from the Walker and Roger memorials to the Esplanade will be the Campus. This will really extend to the river bank itself for, as has been suggested, cooperation with the Cambridge Park Department in regard to the planting of the Esplanade will I am sure enable us to treat this whole area as a single unit. With the arrangement of buildings proposed this open area will be some 800 or more feet in length and something over 300 feet in width, a dignified and impressive central feature of the design.

THE WATER GATE.

At the water front therefore and on the central axis of the campus should be a dignified formal landing and across the Esplanade "The Water Gate" from which branching

paths of ample width and tree shaded, lead past symmetrically designed buildings (of which more detail mention will be made later) to the two memorials above described.

THE LIBRARY AND ADMINISTRATION BUILDINGS.

Facing each other and directly opposite the Rogers Memorial statue I would place two buildings of similar style and size to the east the Library and to the west the Administration building. These two together with the Walker Memorial and with the Rogers Memorial as a central feature would if designed in harmony form a most impressive group. Part way down the center of the campus opposite the main entrance to the long buildings here I would have as a memorial to President Runkle a beautiful flag staff its base designed as the Ventians have their flag staffs in St. Marks Square. Here then would be not only a campus but a Court of Honor.

THE MAIN FACTORS OF THE DESIGN.

These then are the main factors of the design: the broad campus at right angles to the Esplanade and Basin; its central feature the Rogers Memorial statue placed where the two important diagonal paths above described intersect; north of it the Walker Memorial building; south of it toward the imposing "Water Gate" the Runkle Memorial; flanking the Rogers Memorial, the Administration building and the Library building. These are to my mind the important elements, the framework or foundation demanded. Certainly all these things should be

recognized whatever else is done and I believe the arrangement proposed will be appropriate, dignified and impressive and can be made most attractive.

THE GROUPING OF OTHER BUILDINGS.

When it comes to the many details and important considerations involved in determing the style, size shape and location of the remaining buildings there must be manifestly much room for difference of opinion. There are however several underlying factors of prime importance to some of which I have already alluded. One is as already mentioned the Esplanade facades and the ensemble or group value of the various buildings from this perhaps the most important point of view. Given this long straight formal frontage with the opportunity afforded by the wide water Basin for distant views toward the mass of buildings and given also the broad level campus or Court of Honor, which I believe are most important, the buildings on either side and along the long straight Esplanade frontage, whatever their use, should not in my judgement be very tall ones. In estimating on their size from the data as to net areas of floor space furnished me by your office I have assumed a relativly high basement with but three floors above it. This would I believe be the best height also for the three buildings around the Rogers Memorial- ie- Walker Memorial, Administration and Library Buildings. This would give us a central group of five buildings all to be of similar style of architecture and to have the same relatively low roof lines.

As to this matter of architectural style I would not dictate other than to say that it should of course be such as would lend itself to the concrete form of construction proposed. Perhaps the Walker Memorial and the Administration and Library buildings should be relatively most ornate in character and detail as appropriately surrounding the delicately beautiful Rogers Memorial canopy already suggested. The other two large L shaped buildings of the five now under donsideration with their relatively long facades facing the campus and the Esplanade might possibly be somewhat less ornate in character, but their facades, especially along the Basin frontage should be of similar design and so planned as to produce an impressive ensemble from this point of view. As adding to this effect enforcing it and bringing it out most strongly I would have the other buildings grouped on either side and back of this central group, of greater height and of still simpler style and detail.

We would have then the following scheme: The central level tree bordered campus with its delicately beautiful Rogers Memorial as a central feature, a low structure of similar style to the Temple of Love near the Petit Trianon, Versailles. This to be backed by the Walker Memorial and flanked by the Administration and Library buildings. The remainder of the campus and Esplanade Bordered by the long relatively low L shaped buildings of this group designed in harmony with each other, the delicate beauty of the Rogers Memorial canopy backed and flanked by buildings of more massive

character and less ornate detail and these again flanked and enclosed by taller and simpler structures four or even five stories in height.

THE DEPARTMENT BUILDINGS.

We come now to the questions involved in the use by the various departments of these and other needed buildings. Here again there is much room for difference of opinion and the arangement suggested may well call for modification in detail while still maintaining the general features and characteristics above enumerated as desirable. Your office furnished me with the following data as to either the ground floor area or the net floor space necessary for the requirements of each department:

I	Walker Memorial	ground area furnished	20,000 sq ft.
II	Library Building	" " "	20,000 sq ft.
III	Administration Building	" figured	15,000 sq ft.#
IV	Civil Engineering	ground " "	20,000 sq ft.#
V	Mining and Geology	" " "	30,000 sq ft.#
VI	Electrical Engineering	" "	30,000 sq ft.#
VII	Architectural Building	" "	30,000 sq ft.#
VIII	Freshman Building for	" "	50,000 sq ft #

Mathematics
Languages
Economics and Business Law
History
English
Drawing and Descriptive Geometry
Chemistry
Physics
Electro Physics

IX	Mechanical Engineering	ground	area	figured	48,000 sq ft#
X	Dormitories (1500 rooms)	"	"	"	73,000 sq ft#
XI	Naval Architecture Biology	"	"	"	15,000 sq ft#
XII	Gymnasium	"	"	furnished	13,000 sq ft
XIII	Shops	"	"	"	40,000 sq ft
XIV	Power Plant	"	"	"	30,000 sq ft
XV	Stadium and Atheletics	"	"	available	240,000 sq ft
XVI	Heating Plant and Storage	"	"	"	33,000 sq ft

Note -- The ground area of the buildings marked thus(#) is figured from the net areas given by your office making a reasonable allowance for corridors and for the varying height of buildings as suggested on previous pages.

I have already discussed in some detail the location of the first three of these buildings and have I trust decided wisely about them. I have also given some reasons for the height shape and general features of the two L shaped buildings which according to my suggested arrangement are to be occupied; the one to the east by the Architectural and Electrical Engineering Departments and the one to the west by the Departments of Civil Engineering, Mining Engineering and Geology. The triangular shaped plots here between the campus, the diagonal paths and the Esplanade suggest L shaped buildings and I have already discussed the purpose of the long facades on the Esplanade and campus and the size and mass of these

buildings in relation to the others. For these reasons I believe it wise to combine these structures into two L shaped buildings rather than to separate them as of course might be done with almost similar results into four detached buildings. I believe the advantages to be gained by the long facades are important though perhaps not vital. The easterly triangle is slightly larger, has a longer frontage on the Esplanade than the westerly and as the floor area required for the Department of Architecture is somewhat in excess of that demanded for the Department of Civil Engineering I place Architecture to the east and Engineering to the west. The requirements for the Department of Electrical Engineering and for the joint use of the Department of Mining Engineering and Geology are identical. Therefore the two portions of these buildings extending along the campus which as shown on the plans are the same size are set aside for these departments placing the Mining Engineers and Geologists adjacent to the Civil Engineers as quite intimately associated and the Electrical Engineers across the campus and adjoining the Architects. As these latter departments have no particular relation educationally there might well be a grand "Hall of Casts" extending up through two or more stories for the Architectural Department but separating the two in an attractive and useful manner. In all of these buildings I have allowed space for the special department libraries experience has proved to be so convinient and also

ample opportunity for draughting rooms with the desirable north light.

Neither of these triangles was large enough for the huge Freshman Building demanded and while the Department of Mechanical Engineering could have been placed on the more easterly triangle it would have been somewhat crowded here and I deemed it much more conveniently and appropriately located at the north west corner of Vassar St. and the diagonal path as shown on the plans. Here it is very properly near the shops and the power plant and the heating plant which should undoubtely be located across Vassar St. and between that throughfare and the railroad tracks.—The location, size and shape of the large building on your list called the "Freshman Building" to be used for Mathematics Languages, Economics and Business Law, History, English, Drawing and Descriptive Geometry, Chemistry, Physics and Electro Physics, was something of a problem. I believe it has been happily solved by placing it in the large triangle south-east of the Library. Certainly many of the students in these numerous and varied courses will want to be conviently near the main Library and this large triangle here gives ample room for such a building which however might need to be five stories in height and as already discussed perhaps of less ornate character than the central ones just described.

I have alluded to the building for the Department of Mechanical Engineering and believe I have placed it appropriately as shown. There can scarcely be a question as to the practicability and absolute desirability of placing the Shops and the Power and Heating Plants with their demands for railroad facilities and their general practical character near the railroad tracks and across Vassar St. Here they will also serve as a screen shutting off the view and some of the noise of the trains and factories beyond. Therefore the Mechanical Engineers who are so intimately associated with these necessary departments should be near them. This building may well also be five stories in height and of a character similar to the Freshman Building just described.

THE DORMITORIES.

I believe the large triangle west of the Administration Building with its long frontage on Massachusetts Ave. is the proper place for dormitories. Undoubtely these could take many forms and shapes and be built either detached or en masse as suggested on the plan. If such a scheme as is here shown were adopted it could readily be built in sections as need or available funds allowed and up in its great clock tower, perhaps in itself a memorial, one can well imagine interesting quarters for some of the Fraternities or other organizations not accomodated in the Walker Memorial. This large group of buildings with their greater height would serve to minimize one of the disturbing elements of this Cambridge site namely the noise of the

surface cars on Massachusetts Ave· and placed here as shown on the plans they would secure to the other buildings to the eastward the quiet and restfulness so necessary to the student and research worker.—This disposition of proposed buildings leaves a triangle north-east of the Library as yet unoccupied and the only building,on the list furnished me,not provided for is one for the Department of Biology. A former ideal arrangement of buildings prepared before any actual site was selected provided however for Naval Architecture, therefore I show in this triangle a building whose western end could be used for the Naval Architects. Here they would not be far from the Mechanical Engineering Department with which they are quite closely allied. The easterly end of this building might be set apart for the Department of Biology. There would still be room in this triangle and north of this Naval Architecture and Biology Building for another fair sized building when the need arose or for an extension of this building.

THE STADIUM AND GYMNASIUM.

All this still leaves a considerable area north of the Walker Memorial and east of the Mechanical Engineering Building and between these buildings and Vassar St. For the time being at least until further growth makes such a disposition impracticable I have set aside this entire area some 240,000 sq ft. for athletics. At the easterly end of this area I place the Gymnasium and between this and the

Mechanical Engineering Department the Stadium with ample room for foot-ball and for a base-ball diamond and of course for a running track and so on. The Stadium is placed due north and on the axis of the Walker Memorial and a broad covered terrace north of this building is suggested as really a part of the stadium design. This terrace and its roof would afford excellent opportunity for special quests to witness athletic contests. There is room also for a number of tennis courts as shown on the plan.

SHOPS AND POWER PLANT.

There is ample room in the long narrow strip of land between Vassar St. and the B.& A. R.R. not only for the Shops and Power Plant already mentioned but for a single main or central Heating Plant and also for storage of fuel and other supplies.

DRIVES PATHS AND SERVICE.

With so much architectural detail as to the exact size and shape of buildings and the location of doorways and windows, to be determined; it is manifestly impracticable to differentiate between main and service drives and paths until the final building plans are made. It is assumed in this scheme that there is to be a central heating plant for all the buildings; located as shown, near the railroad tracks, accessible for coal supply and that therefore except for the going and coming of trunks to the Dormitories little in the way of strictly service drives would be needed. Some of the broad paths shown would readily serve for formal carriage drives on occasions.

STREETS OPENED AND DISCONTINUED.

Some discussion has I believe already arisen as to the closing of most of the streets laid out as crossing this tract of land and especially as to Amherst St. which now carries considerable business traffic to and from the factories east of Ames St. I have spoken of some of the advantages to this part of Cambridge which will result from the extension of Vassar St. through to Main St. and this very real improvement should be given due weight in any consideration of these questions of discontinued streets. As to Amherst St. a wise solution already proposed would be to allow business traffic on the northerly roadway of the Esplanade, restricting only the southerly roadway adjacent to the water front for pleasure traffic.
As a further aid to an amicable solution of this problem of streets and business traffic I would suggest as shown on the plan that Ames St. instead of pursuing its present inconvenient route at the southerly end be carried straight through from Amherst St. to the proposed traffic roadway of the Esplanade. As there are no buildings here now it would seem that an exchange of areas might be accomplished as suggested giving the Institute a good sized piece of property just across this new Ames St. **with a frontage on both the Esplanade and Amherst Street** as well.— In making such a proposed exchange I would provide for a more ample rounding of the corners of the Ames St. extension than is perhaps strictly required by ordinance so as to give teaming especially good facilities and make the slight detour necessitated by the abandoment of Amherst St. less of a hardship.

A BOAT HOUSE AND FRATERNITY BUILDINGS.

This piece of land east of the new Ames St. extension could serve many useful purposes.—"Technology" actually located on the Charles River Basin should most assuredly take full advantage of such a site and cultivate rowing and all sorts of water sports and right here might be placed an attractive Boat House and perhaps grouped around it several of the Fraternity Houses, an arrangement which would still leave room for a couple of tennis courts for the joint use of members.

THE EAST CAMPUS AND QUADRANGLES.

I have discussed at some length the central feature of the design, the tree bordered Campus or Court of Honor with its numerous memorials and its proposed imposing Water Gate but the scheme of arranging the buildings gives opportunity for a somewhat smaller but fairly ample open area east of the Library Building and extending to the East Gate which might be termed the "East Campus". These open tree shaded areas make not only for a better appreciation of the various buildings fronting on them but give a restful sense of freedom from restraint and crowding which should be helpful as offsetting in part at least the severe mental strain of student life at"Tech". These open spaces too will as further progress in aviation is made become convenient landing places for aeroplanes and the great Charles River Basin for hydroplanes.

Mention should also be made of the opportunity which the general scheme of building-grouping offers for a number of interesting semi-enclosed tree-shaded quadrangles.

One of the most attractive of these would be the rather large area between the Freshman Building and that proposed for joint use of the Architects and Electrical Engineers. Othere of smaller size but which might be made peculiarly interesting and attractive are those to the north of the Dormitory group-building and between that and the Administration Building.

PLANTING.

This brings us to the question of the proper planting of such a scheme and of course the plan submitted is of such a preliminary character that one cannot go further perhaps than has been done there in suggesting a general arrangement of trees and massed planting. It can readily be imagined however what charming effects can be secured by a proper study of this most facinating subject when later on something more definite has been decided upon and actual construction accomplished. These semi-enclosed quadrangles can be made by proper arrangement of paths, trees, shrubs and vines the most beautiful spots imaginable. One can look ahead a few decades and find them embellished with exedras, statues and fountains, class gifts and memorials to honored students and instructors, which will make "our Institute" rank in beauty as well as in every other way with the best in the world.

What a beautiful and inspiring home it can be made. Here Rogers Institute of Technology that new thing in the educational world " a modern University founded on

science" should find its fitting setting. Here the demands for modern technical education are to be met and filled as never before. From such a home as this are to go forth in the future the most advanced types not only of engineers but of scientific educators and investigators. If in the past by dint of struggle in crowded and ill planned quarters and cramped for funds we have, as all conceed, kept abreast of the demands for such a type of education; how much better able we shall be to lead, in such surroundings and with the new aids to our growth that all this must bring. For the realization of such possibilities as are here presented must serve as an inspiration to all; to our loyal alummni and to our friends old and new, helping us to assemble here what I firmly believe is to be not only the greatest and best but most beautiful scientific university in the world.

Trusting that the plans and general scheme herewith proposed may really be of service in the helping on of the good work and that you will be sure and call upon me further in regard to all these matters if there is any way I can be of further service , believe me,

Yours very loyally,

Stephen Child

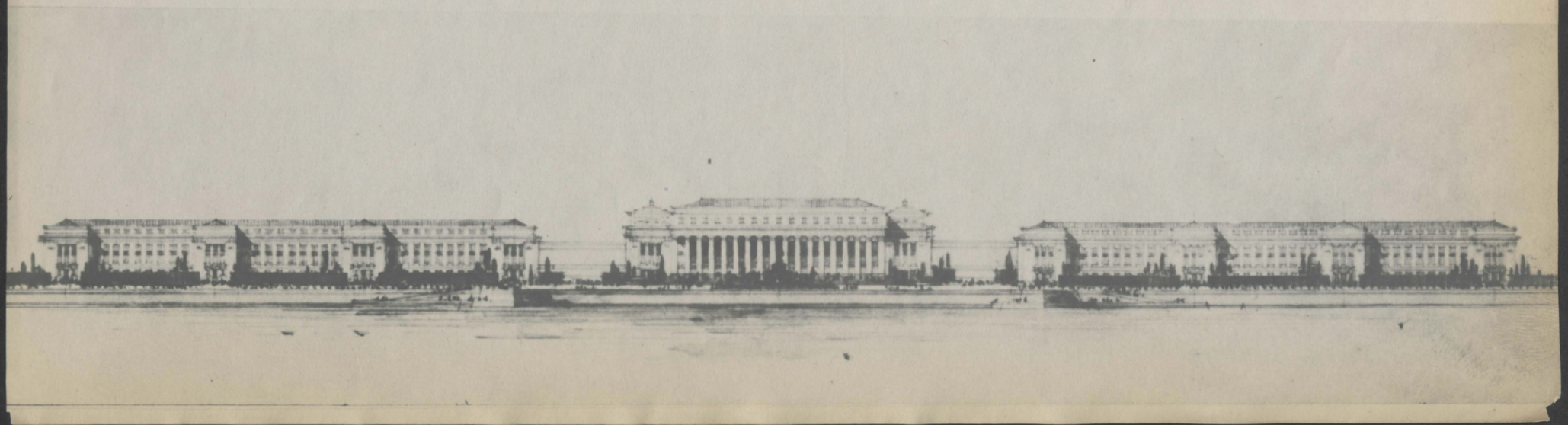
'88

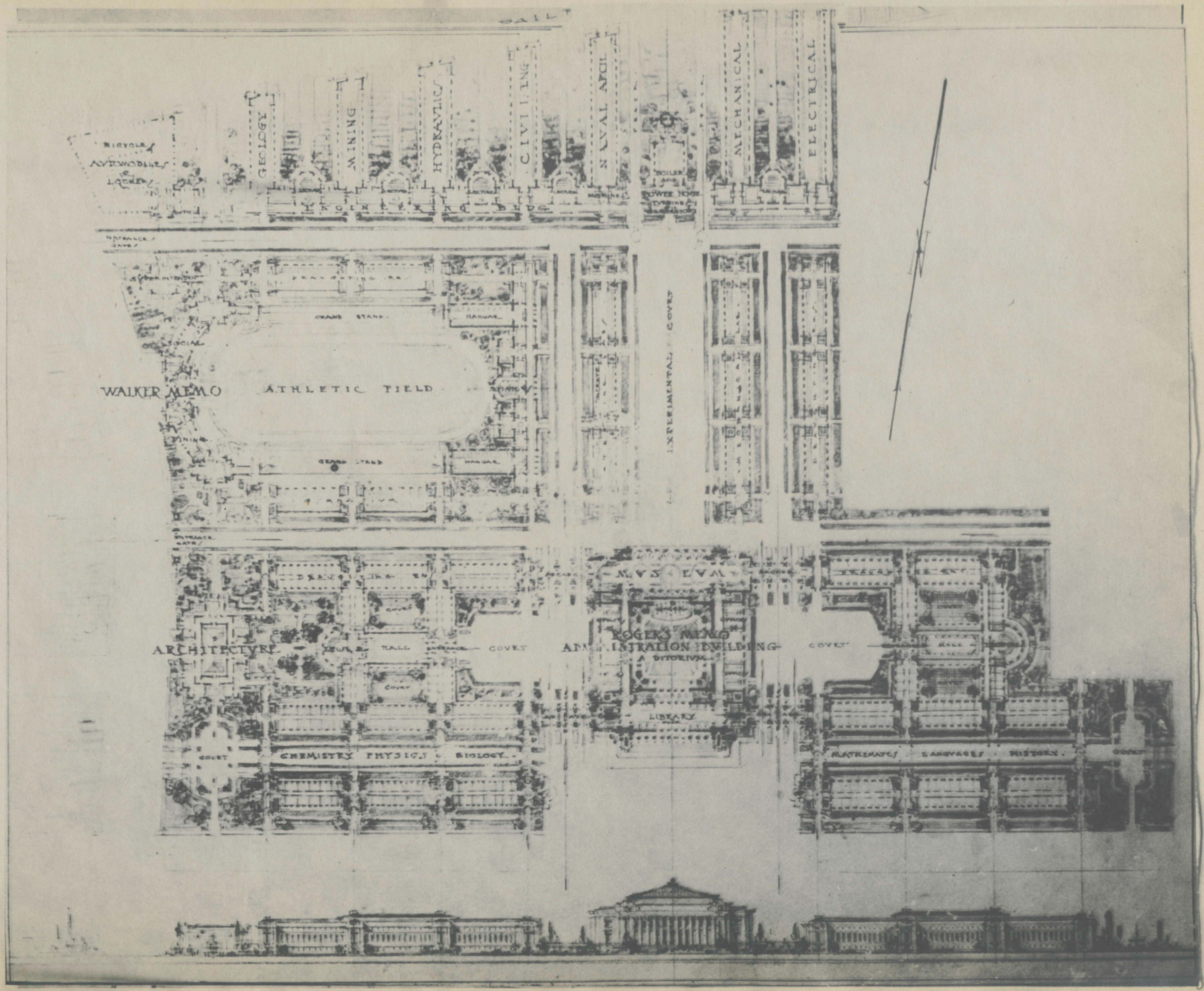
(over)

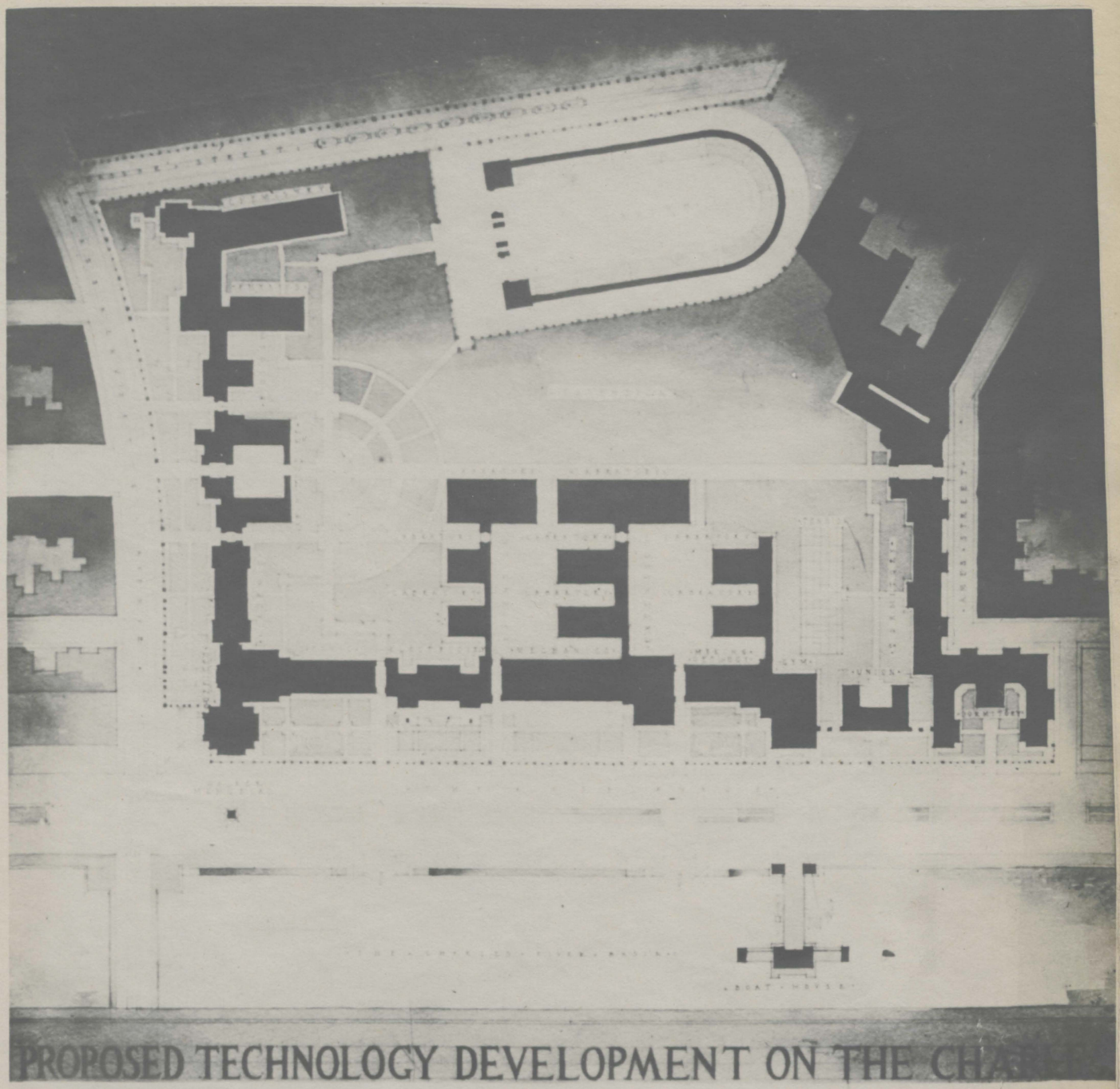
P. S. A large map scale 40 ft = 1 inch and a rendered perspective drawing of the design go forward today by Wells-Fargo Ex prepaid.

Santa Barbara Cal
Dec 30 1911

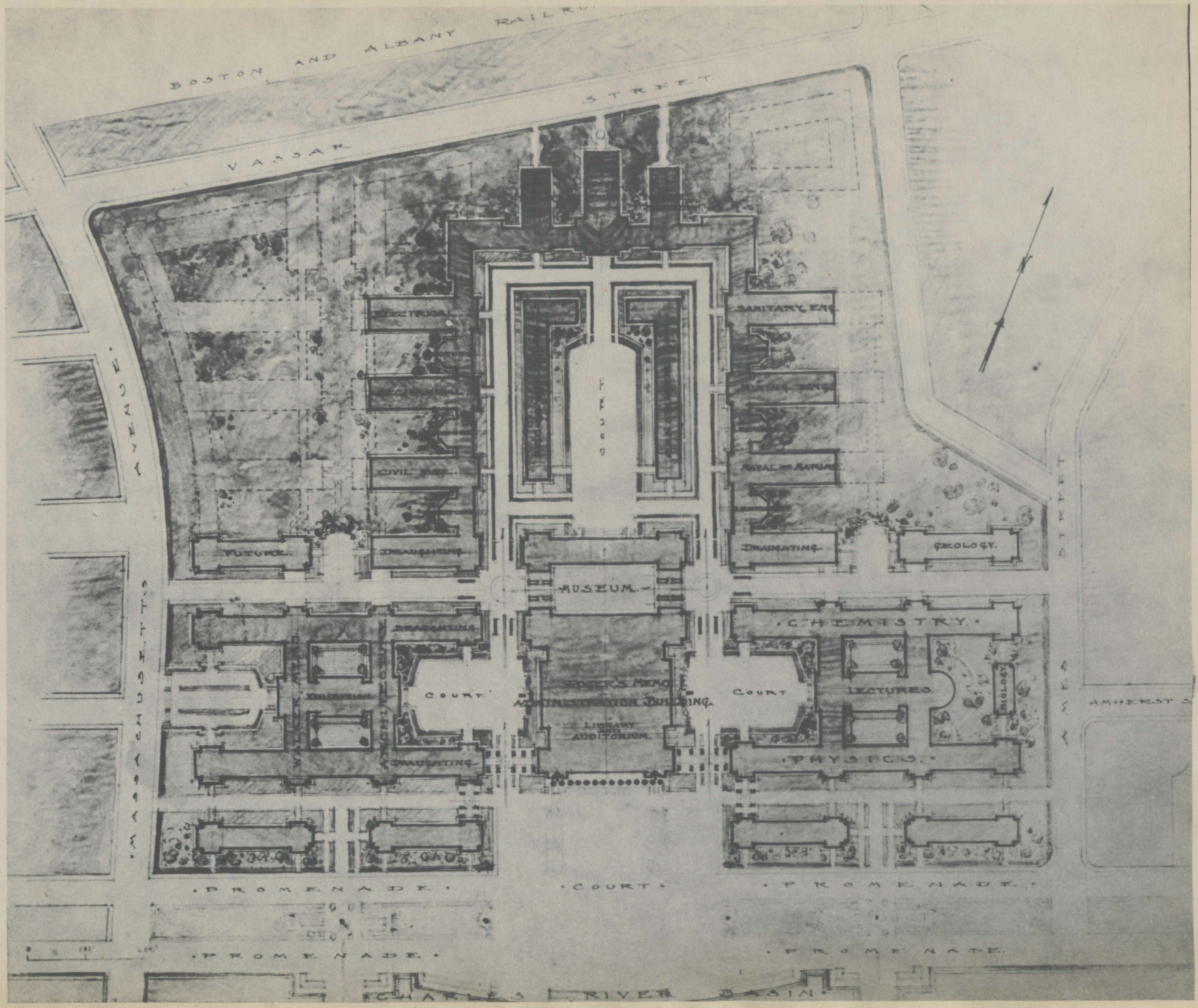
Stephen Child
'88

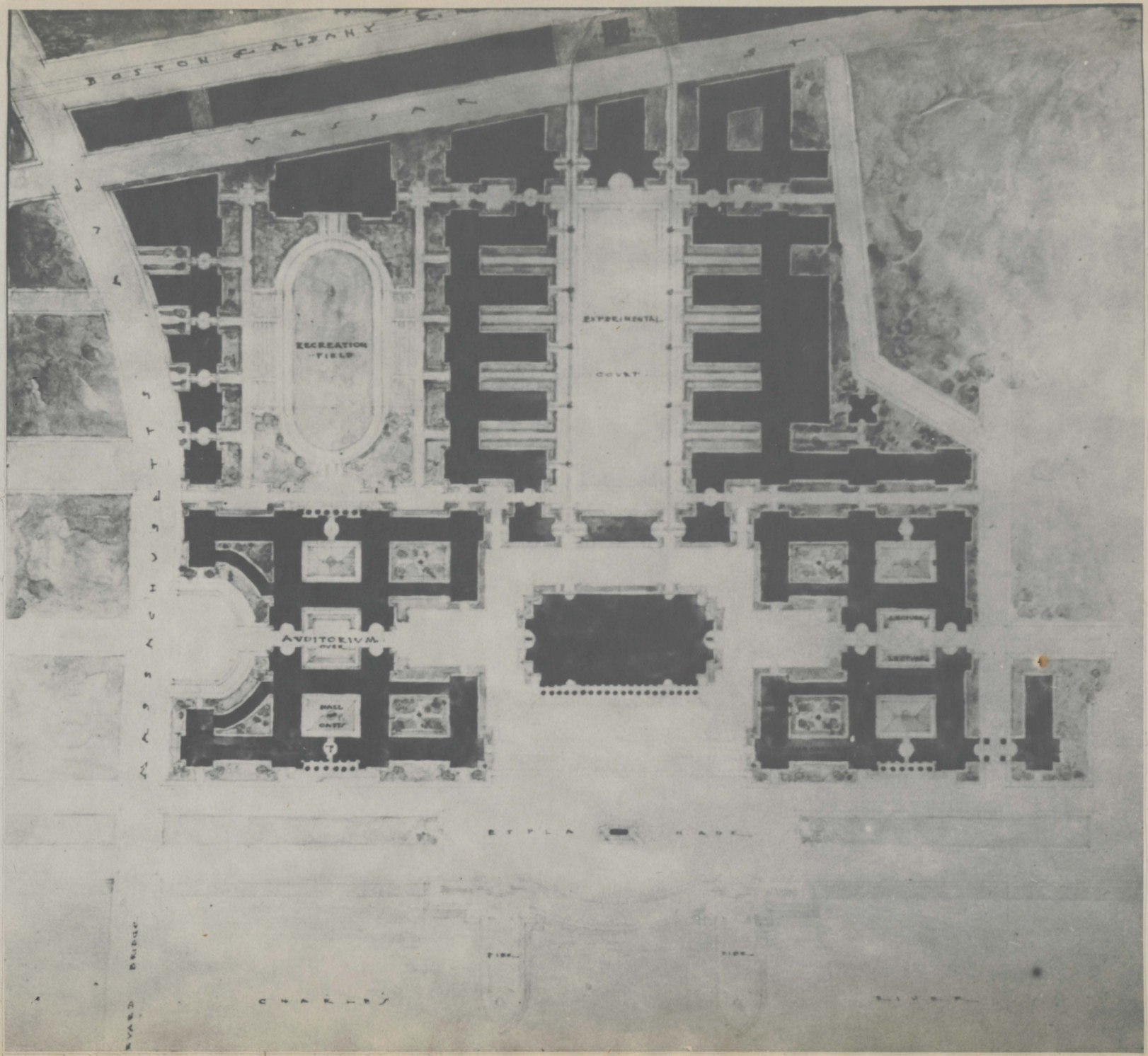


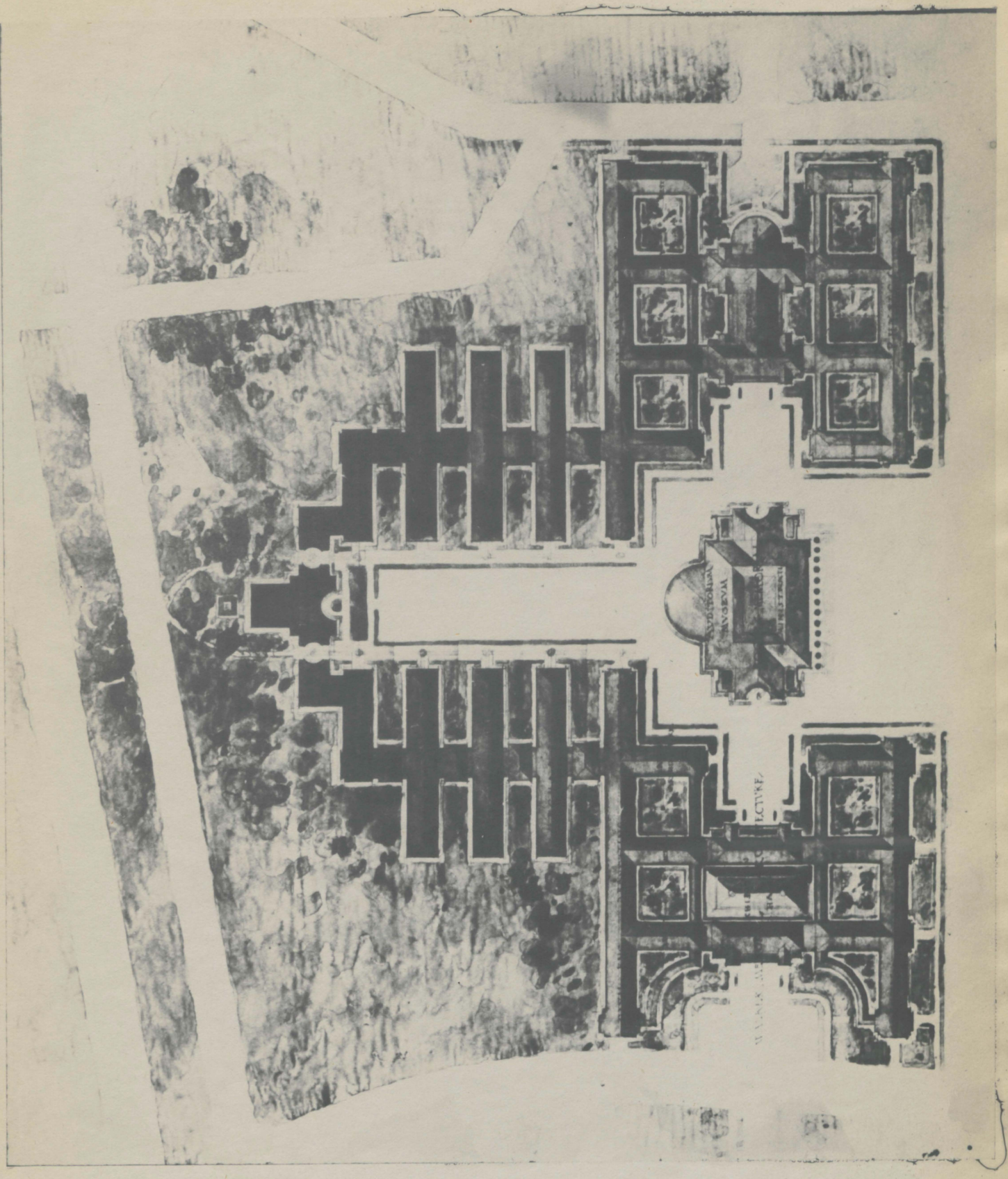

GEOLOGY
MINING
HYDRAULICS
CIVIL ENGINEERING
NAVAL ARCH.
MECHANICAL
ELECTRICAL
BICYCLE & AUTOMOBILE LOCKER
BOILER & POWER HOUSE
GRAND STAND
MANUAL
SOCIAL
WALKER MEMO
ATHLETIC FIELD
EXPERIMENTAL COVER
ROGERS MEMO
ADMINISTRATION BUILDING
AUDITORIUM
LIBRARY
ARCHITECTURE
COVER
CHEMISTRY
PHYSICS
BIOLOGY
MATHEMATICS
LANGUAGES
HISTORY

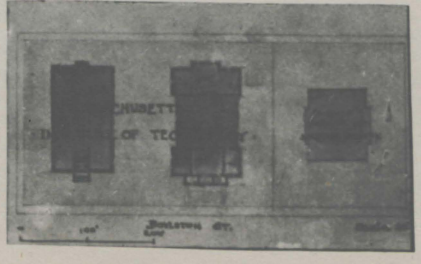


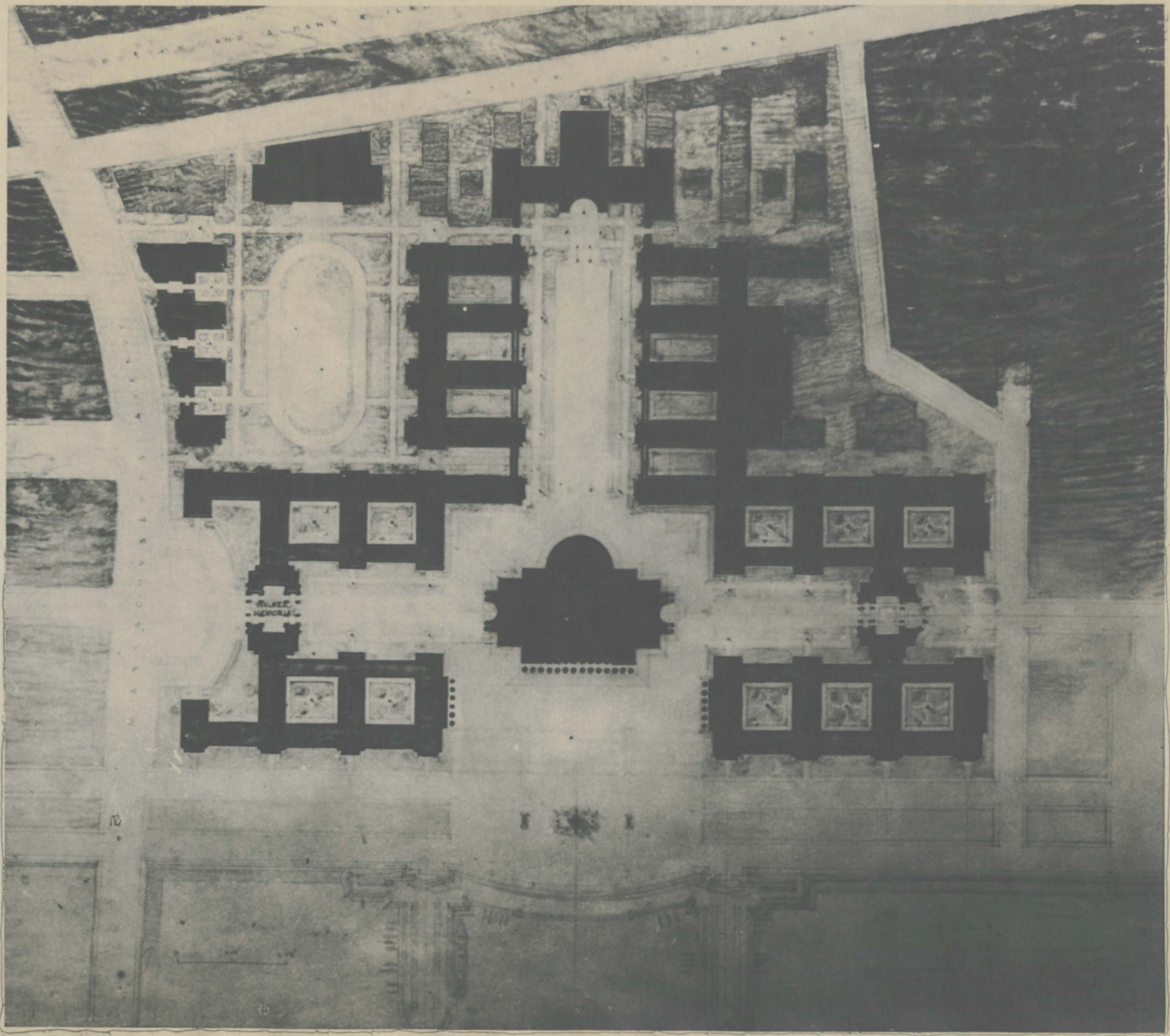
PROPOSED TECHNOLOGY DEVELOPMENT ON THE CHA


BOSTON AND ALBANY RAILRO
VASSAR STREET
MASSACHUSETTS AVENUE
ELECTRICAL
CIVIL ENG.
FUTURE
DRAUGHTING
SANITARY ENG.
NAVAL ARCH
DRAWING
GEOLOGY
MUSEUM
CHEMISTRY
DRAWING
COURT
ADMINISTRATION BUILDING
LIBRARY
AUDITORIUM
LECTURES
PHYSICS
DRAWING
PROMENADE
COURT
PROMENADE
PROMENADE
PROMENADE
CHARLES RIVER BASIN
AMHERST


BOSTON & ALBANY
MASSACHUSETTS AVENUE
RECREATION FIELD
EXPERIMENTAL COURT
AUDITORIUM
HALL OF GATES
MEMORIAL DRIVE
CHARLES






WALKER
MEMORIAL