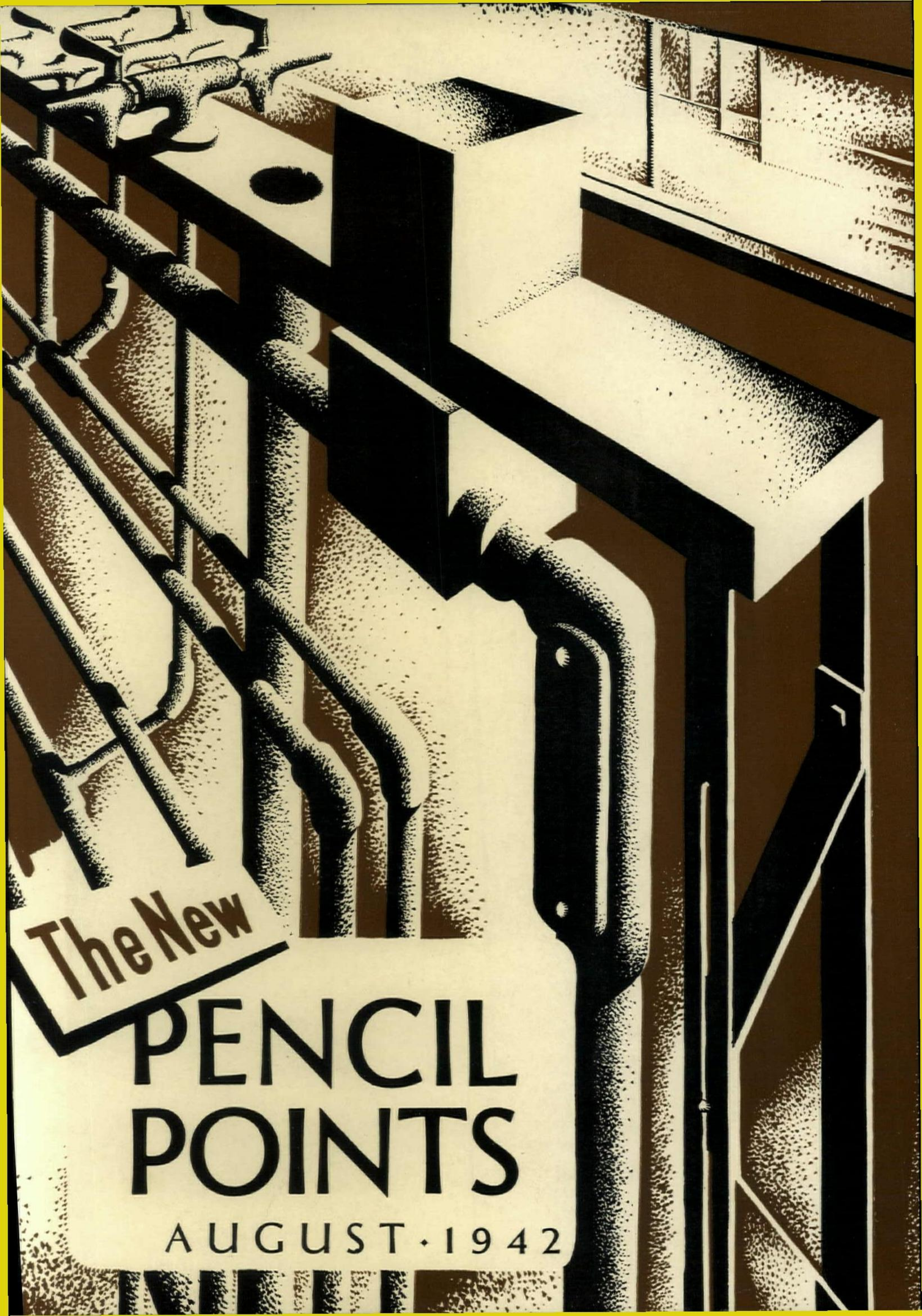
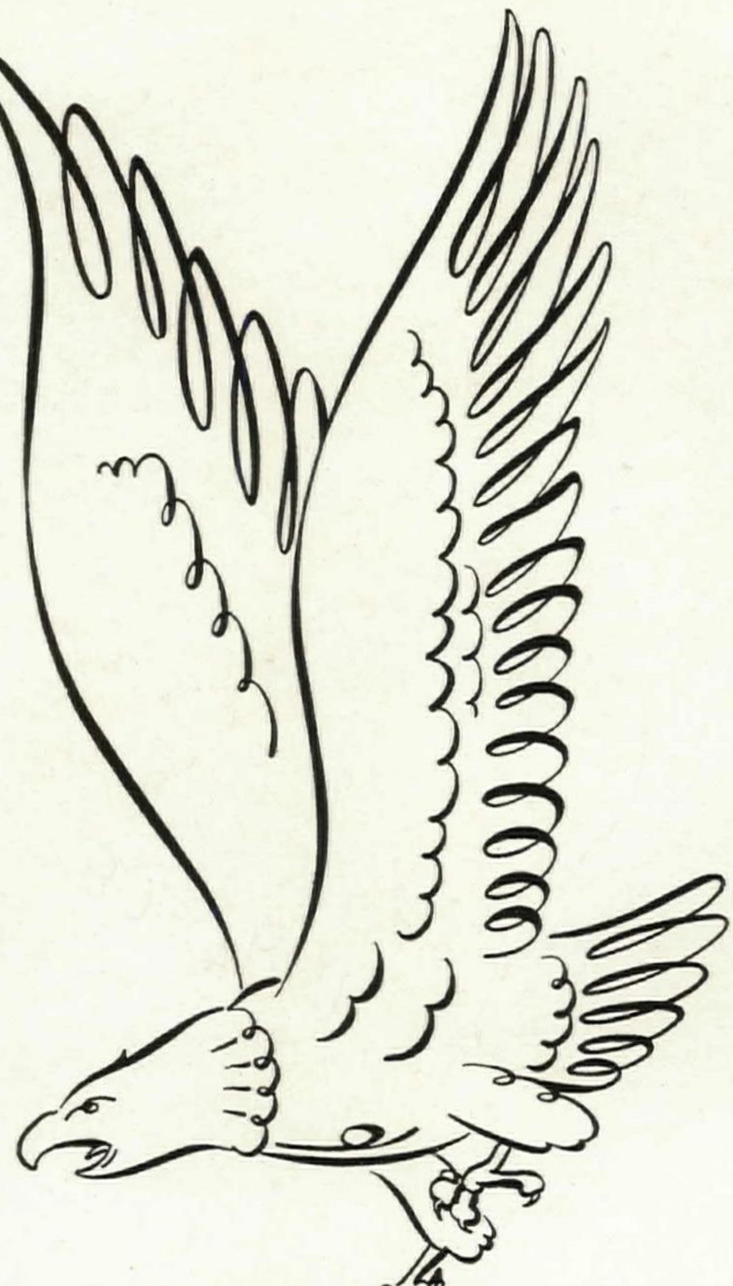

The New
PENCIL
POINTS
AUGUST · 1942



THE FACTS ABOUT Von Duprin VICTORY LINE

FIRE AND PANIC EXIT DEVICES

Except for minor details, the Von Duprin Victory Line Devices differ from pre-war models only in the use of malleable iron to replace drop-forged bronze and brass parts.

While it is inferior to bronze in appearance, malleable iron will perform safely and surely. It has a tensile strength approximating three-fourths that of drop-forged bronze, and far exceeding that of cast brass or bronze.

We are not using—and we will not use—any of the materials which have been suggested as lower cost substitutes, such as plastics and cast iron. We believe that any materials which shatter under low stresses and which therefore cannot stand up under emergency demands, completely defeat the purpose for which you buy panic devices.

While Von Duprin Victory Line Devices may not be as handsome as the former types, you can trust them implicitly. THEY WILL STAND UP . . . THEY WILL DO THEIR JOB . . . THEY WILL LET THE PEOPLE OUT OF YOUR BUILDING!

VONNEGUT HARDWARE CO. . . . INDIANAPOLIS, INDIANA

Von Duprin Fire and Panic Exit Latches Are Listed as Standard by Underwriters Laboratories, Inc.

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MURRAY HILL UNIT

BELL TELEPHONE LABORATORIES, INC

VOORHEES, WALKER, FOLEY & SMITH, ARCHITECTS

PHOTOGRAPHS BY SAMUEL H. GOTTSCHO

BELL SYSTEM

FOREWORD

By Don Graf

IF the requirements of a single laboratory bench are understood, then the 3-million-dollar Bell Telephone Laboratory—like Tennyson's **Flower i.t.C.W.**—becomes essentially a matter of simple integration. From the needs of hundreds of research scientists for services of many kinds as they work on countless experiments, could easily come a vastly complicated result. But the architectural organization of Voorhees, Walker, Foley & Smith of New York have created order out of what, in less skilful hands, might have become chaos!

Alexander Graham Bell once said that he would never have invented the telephone had he been a scientist—for a scientist would have discarded the principle without trying because it was so simple! The present telephone system is highly complex, however, and requires constant scientific research to meet the public demands for improved and enlarged service.

Bell Telephone Laboratories, Incorporated, is the research and development unit of A. T. & T. Company and the Western Electric Company. Its field of research—electrical communication—has been housed in early manufacturing units of the Western Electric Company and in other scattered locations. Now this sprawling growth is to be partly rehoused in the new laboratory building, and it will provide for 800 out of 4500 engineers, scientists, executives, maintenance men and clerical personnel.

Some 250 acres were selected on the outskirts of Summit, New Jersey, a suburban community 25 miles from New York City. The buildings described on the following pages accommodate parts of the chemical and physical research groups of the Bell Laboratories and together constitute the first unit of what may be a small part of an ultimate development.

THE functional plan problem that the architects had to solve focused upon the chemical and physical laboratory table. A completely flexible space unit had to be developed to allow for laboratories of different widths as well as for rearrangement or change as scientific needs might vary in the future.

The architectural solution was arrived at through a combination of media:

1. Compilation of requirements by Bell Laboratories committee of scientists.
2. Plan and model studies.
3. The building of a test house.

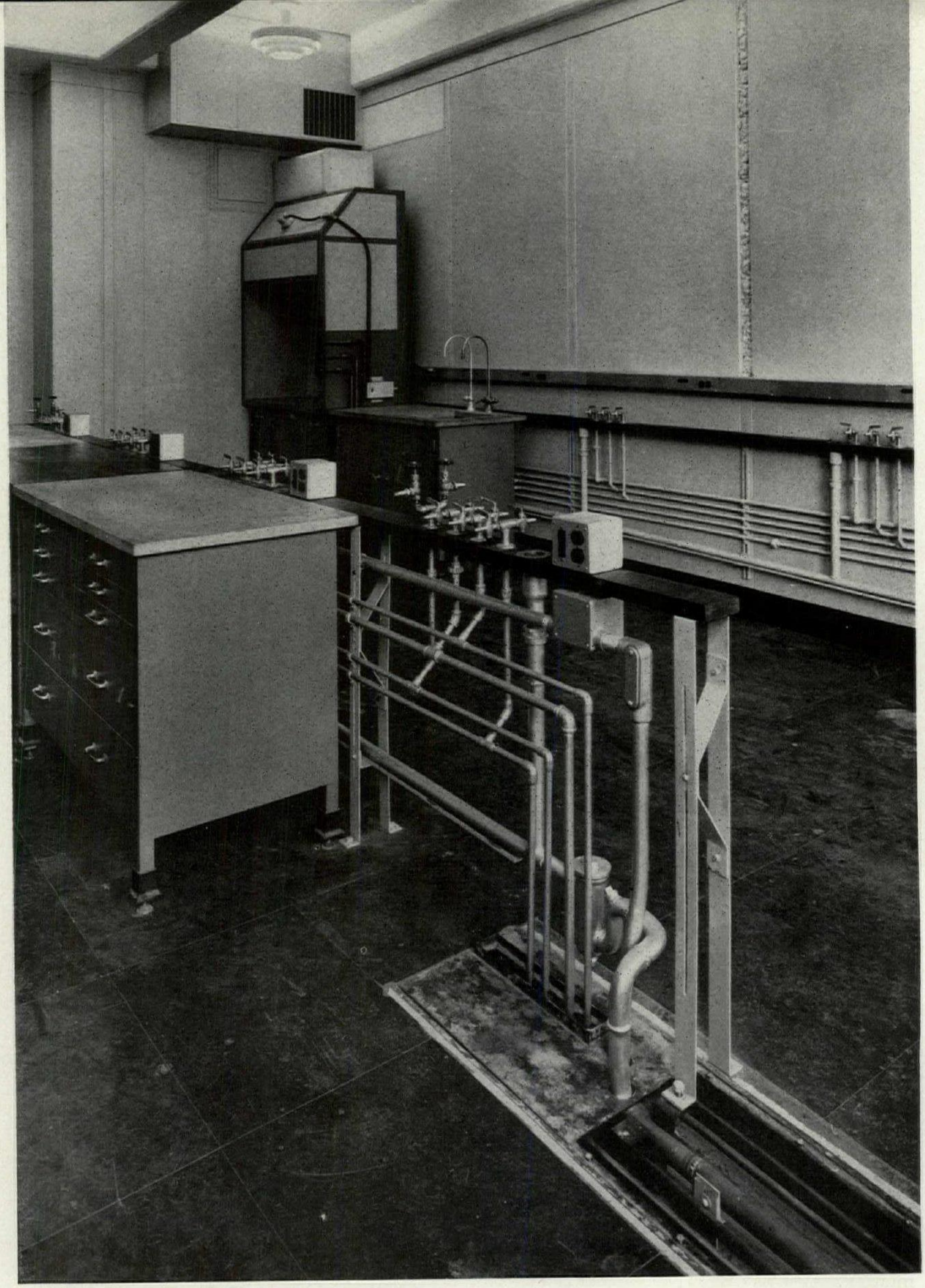
The committee compiled a considerable list of do's and don'ts. These incorporated the owner's requirements and points gleaned from the observation of the other laboratories which were visited.

One of the committee's requirements was that there should be a repetitive unit of 6 feet in width which was to include one double-hung window. With this 6-foot module the requirement for adaptability was set since a laboratory could be 12, 18, or 24 feet wide.

Another "must" was that each 6-foot module should have available the following services:

- Single and 3-phase AC current
- Telephone
- Compressed air
- Steam at various pressures
- Hot, cold and distilled water
- Hydrogen, nitrogen and oxygen
- Illuminating gas
- Vacuum
- Drains
- Unforeseen or future services.

RESEARCH



An 18-foot or 3-module laboratory with benches has been removed in the illustration to show the support of services on partition walls, and the services for island tables. In the corner is a typical fume hood, above which is the supply register. The floor fill of light Aerocrete concrete is of the proper thickness for the trench in the foreground containing services to the islands—the trench being covered with a steel plate and the finish flooring continued over it

View of the test house where plumbing, heating, lighting, ventilation, wainscot, partitions, furniture, and laboratory services were actually installed for careful study. Note the five types of windows installed for test and selection

Many other requirements complemented or hinged upon the 6-foot module unit.

The next step was the studying of the floor plans at 1/64th inch scale. Plot plans on a topographical map were carried on simultaneously with soap models for determining massing. The models and scale studies resulted in discarding any system of distributing services vertically through the center of the building since it interfered with the mobility of the partitions and tended to fix the position of doors. The outside walls were chosen as a location for the distribution of the mechanical services.

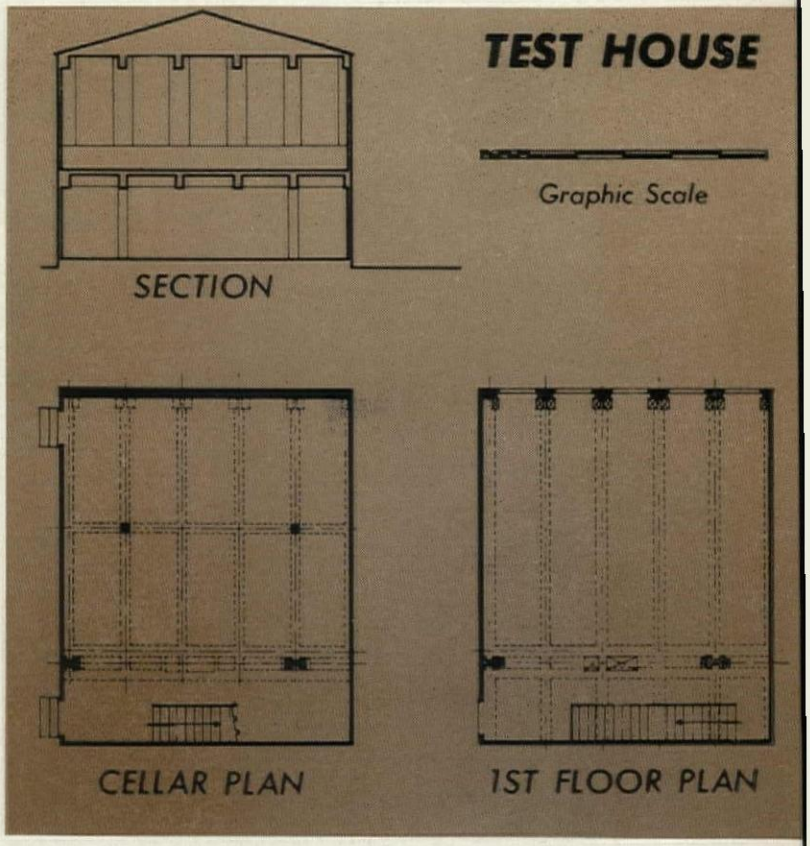
THE TEST HOUSE. As the job progressed from the planning to the working drawings stage, a test house was built. This building consisted of a ground floor simulating the basement conditions and a main floor duplicating five of the 6-foot standard laboratory modules. Plywood and frame construction accurately reproduced the masonry parts in this full-sized model. Plumbing, heating, lighting, ventilation, wainscot, partitions, furniture and laboratory equipment were actually installed in the test house.

The test house proved to have many important aspects. The exact position of the basement mains for the greatest possible simplification of the piping installation was studied extensively. Risers and piping installed in the outside wall revealed in 3 dimensions many things which might not have been obvious from orthographic drawings.

Members of the architects' organization went to the test house to examine the construction—a procedure which was helpful in producing the scale drawings.

Uninitiated representatives of the owner were also frequent test house visitors as problems arose. The owners knew in advance exactly how high the basement ceiling was going to be, how easy the stairways would be to climb, and they were able to visualize the space at full size.

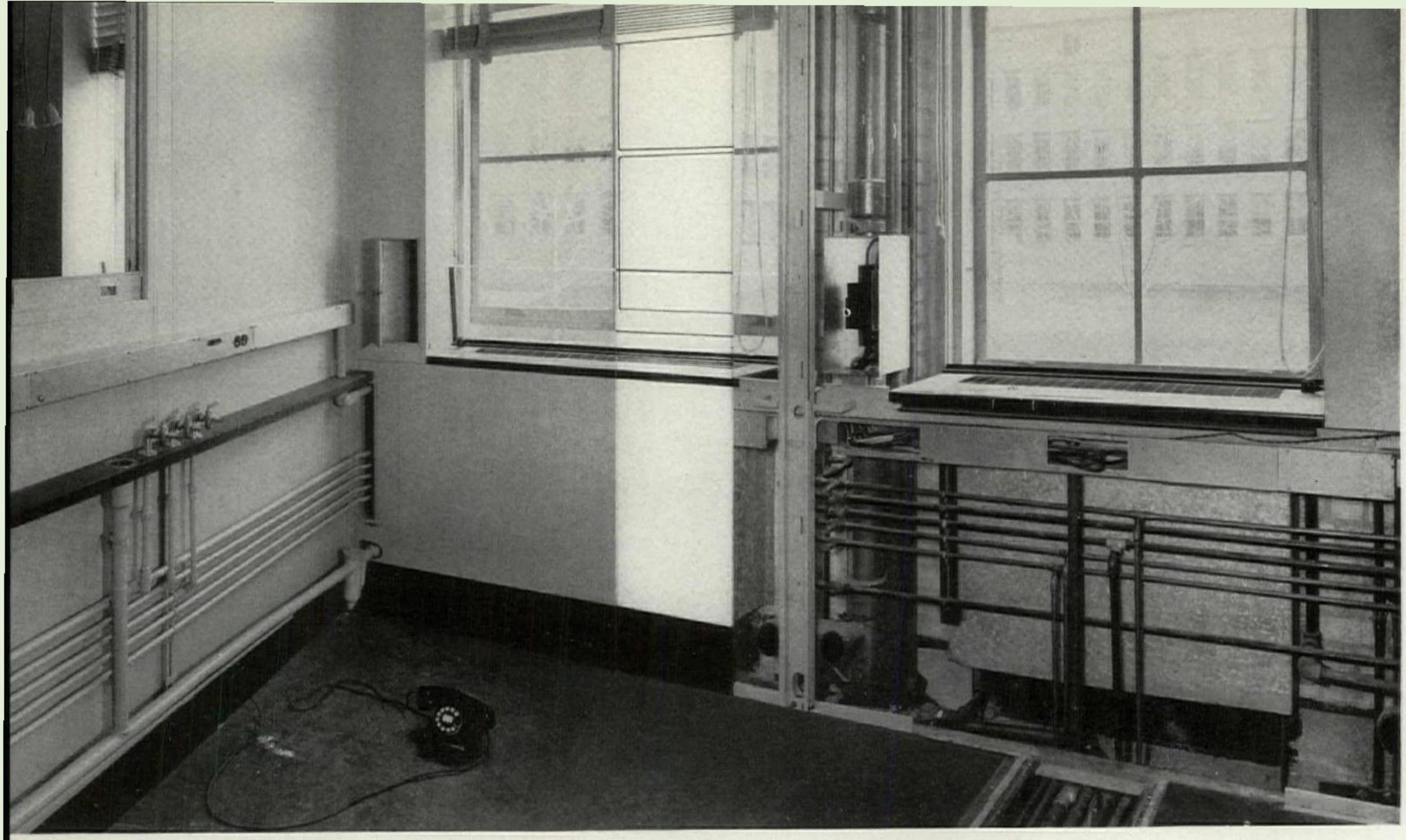
The test house was left standing until the principal sub-contracts were closed. Subcontractors who viewed the test house could



A full size model, called the "test house," paid for itself many times over. Every dollar saved in simplifying the 6-foot module meant over a thousand dollars in actual construction economy

have no question as to precisely the work expected of them.

The test house showed the simplicity of the construction and was a factor in securing bids which reflected the economies the architects had worked out. The sub-contractors' foremen saw at the test house the actual installation work they were to perform, which, later, in the construction of the building, did much to make the management of the building mechanics a smooth process.



Note the combination low-tension wireway and window sill support, below which is the horizontal power raceway, fed from the power riser and circuit breaker assembly. At the left of the picture is a typical arrangement of services. The wire trough enables flexibility of electrical outlets

MECHANICAL SERVICES. Having chosen the outside walls as a point of distribution for the mechanical services to the laboratories, it was next necessary to make economic studies to determine the frequency of risers to be taken from the loop mains in either the attic or the basement. The adopted system provides drains on 6-foot centers, telephone and power risers on alternating 12-foot centers, and mechanical service risers on 24-foot centers.

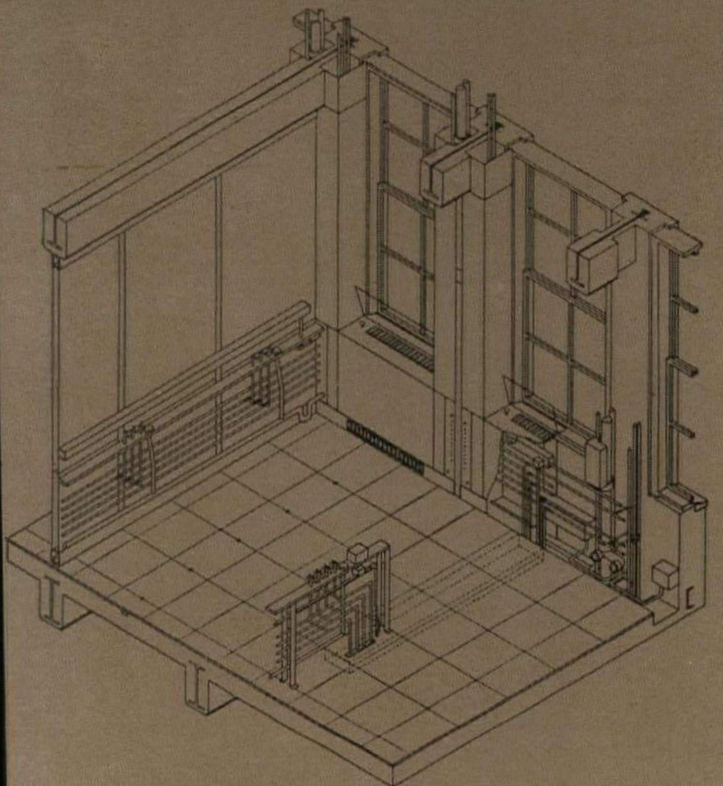
By arranging the 10 mechanical services into 4 groups of associated services, and providing each mechanical riser with horizontal run-outs in the wall beneath the window stools, every portion of each 24-foot bay was thus serviced.

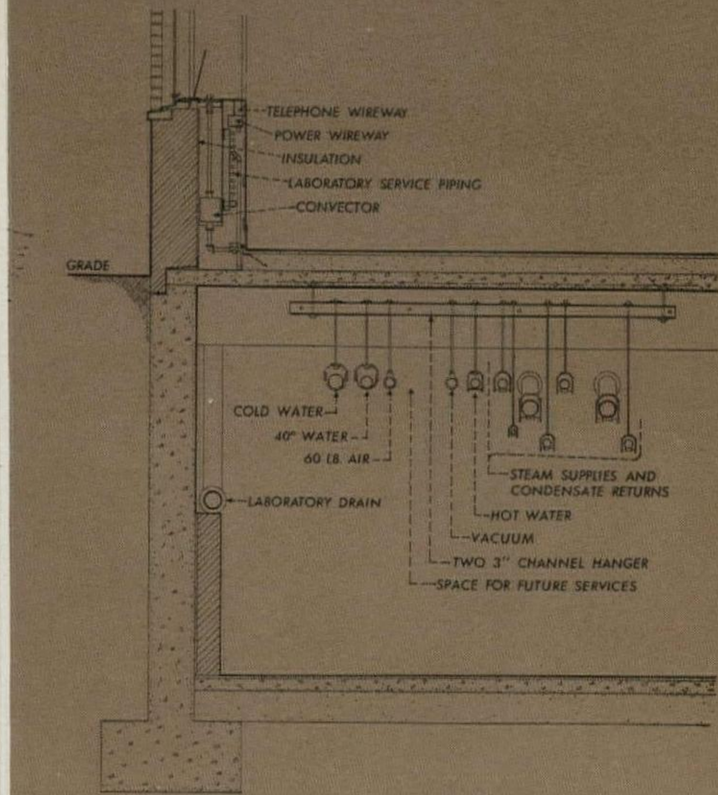
Not only is it possible to bring the many services to any 6-foot module in the laboratory portion, but space is also provided for the addition of other new services should the experiments of the scientists require it. Space in the loop system on the basement hangers has been left for this eventuality.

STRUCTURAL SYSTEM. Sixteen different types of floor systems were designed and evaluated on the basis of economy, thickness, sound attenuation, and appearance. The system giving the optimum advantages proved to be a steel frame in which the beams and girders were designed for uniform depth, supporting the 4" slab reinforced with road mesh. Plywood forms were used and plaster eliminated. Since the framing is of uniform depth, any standard layout of uniform steel partition panels can be effected.

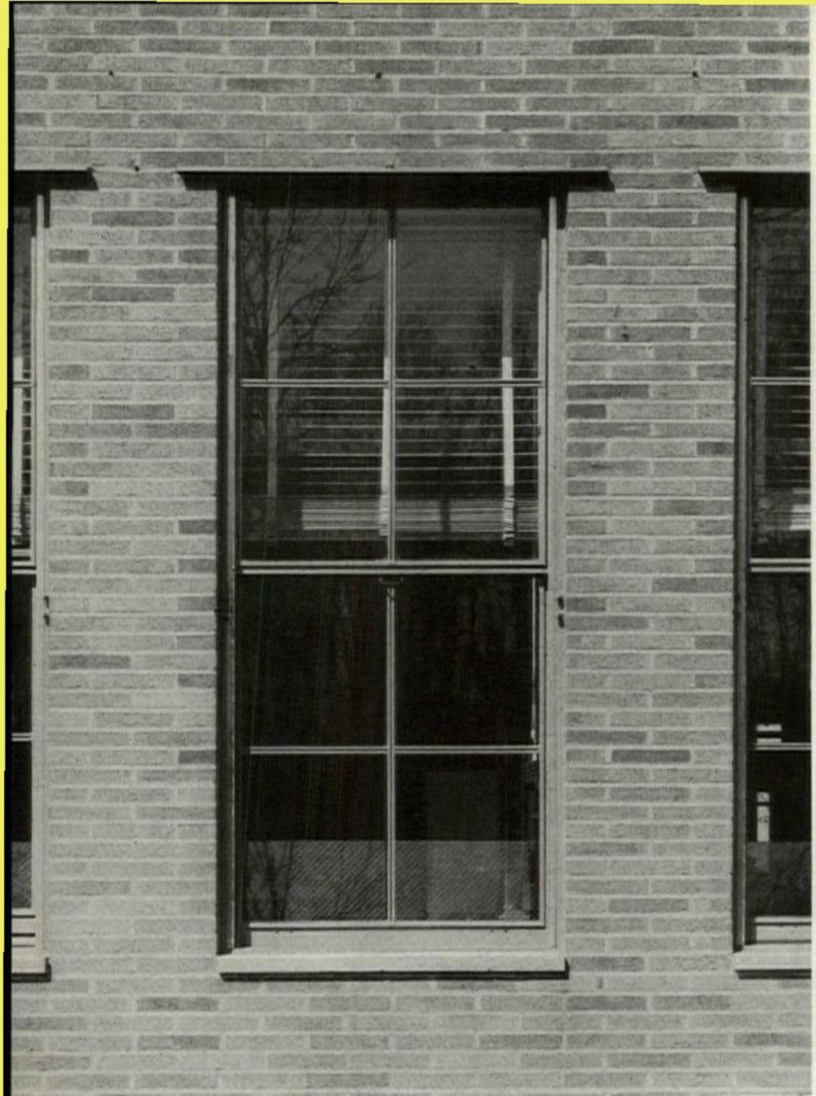
The floor slab can also be easily punctured or an entire 6-foot panel removed in the event that any occupancy so warrants. The lightness of the loads plus beams gives some slight acoustic value and greatly reduces sound transmission through the structure.

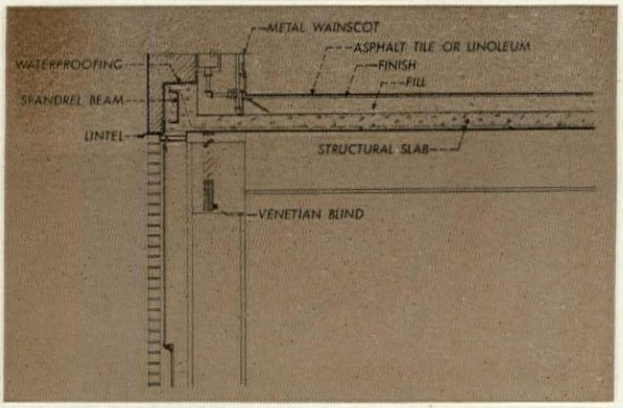
Because it is necessary to run both mechanical and electrical services in the floor fill, this fill is made 4" thick and designed of an exceedingly light aero-crete concrete on which 1" of cement finish was added. In the chemistry laboratories asphalt tile is used as a finished floor, while in the balance of the building linoleum is used. The floor slabs were required to carry 150 pounds generally, with 250-pound loads on the first floor. The beams in the first floor construction are designed for 150-pound live load with a pro-





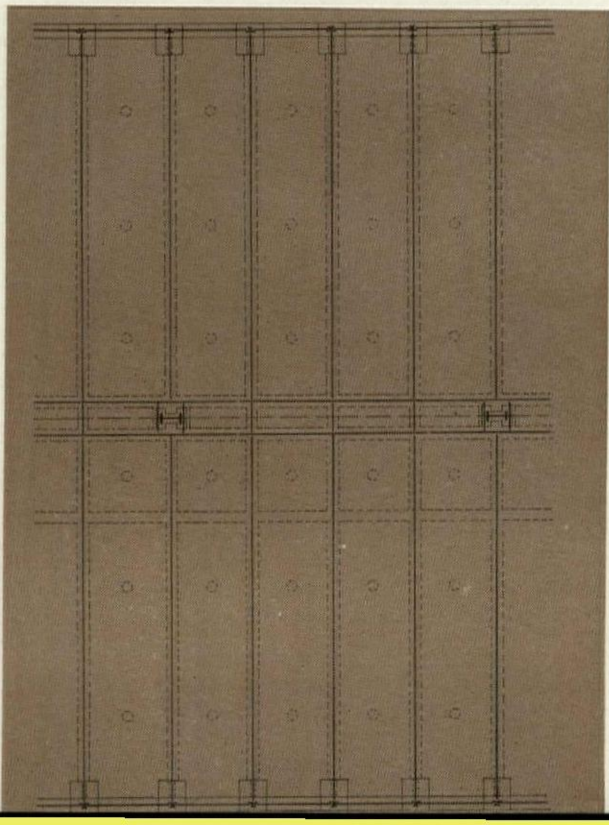
Actual engineering study combined with the experience gained in the test house made possible the installation of basement loop services, properly spaced and fitted. Note the drains on 6-foot intervals for each module plan unit of the superstructure. Section above, (right) shows typical arrangement of loop service piping in the basement as related to the typical service distribution on the first floor. The local horizontal distribution for typical floors is below the window, between the radiator enclosure and the exterior of the metal wainscot





Section through typical laboratory window head. It should be noted that by means of raising the spandrel beam it was possible to have the height of the window approximately at ceiling level. Special lintels serve as drips and as an architectural motif, through the simple expedient of braking the outstanding leg of an oversize angle

The special Roman brick used on the exterior is of such size that one brick plus one joint equalled one foot. Thus, the windows and the two widths of piers forming the modules worked out without cutting brick. Wall ties were used instead of headers for bond. The photograph shows the structural lintel with the projecting leg bent down to throw a shadow and form a drip



vision for future basement columns to increase this capacity to the 250-pound design load of the slab. The office wings and attic are designed to carry 75 pounds live load.

An analysis of the plan requirements revealed that a building with a center row of columns, having the deeper space on one side and an aisle and the narrower space on the other, would be most satisfactory.

With the completion of the design of the structural and mechanical systems the outside wall construction became fixed. The column, relation of window to arch, the spandrel, the double-hung window selected by the owners, all having been settled, left little to be determined except the interior and exterior finishes.

Rafters are on a 6-foot spacing and consist of 12-inch, 25-pound, wide flange H-sections carried at the center by a longitudinal girder between the center columns and at the outside walls by struts resting on the attic floor beams. The roofing is metal-protected gypsum covered by a 1-inch thick layer of insulation, then building paper, and finally copper sheeting.

At the center line of the building the girders are kept the same depth as the beams by using double members, permitting partition uniformity as well as the removal of a two-foot section of floor for the future installation of ducts. Exterior wall columns consist of two car-building bulb angles. Since the flanges at the beam's end are cut away to provide for vertical service chases, a simple beam connection was made possible by bolting the web between the two bulb angles

ELECTRICAL SYSTEM. One of the greatest necessities in seeking mobility of space was the requirement of having available, without expensive later modification, large sources of electrical energy. To this end the owners developed the load center system of power distribution. This is an adaptation of the common city street network system. The voltage is reduced through successive transformers to 120-208 volts. The 208-volt system is carried under the basement corridor. At each central column alternate sides of the ring are tapped from precast concrete manholes. In this way extremely heavy power risers may be added to any part of occupied floor area with no more expense than to tap the source at the nearest basement column.

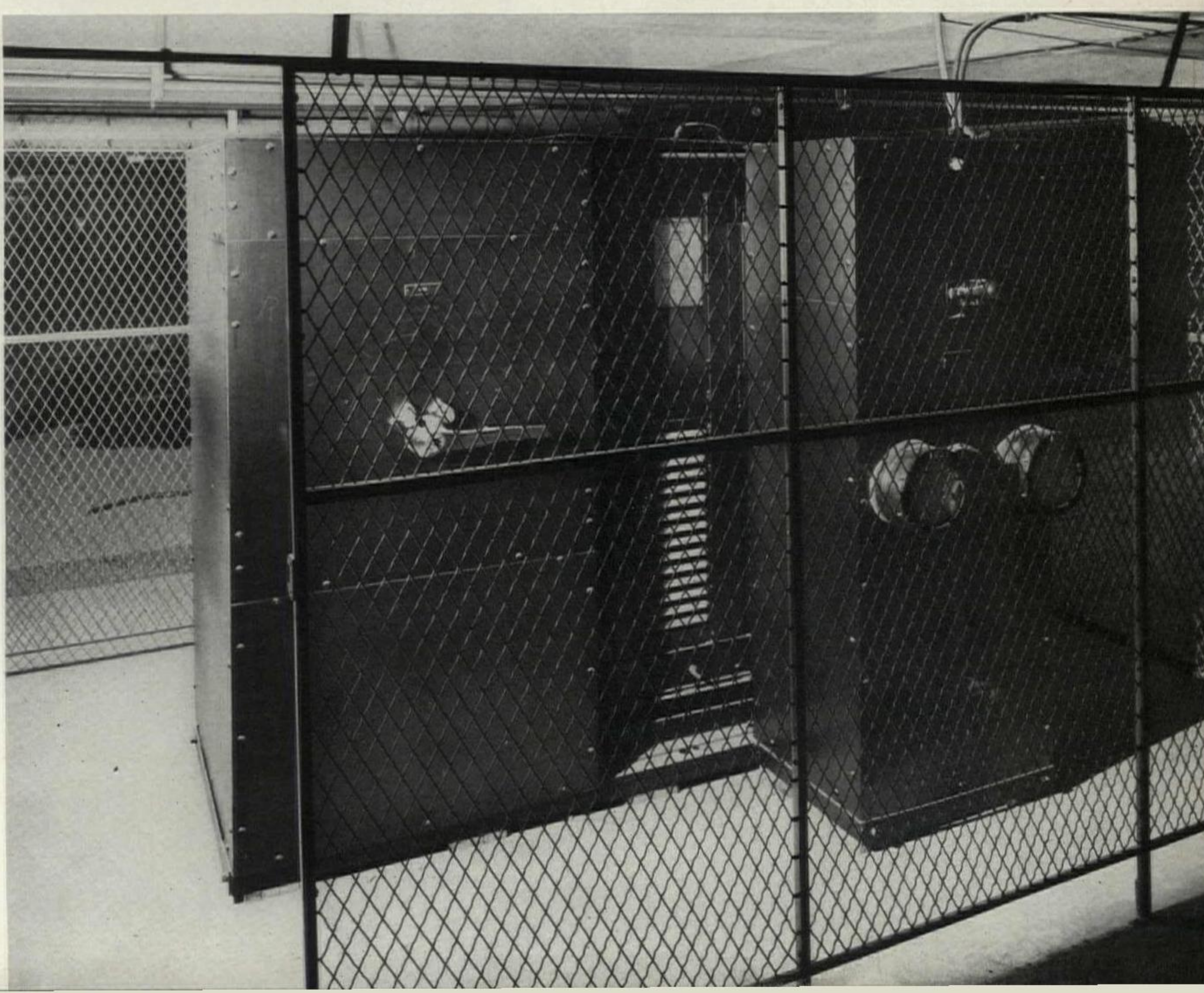
Laboratory power is taken from the panels on alternate center columns to the outside wall where risers are located in the chases on 12-foot centers. At each floor level a 50-ampere circuit breaker is tapped in, and from here it is fed laterally under the window in a specially designed wire trough. Knockouts in the trough are located on 6-foot centers for conduit extensions to the troughs on partition walls and under each window for drops to underfloor ducts feeding isolated machines on island benches.

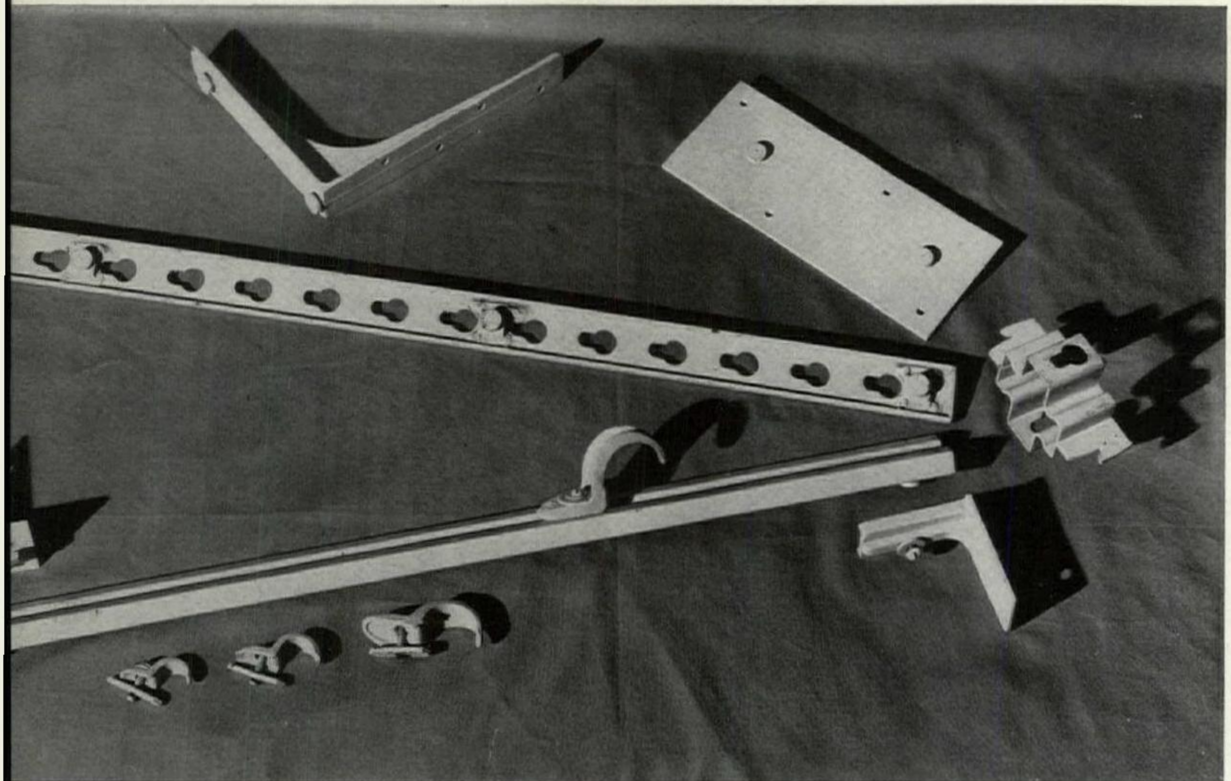
Chases in the central columns serve as points for the distribution of the lighting system current. Lighting changes required by any rearrangement of partitions consist only of revamping of switch legs.

Emergency lighting for the exit signs and stair halls as well as emergency power for the boilers, is automatically energized, upon a failure of regular power, by the starting of a steam turbine in the boiler house operating a 40 kw generator.

Physical laboratories have a generally distributed 120-volt D.C. system. Motor generators, located in the attic, feed a bus duct system at outside walls, which in turn feed drops to various laboratories in much the same manner that the A.C. system is handled.

The power distribution is by means of the load center system. The 4,150 volt feeders carry current to nine 200-kva air-cooled transformers in groups of three. Each of the groups feeds a ring of 120-208 volt conductors. At each central column, alternate sides of the ring are tapped. At left, high tension switch gear; at right, low tension switch gear





Devices used in installing pipes and services on demountable steel partitions. In order to accommodate shelves, blackboards, or service supports, a keyholed device may be inserted between any 2 panels on 6" centers. The basic unit, at right, is supported between two panels and concealed by an expandible cover

SUBDIVISION OF FLOORS. One of the most significant features of the building is the subdivision of floor areas by metal panels 4 feet wide and 10'-8" high, or the full dimension from floor level to the soffit of floor beams and girders. Each panel is 3 inches thick and consists of two layers of 20-gage metal separated by rock wool, which makes the panels very fire resistant and satisfactory as to sound transmission. The corridor walls are also made of the subdivision panels, which are interchangeable with panels equipped with doors and transoms where these are needed, providing a satisfactory method of quickly and conveniently changing a floor layout.

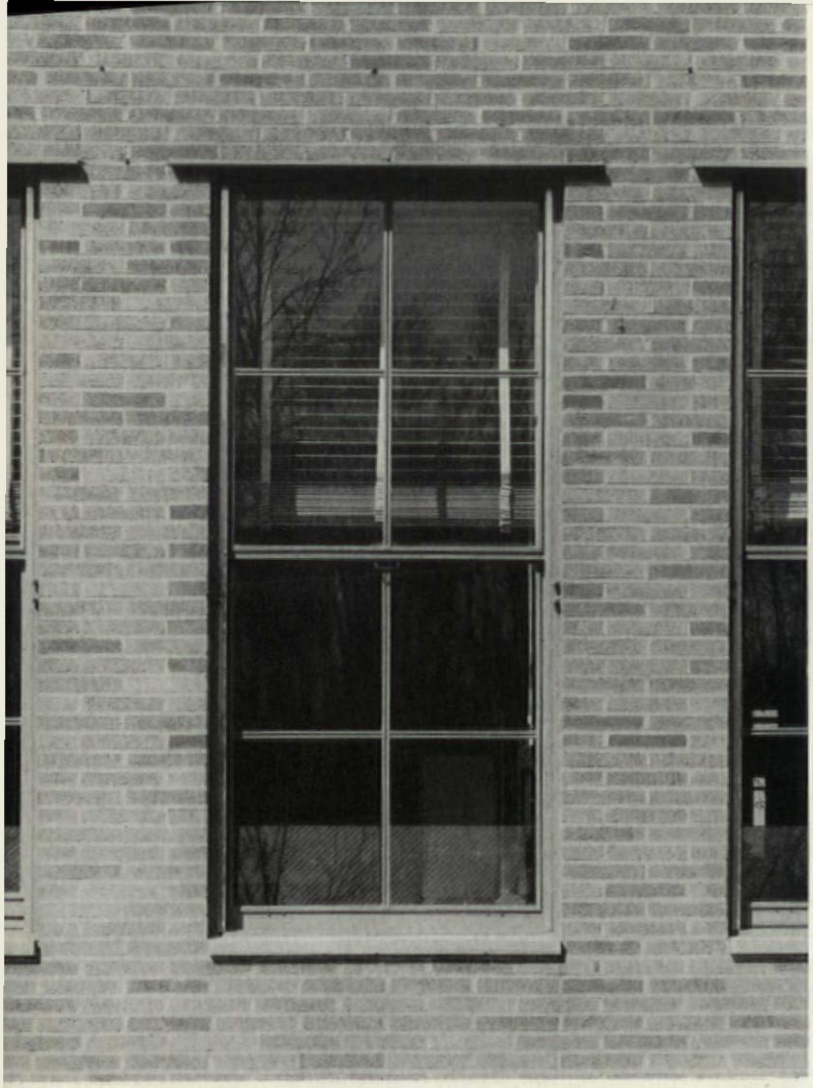
Permanent interior walls around the elevator shafts are 6 inches thick and of cinder block construction. These walls are entirely faced with 20-gage metal of the type used for wainscoting, except in the toilets, where tile is used.

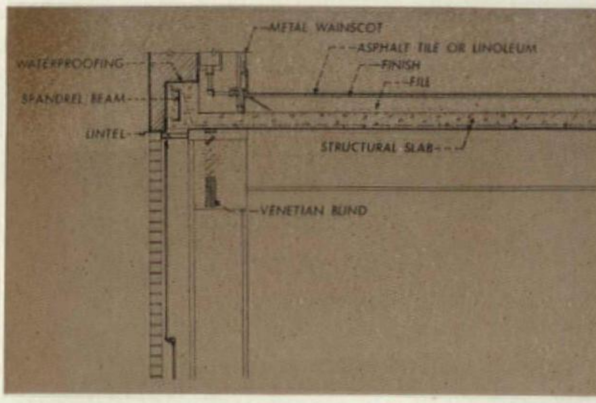
HEATING SYSTEM. The heating system is of the vacuum type with differential controls, for each of ten zones. Each principal wall surface having a similar exposure is a separate zone. The radiators within any one zone are controlled by nine integrating thermostats, a windowstat, and a heat balancer. Minor differences in demand upon the individual radiators are corrected by means of an adjustable orifice at the radiator valve.

The Boiler House is equipped with two 230 BHP straight tube boilers generating 125 pounds. The mains distribute at this pressure to the point of use where it is reduced in two stages to 5 pounds for use in water heaters and heating system. The steam for laboratory use is available at 125, 50, and 5 pounds.

The room in which the control desk is located has a large panelboard on which are mounted all of the heating zone control units and ventilation controls.

Ventilating equipment for the chemistry section is housed in the attic. Every laboratory is provided with supply and exhaust. By developing a slight negative pressure within the rooms, the chance of odors penetrating the corridors and other portions of the building is lessened.





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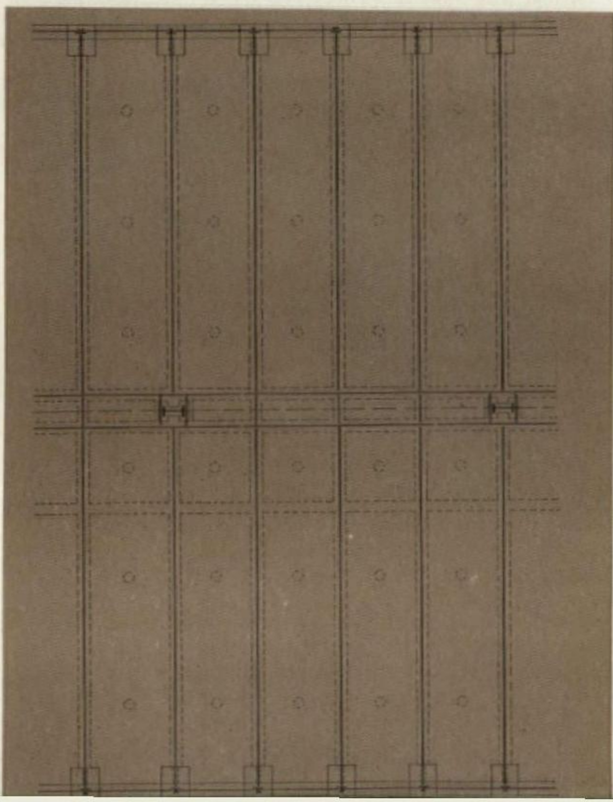

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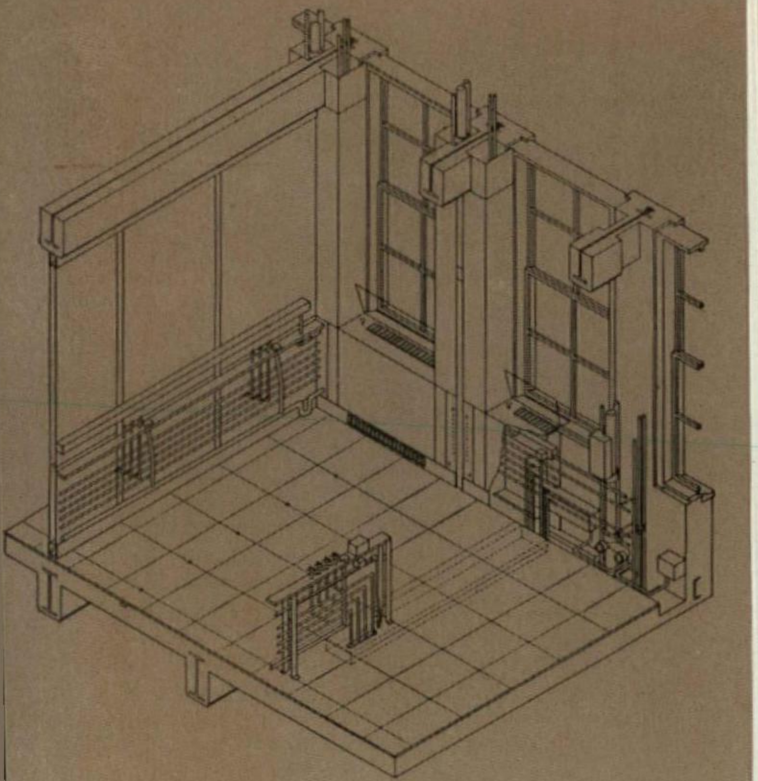

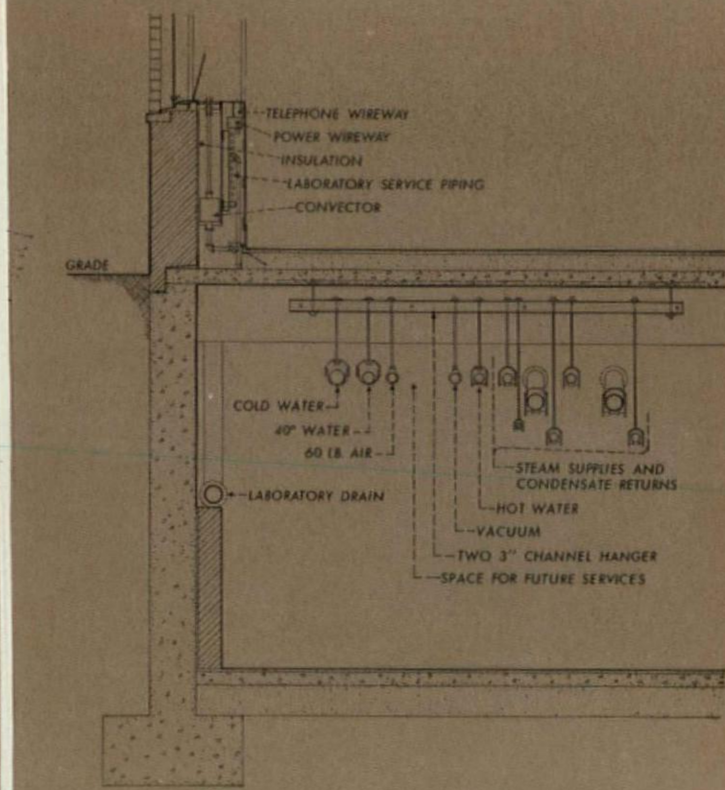

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Entrance front of Acoustics Laboratory. Princeton stone with limestone coping, brick walls beyond, copper roof. Back of the center glass screen is a large foyer. The plan and section illustrated at the lower right is of the Listening Room and Auditorium which is a part of the Laboratory Building

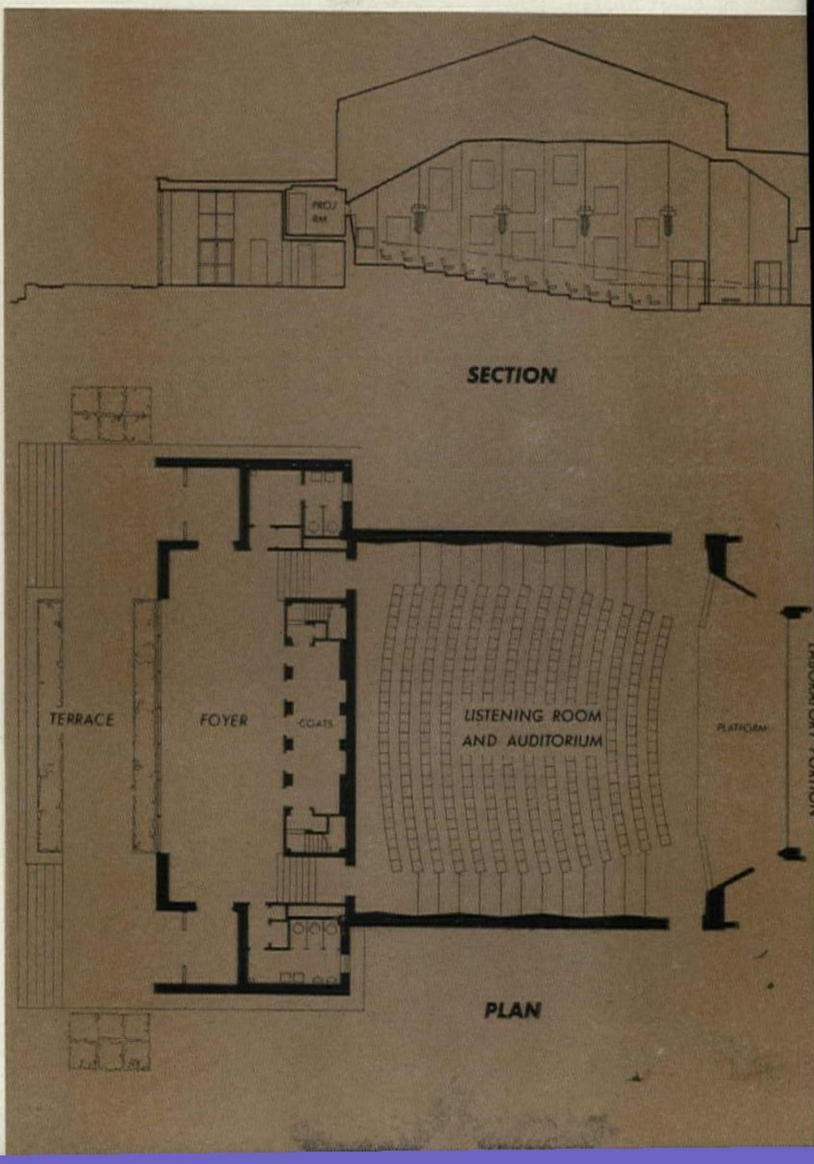
ACOUSTICS LABORATORY

THIS building consists of three major elements, each with its acoustical laboratory space: the dead room or response measuring room, the two live rooms or reverberation chambers, and the listening room.

The dead room is a forty-foot cube built of masonry, in which has been constructed a room with fabric walls, floor and ceiling suspended in 30 layers of varying degrees of separation. Measurements are made electrically in the adjacent laboratory area of sound sources created from the center of the room. For this purpose, a track, suspended from the ceiling, connects with the second floor of the laboratory area and carries a car on which may be mounted loud speakers, a piano or other sound source. The entire structure is isolated from the main part of the building by double bulkhead doors and a four inch air space. At the doors this gap is bridged with rubber head, sill and jambs.

The reverberation chambers are similarly isolated. In these rooms test panels of materials are placed in an opening between the two and measurements of sound transmission are made.

The listening room is not only a laboratory, but has the additional function of serv-



Looking from the Acoustics Laboratory foyer through the glass screen toward the main buildings. This foyer serves the double purpose of an entrance motif for the auditorium as well as an informal meeting place before and after demonstrations which may take place within the Acoustics Laboratory

ing as an auditorium for scientific lectures and meetings. It is equipped with the necessary lobby, toilet and coatroom facilities. Over the coat room is a small projection room.

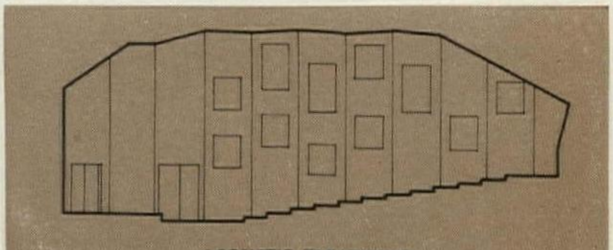
The room seats 363 persons and since in the meetings for which the room is designed there are usually late arrivals as well as frequent intermissions, it was essential that there be a minimum of disturbance. To this end, the so-called continental or European seating plan was used with 27 seats to the row. The seats are spaced 3′-6″ back to back. Each row is on a separate step, which produces exceptionally fine sight lines. Seats are so padded that the sound absorption is essentially the same when the room is empty as when there is a capacity audience.

Inasmuch as the room would be used not only by relatively inexperienced public speakers but for experiments in stereophonic sound, it was agreed that the room should be as resonant as possible without annoying reverberation. In accomplishing this objective, the Bell Laboratory engineers worked in close cooperation with the Architects in the spotting of absorption areas and the arrangement of planes of reflection. The entire area of the rear wall and the adjacent

ceiling were treated with "triple turned absorption" elements mounted behind panels of perforated wood. The side walls are treated with "low frequency" units similarly mounted. However, the placement of these treated areas are asymmetrical. Approximately one third of the side wall area is treated.

Equally as important as the absorption areas are the splayed wall surfaces, which break up the reflections. The rear wall is sloped away from the seats, while the side walls and ceiling are divided into seven foot panels, which alternately slope toward the front and rear at one inch to the foot.

The hung ceiling is constructed of a two inch wood frame subdivided by 2" x2"s into small panels of unequal areas. On this frame



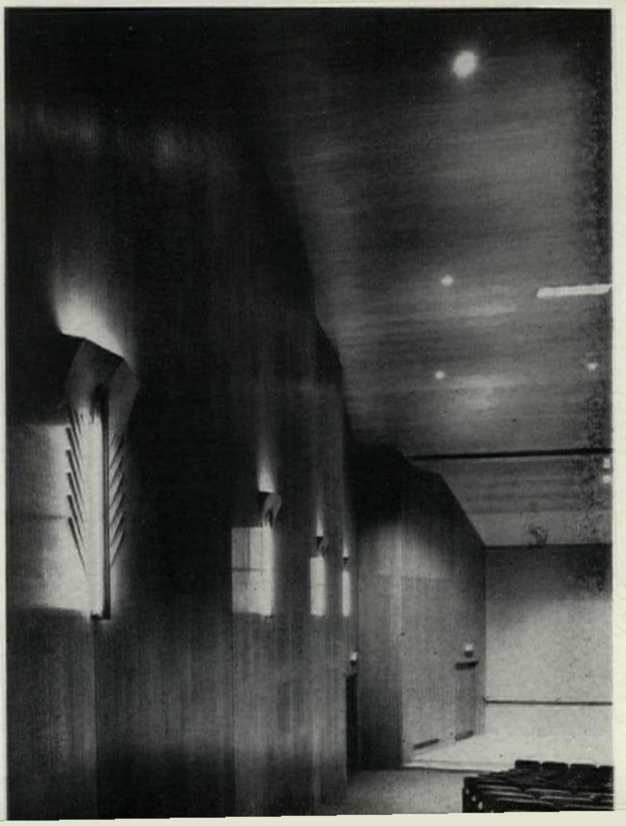
ACOUSTIC TREATMENT

In the wall panels, varying assemblies of 18 x 18" absorbing materials are indicated by the rectangles. Each rectangle consists of perforated squares which are backed up with low frequency absorptive elements. It should be noted that the disposition of the rectangles on the opposite walls is asymmetrical. The rear wall of the room and part of the ceiling are entirely treated with 18" perforated squares of triple-tuned material

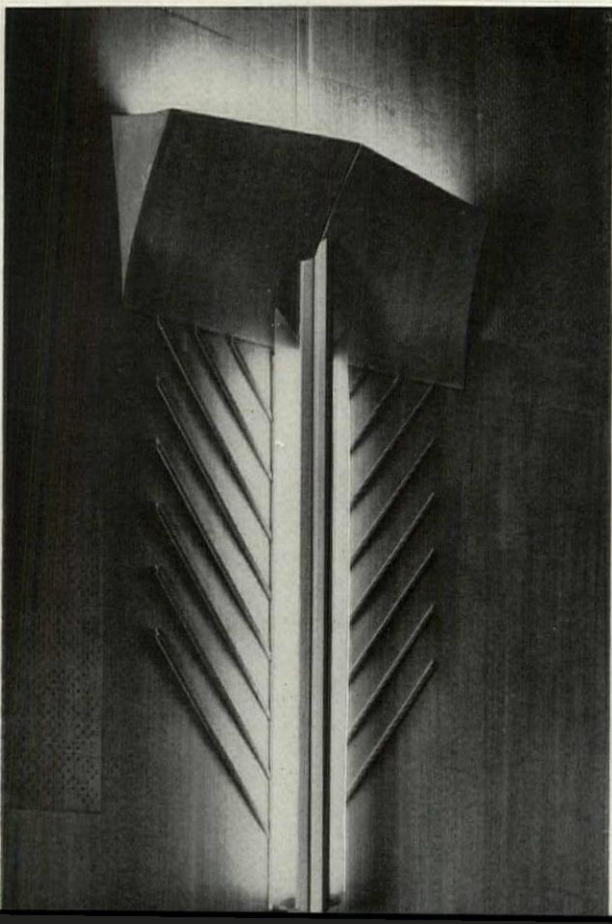
1/4" plywood on the room side and 1/4" asbestos cement board on the unfinished surface were secured with drive screws. The hollow portion of these panels were packed with mineral wool.

The wall separating the platform and the adjoining laboratory had to be fire resistive and at the same time be readily removable for the installation of experimental amplifiers. This wall is constructed of a steel frame supporting cloth of considerable acoustical transparency, back of which are placed 3" double faced steel panels packed with

A photographic study of the side wall in the theatre to show the wall panels set in zigzag position for the acoustic control of sound foci



The walls of the theater (photograph above) are natural finish "cigar-box" mahogany, the fabric on the seats is a light gray-green. The aisles here are carpeted in steel gray, and the floor underneath the seats and the remainder of the floor is covered with natural cork—providing a warm setting which is interesting without being distracting

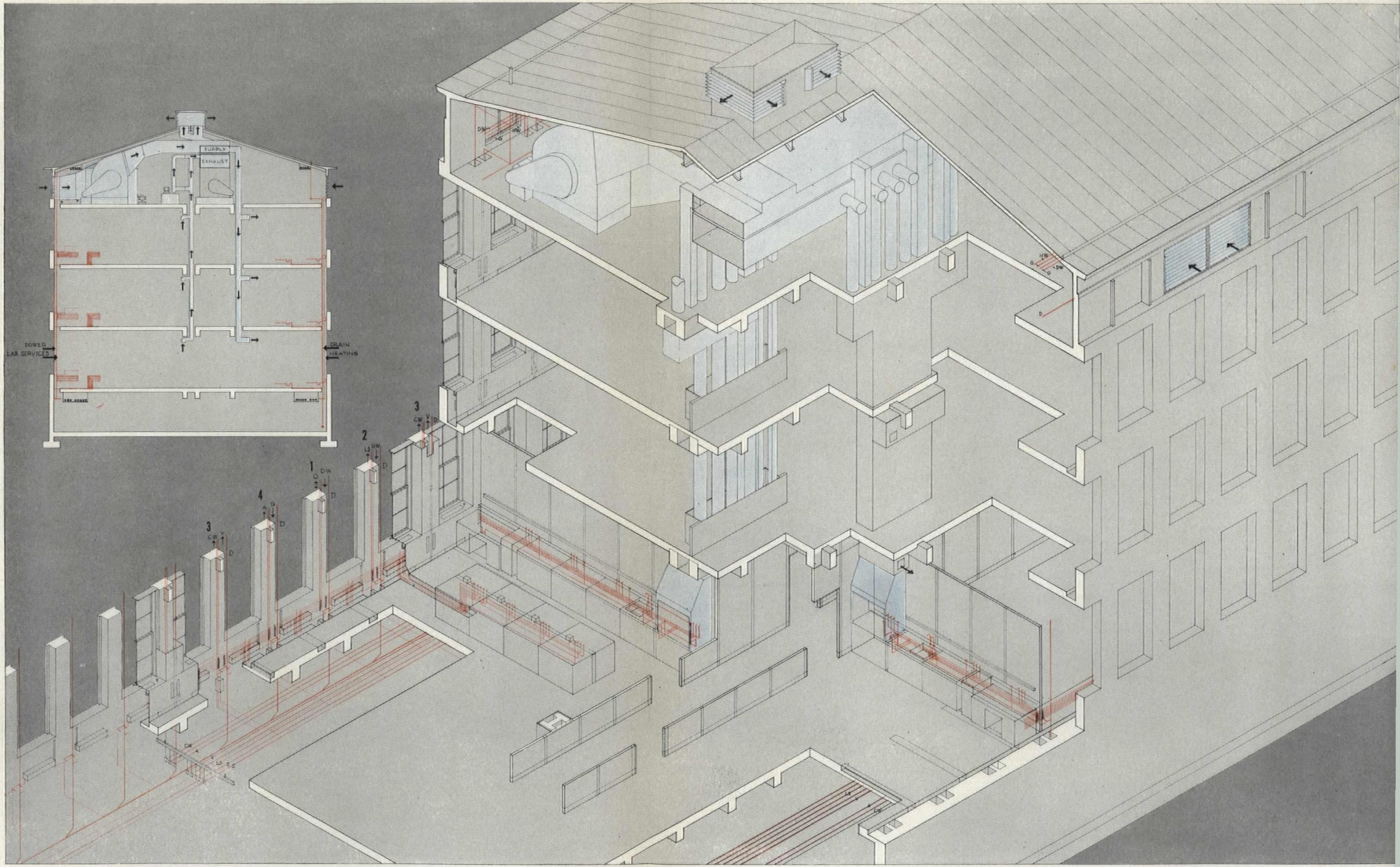


mineral wool. The steel panels approximate five feet by four feet. The laboratory engineer may thus install speakers over the entire area without affecting the appearance from the auditorium side.

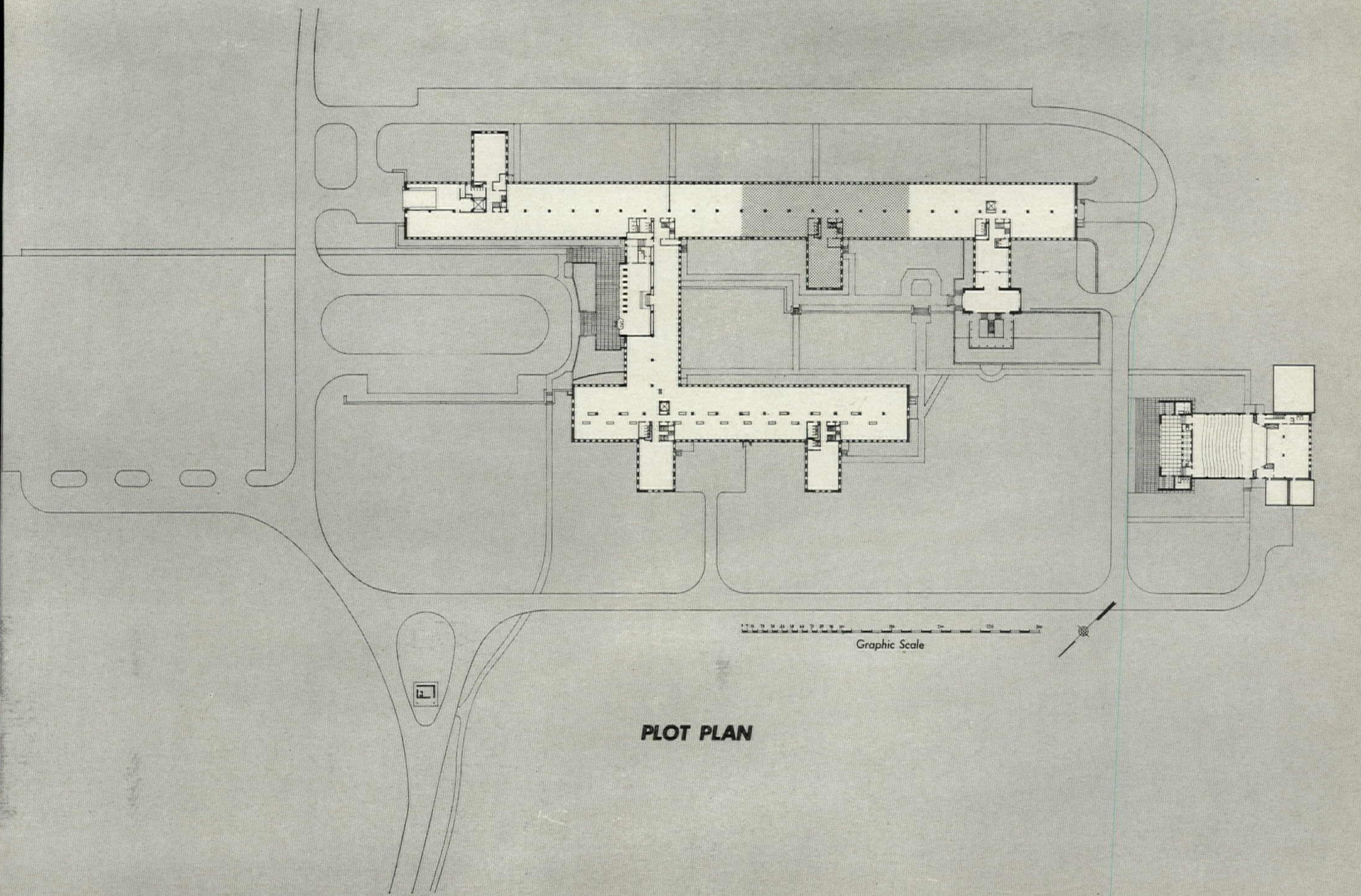
Visually, the room is pleasant since the side walls do not converge upon the listener, even those seated near the extreme side near the front.

Decorative side lights break the monotony of an otherwise simple room, while down lights provide sufficient illumination for the purpose of making notes. The lecturer is lighted by means of spots in three groups at the ceiling. Footlights as well as a high stage were avoided to enhance the feeling of informality.

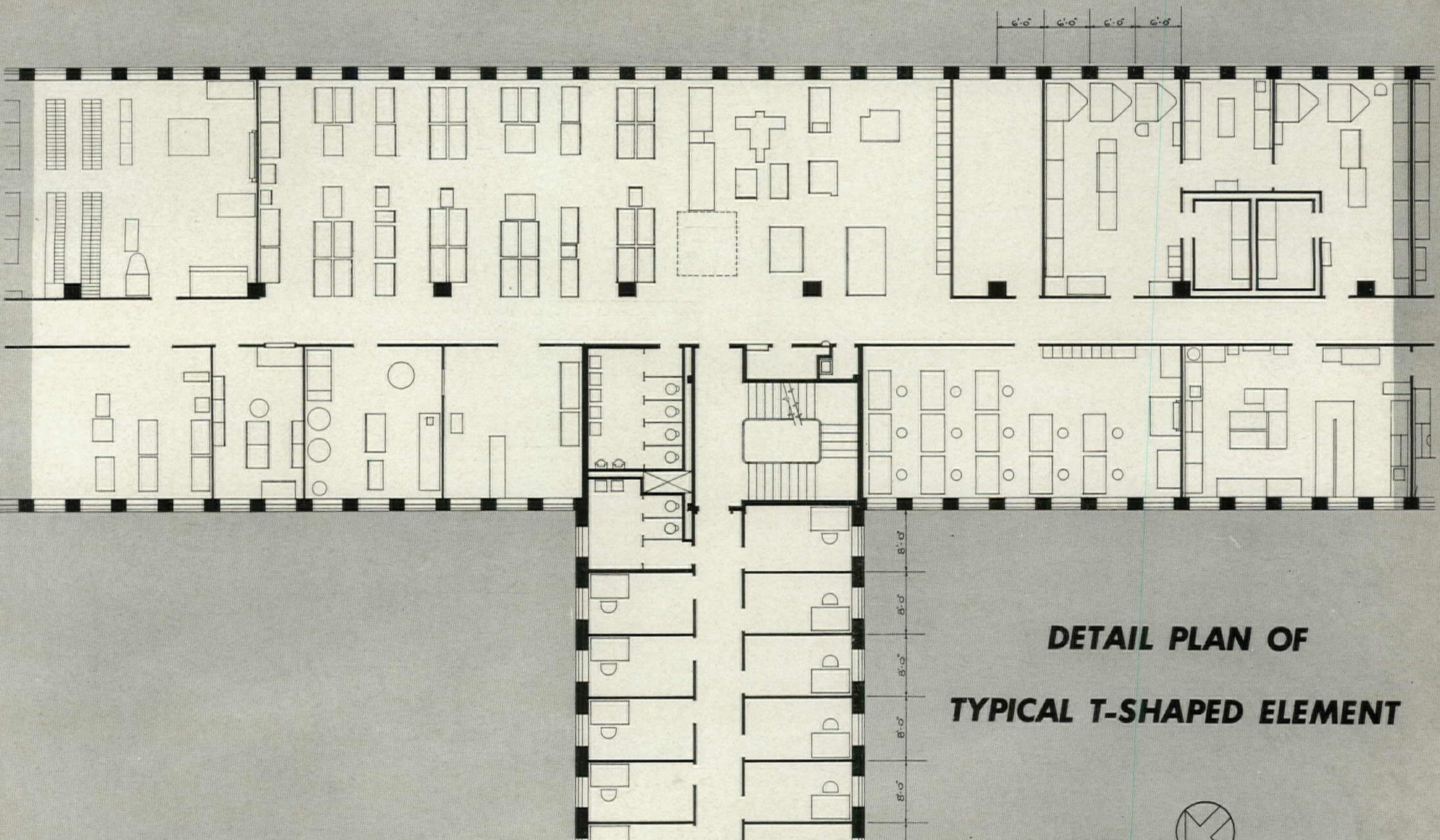
At left is a detail of the lighting fixtures on the side wall. The source consists of double Lumiline lamps with plastic shade supported on a metal frame. The chevron detail is obtained by pieces of wood raised slightly from the surrounding wall surfaces. The hopper serves as ceiling illumination



Cut-away section of Laboratory Building showing the various service facilities available in individual laboratories, the disposition of the ductwork, and the arrangement of the 6 foot module unit (see story on page 36). The blue color indicates the supply and exhaust air for fume hoods, while the red lines indicate the location of laboratory service lines



PLOT PLAN

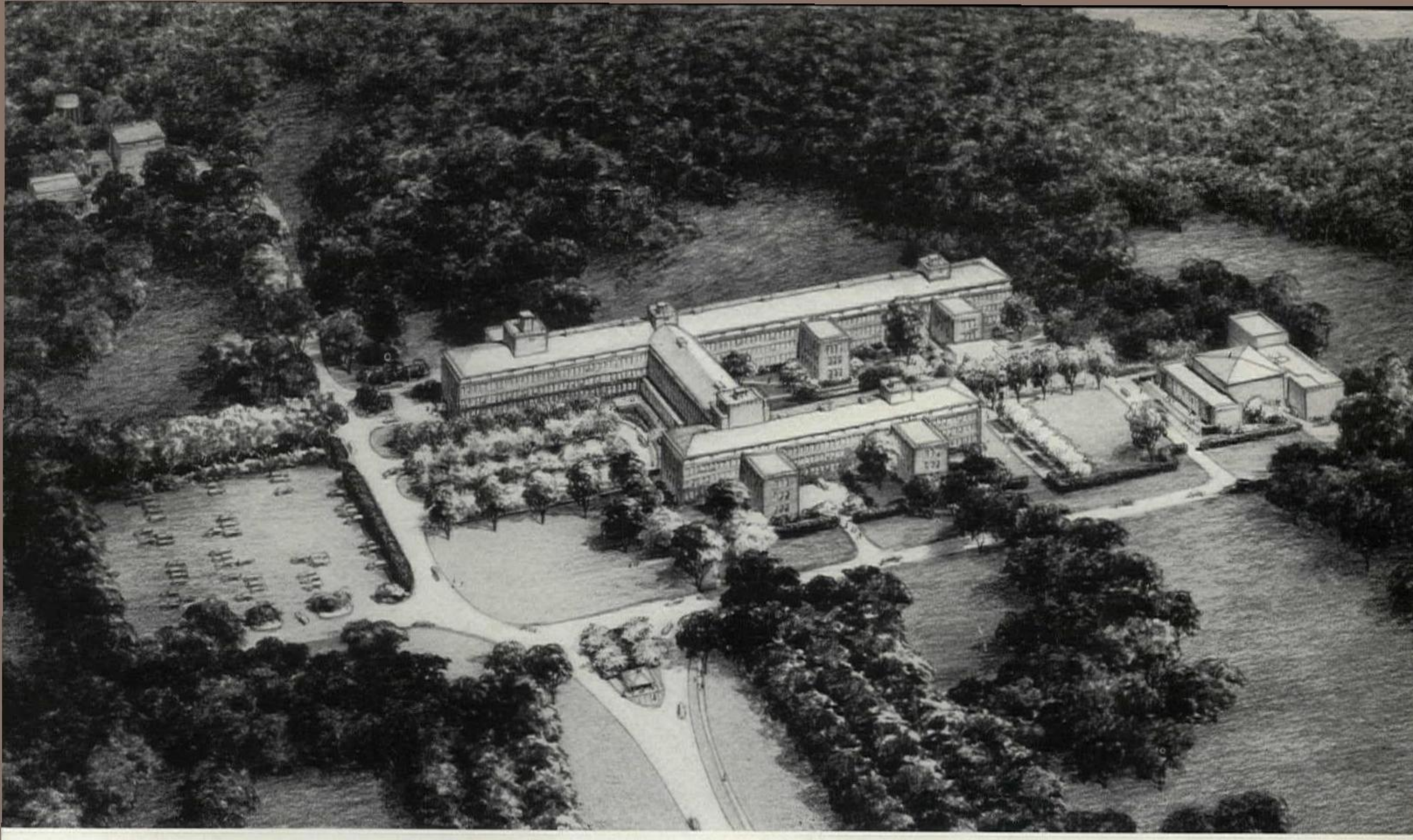


DETAIL PLAN OF

TYPICAL T-SHAPED ELEMENT

GENERAL DESIGN

The extent of the new research laboratories for Bell Laboratories, Inc. is well suggested by the bird's-eye perspective drawing by Chester B. Price and by the general photographic view from the north shown below. The disposition of the laboratory wings with their appended office wings is clearly evident on the drawing as well as their relation to the separate acoustics laboratory building. Strong individual character is provided by the distinctive form of the striking brick head houses which occur at each stair point and also by the rhythmic quality of the fenestration, which of course was dictated by the frequency of the vertical piping and wiring systems. The warm and pleasant color of the brickwork and the texture afforded by the special-size brick leave a strong impression in the visitor's memory. A light and graceful gate house shown above at the left permits full control of visitors approaching on the entrance road



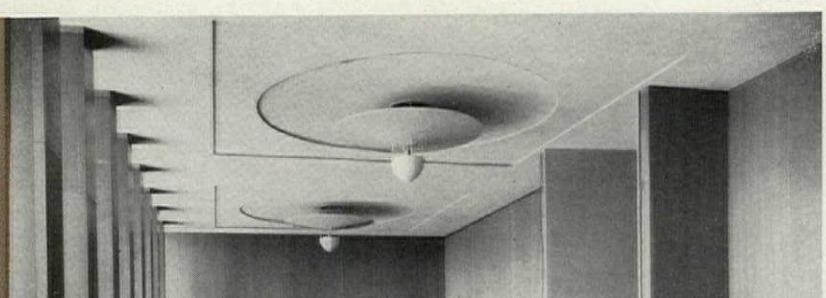
This photograph, taken before the landscaping was completed, fails to do justice to the final effect in which shrubbery and trees will add their ever-changing color to the composition

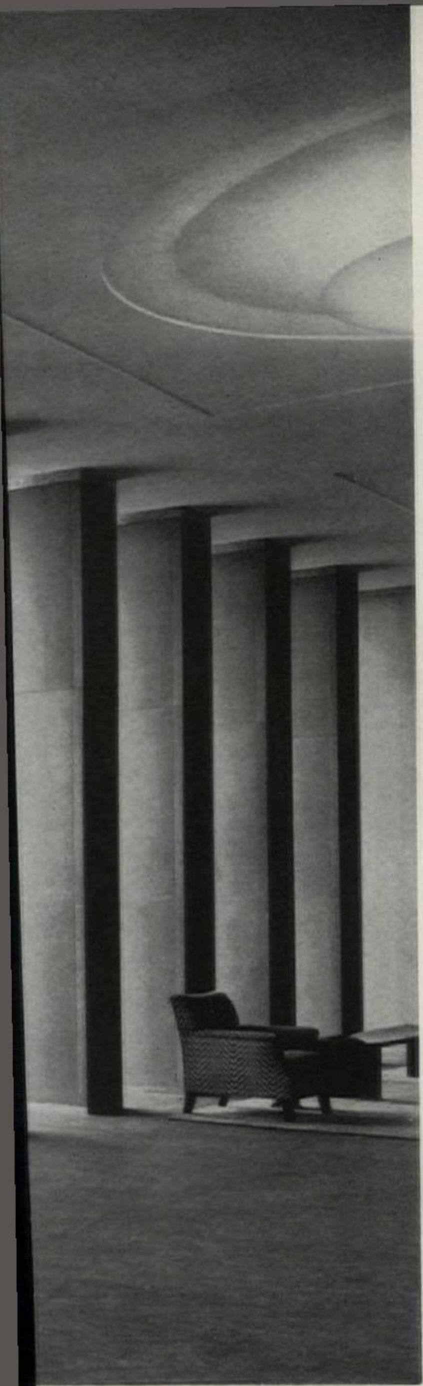
Employees coming to the cafeteria and restaurant pass directly from the first floor of one of the office wings into an attractive lounge and solarium whence an interior stairway leads to the lower level. This view shows clearly the relationship of parts. Access is also provided from outdoors at the cafeteria level

Another view from the roof of one of the laboratory wings explains more fully the relationship of the employees' lounge and cafeteria with the main buildings and the large court between

The one-story cafeteria building is distinguished by beautifully laid Princeton stone walls crowned with a simple and delicate deck railing executed by the late Samuel Yellin. Note the Belgian block road curbing, sloped except at paths. A roomy service court lies to the right

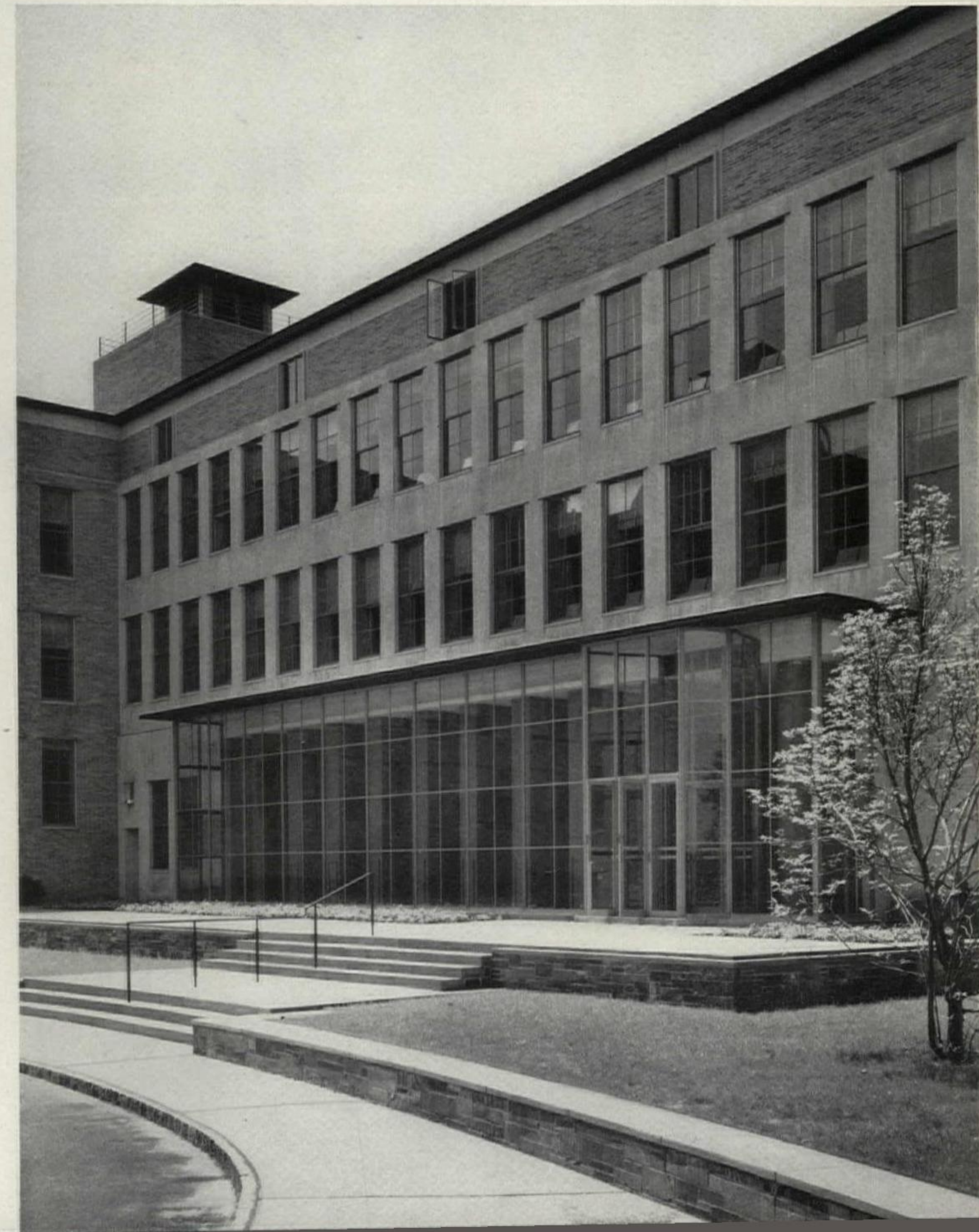
A more complete view of the reception lobby shows the granite steps flanked by slabs of the same material leading to the laboratories. Walls on three sides are straight - grained white oak finished practically raw with a sealing lacquer coat, rubbed





Inside the main entrance lobby the column enclosures are of sheet metal units finished in Indian red. The floor is of ¾ inch red tile squares in broken pattern with wide terrazzo strips. Ceiling, including lighting coffers, is treated with acoustic tile. This makes a spacious and comfortable reception room which will accommodate groups of visitors waiting to be taken into the laboratories

The exterior treatment around the main entrance is simple. The building is faced with limestone up to the attic floor level and the light canopy over the large glazed area is roofed with copper. The glazing is large panes of double thickness glass in fixed steel sash. A bluestone terrace with Princeton stone retaining walls makes a graceful transition from the road to the building



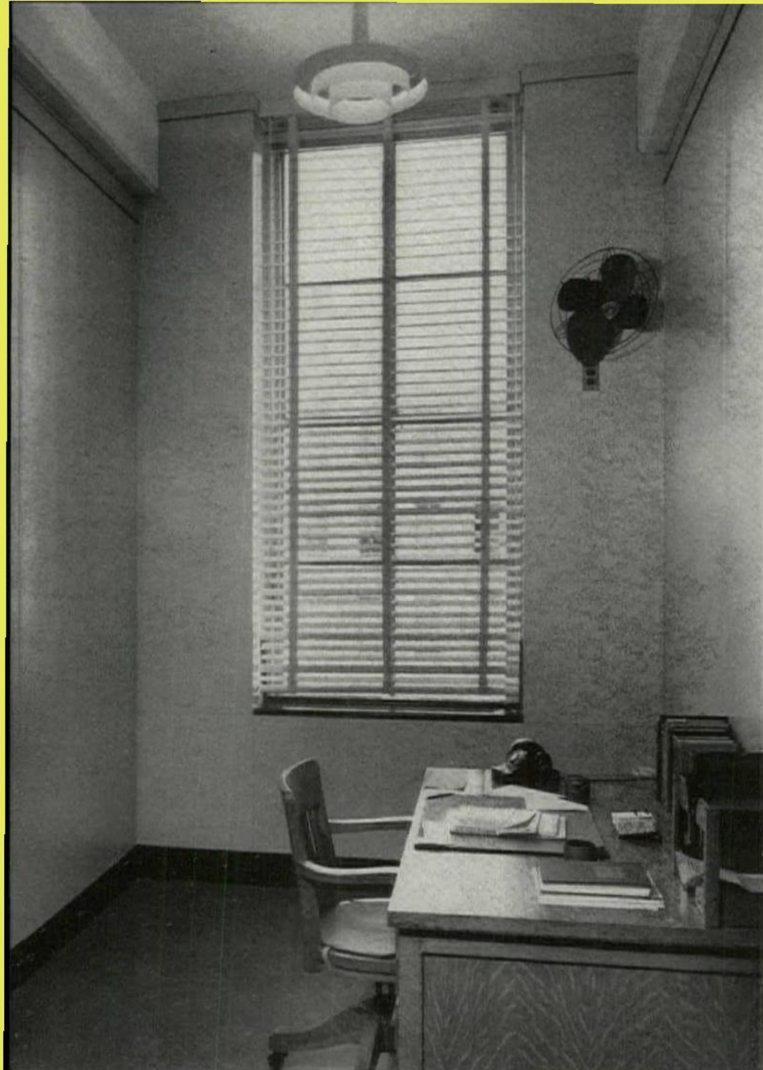
The stair well leading to the cafeteria is surrounded by a sunny lounge space furnished with comfortable rattan furniture upholstered with gay stripes. The floor is red tile and the ceiling natural-color acoustic tile. Note the square columns, supporting only the roof, which are built up of steel angles and plates welded together. The paved deck outside is accessible

Below is the employees' lounge with dark brown linoleum floor, olive green rug, butternut woodwork, and natural acoustic plaster ceiling. On the facing page is a view looking down to the cafeteria level. The ornamental railing of wrought iron and brass is by the late Samuel Yellin. The handsome special fluorescent fixture has vertical tubes of clear plastic—a modern version of the crystal chandelier

The cafeteria stairs are of red tile and the wall surrounding them, together with the supporting stringer, is blue. The floor at the cafeteria level is a darker shade of blue. Below appears a corner of the serving table for the restaurant

The restaurant portion as seen looking out from the conference dining room through a pair of special five-leaved folding doors of oak. Below, a general view of the well-lighted cafeteria which is acoustically treated. A butternut plywood screen running along the service counter gives privacy and cuts off the clatter of dishes and trays

The adaptability of the 6-foot module is shown in this view of the drafting department. Each row of tables is well lighted by natural and artificial light. The typical laboratory building stair opposite is distinguished for its simplicity. Extra high steel balusters, painted tan, carry a natural wood handrail



At left above is a typical small office for an individual research worker. At the right is one of three conventional entrances which occur on the east side of the laboratory building. The same type of welded steel posts used in the lounge occurs here also as support for a light plywood, copper-covered canopy

MATERIALS AND EQUIPMENT

Footings, Foundations	REINFORCED CONCRETE
Terraces	BLUESTONE
Waterproofing	Fabric covered, 5 oz. copper (spandrel)
Wall Construction	11 3/8 x 1 7/8 x 4" BRICK, backed up with sand lime brick. Limestone trim, sills
Floor Construction	REINFORCED CONCRETE with concrete nailers
Roof	STANDING SEAM COPPER; BUILT-UP
Roof Insulation	Vapor sealed RIGID INSULATION; gypsum plank
Windows	DH STEEL CASEMENTS with DH screens; DSA 1/2" plate glass; also polished wire glass and insulating double glass units
Floor Finishes	ASPHALT TILE, LINOLEUM, TERRAZZO, TILE, CORK, CARPETS
Interior Wall Finishes	METAL WAINSCOT, LATH AND PLASTER, TILE, WALL PAPER (Cafeteria Lounge); steel partitions
Plumbing	Copper, brass, galvanized, black steel, and cast iron piping; copper, cast iron, and galvanized fittings
Heating	Wrought iron piping; OIL-FIRED STEAM BOILERS; cast iron radiators
Ventilating and Air Conditioning	Galvanized iron, tile, asbestos cement, and asbestos ducts
Electrical	Rigid conduits, air-cooled transformers, standard laboratory lighting fixtures
Acoustic Treatment	METAL PAN (Offices), ACOUSTIC TILE (Reception Room and Cafeteria), PERFORATED CEMENT BOARD
Laboratory Services	Aluminum piping, fittings, stills (DISTILLED WATER); black steel piping, cast iron fittings (COMPRESSED AIR); black steel piping, regulators (GAS); tile and galvanized pipe and fittings (DRAINS); copper piping and fittings (VACUUM); copper piping and fittings, brass manifolds (HYDROGEN, OXYGEN, and NITROGEN)

A typical laboratory corridor which shows clearly the standard metal wall units and also the method of lighting. Corridors in chemical laboratory are equipped with emergency shower heads for extinguishing burning clothing. These occur at 48-foot intervals and operate by pull-chains within easy reach

Group photo (front row, left to right): Harold Alt, Stephen F. Voorhees, Ralph Walker, Charles Haines; (back row) Victor Hugo, Thomas Christiano, Richard Backus, Benjamin L. Smith, Cecil Cady. Photographs at right show: J. G. Motley and M. B. Long

The idea of a functionally designed laboratory unit in rural surroundings near New York City has been for years both a dream and a project of Dr. F. B. Jewett, formerly president of Bell Telephone Laboratories and now chairman of its Board of Directors, and Dr. O. E. Buckley, formerly its director of research and now its president.

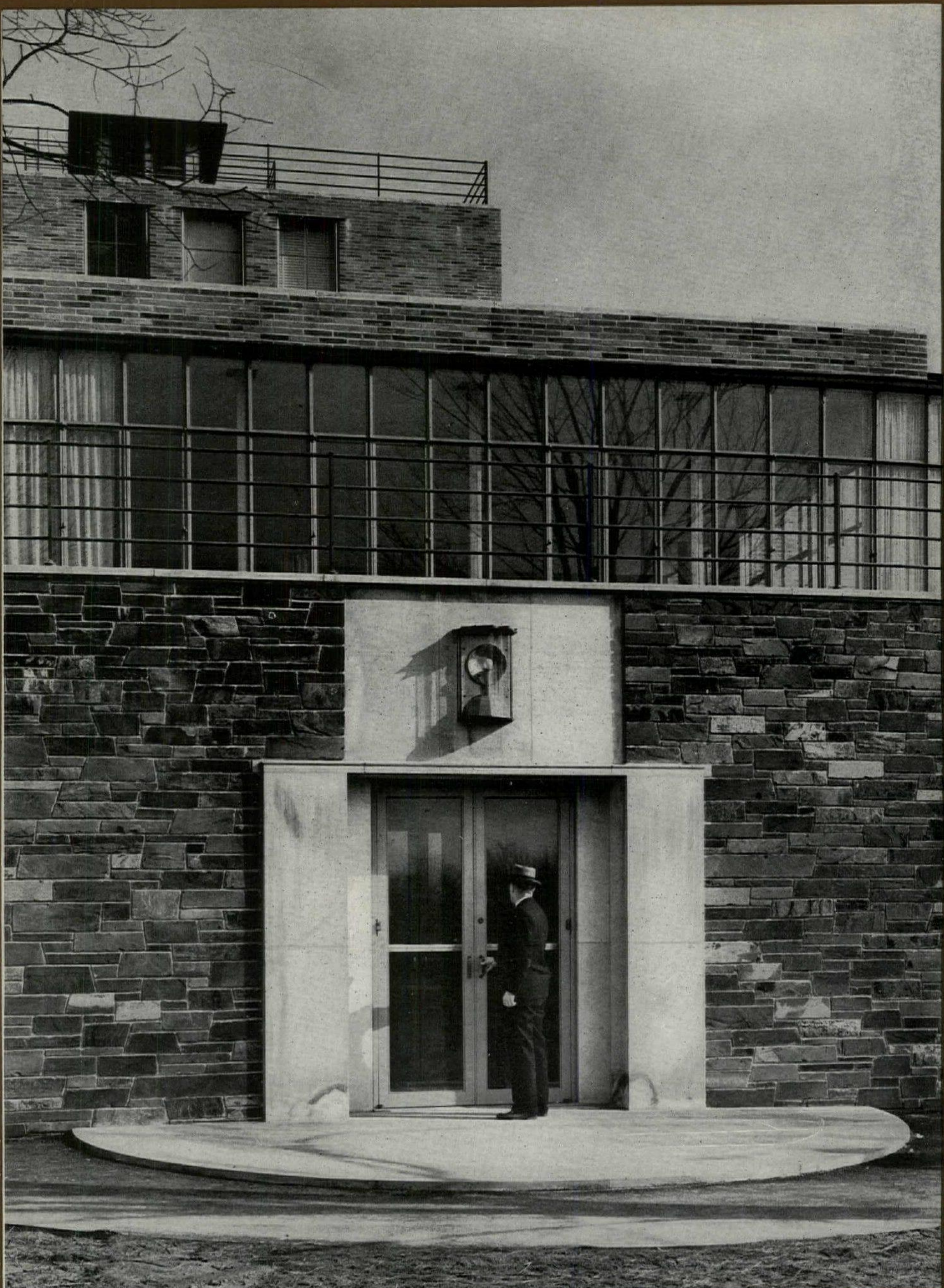
When it was finally decided to start the work at Murray Hill there was formed in the Laboratories a special department—"the Murray Hill Project Department," headed by M. B. Long. Associated with him was J. G. Motley, Laboratories Construction Engineer, who initiated and programmed the design and who has guided with brilliance the detail throughout. Also associated with Mr. Long was E. V. Mace, who was responsible for space assignment. This team, which represented the Owners in relations with Architects and Builders, had as their background the results of studies by previous committees of engineers and scientists in the Laboratories.

The design of the present laboratory building was a complicated technical job requiring the teamwork and cooperation of many abilities. The representatives of the Laboratories, the partners of the architectural firm, the architectural and engineering designers, and the builders, John Lowry, Inc., of New York City, together have created, we believe, a result that is an example of sound architecture. S. F. Voorhees and Ralph Walker (at times being pinch-hitted for by Max Foley and P. S. Smith) coordinated the Owners' needs and gave constant direction to their organization to achieve the finished result.

The project manager from the start was Charles Haines, upon whose patience and knowledge all have leaned.

The architectural design was greatly accelerated by "Ben" Smith and "Vic" Hugo. The structural design was the responsibility of "Dick" Backus, who treads new fields lightly. The electrical engineering, most difficult and most essential to the needs of the Laboratories, was guided by C. T. Siebs of the Laboratories, and Cecil Cady of the firm. Harold Alt, mechanical engineering designer, helped to achieve a regularity and accessibility which the architects believe to be their own brand of order. It was "Tommy" Christiano's hardboiled job to see that the work got done, and that all the branches of engineering were coordinated on drawings. "Jerry" Gherardi, who started as superintendent of construction, resigned to take a commission in the Navy.

R. W.

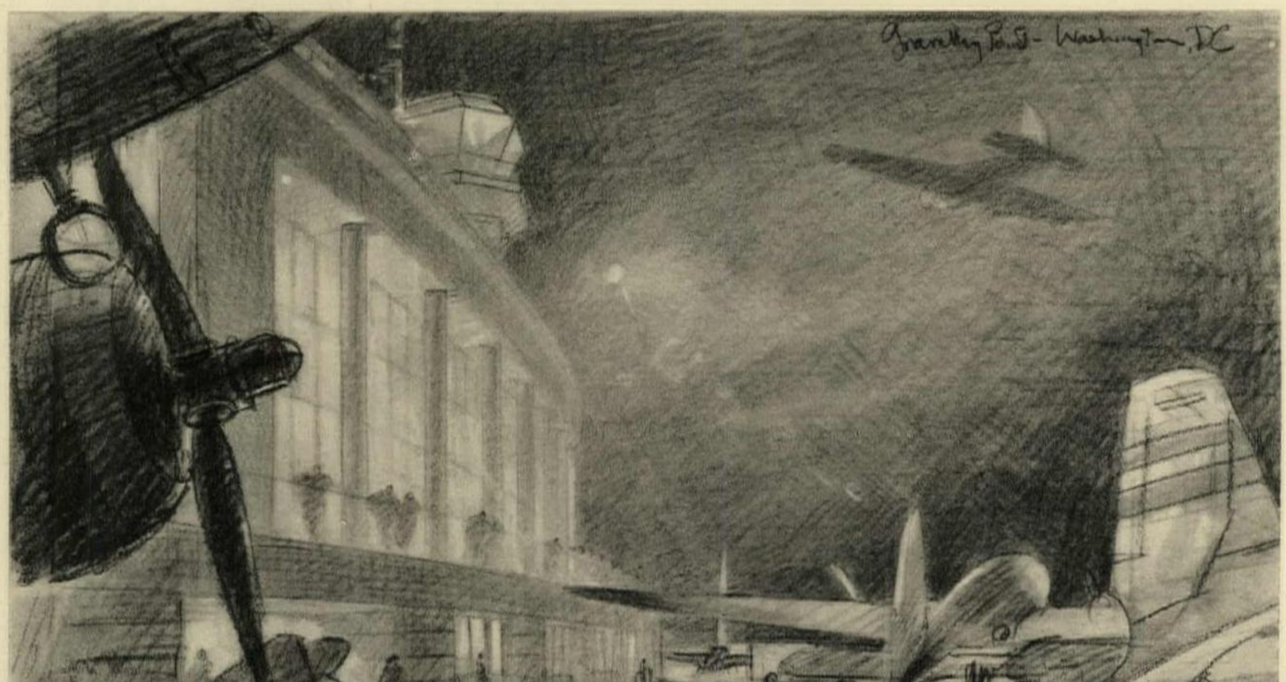


Close-up of cafeteria entrance. Limestone trim, and copper lighting fixture. Semi-circular platform of bluestone

BELL SYSTE

NATIONAL AIRPORT

The Brunner survey was to include buildings of the country's transportation systems—therefore, airports—therefore, the National Airport which (with LaGuardia Field) is the outstanding accomplishment to date. With permission of the Airport management, and accompanied by a guard, sketches were made, during one day, from various viewpoints; however, the choice of a night view had been predetermined upon seeing the Airport, on a fine, clear night, from an approaching plane. It was somewhat inconvenient to complete the night sketch on the chosen spot (on the apron) because of shifting lights and traffic movements; however, by working rapidly and making mental notes, it was possible to forward the sketch in the building, returning to the viewpoint two or three times to check with the actual scene.



The sketch was made with a Pluvius pencil on a piece of tracing paper, 12" x 16", which, with other sheets, was clipped (at all four corners) onto a stiff backboard of the same size. At the studio, on another day, the final drawing was lightly laid out, 16" x 22", following the general lines of the sketch. This final sheet was thumbtacked onto a drafting board set on a drawing stand at convenient angle for work, sitting down. The other sketches of airplane details, etc., were thumbtacked alongside and the final drawing was carried on, relying on one's memory for general tone, and using Wolff crayon, H to 3 B, paper stump, chamois skin, kneaded eraser and kid finish bristol board.

Hugh Ferriss

The Frenzied Functionalist

The functional approach to architecture is now so well accepted in theory that we have already become tired of the word functionalism. We are all functionalists. We sneer behind the moustaches that we grew as Beaux Arts students when a client speaks of the Cape Cod design that he knows he likes although he knows that he knows nothing about Design, and we steer him cleverly into a discussion of open plans and esoteric materials. Of course we end by designing a Cape Cod cottage suggested by that swell house in our favorite magazine a couple of months ago, but we have the satisfaction of knowing that at heart we are functionalists.

Sometimes the procedure of being modern is nerve-wracking. I have watched an architect, his fingers twitching, sternly restrain himself from outlining (I almost wrote tracing) that so subtly correct walnut dado cap, while he recommended a linoleum wainscot. He did not relent until the client pleaded with tears in his eyes. The sense of having done right was, I fear, no compensation for the risk that some day some spineless client might accept the linoleum.

Occasionally an architect gives way completely under the strain. A friend of mine is in a ward of that new psychopathic hospital with the glass brick solaria, hurling himself against the stainless steel grilles and screaming something to the effect that, "Reality is super-geometric if human sensibilities in natural elements include the machine concept." I should like to review his case in some detail:

Last year just about this time (I remember N.Y.U. had just announced a course in Building Materials with the Emphasis on Esthetics to prove that it was a real practical school, so it must have been during the winter) John got the job of remodeling a doctor's office. A small job, but a job. His preliminary interview was unsatisfactory because the doctor was a gruff, matter-of-fact person who kept insisting that he wanted "just a waiting room, an office, and an examination room." John was really very patient; he actually let the client talk and pretended to take notes. However, when he got back to his office he called up the doctor's secretary and said that he was gathering statistics for the A.M.A. From her he found out how many patients a day the doctor had, what illnesses predominated, how many patients came on crutches, how many in cars, and what to do for a pimple on his chin.

On the basis of this information John prepared three charts and punctured the pimple on his chin. One chart was entitled "Occupational-Symptomatic Breakdown per Patient-Minute per Space Unit." This was a fairly simple diagram using only two 8½ by 11-inch sheets. The second was called "Age-Sex-Income Analysis on Basis of Employee Work Hour." This was more complicated. The third became so involved that John could find no appropriate title, so he called it simply "Chart—Doctor's Office."

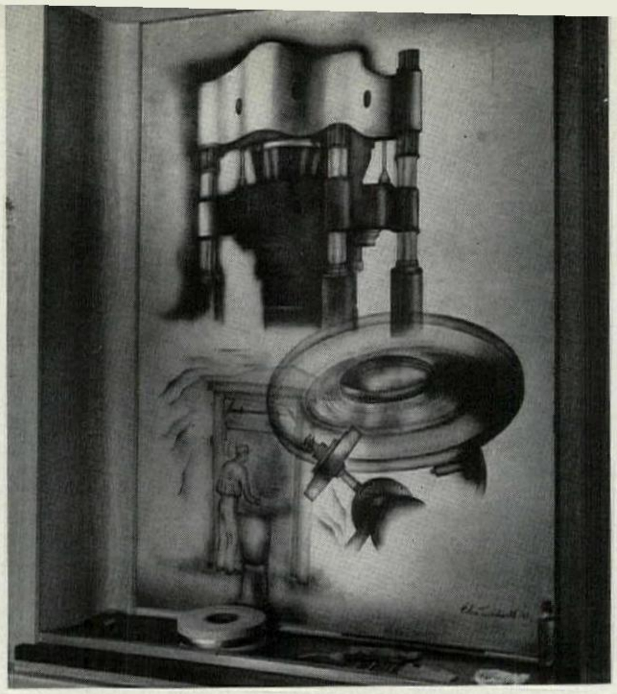
The next step was to disguise himself as a patient, enter the doctor's office and, walking from room to room, record the number of steps that he took. He also studied the movements of the patients, the nurse, and the doctor, and recorded them carefully. Back in his office he prepared, on a double elephant sheet, a Circulation Diagram—a handsome thing which might, under other conditions, have won the Paris Prize. Boxes, lines, arrows, interwoven geometric figures plotted the movements he had studied. (On the third day of this phase of the project he finally decided to ignore a four-year-old child whose movements around the waiting room confused his diagram much too much).

With the three charts and his diagram, John again visited the doctor openly. The doctor thanked him profusely, advised him to have that infection on his chin attended to, and explained that a carpenter had just built his waiting room, office, and examination room. Only a few days later I saw John, and he seemed a little depressed. Last week I heard that he was in the hospital. It occurred to me that it might be well to point out to others what an unattended pimple on the chin may lead to.

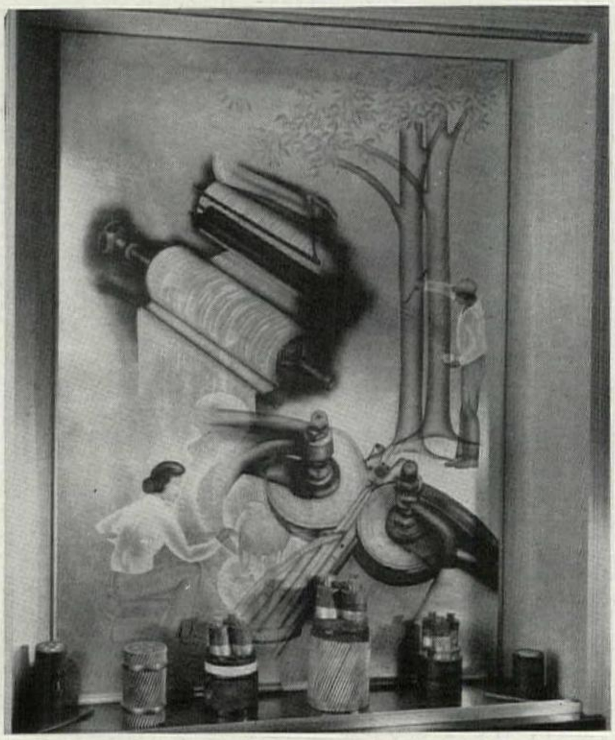
THOMAS H. CREIGHTON

MURALS ON METAL

BY HELEN TREADWELL



The murals above and below are on aluminum leaf



The mural below was air-brushed on copper leaf

Commissioned to dramatize manufacture of insulated wire and cable—from the astonishingly exotic raw materials to the completed product—Helen Treadwell has created a distinguished series of murals on metal for the lobby of The Okonite Company, Passaic, New Jersey. The vigor, the freedom, and the superb delineation that characterize these murals may be judged by the reproductions. They are primarily narrative but also reflect the importance of an industrial concern essential to 20th Century advance in War or Peace.

The four murals shown here, photographed by David Eigen, represent (left) "Mining Lead: Aluminum Press"; "Tapping and Smoking Para Rubber in Brazil: Calendering Machine: Okonite Strip Insulating Process"; and "Spinning Cotton for Winding Cables: Cabling Machine"; and (across-page) "War." The two remaining murals of the series represent "Oil and Paper" and "Peace," the latter symbolic of the myriad uses of cable in normal times.

Unusual materials, even those generally regarded as "impossible," are skillfully used by Miss Treadwell for her decorative murals. Paints that are little known, plastics and paper of unusual texture, cork, rubber, glass and cellophane, the fabrics, and now metals, have been used as the backgrounds.

For the Okonite lobby murals, which are slightly recessed in wide cases to permit the display of the actual products represented by each panel, Miss Treadwell applied metal foil in thin sheets to Masonite, then lacquered them. Guided by a series of stencils she had cut from ordinary wrapping paper, this imaginative artist then sprayed bright-colored lacquers on the metal surfaces with an airbrush: hence the accuracy in detail, the subtlety of tones, and the jewel-like clarity of the panels. This series represents the latest work of Miss Treadwell, whose commissions have included murals for casinos and hotels and decoration of offices and showrooms.

"War" is the title of the mural across-page, which was air-brushed on gold leaf. It represents the use of insulated cable in all the Machines of War

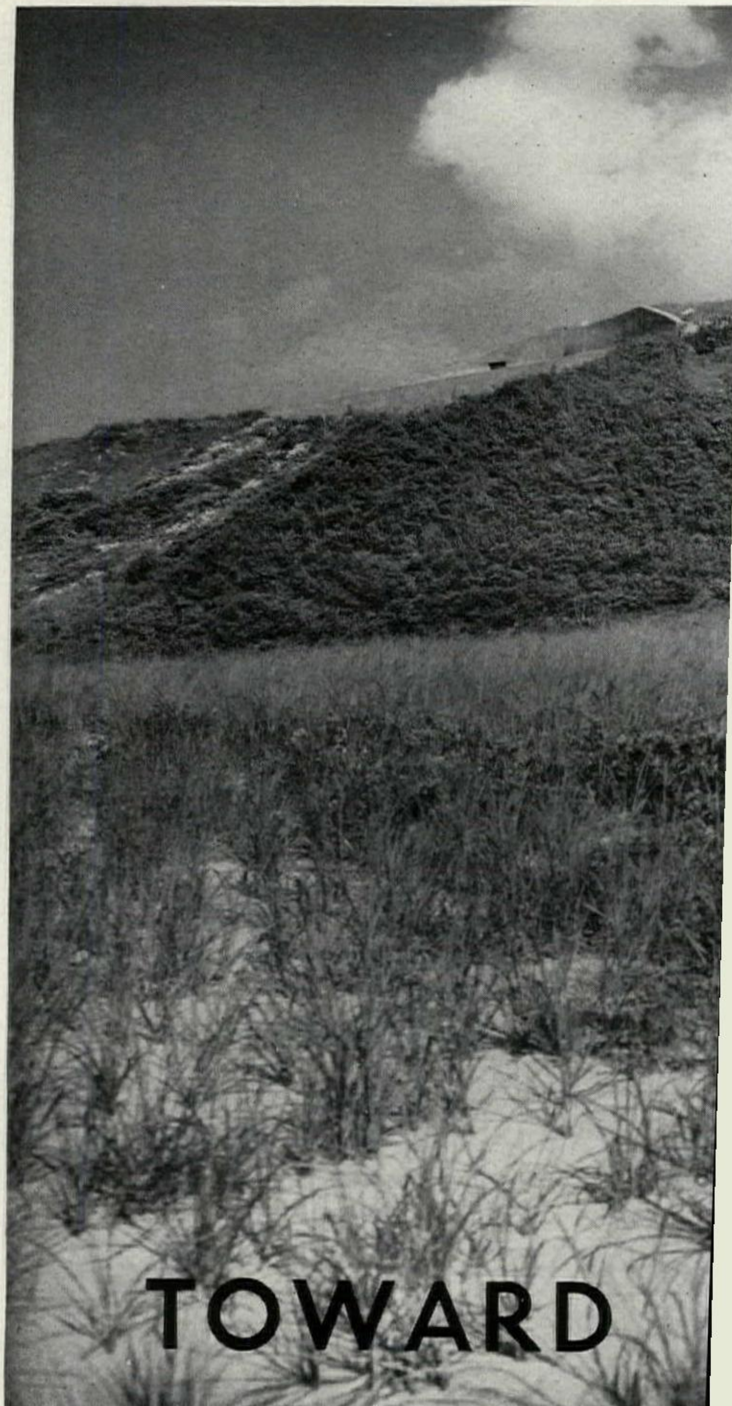
BY Antonin Raymond

Internationally-known Architect who has won particular notice for his skillful handling of the most familiar materials. His influence also has been projected in recent years through a cooperative group of young architects working with him at his farm in New Hope, Pennsylvania

What is the matter with our times? I would like to know. There is just as much dynamic essence here now as there ever has been, and yet we build after ancient models. We fill our rooms with relics. Who would not rather breathe the living air—than the murky odors of catacombs, garrets full of dust, tattered lace, and ghosts? We still meet from time to time, as we walk in the city, one of those sad relics of humanity who crowns herself with ostrich plumes and drags an 1890 skirt in the dust of the street. We do not envy her costume, but for some reason we still go out of our way to buy secondhand her plush sofa.

This strange dementia of our age—would that you also could see it as the dementia it is—this robbing of tombs and stealing from the past is carried into all forms of architecture. Our Government seems to feel esthetically secure in buildings that represent the greatest plagiarism known to history. Our Senators are **even pleased with them** and it is probable that if we were not at war, and if our national resources were not being spent on healthy out-and-out destruction, we would be elevating more Roman columns. Every ugly stupid thing we do hurts somebody. Think of the millions of souls thwarted today by the products of our **unthinking** designers.

Architecture is not creative **only** in the sense that it exists where there are dynamic, living organisms to create it. It is also creative in the sense that it **creates and forms the souls that live in it.** I have noted recently a great change in the work, especially in the attitude, of the younger generation of architects. When I am called in to see the work of students, I find every single one intent on venturing into the new world. They are ready to learn, to sacrifice, to tackle anything! Are the established professional men just going to sit back, literally and figuratively, while the new world soars out of their sight? **I wish that I might make the fact of**



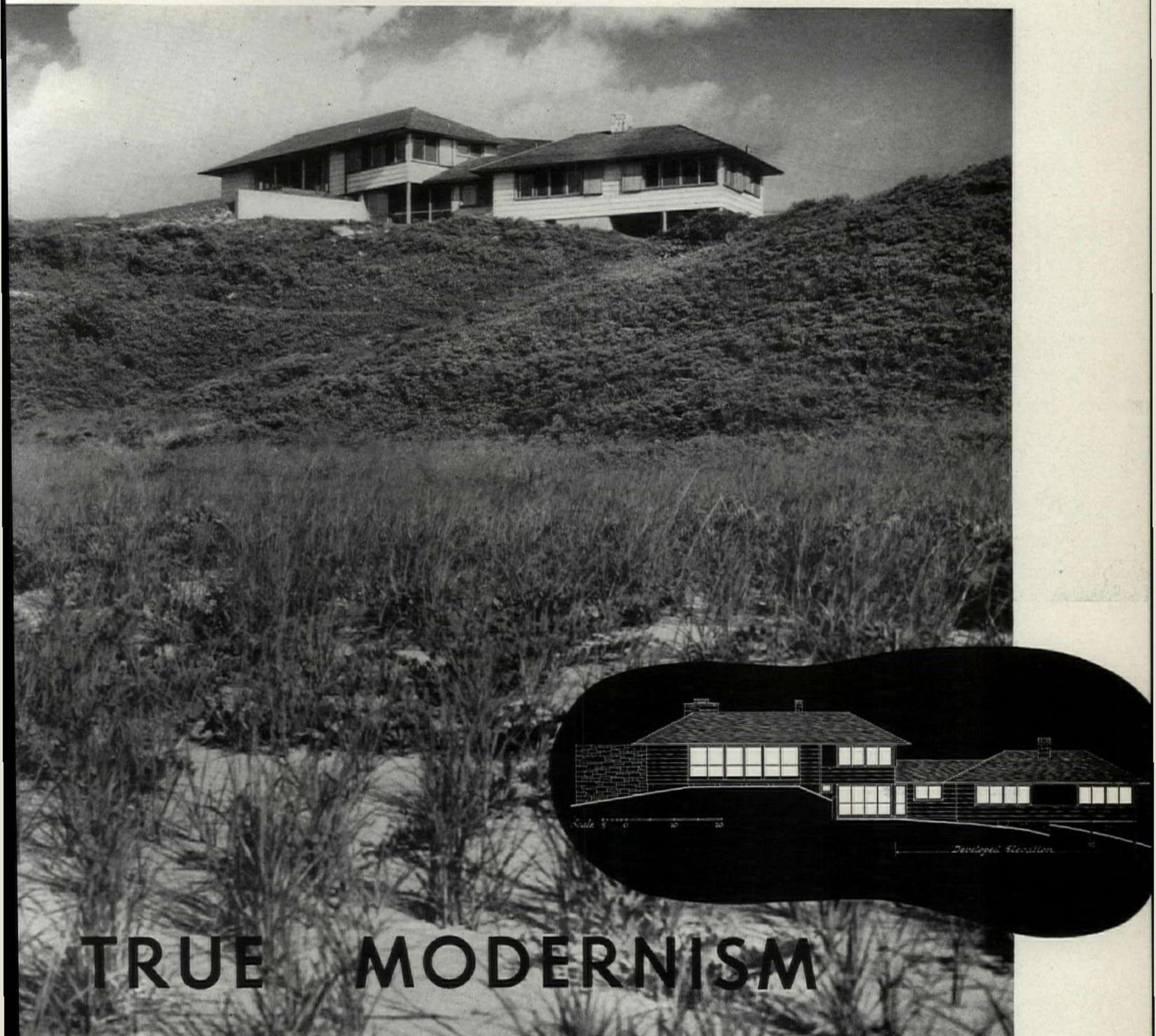
TOWARD

Atop the dunes on the South Shore of Long

modern architecture so true and so desirable that those of you who are sold on it already will pursue it with renewed fervor; that those for whom it is still questionable will unreservedly make the vow of taking up the new, of joining the army of young souls today marching forward in greater numbers.

Le Corbusier has said that modern archi-

PHOTOS BY RODNEY MC CAY MORGAN



TRUE MODERNISM

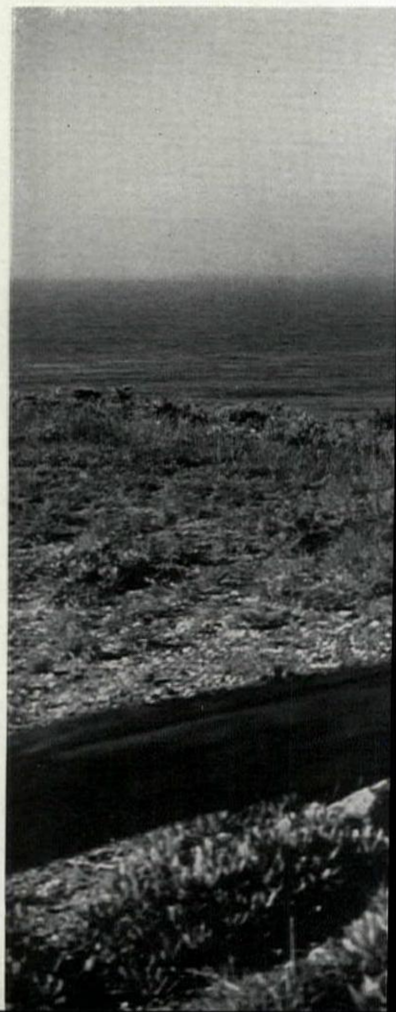
Island, near Montauk Point, the house shown here seems lightly poised. It was designed by Raymond

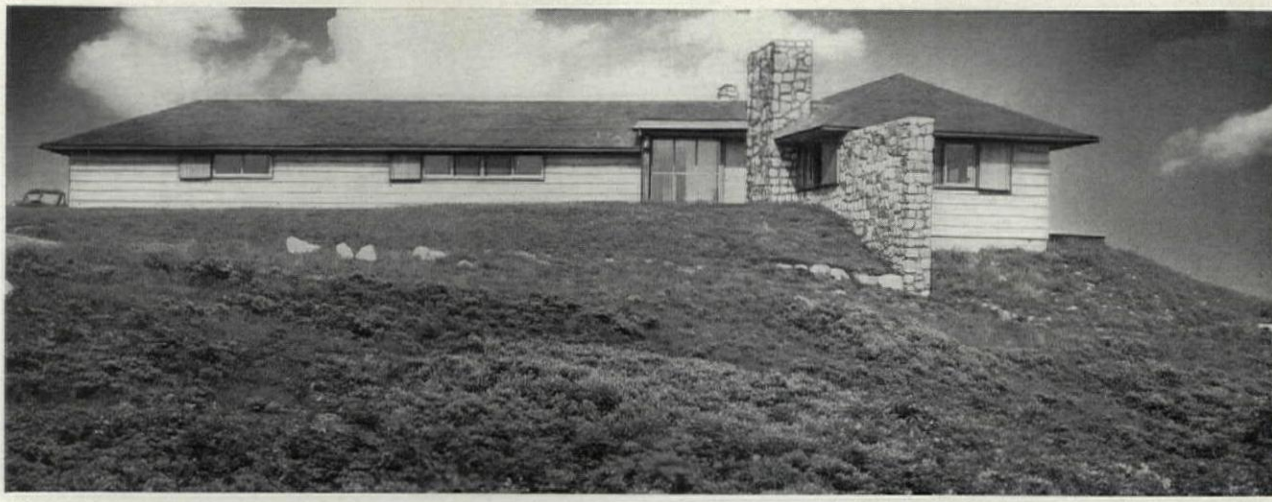
tecture is a way of life. What are the characteristics of modern life? What Americans term a high standard of living is based on certain fundamental principles: first of them all, **a sense of the value of freedom.** We wish to think and act as we believe right—without being dictated to! We have ferociously guarded our liberty of thought and speech and action ever since the first colonist set foot on this soil. We love and cherish our freedom. Another fundamental principle is our **respect for the other man and his freedom.** This has brought us brotherliness, a certain simplicity and frankness of approach. We do not care for pretense. Underneath, we know that we prefer candor to show.

One day, in "unmentionable" Japan, we erected for ourselves a house: to see what could be done if we seized the opportunity to build a structure exactly suited to the life we wished to lead. It was up in the mountains. There was lumber from the neighboring forests, lava concrete from a volcano, and excellent carpenters were at hand. Our building was simple in its solution. Everything was eliminated that did not have a practical purpose. The quality of the materials we used was understood and respected. There was one great luxury, space, for we wished to stretch our limbs after the winter in city quarters.

Our plans were drawn in four weeks, the house put up in six, by carpenters deft, speedy, and understanding. We spent the last week with them, while they fitted the sliding sash and built in a few closets and cases. We had promised ourselves the joy of having nothing about us except objects of immediate utility—and these to be as new and fresh as the house. So the carpenters remained for a few days more to fashion a few chairs and tables of left-over lumber and rope and straw. We went to the nearest village and bought earthen bowls and plates, a few pots and pans. Then we set the table and sat down to eat.

I shall never forget that first meal; the scent of the new wood; that immaculate table of freshly planed hinoki; and the greys and reds of the simple glazed ware upon it. The sliding doors had slid away and the whole plain and distant mountains, ridge behind ridge, lay before us as part of the space we were in. For we were not in a room; we were in a space defined by fine construction. The bearing columns were the grey trunks of chestnut, the roof an interplay of poles of hinoki, the walls and planks of natural cedar. The tin roofing was laid over with a thatch of larch twigs and the roof was like a huge tent in the shelter of which we moved, worked, lived. Bare? Yes, bare like a barn, but full of interest and beauty if you knew anything about quality of design and construction, about the charms of materials, color, light, and space proportion. In modern architecture the only decoration is the construction.





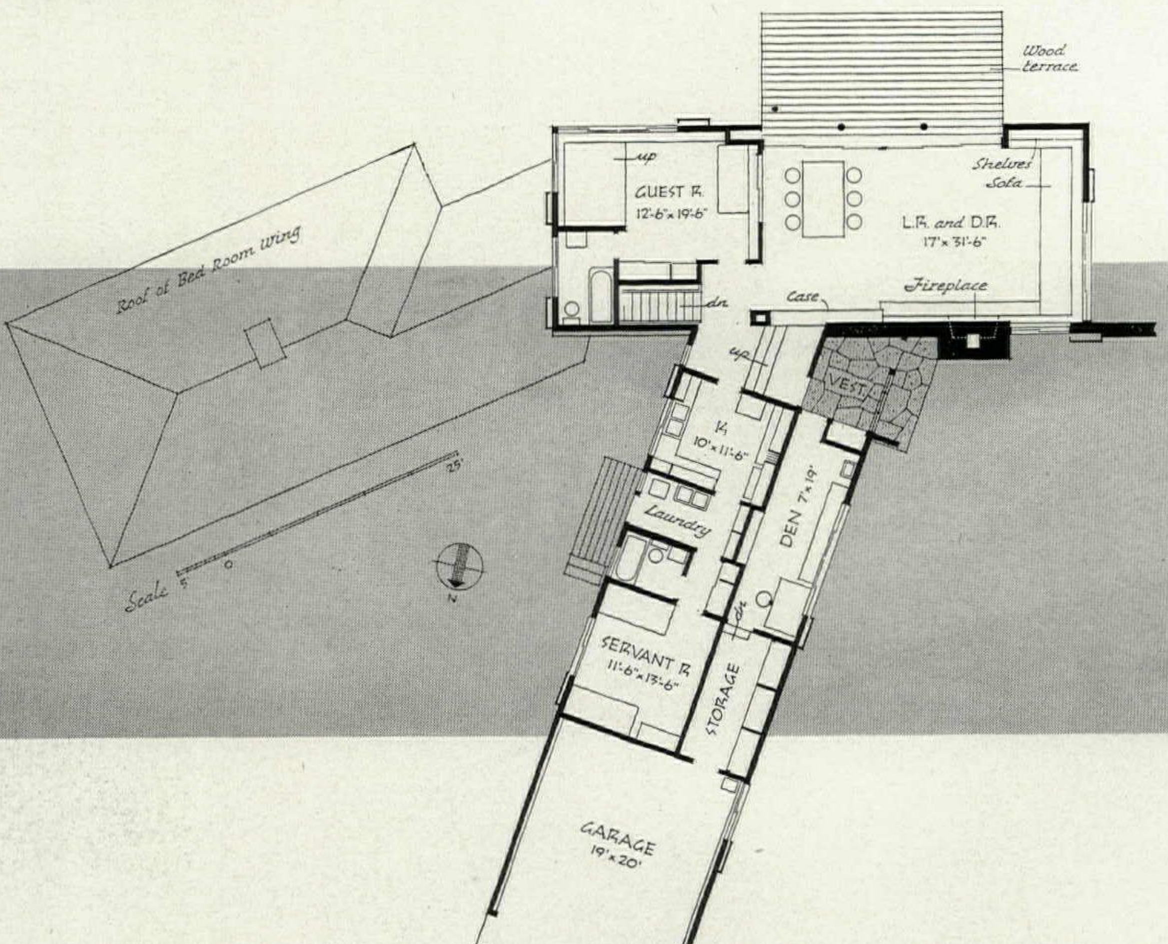
The service wing extends toward the Montauk Point road, shelters the entrance (detail across-page)

We are unconventional. We need only go to a country where we may not speak without introduction, where we must make formal calls, present cards one, two, or three, where we may not drive our own car when calling on people of importance—to realize how happy we are in our simplicity.

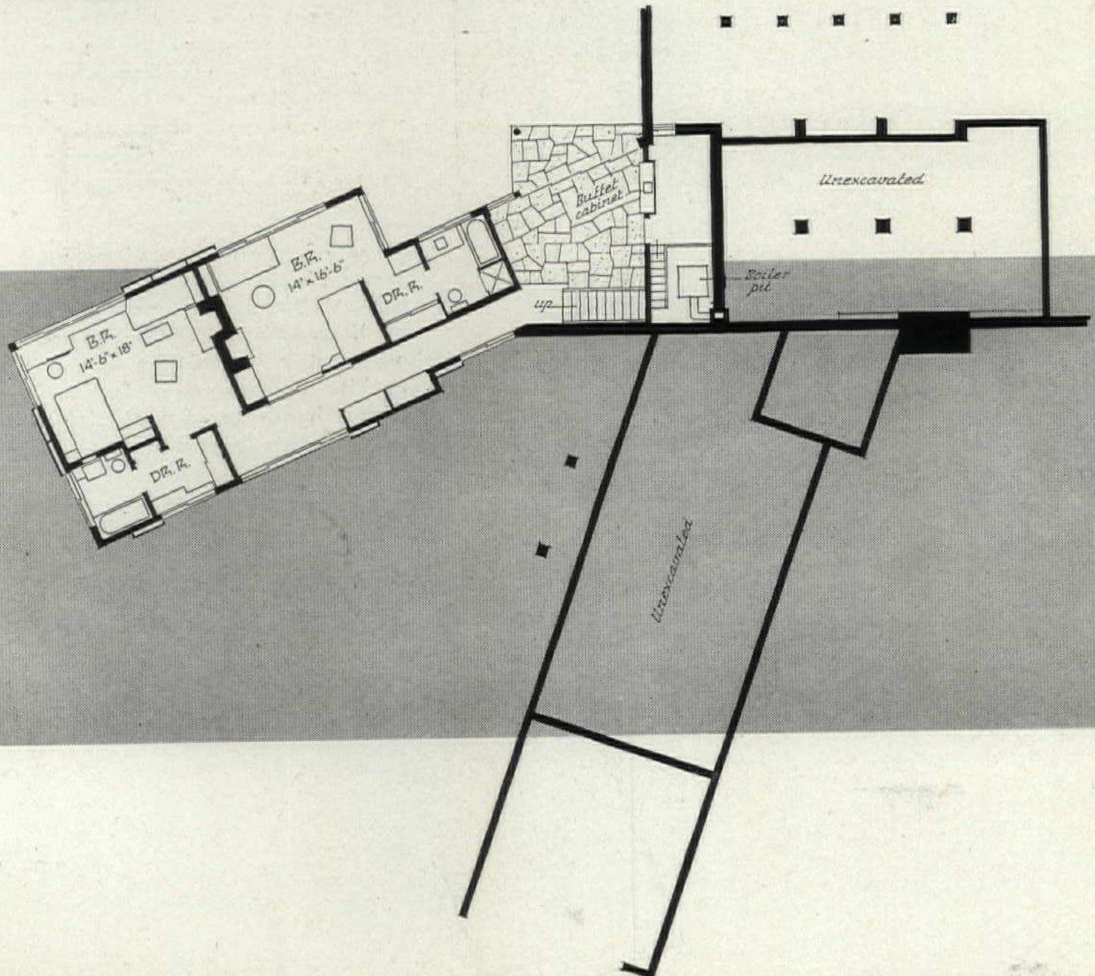
In what way does modern architecture express the ways of modern life? You can find freedom portrayed in the span of our bridges, the sweep of our roads, the wealth of materials we have never known and with which we are experimenting daily. Both freedom and unconventionality are to be found in the way modern plans are handled, in disregard for the old formalities of proportion and rigid balance. **Simplicity** is found in the stress on serviceability, whether in the matter of construction, of planning, or of use.

Space is infinitely flexible. No longer are we doomed to reside in cubes and cubicles; no tradition regulates door heights nor width of corridors. Some of the most important factors in modern architecture are **flexibility, mobility, adaptation to varied uses;** and I would add that all these elements are capable of creating an atmosphere of serenity and calm, life, mobility, and joy.

"It is an interesting detail, I think, that an increase in the size of windows is indicative of an increase in civilization. Because the brigand is less to be feared, windows have become larger"



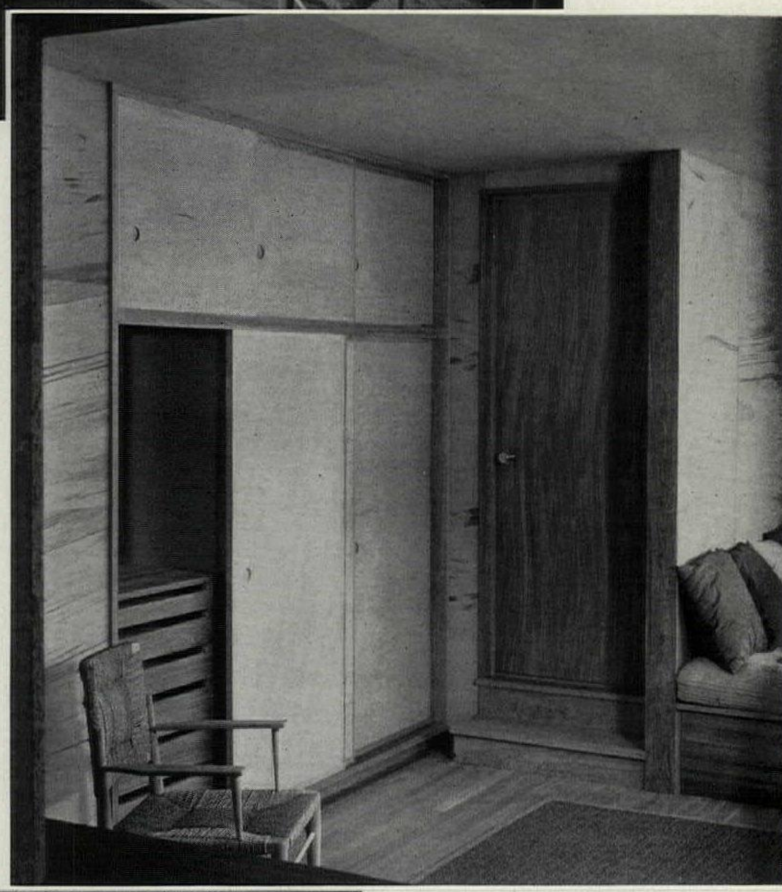
"While sitting on a comfortable couch by the fire, we enjoy being able to see the passing clouds. Our freedom has encouraged us in a new friendliness toward the outdoors"



Overlooking the beach, in the angle between the bedroom wing and the main block of the house, is the inviting paved loggia (above and left) which does duty as a STAIR HALL, bar or breakfast porch, and ever-cool retreat in summer. The two BEDROOMS at the same level are shown below and across-page (lower photo)

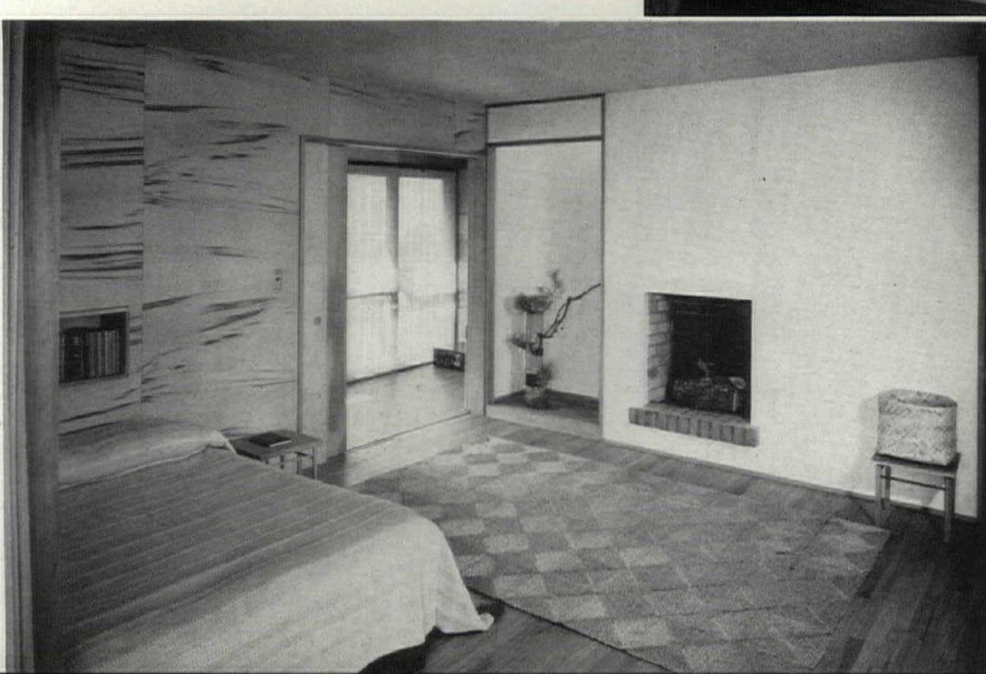
Across-page is shown (top and right) the GUEST ROOM adjacent to the living and dining area, separated from the larger room only by low bookcases and a sliding shoji (see plan on page 76). The broad divan conceals twin beds that may be rolled out when needed. Built-in chest and closets are also concealed by sliding panels, as shown in the detail photo

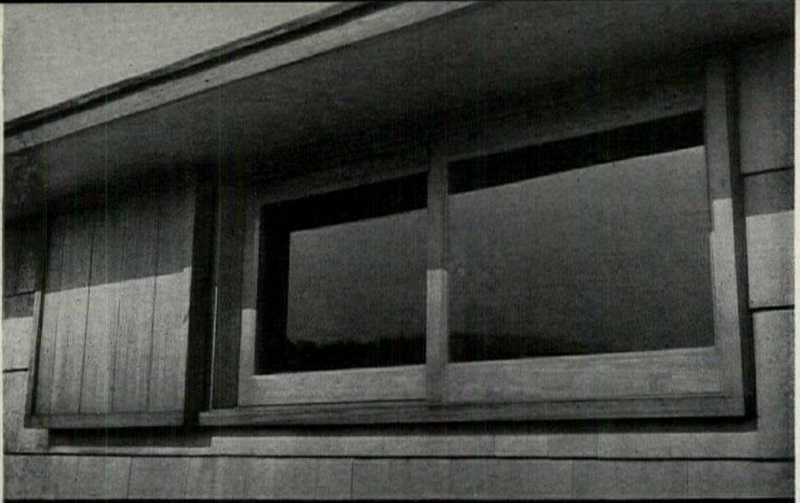
Most of the beautiful carpentry and those pieces of furniture designed by NOEMI RAYMOND, are the handiwork of EDWARD POSPISIL, who was the contractor for this house. To him the architect gives credit for much of the adroit handling of materials. Notable is the stair (page 81)

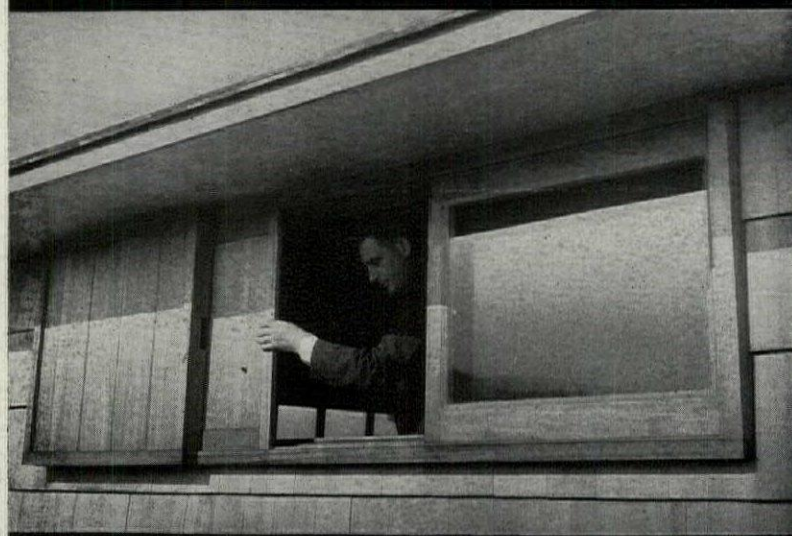


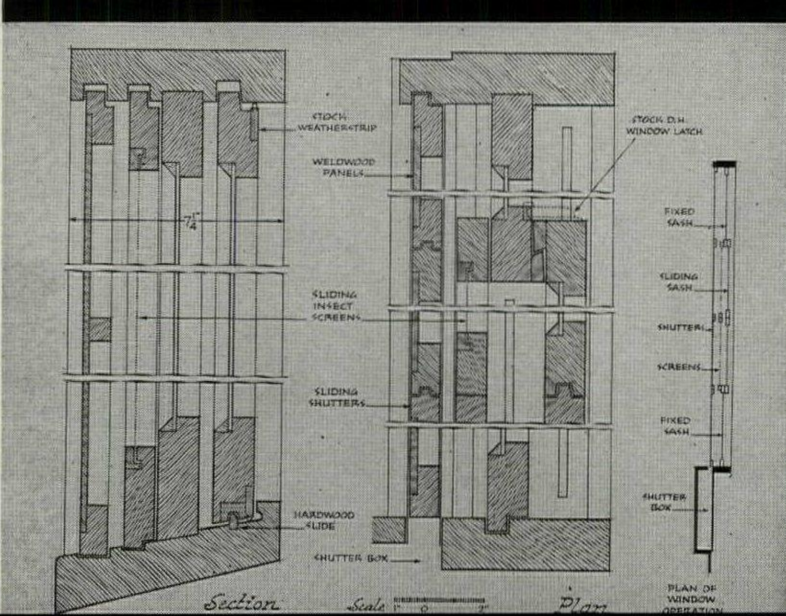
It should be understood that what I mean by modern architecture has nothing whatsoever to do with the pseudo-esthetic refinements that come under the name of Modernistic Style. Nor can its scope in the matter of form be limited. Its simplicity, which is a requisite, should be a natural solution and never an affectation. Why, for instance, is plywood so generously used in modern construction? It is because it is cheaper, practical to use and handle, as well as "right" in looks and feeling. What I mean by contemporary architecture is a **generous, robust, healthy research into the modern way of life and its expression in buildings.** Industrial construction—the great spans across the sea at San Francisco, across the Hudson, the dams and factories, even the highways—enter my **definition** of modern architecture.

PHOTOS BY RODNEY MC CAY MORGAN









MATERIALS AND EQUIPMENT

Footings	CONCRETE
Foundation Walls .	CONCRETE BLOCK and stone
Terraces	2″ x 8″ planks; flagstone
Waterproofing . .	ASPHALT PARGING
Wall Construction .	CEDAR SHINGLES on 2″ x 4″
Wall Insulation . .	ROCK WOOL; QUILT TYPE (partition soundproofing)
Floor Construction .	WOOD JOISTS
Roof	Cedar shingled; copper flashing
Roof Insulation . .	ROCK WOOL
Windows	Horizontal sliding glass windows with sliding insect screens and sliding Weldwood shutters
Doors	FLUSH PANEL (plywood)
Floor Finish . . .	OAK (Guest Room, living Room, Bedrooms); LINOLEUM (Bathrooms, Kitchen, Laundry); PINE (Den, Servant's Room); CEMENT FINISH (Kitchen, Boiler Pit)
Interior Wall Finishes	PLASTER AND GUM PLYWOOD (Bedrooms A and B); GUM PLYWOOD (Servant's Room, Storage, Den, Servant's Bath, Laundry, Kitchen, Living Room, Guest Room); vertical CYPRESS PLANKS (Stair Hall and Loggia)
Plumbing	VITREOUS CHINA FIXTURES; copper and cast iron pipe
Heating	STEAM; oil-fired
Other Equipment . .	BUILT-IN FURNITURE, designed by Mrs. Raymond
Electric Wiring . .	BX cable; recessed fixtures
Ceilings	GUM PLYWOOD
Hardware	BRONZE; BRASS hardware for windows

Window and door openings are all fitted with sliding WELDWOOD SHUTTERS of the type detailed at the left. Since this house at the beach is frequently closed for several weeks at a time, they protect it from marauders as well as storms

A Campaign Ends!

PHILIP GENDREA

Four months have passed since your Technical Personnel Adviser answered the call of PENCIL POINTS to come to Washington to represent the architectural men of the country who wanted to find useful places in the war effort. In this time it has become clear that the PENCIL POINTS Washington service was *greatly needed* and that it has been of *practical value* to both the architects and the Government.

Though it has now regrettably come to an end we can get some satisfaction from the thought that our activity took place at the most strategic time, when everything was in flux during the building and readjusting of the fighting forces, of industry, and of Government bureaus. Order now seems to be emerging and production is settling down to an efficient level. But the reshuffling goes on and we are told that during the coming eighteen months nearly *20,000,000 additional people will be drawn from peacetime pursuits into war production and service in the armed forces!* It is obvious that many architectural men will find themselves among these 20,000,000.

Perhaps it is well at this time to summarize our work:

1 **WE HAVE GIVEN INFORMATION AND ADVICE TO SCORES OF ARCHITECTS** who came to Washington seeking Government work and have helped them to make proper contacts without waste of time. (In the case of confidential personal conferences with architects who came here, we asked each man to report back after making contacts to let us know the reaction of the Government representatives he encountered. This was a help both to the applicant and to this office.)

2 **WE HAVE REPORTED PERIODICALLY ON OUR ACTIVITIES** through the pages of PENCIL POINTS. We have pointed out the need for close cooperative relations with the other technical planning professions; the need for the architect to take an active part in civic affairs—local, State, and Federal; the need for him to study and prepare himself for community planning programs; and other needs that have become obvious through close observation of trends in Washington.

3 **WE HAVE CONSTANTLY TAKEN ADVANTAGE OF OUR CONTACTS** with responsible officials to explain to them the skills and abilities of the architectural men (of which many had only a vague idea) and we have constantly argued that **the architect's manifold skills make him adaptable to many**

types of jobs that need to be done. We can say confidently that this missionary work has been extremely effective, though there are many officials who need convincing.

4 **WE HAVE CONTACTED KEY OFFICIALS** in practically every Government agency and have discovered from each agency its needs for technical manpower. With this information in hand we have analyzed the records of over 4000 men filed with us and have selected the names of those who appeared best trained and qualified to do the required work. We have furnished these names and qualifications (totalling 2821 individuals) to the various agencies, which have followed through by getting in touch with the individuals. We have checked and rechecked with the agencies to insure that they keep these records active — always, however, keeping the original roster cards in the PENCIL POINTS Washington office.

LIST OF GOVERNMENTAL AGENCIES with whom contacts and placements were made, introducing the names of more than 2800 men.	Approx. number of men for whom contacts were established
War Production Board	350
United States Civil Service (general)	500
Office of Price Administrator	100
Federal Public Housing Authority	284
Army Map Department	125
Civil Engineers Navy Reserves	107
Shipbuilding (through Civil Service) approx.	50
Various Architects offices	200
Bureau of Yards & Docks	100
Army Engineer Corps (also Quartermaster Corps)	225
Army Specialist Corps	200
Army Reserve Specialists	50
National Resources Planning Board	45
Federal Works Agency	50
Reconstruction Finance Corp. (Defense Plant Corp.)	40
Army Air Corps	8
Panama Canal Zone Comm.	30
Army Munitions	10
National Roster of Scientific and Specialized Personnel	50
Federal Housing Agency	12
Office of Civilian Defense	30
Division of Aviation, U. S. Marine Corps Res.	10
Maritime Commission—Bureau of Ships	55
Construction Contract Board* (For contact and help for Contract Awards)	
Bureau of Yards & Docks* (For assistance and to help for Contract Awards)	
U. S. Engineers Fort Belvoir, Va. (camouflage)	200

* THESE TWO DIVISIONS PLACED CONTRACTS WITH ARCHITECT-ENGINEERS AND EVIDENCED HELP THEREBY TO PERSONNEL OF THOSE ORGANIZATIONS.

Since we have been down here we have observed changes for the better in the handling of Government personnel work. The old system of clearing through Civil Service examinations slowed up appointments. Since the Civil Service has been increased in size and reorganized it has adopted the practice of using "unassembled" examinations for each specific job. More recently the new Form 57, Circular 332, is being used, whereon each applicant lists at least **four alternate occupations.** This may result in an applicant being called upon to do one of the alternate jobs instead of his first choice, but it increases fivefold his chances of being called upon.

Many architects who have filled out forms and questionnaires for one or another bureau have experienced delays in getting answers and are still awaiting placement. This situation is gradually being corrected. We have gratifying evidence of this in the form of many letters sent in by architects in appreciation of the assistance given and reporting advantageous placement either as civilian workers or in the uniformed forces.

The original four months for which PENCIL POINTS contracted with me to come here were up on July 15. In the event that this work should continue, I shall dedicate my whole time to this greatly needed activity. If, however, the work must come to an end at this point, I wish to go on record to the effect that PENCIL POINTS and the Reinhold Publishing Corporation have made a contribution of inestimable value to the war effort for Victory and toward the welfare of the architectural profession.

Those architects who are now in the armed forces, on land, on sea, or in the air, will get **valuable training in teamwork and coordination** with their associates, the engineers, which should result in a better understanding when they return to civil life. Each of the allied technical professions will, through its war experience, develop a greater appreciation for the others.

This work has increased my respect for the members of the architectural profession and has provided me with the material for many pleasant memories. The numerous letters of thanks so kindly mailed here in appreciation of my services during this four months' period in Washington were most helpful in encouraging me to carry on.

WILLIS A. VOGEL

A job well done!

In bringing to a close our WASHINGTON CAMPAIGN on behalf of architectural men throughout the country, we wish to pay a tribute to the man who went to the firing line for us as Technical Personnel Adviser, Willis A. Vogel, A.I.A. Both we and the architects in whose interests he worked for four months owe him a debt of gratitude that can never be repaid. He accepted this job in a spirit of dedication to the service of his profession and his country. At considerable personal sacrifice, he left his home in Toledo and came to the Nation's "working Capital" at a time of great congestion and confusion. Here he worked indefatigably day and night under conditions that were difficult and that must have been at many times discouraging.

Patiently and tenaciously Mr. Vogel built up and maintained a wide range of contacts with key officers of all the administrative departments of Government where architects might conceivably be found useful. He spent long evenings familiarizing himself with the card records of over 4,000 men who had registered with us. He ascertained the functional needs of each department or bureau, then analyzed the qualifications of the available men and selected for recommendation those most evidently fitted for each kind of work in demand. He furnished lists of qualified men to each bureau, following up frequently to see that the bureau carried out its part of the bargain by getting in touch with these men.

With every one of the hundreds of official contacts he made, he acted as a missionary to break down as far as possible the general lack of understanding and resistance to the employment of architects in Government positions. In each case he analyzed the architect's functions and pointed out how his technical training, his mental habits, his ability to coordinate, his knowledge of men and materials, fitted him to fill not only technical posts but a number of non-architectural positions as well. The value of this educational activity cannot be measured, but it has already borne fruit and its effect will continue for a long time.

In addition to all this, Mr. Vogel made himself extremely helpful to scores of architects and draftsmen who came to his office for advice and guidance in making contacts. He thus paved the way for many a man to secure effective employment in the Victory effort.

In carrying on this work he demonstrated conspicuous lack of self-seeking, at no time forgetting that he was there to represent his colleagues of the profession and not himself.

It is therefore extremely regrettable that, due to a tightening economic situation, this service could not be carried beyond the four months originally agreed upon. We offered to the State Associations an arrangement whereby we would bear one third of the expense provided they could raise the other two thirds. It proved impossible to raise the necessary funds. We have, however, the satisfaction of knowing that the four months' period covered was probably the most critical phase of the great conversion from a peace to a war economy. Furthermore, delegates to the recent A.I.A. meetings in Detroit voted overwhelmingly to instruct its Board of Directors to continue, under Institute auspices, the Washington activities heretofore carried on by Edmund Purves "and others"—the "others" referring to Mr. Vogel.

In spite of statements printed in this magazine from time to time during the course of our campaign, we have run across evidences that there still exists misunderstanding of the relation this activity has borne to that conducted by Mr. Purves at the Octagon House. We would like, therefore, to record briefly the history of the activity from its inception.

At the first of this year we foresaw that there would develop a shortage of private architectural commissions which could not be made up by Government and that at the same time the expansion of Government war activities would require an increasing supply of resourceful, technically-trained personnel. Architects not only wanted to serve, but had to live, and we therefore circulated to our entire mailing list a card questionnaire asking for the experience record of each man interested in finding a place in the Victory Program. OVER 4,000 RESPONDED.

Early in February we approached The American Institute of Architects, offering to provide an able, energetic man to go to Washington to supplement the work being carried on by Mr. Purves, who was already at the Octagon House. We suggested that the Institute might provide desk room at the Octagon House for this man to use as a headquarters and proposed that he should cooperate closely with Mr. Purves. At the same time we interviewed several mid-Western architects as to their willingness to undertake the work. This resulted in the selection of Mr. Vogel, who began operations in Washington on March 16.

Meanwhile President Shreve, of the A.I.A., after graciously acknowledging our offer and thanking us for our willingness to devote our resources to the betterment of conditions affecting the activities of the architects, referred our proposal to the consideration of the Board of Directors. They finally decided that the proposed arrangement, so far as it concerned desk space in the Octagon House, was impractical and so notified us on March 24. We thereupon rented office space at 1727 "K" Street, N.W., in Washington, for Mr. Vogel's headquarters.

Since it was earnestly desired by all parties that overlapping of functions or conflicting activities be avoided, and since Mr. Purves was already ably representing the architects at legislative hearings and dealing with policy-making and administrative officials concerned with the award of Government contracts, Mr. Vogel confined his attention to the matter of establishing liaison between the salaried jobs that were open in both military and civil branches of Government and the men who were ready and anxious to fill them. He kept in close touch with Mr. Purves and there developed between them a spirit of friendly cooperation which continued to the end of their respective tenure of office.

At this writing the A.I.A. has not yet designated a man to take Mr. Purves' place, but President Shreve has informed us that the Institute will provide such a man at the earliest possible moment. It is understood that as a result of the vote taken at Detroit the new Institute representative will do everything possible for the profession and its members in regard to both representing them before the Government and its branches and facilitating contact between the several bureaus and the personnel they need. In this way he will continue, as well as may be, the activities of both Mr. Purves and Mr. Vogel.

All inquiries concerning sources of employment for members of the architectural profession should therefore be addressed from now on to the Octagon House, 1741 New York Avenue, N.W., Washington, D.C. Until the appointment of Mr. Purves' successor they should be directed to the attention of Mr. Edward C. Kemper, Executive Secretary of the Institute. *Thus, responsibility for assisting architectural men to contact sources of Federal Government work will be placed where it belongs—in the hands of the A.I.A.*

The Institute wishes to make clear that it will assume no responsibility for advancing individual claims for employment. It will, as heretofore, refrain from making direct recommendations of an individual for a specific job, but it will do everything it can to help *all members of the profession* to establish contact with the sources of government work.