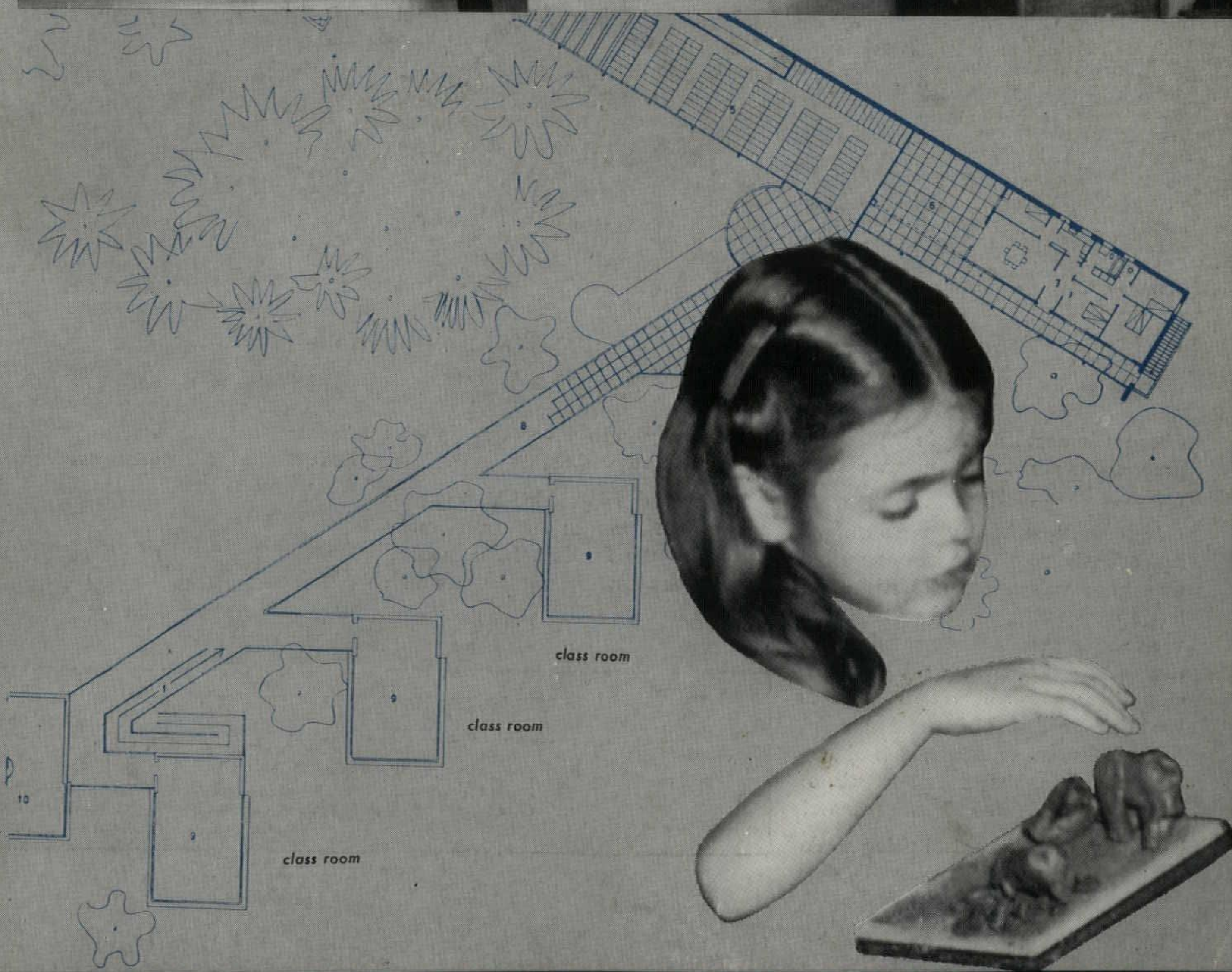
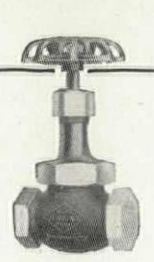
PENCIL POINTS
PROGRESSIVE ARCHITECTURE

4

April 1945





PENCIL POINTS
PROGRESSIVE
ARCHITECTURE

Bystanders Are Not Innocent

Successive waves of over-pessimism and over-optimism about the progress of the European war cannot alter the grim fact that Total Peace is still a long way off. It will not come automatically, even with the final end of the shooting, but must be worked for today and tomorrow and the next day until the world is restored to a condition of wholly constructive economic activity. That, obviously, will take some doing. Time to plan for it is none too plentiful.

In a situation of this sort, no responsible citizen can leave to others his share of the job to be done. Just as the war has involved and affected every human being on earth, so will the reconversion and rebuilding of society require every man's participation.

Particularly is the architect concerned. No longer can he afford to await the client's bidding or confine himself to doing the merely profitable parts of his professional duty. He will have to exert that "leadership" he has claimed so long but so frequently shirked.

As everyone knows, a stable economy after the war will require a large and sustained volume of building. Whether or not America has depression or prosperity will hinge upon the quantity of building made ready to go ahead as soon as materials and labor are again available. Every architect should henceforth not merely stand by, ready to do the planning someone else may engage him to do, but should actively exert his persuasive powers upon all agencies that may become the initiating force for needed construction. Surveys show that there is great danger that neither public nor private agencies will be ready with enough plans in time to sustain the high level of employment we will need during the transition period.

Every architect should look critically at his community; should thoroughly know its present condition and its prospects and plans for the future; seek out the bad spots, the run-down buildings and neighborhoods that need rehabilitation and replacement, the traffic bottlenecks that need cleaning out. He should be able to see many things that are crying out to be done, many opportunities for the profitable investment of building capital. He, above all people, should have practical solutions to suggest. For some of his ideas he should be able to find private or public backing—if he goes after it energetically. As a citizen he owes it to his community and to his country to do this.

Pessimists, fascinated by the huge debt that has been piled up to pay for destruction, say we can't afford to build the "better world" that is to be made after the war. The paradoxical fact is that we can't afford not to; that it is only by cleaning up our slums, re-housing people on a vast scale, reorganizing and improving our cities and towns, building new roads, bridges, dams, schools, hospitals, and community centers that we can support the high production level to which we are now committed and avoid slumping back into confusion and chaos.

Whoever fails to stir himself to positive action during the coming months and years of the world's fight back to equilibrium, will be just as guilty as though he fought on the negative side. There can be no "innocent" bystanders.

Kenneth Reid

Whereas formal education once consisted of cramming pupils with facts, emphasis is now placed upon understanding and cooperation, upon developing intelligence capable of using facts. At least this is the intent. If such a program is not universally adopted, perhaps that state of affairs is in part due to the type of buildings which customarily house it. The schools we show here are not run-of-the-mill nor are they of uniform excellence; but they not only look, *they* work, *differently than did the school of, say, 1915.*

What should a school plant — building and grounds — do? It should offer pupils a congenial environment, understandable to them as children, well related to the community it serves. Most people — and schoolchildren are people — resent the uncongenial, the incomprehensible, a state of mind which hardly benefits the educational process.

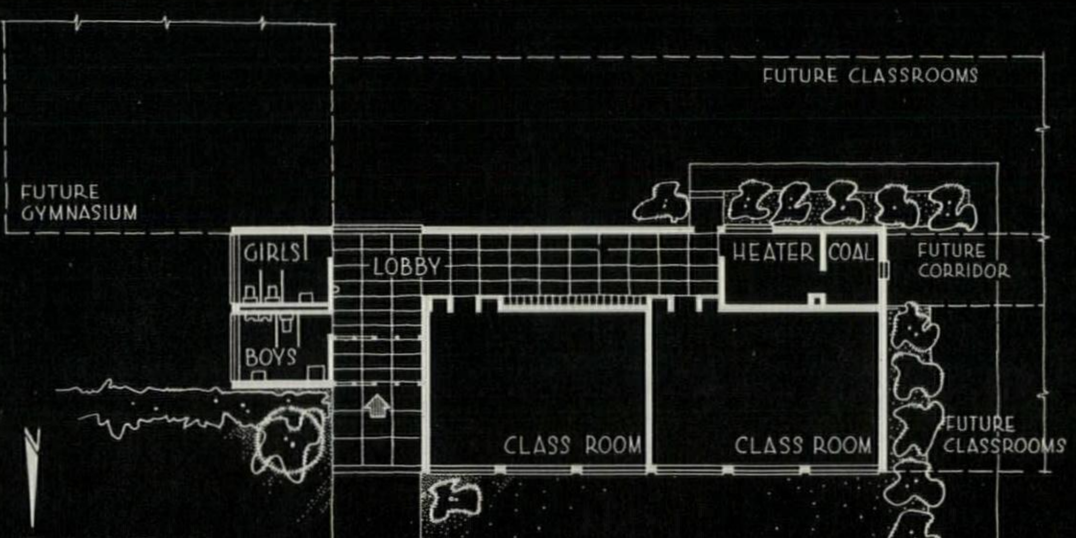
It should go without saying that the school should be designed for convenience, yet how many times is it a monument (to what? the school board?) rather than a convenient place in which to learn!

Three Lanham Act Schools

EBERLE M. SMITH ASSOCIATES, ARCHITECTS-ENGINEERS

1 SAND HILL SCHOOL RURAL WAYNE COUNTY, MICH.

In this small rural community near Detroit, school facilities formerly consisted of an old, wooden, two-room building at one end of the district. The new building serves a new, privately developed, low-cost subdivision, and since it was entirely financed with Federal funds, cost had to be kept to a minimum: $16,760.27.



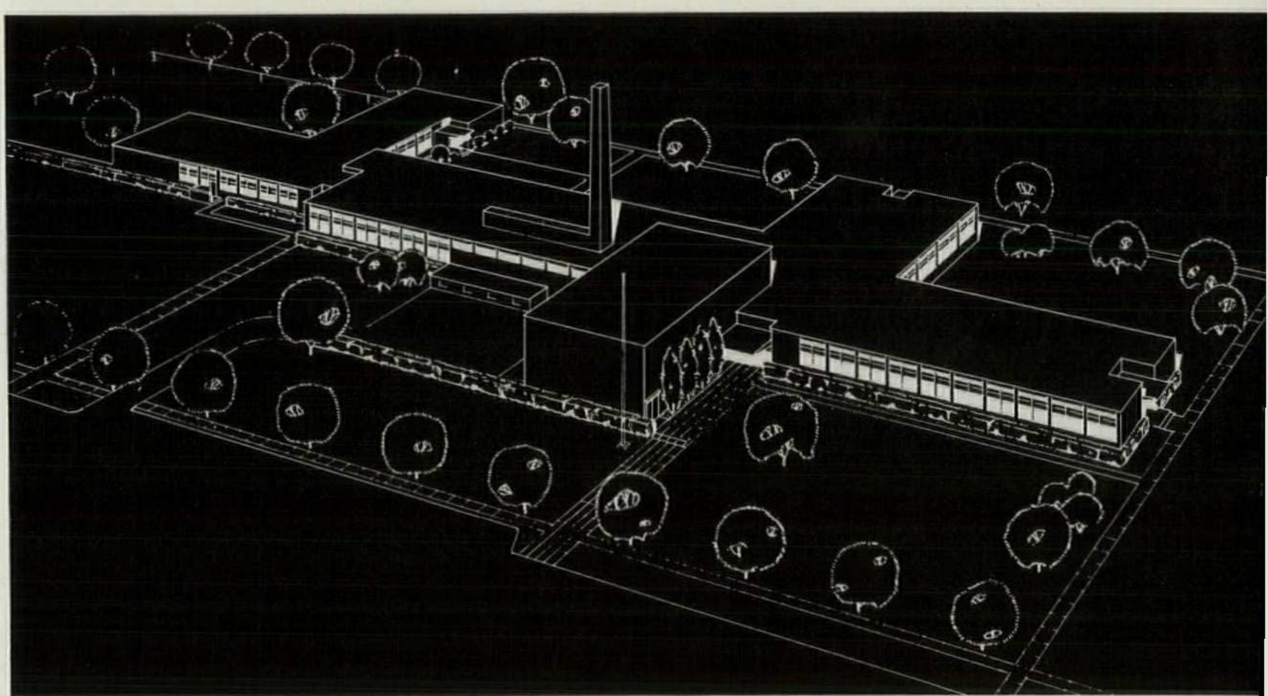
Just because it is a fairly heavy drain on the community purse, its cost should be held to the minimum consonant with the requirements. Certain portions (sports facilities, auditorium, spaces suitable for adult education, etc.) may have to become centers of activity for the entire community in order to justify their shares of the cost. And since the one sure thing about education is that it will change with the times, the school structure must be capable of sheltering each new development without restricting it. Of what use is a better pedagogical technique if the schoolbuilding prevents its use?

The schools presented here have differing antecedents, but all reflect educational trends. Some were built directly as a result of the war; some show war's effects in the materials employed in building them; at least one was mostly built before the war. Although some have obvious faults — even though some bear the unmistakable imprint of the dead classic thumb — each in its precise way is better than the schools we used to build.

Near Detroit Employ Similar Classroom Units

Built during the metals shortage, it is constructed of cinder block with a wood roof. The structural block is also the finish, inside and out.

The situation in many respects parallels conditions which gave birth to the familiar American little red schoolhouse. Although the times now are far from hard in the sense that they were then, the necessity here did exist for extreme economy of money and materials. Faults can be found in the Sand Hill School. It is unilaterally lighted (which some educators now say is not universally desirable); storage space for teaching aids is limited, and so on. But classroom windows do extend from wall to wall and to the ceiling, eliminating the glare-causing contrast between window glazing and adjacent dark interior wall surfaces; and there is a definite scheme for expansion should it be needed. The classroom unit, with modifications, is used in other schools by the same firm, shown on subsequent pages.



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CARVER SCHOOL, INKSTER, MICH.

Eberle M. Smith Associates, Architects-Engineers

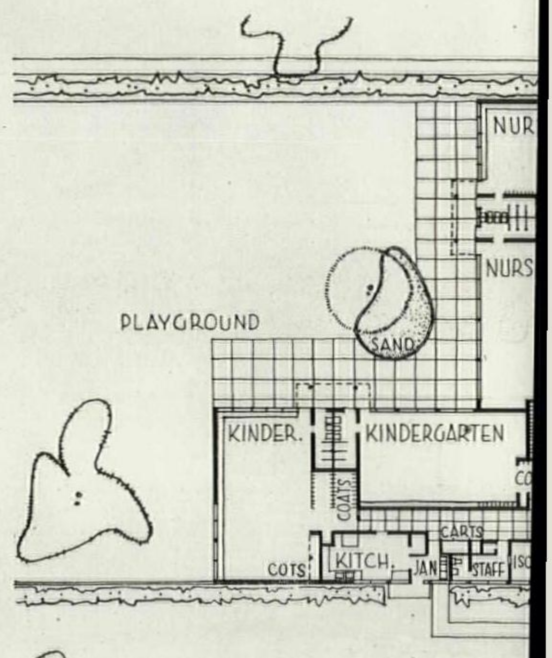
Inkster lies halfway between the great Willow Run bomber plant and the city of Detroit, and contains a 500-unit housing project built by FPHA for Negroes. Carver School, also an FPHA structure, serves this project. Entirely one story, the school spreads out to a total length of more than 421 ft. and a greatest width of over 191 ft. It has sixteen classrooms, of which one is used as a library; two kindergartens and two nurseries, with their own clinical facilities, office, and kitchen; and a multi-purpose room for use as auditorium, recreation room, or cafeteria.

Design and Construction

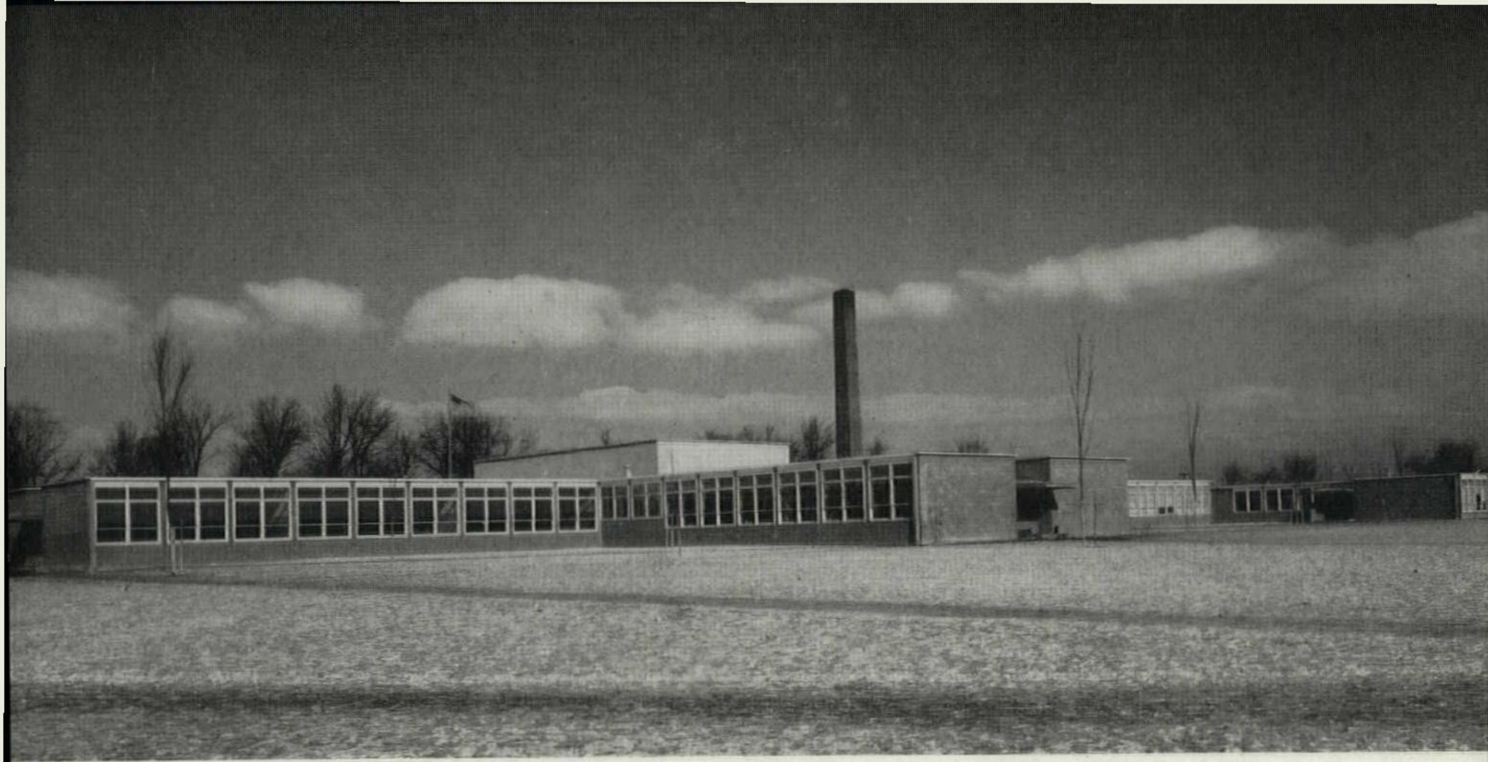
In general, the plan is schemed around the same classroom unit used in Sand Hill School (see preceding pages), and is conditioned by the same needs for economy. Waterproofed cindèr block forms the wall structure and finish; the roof is wood; floors are principally asphalt tile laid on the concrete slab. There is no basement. Except in the nursery wing and multi-purpose room, cinder block piers between windows are uniformly 10 ft. 6 in. on centers; corresponding rows of piers either side of the central corridor simplify the roof framing. Each classroom has a teachers' closet, bookcase, and children's lockers in the recesses between these interior columns.

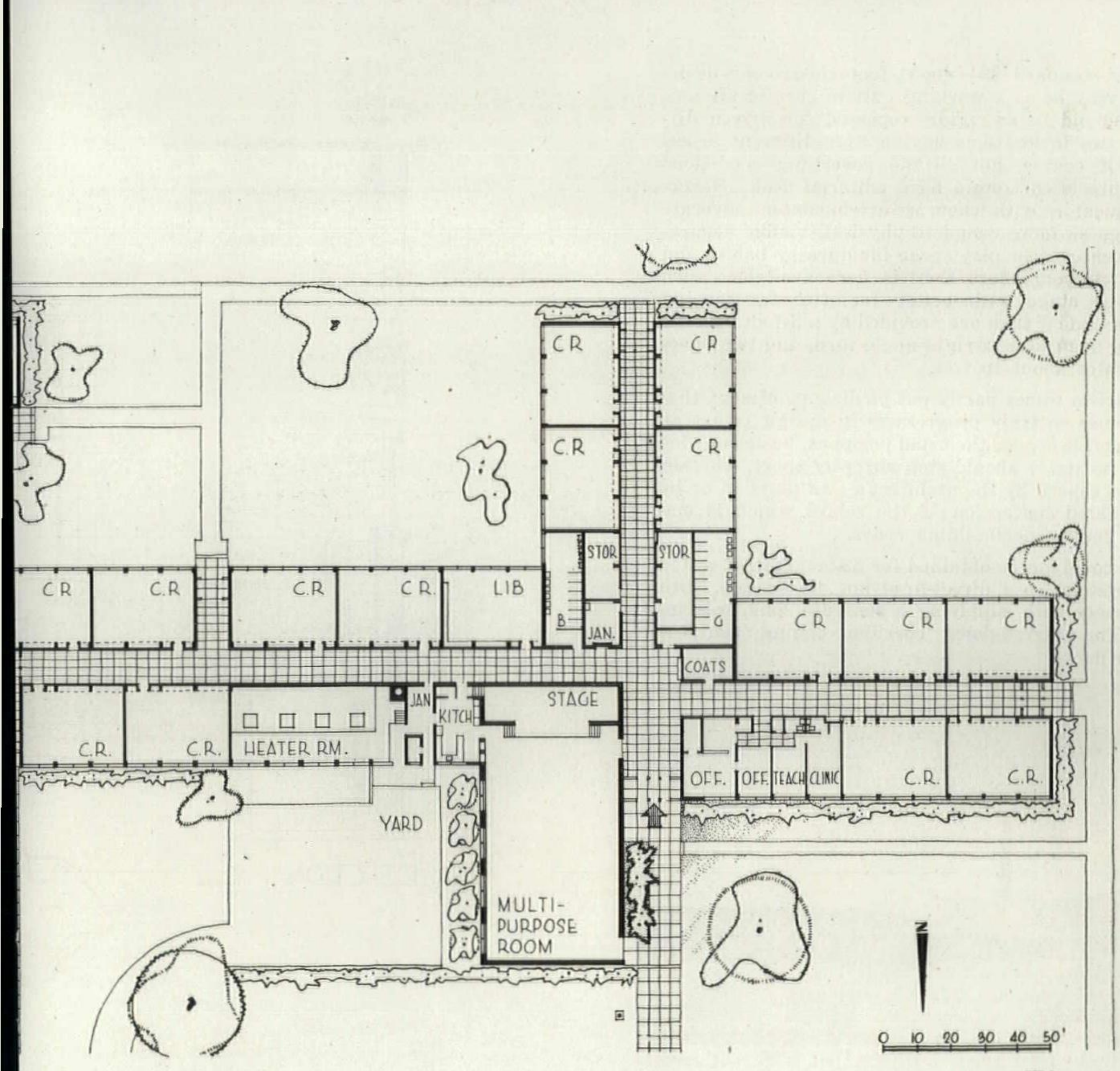
The four kindergarten and nursery rooms (each with its locker alcove, and with individual toilet rooms paired back-to-back against partitions which do not run all the way to the ceiling), open outdoors to a continuous concrete play area and a large common sand box. The whole nursery-kindergarten unit turns its back on the upper grades, and doors separate the units' lobby from the corridor which serves the rest of the school.

One cannot help but admire the straightforward orderliness of the plan, the sterling simplicity of the building in conception and execution, and the inclusion of those social necessities, the nursery and clinic, which have proved so practical. Perhaps that is why it seems



FLOOR PLAN





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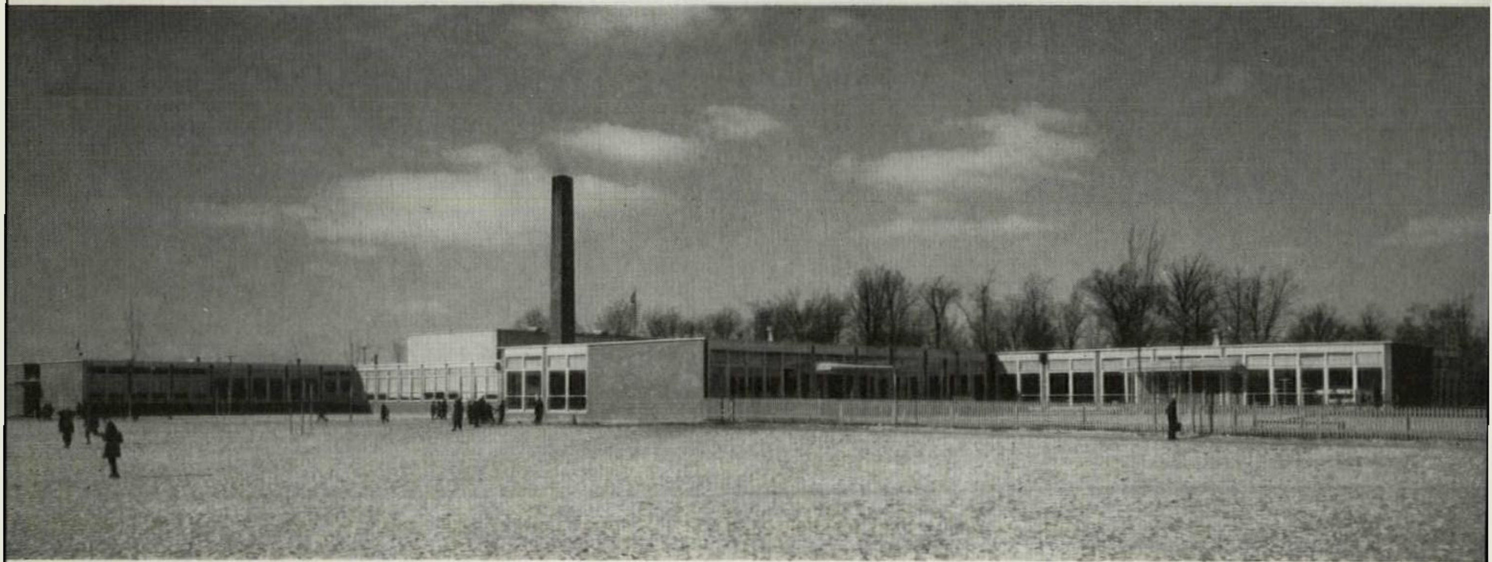
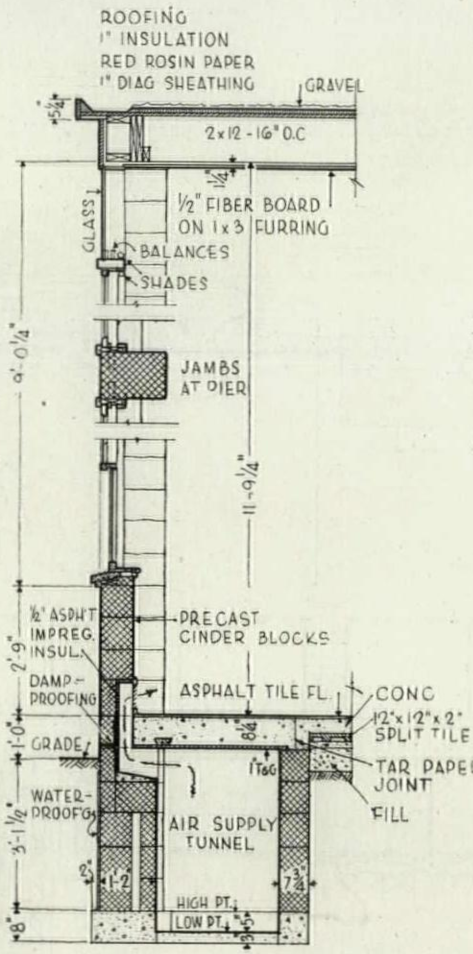


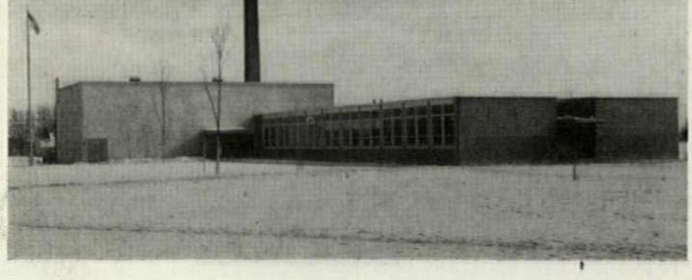
a pity the standard 23½-by-31-foot classroom—desirable as it may be as a working unit in certain circumstances—should be so rigidly repeated for fifteen different classes in locations having four different orientations. Of course, not all the governing conditions can be appreciated from a fixed editorial desk. Nevertheless, educators with whom we are in contact advocate such things as more complete physical, visible separation between outdoor play space for nursery babies and kindergarten youngsters than is here available; such things as a stage with better facilities for moving scenery on and off than are provided by a 3-foot passage containing five risers, a right-angle turn, and two doors in a length of about 10 feet.

Such criticism comes partly out of disappointment that a schoolhouse so truly progressive in design (what an improvement it is over the usual pompous, be-colonnaded school of its size!) should stop abruptly short, whether the stop is caused by the architect's own decision or by the antiquated conception of the school which is embodied in most schoolbuilding codes.

Priorities could not be obtained for a steam or hot water heating system, so a direct-fired hot air system, with four furnaces each supplying a separate zone, was installed. The furred-down corridor ceiling contains return air ducts.

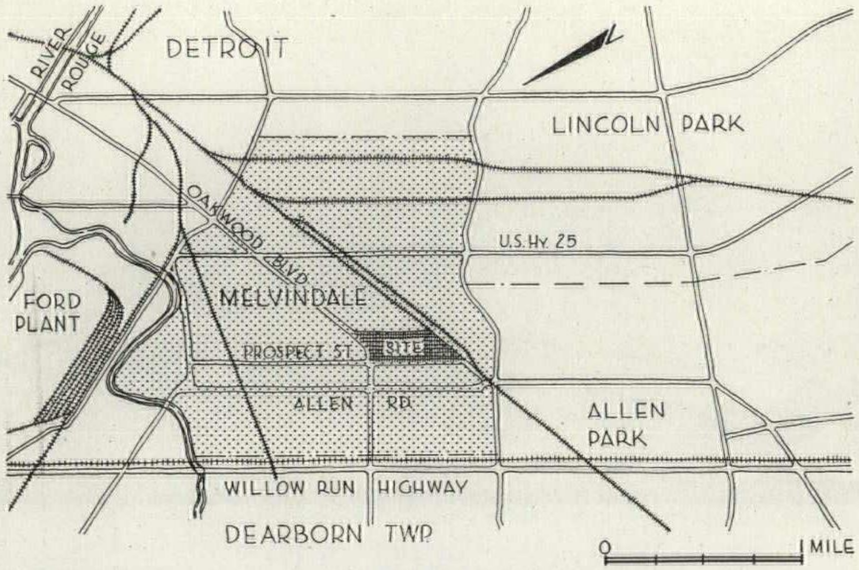


WALL SECTION.

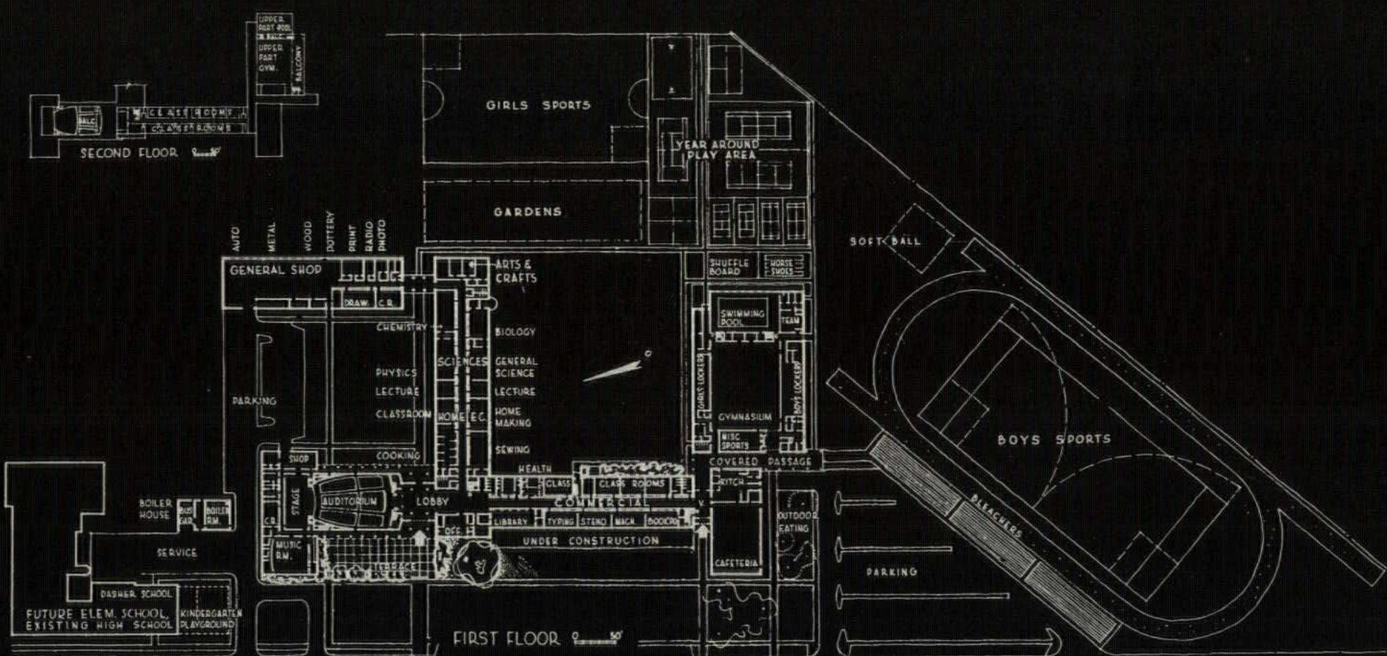


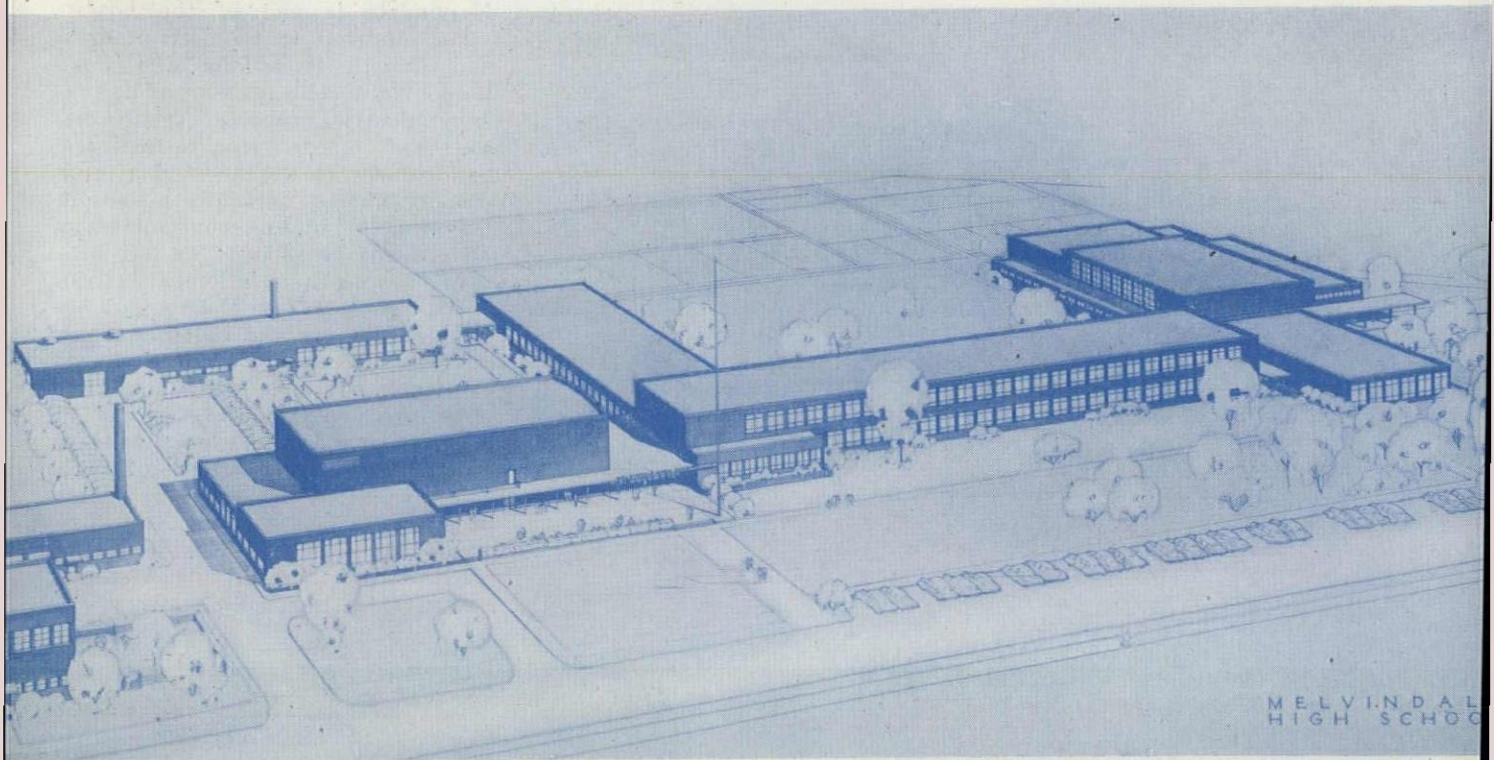
3 MELVINDALE, MICH.

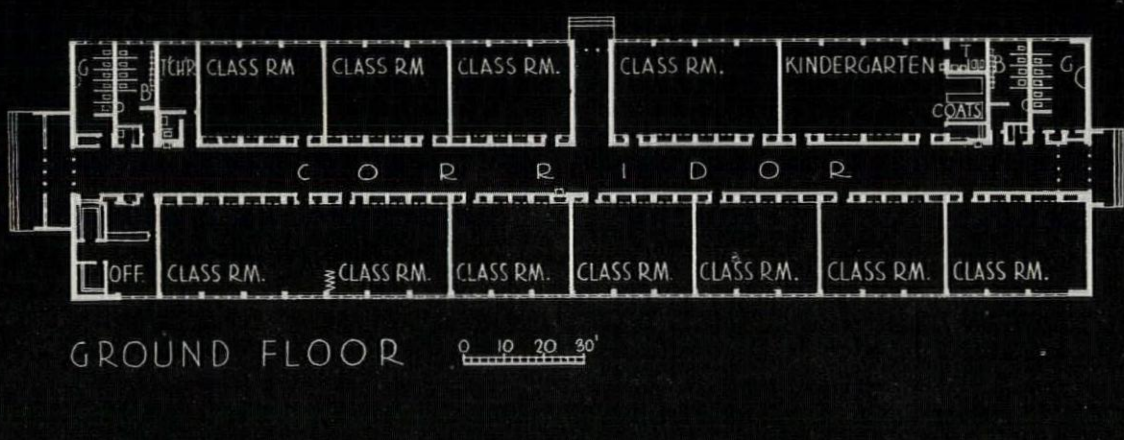
Eberle M. Smith Associates, Architects-Engineers



Melvindale is one of the largest school districts in the Detroit area, and though it adjoins the Ford Rouge plant, contains none of its taxable industrial property. Yet the district badly needs adequate facilities, particularly for the 800-student high school which is currently housed in an obsolete building constructed as an elementary school. At left is a map showing the relation of the proposed new school to the region; below are the site and building plans, showing the extent of development contemplated; and on the following page are plans showing the small central portion which is now being built. The building is to be of brick construction, "fireproof" since parts of it are to be two-story, and is to house elementary grades until the science wing is added. Then it will be converted into a high school.







At present only the central classroom block, and only the first floor of that, is to be built. However, the structure is designed to take a postwar second story as well as for horizontal extension. The entire development, from consideration of the future of the region to planning the specific units here presented, is an excellent example of cooperation between an architect and a progressive local board of education. Notice that the typical classroom is another variant of the unit shown as part of the two preceding schools.

HIGH POINT SCHOOL

Seattle, Washington

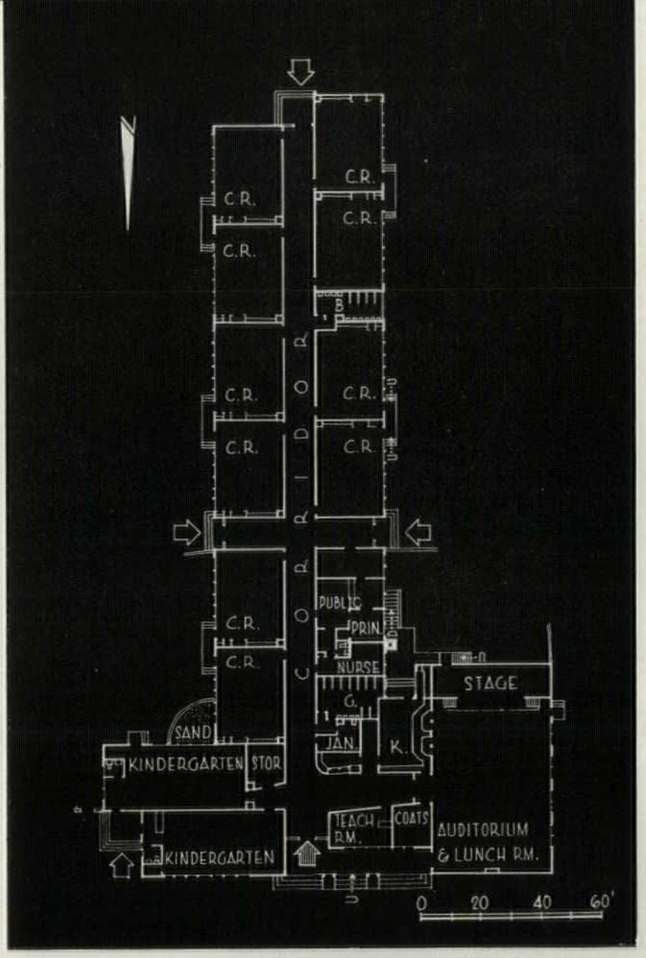
STUART, KIRK & DURHAM, ARCHITECTS

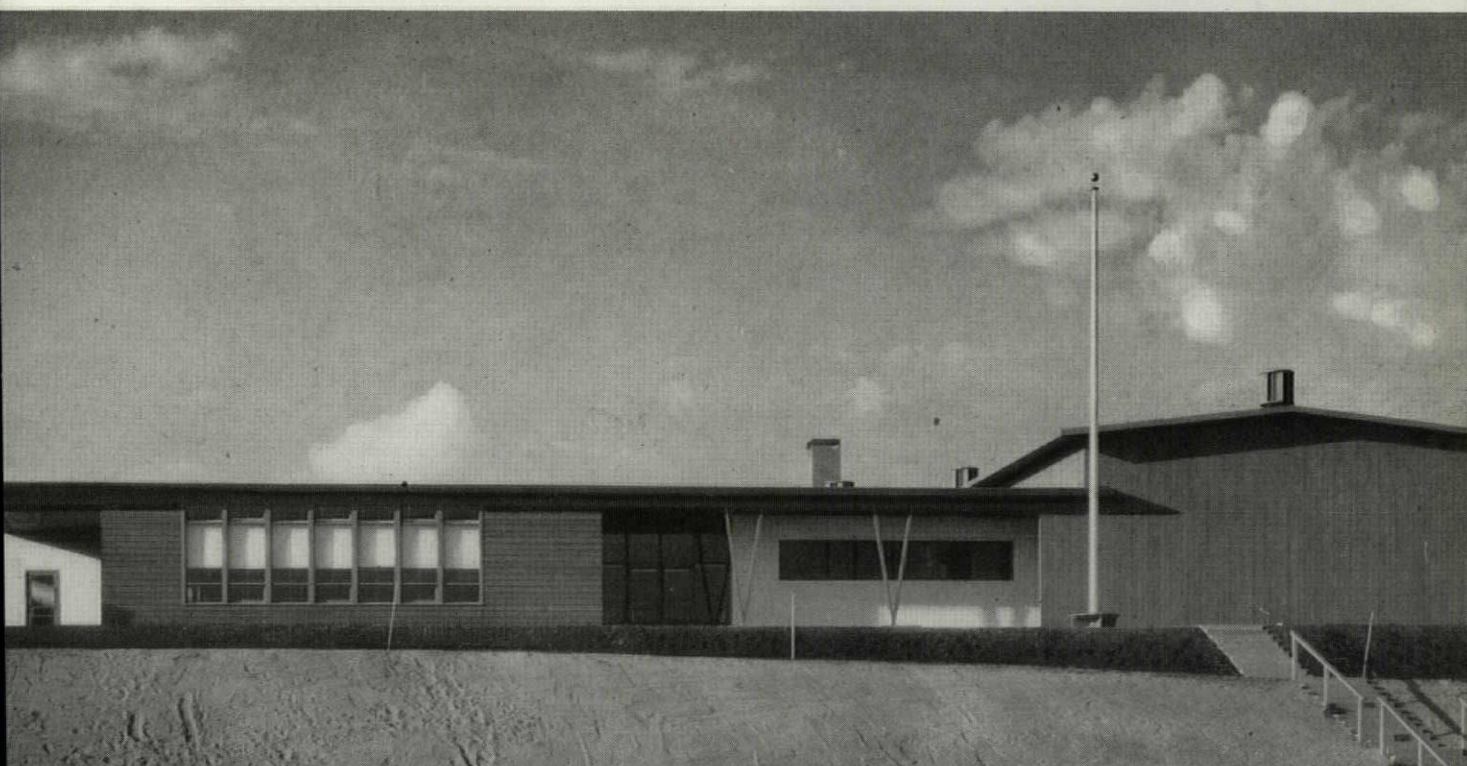
In developing the plans for this "emergency operations unit" under the Federal Works Agency program, the architects had to cope with several brain twisters in addition to the basic problem of providing a good environment for the kindergarten to third-grade-age children of 1,300 High Point homes.

War's demands meant the usual meager list of building materials. Almost in the realm of the mystical was the need to build a temporary structure in a permanent housing project in such a way that it would serve for an indefinite period without too much "temporariness" in either appearance or structural durability.

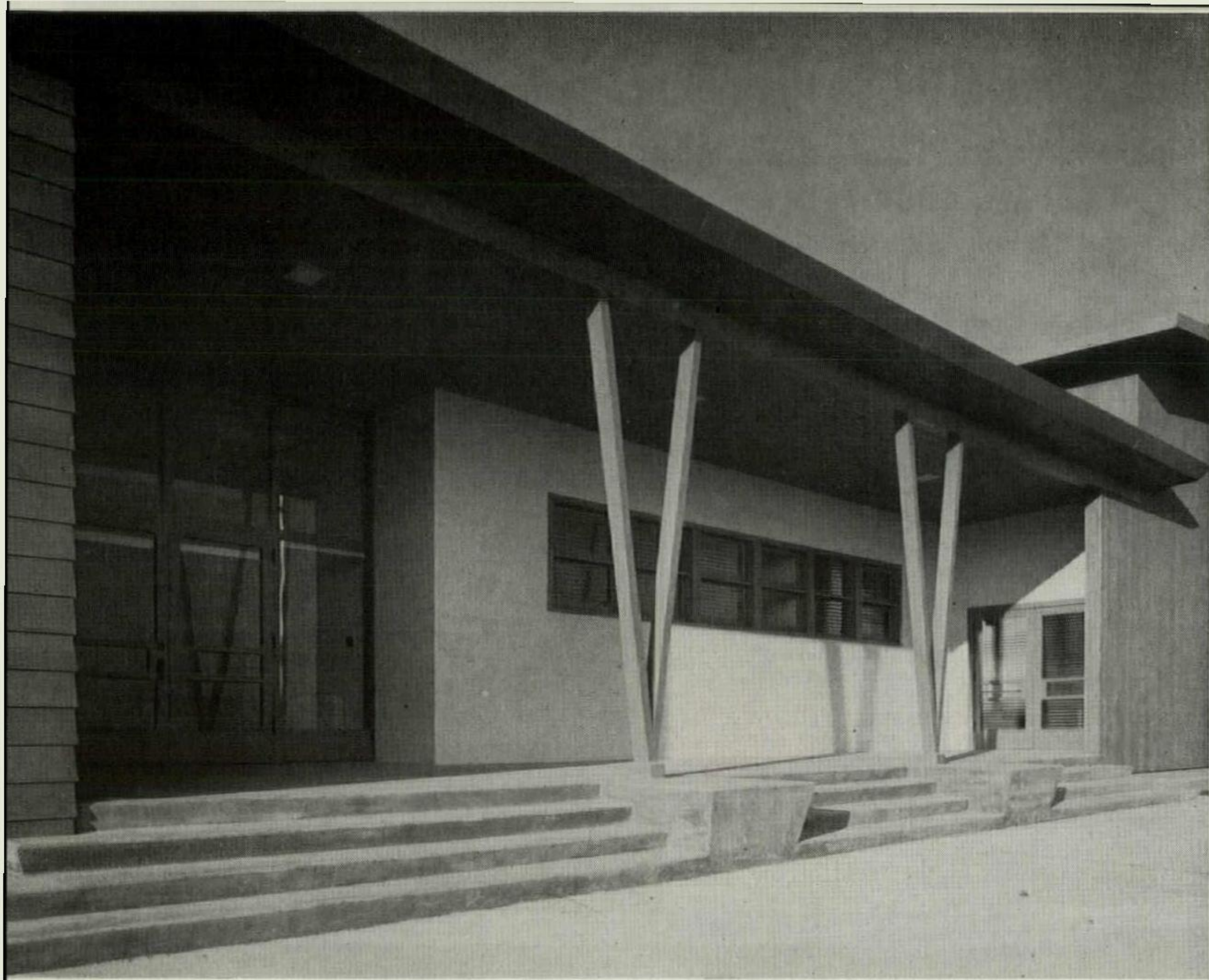
The site (the only space left after the completion of the housing) was a playfield, the central one of three arranged in terraces at about 25-foot intervals. The main entrance is so placed that it commands a view of Elliott Bay across the lower field.

Access to the grade school classrooms is provided by ten separate room entrances and two side corridor entrances (opening from separate play yards), as well as from the main entrance and doors at the far end of the wing. Location of the kindergartens (with a separate fenced play yard), teachers' space, service rooms, and the varied-use auditorium-cafeteria at the front of the building permits their independent use.





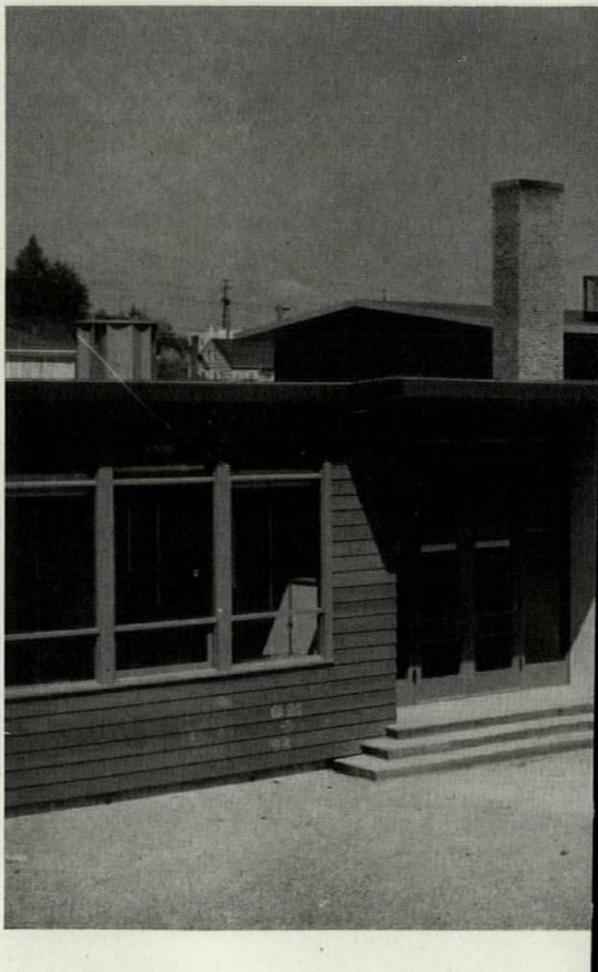
Photographs by P. A. Dearborn

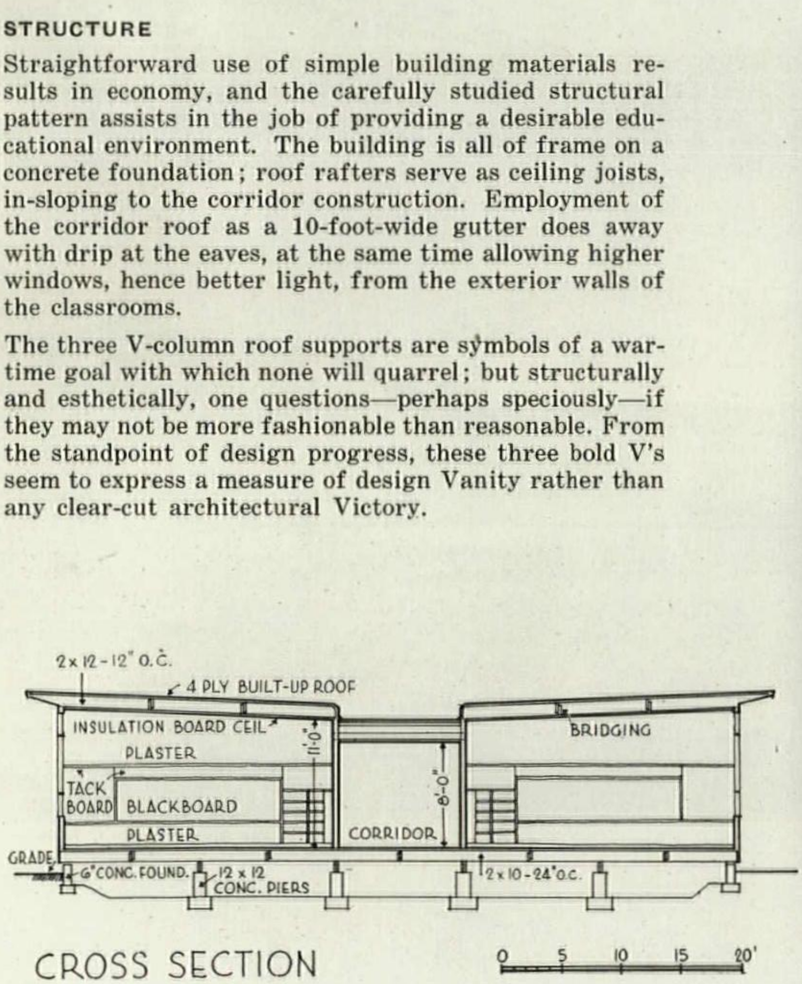


STRUCTURE

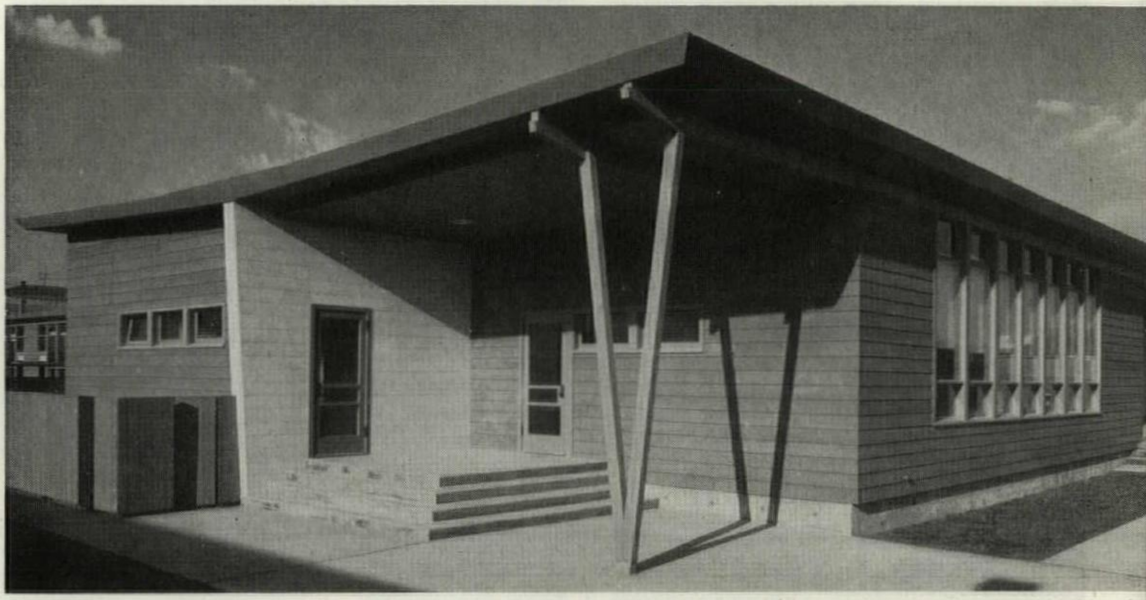
Straightforward use of simple building materials results in economy, and the carefully studied structural pattern assists in the job of providing a desirable educational environment. The building is all of frame on a concrete foundation; roof rafters serve as ceiling joists, in-sloping to the corridor construction. Employment of the corridor roof as a 10-foot-wide gutter does away with drip at the eaves, at the same time allowing higher windows, hence better light, from the exterior walls of the classrooms.

The three V-column roof supports are symbols of a wartime goal with which none will quarrel; but structurally and esthetically, one questions—perhaps speciously—if they may not be more fashionable than reasonable. From the standpoint of design progress, these three bold V's seem to express a measure of design Vanity rather than any clear-cut architectural Victory.

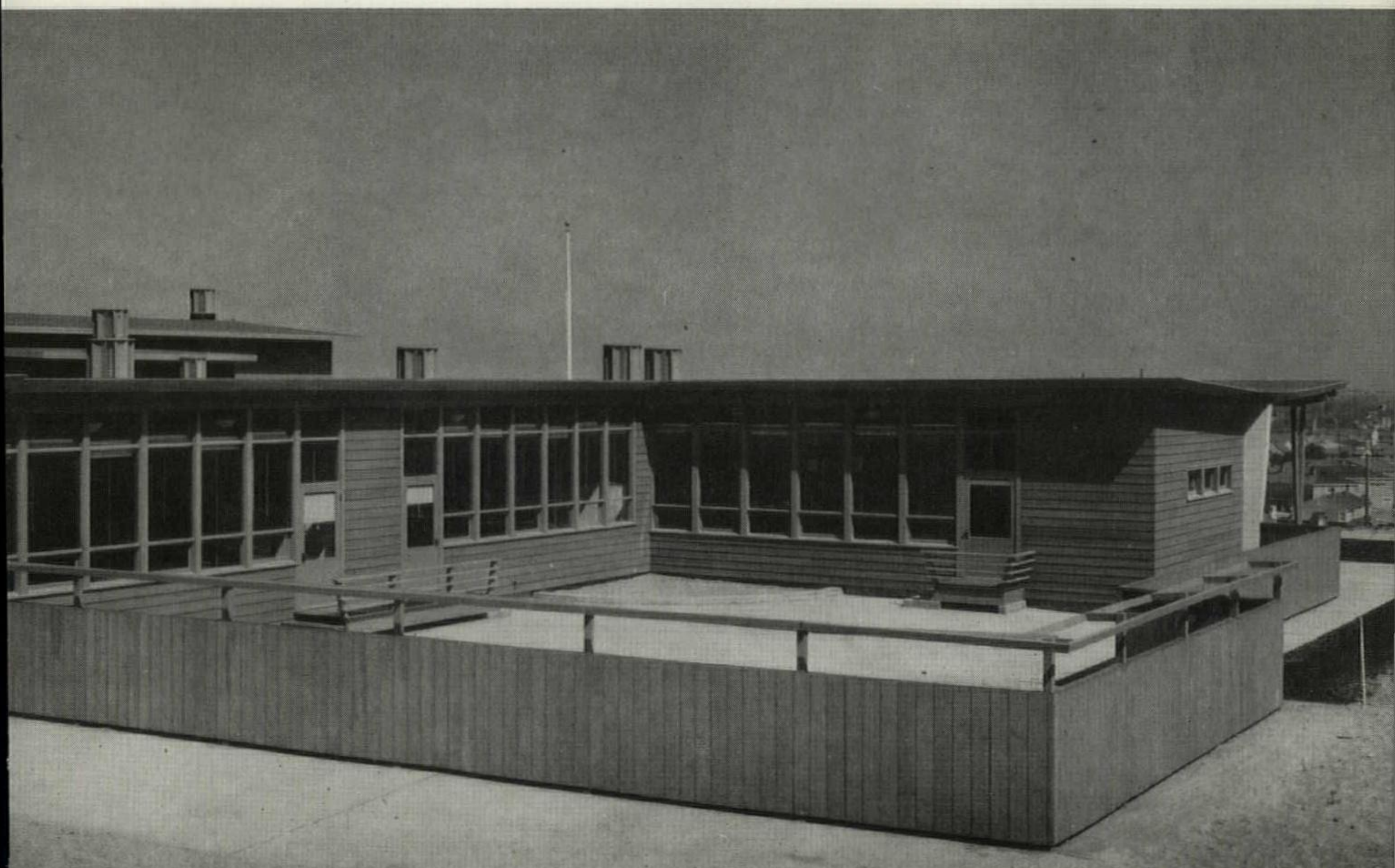


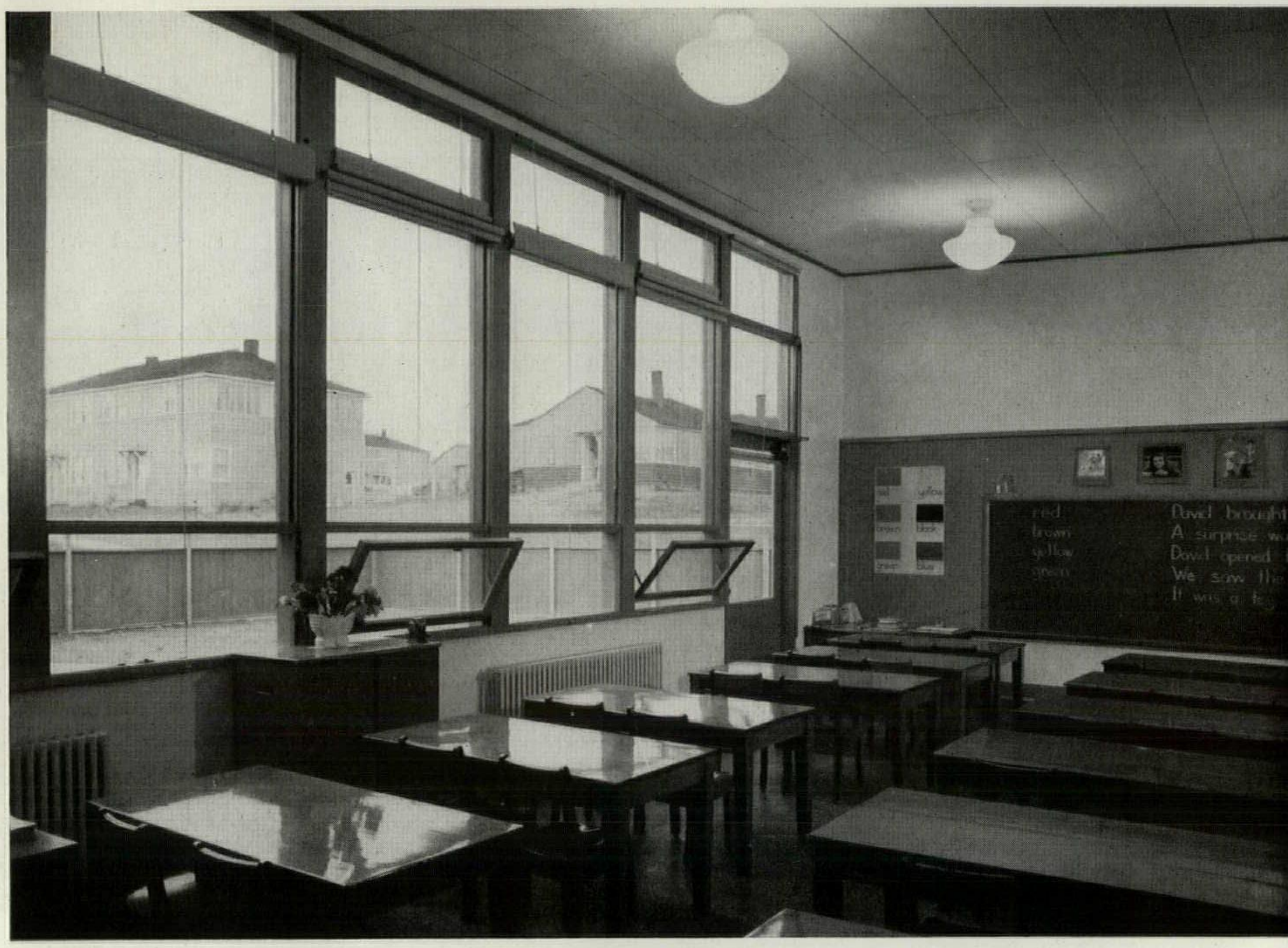


CROSS SECTION

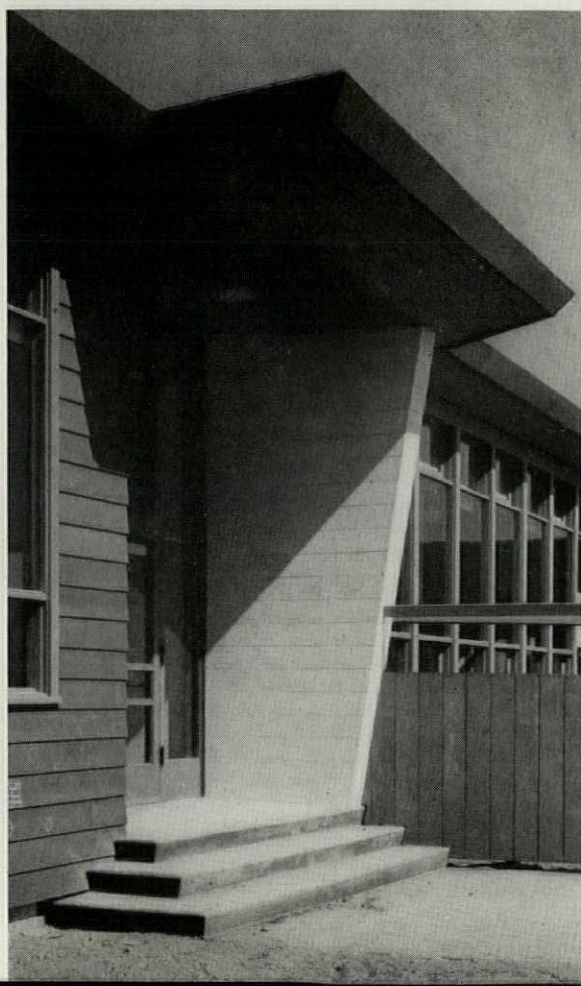


Kindergarten entrances immediately adjoin the gate to the high-fenced play yard. The eaves-height windows are equipped with operable panels at top and bottom to provide positive ventilation without draft. Rough-sawn clapboards are stained cherry red; vertical boarding is yellow, and the trim and soffits are painted turquoise.





Wood trim is stained warm gray; plaster side walls and above blackboard are off white; the rear wall and the wainscot under the blackboard are painted either turquoise or coral.

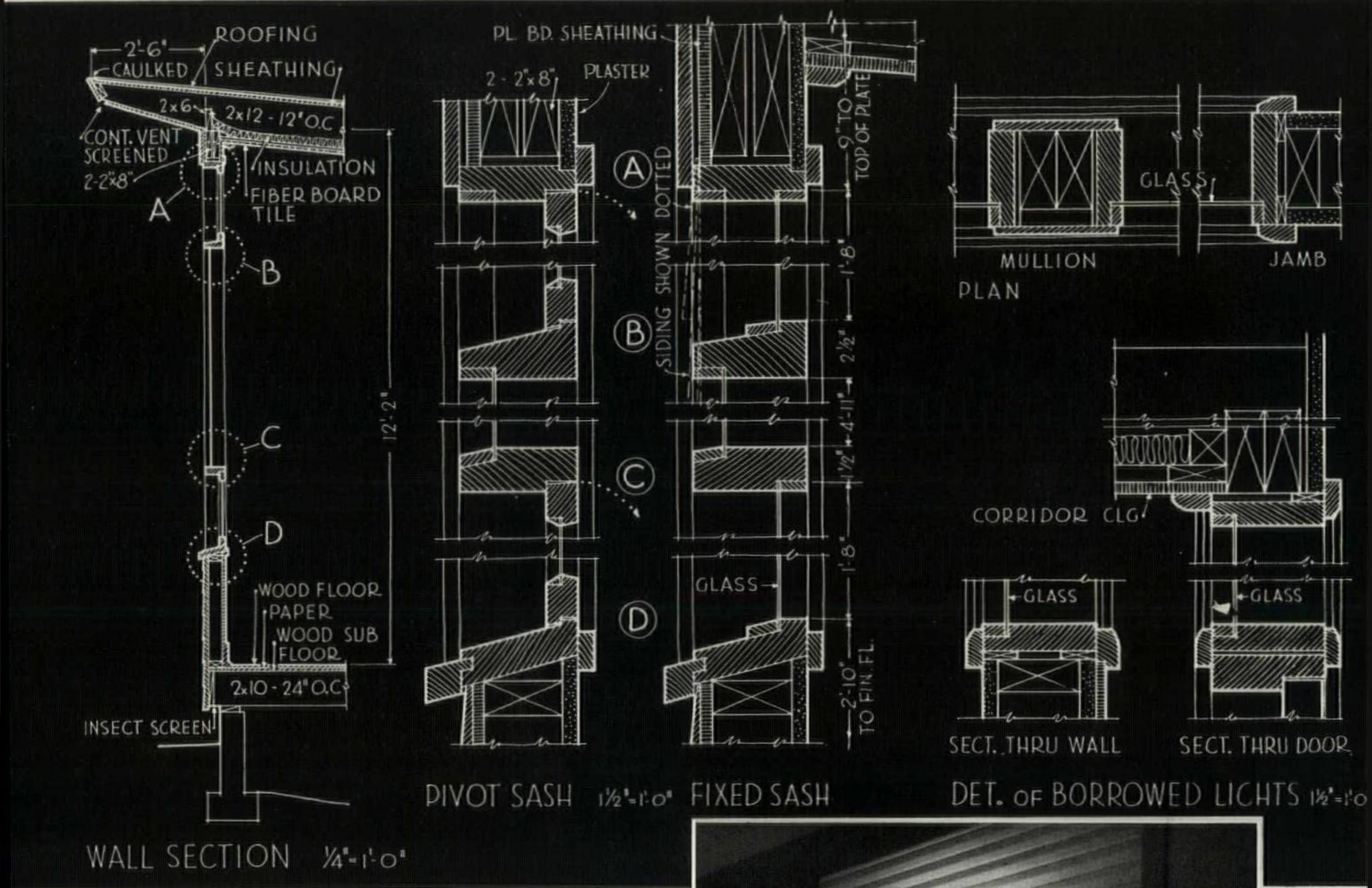


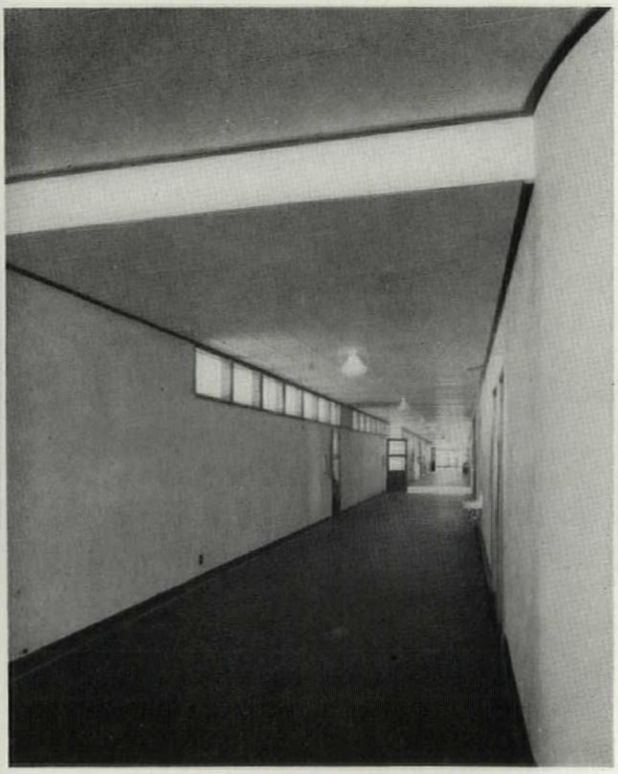
STUART, KIRK & DURHAM, ARCHITECTS

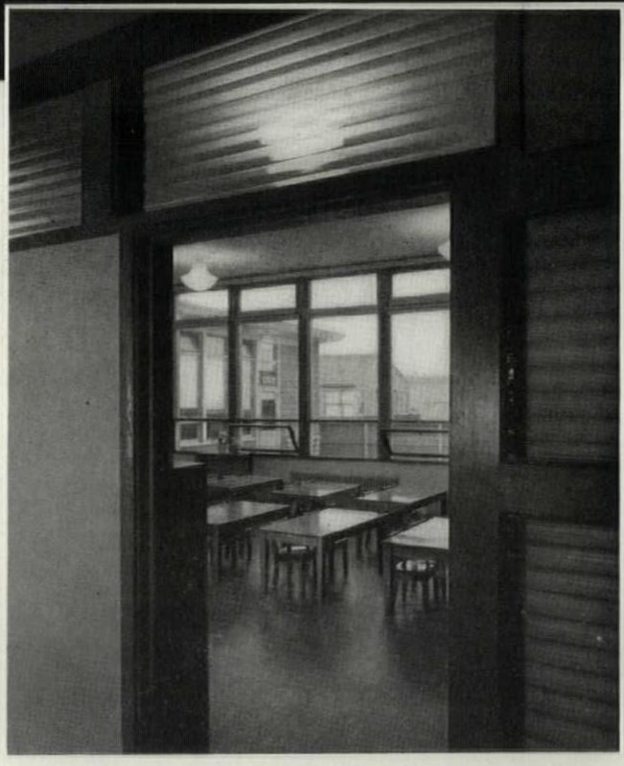
CLASSROOMS

Window bands up to the ceiling provide abundant daylight, which is controlled by shades. The windows are purposely located toward the rear of the room, so that light comes to all desks over pupils' left shoulders. In the face of fast-changing educational methods, wherein next week or next year it may be desirable to arrange room units in some entirely different fashion, many architects will feel that this design detail encourages inflexibility; furthermore, termination of the windows this side of the blackboard wall inevitably produces a corner pocket of shadow—a factor for which a compromise is found in the placement of the blackboard at the center of the wall.

Classroom floors (except in kindergartens and first-grade rooms where asphalt tile is used) are of maple; ceilings are fiberboard tile; walls are plaster finish. Floors of corridors, auditorium, and kitchen are surfaced with asphalt tile.

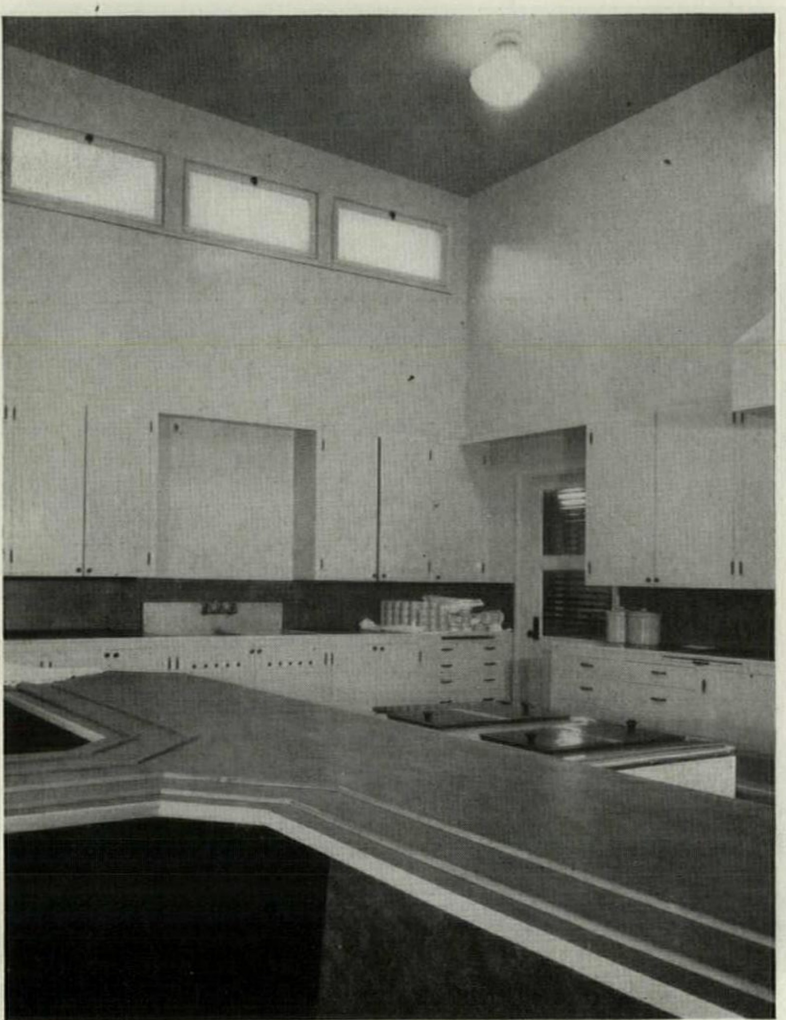






The 10-foot corridors are lighted by borrowed lights with ribbed glass, which run from the top of the doors to the ceiling. The ceiling finish is insulation-board tile; flooring is asphalt tile.

STUART, KIRK & DURHAM, ARCHITECTS



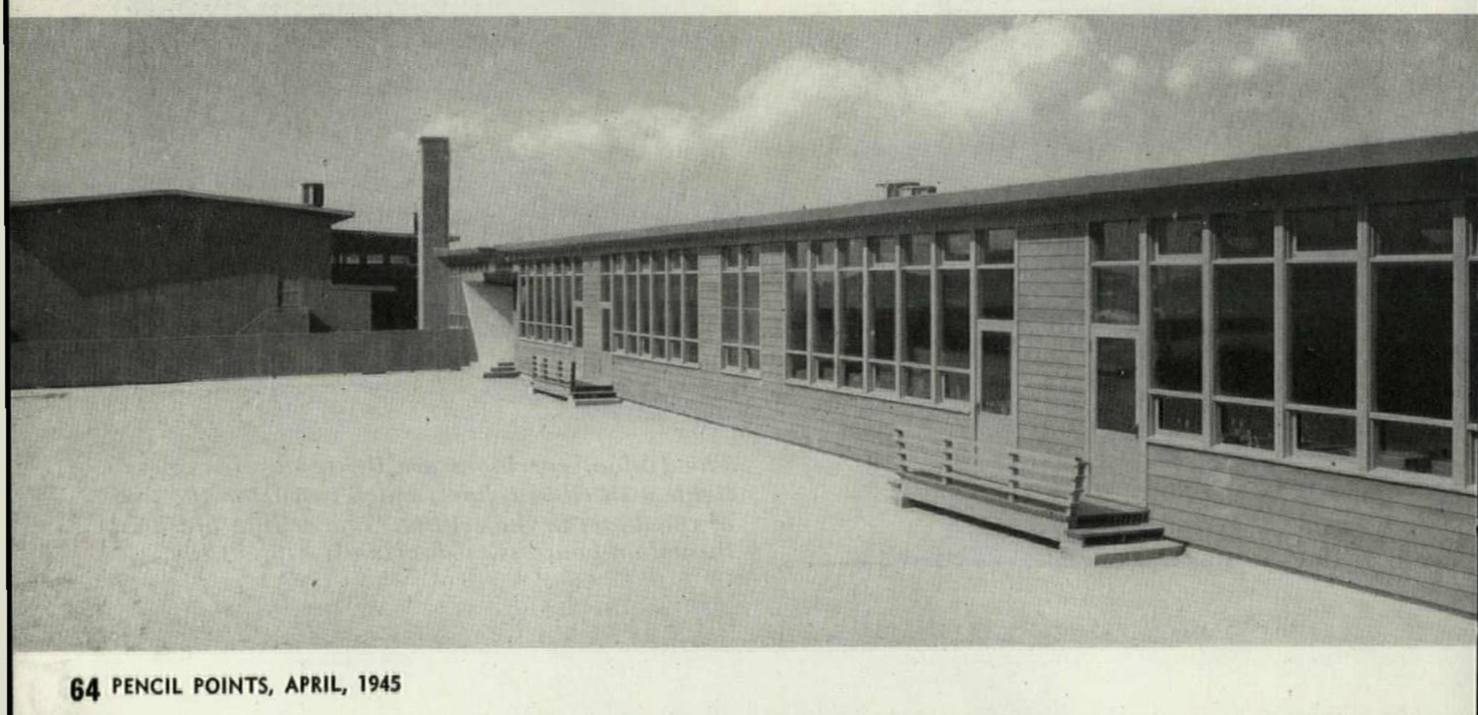
SERVING COUNTER, LOOKING INTO THE CLERESTORY-LIGHTED KITCHEN.

AUDITORIUM

In addition to its use for lectures, dramatics, and social gatherings, the auditorium (unit at left of photo below) is also the school lunch room, served by a well equipped adjoining kitchen. A service court for both the kitchen and auditorium is screened from the school play yard by a board fence. Plaster is used for both the walls and ceiling of the kitchen; the floor is finished with asphalt tile, and linoleum is used on all work and service counter tops. The auditorium is roofed with light member trusses fabricated with ring connectors.

The entire school is heated by a forced hot-water system with stoker-fired furnace. Total cost of construction: $101,320.

THE WEST PLAY YARD, WITH AUDITORIUM-LUNCH ROOM AND SERVICE AREA IN BACKGROUND.



CODES

SHOULD BE INSTRUMENTS FOR SCHOOL PLANNING

—whereas most schoolbuilding codes in existence are restrictive. The author, whose work with the Board of Education of the State of Connecticut has given him an intimate knowledge of the typical schoolbuilding code, contrasts the usual "regulatory" mechanism with the informative code which might be drawn up to give school designers insight into educational problems as well as more technical matters.

by JOHN E. NICHOLS, A.I.A., Supervisor
School Buildings and Plans
Connecticut State Department of Education

There was a time—not nearly long enough ago—when schoolhouses constituted the most hackneyed and uninspired of all the fields of architecture. They were the lowliest and apparently the most contemptible of all public structures—cast all alike in a mold that was thoroughly stark and hideous. Then the schoolhouse was the legitimate prey of any young architect bent upon a few scalps to establish his claim to experience. But why not? It was widely understood that a schoolhouse posed no real problem and therefore no challenge to a designer's abilities. There was precedent aplenty. Departures from precedent were frowned upon as unnecessary, wasteful, and even dangerous. The young architect had only to look about him and copy faithfully what others were doing. What was good enough for Podunk was, of course, just what Timbuctoo needed—barring a few minor adjustments in size.

The results of this attitude still are here to limit and otherwise control the school program today. These buildings—foursquare and ruggedly frugal—comprise probably a majority of the schoolhouses in use throughout our nation. In effect, they are nothing more than groups of one-room schools, gathered for convenience and economy around indoor toilets and auditoriums.

The blame for this situation does not rest primarily upon the architect. By far the greatest share of it can be laid at the doorstep of the educator himself, and of the public whom he had failed to reach. The schoolhouse was simply a natural outgrowth of education itself as it was commonly thought of at that time.

The school then was a little world unto itself—a world of books and chalk, thoroughly insulated against the living realities which existed outside. In its monastic way it was concerned with knowledge and facts for their own sakes, and for their mysterious impact upon the inner man. The pupil was not an individual at all. He was not even a child. He was a receptacle for and the future guardian over this world's accumulation of knowledge.

BUILDINGS FOR THE RECEPTACLES

The building needed for education of this kind was simplicity itself. Fundamentally it was only a convenient place where the receptacle might repose safely and more or less comfortably while being filled. For this purpose seats were provided, fixed row upon orderly row. In one of these, assigned to him, the pupil could listen, read from his texts, and parrot his facts back to teacher as proof that he had mastered them.

For the sake of convenience pupils were grouped into classes according to the number and difficulty of the facts they had mastered. The classes, in turn, were housed in cubicles arranged along a central corridor. Each class was a monarchy, a little sovereign kingdom, independent of and separate from all the others in a world that could little boast of international intercourse.

This pattern held for high schools as well as "grammar" schools. For though the older children circulated from room to room, they were visitors in each kingdom in turn. While there they renounced allegiance to all others. There was the kingdom of English, the kingdom of Latin—of Mathematics, History, and Science. From time to time new kingdoms sprang up to bid for recognition: Manual Training, Cooking, Sewing. But these upstarts were almost invariably relegated to the depths beside the boiler room and toilets. They were outcasts, frowned upon by the academic 400.

The subject itself, neatly and conveniently tied up in a watertight package, was the important thing. The pupil was a bothersome though essential accessory. He was expected to carry over the knowledge gained in one specialized area of subject matter and apply it to another wholly unrelated area—a feat the teacher apparently was either unable or unwilling to accomplish. More than that, the pupil was expected to integrate within himself those unrelated scraps of knowledge to form a well rounded, well educated, self-contained personality.

This was the school of *yesterday*—but the zombies still stalk abroad. It is what far too many, including some architects if their products may speak for them, think of as a school today.

The old-school-tie architect, en route to his next commission, could stir up his parti, salt it judiciously according to the code, season it liberally with poché, serve it up piping hot to an impressionable school board—and get away with it.

BUILDINGS FOR CHILDREN

Our schools have changed. And like everything else they are continuing to change. These two facts contain the meat of the problem which offers a challenge to the very best in the profession of architecture.

The accomplished change is the tremendous growth that has taken place in the variety and specialization of the educational program. Subject has been piled upon subject with little weeded out and, too often, little changed. The old evils have thereby been multiplied. The pupil, bewildered and lost, is immersed in a flood tide of specializations. This cancerous growth is no stranger to the architect. He has labored desperately to cope with it, providing more and more cubicles to compartmentalize the monster. Having dismembered him and cauterized the sections with enclosing partitions, he too often thinks his job well done.

But what of those changes that are not yet accomplished, that are still in the early stages of their development? These offer the greatest challenge of all to ingenuity, to imagination, to the architect's sensitivity. There is an increasing recognition of the fact that education which is static is decadent. Healthy life invariably exhibits signs of change and development. As education changes in emphasis, and scope, and techniques, so must the physical facilities which are provided for education's use.

PUPILS ARE INDIVIDUALS

First, there is the growing recognition of the needs of the pupil himself, his needs as an individual. It is the recognition that education cannot deal with the pupil's intellect alone, apart from his body and his emotions. The pupil is a human being with human needs for play, for rest and exercise, for nutrition, companionship, beauty, incentive, security, responsibility, accomplishment, self-respect. If education loses sight of one of these and fails in it, it fails in the task of bringing about the development of a well balanced, healthy adult.

A change is being exhibited in the school's growing recognition of the futility of exposing the pupil willy-nilly to this body of knowledge, and then to that. The job to be accomplished, pupil by pupil, must eventually take precedence over the autonomy of subjects and class schedules. The old barriers between areas of subject matter are at last beginning to be broken down and each drawn upon as needed for what it can contribute to the individual. This will call for a revised concept of "classrooms" and of integration between facilities to the end that the activities they accommodate may be better coordinated. Only then will the school function as an organism rather than as a collection of unrelated parts.

HOW DO PUPILS LEARN?

There is a growing understanding of the mechanics of learning. Although the Army's educational exploits have revealed nothing new, they have dramatized the effectiveness of methods that ordinary educators—and the public—have been slow to accept. Briefly, the learner needs incentive through a realization of the usefulness of what he is learning and, in addition, through the opportunity to put newly acquired skills and knowledge to immediate, practical use. The less artificial their application, the more valuable. In short, education is coming to recognize that *doing* must accompany *learning*.

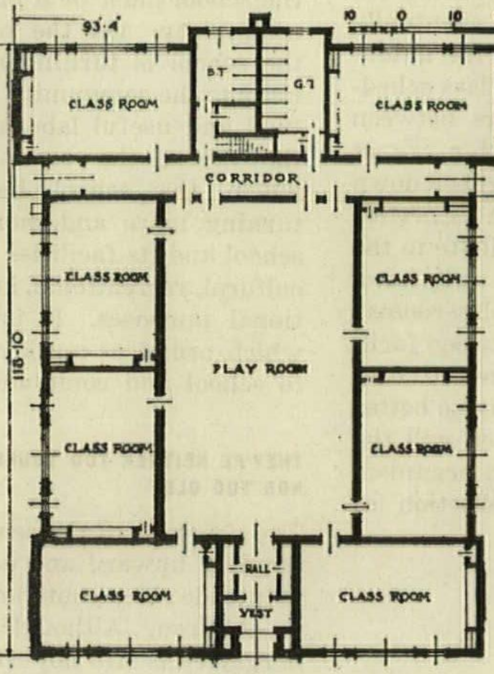
A change which has been in progress for many years, and is gathering momentum, is the shift of emphasis away from almost exclusive concern with an academic college preparatory program toward one better suited to the needs of that great majority of pupils for whom the public secondary school marks the end of formal education. Work of a decidedly vocational nature is taking its rightful place alongside that of a more "cultural" nature, to the end that youth may be better fitted to earn a living as well as to assume his other duties as a citizen in a democratic society.

School authorities and the public alike are coming to realize that the school must be a part of the community. On the one hand, the school is turning more and more to the community as a practical and useful laboratory. On the other, the community to which the school belongs is turning more and more to the school and its facilities for civic, cultural, recreational, and educational purposes. It is a trend which promises marked benefits to school and community alike.

THEY'RE NEITHER TOO YOUNG NOR TOO OLD

The program of the school is expanding upward and downward to include older youth and younger children. Although the kindergarten is still not everywhere accepted as a part of the public school program, the demands for nursery school education are already making themselves felt. At the other extreme, there is a pronounced need asserting itself for a continuation of the secondary program beyond the old twelfth grade. There is every indication that economic developments will cause this need to grow rather than diminish.

Turning from the developing functions of the school, there are other problems of cold economy. We must realize in a wholly practical way that there are changes outside the school which affect it very directly. First, there are the constant ebb and flow of populations that leave our schoolhouses stranded where no longer needed, that require them where they do not exist. There will be much of this in the years immediately following the war. They are wasteful and actually harmful to education—these half abandoned husks. There is a need, not for greater permanence of construction, but for lesser permanence at a corresponding decrease in cost. Second, a close relation of the first, is the problem of capital outlay for education. As the educational program



The plan at left and the three at the right are typical of school design not more than twenty years ago: symmetrical, ruggedly foursquare, solid—with the playroom(?), auditorium, or gymnasium carefully walled off from the public by a protective belt of classrooms. Particularly depressing is the location of boys' and girls' shower rooms, always a humid provision, below grade. Compare with the well ventilated Carmel School facilities, shown elsewhere in this issue.

improves in quality and expands in scope, an increase in operational costs will invariably follow. To offset them, at least in part, must come a means of providing the necessary facilities more cheaply than they have been provided in the past.

These, then, briefly stated, are some of the real problems that are facing education. They are the *real* problems that face the architect who undertakes to design a schoolbuilding.

There is but one excuse for the existence of a schoolbuilding: its performance as an instrument of education. No longer is it primarily a shelter for children, the excellence of which can be measured in terms of its safety and healthfulness for occupancy. Important as these qualities are, they are only incidental to the schoolbuilding's real function: that of making possible and actively encouraging the best possible educational program.

INFLUENCE OF THE ARCHITECT AND IMPACT OF THE CODE

The architect has a far greater influence on education, for good or ill, than many realize. His is a grave responsibility, indeed, for the building which he designs today will go on influencing the activities within it for many years to come. The building designed in terms of the present—no matter how carefully—will from that moment fall behind the advancing developments in education, and, falling behind, become a drag upon them.

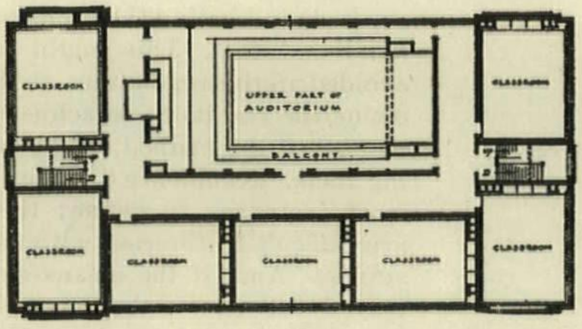
Beside the real, fundamental problems which face the architect, questions of fire-resistance and window sizes and numbers of toilet fixtures pale to insignificance. Such questions are concerned only with the tools with which the architect works in arriving at the ends he seeks.

School design has become complicated and difficult. It is a highly specialized field, calling for an understanding of the problems which must be faced, and for skill in their analysis and solution. The architect who relies solely upon his intuition or the convictions growing out of his own school experience is both presumptuous and foolhardy in the face of his responsibilities. But where is he to turn for an understanding of the problems confronting him and for guidance in solving them? To the School Building Code? Let us examine for a moment the typical school building code. It is composed usually of the following elements, expressed in terms of allowable minima:

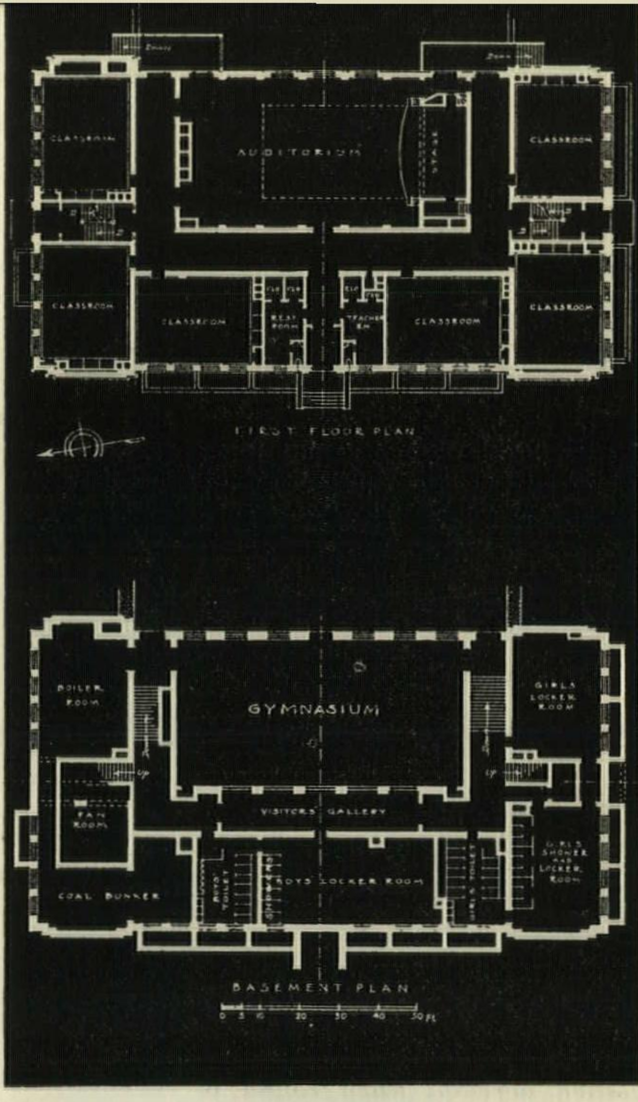
SITE—Required sizes, physical characteristics.

BUILDING—Orientation of rooms, distances from boundaries.

CONSTRUCTION—Types of construction compared with the number of stories, live loads and al-



SECOND FLOOR PLAN



lowable stresses, qualities and kinds of materials.

LIGHTING—Sizes and locations of windows, types of window shades. Number and wattage of lighting fixtures, wiring systems.

HEATING AND VENTILATING—Temperatures to be maintained, protection from radiators, amount of fresh air per pupil to be introduced, design of ducts.

PLUMBING—Types and numbers of toilet fixtures in relation to enrollment, methods of installation, design of sewage disposal systems.

CORRIDORS, STAIRS, EXITS—Widths and locations for emergency egress, enclosures, hardware, lengths and steepness of runs.

ROOMS—Length, width, height, blackboard, spacing of desks.

FIRE PROTECTION—Fire alarm systems, extinguishers, fireproofing, fire escapes.

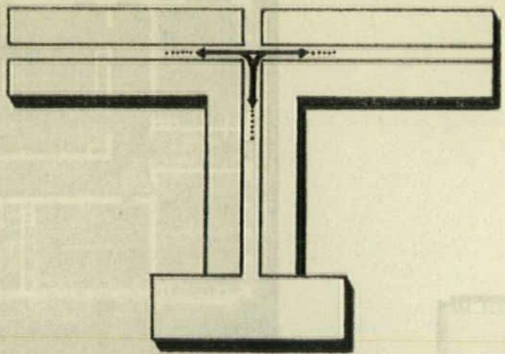
GENERAL—Forms, licenses, permits, contracts, insurance, bonds, etc.

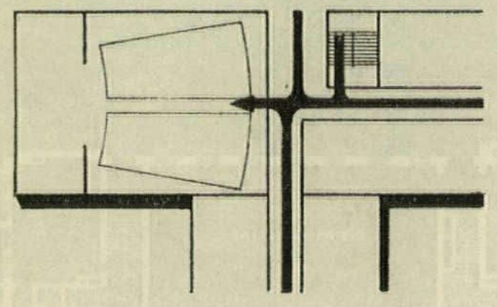
How effective are such codes in producing really effective schoolbuildings? Little or not at all. They all but ignore the function the building must perform in the educational program. Through their exclusive attention to the immediate well-being of the occupants, they give the impression that this consideration is the only significant one. Thus they succeed in producing only a safe and comfortable shelter—a shelter which fails to recognize the very reasons for its existence.

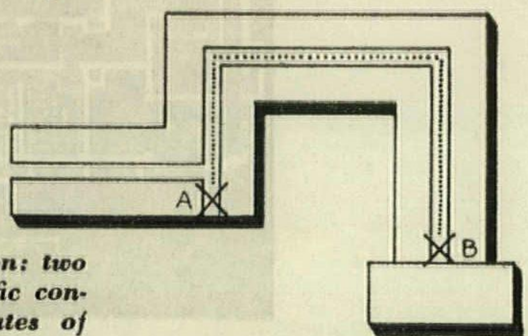
YET SAFEGUARDS ARE NEEDED

It is a tragic fact, however, that such codes remain a practical necessity. Despite the fact that most architects, without compulsion, would provide amply for the health and safety of the pupils and for economical building maintenance, there are always the fringe who would not. Either they are ignorant of the simple fundamentals of their profession or they lack the gumption to hold out against the demands of an ill informed client. The mandatory code can be a bulwark and a comfort. "You see," says the lazy architect, "I'd like to do this the way you want me to, but the CODE won't let me."

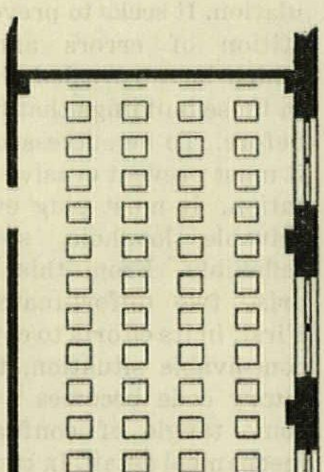
This code is concerned with regulation. It seeks to prevent a repetition of errors and abuses which have revealed themselves in those buildings that have gone before. To be successful in this, it must prevent evasive interpretation. It must plug every conceivable loophole, specifically, inflexibly. From this necessity arise two unfortunate results. First, in its efforts to cover every conceivable situation, the regulatory code becomes a cumbersome tangle of confusing and mechanical detail. In coping with it, the architect's attention becomes so absorbed with meeting all its demands that his efforts become stilted and cautious. Lit-







Common faults in circulation: two top schemes show how traffic congestion develops when routes of travel to the auditorium and to other general service facilities converge. Center scheme shows an auditorium reasonably accessible to the public, but in bad weather it might be hard for performers to reach the stage unseen. Bottom sketch: overlong corridor travel between rooms.



"Typical" classroom envisioned by most codes: four walls in perfect rectangle, 12-foot ceiling, 22-foot width, fixed seating, regulation blackboard, unilateral lighting, etc. What chance is there for differentiation of function? Variation in shape, multi-lateral lighting, abundant working equipment and storage facilities, flexible seating, and some degree of integration with the outdoors, are essential if the room is to fit its use.

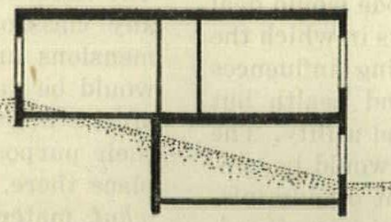
tle by little he loses sight of the bigger issues that once he may have glimpsed.

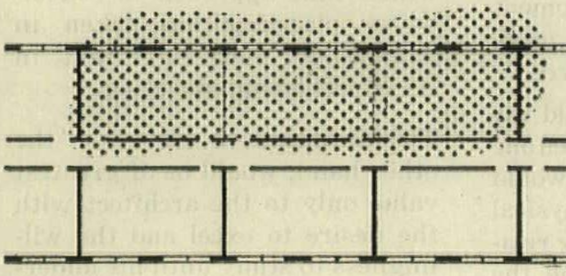
MINIMUM—OR OPTIMUM?

Again, in its efforts to be specific, the regulatory code too often succeeds in binding the architect hand and foot. This might be avoided if the regulations could define the results to be achieved instead of the method of achieving them. Results are difficult in most instances to define; they are difficult to forecast with exactness. And, if the means employed fall short, the harm is done and cannot be undone. Until the architect becomes the contractor, the client cannot reject and refuse to pay for a building that is disappointing in its performance. For protection, then, against the architect who aims just to get by, the methods he employs must be specifically defined.

It is a disturbing fact that minimum requirements become accepted optima in the minds of many architects. Perhaps this is understandable. The very multiplicity and detail of the regulations he faces force him to accept them as major objectives. It becomes a question not of accomplishing something through them but of just complying with them all. No wonder, then, that finally the minima become, not points of degradation below which his work must not sink, but the goals he is asked to achieve.

The regulatory code, built as it often is upon a concept of education and its physical needs that has been thoroughly discredited, tends actually to perpetuate mediocrity through procedures that are no longer adequate. We find in it directions for spacing desks and aisles—as though a satisfactory educational program could employ a rigidly fixed seating pattern! We find limitations upon the depths that classrooms may be sunk below grade—as though a semi-basement room could somehow be a satisfactory





If you take codes literally, when you need a large classroom to use as a shop, you must maintain the standard width. So you throw two or three "typical" classrooms together and equip the teacher with roller skates. And if the resulting room is half underground, well, shop work isn't exactly school work anyhow—or is it?

place for children! It even stipulates measures for waterproofing parapets whereas it would be difficult to discover any function which justifies their existence—and still they go on leaking. Regulations such as these go on year after year, conjuring up mental images in the minds of architects and schoolbuilding committees of procedures and types of facilities that have been long in dying because they are not allowed to be forgotten.

The old line regulatory code, then, has failed as a positive factor in the production of satisfactory schoolbuildings. It has tied the architect's hands, misdirected his attentions, perpetuated misconceptions and half-conceptions, and it has shed little light upon the real problems of function and design.

THE INFORMATIVE CODE

I am convinced that the architect would respond with greater over-all success to a far different approach. There are legions of professionally competent men who desire to do more than a mediocre job, who earnestly desire to do work of outstanding excellence. Given intelligent direction they can. Given a thorough understanding of the problems and objectives, a goal toward which to strive, they would rise above the morass of dull and lifeless half-measures.

For them the schoolbuilding code could be a source of information—even of inspiration. True enough, it would not form a prop for the weak or a defense against the unscrupulous and uninformed. But there is every assurance that in the long run it would produce results that the regulatory code cannot.

The informative code, as opposed to the regulatory code, would contain practical background information — stripped of pedagogical terminology—on the objectives and philosophy of education. It would distil our knowledge of child and adolescent psychology. It would provide an understanding of those factors which contribute to sound intellectual, emotional, and physical development. It would describe the mechanics of learning and evaluate the techniques of teaching.

UNDERSTANDING OF FUNCTION

Unlike the regulatory code which deals with the details of the school plant without reference to their functions, the informative code would deal with education as it affects the school plant. Instead of specifying the size of the site, it would first explain *why* various outdoor facilities are needed—their purpose, their bearing upon the educational process and upon the child's physical and social development. It would shed light on their importance to the recreational life of the community. It would discuss the uses and relative merits of various outdoor facilities and equipment, describe them, point out factors which need to be borne in mind when laying them out. The question of the site's size, then, would issue logically from an understanding of its function.

THE INFORMATIVE CODE COULD BE A WORKING TOOL

The informative code would deal with the many ways in which the layout of a building influences not only safety and health but also appearance and utility. The number of stories would be considered in the light of administration and convenience. Corridors and stairways would be studied from the standpoint of the demands of ordinary conditions affecting circulation and access—not those of emergency egress alone. Considerations of cost would be weighed against those of effective functioning in arriving at a solution designed to give the greatest returns in educational value.

Lighting would be discussed, not in terms of window sizes and locations, but from the standpoint of results desired and the reasons for them. And the informative code would be practical enough to point out the shortcomings of the teacher as an automatic shade regulator and light switch. It would be technical enough to resort to facts and diagrams on such items as glare, reflection, and wire size —but always from the viewpoint of the pupil's needs.

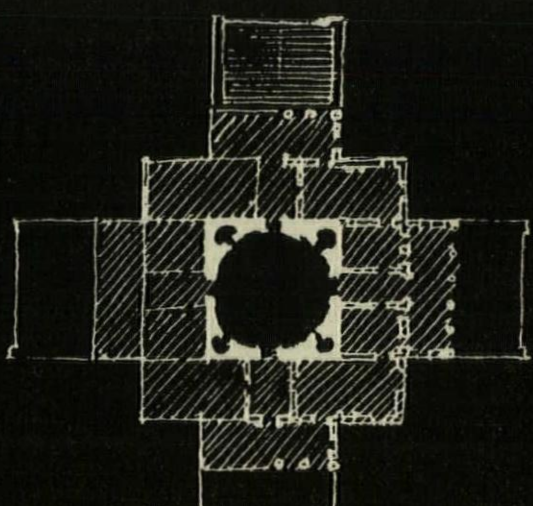
The classroom would not be just any classroom of specified dimensions and temperatures. It would be described in the light of the activities it houses and their purposes: just *what* takes place there, *how* it takes place, *what* materials and equipment are used, *how* they are used, *when* used, and *where* stored.

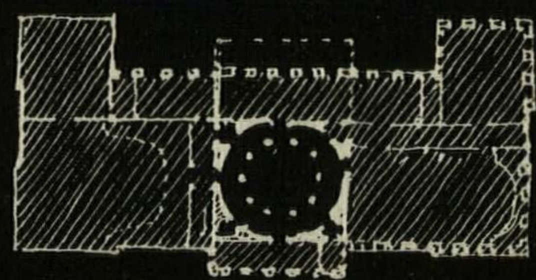
The informative code would explain the relationship between one activity and another. It would discuss the influence of physical relationships upon working relationships. It would outline the principles that operate to integrate the various elements of a building so that they function cooperatively.

It would list the many types of learning activities and services, discussing their value in achieving various ends. The school stage might then be seen as a working laboratory rather than a place for exhibitionism. The value of certain "frills" might then become apparent, together with their physical needs.

The old regulatory code was designed for the architect who was content to slap out his *parti* while running after his next commission. It was a handy, quick-reference volume which could be relied on to list the "musts" and not bother him with extraneous matter. It practically invited superficiality. We have but to look around us to see the toll which that approach to schoolhouse planning has taken in money and, more important, in its effects upon education.

The informative code, on the other hand, would be of greatest value only to the architect with the desire to excel and the willingness to study until his understanding of the problems he faces is a part of himself. The truly informative code does not exist except here and there as a timid shadow. But it can be developed—and if school authorities are to hope for the schoolbuildings they desire, they must place in the hands of the architect the information he needs, a vision of the ideal which will carry him far beyond the piddling minima that now we accept as "good enough."





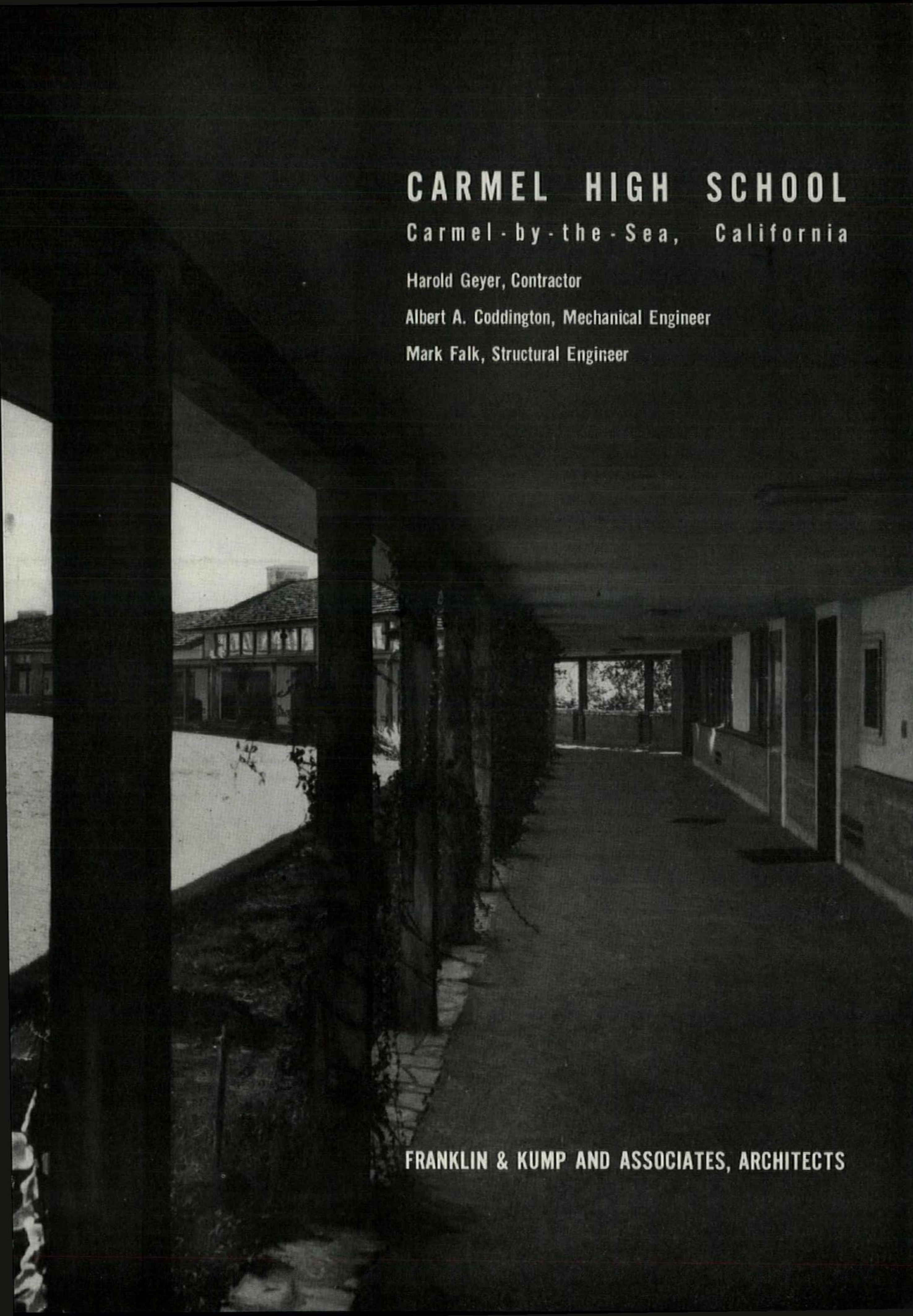
CARMEL HIGH SCHOOL

Carmel-by-the-Sea, California

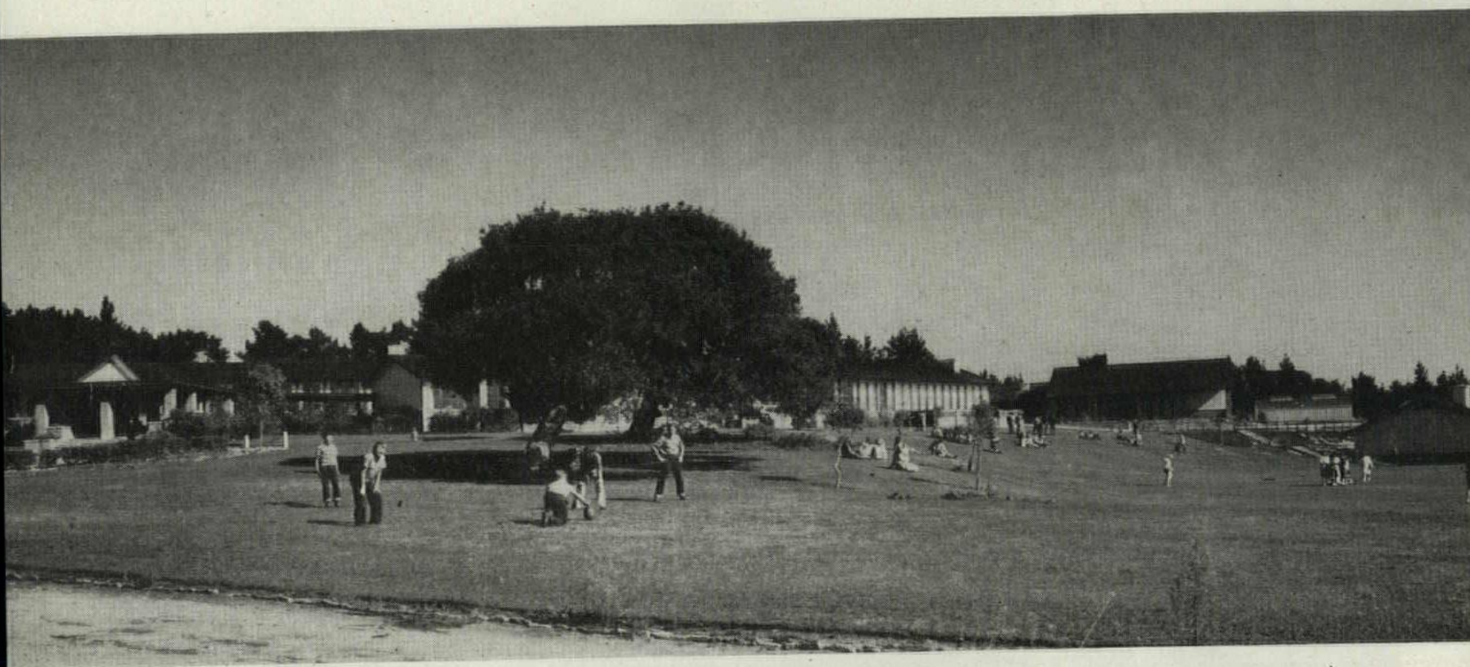
Harold Geyer, Contractor

Albert A. Coddington, Mechanical Engineer

Mark Falk, Structural Engineer

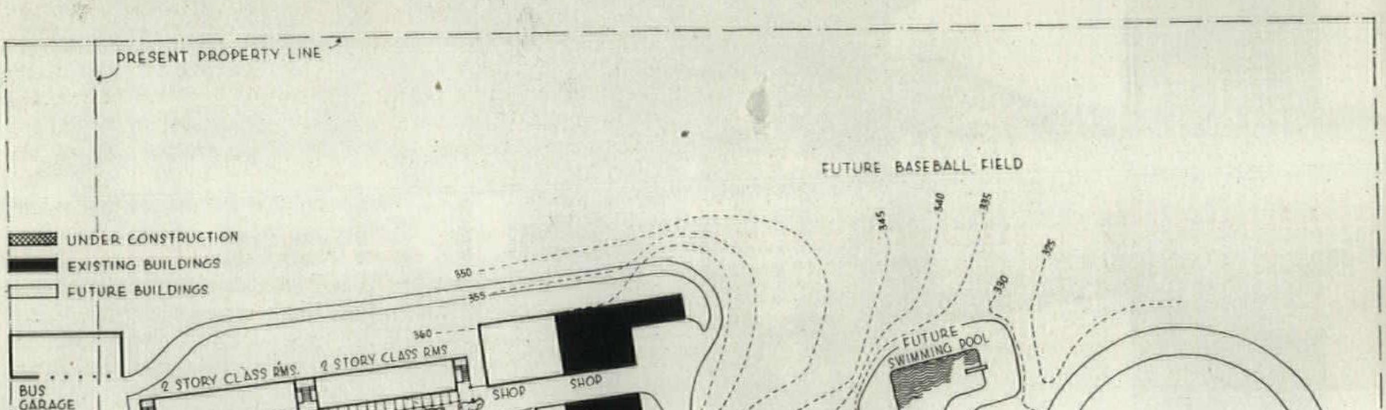


FRANKLIN & KUMP AND ASSOCIATES, ARCHITECTS



GENERAL VIEW: CLASSROOM BUILDINGS AT LEFT; CORNER OF GYMNASIUM, RIGHT.

PHOTOGRAPHS BY ROGER STURTEVANT



DESIGN SYNOPSIS

THE SCHOOL PLANT

Eventual development is to constitute general cultural center, including large auditorium-theater.
Master plan insures intelligent future expansion.
Separate car parking provides for school use and athletic events.
Separate, though joined, buildings house separate educational functions.
Connecting, sheltered, outdoor corridors are organized to minimize cross-traffic and interference with various activities.

CLASSROOMS

All classrooms have substantially the same exposure.
Bilateral lighting is employed in all units.
Classroom width: 28 feet; length, flexible (within 4-foot interval); storage on window-wall side.

STRUCTURE

Built on a module of 4 feet for uniformity and economy of materials and construction time.
No permanent partitions; partitions independent of structure.
Employment of local, handmade materials in conjunction with contemporary, rationalized structural system.

TO OUTWIT OBSOLESCENCE

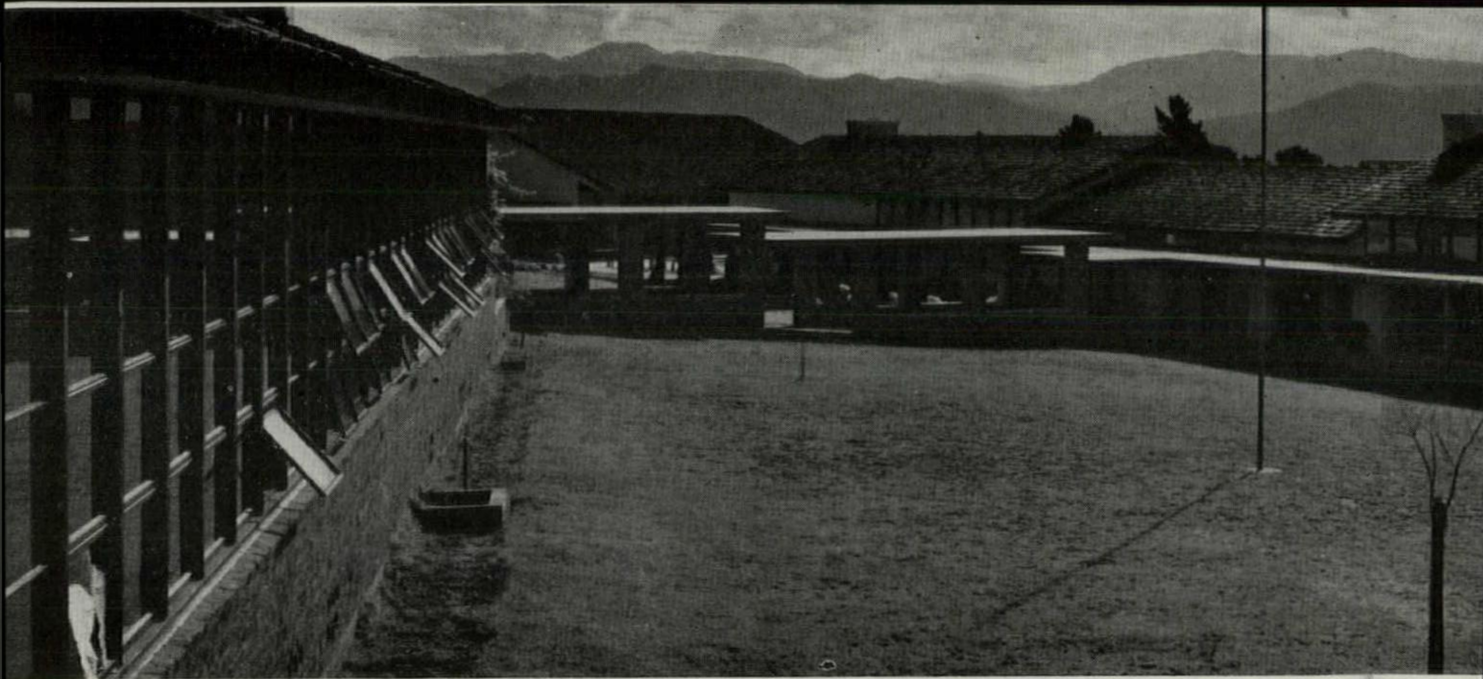
If a measure of the progress of architecture is the extent to which individual structures or groups of structures serve the human functions for which they were planned, anticipate growth and change in these functions, and are integrated with the development of the community and region in which they are built, then the Carmel High School deserves an exceptionally high rating.

The present efficient plant is but the first stage of a carefully-thought-out, larger, eventual scheme (see master plan); and the final scheme will be a general cultural center for the whole community as well as the particular environment planned for the secondary education of young Carmelites.

Perhaps most significant of all, there are no permanent four-walled classrooms to set physical limits to the type of activity—hence, to the type of education—which can go on within them. Instead, the architects and the school board had the vision to plan ahead for change and improvement in educational methods and provided ample, well lighted space that can readily be rearranged—the rooms made larger or smaller, fewer or more numerous—without any basic structural change.

The project occupies a superb 22-acre site a few streets up from the center of town. On every hand are lavish views—the Carmel Valley, Carmel Bay, Point Lobos, and the Pacific. The buildings, both present and future, follow the contours of the hilly upper portion of the site; athletic fields and gymnasium are on the more level, lower portion. Present facilities accommodate 250 children of 8th- to 12th-grade age. Eventually, the entire junior and senior high schools—some 1,200 students—will come to this community for their schooling. The present plant, built under two contracts (one, in 1939: administration building, library, and classroom building; the other, in 1941: cafeteria, shop building, and gymnasium), cost a total of $284,000.

GYMNASIUM

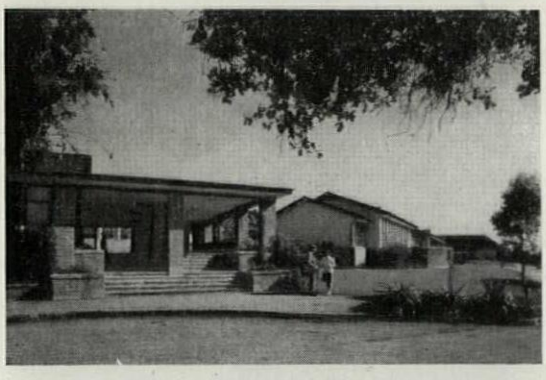


CENTRAL COURTYARD: CROSS-WALK IN MIDDLE DISTANCE. EXTERIOR CORRIDORS. RIGHT.

TYPICAL CORRIDOR ALONG-SIDE CLASSROOM BUILDING.

1

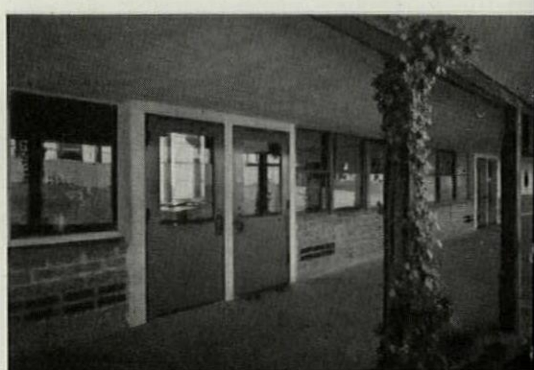
2



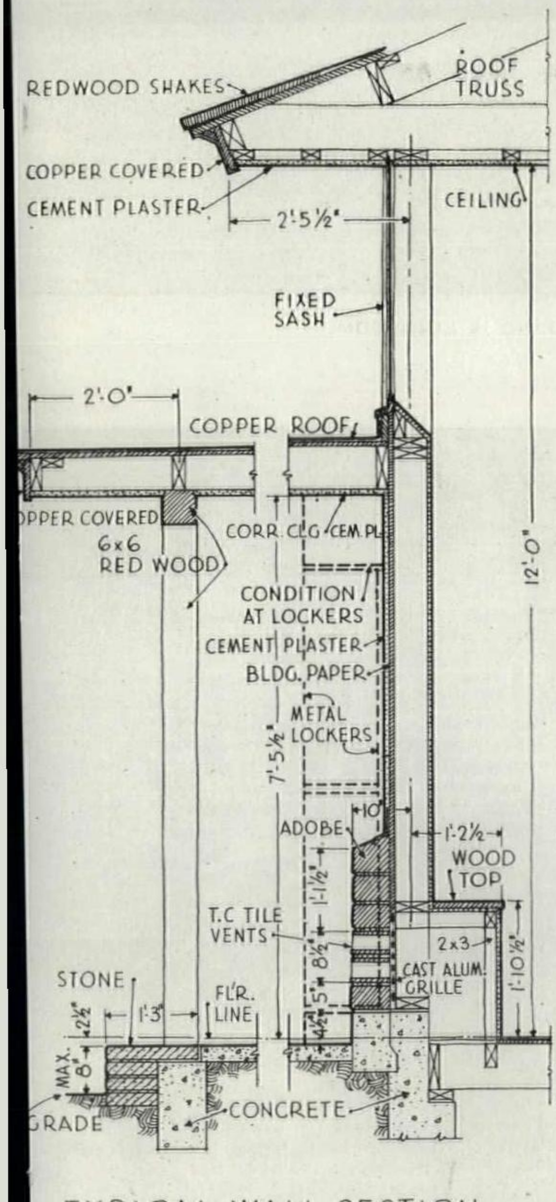
3

1. MAIN ENTRANCE; ADMINISTRATION BUILDING, RIGHT.
2. ENTRANCE AT FAR END OF ADMINISTRATION BUILDING.
3. LIBRARY, LEFT; CLASSROOM BUILDING, RIGHT.
4. WINDOW CORRIDOR OF ADMINISTRATION BUILDING.

4



CARMEL HIGH SCHOOL, FRANKLIN & KUMP AND ASSOCIATES, ARCHITECTS



TYPICAL WALL SECTION AT EXTERIOR CORRIDOR

0 1 2 3'

CIRCULATION

The Administration Building, Library, and Classroom Buildings are all interconnected by covered, outside corridors that rim the uphill sides of the buildings; a sheltered crosswalk joins the upper and lower units. Four-foot clerestories above the corridor roofs provide bilateral room lighting; coat lockers are recessed in the corridor walls.

The circulation scheme, worked out to provide comfortable direct passage from building to building, also facilitates separation of individual functions. Library visitors, for instance, need never use the corridors or otherwise conflict with the activities of the classroom units. The Administration Building is located at the entrance, directly accessible to both public and students, with a minimum of cross traffic. For sports events, the public can reach the Gymnasium or the playfields directly, without using any school building for passage.

EXTERIOR FINISH MATERIALS

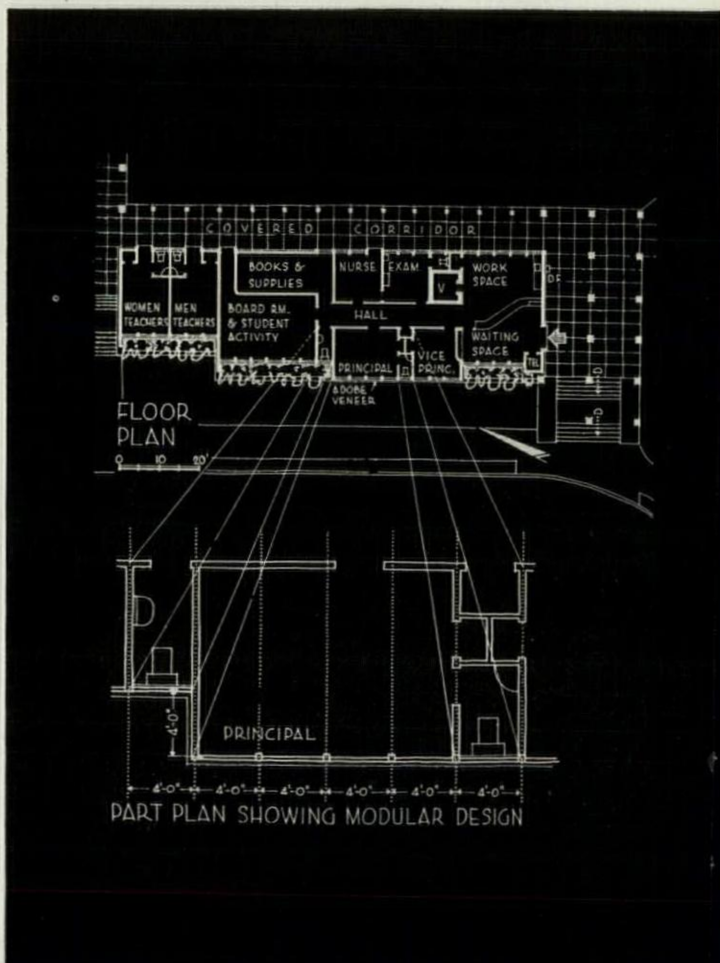
A specialized problem with which the architects coped imaginatively was the requirement that use be made of several locally produced materials—hand-hewn redwood, adobe brick made from clay on the site, and hand-split redwood shakes. Used as incidental members, free-standing supports, trim, or surface finish materials, these local products add richness and variety to the design; yet they in no way affect the highly rationalized structural system that underlies them (see next two pages).

Pitched roofs are surfaced with the redwood shakes; adobe is used as a veneer beneath window bands and for columns bordering the crosswalk; the hand-hewn redwood finds a sensible use in window trim and in the posts and lintels of exterior corridors. Above adobe surfaces, exterior wall finish is unevenly textured cement over metal lath. The corridor roofs are covered with 6-ounce copper roofing.

PLYWOOD-WAINSCOTED LOBBY OF ADMINISTRATION BUILDING; FLOORING IS LINOLEUM.

STRUCTURAL SYSTEM

The various handicraft finish materials produce a surface which apparently belies the structural logic. The structural system of the entire Carmel plant is as rationalized as an airplane fuselage; the finishes are simply veneers, weather barriers. A 4-foot module made possible economical repetition of standardized framing units. A standard truss, with a few variations for special conditions, permitted prefabrication and sped construction.



ADMINISTRATION BUILDING

The Administration Building, one of the units built under the first contract (1939), is at the school's main entrance, convenient equally to students and to parents or visitors. Administrative and student-health offices are entered from the main lobby and waiting room.

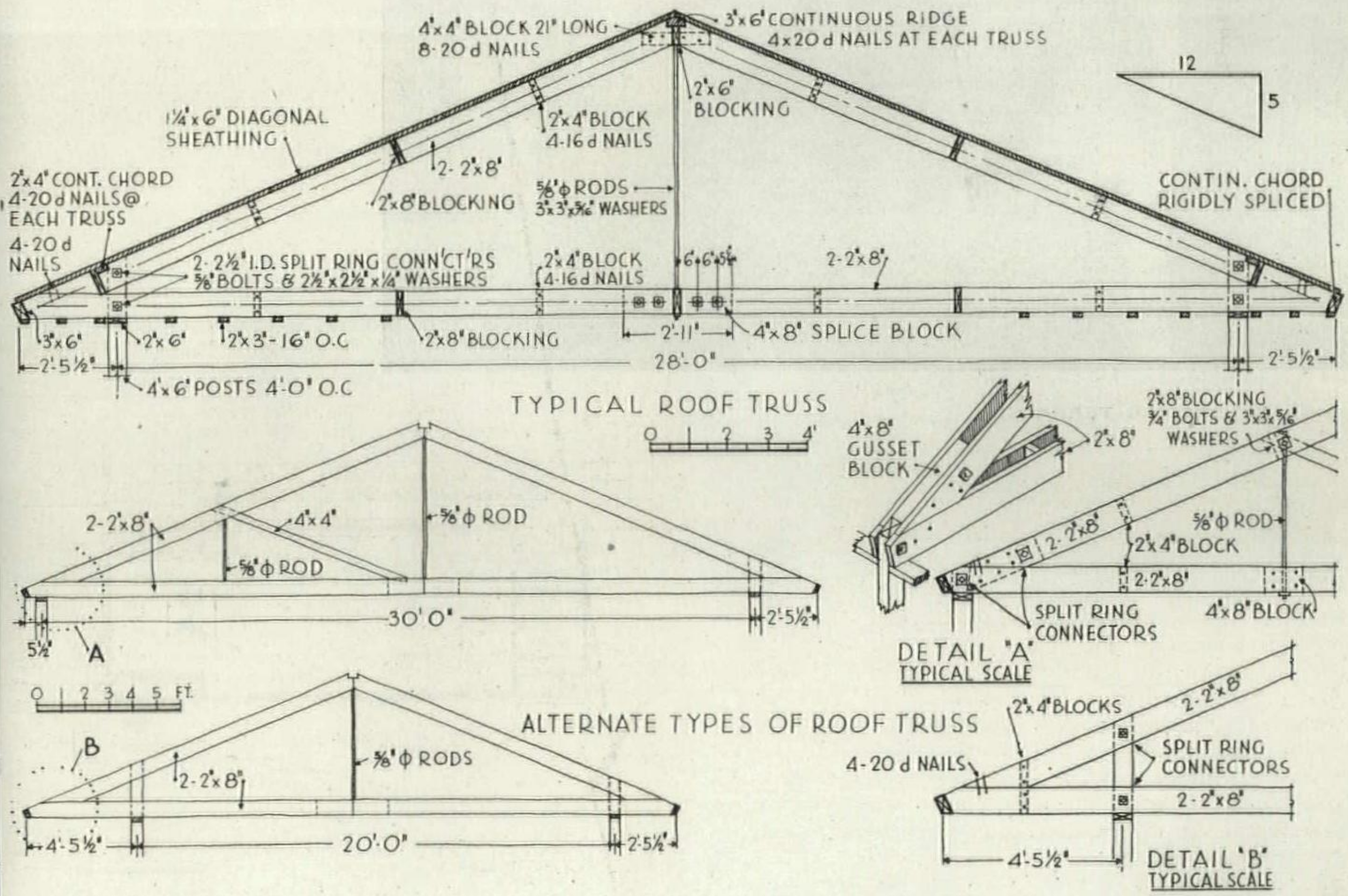
As with all the buildings in the group, the Administration Building has a concrete foundation, with a wood frame laid out on a 4-foot modular unit basis. Framing posts are placed on 4-foot centers; most setbacks are exactly 4 feet or multiples thereof. Windows are steel sash of the out-projecting type; trim and sills are of the locally produced hand-hewn redwood.

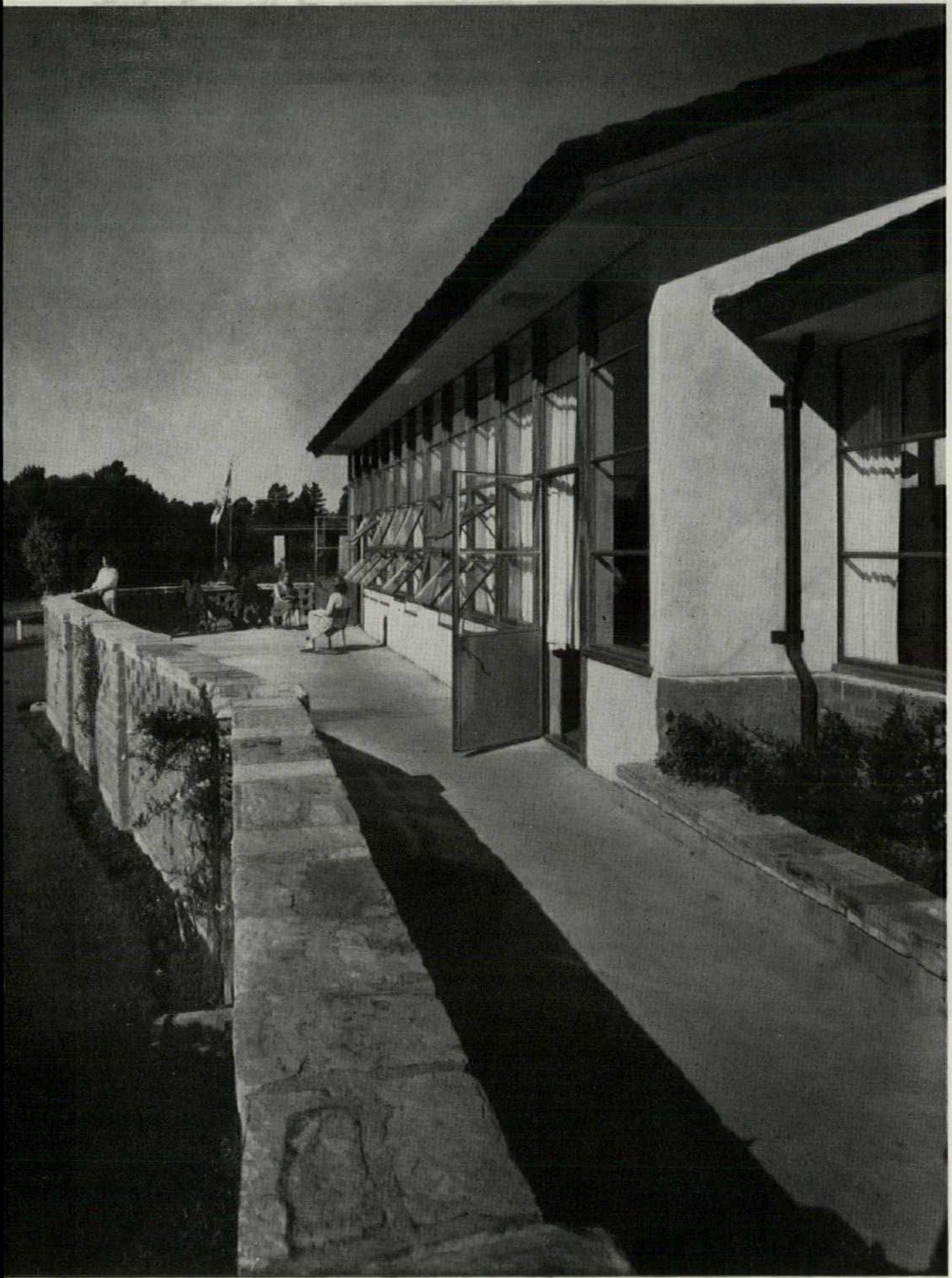
Interior finishes are plywood wainscoting, stained, with plaster walls of white Monterey sand finish and acoustical tile ceilings.

HEATING AND VENTILATING

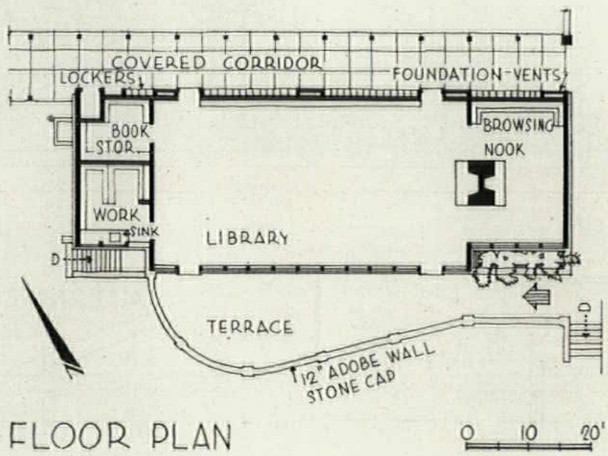
Heat for this building, the library, the three classroom units, the cafeteria, and the shop is supplied from a boiler room located in the southeast corner of one of the upper classroom buildings. The gymnasium has a separate heating system. The furnaces are tubular, gas-fired boilers operating low-pressure steam systems. Heating units in all smaller rooms—especially in the administrative offices—are wall-type convectors. For the larger classrooms, library, etc., the heating units are thermostatically controlled unit ventilators.

The "ventilating system" throughout the Carmel School is, as the architects point out, "very primitive and foolproof, consisting simply of opening windows."





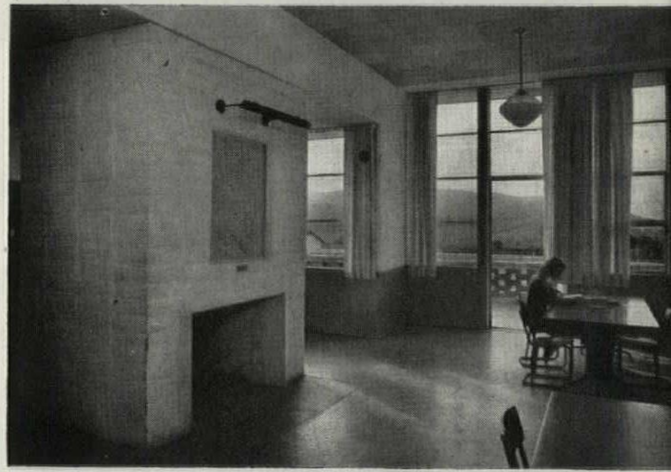
LIBRARY READING TERRACE.



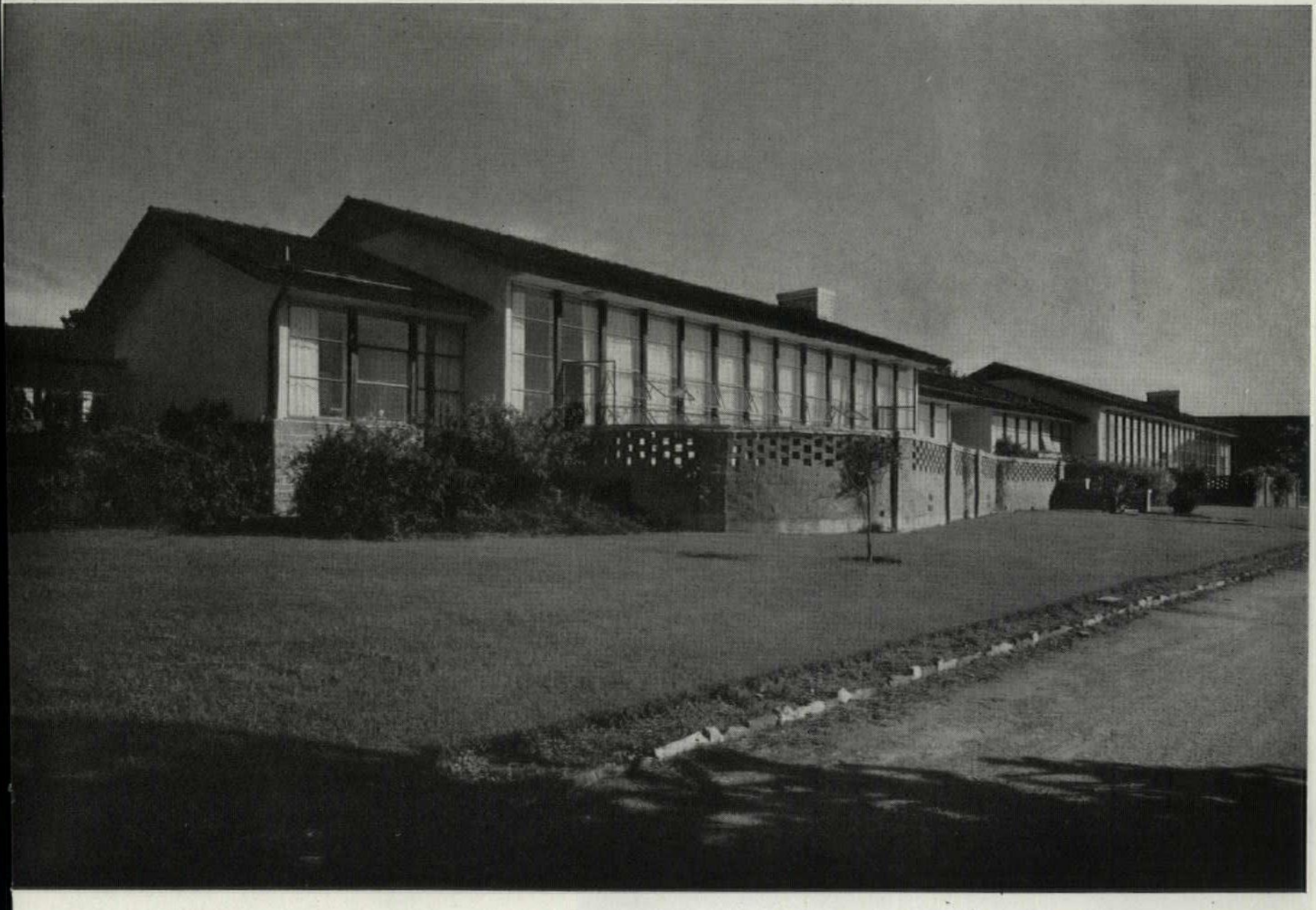
FLOOR PLAN

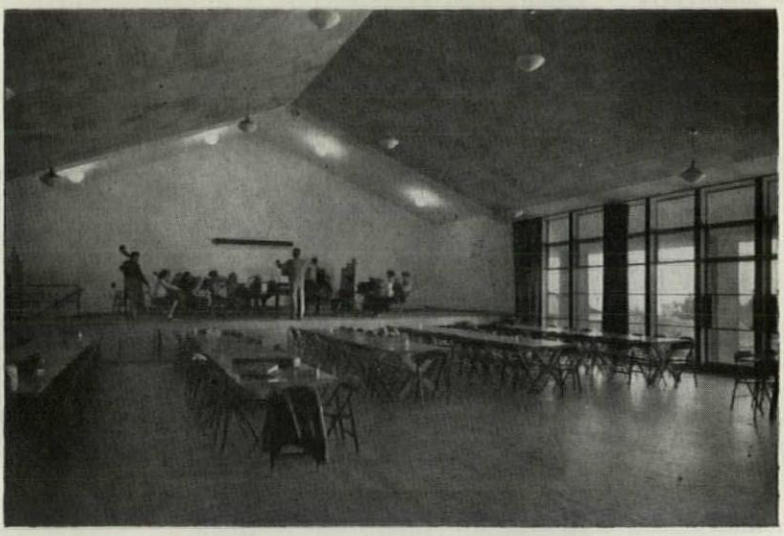
LIBRARY

The school library occupies an independent structure with a broad reading terrace on the downhill side, toward the view. Bilaterally lighted like the classrooms (see subsequent pages), the reading rooms have tall windows the full length of the terrace side of the room and 4-foot-high clerestories on the facing wall above the corridor outside. Where the setback occurs on the terrace, a plant trough is introduced, with the greenery backed up by the adobe veneer of the building wall. One of the few instances of applied decoration in the entire school occurs in a bas-relief plaque mounted in the breast of the fireplace which separates the two main areas of the library. Standardized in construction as are all the Carmel schoolbuildings, the library is finished with adobe veneer, cement plaster, redwood trim and lintels, and roof of hand-split shakes.



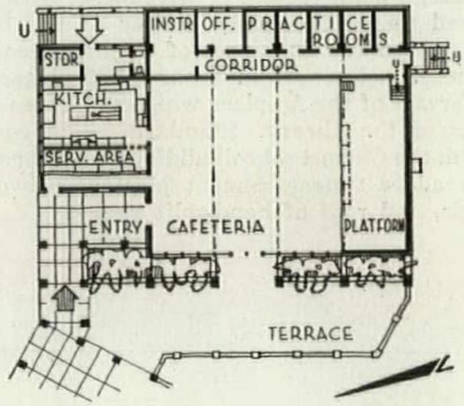
LIBRARY IN FOREGROUND; CLASSROOM BUILDING BEYOND.



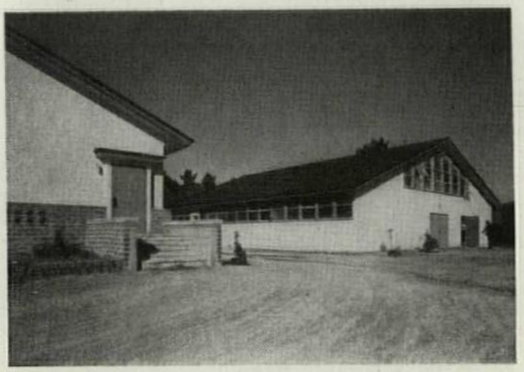


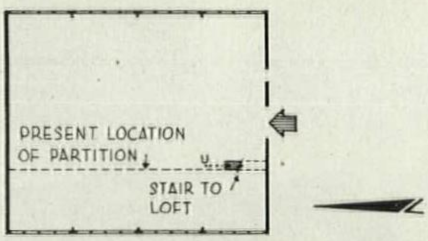
CAFETERIA

Located between the classroom units and the gymnasium, the Cafeteria Building is also used (pending construction of the large theater-auditorium) as the school's theater, music practice room, and social hall. A rigid framing system spans the 59-foot width without the interrupting cross members of conventional truss construction. Interior walls are surfaced with plywood; flooring is maple, and the ceiling is finished with acoustical tile.



FLOOR PLAN





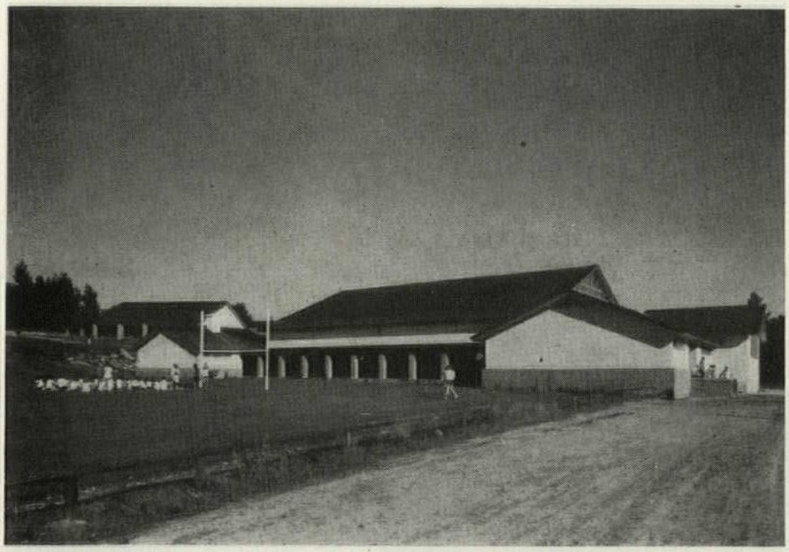
FLOOR PLAN

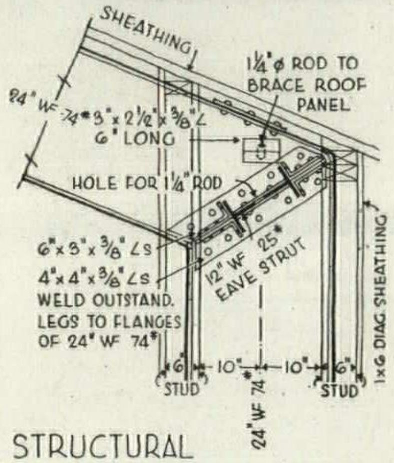
SHOP

Plan flexibility is, perhaps, best illustrated in this rigid-framed shop-building. It houses a single, well lighted space, sufficient in size to accommodate an expanding instruction program. Temporary partitioning is run along one side of the room to form storage rooms and a storage deck above. Next year, some entirely different arrangement may be desired, and the alteration can be made quite independently of the structure. The floor surface is broomed cement; walls and ceiling are the exposed construction; temporary partitioning is of plywood on wood frame.

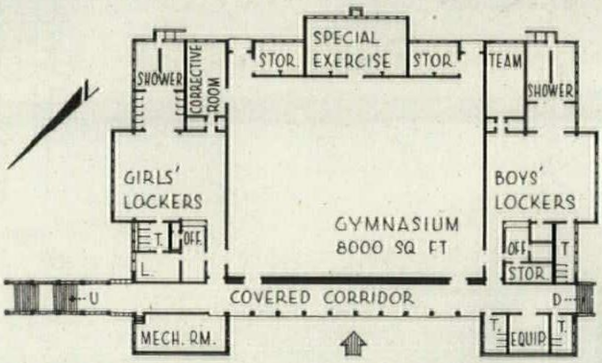
GYMNASIUM

In accordance with the master plan, the gymnasium, Cafeteria Building, and shop were added to the original group in 1941. The gymnasium lies south of the cafeteria, on lower ground bordering the athletic playfield. The main gym room has a maple floor, walls of varnished plywood, and exposed-construction ceiling. The integral wall-and-roof framing (see detail) achieves the broad, clear span with notable economy of materials. Cross-tie rods brace the ceiling construction.



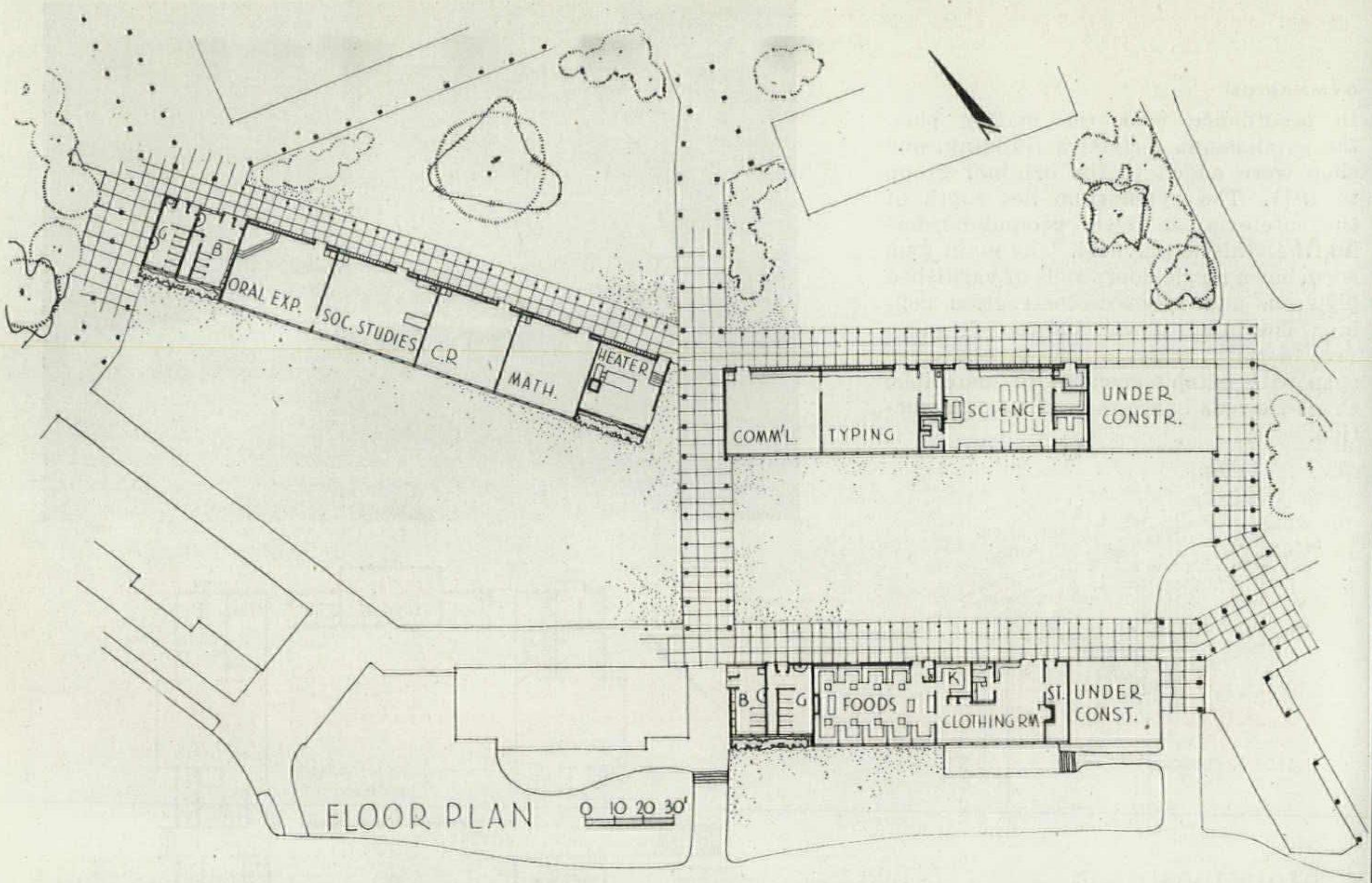


STRUCTURAL DETAIL AT EAVE 0 12"



FLOOR PLAN 0 50'

CARMEL HIGH SCHOOL, FRANKLIN & KUMP AND ASSOCIATES, ARCHITECTS



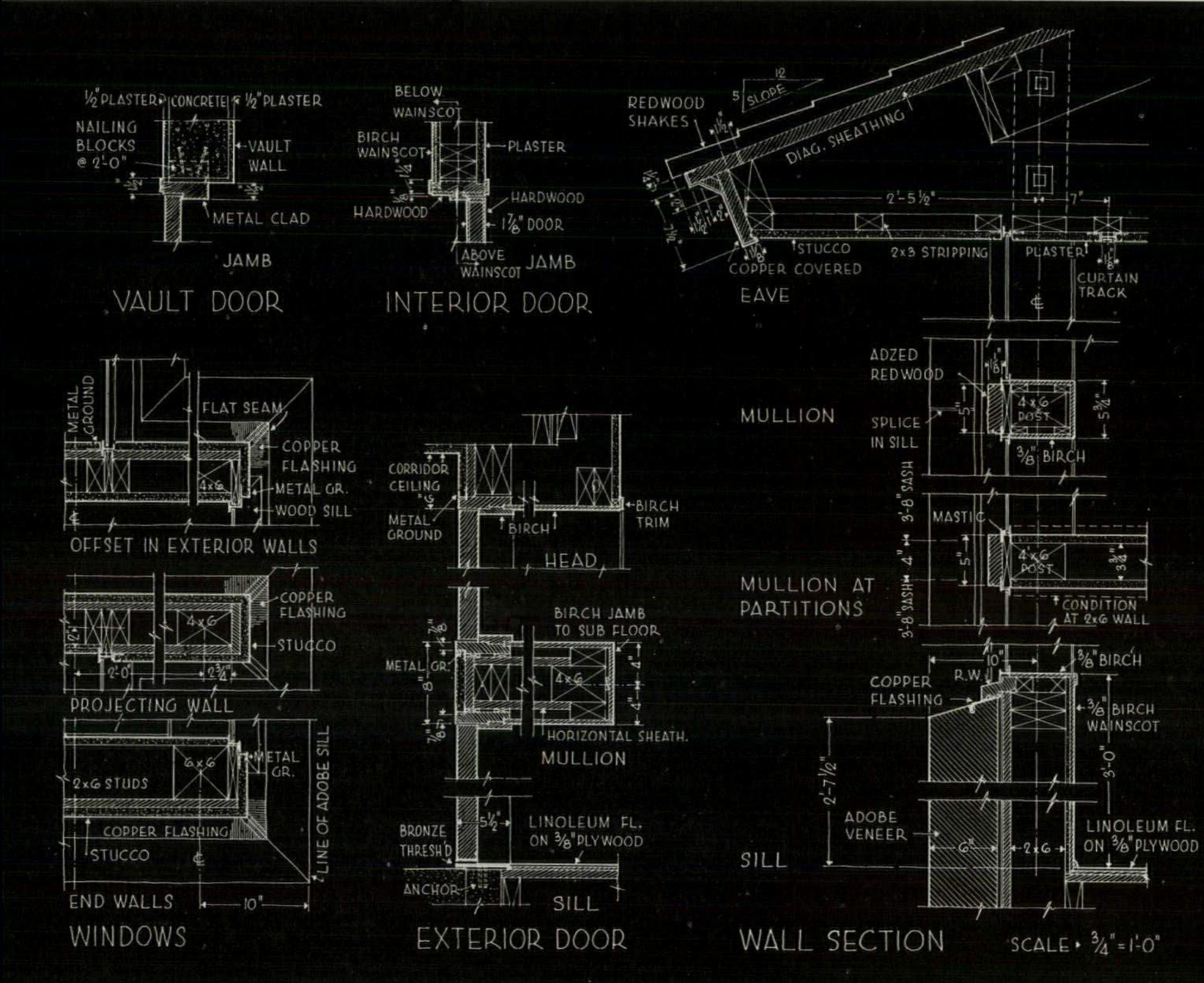
ORAL EXPRESSION CLASSROOM HAS PORTABLE PLATFORM; MOVABLE SEATING IS CURRENTLY ARRANGED ON THE DIAGONAL.

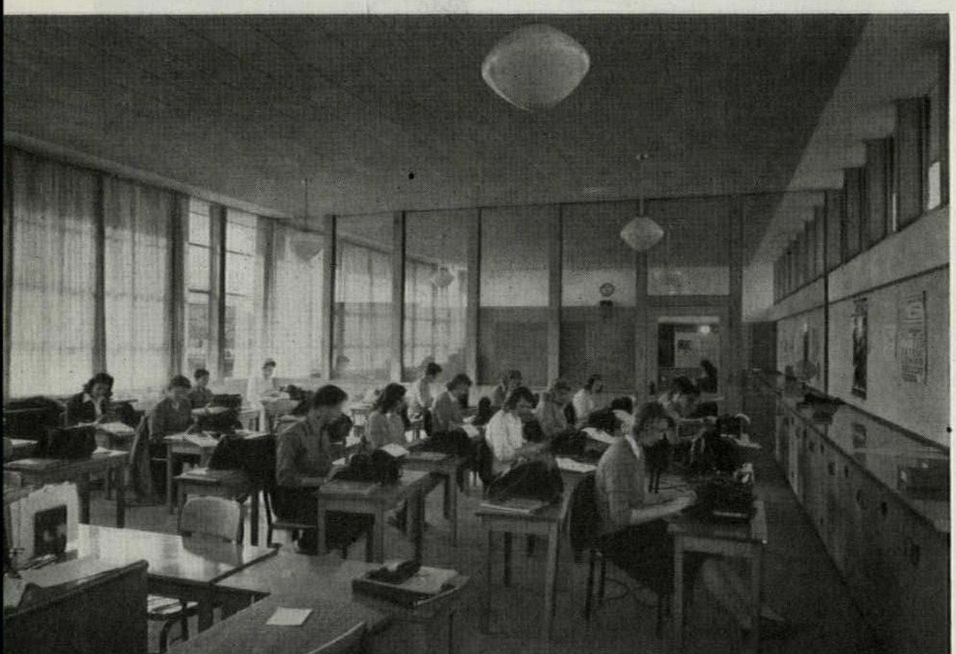
CLASSROOM BUILDINGS

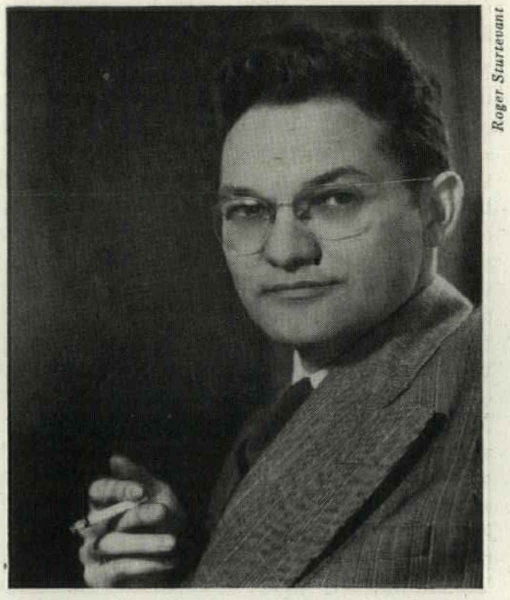
In the classrooms, the nucleus of any successful school design, the planning logic is most successfully expressed. Wall, floor, and ceiling finishes are continuous, and partitions are placed at various multiples of the 4-foot module. To meet changes in educational emphasis or curriculum, partition placement and individual room arrangement may readily be shifted. Bilateral lighting produces an even light throughout the rooms; the large windows reach up to ceiling height and extend from wall to wall. All classrooms are 28 feet wide, allowing greater flexibility for internal, individual arrangement than do rooms of conventional size; storage is accommodated on the window-wall side of the rooms. Above a plywood wainscot are tackboard and blackboard areas, with plaster-finished walls at the top. To facilitate light control, the full-length window walls are equipped with draperies hung to slide on tracks; the density of the curtaining was determined after experimentation to find the weight of fabric which would admit as much light as possible with a minimum of glare.

In the plans of the classroom buildings, it should be noted that all rooms have nearly the same exposure and that the three buildings house separate branches of education. There is nothing remotely "picture-book" about these efficient classroom interiors. Instead, there is space and light, room for—and intention to—change, and a clean, dignified background for learning.

Top photo, chemistry laboratory; lower, domestic science room. In all classrooms, furnishings—which are more important to the individual class than the sheltering structure—can be shifted as the teaching program indicates. Partitions can be relocated when the need arises without destroying the structure.


½" PLASTER
CONCRETE
½" PLASTER
NAILING BLOCKS @ 2'-0"
VAULT WALL
METAL CLAD
JAMB
VAULT DOOR
BELOW WAINSCOT
BIRCH WAINSCOT
PLASTER
HARDWOOD
HARDWOOD
1⅞" DOOR
ABOVE WAINSCOT
JAMB
INTERIOR DOOR
12
5
SLOPE
REDWOOD SHAKES
DIAG. SHEATHING
2'-5½"
7"
STUCCO
COPPER COVERED
2x3 STRIPPING
PLASTER
CURTAIN TRACK
EAVE
ADZED REDWOOD
MULLION
SPLICE IN SILL
4x6 POST
⅜" BIRCH
MASTIC
4x6 POST
MULLION AT PARTITIONS
CONDITION AT 2x6 WALL
3'-8" SASH
4"
3'-8" SASH
METAL GROUND
FLAT SEAM
COPPER FLASHING
4x6
METAL GR.
WOOD SILL
OFFSET IN EXTERIOR WALLS
CORRIDOR CEILING
METAL GROUND
BIRCH
BIRCH TRIM
HEAD
COPPER FLASHING
4x6
STUCCO
2'-0"
PROJECTING WALL
BIRCH JAMB TO SUB FLOOR
METAL GR.
4x6
HORIZONTAL SHEATH.
MULLION
6x6
METAL GR.
2x6 STUDS
COPPER FLASHING
STUCCO
LINE OF ADOBE SILL
END WALLS
10"
WINDOWS
5½"
LINOLEUM FL. ON ⅜" PLYWOOD
BRONZE THRESH'D
ANCHOR
SILL
EXTERIOR DOOR
10"
R.W.
⅜" BIRCH
COPPER FLASHING
⅜" BIRCH WAINSCOT
2'-7½"
3'-0"
ADOBE VENEER
6"
2x6
LINOLEUM FL. ON ⅜" PLYWOOD
SILL
WALL SECTION
SCALE ¾" = 1'-0"





Roger Sturtevant

Perspectives

He Sees Farther Through a Sieve than Most:

Ernest Joseph Kump

The Department of Architecture of the University of California is one of the oldest in the country. And in its long and varied history there is no record of a finer organized or more efficiently functioning corps of "niggers" than that brought into being to serve Ernie Kump during his student days. Through this unusual organization of faithful workers he tried to realize his first great ambition—to graduate from the course in architecture without once having touched a pencil. Thus were the seeds of Ernest J. Kump and Associates first sown, in assembling a group which afforded outlet for Ernie's boundless energy and enthusiasm and his genius for organization. It was no mean accomplishment, this keeping 10 or so young men of university age and youthful interests at a constant pitch of high productivity and accomplishment.

After receiving a bachelor's degree at California in 1932 Ernie decided to move his organization eastward and take over the Eastern Seaboard. Harvard was selected as the theater of operations. History repeated itself with minor variations, and Ernie completed his conquest of that institution in 1934, the terms of surrender being a master's degree.

While at Harvard his espousal of the cause of modern architecture marked him as an advanced thinker, even at times as a rebel if the situation demanded it. On one occasion Ernie sought to advance the general understanding of modern architecture by giving a lecture to the assembled students of architecture and their friends. Plenty of well-designed posters, conspicuously placed, announced the auspicious occasion and brought together quite a sizable crowd. Just before the lecture was scheduled to begin, Ernie (unseen by the assembled multitude) peered into the Assembly Hall and was awed by the success of the venture up to that time. Somewhat abashed, yet determined to see the thing through to a successful conclusion, Ernie thoughtfully regarded his inadequate sartorial equipment, and then went into action. He quickly visited the public cloakroom, picked with great care the most sumptuous overcoat (with a fur collar), a superb derby hat, cane, gloves, and whatever else appropriate he could lay his hands on. (At Harvard there was no dearth of such material in those days.)

His entrance into the Hall was truly magnificent; he took off his borrowed outer paraphernalia with impressive dignity, and with the help of an enlisted assistant who quickly and discreetly returned all of the apparel to its original location he proceeded to the business at hand. The lecture itself was given with seriousness and competence, and was received with the serious appreciation it deserved.

Testifying to both his fine business sense and his preoccupation with the problem of integrating the machine with the good life was his experience in returning to the West Coast after completing his studies at Harvard. He and another classmate, Johnny Evans, purchased a Ford of uncertain year and model for $10.00 and with consummate legal acumen (the previous owner had lost all proof of ownership and registration) succeeded in having it registered, all in due order. They set out bravely for California. On the way they stopped off at Daytona Beach, Florida, for a speed trial. Johnny did the driving during the test run, while Ernie perched precariously on the fender, making on the fly such mechanical adjustments as would ensure the maximum efficiency of the power plant. They were clocked at 28 miles per hour. Well satisfied, they continued back to California, playing cards most of the time to while away the hours while they were crossing the vast empty spaces of the Southwest. On reaching California the car was sold for $25.00.

These anecdotes, I hope, convey something of the zest for life, the good humor, the energy, enthusiasm, and love of unconventional horseplay which are still so characteristic of Ernie Kump. Ernie is an animated, entertaining, convincing conversationalist, and is at his best with friends at the coffee-and-cigarette stage of a good meal. Conversationally he can carry the ball and run to a touchdown in either direction. *(Ed. note: The author did not insert the word "simultaneously.")* His explosive energy and infectious good humor are in such abundant supply that there always seems to be more than enough to go around, to raise the general level of sparkle and life in any gathering where he is present. He is an admitted bon vivant, a keen student of history and current affairs, and has a deep interest in the world of music. All this, however, does little to assess the serious side of his nature, an understanding of which is necessary for an insight into his professional philosophy and his architectural work.

Ernie Kump is only 33 years old, yet the volume of his work is considerable. All of it, even from the beginning of his practice, has given evidence of conviction, of a singleness of purpose, and of a sureness of the means that invest every one of his designs with distinction. He has complete contempt for any temporizing or sacrifice of principle. His every working hour is a passionate pursuit of perfection which will permit no single stud to be out of place in an over-all structural scheme even though covered and invisible in the final work. Something about his work that is not apparent to any but the close, careful analyst is the immediate relationship of the structural system and the architectural design. My statement implies that the two are considered separately, but they are not; they are parts of a unified whole. In Kump's philosophy the structural system must share the distinction of the "architecture." There is to him no such thing as a consideration for superficial appearance; everything must have an integral meaning. To Kump, any project from a chicken house to a city hall is worthy of his best, and each thereby gains in dignity. I have seen designs in the office, at the stage when working drawings were nearly complete, discarded, thrown away, done over, and improved—all at no extra charge.

He believes that architecture must begin in its relationship to the region. He believes too that it is for everyone to enjoy, use, and understand; not for just the esoteric few. His avowed specialty is educational structures; he is not the least ashamed, but proud, to be such a specialist. He wants to put within the reach of every school child and every school board, no matter how low the tax base of their community, the very best school plant that can be had; the dignity and importance of the school child are of paramount consideration. Architecture and architects, Kump believes, have a major role to play in the unfolding of America's tomorrow.

Kump, whose father, the late Ernest J. Kump, was also an architect, started in practice in 1935 in Fresno, California, with Charles H. Franklin, under the firm name of Franklin & Kump. Although schools were their specialty, they found time to stray afield here and there and produce such buildings as the Sill office building in Bakersfield and Fresno's City Hall. Franklin left the firm in 1942 to become a Major in the Army Engineer Corps. Shortly afterward, Kump and Mark M. Falk, an engineer with a rare gift of creative ability, formed a partnership and together provide the leadership of Ernest J. Kump and Associates, under which name the practice is conducted today. One of the most significant of Kump's recent contributions is the development for prefabrication of a school building unit using the limited list of materials available for wartime use. Many of these prefab schools have been built recently in California.

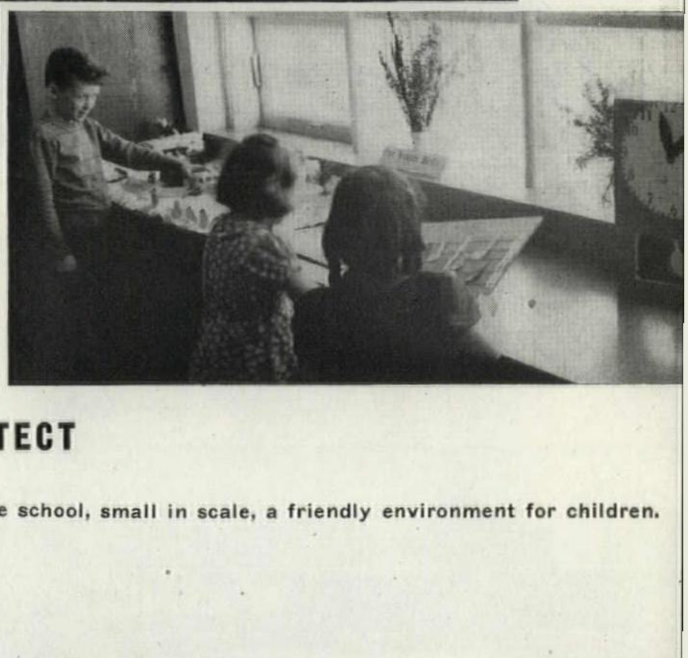
Last year the Museum of Modern Art selected the Acalanes Union High School and the Fresno City Hall, both the work of the firm of Franklin & Kump, for inclusion in its exhibition of the best contemporary American architecture of the last decade. The exhibit has gone on tour throughout the United States; and, as part of an Office of War Information project for informing the rest of the world on American cultural development, it has been widely circulated in various countries. A copy of a movie film depicting the design and construction of the Acalanes school is being exhibited in Central and South America as part of the "Good Neighbor" program. More recently, Ernie has been consulted by the British Planning Mission to North America on England's postwar school building program; and, together with Mark Falk, he has received the U. S. Navy's Meritorious Civilian Service Emblem for the design and construction of Navy work involving over $35,000,000.00.

Kump is a member of the American Institute of Architects, the State Association of California Architects, and the National Advisory Council on School Building Problems of the U. S. Office of Education. He holds several patents on structural systems and building devices.

A visit to the Kump home today would complete your acquaintance with Ernie. A charming wife, Jo, and two sprightly children, a boy and a girl, Peter and Mondi, would put you at your ease; while Ernie, resplendent in a tall white chef's hat, would officiate at the open air grate, putting the deft Kump touch on some delectable dish (ration points permitting) with one hand and shaking up some spirituous encouragement with the other. I told you that Kump had a genius for organizing; the preparation and brainwork behind the repast are those of his wife; the final flourish is Ernie's; the result is a complete integration of hospitality and enjoyment.

—JOHN LYON REID

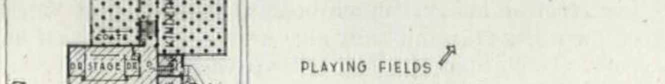
Editor's Note—Lest any reader mistakenly regard the perspective above as output from some Ivory Tower, we have the author's word that "it was put together under the most hectic circumstances. . . . I wrote it on trains, in waiting rooms, on street cars, and in restaurants, and I haven't had a chance to go at it in the spirit of quiet contemplation which is always necessary to the production of great literary achievements! I sincerely hope that this is what you want." (Here, an emphatic "yes.") C. M.



SUNNYLEA SCHOOL

Etobicoke, Ontario

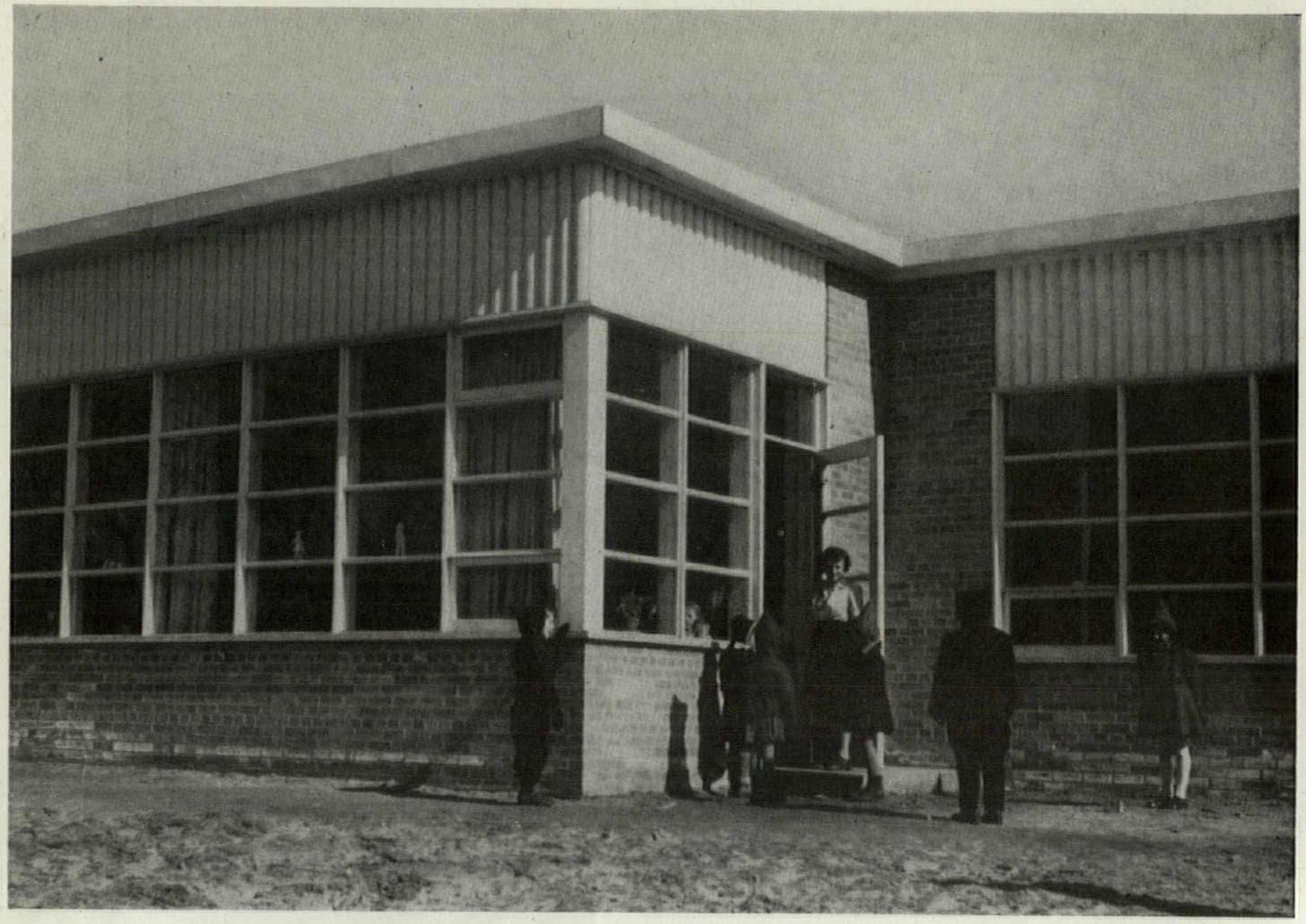
JOHN BURNET PARKIN, A.R.I.B.A., ARCHITECT

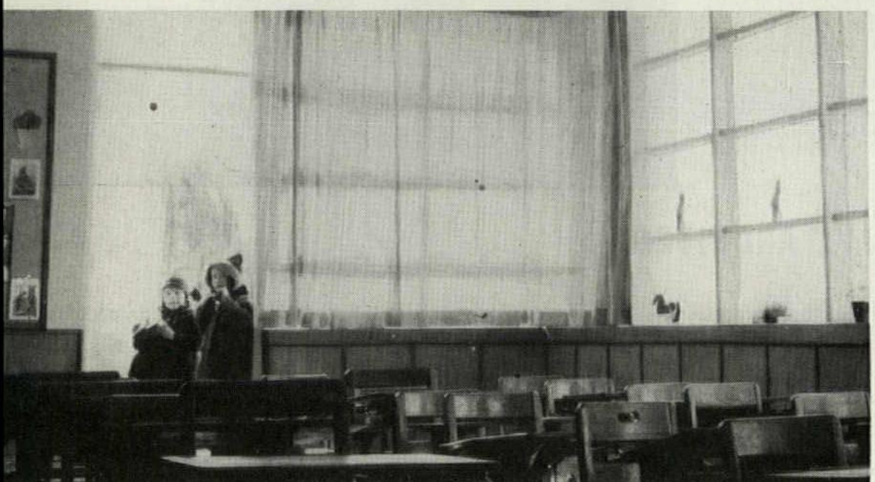


A wartime school, small in scale, a friendly environment for children.

Of a size that would meet the needs of many small towns in the United States, this pleasant little Canadian school—the first stage of a larger development—has much to recommend it. Possibly at the top of the list is the obvious and heart-warming regard that the architect has for the people—the children—who will use it.

There is an unpretentiousness to the whole that invites rather than awes the curious, childish mind seeking security along with knowledge. The scale is modest, and the low shelving and cabinets and great sunny windows combine to form a friendly, informal environment





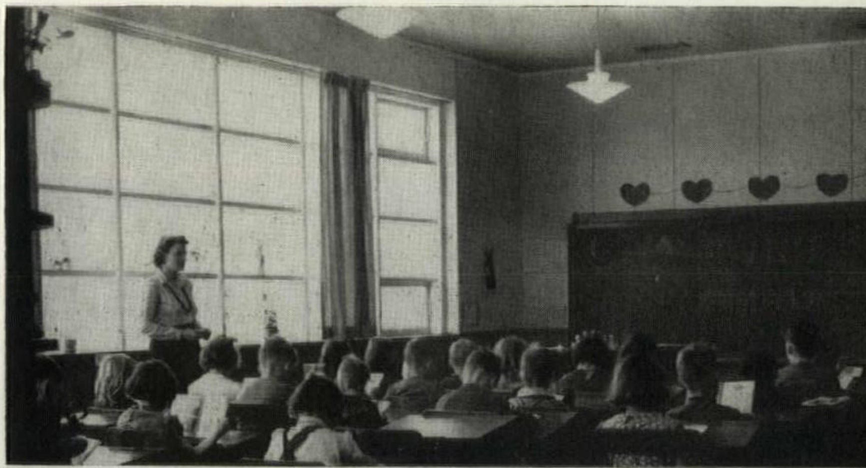
Each classroom unit has a private exit to a separate play yard, a factor with both curricular and fire-safety advantages. The great corner window floods each room with daylight.

for the young. The initial four-room section (with one of the rooms temporarily put to work as heater space, toilets, and lunch room) establishes the unit pattern for the rest—the large, bright classroom, the separate exit to a private play yard, the fitted project room, including coat closets, work counters, and storage space.

The project room, well schemed as it is here, is still an experimental element in classroom design. Some educators—and some architects—maintain that with increasing informality in educational methods, such a set-apart space is unnecessary; that, in fact, when provided, it is used more often for storage than for projects; that a larger classroom space that can readily be rearranged is more flexible and satisfactory.

War limitations resulted in structural ingenuity. Lacking steel or heavy timber beams, the architect worked out window framing that also serves as structural support. To lighten the load above the windows, vertical wood siding over frame was used in place of masonry.

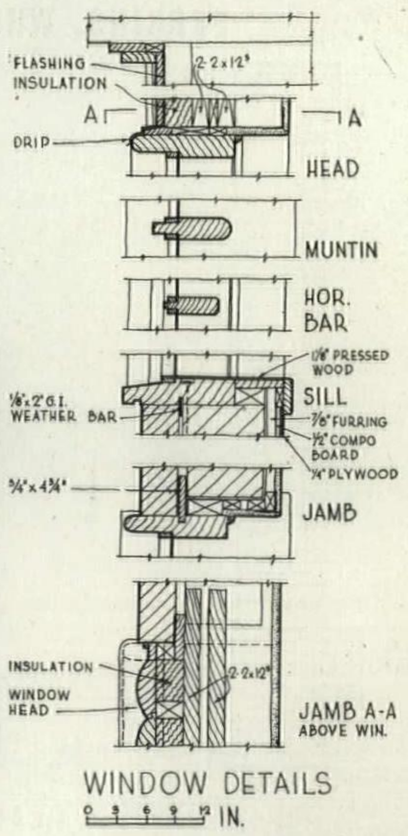
The floor is a concrete slab laid directly on grade and surfaced with asphalt tile, with a continuous heating trench beneath its perimeter. The temporary forced hot-air heating system proved so satisfactory that, the architect tells us, "the floors were not cold even when outside temperatures were -10 degrees, Fahrenheit." This temporary system is now being replaced, however, by a permanent system located (along with permanent toilet rooms) under the new auditorium section.



Although windows do not extend up to the blackboard wall, flush ceiling lights insure good light where seeing is all-important. Ceiling finish is acoustical tile; concrete floors are asphalt-tile surfaced.

The classroom is exceptionally equipped with tackboard space for informal display of creative work; the well lighted project room off the rear corner provides secluded work space for specialized learning tasks.

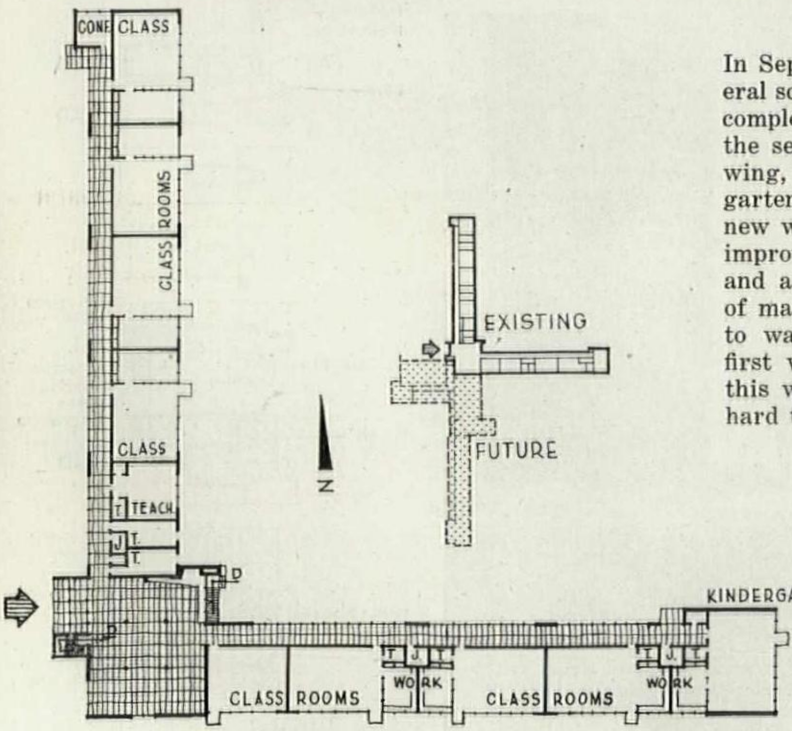
Final judgment pro or con the separate project area awaits further experimentation and analysis.



ADDITION TO RUGEN SCHOOL, GLENVIEW, ILL.,

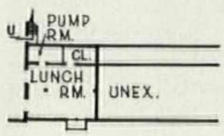
PERKINS, WHEELER & WILL, ARCHITECTS

In September, 1943, PENCIL POINTS presented the general scheme for Rugen School and the first portion to be completed: the North wing. In these pages we show the second stage in the scheme's realization, the East wing, which provides separate facilities for the kindergarten and lower elementary grades. In general the new wing follows the original design closely, although improvements have been made, some errors corrected, and a few changes introduced because a different set of materials had to be employed in some instances due to war conditions. When construction began on the first wing, steel and other metals were short. When this wing came to be built, metal was available, wood hard to get.



FLOOR PLAN

0 12 24 36 48 FT

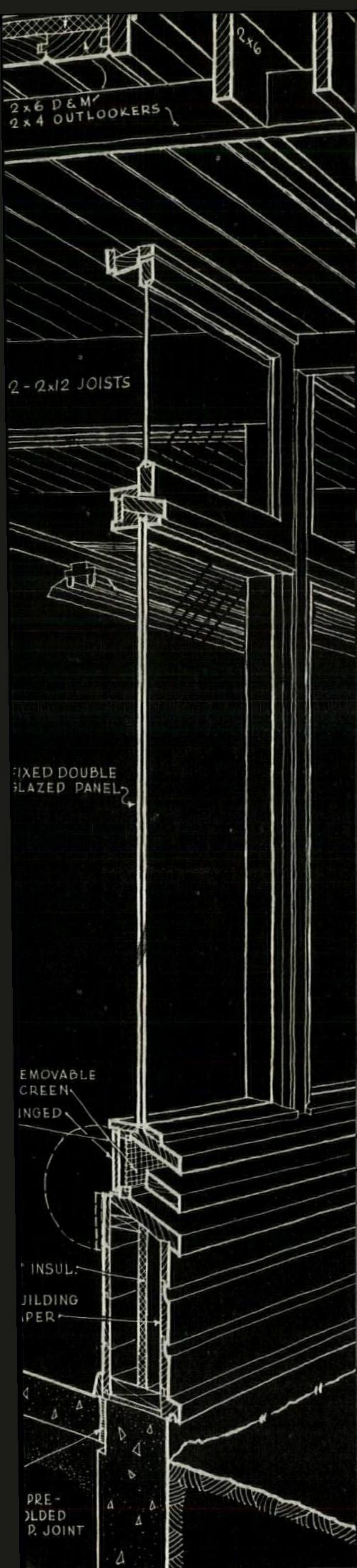


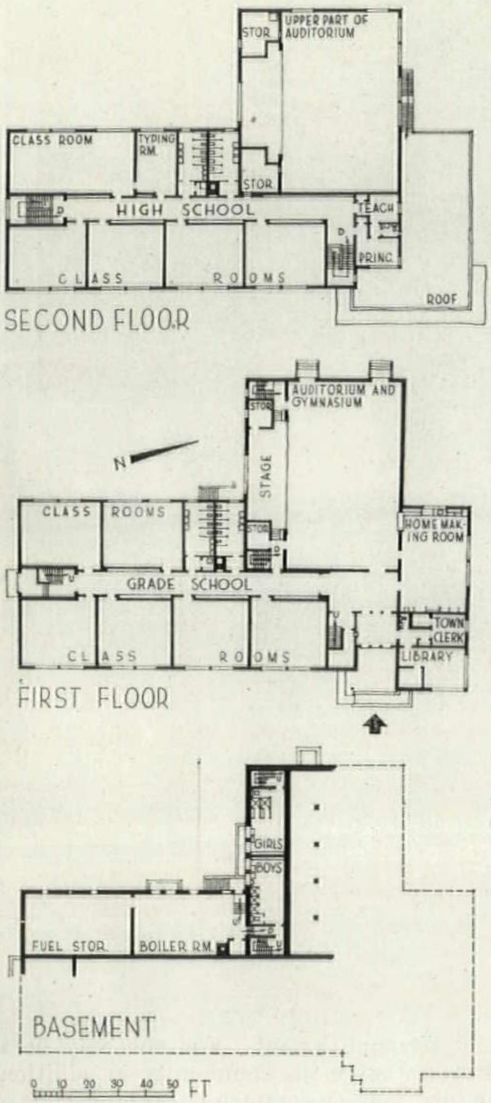
PARTIAL BASEMENT

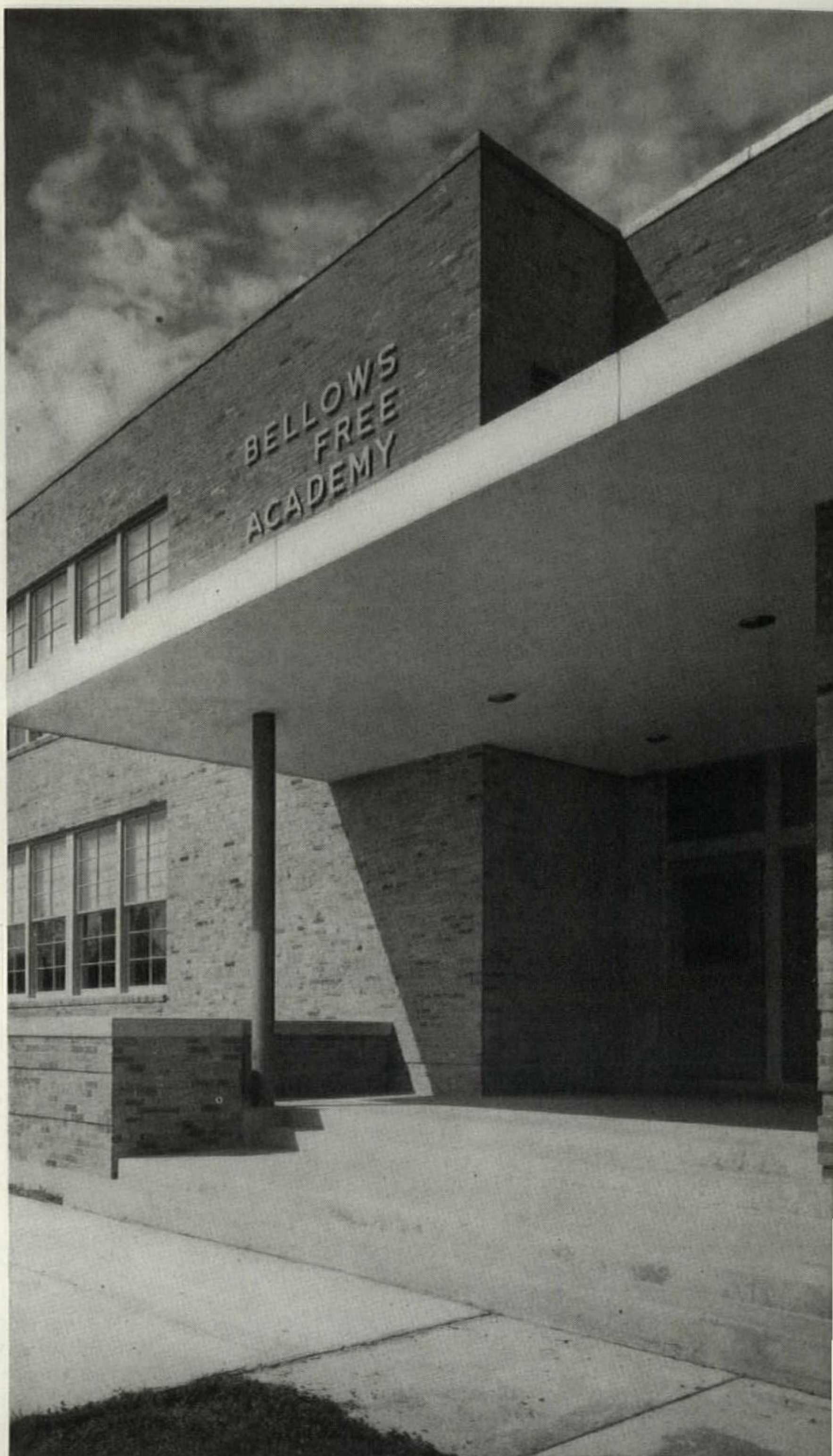
Photographs by Hedrich-Blessing Studio

FOLLOWS THE MASTER PLAN

Kindergarten wing, with entrance at end so that younger children playing outdoors will not interfere with other groups.


2x6
2x6 D&M
2x4 OUTLOOKERS
2 - 2x12 JOISTS
FIXED DOUBLE
GLAZED PANEL
EMOVABLE
CREEN
INGED
INSUL.
ILDING
PER
PRE-
OLDED
P. JOINT





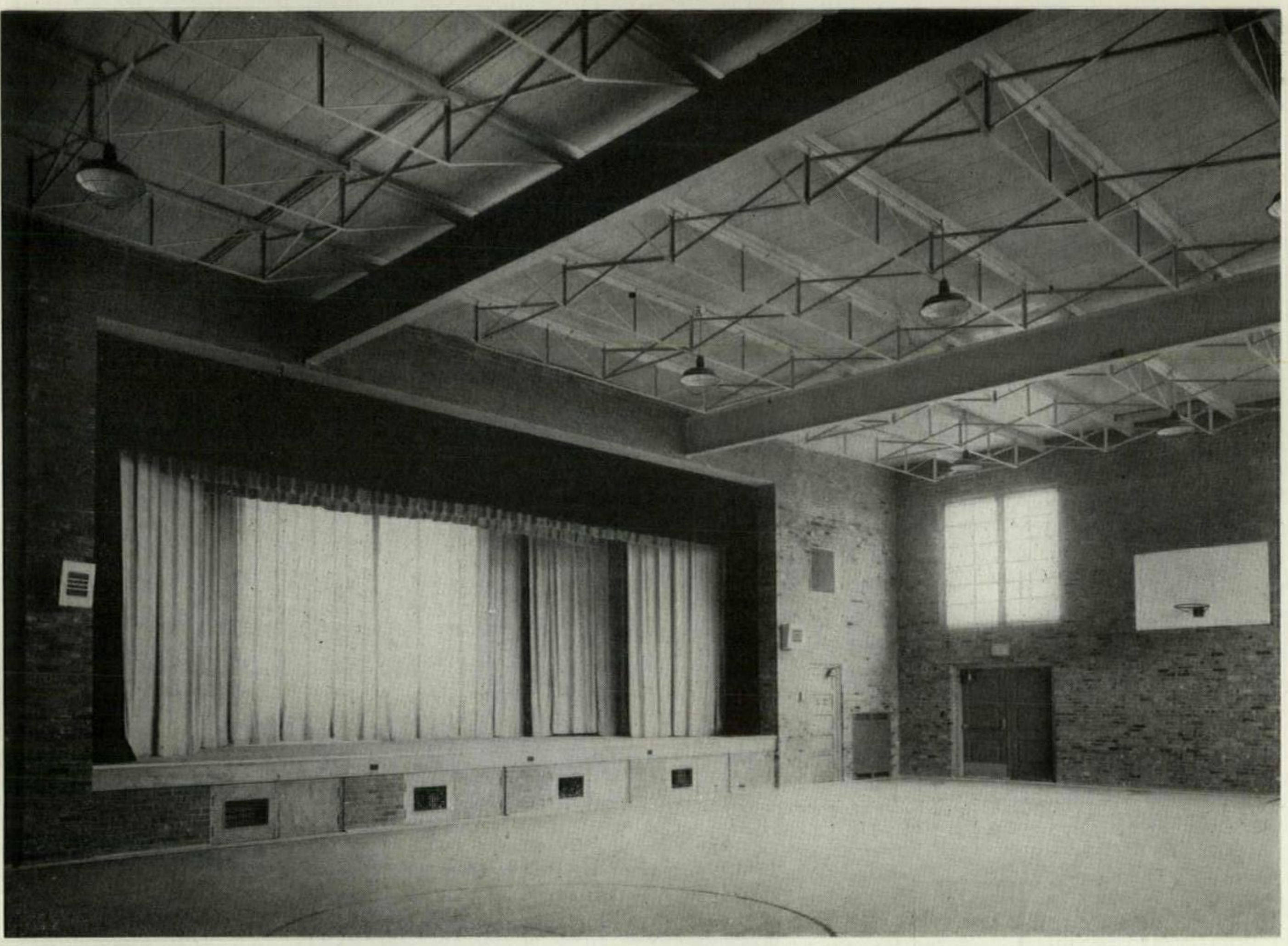
Photographs by Ezra Stol

BELLOWS FREE ACADEMY, Fairfax, Vermont

FREEMAN, FRENCH & FREEMAN, ARCHITECTS

In analyzing a building, it is essential to know something of the clients' preferences before a fair judgment can be made of an architect's performance. Similarly, architectural progress considered without regard for regional equations may prove more theoretical than realistic. For Vermont, traditionally not the first by whom the new is tried, this foursquare school—grade school (first floor), high school (second floor), and community center—is an exciting departure from the pedimented portico, the Georgian cupola, and documented escutcheon of rare device. That makes it news, indeed!

While in some respects—general form and amenity of classrooms, degree of flexibility in partitioning, window treatment, etc.—it can hardly take a place among the more advanced developments in school design, in others—integration with the community, for instance—it is



Gymnasium-Auditorium. Roof construction: steel beams, wood joists, sheathing, and tar and gravel. In classrooms, ceilings are surfaced with prime coat fiber-board tile.

Foundations are poured concrete; walls are of brick veneer over 2 by 6-inch studding, except for the auditorium which has solid brick walls.

an extraordinary accomplishment. For not only does the school auditorium serve the community in addition to its curricular functions (a common enough practice), but included in the plan is the town's public library and the office of the town clerk.

Furthermore, within the limited confines (dictated by a limited budget), all elements are so arranged that they can work independently. High and grade school areas are segregated on separate floors; the library and town clerk's office are isolated from the classroom area, and these two rooms, plus the auditorium, may be used without necessarily maintaining the rest of the building.

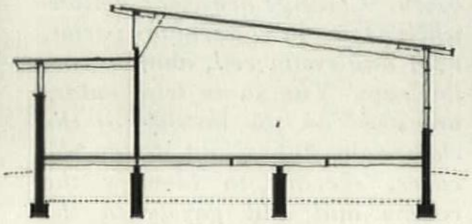
The home-making room (used by both grade and high school students) is on the first floor, so placed that by means of a sliding panel, one end of it forms a kitchen-cafeteria for serving lunches to pupils from outlying districts. This same arrangement is also used for social gatherings held in the auditorium.

All floors are of wood construction, finished with maple, except in stair halls (where asphalt tile is used) and in the home-making room which has a linoleum floor surface. In the main part of the building, roof surfaces are tar and gravel over sheathed wood joints.

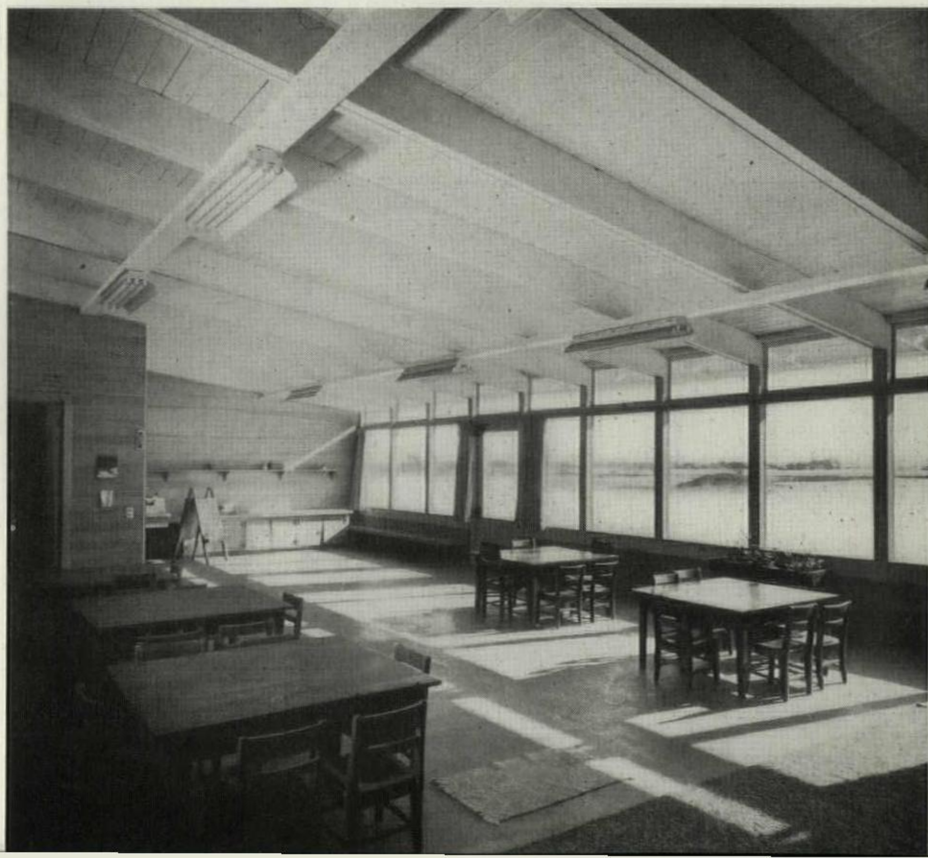
RUGEN SCHOOL ADDITION
PERKINS, WHEELER & WILL
ARCHITECTS

As in the previously constructed portion, classrooms are bilaterally lighted, with one wall of windows which extend up between the roof joists. Other wall, along the enclosed corridor, has clerestory, bottom-hinged lights, with wood fins between to serve the double purpose of stiffening the framing and diffusing the light. All floors are concrete covered with asphalt tile; lighting is fluorescent.

One important change concerned both the floor construction and the heating system. With wood scarce, a concrete floor laid on gravel fill was substituted for the wood used in the first wing. The first intention was to use precast concrete beams and slabs with 2-inch rigid insulation supported by the bottom flanges of the beams; the ducts thus formed were to carry heated air, some of them to heat the floor, some to supply registers in the baseboards. This idea proved too expensive, and yet it was considered desirable to use some form of radiant panel heating. A hot water system was decided on, with heat supplied by a heat exchanger attached to the enlarged boiler. Wrought iron pipe coils are buried in the floor; other coils, over which the wood surfacing is furred out from the studs, comprise the wall panels. Floor panels are designed to function at a maximum of 85° F, wall panels, 130° F. The large windows employ double, insulating glazing units, fixed in their structural frames. For ventilation there are screened louvres below the glazing, with drop doors inside.



CROSS SECTION
1/16" = 1'-0"



RUGEN SCHOOL ADDITION
PERKINS, WHEELER & WILL
ARCHITECTS

All photos on this page show the kindergarten, a single room with adjoining toilet and work room, and closet conveniently located in the corridor. In the eventual building, according to the original master plan, this wing is to be used for the upper grades; the wing first built, for intermediate grades; and a new South wing will then house lower grades and kindergarten. This program explains why certain facilities (coat alcove, rest space, etc.) are not now provided.

Color plays an important part in Rugen School. Interior walls are the natural color of the materials, wood and reddish-brown exposed brick. Ceilings are clear yellow-white; trim in classrooms varies, with one room red, another yellow, etc. The same trim colors are used on the outside of the classroom doors and under the eaves, serving to identify the rooms and add gayety to the composition.