

THE
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A Journal of The American Institute of Architects



The Washington Situation

Employment of Architects for Defense Projects

Design and Construction of the Dwelling Unit for the Low-Income Family—Part II

Massachusetts Law for Registration of Architects

Technical Services Department — With the Chapters

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THE OCTAGON

A Journal of The American Institute of Architects

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The Washington Situation

YOU were advised in the October issue that a representative of the profession had been appointed to come to Washington and concern himself with the "Washington Situation". This representation of The American Institute of Architects and of the profession has been in force since the seventeenth of November.

As you can well understand, the Washington situation is complex and formidable, but as it is a creation of our democratic way of life, it is capable of being understood and there is every reason to believe that the profession will continue to be vitally incorporated in the national defense effort. The contributions of the profession to the defense program to date have been outstanding and have been recognized.

It must not be supposed, however, that by virtue of the fact that there is a Washington Representative there will be an immediate deluge of work flowing over the boards of the profession. Any activity such as we have embarked upon will demand time before results may be appreciated. The position of the architect will be maintained only through the concentrated effort of the entire profession and the continuation of the high caliber of service which has characterized the work of the profession so far.

The country is engaged in a program of astronomical proportions and incidentally we are involved in a shooting war. In the situation and as always, the maintenance of the position and reputation of the architect is dependent upon the performance of the architects as individuals.

The architect's direct relationship with governmental activity has been and will be with the departments and agencies, and for that reason possibly the

profession has come to regard the departments and agencies as almost the exclusive manifestation of governmental activity. It must be remembered, however, that we have legislative and executive branches of the Government in addition to the administrative. The power of Congress must not be discounted, nor should the skill of the executive offices be forgotten.

To give you briefly some pertinent information and items of interest:

Legislation

There are five bills at the moment of interest to the profession:

First, H.R. 5630, which transfers building construction under the Army, from the Construction Division of the Quartermaster Corps to the Engineer Corps. By the time this article is read, the transfer will probably be an accomplished fact. Public statement by officers in authority have indicated a complete competency on the part of the Engineer Corps to take care of the construction work. This does not necessarily mean that the past policies of the Quartermaster Corps will not be carried out. It is anticipated that much of the construction work will be awarded to outside architects as has been the case in the past. It is not anticipated that the Construction Advisory Committee of the War Department will be discontinued and, in fact, there is likelihood that much of the personnel that has guided the construction program of the Army in the past will be continued in office. Possibly a policy of decentralization will take place and it is suggested that architects get in touch with their dis-

trict engineers. These officers may have jurisdiction over some of the construction work.

Bill S. 1833—This bill would set up a Public Works Projects Administration and contains both some W.P.A. and some P.W.A. elements. This bill is meeting with antagonism and its future is still in doubt. There may be further hearings on the bill at which it is expected the profession will be represented. In its present state it would appear to be of doubtful benefit to the profession.

Bill S. 1617 is a bill which sets up the machinery for the making of surveys, investigations, legal studies, comprehensive plans and specifications, etc., as may be necessary to facilitate and expedite the selection, financing, and inauguration of public improvements, works and related activities. It is a short bill and is of great interest to the profession. No further hearings are scheduled for it. In the body of the bill, the plans and specifications are referred to as engineering plans and specifications. The attention of the Chairman of the Senate Committee on Education and Labor, The Honorable Elbert Thomas, Senator from Utah, has been called to the desirability of inserting the words "architectural and" before the word "engineering". The insertion of these words is being considered by the Committee and it would be of help if the interest of the profession in the insertion of these words were called to the attention of the Senate Committee on Education and Labor.

Bill H.R. 5781, for the recapture of excess profits, in its present form implies that if the intent of the bill is carried to its furthest conclusion, the profit as assumed by the Government that an architect would make on a job (not over 7% on the cost of executing the architect's work) would result in an almost microscopic net return to the architect. This bill is scheduled for further hearings and the profession will be represented at the hearings.

Bill H.R. 5211—the \$300,000,000 defense housing act. This is an extension of the original Lanham Act. It is anticipated that this bill will pass.

Of possible interest is H.R. 5990, The Price Control Bill, which is on the floor of the House at the present time (November 27). The Gore substitute bill would have definitely limited the architects' fixed fees on a basis probably not acceptable to the profession. The Gore bill was defeated. It is too early to indicate the outcome of the original bill.

It is suggested to the architects that they acquaint themselves with these bills and that if any action is taken upon them by the chapters, state societies or other architectural organizations such action be referred to The Octagon for further action. At the same time, individual architects sufficiently interested in these bills might well convey to their Representatives and Senators their sentiments in regard to them.

The Housing Situation

The housing picture is in a state of relative uncertainty due to personnel changes in the Federal Works Agency. It is anticipated, however, that the U.S.H.A. will continue its present policy of employing outside architects and will maintain the fee schedule now in force.

As of interest to the profession is the statement of the defense Housing Coordinator, Charles F. Palmer, under date of November 13, 1941, entitled "Defense Workers' Cooperative Housing". Copies of this statement may be had upon application to the Defense Housing Coordinator, 1600 Eye Street, N. W., Washington, D. C. In brief, the Coordinator announces a scheme under Title VI of the National Housing Act for the encouragement of cooperative projects by defense workers. These projects are to be initiated by the workers themselves and the statement calls attention to the position of the architect and suggests that among others, such as local labor unions, local housing authorities, builders, and the personnel managers of defense plants, architects might well make surveys of local situations. After the survey is made, and provided it is in favor of the project, the Coordinator recommends that a corporation for the purpose of building the houses be formed, and an executive committee be appointed to be responsible for the preparation of a plan of action. The Coordinator recommends that competent architects prepare plans and make suggestions regarding site selections and inspect construction. The operation of the plan and outline of the financing is set up in the statement. The entire purpose of the plan is to secure homes advantageous to workers at the least possible risk. The Coordinator of Defense Housing will appreciate knowing of the progress made by any group undertaking action along the line of the suggestions contained in his statement.

O.P.M. & S.P.A.B.

An important phase of the representative's concern is the profession's relationship with the S.P.A.B. President Shreve has commented on this in the October issue of *THE OCTAGON* and clearly explained the stand of the S.P.A.B. and the meaning of the recent policy which was of great concern to the building industry. It is anticipated that the whole situation will be ironed out in time as the Government realizes full well that the over-all picture must be kept in mind and that no country can prosper with large elements of its economic organization thrown out in the cold.

Public Works Reserve

An announcement has been made to the public by the Acting Administrator of the Federal Works Agency, concerning a call for prospectuses for post defense work—this post defense work to consist of public work and public services. The prospectuses are now being received by the Washington office of the Public Works Reserve. The profession should cooperate with this movement, but it is called to your attention that a prospectus is simply a record of a needed or desired improvement and does not constitute an application for Federal funds. We believe that the work should not be undertaken unless the architect is satisfied with the agreement that he may have with the authorities with whom he is cooperating.

Building Industry Forum

There has been a growing demand within the profession for a getting together of representatives

of the elements of the building industry. It is announced that the A.I.A. is holding a meeting at The Octagon on December 4 with representatives of the American Society of Civil Engineers, American Society of Mechanical Engineers, Associated General Contractors, American Society of Landscape Architects, United States Chamber of Commerce, The Producers' Council, American Federation of Labor, and others for the purpose of discussing the problems which are of mutual concern. This meeting is being held irrespective of the building industry committees which may be set up by the governmental agencies, though it is recognized that whatever committee or organization may accrue from the December 4 meeting will cooperate thoroughly with the governmental departments. This meeting will initiate the first step in uniting the front of the building industry.

* * * * *

As President Shreve has told you, your representative welcomes letters and calls from you. When you are in Washington drop in at the office and we shall be glad to furnish you with such information as we have available and do what we can to enable you to find your proper niche in the defense program. Neither The Institute nor the representative can, however, undertake to secure individual commissions or jobs for members of the profession. We can only advise you to the best of our ability as to how you may do this for yourself.

EDMUND R. PURVES,

Washington Representative, A.I.A.

R. I. B. A. Honors The President of The Institute

The Royal Institute of British Architects recently announced that R. H. Shreve, President of The American Institute of Architects, has been elected to Honorary Corresponding Membership.

Mr. Shreve, in acknowledging Mr. Ansell's letter congratulating him on his election as President, said in part:

"It (your letter) . . . comes at a time when the

architects of our two countries are in more sympathetic relationship even than has been customary between our two groups. It is, therefore, with all the more satisfaction that I have received your thoughtful letter and express the hope that we may have the opportunity of cooperating professionally in the emergencies which come to us."

Employment of Architects for Defense Projects

A LETTER FROM WAYNE S. HERTZKA, PRESIDENT,
THE STATE ASSOCIATION OF CALIFORNIA ARCHITECTS

SINCE the initiation of the National Defense Program, considerable effort has been made by officers and members of the State Associations and the AIA to secure federal work for architects. A small portion of this work has been assigned to various offices, most of them large organizations commanding diversified architect-engineer personnel.

At its annual convention last May, the AIA adopted resolutions urging employment of architects in private practice, in order to expedite the defense program. State Associations were to assist in having architectural services included in Congressional appropriations.

Curtaiment of private construction due to priorities has since then imperiled the livelihood of many architects. The State Association of California Architects at its recent convention accordingly adopted resolutions to encourage Federal officials to commission individual practitioners on defense projects, so that they might maintain their offices during this critical period.

The task, as we see it, is twofold and nationwide effort by our profession is essential to its success.

1. Every State Association and Chapter of the AIA must utilize its full membership in impressing upon Federal agencies and individual officials the

value of the architect, as planner, designer and coordinator, in the defense program. It is the duty of every architect to contact public officials, Congressmen, controlling agencies, military and naval authorities and impress on them the importance of assigning projects within their province to private architects.

2. Architects must adopt a plan of business organization to enable them to handle large projects with speed and efficiency. Many individual architects of sound ability and standing have been unable to maintain a sufficiently large organization to handle projects of magnitude. Recent experience has shown that a combination of architects and other technicians for one or several defense projects can produce drawings, contract documents and other services with speed and efficiency.

We, therefore, urge universal adoption of the following plan: "That large defense projects be assigned to an individual or group whose function will be in each case to develop the site plan, direct the engineers, layout and supervise the roads, utilities and other extraneous elements, and act as a coordinator. And that architects with small organizations be assigned one or more buildings included in the project." Complete coordination of personnel is, of course, essential to the success of this plan.

The Plym Fellowship

The Francis J. Plym Fellowship in Architecture

The Plym Fellowship in Architectural Engineering.

By authority of the Board of Trustees of the University of Illinois the Committee in charge announces the twenty-ninth competition for the award of the Francis J. Plym Fellowship in Architecture and the nineteenth competition for The Plym Foreign Fellowship in Architectural Engineering. The value of each Fellowship is twelve hundred dollars to be used toward defraying the expenses for one year of travel for the study of Architecture or

Architectural Engineering.

The competition will be open to all graduates of the Department of Architecture in the curricula in Architecture and in Architectural Engineering of the University of Illinois who are American citizens of good moral character and who are under thirty years of age, on the first day of June, 1942.

Persons wishing to take part in the competition must notify Professor L. H. Provine, Department of Architecture, University of Illinois, Urbana, Ill., not later than January 10, 1941.

Notes on Design and Construction of the Dwelling Unit for the Lower-Income Family—*Part II

By ELISABETH COIT, A.I.A., NEW YORK

BASEMENTS

Elimination of the basement, or even reduction of its size, made possible by the form and efficiency of the newer equipment, promises an economy of which present-day living habits permit of but slow realization, although the cellarless public project row houses and apartments, many of the smaller prefabricated houses, and a few private enterprises are showing the way.

Cellar stairs in the one-family home are often complained of as being poorly designed, dangerous, awkward (97); but a basement is usually desired even where there is ample space on the ground floor for work and storage. Probably the desire for work space well out of range of the family living space, voiced frequently in discussion of home needs, is considered compensation for the extra steps involved. The need for cool storage for fruit, vegetables, canned foods, is also ever present; and ground floor extensions for laundry, workshop, etc., interfere somewhat with the through draft needed for comfort in the living spaces.

Work Space

Of eleven thousand families in upper New York State, presumably largely town and suburban, surveyed by the Niagara Hudson System of public utilities in 1936, eighty per cent wanted full basements, and another fifteen per cent partial basements; furthermore the percentage of those requiring full basements was practically the same for five price categories ranging from below \$5,000 to \$15,000 (114). The same survey showed eighty-two per cent of the families wanting basement laundries, and fifty-five per cent a "fruit and vegetable room". Every small-home architect knows how often the basement seems to be the deciding factor in the question of buying an old house *versus* building a new one. Not only a spacious laundry and cool storage, but also the possibility of contriving a useful and inexpensive workshop or playroom out of the un-

necessarily large full cellar weigh in favor of the old house as against the modern one with more convenience but less opportunity for what to the family in general means ease of living. "Something for nothing" is a handy way of classifying the desire. Another, perhaps better, way is to recognize the urge toward salvage and creation, through contriving a room out of waste space. For designers the point is that basement living and extra stairs are not to the householder as objectionable as they are to the hygienist and to the architect seeking economical construction.

Regional diversity in climate and crops, also, to some extent, in national backgrounds, account for varied practice in home curing, canning, and other preserving. The U. S. Department of Agriculture detailed regional survey of farm families' needs in housing shows that a farm family cans about three to five hundred quarts of food each season, except for those in Southern California and the winter wheat section, which can about two hundred quarts, and that the only region using less than two hundred quarts of home-canned food is Florida and the southern fringe of the remaining Gulf States. The rural home, and particularly the true farm home, must provide also storage for cured meats, apples, potatoes and other winter vegetables; and since in all but the mildest climates most of this storage must be indoors, there must be basement space for barrels, stone jars, crocks, kegs and sand storage (144). The same comprehensive survey cites basement uses in the farm home, approved by reason of comfort and convenience, as well as of keeping out of sight many unattractive jobs: Canning, meat curing, drying of clothes in winter, handling smallscale dairy and poultry products, winter workshop operations, sometimes cooking for large crews of workmen in warm weather, even serving meals, providing an excellent playground for children, and in some parts of the country affording living and sleeping quarters in hot weather (144, p. 10).

* Part I appeared in the October OCTAGON.

Living Rooms

The basement living which so wrings housing's heart is really sub-basement or cellar living; and complete approval of sub-surface living quarters is well illustrated not only by the farm study just cited but also by the colonists of the Granger Homesteads in Iowa, who, a year after occupation were living mainly in the basements. These families, provided with kitchens and living rooms on the ground floor, found that, even with a kitchen range burning, the furnace still had to be used to heat the living room, that in moderate weather the hot water heater sufficed comfortably to heat the tile-walled cellars for general living, while in cold weather the furnace with very little fuel accomplished the same, thus eliminating the need of heating the entire house (33). Food therefore was prepared and eaten in the basement; radios, floor lamps and other equipment brought in to make of this space a combined kitchen, dining room, living room—and complaint was even made that faucets and a drain pipe had not been installed for uses entirely unforeseen when the houses were designed.

Laundries.

Basements, on the other hand, intended for laundries, at the Lake County homesteads near Libertyville in Wisconsin, while provided with water for laundry use had no drain when I was there, and water to be thrown away had to be carried up half a flight of stairs to the open air. A similar oversight occurs also in some large city projects where staff work space in the basement lacks porters' sinks.

Usage always lags a little behind maximum economy; and the electrically equipped simple household, with a washing machine and a dryer in bathroom, utility room or elsewhere does not need a basement laundry. But so long as many families feel, as they do, that a basement is desirable, there is little one can do about it; and "It will probably need a decade of evolution", says one editor, "to break down some of these fixed ideas, so rooted in the past are they" (114).

A decade is a short time. It will probably take an æon or two to make people with any choice offered them to follow the route they do not prefer. Thus the well equipped project basement with community washing machine and locked cages to prevent theft

sometimes enjoys limited use while the housemother washes in her inadequate laundry tray, consoling herself for her unwillingness or inability to carry down a heavy basket of clothing and carry it up again, three flights, perhaps, with the thought that the younger children's play is better in the apartment than in the steamy cellar. In time, doubtless, a dumb waiter to roof or cellar will come to the rescue for transport of laundry baskets; at present we are too near to the memory of the old unsanitary trash dumbwaiter for such a contrivance to find favor with designers. With a lift to the roof or to a drying yard the apartment dweller could air blankets, mattresses and other items rightly forbidden on balconies and window sills, and often practically impossible to air adequately within the apartment. For large city developments the trend is toward minimum excavation on the grounds of avoiding expense as well as underground living; and merely enough excavation for pipe access and heating plant obtain where laundry, storage and recreation facilities are cared for elsewhere. For some time both laundry and storage had been usually basement housed in public city developments, in spite of the tenants' preference for outdoor drying even in cool weather (40). The U.S.H.A. Checking List of 1939 to meet this demand assumes basement laundries, but recommends outdoor drying space adjoining. Some of the most recent U.S.H.A. developments are without basements, washing being returned, so to speak, to the kitchen, while drying is done either in outdoor drying yards or within the dwelling. Toilet facilities and space for storage of equipment owned by tenants are also among the recommendations for communal basement laundries. The basement laundry designed with overhead heat, contributing little to the speedy drying of clothes but overheating the apartment above, is probably an isolated case (62, Ap. 29, 1939).

Managers report supervision of basement laundries a serious difficulty where they must be left open during long late hours to accommodate tenants obliged to wash in the evening, for they offer unsuitable places in which children congregate.

Recreation Rooms

Recreation rooms below grade are apt to be noisy to the point of disturbing first floor residents. The later U.S.H.A. recommendations include sound-

proofing for all children's playrooms, and many managers think it necessary for all public rooms. Basement community rooms are apt to be unattractive unless ceilings are higher than is advisable economically; the expense is to some extent offset, however by the protection the high basement affords the first floor apartments, thus eliminating the need of installing and maintaining grilles. With a reasonable amount of window surface above grade—U.S.H.A. recommends the entire surface—the rooms ought to be attractive even for daytime use; but it is found that only by using sight-proof glass can security from street disturbances be found, and sight-proof glass is unattractive during daylight hours from the inside. Possibly the future developments without special provision for invalid or aged tenants on the main floor may find space there for community activities. Intensive developments on small lots have little choice as to where to house community activities; but Lavanburg and Michigan Boulevard, for example, with high coverage such as was common until recent years, have developed intensive roof use.

Storage Space

Tenant apartment house storage space seems to be calculated generally as 20 sq. ft., being about 10 sq. ft. for dead storage and 10 sq. ft. for baby carriages, bicycles, and wheel toys; but a recent report on "low-rent" F.H.A.-insured "white-collar" housing estimates 30 sq. ft. as the average needed (73, p. 91). Some recent public projects have no basements and little or no common space. Normally in large projects dead storage seems to be mainly in locked areas to be visited only under management supervision; and there is no way of estimating closely the ultimate cost of that system as compared with construction of individual bins with tenant-operated locks. Possibly a strong manager may reduce supervision cost by strongly regimenting visits to the storage area; but that is scarcely the object of providing such storage. Where baby carriages are stored separately from other items, one authority thinks one space sufficient for each seven-and-a-half families (113). All authorities agree that a ramp from storage space to ground level is necessary.

SURFACE FINISH: FLOORS, WALLS, CEILINGS

Flooring

The concrete slab floor, necessary for fireproof construction, and therefore general in large-scale construction, is practically indestructible, and on that account it is inexpensive to maintain if properly surfaced. It is, however, too hard for present day ideas of foot comfort. Also, unless there is ample heat, it is too cold for the interior of most United States dwellings. It is impossible to keep it in clean-looking condition unless it is painted, and when painted it needs frequent refinishing.

Surfaced with asphalt tile for the main rooms, as in many public developments, it is pleasant to the feet, not cold, easy to wipe clean. On the darker shades frequently used every footprint shows, so that no amount of wiping gives lasting satisfaction; but doubtless the middle and lighter colors now on the market will soon come into general use to do away with this objection. The cracking observed in some places is caused, says one manufacturer, by too brittle mix in certain makes. In other cases faulty installation is apparently to blame: owing frequently to roughness in the finish of the slab

on which it is laid. There are several nationally known makes, most of which have been on the market over a dozen years, so that there has been ample time to observe the behavior of this material in ordinary wear, and to learn its limitations and the treatment it needs; notwithstanding which managers report much replacing of tile specified for recent public projects. As extraordinary wear must be classed the trouble reported by one project; "All insecticides so far used have proved a solvent to the asphalt and mastic flooring, resulting in loosening of the tiles from their base" (62, Ap. 29, 1939). A later note on this subject reports that "Our difficulty with the tile floor has occurred in connection with the use of this liquid fumigant . . . Chloropicrin. . . . Whenever a drop of this liquid falls upon the tile floor it softens the tile but does not loosen the tile from its base. . . . We have found improved diffusers and sprays which have minimized this problem and which appear to be the solution for the time being" (62, June 26, 1939). All of which leaves it rather less than clear whether there are two difficulties or one difficulty. When the "time

being" is past the point will be worth investigating, for this fluid is reported as preferable to cyanide gas, in that it is not dangerous to human life, while equally effective in destroying eggs of vermin.

The alternative for flooring of the principal rooms is by all accounts hardwood, whether attached to sleepers or floor joists, or laid in mastic; and this, with asphalt tile, divides practically the entire public project field for hard going, with North Carolina pine or some similar wood for bedrooms and other less frequented spaces. Hardwood laid in mastic is found by one group of investigators to be not sufficiently resilient, and by one development unsatisfactory in that the mastic oozed to such an extent that the job had to be done again, which experience astonished a Boston operator who says that a well done job could never ooze. A serious objection to even a well laid hardwood floor is the noise, in at least one low-rental project so grave that ceilings below had to be soundproofed. To what extent the hardwood is to blame, and to what extent the laying of the floor, is not always apparent; but anyone familiar with apartment house life knows that one or two creaky boards even gently trodden on can spoil the life of the family in the suite below; and managers of public, limited dividend, and other projects urge soundproofing for all floors.

Linoleum for kitchen and tile for bathroom seem generally approved as the best solution of use and maintenance problems. Waxing the kitchen linoleum is often the cause of scalds and burns when some one falls against the stove, or indeed elsewhere, when carrying a hot liquid. For both the housekeeper eager for a shiny floor easily cleaned and for the owner anxious to protect his linoleum there is virtue in a coat of clear varnish which needs complete renewal only at long intervals while permitting of touching up worn areas once a year or thereabouts. Recent tests made by the National Bureau of Standards classify twenty-three floor coverings according to their relative values with regard to the extent to which they are permanently indented under abuse (112). According to that classification, the coverings most desirable for comfort and resistance to abuse are all linoleums: three grades of battleship and one marbleized. If resistance to abuse alone is considered, the materials rank thus: Marbleized asphalt tile, pressed fibre-

boards, short strip maple, strip Douglas fir, strip white oak, asphalt tile plain maroon, asphalt tile plain black, yellow strip pine, inlaid linoleum gray mottled, and rubber tile. Neither so abuse resistant nor so high in foot comfort rank half a dozen materials, which, however, as the Bureau observes, will probably prove to be the lowest in cost. They are felt bases with surfaces of linoleum or of one or another enamel finish, or of mastic or composition. A newer series of tests embraces wood finishes.

Adequate floor maintenance, everywhere an expensive item, is particularly so in public projects, where complex income requirements, increase in the family size, etc., involve a considerable tenant turnover, and where succeeding tenants' furniture cannot be expected to coincide with the marks left by that of their predecessors. A development still in the making can meet the difficulty by providing a certain amount of built-in furniture. Maintenance of hardwood floors by tenants who do not own a power polisher is a heavy task; and the suggestion to tenants given by one medium-priced project seems almost counsel of perfection: "The original finish is an oil stain which has been waxed. We suggest that as soon as possible after moving in you give your floors another coat of wax, and during the first month or two, continue waxing every two weeks. . . . All wooden floors are to be finished with wax only". Possibly some managers have an arrangement for renting to residents the power machines which, hired from a commercial concern, cost from a dollar to a dollar and a half a day—entirely beyond the reach of the low-income and almost beyond the middle class idea of legitimate floor maintenance cost. Another project's similar instructions to wax heavily, clean with a dry mop, after waxing, and "use water only when dirt or stains cannot be removed by dry mop or wax and then . . . sparingly" seems a good recipe for quickly antiquing the floor exposed to hard wear unless great care and some experience are brought to the work. To what extent those instructions can be enforced I do not know. Managers in some projects I have visited recently say that some of their most meticulous housekeepers still believe that soap, soda, hot water and a scrubbing brush best correct a dirty floor; and the parquet suffers accordingly.

Wall finishes

Within the dwelling the casein paint advocates battle with the oil paint defenders. Casein paint, tried in many places with a view to economy, proves difficult to apply satisfactorily and not washable. Two coats sometimes prove necessary for a satisfactory refinishing job, instead of the one estimated, thus eliminating any hope for saving. According to a speaker at the N.A.H.O. Institute, casein paint builds up a surface difficult to change over to the oil paint which he and others would prefer, and many others seem to agree. If decoration is unavoidable before the walls are cured, casein paint is useful as a first coat since it does not prevent the natural curing of the plaster, while oil paint retards it. Construction men say that there is no difficulty in washing off casein paint when the walls are ripe for a permanent finish—and if there is, well that's up to the maintenance. . . . The old argument. For commercial properties, in which appearance requires repainting long before the usefulness of the existing paint is past, casein paint will serve; and the owner of one development tells me he halves what would otherwise be his decoration cost by using casein for walls and stain for the woodwork, instead of oil paint, with apparently no unfavorable reaction from the tenants who are of good professional and business class.

Oil paint, long in use, is still, probably, in the experience of most owners something of an unknown both in application and service. The general experience about washing paint seems to be, with Mr. Satterfield, that "it is virtually impossible to do a satisfactory job of washing with a flat oil paint", and perhaps less generally so when he says he knows "some egg-shell paint that will stand washing" (74, p. 180). Some success in washing flat paint is indicated by Cincinnati Model Homes; and doubtless in districts where high smoke density makes frequent washing necessary, special attention is given both to the quality of the paint and to the manner of applying it. Managers in some places think tenants have not enough skill to be entrusted with renewing paint, and one points out that in his city "it is heresy for a man to wash his own walls" (74, p. 202). Others think better of the situation and not only assume that the tenant may and can wash his own walls, but sug-

gest the sum that ought to be allowed him for painting his own walls and ceilings. There exists, however, some doubt as to his ability to refinish woodwork. An economy I found liked by Stanley S. Holmes Village tenants is a darkish band painted on the plaster wall above the floor shoe, as being not easily soiled and easily renewed when necessary. Where the floor finish is dark, as in this case, the dark band looks well. Another economy,—in user effort, houseworker cleaning, and, to a lesser degree, in refinishing worn paint—would be effected by placing of door handles at about elbow height, say three or three and a half feet from the floor instead of in the low position dictated by the old four-panel door. People always handle the door at a convenient height, and elbow height handles long common in central Europe have made unnecessary the finger plates with which the British long met the difficulty. Now that the one-panel door has become so general in new construction there is no reason why the more convenient height should not be adopted. Makers of refrigerators would earn the gratitude of tenants by specifying refrigerator handles at use-heights also.

Blistering of paint on interior walls is explained by some as caused by either too much free lime in the plaster or insufficient time for drying between processes. Where the processes have been timed properly this will not occur, but since time and weather may prove incalculable, why not arrange for occupation of dwellings before the plaster walls are decorated as was done not so very many years ago by thrifty well-to-do people who decorated only after the plaster had been thoroughly cured? This should be the more practicable today since most dwellings are finished in white or some pale tint.

Paint, in spite of its high maintenance cost, has as yet no serious competitor for interior finish. Fourteen projects reporting to the New York State Board of Housing averaged recently \$8.19 a room a year for "renovating" with an average of \$7.67 a room for redecorating since their respective inceptions. Several of these are workers' cooperatives with a relatively small tenant turnover, and presumably the work was done with union labor. In the same city a private cooperative with a good class professional and business clientele averaged

just under six dollars for the past two years; while the one and two room suites already referred to, with a greatly disproportionate number of bathrooms (not counted as rooms in this calculation), and with a high tenant turnover, kept its average down to \$6.00 a room a year by using stain for trim, casein paint for walls, and project labor.

Water-proofing

Exterior surface finish and refinishing to remedy construction faults have been much in the housing mind in recent years; important to note here is the amount of interior refinishing necessitated by leaking walls. Undoubtedly it was chance which took me in 1938 during a tour of many projects, mainly public developments, to project after project which was either in the act of waterproofing its walls to remedy leaks or reported having recently done so. But the Housing Study Guild states that almost all of the projects visited in one of its investigations had had similar trouble (64); Ex-commissioner Langdon Post reports similar experience for the F.E.A.P.W. projects erected during his term of office in New York; and a reporter for N.A.H.O.'s Washington Conference told of "a passionate plea from Detroit for the secret of waterproofing cinder-block construction", tantalizingly leaving us uninformed as to "whether a symposium on the subject was held, and the answer duly revealed" (80: Sixth, 1938, p. 21). "Not enough lime in the mortar", would seem to be the explanation, according to some of the lime interests, which judgment seems reasonable enough in view of the rec-

ognized shrinkage of cement during drying and the wearing qualities of old walls, built often with but a modicum of cement and innocent of waterproofing. The Bureau of Standards report on "Water Permeability of Masonry Walls", however, describing tests of various types of masonry walls, reports that "permeability . . . was not greatly affected by difference in the relative amount of cement and lime . . . walls built with the high-cement low-lime mortars were slightly less permeable". The composition of proprietary brands of lime may account for some of the confusion; but "Of the many factors, workmanship is the most important single one", says the Bureau, leaving us again at the mercy of the sub-contractors' operators, thrice removed from our control. It is comforting, therefore, to learn that "Molten paraffin, oil paint, and cement paint were effective coatings", even though the approximate length of service of these waterproofing media is not indicated (37).

One wonders did not some waterproofing mania or hysteria hold the country in its grip for a time, greatly exaggerating the amount of the trouble. For report of an investigation a couple of years later disclosed that in all the F.E.A.P.W. projects inherited by the U.S.H.A. for administration "two building walls leaked slightly and one leaked badly" (124, Rel. 424). Recent developments seem to have little or no trouble in that respect. Apparently the air spaces now general between wall and inside plaster accounts for some of the improvement, and reinforced concrete post-and-girder construction appears to account for the rest.

WINDOWS

Assume about twenty per cent of the exterior wall area to be required for windows, says the U.S.H.A. (122), which comes to about the same as the A.P.H.A.'s recommendation of fifteen per cent of the floor area. The latter is more specific, however, for that percentage for the latitude of Washington, or 39°, should be "increased or decreased by two per cent for each degree north or south, varied according to altitude, air pollution, humidity and average daylight illumination. . . (5, 61) with casement or sash to permit of opening not less than one half of the area.

Height

Current practice, as illustrated in public and private developments and supported by A.P.H.A. recommendations, for window sills at least thirty inches above the floor has several advantages. It avoids glare, it keeps children and toys on the right side of the barrier, and, provided one is fairly close to the window, permits a person in a sitting position to supervise the children's play and enjoy the rest of the passing scene. For the average maximum height of a window sill permitting a view of the

yard twelve feet from the house is 35" for a person seated, and 47" for one standing (111).

The thirty-inch sill height has the distinct disadvantage, however, of giving less air movement, and thus less comfort during hot weather, especially where humidity is high, than does a lower sill. The lack of air circulation is sometimes painfully noticeable when the entire body is below the sill level, as is the case of a person lying in a bed of normal height; and doubtless general adoption of this height will hasten the day of mechanical air-cooling in summer, at least for the medium and higher cost house, and the day of obsolescence for the house not so provided, unless the current 14"-to-20" bed height yields to that general in the days of the casement so admired in the old house, where both bed and window sill were often of practically the same height, about thirty inches. A recent development in the casement window is a fixed horizontal sash, eight, ten or more, inches high, immediately above the sill, so that air circulation, still operated through one half of the window area, may start at almost three and a half feet above the floor level: nearly breast height for many a mother and well above the head of a young child.

Light and ventilation

A U. S. Department of Agriculture study of "Housing Requirements of Farm Families", combining with a survey of farm home functions a practical application by region of U. S. Weather Bureau year-round reports, urges that in regions of high summer humidity "it is advantageous to provide ventilation partly by doors or wall panels that can be removed or opened, instead of by glass windows. Window sills should be low, and there should be transoms over doors and windows, and ceiling fans are desirable" (144). One realizes too that the frequent use of french windows in town and country alike by generations which took their fresh air at home, so to speak, was not a mere fad, any more than is the sliding wall section in some of the new luxury buildings: home, hotel, club and hospital.

One Middle-Western rural development has pleasing french windows opening on balconies; for winter ventilation a small supplementary window, a movable pane, or a ventilator will doubtless be

needed. Windows extending almost to ceiling height make transoms unnecessary for windows, and privacy and quiet demand that for the city dwellings, at all events, they shall not be used above most doors. The high-silled small window formerly common (I found it recently at Greenhills), supplementing the main window, gives cross draft and some additional light, without diminishing the amount of wall space for the placing of furniture. And one small minimum-cost development had windows on three sides of its large living room-kitchen, placed high so as to leave unlimited wall space. If the back and front entrance doors which afforded ample hot-weather ventilation had been glazed these ought to have been attractive as well as uncommonly efficient rooms.

Regarding air and light, for which architects are at pains to secure the best orientation possible, it is sometimes difficult to gauge the tenant-consumer viewpoint. The petite bourgeoisie in individual dwellings desiring orientation that will protect carpets and upholstery from sunlight can be understood. Blazing sunlight, a southern exposure and drawn shades, wherever found, are also easily understood. But just how does the "white-collar" family in a small apartment use a suite with rooms facing north or south or east or west, one of hundreds in a ten to twelve story building from which almost all air movement and almost all sunlight are excluded a great part of the day, when most windows—especially living room windows—have a sash curtain covering one half of the glass area, a drape covering about three quarters, a shade drawn down half way, and perhaps a screen? Not even in high summer is there enough light to read a newspaper or play cards during the interval between work and supper. Does a family sit hours long in conversation, with a fan to stir the air? Or does it turn off the fan to listen to the radio? Or does it spend muggy afternoons at the air-conditioned movie; and if so is it because the movie has an interesting program day after day or because the dwelling is intolerable?

The metal frame

Steel casements are now so general that New Towne Court in Cambridge, for example, which meant to use double-hung wood sash in New Eng-

land traditional style, found steel casements cheaper. "Wood can't be weathertight", one hears on many sides. Perhaps nothing can be quite weathertight; but adequate weatherstripping helps.

Metal interior window reveals, seen on a number of developments, while a saving on initial construction costs, are a source of maintenance expense, paint having a tendency to check on them in exposed positions. If the enamel were baked on there would be probably less trouble in this respect. Aluminum frames and sash would pay for themselves out of maintenance saving.

Casements occasion heat loss; but when open permit of more ultra-violet ray penetration, says the A.P.H.A. (5). I believe the added advantage of a feeling of being almost in the open air, which the casement affords, has much value in making for contentment, especially among tenants essentially city and house bound. Some of the casement designs noted defeat both these advantages general in the older-design casement.

The use of non-transparent glass in some kitchens and bathrooms makes frequent cleaning unnecessary; and gives for that reason a slovenly appearance. For stair hall windows, however, easily fingermarked by everyone passing, a rippled glass is almost a necessity for good appearance.

Lack of proper curtain rods for corner windows has occasioned some pitiful makeshifts seen in a F.E.A.P.W. project. U.S.H.A. provides for this in the Checking, List; and A.P.H.A. urges rods so placed that draperies hang adjacent to, and not over, the window surface.

OUTDOOR LIVING SPACES: BALCONIES, PORCHES, ROOFS, GROUNDS

Balconies and porches

Balconies in city apartments are largely a matter of local custom, based, one is inclined to think, on climate and national backgrounds. On the other hand the general use of fire escapes in the poorer districts by tenants of all nationalities for sitting, for house plants, or for airing clothing and bedding—and that in spite of all regulations to the contrary—would seem to indicate that, given opportunity, most families would like to use such space.

Shutters

A high degree of year-round comfort, combined with saving in heating costs, might be secured by use of the solid outside shutters frequently used in Continental Europe. Closed after dark in winter, they prevent heat loss by radiation, and greatly diminish street noise. Closed not too tightly, before the heat of the summer day, they exclude much radiated heat, their actual performance in this respect being enhanced by the *feeling* that the blazing heat and light from pavement or chalky high road or the light stucco houses across the way are being excluded. Even a hurried traveller will recall the "grateful gloom" of his hotel room at siesta time, and the pleasant contrast when the heat of the day was past and the evening light admitted. The double window, formerly oftener seen here than it is now, would according to the *American Lumberman*, pay for itself in two years, and the A.S.H.V.E. says it reduces heat loss by fifty per cent.

The slanting window sill, urged long ago as preventing use of the outside sill for storage of milk bottles or for unmoored window boxes or flower pots, is still far from common.

Cooking ranges should be located at least one foot from the window jambs according to safety experts, for many fires start when window curtains are blown across the stove. The non-inflammable spun glass curtain fabrics now on the market are still too costly for general use; but they may soon be accessible to all, thus simplifying placement of the stove and incidentally saving laundering, for the fabrics are said to be cleaned satisfactorily by wiping with a damp cloth.

I have seen on coldish fall days elderly people sunning themselves on the rather narrow balconies of Brooklyn's "Riverside" apartments, a model tenement built in the 90's where residents are still mainly of Scandinavian, Irish and German background; and the intensive use of some of the little metal slat balconies, with a bit of linoleum or oil-cloth for flooring, in Manhattan's Yorkville, with their morning-glories and petunias, and a safe play space for little children, give anything but a slum

appearance to these unimproved properties tenanted chiefly by people of various central European origins. The curiously persistent absence of people on balconies in a low-cost development well located for outdoor living was eventually explained to me by a tenant who said that abuse of these well-constructed balconies by some tenants had led to a general prohibition of balcony use. This triumph of management over design seemed the more regrettable because the balconies were well designed for access, and it is probably an unusual case.

Management problems in connection with balconies are apparently serious, as evidenced by suggestions from managers of various types of housing that all balconies be omitted (23). At the same time the A.P.H.A. recommended that provision for balconies be made for all dwellings more than one story above the street level.

Privacy, at least to the extent of separating the balconies of different units by some little distance or by an opaque barrier, would seem desirable if the balcony is to serve as a living space, and this is found in many developments new and old. Some F.E.A.P.W. projects have many balconies, and some of the newer public projects have also, but not one to every dwelling, while a Philadelphia defense group has a continuous slab balcony running the full length of the top floor with metal fences between the units.

As even a small amount of carrying of furniture and equipment tends to discourage balcony use, it is well to make access as easy as possible. One F.E.A.P.W. project comes to mind with comfortable balconies, but doors so narrow that only slender furniture can be taken out of doors. An electric outlet might make for longer use by permitting a lamp for work and recreation; in the more secluded balconies, at least, it would make possible ironing out of doors.

Oriented for privacy and the prevailing summer winds, the country back porch has almost endless uses, from rinsing the vegetables and other messy jobs, through the family wash, canning, summer meals, sitting, sleeping for the children; and complaints are without qualification or mercy, for example at Tygart Valley and at Norris, against the "city" architects who designed many of the porches without regard to orientation, climate, or use.

The value of open air living space is expressed not in terms of homemaker's discontents but in those of money and management in an article in *Collier's* for October 4, 1941, stating that low-rent defense housing in San Antonio which lacked garages, porches and adequate landscaping found only eighty tenants for its five hundred four-room units, the remainder of the defenders preferring to rent quarters in town, while the rejected units are being offered for rentals ranging up from a little more than a third of the original rental expected.

The roof

The city dweller thinks longingly or appreciatively, as the case may be, of the roof for both work and play. Recent low percentage coverage leaves space and ground level for recreation; but the sense of space and of being "above the battle", which the roof affords, is valuable to those people who rarely leave town, or even their own neighborhood, for a day. Mothers, too, fear for their children who escape into the traffic routes. With an adequately fenced roof supervision would be simple. Lavanburg Homes, in a congested district, has a concrete tile-finished roof, used to capacity by old and young, including children not resident in the Homes. Movies, games, and a quiet place for sitting were planned for from the start, and drinking fountains and toilets were later added (40, 41, 64). Michigan Boulevard also makes intensive use of its roof, which includes "a half mile roof promenade where members of this community enjoy walking winter and summer", and a small roof garden used in summer for outdoor parties and entertainments (76). Hillside's small covered roof is also considered a boon; and the preference for the roof is well illustrated by the way in which great numbers of tenants were found using the wind-swept roof of the Emerson Tenements on a cool day, while just across the street lies a pleasant little park, far from overcrowded.

Doubtless the cost of adequate roof surfacing and fencing for intensive use, combined with the amount of space available at street level, accounts for the smaller amount of tenant use planned in recent city developments, some of which have later installed at least catwalks to accommodate tenants requesting roof drying space. But the newest sub-

sided projects seem definitely to have decided against any roof use except as a fire escape, so much so that there are often no penthouses and no parapets. Presumably the scuttles will be adequately inspected and will open easily in emergency, while modern fireproof construction makes improbable any great crowding near the unguarded roof edge. Nonetheless one feels more comfortable in presence of, say, East River Houses' light graceful grill.

Landscaping and playlots

Landscaping, initially a costly item, has proved in many projects difficult and expensive to maintain (62, Aug. 10, 1939; 74, p. 205-219). In some three dozen city projects of the F.E.A.P.W. initial costs varied between eight and forty-seven dollars a room, depending on the site; from Williamsburg's old level site, through Harlem's slightly hilly one developed with a sunken playground, to Hillcreek's virgin hilltop with everything to do. Maintenance costs of the F.E.A.P.W. projects were estimated by the U.S.H.A. in 1938 as averaging three dollars a room a year; that of the simpler and more practical U.S.H.A. projects constructed since that time ought to cost appreciably less.

Lawns will probably continue weak in many developments for some years to come; but some well designed features have been a delight from the start, such as the well proportioned and strategically placed garden houses at Chatham Village for the storage of tools and other equipment, the beautiful lamps attached to the house corners at Cedar Central, the wading pools at several projects, sandpiles and playground equipment, while Jane Addams' animals, so modelled as to provide climbing steps and grips, are not only interesting in themselves but promise also the embellishment of a continuous swarm of delighted youngsters climbing on them.

Numerous small scattered playgrounds make maintenance difficult and costly; but they are necessary where small children must be under supervision much of the time by mothers indoors. The National Recreation Association advises minimum areas of 1,500 to 2,500 sq. ft. for small folks' playlots, which allows for sand piles and a reasonable amount of equipment for the children of thirty to sixty families. The Association points out

that for small children the playground is essentially part of the home, whatever provision the municipality may make for older children and adolescents (83), and must, therefore be located so as to be supervised from the home windows.

Apparently wading pools have in some cases carried foot infection, and today the spray pool with water constantly draining away is taking its place. Infection too has been spread by barefoot youngsters playing in the sand piles and the sand piles themselves are easily contaminated in many ways. Many projects are now covering their sandboxes; some others have eliminated them, including one which is glad that the nearby park has sandboxes which remove responsibility from the project management. Sand or a substitute would seem to be one of the most important single playthings, as is evidenced by dozens of swings and junglegyms which get a few minutes' attention now and then, while sand or a bit of unpaved ground outside the project is good for the rest of the day for digging or building or otherwise making something—a hole in the ground will do.

Even children with well equipped playgrounds persist in running out into the street. One development tried to protect them by a barbed-wire fence partly concealed in a privet hedge, and removed it only after children had been hurt by it. Stanley S. Holmes Village meets the difficulty with curtain walls so designed that the children are obliged at least to slacken pace by having to turn sharply as they leave the grounds and enter the traffic routes. A well constructed fence with padlocked gate around an empty play space, which I saw one early afternoon, seemed pitiful on two counts. The playground was well overlooked by many dozen windows, making supervision by parents an easy matter; and the dispossessed young people were playing on the dump and in the puddle just beyond their home. It was in the same project that older children roller skating on the concrete walks in the courts, with their attendant echo, suggested pandemonium, while a staff supervisor mounted merely on sole leather, toiling after in a vain attempt to force the skaters out of the court, seemed ill cast for the rôle of chief tormentor. Skating is forbidden in some projects, while Baxter Court has set aside three large play areas for this sport.

Paving

Rough paving near a popular nursery school I visited was pleasant to the eye, but it caused many a stubbed toe, I was told, and consequent fall. The best surfaces for children's play spaces, according to one manager is moulders' sand, with tanbark for small areas under swings and other similar apparatus where children most often fall. A mid-west city health department says tanbark is apt to cause infection, while another manager thinks his project has "the most satisfactory of any type surface found in use: a composition of emulsified asphalt and sand". Any modification of the hard and abrasive concrete often found in parks and playgrounds is so much to the good, and this surfacing is now usually banned from the areas beneath swings, etc.

The asphalt or cork-asphalt paving used in many recently constructed playgrounds is sanitary and otherwise serviceable, but it is unattractive, even forbidding, and in my experience noticeably deserted. For drying yards it probably combines most of the virtues except that it makes a hot area near the house which quickly growing clover would avoid. During clover's off season a few light slatted walks under the drying lines, at least for apartment house yards, where there is heavy traffic, would suffice.

Grassed areas

Lawns prove expensive to maintain, and tenants often persist in cutting corners and even making diagonal tracks. The manager of a project of twenty-five acres, including buildings, reported a landscape maintenance force of six men required to keep shrubs and lawns in shape during one summer. "Attempts to educate tenants to be more careful have been fruitless", in spite of the abundance of shrubbery and other landscaping "giving an impression more of luxury than of low-rent housing". Such indifference on the part of one of the lowest-income groups (62, 29 Apr. 1939) was doubtless nourished on the too great contrast between the luxurious beauty maintained by a salaried staff and the tenants' own exiguous existence. The grass lawn, requiring generations to make and daily care thereafter to maintain, is at best out of condition and out of use during many months each year in most parts of this country, and even meadow-type

land needs care especially on the borders. Ivy gives a year-round cover, easy to keep neat, decorative during a great part of the year. It is found in public parks that it discourages trampling and is therefore useful especially for borders, it flourishes even in narrow sunless city back yards with sour undernourished soil, ill drained and replenished chiefly with dust and cigarette stubs.

Harlem River Houses protect their lawns with a border of flat paving stones and Queensbridge follows a similar plan using brick instead of stone. The brick and stone are set loosely, and coarse grass grows in the joint, producing quite a handsome effect and requiring little care. A small elevation, even eight or ten inches above the sidewalks, also gives good protection to both lawns and low hedges, which otherwise suggest short cuts; and equally effective ought to be the little Lambert Plan sunken lawn at Princeton (72) surrounded with a low briar hedge. A measure of protection here lies probably also in the plan whereby tenant cooperation in gardening and minor repairs is rewarded by rent rebates.

Michigan Boulevard Garden Apartments also recompense tenant labor, hiring boys living in the project to do planting and watering, a course perhaps not possible in publicly subsidized projects. To the latter however is possible enlisting the whole neighborhood's interest and help. There is rarely enough space in any community for children's gardens under garden guild or school supervision; and the project setting aside space for them gets help with its maintenance as well as providing daily matter of interest to parents and others passing, and developing early in its young tenants the cooperative attack. The low fence need not be either expensive or unsightly. If a reasonable respect for other people's property develops, rabbit keeping may come next. It will probably so develop. South Jamaica Homes in New York found the merest gesture of a fence between allotments was enough, and even that was soon abandoned. The allotments were good to see recently: still in their first full season and producing well in spite of a record drought—with a waiting list for any possible vacant lot. In that project one of the high spots of the social season was the home grown vegetable lunch in honor of the N.Y.C.H.A.'s chairman. A badge

of enrollment sufficed at Mission Hill to keep a corps of young volunteers interested in seeing that the grounds were kept clean, while Old Harbor Village for its thirty-one acres—including buildings—as noted above, found that it could manage with one full time gardener. Little foot-high white picket fences to protect vulnerable margins and corners, planting, and so on, were the tenants' contribution to the embellishment of their housing.

Sitting space

Mothers complain that there is no adequate place to sit in cold weather while airing the baby. In one place I found a great congregation of them hugging a theatre wall just outside the development, because it was the only place in the neighborhood offering sunshine as well as shelter from the wind. As I recall it, the architect's preliminary study for the project included mention of just such provision for mothers within the project. Low masonry benches on platforms, designed on the principle of golf or shooting shelters, but without a roof, could offer a certain amount of shelter from the wind at all times, and in mild weather all four sides could be used. In cold weather cushions for seat and back could be brought in the baby-carriage.

Quiet sitting is about the only outdoor recreation possible in many cases for breadwinner and house-keeper alike, and the minimum of regimentation seems desirable. On one project sitting place reserved for adults is much appreciated. Zeal for distinction and order is considered overdone by

tenants of a medium-rent project who may not sit near their own two and three story apartments but must sit with their neighbors in the general sitting place in the center of their grounds. Contrariwise, the tenants' desire to sit and chat near their entrance door was met at Yonkers by construction of concrete slabs eight feet wide at each side of the entrance, and these little platforms provided with benches are reported to be in constant use. In visiting one or two projects the thought persisted that fathers and children might easily be induced to remove the candy wrappers and weed out the plantains, which together covered a great part of the "grassed" areas in return for, say, the right to sprawl together on those extensive areas on hot Sundays, instead of sitting on benches ranged along torrid walks.

Waste disposal

No satisfactory solution of waste disposal out of doors has been generally adopted. Huge trash baskets at the front door and all over the place mar one development. In several the system whereby tenants take the trash to trash compounds looks badly and attracts flies. Trash or garbage spilled when tenants empty containers into outdoor incinerators is swept up by the management but bad stains remain on the concrete platforms. Stanley S. Holmes Village has satisfactory ventilated trash houses for collecting material (which by Atlantic City ordinance must be left for removal by the municipality). These are provided with doors which the tenant closes after emptying the trash.

THE COST OF HOUSING

Factors contributing to the present high cost of new housing have been well presented in numerous studies: expensive financing, small scale operation, traditional construction processes, wasteful overhead, politics, rackets, obsolete building codes and other aspects of "the law's delay", uneconomical merchandizing, land cost and land uses, taxes, the tyranny of organized labor, the architect's limitations. On most points agreement is fairly general as to the evils involved. There is also fairly substantial agreement as to the remedies for the "chaotic condition of the building industry" suggested

by architect, engineer, economist, realtor and other students of the American scene.

The American family's income

Other studies tell us that normally a family ought to spend not more than twice a year's income in buying or building its home, and not more than one fifth of its income for rent and utilities; that about a third of all American families have incomes of \$800 or less; one half \$1,150 or less, and two thirds less than \$1,800. That is to say, homes for the lowest third ought to cost rarely more than

\$1,600; for the five million families between that and the median not above \$2,300; for the five million between median and upper third something between \$2,300 and \$3,600: all well below the averages for U.S.H.A. simplified units: namely \$4,414 over-all; \$3,390 for dwelling facilities, and \$2,762 for construction alone.

One fifth for housing?

The assumption that in general a family's expenditure for rent and utilities ought to be about a fifth of its income is perhaps for the moment a useful starting point; and the aim ought to be to provide reasonable space, comfort, sanitation and amenity at that price.

Two points suggest themselves, however, in this connection. One is that decent housing is not available to the lower-income family at that price even in subsidized federal projects; the other that spending one fifth of one's income for shelter and convenience has apparently for a great number of people little appeal in competition with other good things.

Just how twenty per cent has come to be assumed to be a fair proportion for rental I do not know; but several studies of twenty to twenty-five years ago give a much lower figure. Average rents for American workers during the housing shortage at the end of the last war were 13.65% for the family with an income of \$900 to \$1,200, and 13.12% for the family with \$1,200 to \$1,500, which, with liberal allowance for the tenant-supplied light and heating of the period would bring the rent-with-utilities figure to little if anything above seventeen per cent (68). Whitten and Adams in 1931 cite similar figures; but for reasons not stated, assume that average to be too low (138).

None of the F.E.A.P.W. projects reported rented for 20%; some rented for 27% to 29%, only four of forty reported fell below 23%, all four in the South, and the average for the forty was 24.6% (124). These figures include utilities. U.S.H.A. has reached a much lower income group, averaging when last reported \$787 (125), as compared with \$1,245 for the families it took over previously from the F.E.A.P.W., but the rental of U.S.H.A.'s 22,807 units reported averaged practically 20% without utilities (19.87%).

True, today's dwelling is a more smoothly running machine than that of twenty years ago, with more convenience and better sanitation, and novelty, all of which bring higher prices. On the other hand, while other manufactured products as well as services have on the whole arrived at greater and more varied usefulness, ordinarily at lower cost, housing, while its price has increased has come to take a progressively smaller place in the day's life of even quite lower-income families, who need a variety of clothing unknown a generation ago—sports and "party" clothes as well as a greater selection of work clothes; wider recreational activities, camp, dancing, movies, excursions, athletics; special remedial and cosmetic aids, medical and surgical, far from free even in clinics, to enable the weaker to run the increasingly strenuous race for work; commercial provision of commodities and functions formerly provided at home, from being born, through laundering, preserving, sewing, dress-making, sick nursing, wooing and wedding, to the preliminaries to being buried. Education in domestic sciences and general electrification of the dwelling are bringing some of the more routine of those back into the home; but most of them are booked elsewhere for many years ahead.

Housing patterns

Meanwhile many a lowest and median income family is fairly well housed even if not according to modern standards of convenience, often without spending a fifth of its income for lodging and usually without immediate benefit of architectural advice. The patterns are well known:

1. A few new houses, sometimes individually built, sometimes bought from realty development companies, built with varying amounts of unskilled, skilled and union labor, and with a minimum of architectural advice.

2. The home constructed of used materials: salvaged lumber, piping, bath and kitchen fixtures, doors and windows, bought from wrecking companies. Often, but not always it is the rural one-family home. At least one federal project has used second-hand material. One local authority was induced to drain the land and give other services to a little colony of relief workers who had established themselves in houses constructed out of waste

material on suburban land they had bought. One city has used a variety of second hand material in a harmonious little development which stands to its sponsors for righteousness on esthetic as well as on shelter grounds now that the monotony of much new large-scale housing palls almost as much as did the drabness of the slum it has superseded; while housing's record to date for shelter and convenience at lowest cost was achieved by one city by a reversed process: new material, new processes, good organization, waste labor (unskilled-unemployed) and waste land (leased or bought for a nominal sum).

3. The used house, whether bought, traded or inherited, used unchanged, or modernized, with new or used material, fixtures, etc., with the aid of skilled or unskilled labor.

All tried practices these, promising to continue in about the present proportions with the trend for the immediate future toward a smaller percentage of new construction. For apart from the present emergency's shutting off much of the new material needed, there remains in urban dwellings alone most of the \$7,750 millions worth of rehabilitation business estimated by the *Building Reporter* as available in 1938, a great part of it apparently for new equipment and such slight changes in layout as the combination of buildings mainly sound structurally and provided with utilities and a public increasingly limited in spending power may suggest to the entrepreneur.

Rehabilitation

No outstandingly good fundamental modernization of commercial city apartments for low rental has emerged. Most of the properties, even when changed in little beyond providing modern equipment surface finish and fire retarding, have substituted for the low-income tenant of substandard days one with a medium or upper income. Restoration in units at least block-size is urged by the Citizens' Housing Council of New York (27); and possibly legislation such as the recent Illinois and New York urban redevelopment laws will, by simplifying assembly of adjoining land parcels, give impetus to this type of housing provision, estimated to prove even in large cities far above minimal accommodations at from \$300 to \$400 per room.

Outstandingly successful, on the other hand have been the restoration and re-equipment of some properties to accommodate the same type of tenant for which they were originally designed. Brooklawn's reclaiming of two thirds of the houses within its borders—erected near Camden, N. J. during the last war for shipbuilders' families, bought later by individuals, abandoned and dilapidated—was not only good municipal housekeeping, protecting the remaining third of the properties and producing not a little income: it also affords low-rental housing in a pleasant little town of curving tree-lined streets. Chicopee Falls Village, a Massachusetts mill town, after more than a century's continuous service, modernized its 818 rooms at a cost of \$190 a room for construction and continues to shelter rather graciously people, many of whom are proud to have been born there. At \$4 a room a month, exclusive of utilities, there is a surplus. Two others are Brooklyn's Tower and Homes and Riverside where thorough modernization (including re-planning for greater protection and amenity which incidentally produced several extra rentable rooms) with best materials and workmanship cost about \$600 a room, of which \$440 a room took care of refinishing, re-planning and re-equipping the dwelling.

Agreement on standards can with difficulty be achieved. Idealists who make no small plans, and want complete housing communities, frown on minor restoration schemes. At the other end of the scale are those two dozen-plus building officials who a few years ago reported for their respective communities "no blighted areas of any extent", including several—among them one from Boston—who reported no blighted areas or slums at all (132); and the civic minded group in Senator Wagner's own Yorkville who at the opening of the present rehabilitation movement awarded a prize for a bank-owned tenement block on a fair wide avenue, of which when I looked it up six years later, more than half of the units lacked bath tubs and individual toilets. One of the architects thinks the prize was awarded for the window boxes, long since gone.

Financing new construction

In new construction the need to keep down initial expense continues to add to the burden of operation and maintenance. Fireproof individual

homes are probably out of the question for some time in a country in which ninety-three per cent of all farm homes and eighty per cent of all homes outside of one or two cities are of frame construction. It is doubtful, however, whether semi-fireproof construction for a public development outside the city's fire-zone is a real economy; or management hanging of tenants' pictures over three score years, for lack of picture rails; or transferring to the lowest-income tenant provision of most of the lighting fixtures; or floors not soundproofed in medium and higher rental apartments—"although . . . as tenants become used to noises complaints cease" (125).

If operation and maintenance make a heavy demand on the small owners' housing dollar, financing makes one which also could be lessened by the initial design. One way is to design for partial construction; another is to lessen the equipment cost by building in all possible furniture.

Financing public housing over a sixty-year amortization period, even at the low interest rate possible for government projects, brings the cost to a figure which can be borne only because it is collected on a nation-wide basis. The small private owners' typical financing pattern at a higher interest rate and amortization over twenty-five years, bringing the cost of the venture to some seventy-five per cent more than the sum advanced, can also be at least endured. It may even be considered a good investment if the family incurring the cost continues a patterned course in the neighborhood of its choice, with custom, use and wont, association and sentiment to take the place eventually of novelty, adventure and the convenience of earlier days.

Relatively few families follow that course. Many, even without experiencing adverse fortune, would be better served, long before those twenty-five years are up and the house paid for, by smaller houses or apartments with opportunity for simpler or more modern housekeeping, less responsibility, perhaps a different neighborhood, and greater freedom of action. For many a family, far from settled or content in the communities of its first choice, and insecure in its economic life, a less perfect home and a smaller mortgage to be paid off in about half the time now usual would be of greater service.

Financing patterns have not been to any extent worked out for such families; nor are they welcome in most subdivisions. Isolated, therefore are the families of small material resource but fair creative imagination, who build their homes almost out of income. A good architectural plan and specifications, and an F.H.A.-insured loan for the owner who undertakes to carry out his approved enlargements in an approved order, would enable the more imaginative family to start with a living room with bunks or couches, the beginnings of a kitchen and a partially finished bathroom, to which nucleus, further equipment, needed rooms, and other improvements can be added in the order dictated by necessity and income, either by the original investor or by his successor.

On the simplest scale this plan is realized by the Finnish small farmer who first builds the hut, later to be the family steam-bath, and lives in that with his bride during the summer while he builds his house, finishing that in turn after he has moved in. Akin is the system by which the Hoess Brothers of Hammond, Indiana, advance on easy terms sums from \$1,600 to \$3,000 for an acre and a house for which the shell, wiring, and installation of fixtures needing skilled labor are in charge of a local builder, while landscaping, painting and accessories are left for the owner to finish according to his need, his taste, and his ability to pay. The acre provides food and keeps the family busy at home. A more strenuous but cheaper plan enables Stockholm artisans to acquire at phenomenally low rates dwellings erected largely by the future owner at weekends and on long summer evenings under skilled direction from the municipality which finances the project (30).

Prefabrication's promise

Prefabrication's accomplishment in cost reduction still lags far behind its promise; except in large scale operations. The obstacles in small scale work remain, after years of promotion: poor merchandizing; uneven distribution; difficulty of transportation; labor's objections, in some neighborhoods so effective as to be prohibitive; unfamiliarity of local dealers with the product or the process; cost; unsuitability of certain products, essentially by-products of other industries; unreliability of makers

to keep to schedules and to complete orders; difficulty of marrying a standardized plan to an unstandardized site.

For large scale operations with adequate administrative machinery the story is different, and possibly "a devastating and rapid reduction" in building cost is on its way; possibly the two efforts to which one writer refers "the details of which have been most carefully kept secret" (16) are different from those severally cherished by most interested investigators living week by week in tense anticipation of one or another epoch-making development, details of which have been confidentially described by their several sponsors for years.

One or more of these difficulties is overcome by one or another sponsor. The Gunnison low-cost housing in which financing, construction and even complete furnishing, if desired, are in the hands of one firm is limited only by the fact that not all regions have a Gunnison overseer. The Homasote Company's Precision-Built house, on the other hand, is one of a type easily constructed in any place not too remote from a mill with a jig-table for cutting and assembling large sections, thus permitting local

contractors to handle the job; and this house has been built from coast to coast.

To judge by Fort Wayne and Lebanon the solution for the small owner with some little mechanical skill may prove to be a packaged house with clear directions on the label, costing perhaps a thousand dollars for materials in addition to a few—a very few—days' work on the part of the owner with a helper or two. For the John B. Pierce Foundation demonstration house at Lebanon, including most essential furniture built in, was assembled by four men who had never before erected such a house; and the Foundation estimates that four days would suffice for the work, although the experimental house took longer (107). That house also cost \$2,000, while the Foundation's estimate is that subsequent units would cost about \$1,700. Neither this nor the Foundation's second experimental house conflicts with current craft organizations. Fort Wayne's house, mentioned above, cost \$900 for material, and it is estimated by the Authority that if W.P.A. labor had not been available the labor cost would have been about \$800 for labor instead of the \$400 which unskilled relief labor did cost (42, 71).

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144. Wilson, Maud. Housing requirements of farm families in the U. S. 1939. 40 p. U. S. Dept. of Agr. (Misc. Pub. 322.)
145. ———. 1. House planning of Oregon Women. Corvallis, 1941. 31 p. (Ore. State Agr. Dept. Sta.

- Bull. 369.) 2. Planning the kitchen. 1939. 32 p. (Circ. 131.) 3. Willamette Valley farm kitchen. 1938. 82 p. (Bull. 356.) 4. Use of time by Oregon farm homemakers. 1929. 71 p. (Bull. 256.)
146. Winners of Productive Home competition. *Arch. Record*, April, 1939, pp. 10, 12; May, 1939, pp. 53-58. See also *Pencil Points*, May, 1939, pp. 307-314.
147. Women's City Club of New York. Committee on Housing. Housing for the family . . . New York: The Club, 1936. 40 p., tables, plans.
148. Wright, Henry N. Rehousing America. New York: Columbia Univ. Press, 1935. Illus., maps, plans, diagrams.
149. ———. Rehabilitation of blighted areas. In Walker, M. L. Urban blight . . . Pp. 93-108.

Massachusetts Registration of Architects

BY G. H. BURR, A.I.A., SECRETARY, MASSACHUSETTS STATE ASSOCIATION OF ARCHITECTS

AFTER repeated attempts to convince the Legislature of Massachusetts that some sort of Registration of Architects was necessary, such an Act has finally become law, having been passed by the House and Senate, signed by Governor Saltonstall on October 24, 1941 and becomes effective ninety days thereafter.

In previous attempts to obtain registration, bills sponsored and supported by the Boston Society of Architects were unofficially opposed by a number of prominent architects in Boston, and had little active support from architects outside of the Metropolitan Area.

This year the newly formed Massachusetts State Association of Architects made it their principal business to work for a Registration Law, and active support was obtained throughout the State. It is interesting to note that this year the architects had the active support of the Building Trades Council of the American Federation of Labor.

The bill as filed was entirely re-written and thereafter approved without change by the Committee on State Administration. It was passed by the House without material change, but had many of its "teeth" removed by the Senate. While we did not approve of these changes, it was felt expedient not to carry opposition any further, and worked to get concurrence in the House.

The Act, as signed by the Governor, retains all the administrative requirements as desired by the architects, but for the present, registration is not mandatory for performing the functions of an architect. It sets up a Board of Registration composed of five (5) architects appointed by the Governor.

The appointees must be residents of Massachusetts and have been practicing architects for at least ten (10) years. Except for the original appointments, there will be one architect appointed each year for a five year term, and after the first year each appointee shall also be a registered architect in the State. The Board is empowered to make its own rules and regulations and to set up its own administrative machinery.

The Law provides for a registration fee of twenty-five dollars (\$25.00) and a renewal fee of ten dollars (\$10.00). Until January 1, 1943, architects may register under three so-called "Grandfather" clauses. (1.) In practice as a principal for at least five years. (2.) Eight years experience in the office of practicing architects. (3.) A graduate of a recognized architectural school, with three years experience in architectural offices. After January 1, 1943, all applicants will be subject to examination in such subjects as the Board may determine.

While the law as passed is not all that might be desired, the administrative set-up is such that the state Board, properly supported by the Society and the State Association, can hope to obtain, in the not too distant future, the added requirements to make this a model registration law.

The State Association and the Society have collaborated in sending to the Governor a list of architects who we know are qualified and willing to serve on the Board. It is hoped that the Governor will make his appointments from this list.

This year there also became law a bill for the permissive registration of professional engineers, sponsored by the affiliated engineering societies.

The Department of Technical Services

BY THEODORE IRVING COE, TECHNICAL SECRETARY

Technical Bulletin of the Central Housing Committee.

The Number 2 (October 1941) issue of the bimonthly *Technical Bulletin*, published by the Central Housing Committee on Research Design and Construction, contains a note of dedication to N. Max Dunning, F.A.I.A., of the Public Buildings Administration, by Horace W. Peaslee, F.A.I.A., Secretary of the Central Housing Committee and Editor Pro-tem of the *Bulletin*.

Editor Peaslee refers to the fact that the *Technical Bulletin* outlines the objectives of the following recommendation made by Mr. Dunning, who has taken an active interest in the work of the Central Housing Committee:

"To a greater and greater extent, conclusions reached by sub-committee and reference groups of the Central Housing Committee should be given general publicity and made available to the public in order that agencies entering the housing field shall be given advantage of the vast research and experience data accumulated in Washington through the activities of the various groups of the Central Housing Committee.

"It would seem that, because of the fact that the members of the different groups of the Central Housing Committee are public officials or public employees, the public at large is entitled to all information that can properly be disseminated, bearing on the broad problem of housing."

The *Bulletin* continues to present a carefully selected list of articles, reports, etc., of value to architects and others interested in the field of housing, site planning, building and zoning regulations, etc.

The limited edition will not permit general distribution, but the secretaries of Institute chapters and the chairmen of interested committees may obtain copies by addressing Mr. Peaslee at 1601 Eye St., NW, Washington, D. C.

Coordination of Dimensions Facilitate Pre-Fabrication.

A two story and basement frame dormitory, for government inspectors, 141 feet long by 85 feet wide, has recently been constructed at Sorel, Canada.

The design incorporated the principles of coordi-

nated dimensions based on a four inch increment and conformed closely to the wood frame details developed by ASA Committee A62, with which representatives of The Institute are cooperating in the study of the coordination of dimensions of building materials and equipment and the correlation of building plans and details with such dimensions.

The Canadian authorities consider the results a success in over-all economies and especially in speed of erection.

The wood frame, walls and ceilings were pre-cut and assembled in sections in a temporary shop located 85 miles from the site of the building and the contractors for the same reported favorably on the ease and economy of installing the mechanical equipment.

Specifications Used by the War Department.

An "Index of U. S. Army and Federal Specifications, Used By The War Department", may be obtained from The Superintendent of Documents, Washington, D. C. 25c a copy.

Simplified Practice Recommendation.

The following recently formulated Simplified Practice Recommendation as issued by the U. S. Department of Commerce, through the National Bureau of Standards, is available from The Superintendent of Documents, Washington, D. C., at 5c per copy.

R180-41 Copper Conductors for Building Purposes.

Specifications for Portable Steel and Wood Grandstands.

The first in a series of standards for grandstands now under development in the American Standards Association has been completed and issued as The American Standard Specifications for Portable Steel and Wood Grandstands—Z20.1—1941.

Copies may be obtained from the American Standards Association, 29 West 39th Street, New York, N. Y., at 60 cents.

National Bureau of Standards Research on Building Materials and Structures.

To the list of those reports mentioned in previous issues of THE OCTAGON the following reports have been added and may be obtained from the Government Printing Office, Washington, D. C.

BMS76. Effect of Outdoor Exposure on the Water Permeability of Masonry Walls.....	15¢
BMS77. Properties and Performance of Fiber Tile Boards.....	10¢

American Standards.

The following ASTM Specifications have been approved by the American Standards Association as American Standards.

Standard Method of Testing Gypsum and Gypsum Products. ASTM—C26-40. ASA—A70.1—1941.

Standard Specifications for Gypsum Wall Board. ASTM—C36-34. ASA—A69.1—1941.

Standard Specifications for Gypsum Sheathing Board. ASTM—C79-34. ASA—A68.1—1941.

Standard Specifications for Gypsum Lath. ASTM—C37-40. ASA—A67.1—1941.

The Producers' Council, Inc.

The Cambridge Tile Manufacturing Company, of Cincinnati, Ohio, has recently been elected to membership in The Council. C. H. Burchenal, President, will serve as Official Representative in The Council.

With the Chapters

NEWS NOTES FROM CHAPTER SECRETARIES

Arizona.

In Phoenix, Saturday Evening, November 8, the Arizona Chapter held its regular meeting. Of course, the discussion centered upon the Architect and Defense: having read a number of resolutions or memorials from other Chapters protesting the Government's lack of appreciation for Architects, notwithstanding its indulgence in other quarters such as labor and the farmer, it was more or less our conclusion that:

Granted the Government has shown little interest in the Architect, we find many skilled and successful architects working hard on Defense projects, there being some which need his technical aid; we are opposed to arbitrary patronage for any group (even for ourselves); and we believe that the essential characteristic of the Architect which makes him deliberate over plan and detail (a virtue in the long run) cannot reasonably be tolerated in an emergency situation (where in haste the first feasible solution must obtain and be immediately executed). *But*, we stand ready to aid in any way we can, fully realizing that our responsibility carries on beyond the catastrophe, for Architecture, despite wars and other tumults, is Civilization's long range planning.

It is our intention as a Chapter not to concur in

this movement which has consumed others to a point of open criticism and rebellion.

The writer showed colored moving pictures which he took at the Yosemite Convention and discussed "Personalities of the Convention", stressing the contributions made to our profession by certain strong men, older and younger.

Earlier in the day our Committee on Publicity met to discuss the coming Architectural Show. Our theme will be based upon the stability and continuity of Architecture, one of the greatest forces in civilization.

FREDERICK WALLIS WHITTLESEY,
In Charge of Publicity

Pittsburgh

The November meeting of the Pittsburgh Chapter was a "natural" for interest, but a very small turnout resulted, which however did not dampen the enjoyment of those who attended.

Viewing of the "Directions in American Painting" exhibit at the Carnegie Institute preceded dinner at the Royal York Dining Room. The dinner of roast duck and all the trimmings satisfied all the gourmards present.

A lot of important business was taken care of with expedition. Election of Harry Widom, Gerald Black and John Finley to Corporate Membership was announced. Six other applications pending. J. N. Franklin was appointed chairman of

the Committee on Public Information to succeed Marlier, now resident in Washington. Charles Stotz and Allan Neal were elected Pittsburgh Chapter members of the newly organized Middle Atlantic Council, the new-born pet baby of Regional Director Fletcher. Organization meeting will be held early in December. A resolution was passed protesting the Government curtailment of the construction industry and copies were to be sent to all Chapters, Associations, Senators, Representatives and related construction groups.

Our guest, Norwood MacGilvary, prominent artist and critic, was then introduced and gave us a delightful talk on the painting exhibit, after which a general discussion was joined in by all.

ALLAN H. NEAL, *Secretary*

West Virginia.

A meeting of the Chapter was held on November 11 at the Daniel Boone Hotel, Charleston, W. Va.

After an enjoyable luncheon the meeting was called to order by president C. E. Silling and no time was lost in getting down to the business at hand. Mr. Silling gave a short talk on past history of the chapter activities and outlined to the members something of the future aims, activities and interests that should guide us in future meetings.

There was general discussion on current problems affecting the profession in general and such keen interest was displayed by all present that practically the entire afternoon had passed before any one realized it. The foremost concern in the minds of all present seemed to be regarding the future status of the architectural profession in view of the ever increasing problems arising from the government priority system and various phases of the government defense program which are threatening to ultimately force the architects out of business. After this discussion the secretary called attention of the Chapter to a generally adopted form of resolution which he had received from other chapters in protest against some of these infringements. A copy of the resolution which follows was read to the Chapter. The resolution was voted upon and adopted and the secretary was instructed to send copies of same to our representatives in Congress advising them of our action:

Whereas, The recent decision of the Federal Administration curtailing—(and virtually eliminating)—all construction activities except for houses costing less than \$6,000.00 will cause the unemployment of many thousands of laborers, craftsmen and others connected with the Construction Industry in this Chapter's Territory, and

Whereas, The skills of these people affected by this curtailment in the Construction Industry are such that there is little demand for their services in industries manufacturing war materials and,

Whereas, The Housing Program under consideration by the Government will not begin to absorb the services of these men unless increased many fold, and

Whereas, This unemployment will place many people on relief and destroy their morale and seriously weaken the Country's unity in the war effort, and

Whereas, We believe that if curtailment of new defense activities is necessary they should be applied equally to all Non-Defense Industries, and

Whereas, Our knowledge of the Territory embraced by our Chapter leads us to believe that by proper regulation such sweeping curtailment would not be justified, now be it

Resolved, That the West Virginia Chapter of The American Institute of Architects go on record as follows:

1. That we protest the curtailment in the Construction Industry as being unnecessary and unwarranted—
2. That if restrictions are applied such restrictions should apply equally to all non-defense industries and at the same time provision be made to re-employ those who are affected by these restrictions.
3. That the members of this Chapter of The American Institute of Architects feel that the morale of the citizens is fully as important as military preparedness and the destruction of the former will impair the latter.
4. That all Congressmen and United States Senators within the territory of the Chapter be sent a copy of this Resolution and they be requested to do all in their power to have lifted these unwarranted restrictions now placed on the Construction Industry.
5. That a special committee be formed to call these restrictions which abolish their means of livelihood to the attention of all organizations such as Labor Unions, General Contractors Associations, etc. within the limits of our Chapter territory.
6. That the West Virginia State Association of Architects be requested to make a similar protest and to request simultaneous action by other State Associations and organizations of architects in the United States.

FRANCIS GEORGE DAVIDSON, *Secretary*

Chapters of The American Institute of Architects

INFORMATION HEREIN WAS FURNISHED BY THE CHAPTERS: UP TO DECEMBER 6, 1941

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 Secretary: Mark B. Stophlet, Security Bank Bldg., Toledo Ohio

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 Secretary: Leigh Hunt, 152 W. Wisconsin Ave., Milwaukee, Wis.

State Association Members of The American Institute of Architects

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 Secretary: Clyde C. Pearson, 115 South Union St., Montgomery, Ala.

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 Secretary: Vincent G. Raney, 233 Post St., San Francisco, Cal.
 President, Northern Section: Wayne S. Hertaka, 369 Pine St., San Francisco, Cal.
 Secretary, Northern Section: Andrew T. Hass, 557 Market St., San Francisco, Cal.

Official Headquarters: 557 Market St., San Francisco, Cal.

President, Southern Section: Walter R. Hagedorn, 3316 San Marino, Los Angeles, Cal.

Secretary, Southern Section: Winsor Soule, 116 East Sola St., Santa Barbara, Cal.

Official Headquarters: 3757 Wilshire Boulevard, Los Angeles, Cal.

FLORIDA ASSOCIATION OF ARCHITECTS 1940

President: Elliott B. Hadley, 211 Taylor Arcade, St. Petersburg, Fla.
 Secretary: E. F. De La Hays, Box 3747, Daytona Beach, Fla.

ILLINOIS SOCIETY OF ARCHITECTS 1941

President: William J. Ryan, 48 E. Ohio St., Chicago, Ill.
 Secretary: Henry L. Newhouse, II, 8 S. Michigan Ave., Chicago, Ill.

INDIANA SOCIETY OF ARCHITECTS 1940

President: Richard C. Lennox, Architects' Bldg., Indianapolis, Ind.
 Secretary: David Burns, 333 N. Pennsylvania St., Indianapolis, Ind.

KANSAS SOCIETY OF ARCHITECTS 1940

President: Glen H. Thomas, 125 1/2 North Topeka St., Wichita, Kans.
 Secretary: Paul Weigel, Kansas State College, Manhattan, Kan.

ASSOCIATION OF KENTUCKY ARCHITECTS 1938

President: J. M. Ingram, 919 Park St., Bowling Green, Ky.
 Secretary: John L. McDermott, 65 Blue Grass Ave., Ft. Thomas, Ky.

MARYLAND SOCIETY OF ARCHITECTS 1940

President: John J. Zink, 2828 Overland Ave., Baltimore, Md.
 Secretary: E. Russell Marcks, 12 E. Pleasant St., Baltimore, Md.

MICHIGAN SOCIETY OF ARCHITECTS 1938

President: C. William Palmer, 243 Congress St., W., Detroit, Mich.
 Secretary: Cornelius L. T. Gahler, 17481 Alwyne Lane, Detroit, Mich.

MINNESOTA ASSOCIATION OF ARCHITECTS 1940

President: W. H. Tueler, 202 Foshay Tower, Minneapolis, Minn.
 Secretary: H. W. Fridlund, 1598 University Ave., St. Paul, Minn.

MISSISSIPPI ASSOCIATION OF ARCHITECTS 1940

President: Frank Fort, 1305 Deposit Guaranty Bldg., Jackson, Miss.
 Secretary: Frank P. Gates, Millsaps Bldg., Jackson, Miss.

THE MISSOURI ASSOCIATION OF ARCHITECTS 1941

President: Harry Satterlee Bill, Bingham Rd., Columbia, Mo.
 Secretary: Austin H. Welch, P.O. Box 52, Jefferson City, Mo.

NEW HAMPSHIRE SOCIETY OF ARCHITECTS 1940

President: Eric T. Huddleston, Uiv. of New Hampshire, Durham.
 Secretary: Harry G. Forrest, 20 Pleasant Street, Concord, N. H.

THE NEW YORK STATE ASSOCIATION OF ARCHITECTS 1941

President: James Kideney, 505 Franklin St., Buffalo, N. Y.
 Secretary: John Briggs, 101 Park Ave., New York, N. Y.

THE NORTH CAROLINA ASSOCIATION OF ARCHITECTS 1940

President: Charles C. Hartmann, 120 Jefferson Standard Bldg., Greensboro, N. C.
 Secretary: Lindsey Gudger, 52 Carter St., Asheville, N. C.

ARCHITECTS SOCIETY OF OHIO 1935

President: Paul G. Hill, 322 Hammon St., Cincinnati, Ohio.
 Secretary: Ralph Chas. Kempton, A.L.U. Bldg., Columbus, Ohio

THE OKLAHOMA ASSOCIATION OF ARCHITECTS 1940

President: Lee Sorey, 2602 First Nat'l Bldg., Oklahoma City, Okla.
 Secretary: Wm. M. Lawrence, 3316 N. W. 22nd St., Oklahoma City.

PENNSYLVANIA ASSOCIATION OF ARCHITECTS 1941

President: Edwin H. Silverman, Architects Bldg., Philadelphia, Pa.
 Secretary: Harry G. Stewart, Architects Bldg., Philadelphia, Pa.

THE TEXAS SOCIETY OF ARCHITECTS 1940

President: George Dahl, Dallas, Texas
 Secretary: R. Max Brooks, Scarbrough Bldg., Austin, Texas

THE VIRGINIA SOCIETY OF ARCHITECTS 1941

President: C. W. Huff, Jr., 108A East Cary St., Richmond, Va.
 Secretary: E. Tucker Cariton, Builders Exchange Bldg., Richmond, Va.

THE STATE ASSOCIATION OF WISCONSIN ARCHITECTS 1935

President: William Mickelson, 2510 Washington Ave., Racine, Wis.
 Secretary: Leigh Hunt, 152 W. Wisconsin Ave., Milwaukee, Wis.



