



Park and Recreation Structures

Part I—ADMINISTRATION
AND BASIC SERVICE FACILITIES

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ADMINISTRATION AND BASIC SERVICE FACILITIES

AS HAS ALREADY BEEN STATED, administration and basic service facilities are considered to embrace park structural developments necessary for the control, supervision, and maintenance of an area together with those basic services which might be termed the park equivalents of the city's public utilities. Included are entrance and boundary structures, administration buildings as the seat of order and authority, signs as an instrument of control, equipment and maintenance buildings functioning to give continuity to desirable physical conditions attained, and structures for housing those persons charged with administering and maintaining the park preserve. Here also are those "first things" needed for safe use of an outdoor area by the public, namely, drinking water supply, toilets, rubbish disposal, and fire lookout structures, paralleling respectively the city's water, sanitation, rubbish disposal, and fire alarm systems. These are topped off with trail steps, crossings, culverts, and bridges—all of which seem somehow analogous to the accomplishments of the public roads agency of any governmental unit.

All the foregoing have highly practical functions to fulfil, to express and to aid which we do well to provide practical structures. Some are most properly located beyond the horizon of public view and such need carry no economic overburden of park-consciousness. No one of the several kinds of facilities here classified can be termed other than completely requisite in a park area of size, developed for a proper public use. Because so patently essential in a park, the most fitting conception of most of these will be without frills, which are better indulged in, if at all, in the less essential, but more importantly placed, public use structures that should follow only when the fundamental things have been provided.

What follows in this chapter has been said and written many times by the park-minded. It is

something of a creed for construction environed by Nature and a pardonable repetition as preamble to any consideration of the many major and minor structures given place in natural parks. Because of their truly basic character, the points here recited may not be omitted, for all it is fully appreciated they will reach the ears of many readers as all too familiar echoes. They are the deep roots of a sound park construction, from which any new growth must stem.

The present discussion by no means applies solely to structures concerned with administration and basic facilities. In point of fact the fullest application of the principles will probably involve those structural items less committed to a stern practicability and more concerned with aesthetics by reason of greater contact by the public.

THE STYLE OF ARCHITECTURE which has been most widely used in our forested national parks, and in other wilderness parks, is generally referred to as "rustic." It is, or should be, something more than the worn and misused term implies. It is earnestly hoped that a more apt and expressive designation for the style may evolve, but until it appears, "rustic", in spite of its inaccuracy and inadequacy, must be resorted to in this discussion. Successfully handled, it is a style which, through the use of native materials in proper scale, and through the avoidance of severely straight lines and oversophistication, gives the feeling of having been executed by pioneer craftsmen with limited hand tools. It thus achieves sympathy with natural surroundings and with the past.

In high, mountainous and forested regions the various structural elements of rustic construction—logs, timbers, rocks—must be reasonably overscaled to the structure itself to avoid being unreasonably underscaled to surrounding large trees and rough terrain. In less rugged natural areas, the style may be employed with less emphasis on oversizing. For

pleasing harmony, the scale of the structural elements must be reduced proportionately as the ruggedness and scale of the surroundings diminish. When this recession in scale reaches a point at which there is any hint of "twig" architecture masquerading under the term "rustic", the understanding designer will sense immediately its limitations and take refuge in some widely different style.

That the so-called rustic style offers, if anything, more pitfalls to failure than do the more sophisticated expressions, is not widely enough understood. And while generally speaking it lends itself to many semiwilderness regions perhaps better than the others, its use is by no means appropriate to all park areas. This is instantly demonstrated by recalling the wide range of dominant characteristics of our parks. Spectacular snow-covered mountain parks, dramatic primeval forests, open expanses of arid desert or limitless prairie, shifting sand dunes, gently rolling woodland and meadow, semi-tropical hammock are not to be served appropriately by a single structural expression. A range of architectural styles as varied as these backgrounds must be employed before our park architecture will have come of age.

Nothing is more indicative of lack of a proper sense of values in park technique than the frequently expressed determination to "make a feature" of a shelter or other park structure. The features to be emphasized and stressed for appreciation in parks with which we are here concerned are the natural features, not the man-made. After all, every structural undertaking in a natural park is only a part of a whole. The individual building or facility must bow deferentially before the broad park plan, which is the major objective, never to be lost sight of. The park plan determines the size, character, location, and use of each and every structure. Collectively, these should be properly inter-related; at the same time they must be closely and logically related to the park plan to insure its workability and harmony. Otherwise, there will result, as someone has expressed it, a costly but ineffectual collection of "spare parts."

Although a park structure exists solely for the use of the public, it is not required that it be seen from some distance. In its most satisfying expression, the park structure is designed with a view to

subordinating it to its environment, and it is located so that it may profit from any natural screening that may exist. Suitable signs marking the way to a particular park building which has been appropriately retired are to be preferred to the shock of finding a building intruding at a focal point or visible for great distance.

THE SUBORDINATION OF A STRUCTURE to environment may be aided in several ways. One of these is to screen the building by locating it behind existing plant material or in some secluded spot in the terrain partly screened by some other natural feature. In the absence of such screening at a site otherwise well-suited for the function of the building, an adequate screen can be planted by repeating the same plant materials that exist nearby. Preferably, structures will be so located with reference to the natural features of the landscape that it is unnecessary to plant them out.

The color of the exteriors, particularly the wooden portions of park structures, is another most important factor in assimilation. Naturally such colors as occur in, and are commonest to, the immediate surroundings serve best. In general, warm browns will go far toward retiring a wooden building in a wooded or partly wooded setting. A light driftwood gray is another safe color. Where contrast is desired to give architectural accent to minor items, such as window muntins, a light buff or stone color may be sparingly used. Strangely enough, green is perhaps the hardest of all colors to handle, because it is so difficult to get just the correct shade in a given setting and because it almost invariably fades to some very different hue. A green roof might be expected to blend with the green of the surrounding trees, yet because a mass of foliage is an uneven surface, intermingling other colors, and broken up by patches of deep shadow and bright openings, and because a roof is a flat plane which reflects a solid continuous color, anything but harmony results. Brown or weathered gray roofs, on the other hand, blend with the colors of earth and tree trunks to much happier results.

While structures should be so designed and so located that it will not be necessary to plant them out, the proper introduction of vegetation along the foundations will gracefully obliterate the other-

wise unhappy line of demarcation between building and ground. Rough rock footings artfully contrived to give the impression of natural rock outcroppings are a means of blending the structure to the site. A batter to a stone wall, with skillful buttressing of the corners, if done with true finesse, will often bring to the building that agreeable look of having sprung from the soil. Park structures giving that impression are of the elect.

Some park structures give hint of their designers' long dalliance in cities, where architectural design has become a matter of one façade. It should be remembered that park buildings will be viewed from all sides, and that design cannot be lavished on one elevation only. All four elevations will be virtually front elevations, and as such merit careful study. Admittedly, one side of major park buildings will always provide for service, and while enclosures on park areas are to be deplored and only installed where necessary, a palisade or some other suitable enclosure on this side of the building should completely screen all service operations.

As a rule, park structures are less conspicuous and more readily subordinated to their settings when horizontal lines predominate and the silhouette is low. Where snow conditions will permit, any feeling of verticality will be avoided by adopting a roof low in pitch, perhaps not more than one-third. Too frequently roofs needlessly dominate both structure and setting.

THE DEGREE OF PRIMITIVE CHARACTER in park structures that native materials can contribute depends entirely on intelligent use. Not alone the fact, but the quality of "nateness" of materials is to be sought. Local stone, worked to the regularity in size and surface of cut stone or concrete block, and native logs, fashioned to the rigid counterpart of telephone poles or commercial timber, have sacrificed all the virtue of being native.

Rock work needs first of all to be in proper scale. The average size of the rocks employed must be sufficiently large to justify the use of masonry. Rocks should be placed on their natural beds, the stratification or bedding planes horizontal, never vertical. Variety of size lends interest and results in a pattern far more pleasing than that produced by units of common or nearly common size. Informality

vanishes from rock work if the rocks are laid in courses like brick work, or if the horizontal joints are not broken. In walls the larger rocks should be used near the base, but by no means should smaller ones be used exclusively in the upper portions. Rather should a variety of sizes be common to the whole surface, the larger predominating at the base. Rock should be selected for its color and hardness.

Logs should never be selected because they are good poles. There is nothing aesthetically beautiful in a pole. Logs desirable in the park technician's viewpoint are pleasingly knotted. The knots are not completely sawed off. The textural surface of the log after removal of the bark is duly appreciated and preserved. Strong as may be the immediate appeal of structures built of logs on which the bark is left, we do well to renounce at once this transitory charm. If the bark is not intentionally stripped, not only will this process naturally and immediately set in, but the wood is subjected to aggravated deterioration through the ravages of insects and rot. It is in the best interests of the life of park structures, as well as in avoidance of a long period of litter from loosening bark, and of unsightliness during the process, that there has come about general agreement that the bark should be entirely sacrificed at the outset.

When the timber resources of the American frontier seemed limitless, it was usual to lay the sills of a log cabin directly on the ground, without supporting stone foundations. When after a time the logs in contact with the earth had rotted to a point where the cabin commenced to list and sag, another cabin was built, and the earlier one abandoned. This, it seems, in the economy of the frontier, was more reasonable than to have provided a foundation under the earlier cabin. Regardless of the pious respect a log cabin builder of the present must have for the traditions of the past, the changed economy of our day demands that his cabin be preserved against deterioration by the use of masonry or concrete supporting walls or posts that extend well above grade.

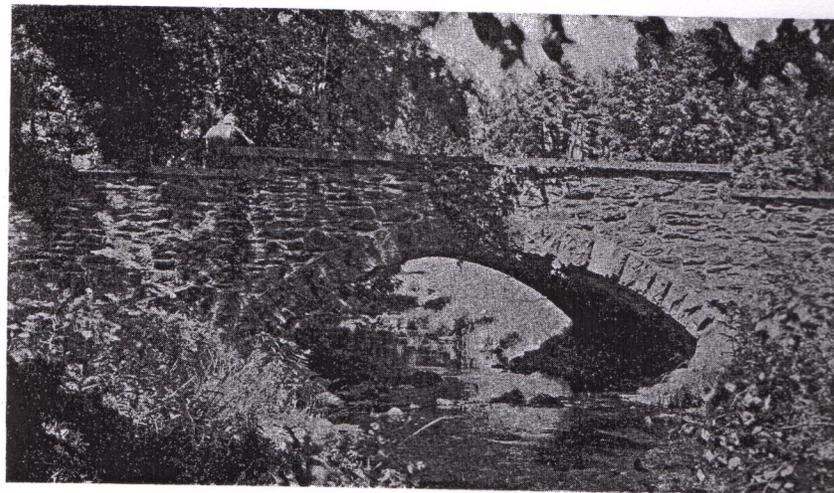
THIS OUTLINE OF THE FACTORS which make for the desirable and appropriately rugged, handcrafted character of park structures would be woefully

incomplete if the matter of roof texture were left unconsidered. The heavy walls of rock and timber which are urged as fitting to a natural environment are assuredly created in vain unless crowned with roofs having related character. Surmounted with roofs trivial in aspect and thin in fact, the heavy walls appear robbed of justification. Verge members in gables should tend to be oversized, eave lines to be thick, and the roofing material to appear correspondingly heavy and durable. Where wood shingles or shakes are used on a roof, these should be fully an inch in thickness if possible, and the doubling of every fifth course or so, unless the building is quite small, will bring the roof texture into more appropriate scale with the structure itself and with the other materials that compose it. The primitive character we seek to create is furthered tremendously if we shun straight rigid eave and course lines in favor of properly irregular, wavering "freehand" lines. The straight edge as a precision tool has little or no place in the park artisan's equipment.

Since structures exist in parks through sufferance, it follows that it is highly desirable in every area to keep down the number of them. A small area can be ruined by a clutter of minor buildings which, however necessary their purpose, seem to have been forced into every vista to inflict a con-

sciousness of the hand of man. Two functions, or even more, where closely related at a given location, should be combined under one roof. This is not in defense of excessively large buildings. It is sound practice only within reasonable limits. It is based on a belief that a localizing of infection is preferable to an irritating rash of trivial structures all over an area. The grouping of two or more facilities under one roof tends to bring welcome variety to park structures generally. The limited range of expression of any simple, one-purpose building is vastly widened as other purposes are combined in it.

The structures necessary in a park are naturally less obtrusive if they are reasonably unified by a use of one style of architecture, limited construction methods, and not too great variety in materials. When a truly inappropriate style of architecture already exists in a park in which new work is contemplated, it is urged that the new buildings do not stubbornly carry on the old tradition. The best judgment available should be consulted to determine the style most appropriate to the area, and this then frankly and courageously launched. If the new style is the more appropriate one, it will prevail. Time will eliminate the earlier, inappropriately styled buildings for the disturbing contrasts they produce.



Bridge, Dutchess County, New York

CABINS

➤ **A**MONG BUILDINGS which have come to be regarded as on occasion justified within our present conception of a natural park, the cabin alone has the favorable advantage of long familiarity to us in woodland and meadow. So accustomed are we to survivals of frontier cabins dotting the countryside that we have grown to look upon them as almost indigenous to a natural setting. Of all park structures, those cabins which echo the pioneer theme in their outward appearance, whether constructed of logs, shakes, or native stone, tend to jar us least with any feeling that they are unwelcome. The fact that park cabins are usually erected in colonies or groups (frontier cabins as a rule were not) destroys somewhat the feeling of almost complete fitness that is produced by a single primitive cabin. The further fact that the true cost of such structures is usually much higher than their purpose or the prospective income from them would justify often imposes upon the designer the necessity of availing himself of cheaper and more easily handled materials than those employed by the pioneer, and of using these the best way he can. Hence cabin groups must always be something of a dissonance in parks, acceptable only when their obtrusiveness is minimized insofar as possible.

If the cabin on publicly owned lands is to justify itself, it is essential that it at least pay its own way during its lifetime, and that charges for its use bear a logical relationship to its true cost. Any evaluation of that cost which fails to assign a reasonable value to materials acquired on the site or to all labor involved, however compensated, would be faulty.

Often overlooked, but certainly the primary objective in providing cabins in public parks, should be adjustment in cost and rental of facilities to the income range of the using public. There ought to be just as sincere an effort to furnish habitable vacation shelter to the patron of

very limited means as there seems now to exist an enthusiasm to supply the more ample facilities which the higher income brackets can afford and demand.

At the lack of spread in cabin facilities and rentals observable in many parks, just criticism can be leveled. It would seem to be not only better park planning, but better business planning, to offer accommodations in a wide price range bearing some logical ratio to the wide income range represented by park patrons. It might be pointed out as an abuse of democratic principles if the benefits of park areas are withdrawn from availability to the many to the selfish enjoyment of the few. An abundant provision of cabins such as only the few can afford and a blind, or callous, disregard of the budget limits of the vast majority are not social arithmetic.

LET US EXPLORE the range of cabin accommodations that parks might well offer in order to extend availability.

The simplest type of cabin, the "Student" or "Tourist" class (to initiate the figure of the passenger liner), must seek to bring the required minimum of space need in shelter within a most rigid limitation of cost, which must relate definitely and logically to the very limited rent the humble park user can afford to pay. This problem will tax the ingenuity of the ablest designer desirous of producing a nice balance between traditioned charm and reasoned practicability.

Of necessity such a cabin must be a very modest affair, affording merely the most compact sleeping and living space. Required economy will compel the omission of toilet and bathing facilities from this simplest type of cabin. Naturally, concentrating the toilet and bathing facilities will reduce the cost of a cabin group, as compared with that of other cabin groups in which toilet and bathing facilities are integral with every cabin. If provision

is made for preparing meals in these cabins, the kitchen must be truly of kitchenette proportions—merely compact cabinet, closet, or small shallow alcove. A possible alternative to the modest kitchenette allowable is an outdoor campstove, preferably with sheltering roof. If strategically treated, the campstove may be a multiple unit, and the kitchen shelter thus made to serve several cabins. Desirable as a fireplace may be, it is scarcely within the economy of the simplest of cabins unless climate makes such a feature an absolute necessity.

Such is the prospectus for recreation or vacation cabins within the budget range of the many and, it should be borne in mind, available to them only for brief periods and by dint of most careful economy on the part of the family unit.

A narrowing field of potential users results when greater spaciousness and added facilities, naturally accompanied by mounting costs and proportionately higher rental charges, are offered in "Second Class" cabins (to continue the figure of the liner). Cabins of this type might contain a kitchenette, a bedroom, and a living room to serve also as a sleeping room at night. The kitchenette will tend to be something more than the simpler cabin type permits. A fireplace is an allowable feature, since the larger cabin will probably have a longer season of use. If a nearby central recreation building is not provided as a gathering place, the cabin is forced to a greater self-sufficiency. Toilet and bath facilities, although naturally desirable features, are not usually possible in this class of cabin because of the cost involved.

Of cabins of the next group, which might be termed "First Class" cabins, distinguishing features are toilet and bath facilities, along with perhaps added spaciousness and more privacy in sleeping quarters. Arbitrary pronouncement of limitations in space and facilities for these cabins is considered beyond the province of this general discussion. When examples of the "First Class" cabin give hint of elaboration to the point of becoming "Cabins de Luxe" or "Royal Suites", their appropriateness within natural parks will be challenged by many and defended by but few. It is certain that pretentious cabins are only justifiable if their vacancy ratio is negligible and if

they are rented to produce an income consistent with their initial cost and maintenance expense.

It is not argued that the several "classes" of cabins must rub elbows in the park area as a condition of serving equitably the patrons from different social or financial strata. On the contrary, this is something to be rigidly avoided in lay-out. There is less emphasis on social differences and therefore less dissatisfaction for all concerned if cabins of each type are discreetly grouped somewhat to themselves.

Along with providing a range of rentals, variety in the number of persons to be accommodated in the several cabins of a group should be given consideration. The American family group averages somewhere between four and five persons. It would, therefore, appear reasonable to plan perhaps a majority of cabins to sleep four people. There will be some demand for cabins accommodating two, and a sprinkling of six-cot cabins would not be amiss.

While many cabins built as a single room are large enough to sleep four or six persons, it is very desirable to provide a certain privacy by means of partitions, or curtains on poles, around one or more of the bed locations. Furthermore, potential tenants are not always a family group, and failure to provide some measure of privacy results in a narrowing of the tenant field.

In most localities some form of porch will be a serviceable feature of a cabin. In certain climates a simple terrace may serve, but in a majority of cases a roof will add greatly to usefulness. Rather generally it will be necessary to screen in the porch if its full benefits are to be enjoyed.

When a screened porch is provided, a wide opening between it and the living space is a space-saving possibility to be considered by cabin designers with a praiseworthy urge to provide the utmost for the cabin dollar. Such an opening about eight feet wide, framing sliding doors or three or four folding doors, throws together the limited space allotments of living space and porch and makes for a roominess very useful on occasion.

IT MUST BE ADMITTED that the need in some parks for cabins in considerable numbers presents some very real problems, one of which is the spacing of

them. A cabin, when occupied, along with a certain ground area bordering it, is in effect privately leased, for a night, or a week, or longer, as the policy of a park may dictate. It becomes virtually private property serving an infinitesimal portion of the park-using public, and the greater the spacing between the cabins within a group, the greater the area that is withdrawn from the use of the public-at-large. For this reason the spacing of cabins dare not be determined entirely on the basis of a splendid isolation for each cabin.

Frequently observed in connection with cabin groups is a tendency to spread the effects of their presence over a needlessly large area. In groups composed of the simplest cabin types, wide spacing either compels a multiplication of toilet installations or renders the use of central facilities so difficult that the cabin occupant, particularly after dark, will often not go to the required trouble, with consequent development of unpleasant and insanitary conditions. It also compels establishment of additional water outlets—one more item of cost.

Even in the case of cabin groups equipped with toilets and with running water, wide separation means added road construction to make them accessible and longer runs for electric service. After all, it seems fair to assume that, where cabins are erected in parks, their purpose is to facilitate enjoyment of the park itself, and that complete seclusion during the hours when they are occupied is not the supremely important goal it is so frequently assumed to be. To repeat, spacing cabins far enough apart to satisfy fully the desire of the occupants for seclusion tends to encroach on the interests of the public-at-large by reducing its range, so to speak. On the other hand, if the spacing of cabins must so yield to the interests of the public (and perhaps to the influence of economy) that the cabin area becomes row upon row of trifling, and too often identical, cabins—with ground cover and shade traded in for a few inches of seasonally alternative dust or mud underfoot—we have simply infected the outdoors with tenement substandards and made Nature an outcast.

Another problem is the size of the cabins individually and the determining of a proper assortment of cabins of the several possible sizes. If the cabin is small and compact to a minimum, a large

family or group finds it cramped. If it is made more spacious, it is in excess of the actual space needs of a family of two. Recently, at Spring Mill State Park, Indiana, some novel cabins have been developed which seem to present the solution to the practical need for accommodating from two to eight persons, without either waste of space or overcrowding. "Multiple cabin" has been suggested as a suitable designation for the type.

Successfully accomplished in these is an ingenious space arrangement of great flexibility. These cabins have four rooms, each of which is served by a separate outside entrance, is equipped with water closet and lavatory, and sleeps two persons. One group of eight, two groups of four, four groups of two, or other combinations are possible by the simple operation of locking or unlocking communicating doors.

Equivalent in flexibility and interest to the Spring Mill multiple cabin is the development adjacent to the Bright Angel Lodge on the South Rim of the Grand Canyon. In this particular setting a large building would have been incongruous. It is avoided, and the problem is solved by linking many small guest houses to the lodge proper by covered pergolas. The guest houses contain from two to sixteen bedrooms and are in effect multiple cabins, permitting the renting of rooms individually or en suite.

SOMETHING ON THE SUBJECT OF CHIMNEYS cries to be heard, but since chimneys have no separate entity in these discussions, their case must be presented and pressed by cabins, as "next friend."

In the discredited "whatnot" or "mission" period of the past, some evangelist of grim determination must have been possessed of an hypnotic ability to implant his debased preference in cabin chimneys through the length and breadth of the land. Apparently it was a lifelong fixation of this crusading apostle. Nothing else will account for the far-flung faith that developed in the supreme appropriateness of boulder masonry for this purpose. The unfortunate circumstance seems to have been further aggravated by a quaint conviction that the less structural in appearance, the less evident the bonding mortar, and the less apparent any reliance on physical laws for stability, the happier and more creditable the accomplishment.

Need it be more than pointed out that from time immemorial good stone work has always been that stone work which appeared incapable of toppling even if all mortar were to be magically removed? It is possible that there has been throughout history recurrent abandonment of this principle as something just trite and old-fashioned in masonry technique. This is mere speculation, of course, because somehow the evidence of such experimentation, other than the execrable "peanut brittle" chimney technique for log cabins, has not survived the ravages of time to our day. It is indeed to be regretted that the most recent sponsor of formless masonry drew no conclusion from this fact. Surely, if he had, his disciples would be spared over the years many chimney replacements, if not necessitated by actual collapse then eventually blasted to ruin by the trumpets of good taste. As from time to time these reconstructions must be made, it is hoped that the reconstructors will appraise the chimney survivals of the American

pioneer, and if they are led to offend with globular masonry no more often than did he, a weird ghost will have been laid.

The tailpiece illustration is of a cabin which recalls the handiwork of the pioneer and the splendid timber resources which over wide areas awaited his axe. Only the sworn statement of one who is well-informed, to the effect that this cabin was built from windfalls and not cut timber, permits conservationists to show this cabin here. Almost humorous in its scale, it is far from that as a reminder of magnificent forests all but extinct. As a relic of the days when trees were trees, this cabin can inspire us to firm resolution to permit them to be so again in the long-term future. Somewhere between the scale of this log work and the spindling scale of the majority of present day log structures is the happy and satisfying medium that is too infrequently seen. The random informality of the axe-hewn log ends contributes greatly to the naive charm of this little building.



Cabin, Itasca State Park, Minnesota

COMMUNITY BUILDINGS

➤ **T**O TRY TO DESCRIBE what we term community buildings in parks by statements of what they are not is a temptation not to be withstood. It is the easiest way, and by and large perhaps as clarifying as a more affirmative effort, inasmuch as the purposes of the community building seem to be more obscure than those of most other structures having place in parks.

To begin with, this building differs structurally from the open shelter (an essential item of rather similar function) in that it is entirely enclosed. It differs functionally from the concession or refectory building (often a similar item structurally) in that it is seldom identified with the selling or serving of food. Perhaps it need not be so negatively described; it can be more positively defined, after all, as a marriage of something of the function of the shelter and something of the physical aspect of the refectory building.

The community building is almost always located in an intensive use area. It is normally a supplementing facility of an overnight group such as a public campground or a cabin colony. Probably its primary use is as a clubroom or recreation room where tent and trailer campers or cabin occupants can become acquainted and participate in games, music, dancing, and other social diversions. Particularly is this need for it acute when overnight cabins have been pared down in size to a point where they offer only sleeping space and no room at all for indoor activities in bad weather.

However, its use can be more than social and recreational; it can have educational and cultural purpose. Where a park museum is lacking, it often develops that the community building acquires as a side line the offhand display of minor collections of biologic and geologic material and relics or curios of local interest. Sometimes the community building will serve as an indoor "in-case-of-rain" substitute for the campfire circle

or amphitheater. The activities of community buildings of considerable size may even embrace platform entertainment.

These varied combinations of purposes encountered in community buildings should result, if structure follows function, in a related variety of structural expressions. Such does not obtain, however, perhaps largely because the combination of functions ultimately housed can so seldom be forecast. And so the community building inclines to be something of a catch-all, functioning for some buildings not yet supplied and for existing others that have proved to be inadequate or overtaxed in use.

If it is to serve advantageously in the many emergencies that can overtake it, the community building must have many windows to supply ample ventilation when it is crowded in warm weather and to light effectively, without need for artificial illumination in daytime, if possible, any collections casually displayed. It should have a fairly high ceiling, since it may have to accommodate large gatherings comfortably in weather when the windows cannot be widely opened. It is no psychologically satisfying substitute for the campfire circle if it is not furnished with at least one large fireplace. Toilet facilities, if not conveniently near in other structures, should be provided in the community building.

If platform entertainment can be foreseen among its ultimate activities, the community building will probably be equipped with something that is more than speaker's platform, yet less than stage. Sometimes this feature is movable. Promoted entertainment will embrace lectures and talks, especially if there is in the vicinity a campfire circle for which the community building will be called on to substitute in bad weather. Since slides and motion pictures are frequently the accompaniment of these outdoor talks and lectures, the community building wisely planned will have, or allow for the future

installation of, a screen and a projection booth. In no event should construction of the booth in any detail fall short of fireproofing practices generally recommended for the housing of this equipment item because, along with the usual hazards of film projection and a crowded auditorium, there is likely to be the hazard of a building largely of wood construction.

While platform entertainment in the community building will probably seldom if ever embrace dramatics, it is conceivable that something on the scale of an amateur vaudeville show or a "stunt night", arranged with camper talent, will often threaten. Wherefore the size of the platform might well anticipate the space needs of a song-and-dance act, a quartette, and a dramatic reader with a capacity for sweeping gestures.

It is not intended in the foregoing to impute to the average community building the characteristics of an auditorium. It should stop with being an all-purpose assembly room, nicely scaled to the number of persons likely to make normal use of it in its several uses. Because it may sometimes be overcrowded, there should be no shortage of exit doors, strategically located. If dancing is anticipated as one of its recreational probabilities, a wood floor of good grade is needed.

In common with other park buildings where visitors congregate, community buildings become more useful, and in the summer season actually ac-

commodate more people, if they are provided with wide, roomy porches. Certainly a sheltering entrance porch is almost a necessity.

Since it is an enclosed structure, extra-seasonal use can be made of the community building by appropriating it for week end and other short-term winter camping. Site conditions and climate will sometimes conspire to make it logical to use the building as a shelter house for winter sports participants and onlookers. If this seems probable when the building is being planned, there is justification for providing some means of heating it in winter temperatures, as well as for including a ramp approach, toilet and shower facilities, waxing room, and other refinements which can extend its usefulness.

The well-groomed little structure of the tailpiece illustration is not officially designated a community building and may not even be so utilized. But its plan elements follow so closely those which constitute a serviceable community building in a small park that it is chosen to classify it here as such. It houses a small public room, a tiny office, and toilet rooms for men and women. At one end of the public room are a counter and enclosure that could function as a checkroom, especially if winter sports were an activity, and even as a minor food concession. Besides, it is representative of an appropriate sophisticated park architecture too rarely encountered, compared with which fact, mere accuracy in classification seems unimportant.



Poundridge County Reservation, New York

WASHHOUSES AND LAUNDRIES

ONLY RARELY are all cabins in a park area individually equipped with toilet, shower, and laundry facilities. More frequently cabins are less pretentious, and groups of such, as well as all public campgrounds, must be furnished with community toilets, showers, and laundries. Wherever, for one or another reason, pit privies rather than flush toilets must serve, shower and laundry facilities should be housed in a separate building. Where flush toilets can be provided, all the needed facilities may be accumulated in one structure scarcely different from the park comfort station save for the addition of shower and laundry rooms.

Because the park comfort station has been already discussed and illustrated, concern here is primarily with shower and laundry facilities for overnight visitors. Although toilet facilities are a part of some of the subjects illustrated, these are considered only incidental to the subject in hand.

Unlike the hot shower and laundry building in organized camps for one sex only, this building in the public campground or cabin colony must have separate shower rooms for men and women. It is not necessary to build the men's showers with individual enclosures and private dressing booths, but it is best, in the women's section, to provide enclosures and dressing rooms with curtained fronts for some of the showers. Although the trend in providing showers for age groups of younger women is probably toward gang showers, such an arrangement for women of all ages, including children, too, does not meet with general approval.

A ratio of one shower to every 12 or 15 persons is reasonable; the same ratio applies to lavatories in the dressing rooms. Windows, giving abundant ventilation and daylight, and electric lighting after dark, wherever electricity is available, are recommended in the shower and dressing rooms, and in the laundry. A careful spotting of the electric

outlets, so that all laundry operations are properly lighted, is especially important. In the splash and humidity normal to all the rooms under discussion, smooth and impervious surfaces that are easily kept clean are very desirable. Curbs about six inches high should be built at openings between private dressing rooms and shower stalls and between general dressing rooms and shower rooms. Wood, with its tendency to absorb and retain moisture, swell, and eventually rot out, is to be avoided.

In the laundry, removable mats of wood slats, to keep the campers' feet off the wet floors, will add to comfort. Hot water requirements will mean a large tank and heater, which can be advantageously placed in the laundry room if there are flatirons to be heated. Otherwise, a separate room for heater, tank, and fuel is better, for it will keep much dirt out of the laundry itself.

The average campground laundry will not have all the mechanical equipment the day and age can offer, because of the costs involved and because most campers' laundering is of limited amount. Plentiful hot water, enough two-part laundry trays, ironing boards, and outlets for electric irons or, if electricity is lacking, a stove for heating the old-fashioned kind, will meet the needs of most vacationists. Washing machines, mangles, and driers are not overlooked or here cried down, but these belong to an economy of efficiency rather than the economy of simplicity which largely governs outdoor vacationing.

The vacation season is usually favorable to the drying of clothes out-of-doors. A clearing with clotheslines in orderly alignment should be adjacent to the laundry building. It is fortunate if views of this drying yard can be screened by woods growth. Otherwise, an enclosing fence of vine-covered lattice can be erected to screen sights that might quickly disrupt a housewife's vacation mood.

FURNITURE AND FURNISHINGS

➤➤➤ **O**PEN SHELTERS in parks do not lend themselves to furniture and furnishings in the sense the terms apply in instances of more enclosed buildings. Mobile equipment of these, whether for picnic or trailside use, is almost exclusively picnic table and bench combinations and trailside seats, a little lighter and more finished perhaps than similar items in the open, but almost as limited in form and variety. The furnishings and decorations of lodges, community buildings, refectories, and cabins, on the contrary, can have great variety and contribute importantly to widen the use and improve the appearance of these buildings. They offer a broad field for the exercise of individuality, taste, and ingenuity.

The well-known principles of all good furniture design—suitability to purpose, appeal to the eye, and adaptation of technique to materials at hand—apply no less to furniture for park buildings than to other types. In the designing of park furniture, however, further considerations, scarcely less important, should be taken into account.

Simplicity must be the keynote if the furnishings are to appear appropriate in structures which themselves must be unpretentious to be successful in natural settings. If the desired simplicity cannot be guaranteed as a matter of course by the good taste of designers, perhaps the usual scarcity of funds for once deserves a cheer for the curb on elaboration it will force.

A certain simplicity of furnishings is reasonably assured when another guiding factor in appropriate design is acknowledged. This is the long tradition of the locality. Primitive and pioneer furnishings were extremely simple; so were the interpretations of transplanted historic styles developed here by the earliest settlers. The same combinations of controlling historical, racial, climatic, and regional influences that produce park structures of varied types should produce furnishings of equivalent variety. Needless to say, the same set of influences

that produced a particular building should have play in determining the furnishing of it.

It would be unfitting to transplant Spanish and Pueblo furniture, suited to park buildings of the Southwest evidencing similar influences in their exterior treatment, to other regions, say the Hudson Valley with its early background of Dutch settlement, New England, or the environs of Chicago. The fine, simple furniture styles of the religious sects—the Moravians, Shakers, Amish, Dunkers, and others—are a sound inspiration for the furniture of park buildings in localities in Pennsylvania, Western Massachusetts, Iowa, and Ohio where these groups settled, yet only if the buildings to be furnished testify to the same inspirational sources. Primitive furniture of native handcraft and early origin, still being produced by mountain people in remote parts of the Ozarks, the Great Smokies, and other sections of the Appalachians, offers a pattern for park furniture suitable over a considerable, yet by no means a Nation-wide, area. There is hardly a section of the country but has some historic, racial, or other background for a theme in furnishings and decoration that would be truly individual and appropriate.

The available natural resources of any locality influenced the furniture making, weaving, and other crafts of the pioneers and of the primitive races that preceded them. If the practices of these are to inspire the objects contrived in the present for furnishing park buildings, we too must employ native materials and recognize their peculiar advantages and limitations.

Keeping this in mind, we make use of maple, walnut, and other close-grained hardwoods where tradition calls for turned furniture styles, and avoid sharp edges and turnings when soft woods only are available; we realize the suitability of hickory, ash, maple, and pine to particular uses in Windsor and slat-back chair construction, and of the soft pines to the furniture styles that employ incised ornament.

Furniture of rustic type having members in the round with beavered tenons can be made from cedar and hickory. After the outer bark of the former wood is removed, the surface is shaved so that the thin, inner red bark sometimes is not entirely removed, and a striking, mottled surface results. Because its bark stays on better than that of most other woods, hickory made into furniture with the bark intact is quite satisfactory and probably represents the peak in allowable rusticity in furniture.

Happily, furniture items contrived from oddly formed wood growth are no longer popular as they once were. It is hoped that there will be no reaction from the current trend that might result in littering our park buildings with contorted multi-forked logs posing as hat trees, sections of tree trunks hollowed out for barrel chairs, and similar monstrosities.

The seats available for chairs of truly primitive type are in a considerable range—wood slabs, woven rush, woven splint of hickory or elm, many kinds of leather laced on with leather thongs, and even woven fabrics that reproduce early workmanship and patterns.

The need for hangings and upholstery can often be appropriately supplied by reproductions of early fabrics. The weaving of these has lately been revived in different parts of the country, especially among mountain peoples and the Indians. Indian rugs, hooked rugs, and woven rag carpets will quite generally serve for floor coverings, subject, of course, to geographical location and compatibility with the architecture of the structure to be furnished.

Studied effort must be made to introduce color

into the furnishings of park buildings if a certain somberness characteristic of interiors built entirely of natural materials is to be offset. Most untreated woods weather to dull grays and browns, and there is only very limited color in most stone masonry. The accent of bright harmonious colors in fabrics and floor coverings is welcome. It is conceivable under certain conditions that the raw wood of certain types of furniture might be stained or painted in relatively brilliant colors to introduce more gaiety into the interiors than it is permissible to express in the exteriors of park structures.

The feeling of the past is accentuated when items of skilled handcrafts associated with the early days are introduced. Products of the loom have already been mentioned. The art of the blacksmith can supply many details important in the creation of "atmosphere." There are types of hand-wrought iron hardware peculiar to the early New England communities, the German counties of Pennsylvania, and the Spanish settlements of the Southwest. In fireplace fittings there are regional characteristics that can be revived in the re-creations of today. There are items of early lighting equipment of wrought iron, other metals, and turned wood unmistakably identified with particular parts of the country and different periods of development. These invite adaptation to present needs.

There is no longer any special novelty about lighting fixtures fashioned from wagon wheels, ox yokes, and parts of spinning wheels and reels. The spirit of pioneer days will only attach to such adaptations as long as they do not become utterly commonplace by reason of being too often used, a fate that is always treading on the heels of innovations popular because of their quaintness.

CAMP LAY-OUT

➤ **A** DISCUSSION of the lay-out of organized camps is only ventured in a compilation devoted to structures and facilities because lay-out plays such a vital part in determining just what structures and facilities are requisite in a camp and what the details of these shall be. Very definitely the number and size of the camp buildings and the relationship between them *are* the camp lay-out in fact, and any discussion of the buildings individually is difficult without some preliminary consideration of them as a whole.

There is no intention here to examine the structural needs of all kinds of camps, or even of organized camps of every size. It is chosen to limit detailed consideration to the structural requisites of organized camps in that capacity range which embraces the overwhelming majority of organized camps—those accommodating not less than 25 and not more than 100 campers.

There are organized camps of lesser and greater capacity, justified, it is admitted, under special conditions. Week end or other short-term accommodation of groups of less than 25 persons will be briefly touched on later. Larger camps accommodating several hundred campers exist and are deemed by some to be successful. There is a growing realization, however, that camps of more than 125 persons, ranging say to capacities of 200, 300, or 500, in a sense cease to be true camps and become mere cantonments or concentrations where the things that are of the essence of camping somehow cannot be done.

There is now almost general acceptance of the principle that any camp for more than 32 persons should be broken down into groups of 16, 24, or at a maximum, 32 campers. Camps so planned have come to be known as unit camps. A central area provides facilities for general administration; dining; medical examination, care, and isolation; and for the mass recreational and cultural activities of all the campers on the area. Outlying a short

walking distance from this central area are the units, each of which is a colony of sleeping cabins or tents for campers and their leaders, centering around a unit lodge which is the recreational and social rallying point of the group. A unit wash-house and latrine completes the unit lay-out.

One figure of speech has the central area the “hub” and the units the radiating “spokes” of a wheel. Another has the units as outlying “hamlets” suburban to a “village” in which the mutual interests of all the units in orderly government, food supply, medical care, and recreational and cultural pursuits center.

Camps laid out in units allow for the variations that exist in all human beings. In children’s and young people’s camps, a break-down into small units permits a logical grouping of campers of the same age and physical ability, similar interests and experience. In these small groups children and adolescents are given opportunity to find themselves, while in “mass camping” they experience a hardly avoidable regimentation and a sensation of being lost in a crowd. Small groups permit a high degree of personal attention on the part of the counselors, while large groups mean a less personal leadership or exhaustion of the counselors who attempt too much.

From a health point of view, there are also sound arguments in favor of small groups in camp. Children in large groups easily become overstimulated, and the possibilities for fatigue are greatly increased when a large number of children eat, sleep, and generally live in close quarters. Should a communicable disease develop in a camp laid out in units, it is less likely to spread through the whole camp.

THE BREAK-DOWN OF A CAMP into units or groups does not mean that each is wholly independent of the others. Many recreational and cultural activities are participated in simultaneously by all

CAMP LAY-OUT

groups. But the deadly institutionalism toward which mass camping can tend is avoided through the individualism fostered by the recreational activities and intimacies of the small unit, "on its own" much of the time.

Because many youth groups which go in for camping are organized into squads or patrols of eight, or troops of 16, 24, or 32, there is good reason for laying out camp units in multiples of eight. Units of 24 campers are considered both practical and desirable. There can be an efficient supervision of groups of 24, which escapes being either repressive or insufficient. Units of 16 are perhaps more desirable than practical, for in order to accommodate a given number of campers there must, of course, be a greater number of units, resulting in a more extended camp and increased costs of construction and operation. Units of 32, on the contrary, are probably more practical than desirable, for while such concentrations mean some reduction in the costs of construction, maintenance, and operation, the supervision will tend to be inadequate and the groups to be unwieldy for a properly unified leadership. All things considered, units of 24 seem to be the happy mean. It is assumed that the logic back of units which accommodate 16, 24, or at the most, 32 persons will lead to most camps being laid out in units of one or another of these sizes.

Camps, ranging roughly from 25- to 100-camper capacity, laid out in multiple-of-eight units, seem to group into three sizes. There is the small camp accommodating 24 to 32 persons. Although generally a single unit, it may be broken down into two units of 16 where rigid economy is not a weighing factor.

There is next the medium-sized camp of 48- to 64-capacity which embraces camps of two units of 24 or 32 campers. We may also include in this category camps composed of three and four units of 16, if these more ideal standards are economically supportable.

The large camp accommodates from 72 to 96 campers and may be made up of three groups of 24 or 32, or four groups of 24, campers. It, too, may be broken down into units of 16, but the resulting increase in construction and supervisory costs and the probable unavailability of five or six

suitable unit campsites, properly central to the administration area, will be deterrent influences. It is sometimes felt necessary to stretch the capacity of a large camp to accommodate more than 100 campers, but 125 is a recommended maximum, and capacity in excess of that is almost invariably to be discouraged.

The distances desirable between the several units composing a camp and between these units and the administration or central area cannot be arbitrarily stated. In selecting the location for any camp, privacy is a consideration as primary as the availability of safe drinking water and the suitability of the soil for sewage disposal. Likewise, a proper degree of privacy is of first importance for the component units of the camp. Studies of a group of camps have revealed an average distance of 600 feet between units. It does not follow, however, that 600 feet or any other given distance may be fixed for spacing units from each other and from the administrative group. The distance necessary for a suitable privacy depends in each case on existing site conditions, among which topography and cover are controlling elements.

In the cabin unit the spotting of campers' cabins in relation to one another, to sun and shade, and to dependencies of the group deserves a word. It is desirable that they be exposed to sunlight a part of the day, preferably in the forenoon, so that clothes and bedding may be sunned and aired. Shade in the late afternoon is equally desirable in warm climates so that the cabins will be comfortable for sleeping at the early hour campers usually go to bed. The distances between cabins are naturally subject to site conditions, but 50 feet is the recommended maximum for age group camps where supervision is an important consideration. Family cabins can string out with greater space between them, for, in groups of these, supervision is limited or even unnecessary. No sleeping cabin in a children's camp should be more than 150 feet distant from the latrine. Cabins for a youth group or a family may exceed this distance somewhat, but more than 200 feet is not good practice.

THE LAY-OUT OF A CAMP, before stated to be synonymous with the number of buildings, their

size, and the relationships between them, is governed by a variety of considerations.

Probably foremost is capacity as dictated by the needs of the community to be served. Whether to undertake a small, medium-sized, or large camp, or a camp which falls outside the 25- to 100-range, hangs in any case on carefully analyzed need.

Second and inevitable influence is the availability of funds. Consideration of this may not stop with capital investment in site, buildings, and equipment. It must anticipate all details of supervision, and foresee the extent of the supervisory staff and the full complement of lesser employes required for a proper functioning of the camp in operation. There is opportunity for grievous error in miscalculating the scale on which camp operation may be economically carried on. Overestimate of an economically supportable personnel results in a waste of capital funds to construct some buildings which are not long used. On the other hand, if an essential staffing is underestimated, unfortunate overcrowding of facilities is certain to follow. Operating and maintenance costs must therefore be taken into account when funds for construction, and the physical plant such will provide, are undergoing preliminary examination.

Another set of conditions which has all-important bearing on the camp plan includes site factors such as topography, natural features, and climate. A rugged topography may force a sprawling lay-out or a very concentrated one, both of which are non-typical and short of ideal. Sparseness of cover will suggest a wide separation of units. Because most camps are so largely centered around swimming, the natural feature or man-made facility which will serve for this activity will directly govern the lay-out. A steep lakeshore or river bank may make it necessary to string out the camp in a plan that departs from the typical. If the site is a small peninsula, the lay-out will recognize the peculiar advantages this offers. If the site is along a stream, dammed to create a small pondlike "swimming hole", the camp development along both banks will find a different expression. If the hub of activity is a formal swimming pool, the camp and its component units will be arranged in still another pattern. A mild, dry climate may permit a minimum number of buildings and a light, inex-

pensive construction. A rainy climate will call for considerable space under roof for enforced indoor recreation. In northern areas a better grade of construction will probably be employed, aimed to lengthen a short camping season or even to make winter camping possible.

If a projected camp is to be built on public lands as a public or semipublic undertaking, the sponsorship indicated for it is an important consideration in the planning. When it seems definitely assured that a single organization can be relied on to assume continuous responsibility, there might be some minor warping of typical lay-out to meet particular needs of the single using agency. Naturally, a camp planned exclusively for families could differ in some of its details from one planned for occupancy at one and the same time by boys and girls, or young men and young women. Similarly such co-recreational camps would not with logic duplicate camps planned to be continuously occupied by very small children, mothers with infants, or crippled children. But if, as is often the case, the use of the publicly or semipublicly owned camp is to be divided among several using agencies, it follows that any departures from a typical lay-out in the interest of one of them will be likely to handicap the program of the others. A generally typical arrangement represents a nice balance between extremes that should prove practical and satisfactory to the great majority of all potential users. Obviously, the restrictive factor of multiple sponsorship and use does not involve the designing of private camps on privately owned lands. Neither will the lay-out of private camps be forced to acknowledge the claims of other competing recreational interests which very often affect the planning of camps built on publicly owned lands.

Whether the public or private camp under single sponsorship will be occupied by one group of campers for its entire season of use or by successive groups for short-term periods will also influence the lay-out. There are items, almost essential for full-season occupancy, which for short camping periods may be foregone.

THE STRUCTURES AND FACILITIES which make up an organized group camp may be classified on the basis of function in categories which broadly

parallel the groupings of park structures and facilities as these have been hereinbefore presented.

One group embraces structural facilities identified with administration and the basic services, among which the administration building, infirmary, unit washhouse and latrine, and central hot shower and laundry building are the principal items. Another includes facilities which further recreational and cultural activity—the unit lodge, recreation building, accessories to water sports, museum, craft shop, and campfire ring. A third deals with construction that provides for the preparation and serving of meals—dining lodge and kitchen with related dependencies, as well as the outdoor kitchen occasionally favored. Finally, there is the group which embraces sleeping quarters for the campers, the staff, and the employees.

There is also purpose in classifying organized camp structures and facilities on the basis of need. There are those deemed essential, or essential under certain conditions. Others rate as desirable though not essential, and there are varying degrees of desirability determined by a host of influences such as availability of funds, competence of leadership, the age and sex of the campers, recreational occupancy, and many another.

The plates which follow show ideal unit camp lay-outs on hypothetical sites, conjectured to illustrate the variety of topographic conditions likely to be encountered in problems of camp planning. It has also been sought to show the differences in relationships between buildings and between units which logically come about in camps of different sizes. There is furthermore an attempt to differentiate between essential construction and items, sometimes desirable but nonessential.

It will be observed that the ideal location for the administrative center is one easily reached by automobile from the outside and by foot from the rest of the camp. It should not be assumed, however, that the administration center is of necessity the exact geographical center of the camp. The entrance road to the camp should penetrate a minimum distance, to a small parking area for automobiles near the administration building. It is well to supplement this with an overflow parking area on the approach road further removed from the camp. From the termination of the entrance road

a strictly service drive should lead to the service area, which, in most cases, is the kitchen wing of the dining lodge. The garage is the only other building necessarily served by a road, and, if properly located, is in the immediate vicinity of this terminal point. There is no purpose in an actual roadway to the other camp buildings. Should there be occasional need to reach other buildings to collect rubbish, for instance, or to distribute any heavy equipment at the opening and closing of a camp, a cleared truck or wagon trail, treated merely as a widened foot trail, under all but the most unusual conditions, will suffice. In laying out and clearing a roadway for use during the construction of the camp, it is farsighted to anticipate any service trail travel needs in the finished camp, so that the two purposes can be served by the one operation.

To build the service road between the parking area and the kitchen wing so that it invites travel other than by delivery trucks is a tactical error. It is undramatic in the extreme to lead campers and visitors, on the occasion of their first entry into the camp, right up to the kitchen door, after perhaps passing the incinerator and help's quarters en route. First impressions still remain important, and it is an obligation in camp lay-out to arrange the stage so that the setting for the first act of a camping experience will disclose something more romantically thrilling than its back yard operations. A more effective approach will be a well-laid-out foot trail from the parking area to the administration building and on beyond to views that reveal more favorably the campsite and its buildings and activities.

The distance between the campsite and the place of water-front activity is important in the planning of the organized camp. The temptation to indulge in unsupervised swimming, despite the fact that it is outlawed in every well-conducted camp, is great. Particularly are employees, busy during the day, inclined to disregard this first of camp commandments and go swimming at night. The desirable thing, of course, is by moral suasion to make unsupervised swimming unthinkable to everyone in camp. Where it is felt that this attitude can be attained 100 percent, the camp buildings can be on the water-front. The cynical planner may see

fit to reinforce moral restraint with physical distance and spot the structures from 1,000 to 2,000 feet from the swimming beach.

When the swimming facility is a constructed pool, there is need for close relationship with the shower house, which will mean locating the pool centrally in the camp. Likewise, in a large camp a naturalized swimming hole, contrived by damming a small stream, must be in the heart of the camp if the recommended relationships between the several units are to obtain. Formal pools and shallow millponds, however, are without some of the hazards to swimmers that exist in large lakes and in river currents.

There are other desirable, if less important, relationships in lay-out. These will be mentioned as the different structures of the organized camp are discussed in detail.

Not for any bearing on plan, but because they are of very general nature, some further details should not go unremarked. Important and commendable as is a determination to limit modification of the site and surroundings of camp buildings to a minimum, it sometimes occurs that vegetation, particularly low growth, in the immediate vicinity of the buildings is retained to the detriment of other, not less important, considerations. Too dense cover up to the very walls of the buildings tends to produce damp and unhealthful conditions by obstructing sunlight and movements of air. To insure against such conditions, the less desirable cover near the buildings should be judiciously thinned out, but in such a manner that there is a

smooth transition to the unmodified cover beyond.

The menace of fire should be recognized and guarded against in the planning and construction of camp buildings in such reasonable degree as available funds allow. To this end it is desirable to provide continuous enclosing masonry foundations under the building. If this is not possible by reason of its cost, the alternative of setting the floor construction high enough off the ground that dead leaves and other combustibles can be raked out from under the buildings should be adopted. There should be no slighting of well-recognized fireproofing measures in the building of chimneys and the installation of stoves. Electric wiring should conform with approved standards. The construction of the camp buildings can contribute only to the prevention of fires; once fire appears, fighting it is a matter of equipment and action.

There are some recommendations general to camp buildings that, however trite, still bear repetition. For health and comfort in the majority of locations, most of the structures should be completely screened against insects. If wall construction is not insect-tight, as is likely to occur when waney-edged siding or green lumber has been used, it becomes necessary to line the interior with some type of building board or other material to make the cabin insectproof. Types of floor construction which do not allow for a circulation of air between the cabin floor and grade, such as concrete or masonry laid on the ground, are unsatisfactory, and in a long spell of damp weather become a health hazard.

CAMP ADMINISTRATION AND BASIC SERVICE FACILITIES

➤➤ **B**ASIC SERVICE FACILITIES of a camp are those necessary structural items without which other construction, more apparently identified with the feeding, housing, and recreational pursuits of the campers, could not function properly and ought not to be undertaken. In large part these are the camp counterparts of the public utilities and services of any community. The camp office or administration building is in a sense the "town hall" of the camp village—the point of control. The fact that it is the first building reached on entering a properly planned camp will serve as the logic for discussing it before other structures.

Office space requirements in the typical camp are not great. The administration building should provide a private office for the camp director and an ante room with space for files and desk for a secretary or clerk. In very large and very completely staffed camps there may be need for office space for an assistant director, program director, and additional clerical help. Bookshelves, a storage closet for office supplies, and a public telephone booth might well be included. If not otherwise available within a short distance, a toilet and a drinking fountain should be provided. It is not good practice to combine living quarters and administrative space under one roof.

In a small camp the administrative function may be made a part of the dining lodge or the recreation building, but the kitchen noises of the one and the hub-bub of rainy day recreational activities of the other are likely to prove distracting.

It is logical to incorporate in the administration building the canteen, trading post, or camp store as it is variously called. The combination may be said to be usual. Since the camp store is customarily open only for scheduled short periods, its association with the administrative function makes it possible for one individual to assume the duties of storekeeper along with those of administrative

clerk or secretary. Equipment of the camp store should include shelves, counters, and a storage closet lined with one-quarter-inch galvanized wire mesh or otherwise rodentproofed. The store will require only a small space unless the camp is of the family type, and food is sold to the campers. Even in such an instance the stock will not be extensive except in some unorthodox operation of a family camp in which, no point of central feeding being provided, every family might be expected to prepare all its own meals.

A **VERY BASIC NEED** in the organized camp is the combined hot shower house and laundry. It is necessary in all camps to provide facilities for hot showers with soap. A soap scrub while swimming is not a substitute. As one health authority has put it, "The swimming place is not a proper place for soap baths unless it is a fast running stream, and a fast running stream is not a proper place for swimming." Because of the great cost of installing and maintaining a supply of hot water at many widely scattered points, it is not considered necessary to provide these facilities in every group of cabins. It involves no great hardship for the camper to go to the administration unit daily to launder his clothing and his person. It is important, however, to locate the central shower house and laundry so that its distance from any cabin group does not belie the designation "central."

It is economically practical wherever possible to include separate showers and toilet rooms for the staff, for employes, and for visitors in the same building which houses the campers' showers and laundry facilities. This multiple functioning will further incline the camp planner to locate the hot shower and laundry building so that it will be readily convenient to the living and working quarters of staff members and employes. Since all these points are centrally, if properly, located with respect to the entire camp, the desirable central

location for the shower and laundry building seems almost to be guaranteed.

Naturally, in very large camps or where conditions force distances between units greatly in excess of the ideal, it will be expedient to build more than one shower house. In family and co-recreational camps it will be necessary to have either two such buildings or one in which the required duplicating facilities are properly separated. The question whether to provide showers in private stalls or a battery of open showers for women and girls remains an open discussion, with the trend probably toward gang showers. Where it is concluded to provide open showers generally, it is suggested that one be enclosed with its private dressing room.

Showers should be provided in the ratio of one to eight or fewer campers. In figuring the number of showers, the largest number of campers in any one unit may be taken as a base, for it is possible to schedule the use of the showers so that but one unit uses them at a time. The floors of the shower room and dressing room should be of cement, compacted and troweled to a smooth, polished surface that can be kept spotlessly clean. A cement base six inches or eight inches high around these rooms will do much to retard the deterioration of walls of wood.

A disinfecting footbath, depressed in the cement floor within the doorway through which the bathers must pass in leaving the shower room, has a useful purpose. It does not function automatically, however, and where evidence of a fixed determination to keep the device clean and conditioned is lacking, it is perhaps as well to omit it entirely.

The shower and laundry building should have a hot water storage tank and heater of ample size, and should provide space for fuel storage. Tank, heater, and fuel supply are best housed in a separate room, in which supplies might also be kept; an alternative location is the laundry room.

A double laundry tub is probably sufficient equipment in the laundry of a camp occupied by restricted age groups. In a family camp, however, more laundering will be done by the campers, and two or three double trays will be required. If the men's and women's showers for a family camp are in separate buildings, the laundry equipment will be mainly useful in the women's shower building,

although there will be purpose in installing one set of trays in the men's building, placed in a corner of the dressing room.

It is important to have shower and laundry buildings completely screened against insects.

A WASHHOUSE AND LATRINE building is an essential basic service facility for each group of sleeping cabins. Just as the hot shower house and laundry building should be central to the several cabin groups, so should the location of the unit washhouse and latrine avoid favoring some cabins to the disadvantage of other cabins of the unit. In children's camps no sleeping cabin should be more than 150 feet distant from the latrine. Even in camps serving adults a greater distance is objectionable, although sometimes unavoidable owing to site conditions and spacing for privacy.

By all means should a system of sanitation that provides flush toilets and a positive disposal of sewage by natural processes be adopted wherever possible. There is strong prejudice against sewage treatment by chemical processes alone due to the uncertainty of accurate control. The National Park Service Engineering Manual, Part 700—Sewage Disposal, will be found a valuable reference for its detailed consideration of sanitation with respect to parks and campsites.

In cases, and it is hoped these will be few, where flush toilets and a proper system of sewage disposal are out of the question for reasons of economy or other considerations, the alternative pit privies should be the best it is possible to devise, and be unremittently maintained. When pit privies must be resorted to, these and the washhouse must be separate structures. Although flush toilets and facilities for washing, on the contrary, may be housed under one roof, it becomes necessary to have pit latrines of temporary character auxiliary to the flush toilet equipment of camps scheduled for winter use.

The combined washhouse and latrine serving a cabin group is desirably made a partially enclosed structure. One end is merely roofed over to shelter the wash basins or troughs, the other end is enclosed to house the toilets in stalls. It is well to devise a line of least resistance for the campers by adopting a plan arrangement that leads the

campers past the wash basins or troughs as they leave the toilet stalls. A theory that campers will walk around the end of a building to clean up is not borne out by experience.

A concrete floor, or one of stone on concrete base, is important both for the washing "porch" and for the toilet stalls. A mere earth or gravel-filled floor surrounding the basins can become a most insanitary wallow when the sloshings and spurtings of exuberant youth on the loose are added to a normal splash and wastage of water. Ordinarily showers are not needed in the unit washhouse, if the central shower house equipment is of proper capacity. Cold showers only will be supplied in the unit washhouse, if showers are provided there at all.

An arrangement for washing in running water is the more desirable, because it is the more sanitary. Lavatories, or faucets in connection with a trough lavatory, should be in the ratio of one to eight campers. But this is a wasteful system, and if the water supply is limited or must be pumped at great cost, hand basins must sometimes be used for reasons of economy. A hand basin used in common can carry and spread infections and belongs in the same class with common drinking cup or common towel. In camps where water must be conserved, individual hand basins for every camper are the only tolerable substitute for running water.

Toilets should be provided in the ratio of one to ten campers. The privacy of toilet enclosure stalls equipped with doors is recommended. Urinals, if installed at all, should be a type that extends to the floor, because of the difficulty of keeping other types and their surroundings in a sanitary condition.

For camp units which house both sexes, it is of course obvious that the facilities here under discussion must be arranged differently than in the unit washhouse and latrine just described. Where flush toilets are possible, a single building will serve if the men's latrine and women's latrine sections are placed back-to-back and provided with entrances through wash "porches" placed at opposite ends of the building. With such an arrangement it is recommended that the wash basins or troughs be largely screened from view by lattice to afford more privacy. If toilets are of the pit privy type, two separate latrine structures are recommended, each with its detached, lattice-screened washhouse.

On the "must" list for all unit latrines or combined washhouse and latrine buildings is the complete insect screening of all toilet stalls. Particularly is it mandatory to screen effectively pit privy structures, to see to their maintenance in a clean and sanitary condition, and to resort to self-closing seat covers and any other devices which may be in the direction of preventing contamination being carried by flies, other insects, and animals.

THE INFIRMARY fills the need in every camp for a building in which to care for campers who become ill or injured or who may need isolation and rest. Its location should be removed far enough from the sleeping units and from points of noisy recreational activity to afford quiet, and near enough to the kitchen of the dining lodge to permit serving hot food from the kitchen to the infirmary conveniently. The structure should have a room which can be used as a dispensary where examinations may be made and minor injuries may be cared for. This dispensary or first aid room should be equipped with a sink, a closet, and shelves and cabinets for supplies and equipment.

There is seldom, if ever, need for a separate waiting room, for large groups of campers are practically never waiting for treatment. On the rare occasions when it may be necessary to have them come to the dispensary en masse for examination, they can await their turns out-of-doors. A bench or two on a porch outside the dispensary door will be useful in such situations.

Other space needs in the infirmary are a ward, an isolation room, a bathroom, and sleeping quarters for the doctor or nurse in charge. Recommended capacities are two beds for what has been termed the small camp, three for the medium-sized, and four for the large camp. In each case, the isolation room will accommodate one of these. It should be possible to place all beds, whether in a ward or in the isolation room, so that access may be had from both sides. Wards should be large enough to allow the spacing of beds with a distance of six feet between side rails and four feet between end rails. A plan arrangement that provides fairly direct entrance to the isolation room from the outside without the need to pass through any other rooms is always best.

The equipment of the bathroom will be the usual three fixtures—lavatory, toilet, and tub, a shower preferably over the tub. As it will be used by the doctor or nurse, and the patients as well, it is best to locate it centrally so that it is entered from a hall or passage.

The doctor's or nurse's sleeping room should contain not less than 100 square feet of floor area and should be supplied with a closet of ample size.

Important in the infirmary building are provisions for abundant sunlight and ventilation, a plentiful supply of hot water, some means for heating the rooms if conditions demand, and a positive screening throughout against insects.

Ideal arrangements for heating are a fireplace in the dispensary and a heater for the hot water tank so oversize that, when temperatures demand, this one source can also heat small hot water radiators in the ward and the isolation room. The hot water tank, heater, and fuel bin should be in a separate room, lined to be fire resistant and non-conductive of heat. A small door can be rigged in one wall of the heater room. This will permit taking advantage, in chilly weather, of the heat generated in the heater room. Preferably this would open into the hall or the bathroom.

VERY PATENTLY in the category of basic services or transplantations of urban utilities to the camp community are water supply, electric wiring, and incinerators. Drinking water should be brought to each of the units as well as to the administrative center. Bubblers should be installed at the unit washhouses and outdoor kitchens, and in the unit lodges if these and the outdoor kitchens are not joined. Bubblers are hardly short of essential, certainly very desirable, in the administration building, infirmary, recreation building, craft club, nature club, and the living quarters of staff members and employes. Water must, of course, be brought to the dining lodge, and will be a great convenience in the garage and for the washing out of garbage cans at the incinerator. Assuming flush toilets as equipment and one shower bath per camper per day as inescapable, a minimum of 50 gallons of water per camper per day is needed.

When electricity is within reach, the extent to

which wiring should be provided in the organized camp is controversial. Few would argue to withhold its benefits from the administration unit, wherein it will lighten the kitchen tasks and constitute important equipment in the infirmary. Opinions differ as to whether it should be carried to the outlying units. While some would wire every building in camp as a matter of practical convenience, others would ban electricity from the units for the training and experience that campers acquire through contact with elemental processes. Overhead wiring is destructive of the illusion of wilderness; underground wiring, properly done, is expensive. It is the practice of young campers to retire early; this does not prevail among those camping as families. To generalize in arbitrary recommendation of flashlights or floodlights in the units would be foolhardy indeed. In each individual case the considerations cited, and others, deserve to be thoughtfully weighed.

The complete disposal of garbage and rubbish is mandatory in every camp, as in every other recreational area. The effective medium is an incinerator. Because the facilities serving camp and picnic ground are identical, the discussion and illustrations previously presented in the section "Incinerators" will not here be repeated. The proper location for the camp incinerator is one far enough distant from the campsite that the smoke and odors of combustion do not reach the camp. The direction of prevailing winds will be taken into account even though it results in the incinerator being less accessible. A small trash burner near the camp kitchen will be a convenience, and need not be an annoyance if used with discretion.

Another service structure desirable in a camp is a garage to shelter one or two cars and provide space for a workshop. Since this building does not differ from the garage built as a part of the service group on other recreational areas, it is unnecessary to repeat here verbal or graphic exposition of it. The camp garage can rate a classification as essential if it is made to serve a double purpose. It can be utilized for winter storage of equipment to include mattresses and bedding, if it is made rodent-proof; and if tightly built, it is a logical place for the fumigation of such equipment.

group. Particularly is this true if the dining lodge is readily convertible and roomy enough for mass recreational activity, and if not too many such demands are made on it. Without the network of unit lodges to take the brunt of enforced indoor activity in bad weather, the taking over of the dining lodge for every minor indoor recreational need would indeed be a disruptive practice, and a central recreation building would become a necessity. While in a choice between a chain of unit lodges and a central recreation building, the former is thought to be better camping practice, some camp planners, for good and sufficient reasons (lack of funds probably a potent first), will elect to build the central facility instead. It should not be assumed that a camp having both a central recreation building and a chain of supplementing unit recreation buildings is necessarily ideally equipped—too many facilities for indoor events may interfere with the realization of a desirably complete outdoor program.

The ideal, if seldom economically supportable, central recreation building will allow from 15 to 20 square feet per camper. It will feature a generous fireplace, perhaps more than one. The main recreation room will have a portable or permanent stage for amateur entertainments and will be arranged so that dressing rooms, if not actually a part of the building, can be supplied by tents temporarily erected outside advantageously located stage exits and entrances. A wide veranda will contribute greatly to the general usefulness of the structure, and an alcove or separate room for reading and writing, equipped with bookshelves and writing tables, will be another important element. The main recreation room will have tables for ping-pong and other games, and benches and other seating furniture suitable to its varied uses. Ample storage space for equipment items that need to be stowed away when the building is appropriated for special events will not be overlooked.

IT CANNOT BE DENIED, with swimming almost the reason for being of most camps, that insuring safety in the water-front area, insofar as lay-out and structural appurtenances can effect this, is the first and foremost demand upon planners of camp recreational facilities. Stating objectives broadly, water-

front development should create a confined, safe operating range for beginners and nonswimmers, facilitate their instruction, and provide for the more varied, less restricted, but still safeguarded, activities of experienced swimmers.

Probably the ideal development of a swimming beach is an H-shaped dock, the upright strokes of the letter at right angles to the shore line. Within the shoreward hollow of the H, beginners' flounderings and founderingings are confined, and instruction is given. Herein the water should not exceed a depth of four feet. The outer hollow is the sports arena of the true swimmers, and within this area the water is desirably not over seven feet deep. At the ends of the piers the diving boards are installed, where, for high diving, water nine feet deep is necessary.

The many advantages in the H-dock will be quickly sensed. Not the least of these are definitely prescribed limits of water-front for swimming activities which tend to restrain the rash and unwary from venturing beyond the bounds of rescue. Another very real advantage is that boats, where boating is also a camp activity, may be moored outside the piers and kept completely away from the swimmers. The operation of boats within swimming areas, irrespective of the skill and cautiousness of the operators, is a hazard which will not be tolerated in a well-supervised camp.

There are other forms for the swimming dock—T-shaped, L-shaped, and others, but none scores with so many telling advantages as does the H-plan. Regardless of the form adopted, the construction of the dock should be such that there is no chance for campers, diving or swimming under water, to be trapped beneath it. This may be accomplished, where the water level is not widely fluctuating, by building the dock level high enough above the water level to insure "breathing space" between them at all times. Elsewhere barriers of wood piling, heavy wire fencing, or something equally effective, to keep swimmers from getting under the dock, become a necessary part of the substructure and should extend to the bottom. The substructure should be of substantial construction which anticipates and gives promise of surviving ice conditions of the locality. The timbers under water should be heavily creosoted.

CAMP RECREATIONAL AND CULTURAL FACILITIES

➤➤ **C**HIEF, and perhaps only, structures truly essential to the recreational and cultural program of camping are the accessories which contribute to safe swimming and indoor space for rainy day activities. Purposeful as are a campfire ring, craft shop or craft club, nature lore building or nature club, and water-front building, in the event of the omission of any or all of these, the unit lodge can take over many of their functions without the sacrifice of the major objectives of a worth while camp program.

As has been said, the unit lodge is the rallying point of a camp unit. It has recreational, social, educational, and cultural purpose. It is the common living room or clubroom of the campers who make up the unit, and if joined with an outdoor kitchen—a recommended practice—it can serve as their dining room as well.

In size the unit lodge should allow about 20 square feet for each camper of the group. A room 20 feet wide and 30 feet long has convenient proportions. As with most structures for campers' use, the fireplace is its most important feature and should be of generous size. Closet and cupboard space will be useful for the storage of equipment at all seasons.

For the bearing it has on construction details, thoughtful consideration should be given to the likelihood of winter use of a unit lodge. In that prospect, for instance, it is well to provide in the chimney an extra flue and thimble for connecting a stove for both cooking and auxiliary heating purposes. Projected winter use will also suggest a lower and flatter roof so that the lodge can be more easily heated. It will also lead to the substitution of glazed sash of limited extent in place of the more generous screened openings and batten winter closures recommended for unit lodges planned for summer use exclusively. For comfort in winter occupancy, the higher insulating value of a grade of construction better than required for strictly summer use is advisable.

If the full potentialities of the unit lodge are to be realized, a simple outdoor kitchen shelter, where meals can be prepared, must be erected nearby or, better still, attached to it. The latter arrangement permits one chimney to do double duty and will prove its superior convenience on rainy days. Experienced camping groups may essay to cook all their meals in the outdoor kitchen. Others may use it on occasion for practice cooking or the novelty of preparing a meal or two, on their own. When the camp is not entirely occupied, the outdoor kitchen combined with the unit lodge functioning as a dining room makes possible and practical the operating of units as independent camps accommodating small groups.

It is recommended that the kitchen, if joined to the unit lodge, be open on three sides; if entirely detached, then open on all four sides. The stove should be of masonry of the campstove pattern, built integrally with the masonry chimney. Its iron top, preferably a casting, should be solid, from front to its intersection with the face of the chimney, and should be at a convenient working height. Grills and any perforations or openings in the stove top which would allow smoke to collect within the shelter are to be avoided, likewise removable lids like those of a coal range, which are too easily mislaid or otherwise lost. Control of draft either by a damper in the flue or by a readily adjustable fueling door should be provided.

Needed structural equipment for the outdoor kitchen further includes cupboards for storing utensils and dishes, an ice box, and storage place for food protected against animals and insects. Drinking water should be available at a bubbler and also at a tap where pails and other vessels may be filled.

Generally speaking, the small recreational building of each cabin colony in the form of the unit lodge, as described, will eliminate the need for a large recreation building in the administrative

There are water-front situations in which a sharply sloping beach, mucky bottom, swift current, or other unfavorable condition will dictate the building of a swimming crib—a floating swimming pool—for the instruction of beginners. The crib is of cross-planked cratelike construction, the spaces between the planks permitting active circulation of water yet narrow enough that there is no chance of a foot getting between the planks and being wedged there. Pockets built in the ends of the crib, weighted with rocks, make it possible to float the crib at the desired level. By building it in sections, bolted together, a crib 80 feet long and 35 feet wide is practicable. Structural members, of course, must be scaled to its over-all size and to affecting conditions such as current and ice conditions. Damage by the latter can only be effectively circumvented where winters are so truly mild that ice normally occurring qualifies as a film rather than anything more formidable. Projected for cold climates, the crib should be so contrived that its superstructure can be readily removed in sections and hauled ashore for the winter months, and the substructure prayerfully weighted down in deep water in the hope it may escape damage by ice. Crib construction should have the preservative benefits of thorough creosoting for submerged parts and painting for the parts above water.

The provision of diving boards is nothing to be undertaken in an offhand manner. There are definite and easily obtained standards for this equipment item governing the pitch and overhang of the board, its dimensions, distance above the water, the clamping device, and other equally important details. Experimental and makeshift departures from generally accepted diving board standards are unwarranted, even dangerous. It is decidedly unfair to campers bent on learning to do something well, to start them off disadvantaged by nonconforming equipment.

The only satisfactory location for diving boards is a fixed structure. Diving boards on floats are hazardous. The behavior of a float in rough weather is unpredictable, and painful accidents to divers can result. It is also possible for a swimmer to come up under a float and be trapped there. In consequence, even though it becomes necessary to resort

to a rock crib construction, diving boards should be on fixed structures.

There are a number of water-front accessories, minor as structures, but important to the safety of the swimming area. One is an elevated seat from which a guard can observe all swimmers and quickly speed to the rescue of any who get into difficulties. Other items are rescue and safety equipment—always life rings hanging on racks ready for instant use, life lines, and resting floats, and, if the site conditions warrant, life boats. There should be no shortage of ladders up which to climb from the water to the dock. Trivial structurally as ladders are, the scarce provision of them in many outdoor swimming set-ups is shocking. Wherever swimmers must tread water awaiting their turns to clamor up a ladder, the planning of facilities is under the cloud of criminal negligence.

Where there is neither lake nor dammed stream to afford swimming for the organized camp, the man-made formal swimming pool is the alternative to be undertaken. It will differ not at all from the swimming pool in any outdoor location, thorough information on which is available from so many sources that there is no obligation to discuss it here. Let it suffice here to urge upon camp planners that, where the swimming pool is a required structure, the most authoritative recommendations be not slighted.

CONSIDERATION of camp recreational and cultural structures and facilities now tapers off to embrace those generally held desirable but less than essential. The recreation building in the administrative group has been mentioned as thus classifiable except when, by reason of the omission of recreational facilities from the units, it becomes a truly essential structure.

In the typical organized camp, dressing for swimming can be done in the sleeping cabins, and no water-front construction in provision of dressing rooms is considered to be necessary. There will only be purpose in a water-front building if boating is a camp activity. Then it will be a boat storage building divorced from the bathing area. It will be sized to berth the boats belonging to the camp and will have storage space for paddles, oars, and such accessory boating gear. Perhaps it will have an

incline to the water, with cleats for a foothold in hauling in boats. In some instances a landing pier adjoining the boathouse may be desirable. The water-front building may advantageously include winter storage space for some of the bathing beach equipment such as life rings and resting floats. It is a structure that cannot be reduced to a typical lay-out, being affected more than any other camp building by special considerations of site and program. Foundations that will withstand severe ice conditions are important.

Naturally, if the facility for swimming is a treated pool, preparatory shower baths will be required of all who enter it. In that situation the central shower house will logically be located near the swimming pool, its size increased to provide a roomier dressing space and more shower heads.

WORK IN THE CRAFTS is an activity in organized camps of all kinds. With some campers craft interest is merely a rainy day matter; with those of creative bent it is a thrilling pursuit that cannot be made to wait on unfavorable weather. The structure which houses these activities is termed a craft shop, or craft club, and among the interests possible are carpentry, leather work, the graphic arts, metal work, weaving, printing, and photography. The building is normally a simple structure with plenty of light a first requirement. Its equipment will include work benches and tables, shelves, cupboards, even individual lockers for tools, materials, and work in progress. A sink with running water is necessary; a fireplace is desirable. The variety of the craft program will dictate the extent of the other equipment, but a loom, a small forge, a photographic dark room, a potter's wheel, and a small printing press are among the many possibilities. It is recommended that the craft and nature buildings be located in the same general vicinity but not joined under one roof. The often noisy and untidy creative activities will be likely to disturb the more contemplative research of the nature groups.

It has been found to be good practice to place the craft and nature buildings so that they will be passed by the campers in the day's routine travel. Young people, particularly, will not be inclined to seek out these facilities when located off the beaten

track, yet their indifference can be broken down, and an enthusiasm can be created, if they are given opportunities for frequent and casual observation of the interest of fellow campers in craft and nature hobbies.

WHAT IT IS CHOSEN herein to christen the nature club is a facility long-provided and variously designated in camps. The terms "museum" and "nature museum" somehow suggest eternally suspended animation, whereas the place, functioning as it should, is one of lively activity. "Nature lore building" seems to carry threat of an innocuous bedtime story approach to the facts of Nature from which sophisticated modern youth will instinctively back away, and more power to him! "Nature hall" has scholastic and World's Fair connotations which make this term not exactly fitting. These names and less used others for one or another reason seeming less than apt, it is here elected to send up a trial balloon for "nature club" as suitably descriptive.

It is the rendezvous of the nature-minded, present and potential, among the campers. It may contain permanent collections of natural objects identified with the locality, but its more important purpose is to serve as a working museum—a combination laboratory-classroom-library for the campers of an inquiring turn of mind in the realm of Nature. Structurally, it will probably consist of a large exhibition-workroom and a small office-laboratory for the nature counselor in charge. It will be well-lighted and equipped with shelves and cases for display, work tables, bookshelves, cupboards for storage, and a sink with running water. Very desirably a wild flower garden, perhaps a vivarium or aquarium, will adjoin it, and it will be the starting point of a nature trail. The building will be expressive of its purpose if it is linked with the out-of-doors by large openings that give vistas into the surroundings and by the use of materials patently native to the locality.

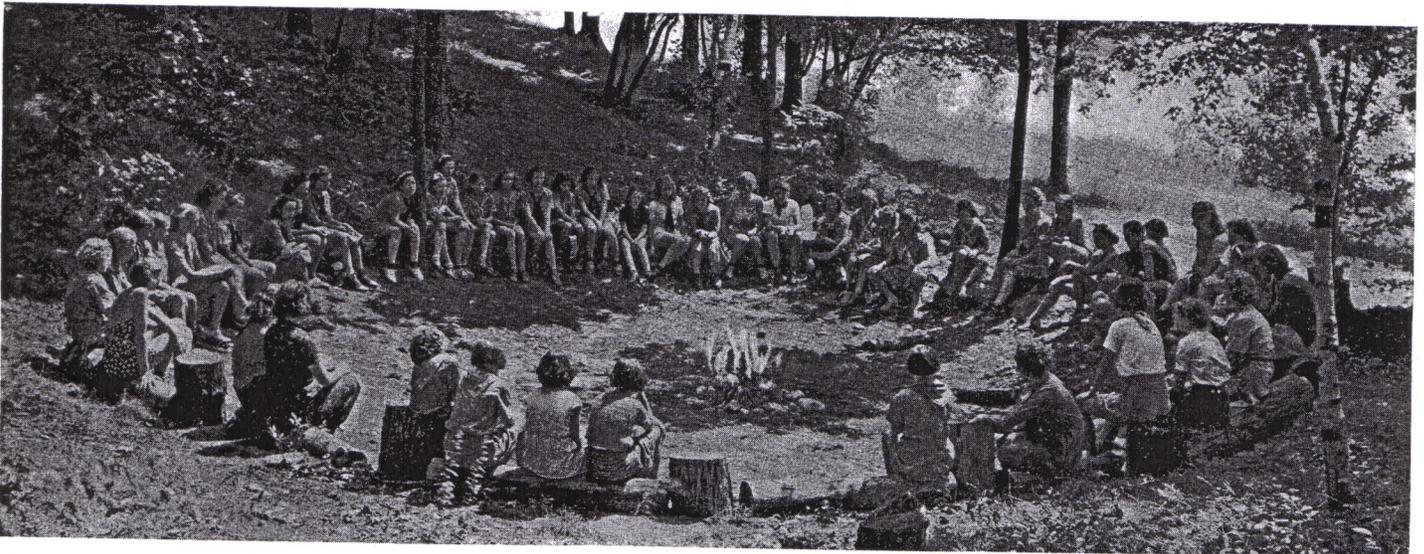
THE COUNCIL CIRCLE, or council ring, only fails of classification as essential in organized camps, for the reason that, in the initial absence of any such facility, persistent need will eventually bring into being a makeshift substitute. The makeshift may

serve very well, or not, depending on terrain and other considerations of locale.

The ideal camp council circle will be remote from the camp, at least 1,000 feet from the nearest building. It will be in a secluded spot, wooded if possible, without distracting vistas, and free of disturbing influences. The location must be such that a cleared circular plot, smooth and practically level, of 24- to 30-foot diameter, can be ringed in by the front row of seats. Seating will be benches with low backs. When there is need for a second and third row of seats, each should be elevated slightly above the row immediately in front. The leader's seat, as the focal point, may well be differentiated from the general seating by a higher back. It is fine if a large tree or rock can furnish a background. Entrances through the ring of seats should be few, preferably not more than two or three. The

council circle of the organized camp differs from what is termed in some campgrounds a campfire circle, in that it lacks a pit or a fixed hearth ring of stones for the campfire. The enclosed space accommodates a campfire, of course, but is free of any construction which might interfere with the games, stunts, and rituals of the organized campers.

Success has not rewarded a search for a photograph of a council ring on the structural lines just described. Perhaps, after all, the council ring is what one camping expert, to whom appeal for a photograph was made, described it to be: "a group of people bound together by bonds of interest and appreciation around a fire"—something of the spirit rather than of structure. And if this is true, the tailpiece illustration, as the sole example here pictured, ably represents this facility.



CAMP COOKING AND DINING FACILITIES

EXACTLY three times a day facilities for cooking and serving meals become the most important structures in every camp, wherefore too much care in planning them is hardly possible. The primary structure is a dining lodge housing dining room and kitchen with necessary dependencies. While separate structures for cooking and dining purposes are imaginable in some situations, the arrangement promises too little of logic and efficiency to occur very often.

The outdoor kitchen as a joined or detached dependency of the unit lodge has already been touched on. This facility in which the cooking done is normally recreational and occasional, and not an efficient "three-square-a-day" business routine, is not a present concern. After a preliminary reference to campstoves, the discussion here will treat only of the dining lodge, combining dining room and kitchen, and the several minor accessories which may be housed either in it or in small independent buildings clustered around the kitchen wing or service court.

Campstoves have previously been discussed and illustrated as needed facilities in the public campground of a park. They likewise have useful purpose in the organized camp planned for the use of families, where it is likely a family will sometimes wish to prepare a meal on its own. They will differ not at all from the types of park campstove illustrated in the section "Campstoves", for they will properly be built to greater height than picnic fireplaces; they may, or may not, have a sheltering roof; and they may be either single or multiple. When an organized family camp can be built with its full complement of desirable structural accessories, one or more campstoves will be provided in each cabin group.

DESIRABLE OBJECTIVES in devising a plan for a dining lodge are wide and pleasing views from the dining room, ample light and cross ventilation for

both dining room and kitchen, and a relationship between these two units which will result in a service of maximum efficiency with a minimum of steps. The T-shaped plan accomplishes these objectives, and is recommended above all other plan possibilities, with a full realization that the recommendation, if widely accepted, will lead to a degree of standardization, and that standardization is frowned on by designers of ability. Nevertheless, the T-shaped plan has too many advantages to justify rejection of it solely on the score of its being too commonly used.

The dining lodge is generally built for summer use only. It can therefore be of very light construction and can have many large screened openings with low sill height for the full benefits of view and ventilation. All openings should be equipped with shutters or closures of a type to give protection in stormy weather while the camp is occupied and to make possible closing the building out of season.

Completely effective insect screening of the dining lodge is essential. This should include all roof and floor ventilators and every other minor opening, for only the most positive precautions against the entrance of flies, where food is prepared and served, comply with recommended camp practice.

A fireplace is a welcome feature in the dining room not too widely open to retain the cheer and warmth a fireplace can spread on chilly mornings and evenings and in wet weather. Its flue and, let it be remarked in passing, the flues of all camp buildings, regardless of purpose, should be topped off with an effective spark-arresting device.

A dining room of suitable size will be had by allowing from 10 to 15 square feet of floor area per camper, depending on the size and shape of the dining tables. Table and bench combinations, that is, tables with seats attached, such as are appropriate in the picnic area, are not recommended in the camp dining room. Chairs or benches independent of the tables will be useful on those occa-

sions when the tables must be stored away to clear the room for recreational use. Tables seating four, six, or eight persons have been found practicable. They may be square, round, or rectangular. In camps where the lack of a separate central recreation hall means that the dining room must sometimes be converted to recreational use, light dining tables of folding type, which can be easily handled and stored in a small space, are a possibility.

In most well-ordered camps, a current trend in the serving of meals is to duplicate as far as possible practices that would prevail in a not underprivileged home. Meals are served as at a family table with campers taking turns as waiters and a counselor serving at each table or delegating the serving to one of the campers. Stacking the dishes and skidding them to the end of the table nearest the kitchen may be timesaving, but there is nothing else to recommend it and, as a permissible practice, it is out. There are those who condemn cafeteria service in a camp dining room for being institutional in flavor. There are localities, however, notably along the Pacific coast, where this type of service has been preferred. Regional preferences should be the weighing factor when a choice between the two types of service is to be made.

To prevent kitchen heat, noises, and odors from penetrating to the dining room, the openings between these rooms should be limited to two doors, whichever type of service is adopted. The camper-waiters of the one plan will pass in one door, pick up food from a serving counter extending across the kitchen, and reenter the dining room by the other door. If cafeteria service is used, the counter, of course, will be on the dining room side of the partition separating dining room and kitchen, and the two doors will serve the in-and-out traffic of the kitchen help. In either case the counters should be continuous, with gates or hinged tops at any required openings to bar the campers from the kitchen help's field of operations.

The most vexing problems of camp operation invariably center around these employes. A first and far step in forestalling some of the difficulties which can arise is to keep the campers out of the kitchen proper and away from behind the serving counter. It is appreciated that in many camps the campers will be detailed to set the tables, to assist

in the preparation of vegetables, and to perform other tasks, but it is only rational so to plan the dining lodge that this amateur help will not recurrently short circuit the professional and blow the fuse of morale. Very effective insulation against such disasters is to provide a screened porch directly off the kitchen where the campers doing K. P. can work at their set tasks out from under foot of the cook and his assistants.

IN THE CAMP KITCHEN, as in every other kitchen, the lay-out of equipment should adhere to the tried principles of efficient arrangement. In short, it should be zoned for three basic functions—preparation of food, serving of food, and dishwashing—arranged in this proper sequence. In the well-planned kitchen the dishwashing zone will be definitely isolated from the two others, which will be as disentangled one from the other as their inherently close relationship will permit. Range, work tables, counters, dish closets, pan racks, sinks, and all the items which make up the complete kitchen will

only find their proper location if the importance and use of each in relation to the others has been carefully analyzed, and if such factors as light, ventilation, and circulation, have been weighed.

Size is a matter of first importance in the kitchen. There is no glib formula for calculating the exact desirable size, yet for every particular case there is a right answer within very narrow limits, about as one might say the answer to 7 times 7 is between 48 and 50. The kitchen a little large is much too large; the kitchen a little small is much too small. And sadly enough, the kitchen that is just the right size is very rare indeed.

Concrete floors under the range and the hot water heater serve as a safeguard against fire. If extended throughout the kitchen, concrete provides a floor surface that is more easily cleaned than wood, though harder on the feet of those who must stand on it all day, and usually costlier. Wall and ceiling surfaces adjacent to the range and to the hot water heater should be adequately fireproofed.

The temper of the kitchen staff and the temperature of the kitchen would appear as parallel movements if shown by graphs. No simple ventilating device which will aid in keeping down temperature and tempers in the kitchen should be omitted from

the construction. A long, low ridge ventilator, screened and fitted with movable louvres, will serve as an outlet for the warm air and cooking odors which accumulate under the roof. Louvred screened openings at the floor line will supply fresh air and, in conjunction with the ridge ventilator, effect a helpful natural circulation of air. An abundance of windows for cross ventilation and light is strongly urged. An overventilated summer camp kitchen south of the arctic circle is yet to be heard of. Whereas the sills of the dining room windows should be low enough to afford persons seated views of the outdoors, the sills of the kitchen windows should be high enough to clear all counters and sinks at a suitable working height.

Dependencies of the kitchen desirably joined with it include a cool room; a refrigerator having two compartments, one for meats, the other for vegetables and dairy products; a rodentproof storage closet; and a service porch. The cool room is a storage place for vegetables and need not be large if it is supplemental to an underground vegetable cellar. A secondary function of the cool room, if proper planning has the refrigerator entered from the cool room and not directly from the kitchen, is to insulate the ice box against kitchen heat. In such a plan arrangement, ice is conserved, and some of the cold lost by the refrigerator serves to lower the temperature of the cool room.

To serve a summer camp adequately, the ice box of necessity will be large. Whether it may be a carpenter-built affair that pretends to no exceptional rating for efficiency or should be a commercially built box of guaranteed, proved insulation value depends on the source of ice. Obviously, in northern locations where natural ice has been cut and stored near at hand in abundance, there will not be the same economic reason for efficiency in the ice box as exists where artificial ice must be brought from a distance. An outside icing door placed suitably high in the wall will prove convenient.

In the rodentproof closet are kept the staples and foodstuffs which do not require storage in a cool place. Quarter-inch wire mesh over walls and ceilings and between subfloor and finish floor will prevent animals from entering the closet.

The service entrance steps and porch should be built of masonry or concrete. Not only must these

endure much wear and tear due to deliveries and removals, but there will be frequent need for hosing down the platform and steps to keep them in a sanitary condition. Nearby, though preferably not directly joined with the steps, should be a concrete platform for garbage cans. It is convenient to have this at truck platform height.

If toilet and wash basin are not available in another building close by, there will be the economy of saved time if these are provided along with other dependencies in the kitchen wing.

It is conceivable that there might be need in a large camp for a dietitian's or steward's office where accounts and deliveries might be checked and other duties performed away from the kitchen proper. It can be a very small room, and its proper location is near the service entrance door.

DEPENDENCIES OF THE DINING LODGE which are better housed separately than incorporated within the kitchen wing are few. Most necessary is space for fuel storage. If the fuel for the range and the water heater is the usual coal or wood, a small separate structure in which to store it convenient to the service entrance will keep much dirt and dust out of the kitchen. To bring in fuel from the outside may seem less convenient than to dip into an abundant supply stored alongside the range, but the annalist should ponder the more frequent scrubblings of the kitchen floor made necessary when the kitchen doubles as the coal bin.

If gasoline or oil must be used as fuel for the kitchen range and heater in the camp, it becomes mandatory to provide a separate shed a safe distance from all other structures, marked to announce the hazardous contents, and otherwise in compliance with any governing regulations in force.

In some localities an underground storage place for vegetables, convenient to the kitchen wing, will be useful. When ice must be brought from such distances that buying for only a few days' need is uneconomical, or when winter ice is cut on the camp property and a season's supply must be stored on the premises, generous storage space is needed. As for other minor structural needs associable with camp cooking and dining facilities, it is pointless to explore the nontypical further to a possible confounding of typical construction.

CAMP SLEEPING FACILITIES

➤➤➤ **T**IME WAS, and not long past, when the very word "camping" carried presupposition of sleeping in a tent. Since prehistoric darkness, some form of tent has served man as shelter during his migrations and farings forth to hunt and to fight. In consequence the tent stands as an inherited symbol of high adventure, especially to youth. Naturally then, when on his first camping expedition, a youthful reincarnation of Daniel Boone or Marco Polo finds to his horror that he is expected to sleep in other than a tent, cynicism rears its ugly head, and today's generation is forever convinced that it was born too late.

Probably organized camping must take the lion's share of responsibility for having undermined tentage as the supreme facility for sheltering campers. This institution has had opportunity to observe the high cost of tents (maintenance and replacement considered) and the difficulties of screening them against insects. Conclusion is very generally reached that the "wooden tent" has enough advantages in economy and health to outweigh the thrill of sleeping under canvas.

Some camping leaders will not lightly sacrifice the psychological advantage of the tent and will favor using it for sleeping purposes in spite of its overburden of cost. A tent so used should have a raised platform with flooring tightly fitted. It is pointed out that the actual dimensions of tents often vary by several inches from their nominal size. Hence it is unwise to build tent platforms until the tents are on hand, in order that the platforms may be custom-tailored to a snug fit. Well-braced side rails will contribute to fixity of form and will help in anchoring the canvas.

There is always inclination to try to eliminate the shortcomings of the tent by this change or that addition. This leads to an anomalous fabrication, half-tent and half-cabin, which usually succeeds in rolling into one all the disadvantages, rather than the advantages, of both kinds of shelter and

in appearing to be a cross between a corncrib and a cricket box of heroic proportions. Unless the tent is accepted for exactly what it is, the alternative of an out-and-out wood structure is urged.

As a usual thing, sleeping units in camps must accommodate the following different groups: campers, staff members, and those termed collectively the help, but more accurately defined as employes who are not members of the leadership staff. The help will be housed somewhat to themselves within convenient reach of the dining lodge. Quarters for the staff will be at a location so central that general supervision of the camp can be maintained at all hours. The living quarters of the doctor or nurse in charge of the infirmary are necessarily within that building, as has been said. If the camp is planned for young children or youth groups, living quarters for one or more counselors or leaders will be provided in each group of campers' cabins. This practice may or may not prevail in the camp planned for family use.

As to sleeping cabins for the campers themselves, there are material differences between those designed for families and those designed for age groups. Let us consider the two types and their basic structural differences before sleeping accommodations for staff and help are explored in detail.

THE HISTORY of group camping reveals a continual reduction in the recommended number of campers housed in one sleeping unit. Actual experience with age groups in camp, particularly younger children, shows that as "dormitory" groups were made smaller, many behavior problems disappeared and the campers were happier. There are many children and older persons too who find it difficult to adjust themselves to many roommates. It was found that eight campers in a cabin was better than twelve, that six was a still better-sized group, and that four seemed best of

all. Because adjustments to camp mates and camp life are more easily made in the small group and because noises, disturbances, and problems of discipline all decrease proportionately as the size of the group, and therefore less supervision is required, it is urged, when campers are over 12 years of age, that not more than four be housed in a sleeping cabin. For children under 12 it is recommended that the cabins be planned with two rooms accommodating four campers each and with a separate room for the counselor between.

Wherever groups of small children are brought together in camp, the sleeping cabins, for reasons of health, safety, and comfort, should comply with United States Public Health Service recommendations. These call for six feet between side rails and four feet between end rails of beds, and ban double-deck bunks. In cabins or dormitories that accommodate more than four young persons, the six-foot spacing can be reduced if well-fitted canvas or light wood barriers are placed between the beds, and if in so doing the cubic content requirements of local health agencies having jurisdiction are met. If the campers are adult or housed as families, it is considered allowable to substitute the space and content regulations of directly jurisdictional agencies for those of the Public Health Service.

In sleeping cabins planned for summer use only, as is generally the case, window openings may be large. The solid walls need not extend more than three feet above the floor, from which level to the plate line screened openings should be provided. Some method must be contrived for closing them in stormy weather. It may be done by means of canvas curtains, wire glass-cloth on frames neither too light nor too heavy, or by solid wood shutters. Canvas curtains flap in the wind, become mildewed if rolled when wet, and will be found to entail high maintenance costs even though mildewproof canvas is used. If not subjected to abusive treatment, wire glass-cloth mounted on sufficiently rigid frames should last for several years. Because this material admits light, it is superior to the canvas curtain and the solid wood shutter, both of which leave the cabin entirely in darkness when they are closed. Everything considered, the most desirable solution would seem to be glass-cloth storm closures

interchangeable with wood batten winter closures.

The initial cost of glazed sash in camp buildings is high. And when the buildings are remotely situated and deserted out of season, glass breakage is often considerable with consequent high maintenance costs. It is recommended that the use of glazed windows in camp structures be limited to those buildings planned for year-round use.

As to equipment, sleeping cabins should provide individual clothes closets for the personal belongings of each camper to insure a neat and orderly cabin at all times. These closets may be simple three-sided affairs with canvas curtains across the front. One or two shelves at the bottom or the top will serve to store the camper's small belongings; a rod or coat hooks will accommodate coat hangers. Building these closets in the center of the ends or sides of the cabins will help to insure the cots being placed in conformity with the United States Public Health Service space regulations.

It seems hardly necessary to recommend that all doors of sleeping cabins should open outward as a safety measure in case of fire or other emergency when young children, especially, would be panic-stricken. A small porch at the cabin entrance will protect the doorway in wet weather and offer a place where campers before entering can clean their shoes of mud. If large enough, the porch is a pleasant place for the cabin occupants to sit outdoors, weather and insects permitting.

When it is expected that an organized camp will be occupied part-time by families and part-time by age groups, the cabin just described as desirable for the latter will meet fairly acceptably the needs of a family. If, on the other hand, a full-season family use of the camp is projected, a cabin more favorable to family occupancy can be devised. First of all, this would be less open. A group of family cabins will be inhabited by persons of both sexes and all ages, and more privacy for the family than would be accorded an age group of either sex is very much in order. To this end the amount of screened wall can be reduced by half. Furthermore, it is desirable to divide the family cabin into two rooms, for conceivably a family camp will not operate on so fixed a schedule as other camps, and the children and adults of a family will retire at different hours. It is also proposed that cabins be

of several sizes, sleeping four, five, and six persons, when strictly family use is anticipated.

The economy basic in organized camping, founded on the principle of making its benefits accessible to the greatest number, will oppose anything more elaborate in family cabins than has just been described. True enough a fireplace, a living room, and a screened porch would be desirable additions. But these, accompanied by that inevitable other addition—an increased camping fee, resulting in reduction in the broad field it is hoped to serve by organized camps—are unjustified.

SLEEPING QUARTERS FOR STAFF MEMBERS in camps operated for age groups must be widely scattered to effect a proper supervision. In family camps this need is less imperative or may be lacking altogether. There are staff members in age group camps—the counselors or leaders—who are on duty 24 hours a day, being expected to sleep with one eye and one ear open.

The tendency in camp staffing is toward more counselors to a given number of campers than formerly. This has resulted in more varied programs as well as more personal attention. In present practice the camper-to-counselor ratio probably averages around eight to one. Doubtless fewer campers per counselor is the situation where the campers are very young or physically handicapped and more, where the campers are more mature.

The younger the campers, the closer at hand should be the counselors' sleeping quarters. Hence, when the group is made up of very young children, the type of cabin previously described, having the leaders' room flanked on either side by rooms accommodating four campers so that all are under one roof, is desirable. When older children constitute the group, a detached cabin will serve as living quarters for the counselors. It may house three, but two is better. Its proper location is central among the campers supervised by the counselors. Its construction will be similar to that of the campers' cabins, and it will be of a size that permits spacing beds at least as far apart as recommended for campers' cabins. It will be equipped with a closet for each occupant and will be arranged to receive two or three chairs and a table for use as a desk.

In the typical camp there will be need for a cabin with sleeping quarters for the director and other members of the central staff who may be off duty after taps. It is sometimes advantageous to include sleeping accommodations in this cabin for one or two guests, and perhaps a living room or lounge with a fireplace which can be used by other staff members during their leisure hours. Often there will be purpose in building it so that short-term winter use is possible by an arrangement that permits one bedroom to be converted to use as a kitchen. Otherwise, a summer construction, a little less exposed and somewhat more spacious than recommended for counselors' and campers' cabins, is in order. The camp staff, in camp all summer long and composed usually of older people, is entitled to a little more room, privacy, and comfort than the campers will require.

Employes' living quarters should be apart from those of the campers and staff members, yet should be located convenient to the central washhouse, which incorporates their toilet and bathing facilities, and to the dining lodge, in which their work centers. There is advantage too in locating the building that houses help where it will control the service road to the kitchen wing of the dining lodge, as some supplies may be delivered at hours when none of the kitchen crew is on duty.

Size of the help's quarters will be determined by the policies and type of service adopted in the kitchen and dining room, the extent of camper participation in the operation of the dining lodge, and the possibility of employment of some day help in the neighborhood who will return home at night. It is wise to plan one room for a couple. The building will usually be of summer construction, perhaps less open than the campers' cabins.

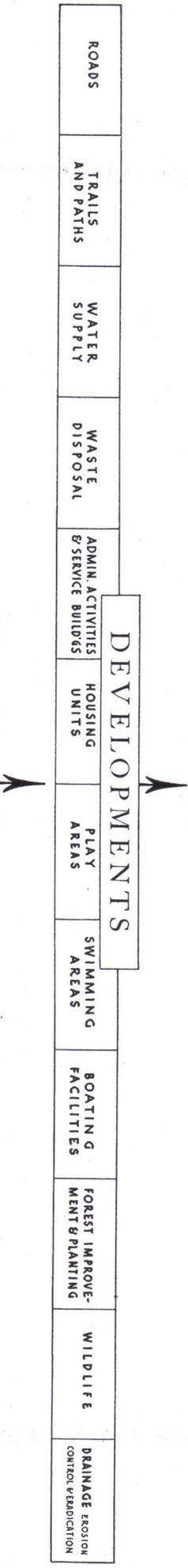
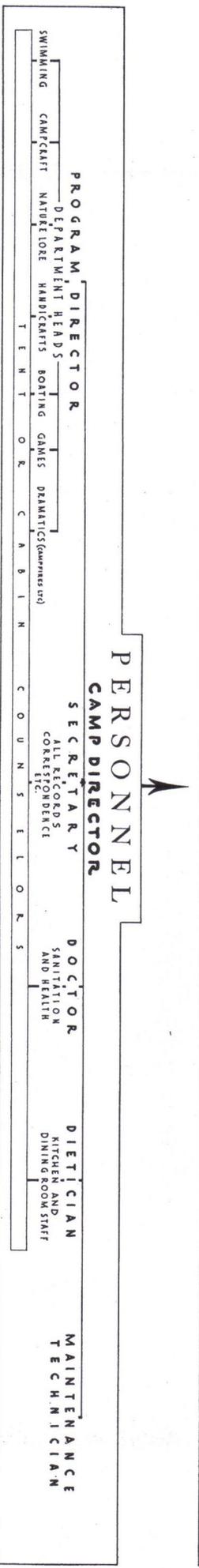
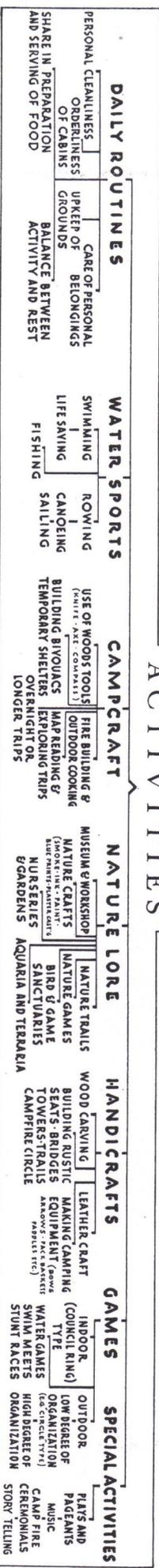
Anticipated short-term winter use may warrant a better construction in either this building or the staff's cabin, or even in both. When it is a case of one or the other and not both, then such construction and use seem the more logical in connection with the staff's quarters. In some camp lay-outs it will be chosen to duplicate counselors' cabins to house the help. Toilet and bath incorporated in staff's quarters and help's quarters are, of course, convenient, but scarcity of funds usually dictates omission of them.

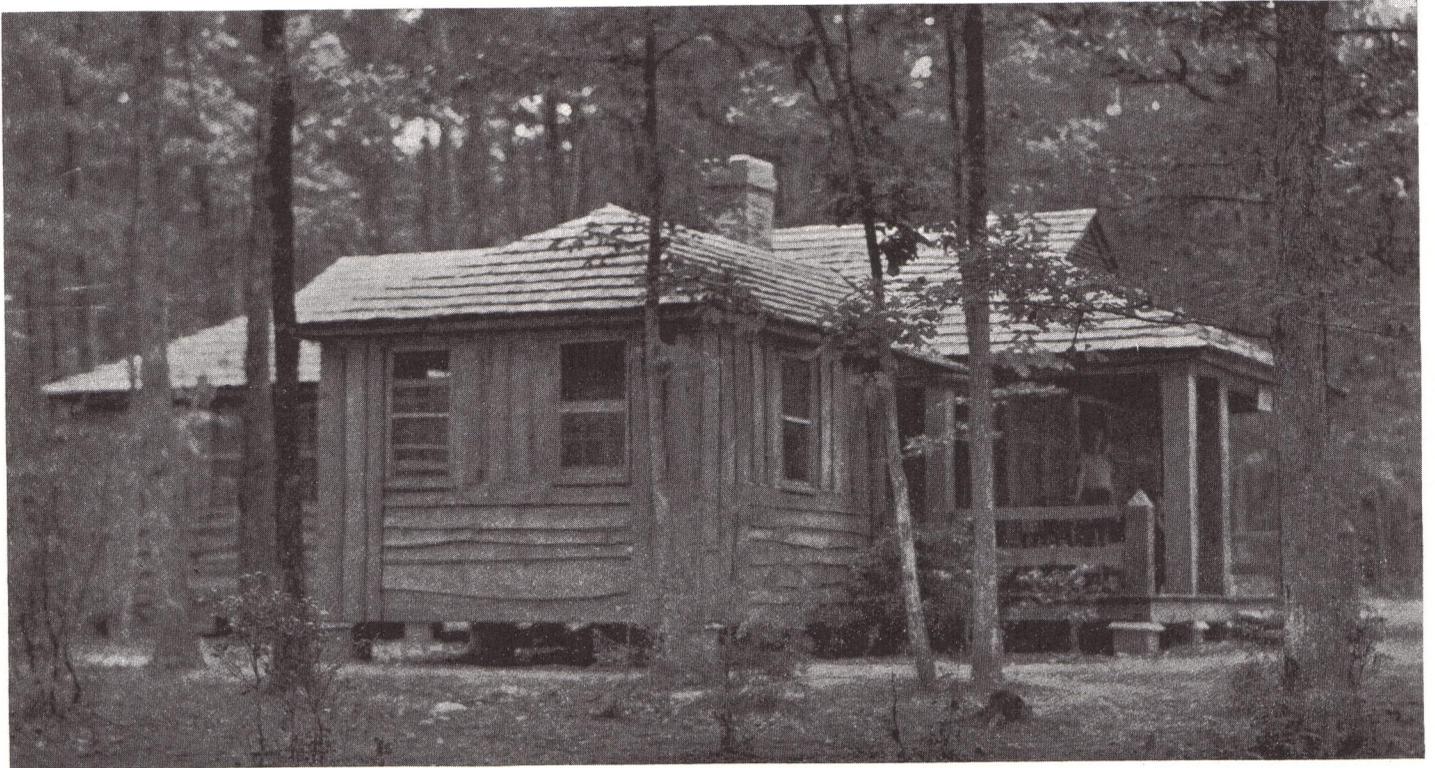
LOCATING, DEVELOPING, AND OPERATING AN ORGANIZED CAMP

THE INDIVIDUAL
(ADULT OR JUVENILE)
A HEALTHY · HAPPY · RESPONSIBLE · MEMBER OF SOCIETY

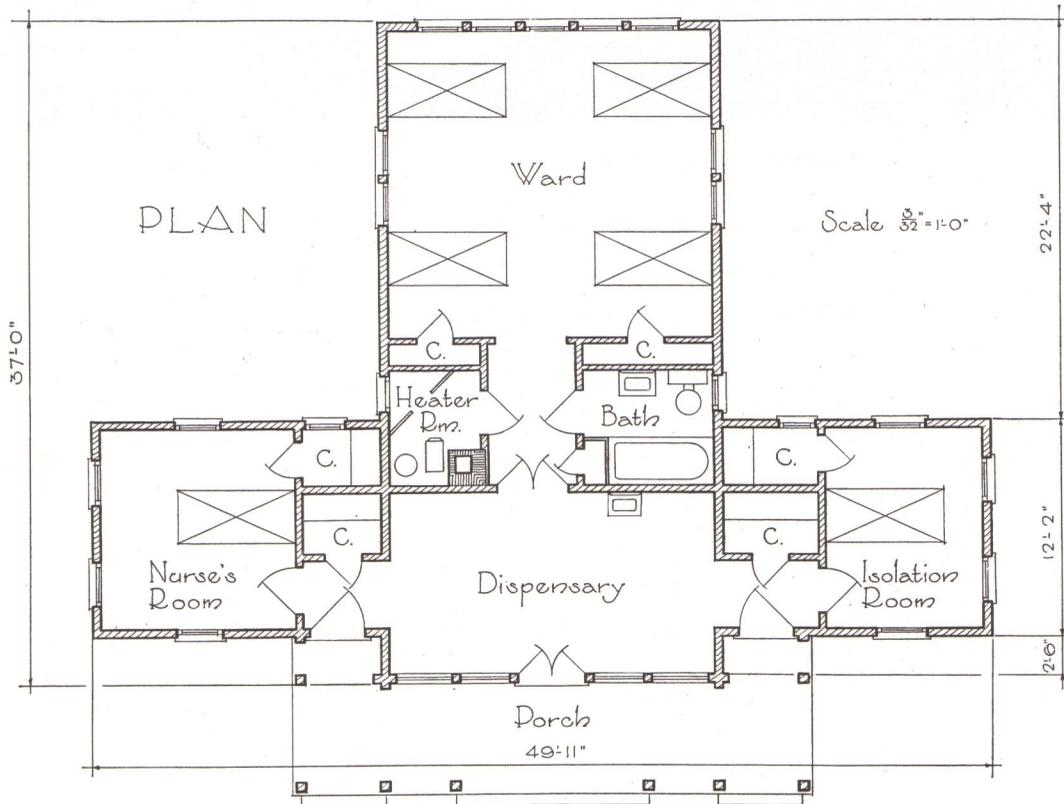
OBJECTIVES

SAFETY HEALTH NEW INTERESTS SOCIAL ADJUST- SPIRITUAL FUN
 • PHYSICAL & • APPRECIATIONS • MENT AND GROWTH • GROWTH • ENJOYMENT
 EMOTIONAL AND SKILLS & ADVENTURE



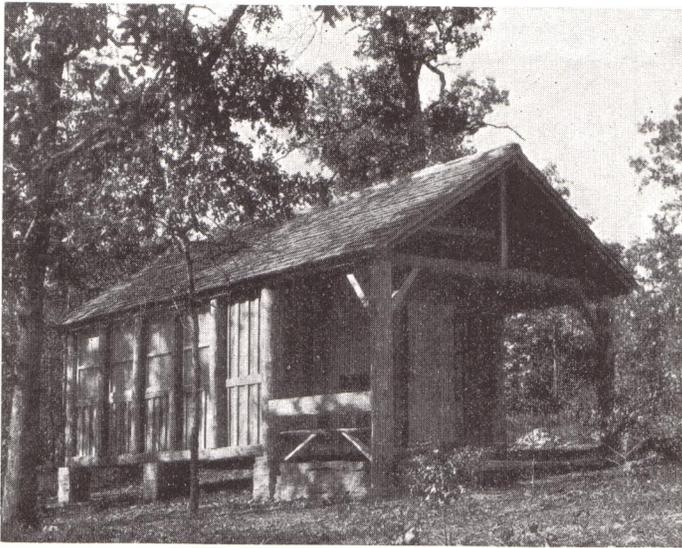


Infirmary, Chopawamsic Recreational Demonstration Area, Virginia

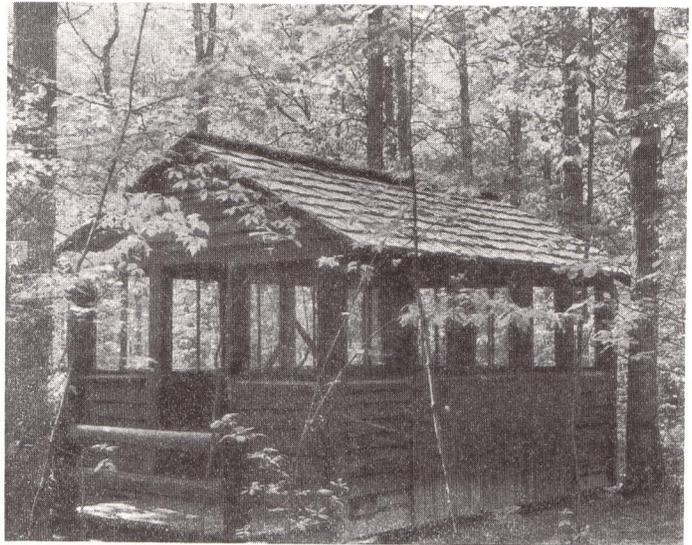


Once again the combination of vertical boards and waney-edged siding that distinguishes the buildings at Chopawamsic gives pleasing results. There

is generous provision of closets. The ward, isolation room, and nurse's room are well supplied with windows, promising good light and ventilation.



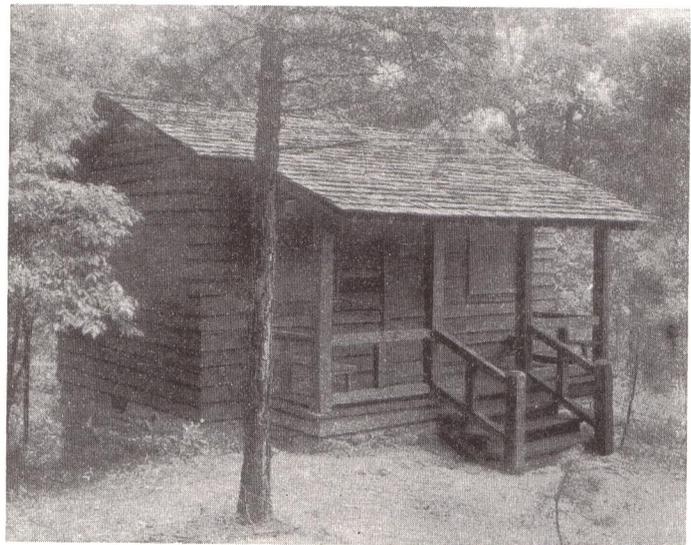
Falls Creek Falls Recreational Demonstration Area, Tennessee



Chopawamsic Recreational Demonstration Area, Virginia

CAMPERS' CABINS IN THE SOUTHEAST

Another group of camp cabins assembled on a geographic basis and not because of any structural or other close kinship. The plans opposite show the cabins at the top of the page to have end porches and entrance doors and the others to have side porches and entrances. The timbers of the upper cabins are logs in the round; those of the lower three are square. Alternative locations for the closets will be noticed; all four may be banked opposite the entrance door, or two may be spotted on each side between the cots.



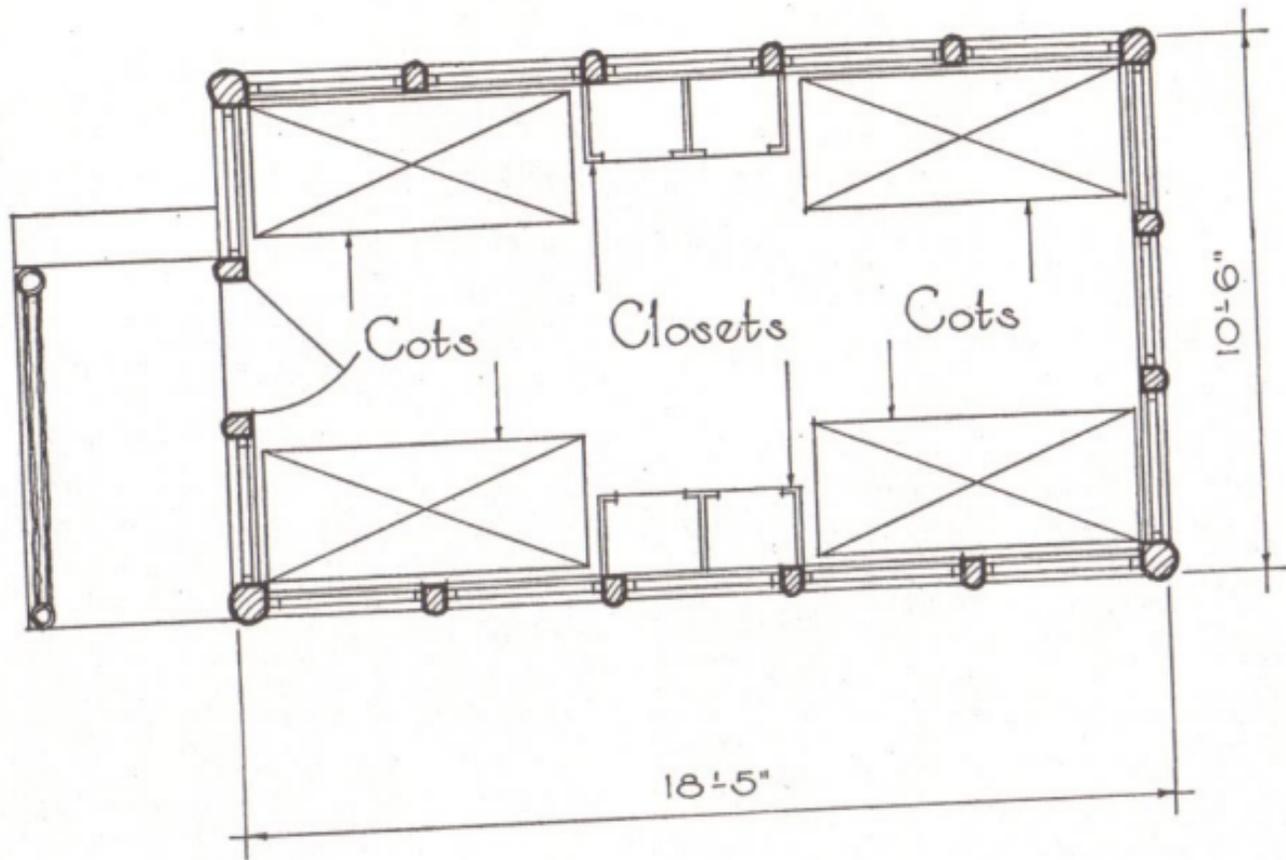
Alexander H. Stephens Memorial Park, Georgia



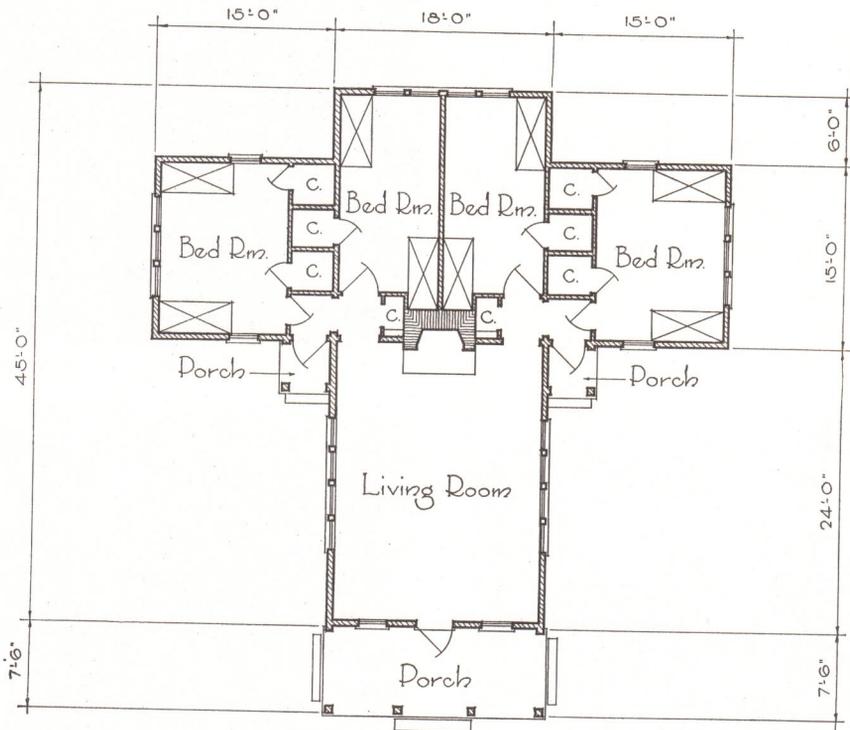
Cheraw Recreational Demonstration Area, South Carolina



Swift Creek Recreational Demonstration Area, Virginia

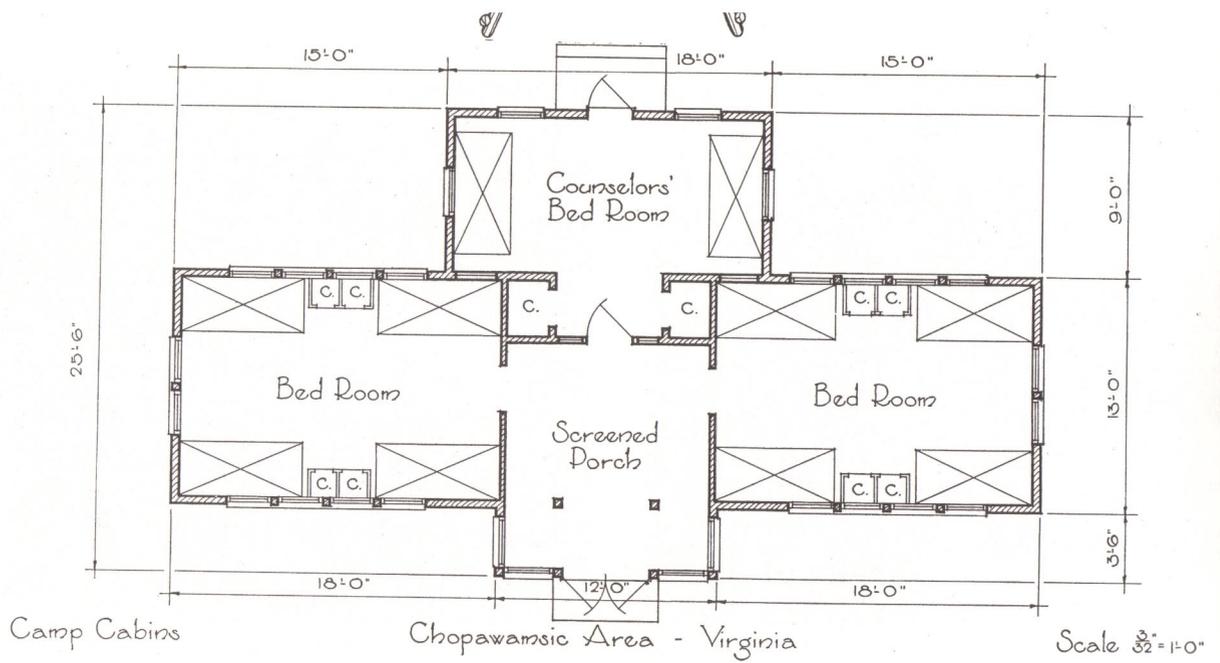


Chopawamsic Area - Virginia



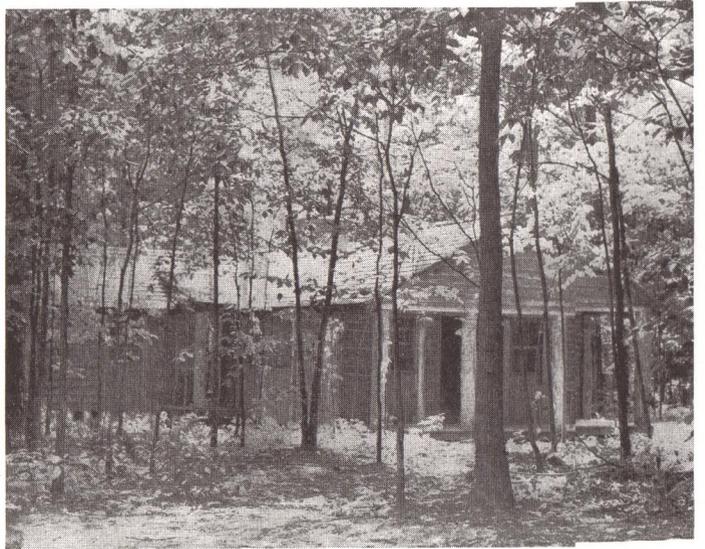
Chopawamsic Area - Virginia

Staff Quarters
Scale $\frac{1}{16}'' = 1'-0''$



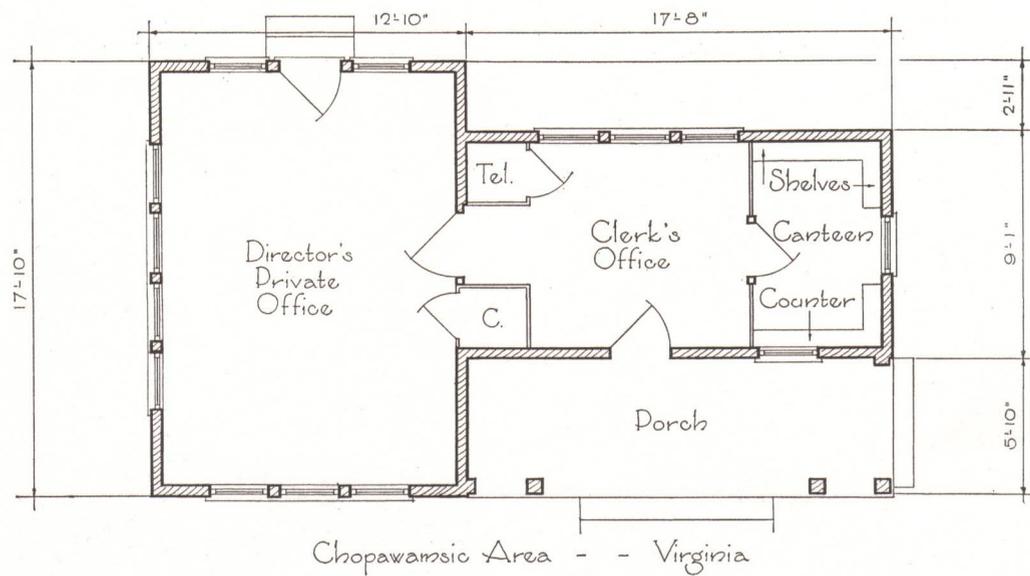
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Here the same plan elements are to be found as in the two plans above, but less compactly grouped and on a little more spacious scale. Its chimney is located to provide the extra flue for a cook stove set up in a bedroom in the event of winter camping. The three exposures of the living room are a good feature, but two of the bedrooms are ill-favored for light and ventilation.



Chopawamsic Recreational Demonstration Area, Virginia

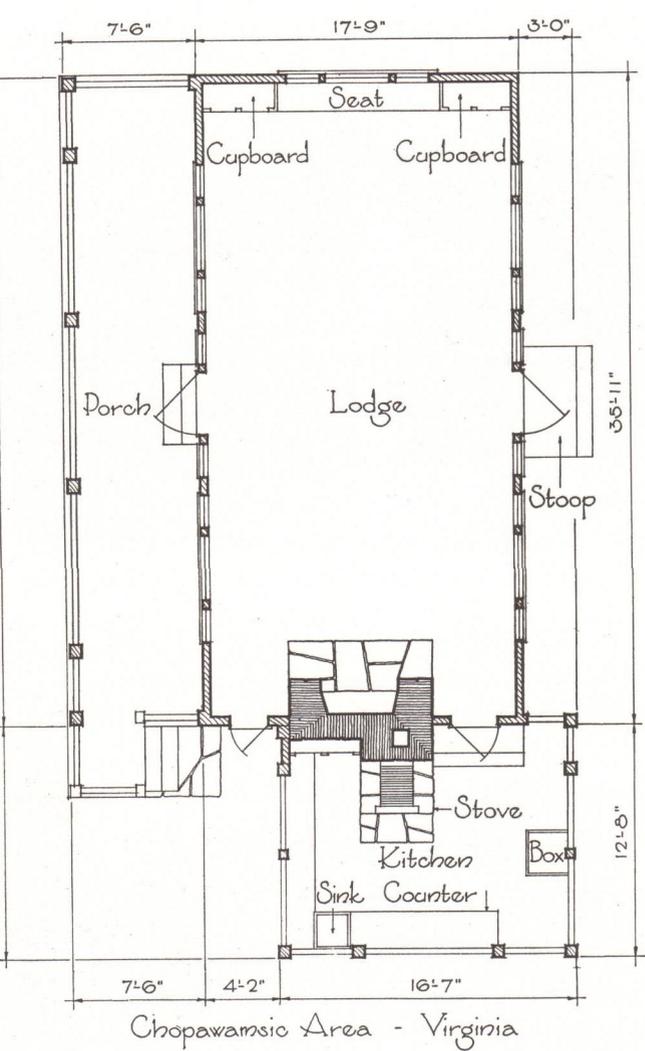
189



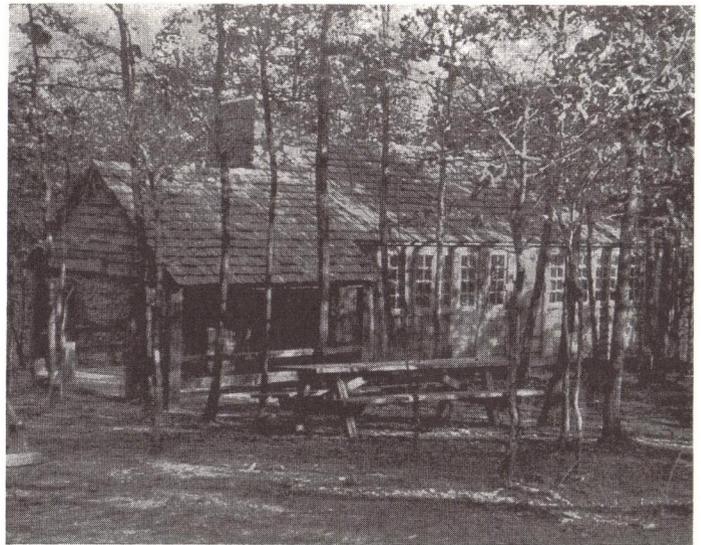
All three administration buildings here grouped are of a modest size, adequate for organized camps up to a capacity of 100. All have uninspired similarity of plan because the interrelationship of the primary elements of the plan was made a condition of the problem. The combination of waney-edged siding cut in between clustered vertical boards at the corners of the building is typical of the Chopawamsic Area and gives its buildings a certain individuality.



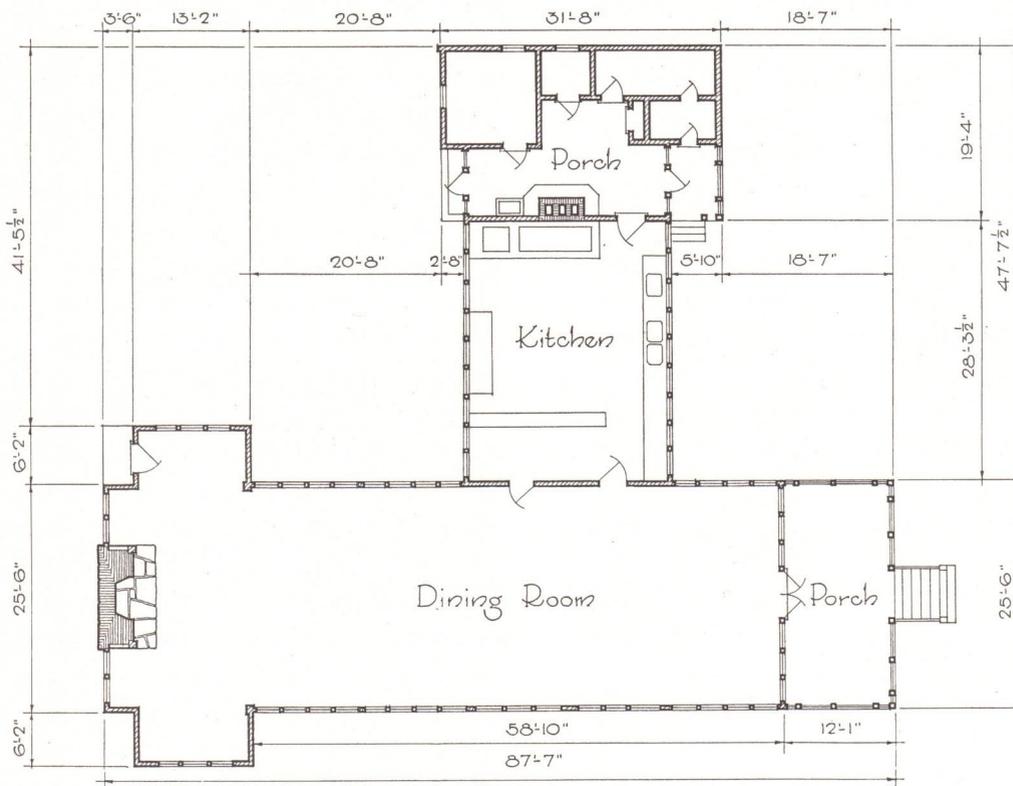
Chopawamsic Recreational Demonstration Area, Virginia



For the unit lodge, a second porch of the extent of the one shown at upper left of the facing page cannot be termed undesirable, although it is certainly unrequired. There is a tendency to add this superfluity in a hillside location that offers a view. It is one item which may be omitted without hampering use of the building. The native materials and methods here employed bring a pleasing wilderness character to the structure. In size it is scaled to a unit of 32 campers and in a winter camping use would accommodate eight or ten cots in a recommended spacing.



Unit Lodge, Chopawamsic Recreational Demonstration Area, Virginia



Chopawamsic Area - Virginia

Camp Dining Lodges
Scale $\frac{3}{8}" = 1'-0"$

Something more than minimum requirements is in evidence in this dining lodge. Features such as the bay windows flanking the fireplace and the large porch, if quite nonessential, are important factors in the attractiveness of the building. The breezeway between the kitchen and the dependencies behind it has purpose in warm climates. Unfortunately, because of the density of cover, a photograph of the building in its entirety could not be obtained.



Chopawamsic Recreational Demonstration Area, Virginia

Although a sleeping capacity of four in a camp cabin is widely held to be the desirable ideal, some viewpoints consider a capacity of six or eight allowable, as the plans on the facing page indicate.

The six-bed cabin at Cuivre River, shown at upper left, would be more acceptably arranged if four of the beds were moved into the corners to give a bed spacing equivalent to that of the eight-bed cabin on the Versailles Recreational Demonstration Area, shown at upper right.

The chief accomplishment of the striking tepee-like structure of octagonal plan is the thrill it holds for youth. But this is not arrived at without

sacrifice. In a housing that is more picturesque than well-ventilated, the eight double-deck bunks crowd sixteen sleepers in serious violation of space recommendations. Even though the eight double-deckers were single cots, the spacing would still be substandard.

The "saddlebag" cabin at Chopawamsic is the arrangement recommended in camps for very small children. It brings eight children together under one roof in two four-room dormitories, separated by an entry and a sleeping room for two leaders. This permits one leader to be off duty at certain hours with no relaxing of supervision.



Virginia

