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HOW TO BUILD AND OPERATE A MOBILE-HOME PARK

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By

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Preface

The mobile-homes industry is comparatively young. It is essentially an outgrowth of the camping-trailer industry which prevailed during the early thirties.

As a mobile-home industry it has faced growing pains and the need for adequate standards and planning. Much of this need has been in the field of the trailer park, known today as the mobile-home park.

Professor Michelon, who had spent several periods in Florida studying mobile-home park development and its relation to retirement programs, came to the conclusion that there was a definite need for a text on the construction of such a park.

The Mobile Homes Manufacturers Association, which with its Park Division had spearheaded the planning of such parks, readily joined with his cause.

Mr. Michelon then proceeded to construct his own park and from such construction weave the pattern to help other prospective park operators.

The Mobile Homes Manufacturers Association acknowledges the work of Professor Michelon and appreciates the part played by the staff of the University of Chicago Industrial Relations Center, which participated in the retirement research program at A1A Mobile Home Park, Melbourne Beach, Florida.

The Manufacturers Association takes pride in the publication of this text, the first complete volume covering the construction of a mobile-home park.

MOBILE HOMES MANUFACTURERS ASSOCIATION

Contents

PART I

Planning a Mobile-Home Park

CHAPTER 1

Exploring the Mobile-Home Park Business

BE YOUR OWN BOSS

Sit back and relax. Imagine a beautiful, landscaped tract of land—10, 15, or 20 acres—located in a nice resort area away from the dirt, noise, and tension of the city. Or perhaps in a nice suburban area, out far enough to be beautiful and in close enough to be convenient.

On this land sets a new way of life—the mobile-home community. You are the head of that community. If it were an elective office, you'd probably be the mayor. But you're its head because you've shown the initiative to start one of the many mobile-home parks needed today.

Now, imagine your community in operation. You see attractive mobile homes placed on neatly spaced lots—with sidewalks, paved roads, and street lighting. See Plate 1.

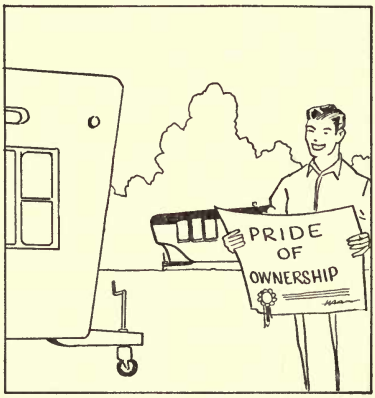
You see, too, a new kind of community spirit. People no longer live in isolated homes—socially insulated from one another. They are now part of a self-contained community, where people can have sociability when they want it or privacy when they need it.

What does all this mean to you? Just this. If you start a mobile-home park, you'll be going into a business that is needed and which, in most cases, will be highly profitable. Beyond that, you'll be starting a new way of life that cannot be duplicated by other forms of housing.

You can, of course, work for someone else. And this may even be better than owning your own business or being your own boss. Any business of your own requires good planning, extra work, and some worry. You've got to *plan*, *save*, *sacrifice*, and *learn* from inevitable mistakes. Problems are the rule, not the exception.

When you go into business, for example, there will be responsibilities to your family, employees, and creditors. Meeting the payroll and paying monthly bills are heavy loads. Important decisions will be made by you every day. If you make too many mistakes, you face the danger of losing your capital—or your earnings will be much less than working for someone else.

Regardless of these difficulties, you've probably said to yourself, "I want a business of my own." All of us, at one time or another, want to create our own opportunities and build our own security.



And, after all, there are many bright sides to the picture! When you start a business, you're boss. When new ideas come, you can put them right to work or drop them as quickly. There are risks—plenty of them. But, if all goes well, you can pay yourself a good wage and a husky dividend. Since no one can fire you, success in business makes ownership permanent and of lasting value.

Then there is the pride and security that comes with the ownership of income-producing real estate. It is a real pleasure to own a mobile-home park, watch it grow and flourish, and know that it is yours.

The fact that you're reading this book puts you ahead of the thousands of dreamers who build air castles and never carry out their visions with concrete plans and action. It is possible, too,

that, when you finish reading, you will be enthusiastic about becoming the owner of a mobile-home park.

THE NEED FOR MOBILE-HOME PARKS

From time to time we're going to refer to "mobile-home parks" and "trailer parks." You may wonder why different terms are used. Are they just different words to describe the same thing? Or do they reflect some real differences in the parks we're going to talk about? We think you'll agree that a "mobile-home park" represents a basic change in mobile living. Here's why.

The trailer-coach industry was just getting started in the 1930's. Even as late as 1940 the industry had turned out only 10,000 trailers. Most of these trailers were small and were used by sportsmen for vacations and by construction workers located temporarily in out-of-the-way places. Trailers didn't have bathrooms, nor were their kitchens equipped with the ultramodern conveniences new mobile homes contain.

Today, the production of mobile homes exceeds 65,000 units a year. Modern mobile homes are much larger and more luxurious than those of fifteen years ago. They may be 35, 40, 45—even 50—feet in length. Some come in two sections. Most of them are equipped with complete bathroom facilities, plush living-rooms, up-to-date kitchens, and full-size bedrooms.

People, therefore, are now finding mobile homes a practical and economical form of permanent housing. It is estimated that more than two million people are now living in them. And our retired folks—millions each year—are finding the mobile-home park an ideal retirement community. See Plate 5.

The only similarities between the trailers of 1940 and the mobile homes of today are *wheels* and *mobility*. Everything else is different—including electrical installations, brakes, heating arrangement, interiors, and frame and body construction. Yes, the change is as great as from the horse and buggy to the automobile.

What has all this done to trailer parks? Briefly, the parks built to accommodate small, nonmodern trailers are obsolete. Their

spaces are too small. Roads are not wide enough. Electrical wiring is not heavy enough to handle the loads required by modern kitchens, hot-water heaters, and increased lighting. Such parks generally do not have sewage-disposal systems—or individual coach connections. And, since they were not properly planned, they do not present the attractive community appearance mobile-home owners are looking for.

MOBILE-HOME FACTS

- **Fully equipped kitchens, including range and refrigerator, are standard equipment in mobile homes.**
- **Today's mobile homes are built in a wide variety of floor plans, from small one-bedroom models to large homes with sleeping accommodations for eight.**
- **All furnishings, including major appliances, are included in the purchase price.**
- **Many models contain built-in air conditioning, built-in television facilities, automatic garbage-disposal units, and other convenient appliances.**
- **With the exception of some special purpose and vacation models, today's mobile homes contain complete sanitary facilities, including tub or shower or both.**

The point is clear! Mobile-home parks are an underdeveloped part of our economic structure. Of the more than twelve thousand parks in the country, only about four thousand are approved by the Mobile Homes Manufacturers Association. And, in the face of an increasing demand for new mobile homes and better parks, more and more parks are getting obsolete every day.

Keep in mind, too, the differences between mobile-home parks and motels or efficiency apartments. A mobile-home park has a large part of its facilities underground in the form of sewer lines,

electrical connections, water connections, and so on. Depreciation and maintenance are low, since you don't have to keep up a large number of buildings or continually replenish furnishings. Moreover, when a mobile home is permanently located in your park, the occupant usually cares for his own space and takes pride in doing so. In this way, your customers take over some of the burdens of your business. And, if you're a congenial manager, they'll volunteer to help on other things. See Plate 4.

So, when you start a modern mobile-home park, you'll have many things in your favor. You can depend on the long-term growth of the mobile-home industry, on a large retired population that will take to mobile living, and on the fact that many older parks are not designed to meet the needs of today's mobile-home owners.

HAVE YOU GOT WHAT IT TAKES?

The success of a mobile-home park depends largely on the ability and resourcefulness of its owner. Some people go into business with a vague desire but without the necessary drive or knowledge. Others start on a "shoestring"—or refuse to keep books and prepare profit-and-loss statements. Generally, people fail in business because of (1) lack of capital; (2) lack of knowledge; (3) lack of initiative; or (4) poor records.

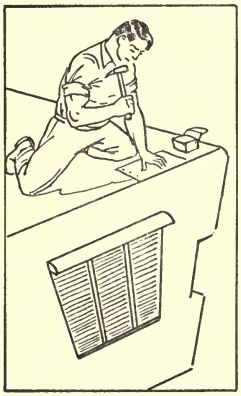
A mobile-home park requires a manager with many talents. It requires a knowledge of local, state, and federal taxes and municipal codes; simple accounting methods; the ability to get along with people; and the mechanical ability to fix things.

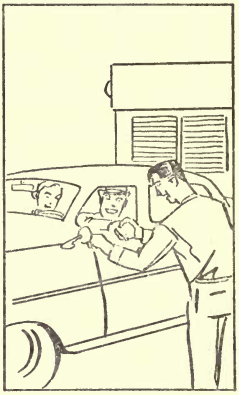
You must be a jack-of-all-trades and a master of as many as possible. You must be able to work with your *hands*—with faulty plumbing, simple electrical repairs, and the like. You must be able to work at the *idea level*—with promotional programs and advertising. You must be able to work at the *social level*—meet people, enjoy their company, and get well liked.

An important asset is a strong desire to be *independent*. This expresses itself in many ways. You may be one of those who worked your way through school or who took a chance on part-time business activity, like selling newspapers or magazines.

To be successful in business, you must be *resourceful* and adaptable. You must be able to make decisions about constantly changing situations, since your livelihood will depend on your ability to cope with problems as they arise.

You have a better chance if you're a *self-starter*. You're a self-starter if you recognize good ideas, initiate activities based on these ideas, and carry them through to completion. In large organizations the responsibility for initiating and carrying out





activities resides in someone "higher up." You do as much work as you can during your shift; and, if there is more than you can do, the man on the next shift takes over. When you own your own business, you are the "higher up." There can be no "buck-passing" or shirking of responsibility.

You needn't have all these qualities when you start out. But you should strive for them, since, as you develop these qualities, you will increase your income and make your mobile-home park a more profitable and satisfying activity.

A simple check list of personal and other qualifications is included at the end of this chapter. Look it over carefully and try to gauge your chances of success. It is intended merely as a rough guide to some of the factors affecting your future success.

HOW MUCH MONEY WILL IT TAKE?

You may want to know how much money you need to start a mobile-home park. An exact figure is not possible at this point,

because the capital needed will vary with the size of park, the location, the cost of land, the park design, and the types and sizes of buildings. Moreover, mobile-home parks are quickly expandable—so it is possible to start out small and to grow as quickly as the business requires.

Naturally, a park of 40 mobile-home spaces will cost much less than a park of 70 spaces. The *cost per space* of a 70-unit

XYZ TRAILER PARK, INC.

BALANCE SHEET AS OF JANUARY 1, 1955

ASSETS

Current Assets:			
Petty cash		$ 100.00	
Bank and cash		1,713.52	
First Federal (savings account)		13,000.00	$ 14,813.52
Fixed Assets:			
Land		$ 18,371.66	
Organization expense	$ 4,748.00	4,748.00	
Recreation building	10,076.56		
Service building	6,570.00		
Laundry building	3,301.72		
Hobby-shop building	1,600.13		
Sewer system	6,779.74		
Water system	8,098.67		
Roads	6,052.53		
Landscaping	5,323.48		
P.A. system	142.40		
Trailer furniture	5,671.07		
Trailer equity	6,707.70		
Patios	3,423.85		
Tools and equipment:			
Power	4,000.00		
Other	685.63		
Electrical system	4,473.71		
Jeep	2,497.37		
Total	$75,404.56	75,404.56	98,524.22
TOTAL ASSETS			$113,337.74

LIABILITIES

Capital:		
Authorized capital stock	$100,000.00	
Treasury stock	600.00	
Total	$ 99,400.00	
Operating profit	13,937.74	
TOTAL LIABILITIES AND CAPITAL		$113,337.74

park, however, will be lower, because the buildings, roads, sewers, and land can be spread out over more units. On the other hand, the net income from a park of 70 mobile-home spaces will be much greater than from one of 40.

A balance sheet covering the actual construction costs of a park of 79 spaces is illustrated. This is a "Gold Star" park located in the South and complete in every detail. As you can see, the cost is approximately $1,000 per space, including land.

Let's assume that a park of 50 spaces, with adequate land for expansion, represents a good beginning for most prospective park operators. On that basis the original investment will vary from $45,000 to $60,000, depending on the location of the park, the number of buildings in the original design, and the amount of construction work the prospective owner does himself.

HAVE YOU THE RIGHT KIND OF BUSINESS ORGANIZATION?

When you start your mobile-home park, there will be so many pressing problems that you may not consider the *kind of business organization* that is best for your operation. When you're worried about capital, picking a site, construction problems, and a hundred-and-one other things, it is natural to delay a serious consideration of the form of organization.

Will you run the business as a proprietorship? Will you go into partnership with someone? Will you set up a corporation? Each form of organization has its advantages, and you should be familiar with them.

Don't make the mistake of starting a business with friends or relatives, thinking you don't need a clear understanding of the *responsibilities* and *contributions* of the various people involved. In the long run the best way to keep friends in business is to make clear—*in advance*—what everyone's responsibilities are going to be.

A person often overlooks this because he is sensitive about how a partner or relative will take it. Experience proves, however, that more trouble is caused when things are not spelled out than when a definite understanding is reached. Both parties like to have the issues clarified but are sometimes too polite to

bring them into the open. Make sure you discuss them thoroughly—in advance—before you go into business.

Here, in brief, are the advantages and disadvantages of the different forms of the business organization. Check with a good attorney to see which type is best for you.

Individual Proprietorship

Most small businesses are owned and operated by individuals on a proprietorship basis. The individual proprietorship leaves the owner completely independent. He can conduct his business as he sees fit and take whatever steps are necessary for its success. Since he takes all the risk, he has all the authority.

The complete independence of the owner is itself one of the greatest disadvantages of the individual proprietorship. He may carry out his plans with complete freedom, but, since only one person is involved and capital and experience are limited, his chances for success are reduced. Also, the debts of an individual are collectible against his entire estate and are not limited to the assets of the business. The unlimited authority of the proprietor, therefore, carries with it unlimited liability that may expose the owner to losses far greater than in some other form of business organization.

An individual proprietorship is best when a business can be managed efficiently by one person and when the owner has little need for outside financing.

Partnership

A partnership is an association of two or more persons in a business enterprise. The partnership is similar, in many ways, to the individual proprietorship. It is easy to organize and retains the personal element of the owners.

The responsibilities, liabilities, sharing of the profits, and the authority of the partners are provided for in an informal or formal agreement. The agreement is usually in writing, but it may be implied through the actions of the parties. To avoid misunderstandings, a partnership should be defined in writing when the organization is formed.

The written agreement is known as *articles of partnership*. It is typewritten, signed by the partners, and notarized—and contains information about the partners, name of the firm, nature of the business, amount of capital to be contributed, sharing of the profits and losses, compensation to partners for their services, arrangements for withdrawing or increasing original investment, provisions for dissolving the firm, and so on. Any attorney can draw up a good draft of articles of partnership.

There are many advantages to a partnership. It permits the pooling of capital, experience, skills, and contacts of two or more individuals. It spreads the risk, increases the possibility for expansion, and improves credit standing. As a rule, the combined effort of several partners is more effective than the individual proprietor. Its ease of formation and the simple procedures for reorganizing the partnership relationships make it an effective means for bringing together the business interests of several people.

There are several disadvantages, too! Legally, the actions of one partner are binding on the firm and on each partner of the firm. Claims and lawsuits that arise from the acts of one partner can be satisfied against the other partners, as well as against the firm itself. Most state laws, however, require that creditors exhaust partnership assets before attaching the private properties of the individual partners.

Corporate Organization

A corporation makes possible the accumulation of a large amount of capital by means of stock shares and the investing of this capital in a single business in which the individual investor is not liable beyond the value of his shares. Corporations are created by the state through a charter that represents a contract between the incorporators or prospective stockholders and the state. The organization is perpetuating and does not depend on the life of any one stockholder. The issue and sales of shares permit the separation of ownership and management. People can be hired for their managerial, technical, or productive abilities—whether or not they have capital to invest.

When a corporation is chartered, it is authorized to do business and to own and manage property. Personal liability is limited to the shares held by the individual; so, if failure occurs, the stockholders' personal properties are not affected.

Corporate organization has the advantages of limited liability, centralized control and management, and the ability to transfer or sell ownership shares. It is adaptable to businesses that require more capital, larger operations, or a reservoir of technical or administrative skills.

The disadvantages of a corporation are many and should be carefully considered. The cost of incorporating and the expense of issuing and transferring stock may be high for the business involved. The limitations and regulations imposed by the state, as well as increased taxes, often outweigh the advantages. A key disadvantage is the difficulty of obtaining outside financing. Creditors know they are restricted in proceeding against individual stockholders, so they are usually hesitant about extending credit.

Where a simpler form of business organization is practical, the disadvantages of corporate organization may be important enough to discourage its use.

GET THE FACTS

"Knowledge is power"—particularly where your own business is concerned. A little planning in the beginning, a little knowledge at the start, talking it over with people already in business—three or four days spent this way may avoid years of grief later on. Sound planning will help remove many of the risks that experience will otherwise teach in an expensive way.

Weigh carefully the advantages and disadvantages, the difficulties and rewards, the requirements in capital, work, and knowledge.

Get copies of the state laws and municipal codes that will affect your mobile-home park. Check with attorneys and architects who are familiar with applicable statutes and building requirements. And let the Mobile Homes Manufacturers Association know you're going to build a park and where you intend

to locate. They have on hand several approved park designs that will help you get started. They also have information available relating to health and sanitation laws.

OPPORTUNITY UNLIMITED

Don't go into the mobile-home park business if you expect to get by without work, heartaches, and major problems. Nothing worth while is that easy.

The mobile-home park has unlimited opportunities, but its success depends more on the owner than on any other factor. If you talk over your plans with others, have a good mobile-home park design, have a good location in mind, develop the necessary qualifications, and meet your clientele halfway, your chances for success will indeed be excellent.

You'll be going into a business where long-term growth is assured. You'll be engaged in a genuinely satisfying activity—and along with economic independence will come a new way of life and many friends.

A mobile-home park is challenging. It is tough to start. But it's usually successful. And always worth while.

CHECK LIST OF PERSONAL QUALIFICATIONS AND OTHER FACTORS

Here is a simple check list of items to consider before going into the mobile-home park business. Study it carefully and try to evaluate your qualifications as honestly as possible. There is no set standard against which to check yourself, but most factors should be favorable before you go into business for yourself.

Personal Qualifications

1. Do you have initiative and perseverance? _____
2. Do you work well with others? _____
3. Have you sales ability? _____
4. Can you organize the work and allocate the time of others? _____
5. Can you assume responsibility? _____
6. Do you have imagination? _____
7. Do you have common sense and good judgment? _____

Experience and Education

1. Have you had experience in the mobile-home park business? _____

2. Have you had experience in a business similar to mobile-home parks? ____
3. Have you a good general education? ____
4. Have you had special training that will be an asset in your business? ____
5. Have you ever supervised the work of others? ____
6. Have you ever hired people or met a payroll? ____
7. Have you dealt with the public? ____
8. Have you read the information available on mobile-home parks? ____
9. Have you written to the Mobile Homes Manufacturers Association for advice and information? ____

Capital Requirements

1. Have you made a careful estimate of the money you will need? ____
2. How much will you invest in land? ____
3. What will your buildings cost? ____
4. How much will you invest in equipment and fixtures? ____
5. Have you thought of insurance—liability, fire, theft? ____
6. How much will you need for at least six months' operating expenses (rent, salaries, supplies, gas, light)? ____
7. Have you enough money to cover your personal living expenses until the business begins to pay? ____
8. Have you a reserve for emergencies? ____
9. How long do you estimate it will be before the business makes a profit? ____

Financial Resources

1. How much of your savings will be needed in the business immediately? ____
2. How much do you have in the form of assets that, if necessary, you could sell or borrow on to get more money? ____
3. Is your credit such that you can borrow money from a bank or other financial institution? ____

Personal Finances

1. How much money do you make at the present time? ____
2. What would be your estimated income as the owner of a business? ____
3. Are you willing to get along for a while on lower earnings? ____
4. Are you willing to risk uncertain earnings for the next year or two? ____

Economic Status of the Community

1. Is the business trend in the community you're thinking of *up*, *down*, or *stationary?* ____
2. Is the community industrial, agricultural, or residential? ____

3. Are the major businesses and industries old and established, or are they new and expanding? ____
4. Is the business diversified, or is it a one-industry town? ____
5. Is the population of the community growing, decreasing, or staying about the same? ____
6. Are transportation facilities, professional services, banks, schools, and so on adequate? ____
7. Are the civic associations aggressive? ____
8. Have any mobile-home parks failed in the community? Why? ____
9. Have you checked to see how much business activity there is and how it would affect your business? ____
10. Are your competitors well established? ____
11. Are their parks obsolete by modern standards? ____
12. Does the community welcome mobile-home parks or is it against them? ____

General Considerations

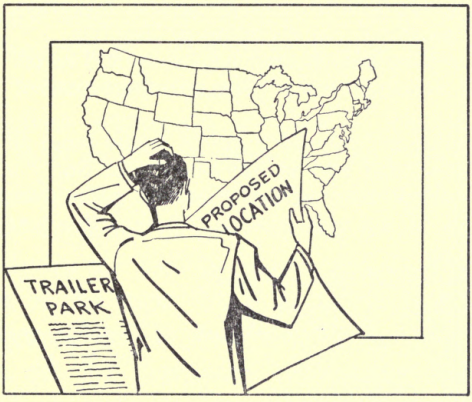
1. What do the local businessmen think of your chances of success? ____
2. Have you talked to your banker? What does he think of your setup? ____
3. Would he lend you money if you needed it? ____
4. Have you talked to representative citizens to get their opinions? ____
5. Have you figured out how many employees you will need and how much you will pay them? ____
6. Will you be able to get along with part-time help? ____
7. Do you know what the usual wage scale is in the community in which you intend to set up business? ____
8. Do you have a bookkeeping system worked out? ____
9. Have you decided on what brochures and letterheads you will need? ____
10. Have you determined your business policies in regard to rental per space, advertising, business hours, and the like? ____
11. Have you inquired about the cost of adequate insurance to cover damage from storms and floods, damage suits, public liability claims, and loss from burglary? ____
12. Have you checked with your local, town, city, or state authorities in regard to licensing requirements? ____
13. Have you checked with the local health authorities to be certain that your business will meet with the requirements of the community? ____

CHAPTER 2

Finding the Right Location

Next to the manager, location is the most important factor in the success of a mobile-home park. The best-built park poorly located is just a white elephant. Nothing is more discouraging than to build a model park, open for business, and then wait for customers who aren't coming in.

Remarkably little attention is given to location. In the en-



thusiasm of starting a park, the owner may, after too hasty a check, buy a tract of land and start construction. It is the rare person who compares locations, lists their advantages and disadvantages, and makes his decision only after looking at all possibilities. A month spent shopping around may save thousands of dollars and months of anxiety.

So, when *you* start your mobile-home park, compare the advantages and disadvantages of three or more locations. Don't buy land because it is cheap or available. Make sure it is suitable for a park, then consider the cost and how it can be handled.

Building a park on a poor site is like putting up a $50,000 home on a bad lot. You just cannot afford that kind of economy.

FACTORS AFFECTING LOCATION

The first thing to do when looking over a given area for the location of your park is to talk to the local mobile-home dealers and the Chamber of Commerce to see whether a new mobile-home park is needed. Check existing parks to see whether they are full and prosperous.

When you're sold on the general area, then begin looking for a park site with these points in mind:

1. Proximity to a good shopping center
2. Availability of city water and sewer lines
3. Frontage on hard-surfaced roads or arterial highways
4. Nearness to resort areas or recreational facilities
5. Availability of hospitals, movies, television, and so on
6. Possibility of drawing on the permanent residents of a metropolitan city
7. Strategic location in terms of transient traffic from all directions (*Be careful*, however, that *you do not locate* near heavy industry or railroad tracks, where noise or objectionable odors prevail)
8. Characteristics of the area—that is, whether in a *growth*, *recession*, or *stability* stage
9. Topography and high level of land
10. The size and shape of the site
11. The original cost and additional costs of *clearing*, *grading*, and *landscaping*
12. Proper zoning

City-Type Park

Some of these factors apply to certain locations but not to others. For example, if your park caters to permanent, working residents—that is, to those who use mobile homes for year-round living—you should pick a site:

1. Near commercial transportation
2. Convenient to shopping districts and places of employment
3. Close to school facilities
4. Where zoning and other laws are not too restrictive
5. Where the land area is of such *size* and *shape* that you can get a maximum number of spaces per acre
6. With certain characteristics—that is, whether the area is in a *growth*, *recession*, or *stability* stage

The city-type park is usually located on the outskirts of a large town or city. It need not be on an arterial highway, although this may be an advantage. Such parks advertise for permanent residents and build up their clientele over a period of time. Because they cater to permanents, there is no pressing need for an elaborate recreation building or recreational program.

Resort-Type Park

Resort locations present another problem. Mobile-home parks in resort locations cater to a less permanent type of clientele, although they try to build up permanent and recurrent clientele, particularly of the retired type. See Plate 4.

A resort park need not be located on an arterial highway or even on the outskirts of a metropolitan area. But, whenever you can get these advantages, by all means do so. Your chances of getting immediate customers are better whenever a park is located *on* or *near* an arterial highway. Be careful, however, of locating on a highway unless you have some tourist attractions or recreational facilities near by. Some parks were started on highways, only to see mobile homes pass by on their way to other sections of the state. They now find themselves catering to overnight guests only.

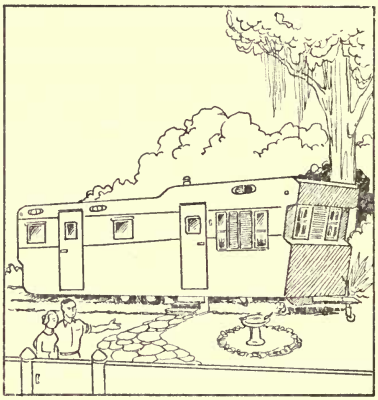
So balance off the short-term advantages of transient customers with the long-term advantages of permanent-type clientele. Try to get as many permanents as you can. They are the "overhead carriers" that assure you an operating income year in and year out. Transients seldom stay long enough to develop loyalty to your park.

Resort parks are found in all areas of the country but predominate in Arizona, California, and Florida. California has more than 2,100 mobile-home parks; Florida has about 1,100. Of the 2,100 in California, 1,233 are MHMA approved and 224 have "Gold Star" (highest) ratings. Of the 1,100 in Florida, 623 are approved and 93 have "Gold Star" ratings. Florida's parks vary from locations near large cities like Sarasota, St.

Petersburg, Tampa, and Miami to those near small cities like Delray Beach, Bradenton, Fort Pierce, and Stuart.

If you start a resort park, canvass the area with great care. Find out whether people like the area for permanent housing. Pick a location where seasonal occupancy is long. Short seasons reduce your chances of making a good profit.

A location near well-established mobile-home parks may be advantageous, because overflows from them may give you an



immediate mobile-home population to draw from. Be sure, however, you have a park that competes.

A good case is Bradenton, Florida. The Kiwanis Club started one of the largest mobile-home parks (over 1,100 spaces) there for retired people and soon discovered they couldn't handle all the mobile homes coming into the area. See Plate 6.

Other parks started up in the same area, and most of them found enough customers to operate profitably. Moreover, mobile homes heading for Bradenton from the North had to go *near* or *through* cities like St. Petersburg. Many of them were diverted to St. Petersburg, where there is a large retired population. Today, St. Petersburg has many successful mobile-home parks.

One word of caution! Look out for municipally owned parks where space rentals are abnormally low. If you don't, you may find yourself stuck with a noncompetitive rate schedule.

How can you be sure you have a good location? The best advice is to *be careful* and *investigate thoroughly*. Don't overlook the key factors. Go over them in detail, then consider topography and high level of land.

TOPOGRAPHY AND HIGH LEVEL OF LAND

A mobile-home park requires a large tract of land. If good-sized spaces are used (40 by 60 feet), you need about 8 acres of land for every 75 mobile homes. This includes the land needed for roads, building sites, and landscaped entrances.

High level of land.—Mobile-home parks require a high level of land for good drainage. Large tracts of land are often unsuitable because of lowness or irregular land contour. Someone may offer you 8 or more acres at what seems to be a bargain. But you may find the land so low or irregular that you would have to spend a considerable sum of money before it would accommodate a sewer system or permit satisfactory septic-tank operation. Or the land may be so barren or rocky that grading and landscaping would be major problems.

Remember! The land you buy must be worked on and put in shape for your park. Buying land because it is *big enough*, *cheap enough*, or *near a large number* of mobile homes may cause trouble unless you consider the problems of clearing, grading, landscaping, and sewage disposal.

Drainage.—Pick a site that has good drainage. Check the survey plat of the property and talk to people near by to determine whether the area has been bothered by flooding. See a bulldozer contractor and get estimates on clearing and grading.

Landscaping.—Look the land over for landscaping. Check for bushes, trees, and shrubs that can be built into your landscaping plan. Landscaping is a major cost, so balance this off against the original price of the land.

SITE PROVISIONS

The general *minimum* requirements relating to a mobile-home park site are as follows:

The mobile-home court must be well drained, not adjacent to swamps or marshes, and adequately lighted at night.

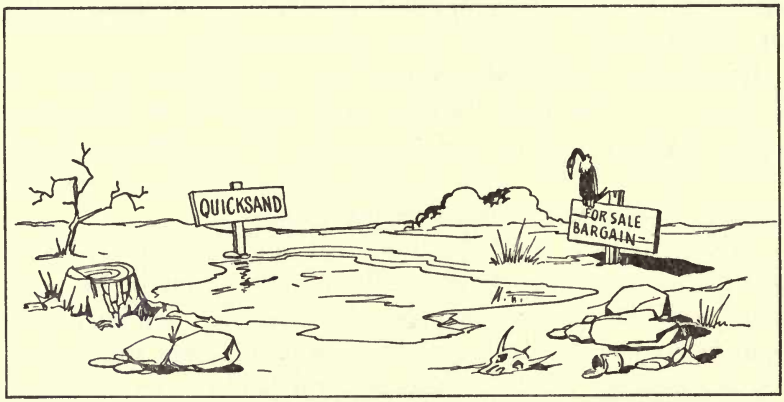
Each mobile-home space should contain a minimum of 1,000 square feet, be at least 25 feet wide, and have its boundaries clearly defined. The space should abut on a driveway not less than 35 feet in width, which should have unobstructed access to a public street or highway. Mobile homes should be parked on each space so that there will be at least 15 feet of clearance between coaches, 10 feet between coaches and any adjoining property line, 25 feet between coaches and any public street or highway, and 15 feet between coaches and any building or structure.

Sufficient area should be provided for the parking of at least one motor vehicle for each mobile-home space. Motor vehicles should not be parked between mobile homes.

A separate area should be provided for recreational purposes. This area should be in a location not subject to traffic hazards and should provide 100 square feet of open area for each mobile-home space.

YARDSTICKS OF COST

A comparatively expensive tract of land, favorably located, may be cheap in the long run, since occupancy and income may be high enough to warrant the initial cost. On the other hand,



a cheap tract of land, badly located or with bad topography, may prove to be expensive.

A good rule of thumb is to keep land costs below $200 per mobile-home space. If the site is to accommodate 70 mobile home spaces, for example, try to keep the cost of land below $14,000. Of course, get the land as cheaply as you can, but don't sacrifice the key factors to do it.

CONCLUSION

Remember location! Next to the manager, it is the most important factor in the success of your park.

Don't buy land because it is cheap. Study its topography and try to imagine how your park will fit in.

Check the level of land and consider the problems of clearing, grading, and landscaping.

Try to locate where city water and sewers are available; near hospitals, movies, and shopping centers; close to commercial transportation; where a permanent clientele is likely to reside; convenient to attractive resorts; and on or near arterial highways along which mobile homes travel. Make sure, however, you keep away from noisy areas or places that have objectionable odors.

Pick three or more locations. Study their advantages and disadvantages, give them a numerical rating, then choose confidently.

And, by all means, bargain with the owner for a *low price*, *long-term financing*, and *reasonable interest rates*.

CHAPTER 3

Designing a Mobile-Home Park

Designing a mobile-home park is like laying out an attractive and functional home. No one design is best, but all good designs incorporate certain essential features.

The essentials of a modern mobile-home park are:

1. Large and attractive spaces
2. Angular parking of mobile homes
3. Suitable auto-parking areas
4. Concrete patios and sidewalks
5. Hard-surfaced or durable roads
6. Street lighting
7. Modern sewer, water, and electrical installations
8. Up-to-date buildings, properly located as to function and appearance
9. A landscaping plan, with an attractive entrance for eye appeal
10. Recreational facilities

LARGE AND ATTRACTIVE SPACES

Spaces should accommodate the largest mobile homes commercially produced—that is, 50 feet.

The trend, in recent years, has been to larger mobile homes. Since you can never be sure of the future sizes of mobile homes, it is better to have larger rather than smaller spaces.

ANGULAR PARKING OF MOBILE HOMES

Mobile homes should be parked at a 60-degree angle rather than on a line perpendicular to the road. It is easier to park a mobile home when the space is at an angle, since the turning radius is reduced. The 60-degree angle should be located so that the patio side of the mobile home faces toward the road; then its occupants will not look directly into the mobile home parked on the next space.

SUITABLE AUTO-PARKING AREAS

When you design your park, keep in mind the need for auto-parking space. Most older parks let the trailerist park his car right on the space next to his mobile home. This is poor practice, since cars parked in this way "cut up" your spaces and destroy your landscaping. They also are fire hazards. It is far better to widen all roads to 35 feet, so two rows of parked cars and two lanes of traffic can be accommodated.

CONCRETE PATIOS AND SIDEWALKS

Concrete patios and sidewalks are essential in the modern mobile-home park.

Patio sizes should never be less than 8 by 20 feet. Larger sizes, preferably 9½ by 22 feet, are recommended, since standard size cabañas and aluminum awnings can be placed on such patios without further work.

If the patio and sidewalk are put in at the same time, a "one-section" unit can be used. The sidewalk is part of the patio, so the forming and cement-finishing operations can be done at the same time.

HARD-SURFACED OR DURABLE ROADS

Roads are a particularly important part of the modern park.

The sizes of our modern mobile homes require that the roads be well constructed. We will discuss road construction later, but we can say here that roads should have a good subgrade, be constructed of material that will withstand heavy traffic, and of sufficient width (at least 35 feet) to accommodate two lanes of traffic and two rows of parked cars.

BUILDINGS, LANDSCAPING, AND AN APPEALING ENTRANCE

A good way to save time is to submit your park design to the Mobile Homes Manufacturers Association for constructive criticism. They will furnish expert assistance—free of charge—to evaluate the practicability of your park plans, as well as suggest improvements in your layout. They have many basic mobile-home park designs on hand that will give you preliminary

tips on building an attractive and functional park. Eye-appealing entrances are particularly important, as you can see from the illustration. See Plate 7.

When you design your park, scale all drawings to size so you can see how the park will look in final form. Proper dimensioning will give you the true orientation of the buildings, roads, and spaces. Rough hand sketches are always deceiving.

Cut out little pieces of cardboard to represent buildings and mobile homes and see how everything fits in. Move the "cardboard" trailers down the road and around the corners. Park them in the spaces shown in your design. This simple process will reveal flaws on such things as the turning radii of roads, adequacy of parking areas, and so on.

Many other things can be done on paper before construction begins. You can, for example, locate your electric meter boxes properly. The same can be said for water faucets. The proper installation is shown on page 68. Note that the water and sewer connections come up alongside the mobile home.

MHMA-APPROVED LAYOUTS OF MOBILE-HOME PARKS

With these points in mind, let's look at several park designs approved by the Mobile Homes Manufacturers Association. Look them over carefully, even though they may not fit your particular needs. A detailed study of them will give you some good ideas on park construction.

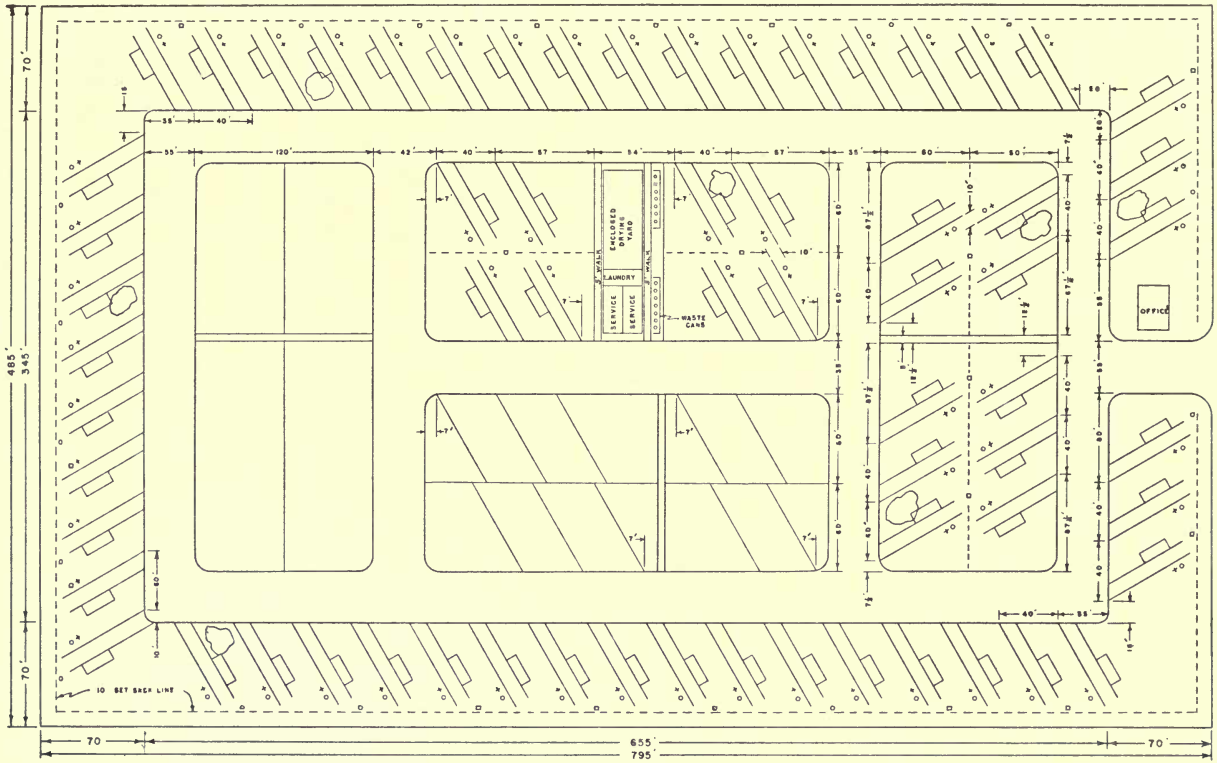
MHMA Plan 1

Plan 1 is a suggested park layout for a rectangular piece of property.

The area of the property is 385,575 square feet, or 8.85 acres. All spaces are 40 by 60 feet. Eighty-five spaces are provided, averaging 9.5 spaces to the acre.

This plan permits rapid expansion, since the park can be started at the main road and expanded as business increases.

The service building, with laundry, is centrally located so everyone can get to and from the building conveniently. The design provides a recreational area but no recreation building.



Plan 1

SYMBOLS

- INDIVIDUAL SEWER CONNECTION
- INDIVIDUAL WATER CONNECTION
- ELECTRIC METER POST
- SHADE TREE

The road is 35 feet in width. The center is blacktopped, with side parking areas of crushed gravel or stone. Foot walks are provided, as shown.

Water connections and coach sewer connections are marked by plus signs (+) and circles (○). Electrical meter posts are represented by small squares (□).

Trees are shown on the edges of each patio and are located to give the maximum amount of shade. The position of trees will vary, however, with the section of the country and the angle of the sun. It is important, therefore, to check this before deciding on your landscaping plan. County agricultural agents are more than happy to co-operate with park operators on this problem.

MHMA Plan 2

Plan 2 is similar to Plan 1 but has space sizes 35 by 50 feet—providing a total of 85 spaces on a land area of 6.78 acres.

It is important to note here that individual lot sizes should never be less than 35 by 50 feet and that the most popular size is 40 by 60 feet.

Some park operators want to install a mobile-home sales agency as an additional source of income. If you favor a sales lot, you can remove the three spaces to the right or left of the entrance.

MHMA Plan 3

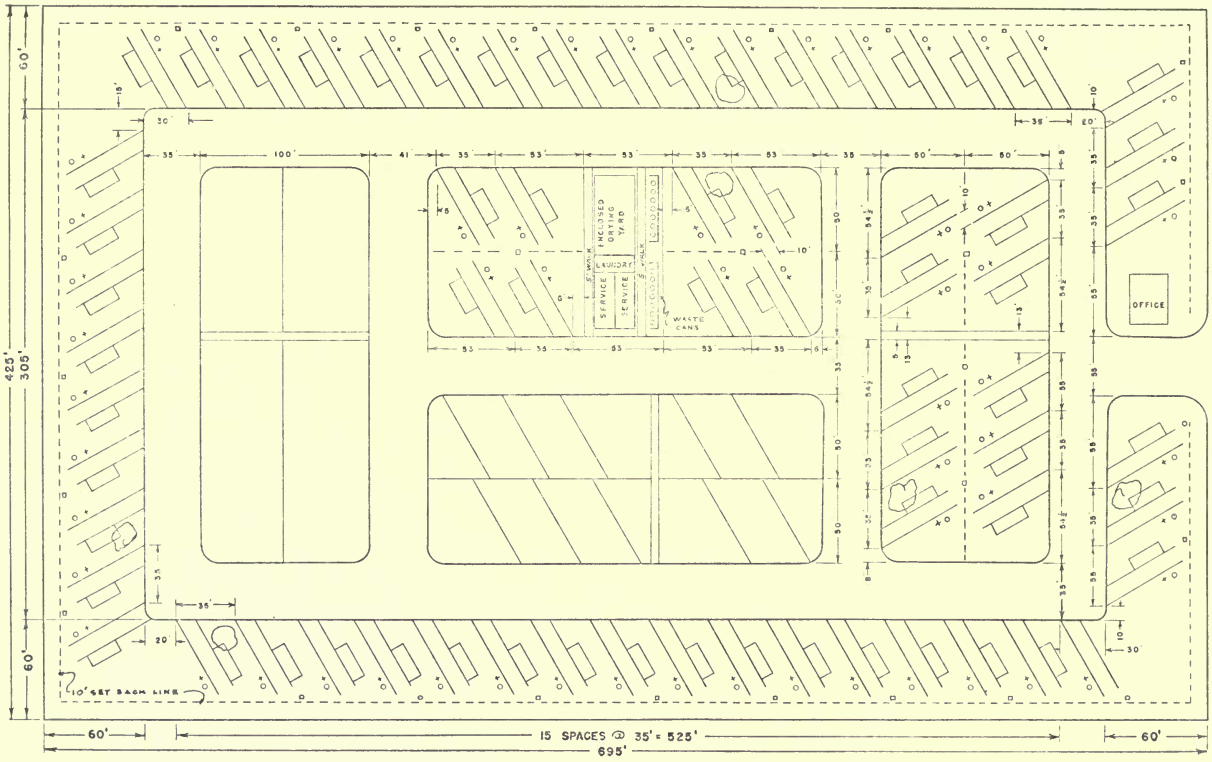
Plan 3 illustrates how an irregularly shaped piece of land can be used.

Spaces are 40 by 60 feet, giving a total of 55 on 6.09 acres—or an average of 9 spaces per acre.

Other park details are similar to Plans 1 and 2, except that the amount of road is reduced because of the triangular shape of the lot.

A buffer type of landscaping is provided around the property line, where spaces extend along the edges of the park.

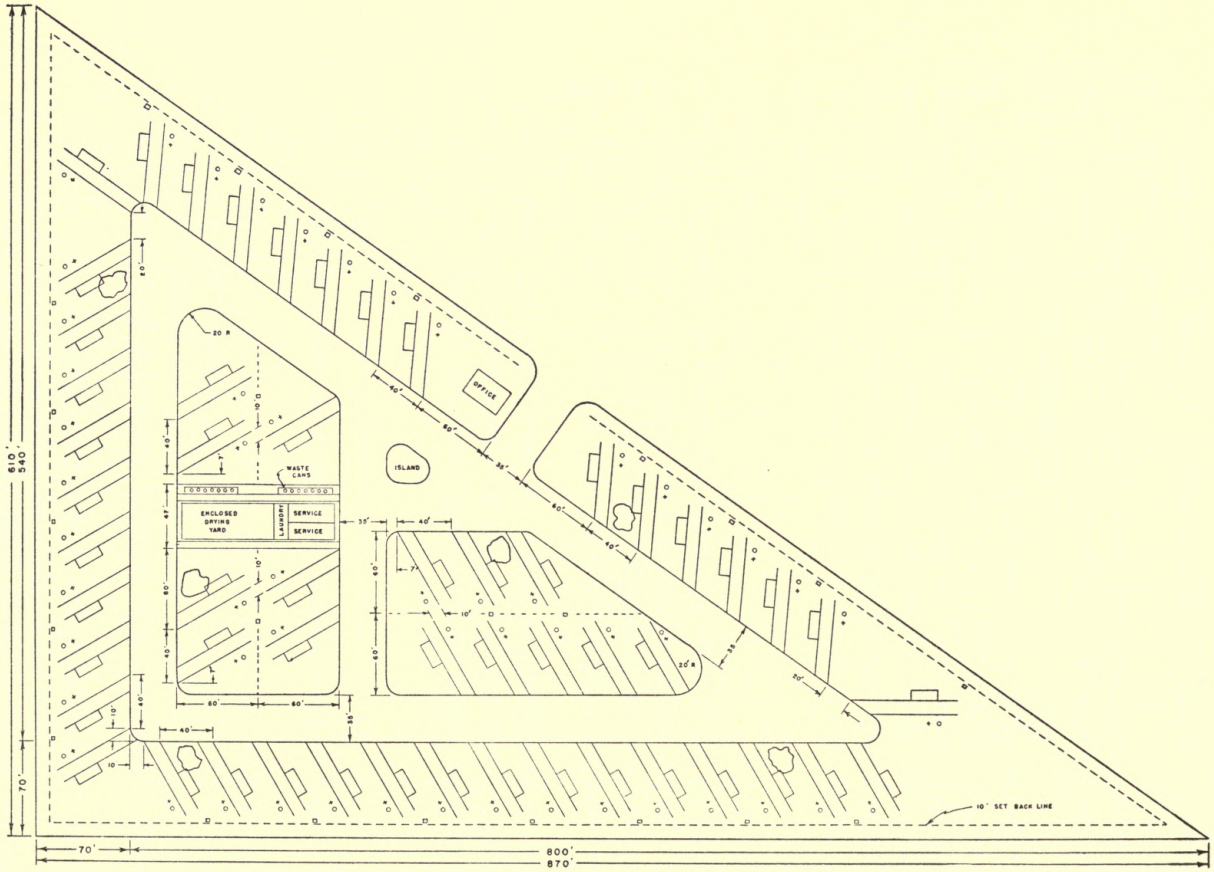
So, before you buy land for a mobile-home park, study your lot dimensions and land contour. Sketch a preliminary park



Plan 2

SYMBOLS

- ○ INDIVIDUAL SEWER CONNECTION
- \+ INDIVIDUAL WATER CONNECTION
- ▫ ELECTRIC METER POST
- SHADE TREE



Plan 3

SYMBOLS

- INDIVIDUAL SEWER CONNECTION
- INDIVIDUAL WATER CONNECTION
- ELECTRIC METER POST

design. See whether the land lends itself to economical utilization. Keep in mind the problems of sewage, electrical installations, and water systems.

Plan all phases in advance, since, in that way, you can reduce costs and eliminate needless effort.

TIPS IN DESIGNING A MOBILE-HOME PARK

Here are some practical tips on design:

I. PROPERTY

A. *Zoning.*—Be sure the property *is zoned* for a mobile-home park. Or specify *rezoning* as an essential part of the sales contract.

B. *Taxes.*—Find out in what manner and how much your park will be taxed. Also, determine whether your tenants will be taxed, since this may affect your rental schedule.

C. *Size.*—Generally 50 coach spaces (about 4.5 acres) is minimum for a profitable park business.

The proportions of the land are important to eliminate wasted space.

Property should be wide enough to accommodate at least one row of spaces at each side and one double row in the middle, plus two 35-foot roads between them. Check local codes for required setbacks on the side rows of the park.

D. *Services.*—Check availability and costs of water, gas, electricity, sewage and storm-sewage disposal.

II. DESIGN OF PARK

A. Obtain suggested plans from MHMA architect, 20 North Wacker Drive, Chicago, Illinois.

B. Retain a competent attorney to handle all legal matters.

C. Obtain the services of a local architect who is familiar with the legal and technical design aspects.

D. If you intend to do the design work yourself, consider these items carefully:

1. *Sidewalks* may be placed at an angle with the lots, so as not to waste space.
2. *Service building.*—Check local and state codes on requirements. In absence of any codes, use a building of the type designed for MHMA, plans of which are available at nominal cost. Laundry facilities, if not dictated by local codes, should provide one washer for each twenty families.
3. *Waste cans.*—These should be enclosed, sanitary, controlled, and centrally located—but not more than 300 feet from any lot.

Pick-up service is the most popular method of maintenance. Individual lot containers, however, should not be unsightly.

4. *Lots should be marked off* individually, with steel, concrete, or wood posts. Patios should be mesh-reinforced concrete or masonry—and runways, if concrete, should be properly reinforced for soil conditions. Runways should at least be crushed-stone surfacing. Sidewalks should be concrete. Roads may be 18 or 20 feet macadam or blacktop on a sound gravel foundation, pitched to drain, with the remaining sides in crushed stone or equivalent for car-parking.
5. *Electrical.*—All layout designs, materials, and methods of construction will be subject to local codes and the requirements of the power company. Find out from your local power company how much material and labor they will furnish when bringing service to you.
   Find out whether the company will charge by individual meters or by a central meter.
   Street lights.—If there is no local code, the minimum is 15-foot posts 100 feet apart, alternated on each side of the street.
   The individual lot service from the distribution post may be either an outdoor plug-in at the post or underground conduit from the post to an outlet box on each patio.
6. *Plumbing.*—All layout designs, materials, and methods of construction are subject to local codes and health regulations.
   a) *Storm sewer.* Find out if city lines are available. If not, get proper approval for drainage of the property.
   b) *Sanitary sewer.* Find out if city sewer lines are available. If not, the choice of sewage disposal depends on the type of soil, size of park and future extension, maintenance, initial cost, and local health regulations.
   c) *Septic tanks.* Imhoff tanks and sewage-treatment plants are some methods used by park owners. See your local health official, architect, or engineer for your particular needs.
   The increasing use of detergents may present a problem in septic-tank design. At the present time the best procedure is to bypass laundry waste into a separate tank or compartment.
7. *Fire hydrants.*—All lots should have direct access to a road for quick removal of coaches. Hitches should face the road for this reason. Some local codes also require hydrants.
8. *General.*—
   a) *Future expansion.* Always plan for future expansion in the initial design of electric, water, sewer, and laundry facilities as well as in the size of land area.
   b) *Recreational areas.* Provide recreational areas of sufficient size to meet the requirements of the park and the type of tenants anticipated.
   Child and adult areas should be separate wherever possible.

c) *Approvals.* Get all necessary approvals of plans from appropriate local officials before actual construction is started.

d) *The owner must set his own policies* concerning dependent and independent coaches, pets, children, transients, mail handling, maintenance, and so on.

CHAPTER 4

Getting Ready To Build

There are eight preparatory steps before you begin to build your park. In the beginning you may feel these steps waste time that could be put right into construction, but experience proves they are worth while. The eight steps are:

1. Retain a competent attorney
2. Make an inventory of the laws affecting utilities and buildings
3. Compile a comprehensive bill of materials
4. Select the right items for subcontracting
5. Get definitive bids
6. Set realistic cost goals and stay within them
7. Avoid liability from injuries during construction
8. Get waivers of lien on work fully paid for

RETAINING A COMPETENT ATTORNEY

The first step in getting ready to build is to retain a good lawyer. He will usually be familiar with zoning and sanitary laws, taxes, forms of business organization, and so on. Moreover, a lawyer should always be consulted at the time you buy your land. Most of the letters to MHMA from park owners who are in trouble bring out the need of retaining a lawyer you can depend on and in whom you have confidence.

INVENTORY OF THE LAWS AFFECTING UTILITIES AND BUILDINGS

The next step is to check all local and state laws regarding utilities and buildings. Check all zoning requirements. Do this right away. Make sure you call on all necessary health and utility officials.

Reputable contractors will be familiar with the usual sanitation and building codes. It is better to assume, however, that they are not familiar with all phases of mobile-home park con-

struction. Otherwise, you may end up with a park that will not be approved for operation.

Perhaps the sewer and water systems are the biggest problems. State and local laws differ widely, so it is best to check directly with the local or state health officer.

Submit your plans for approval before you begin to build. Don't start construction and then seek approval. If you submit drawings and specifications in advance, health officers will try to help out by suggesting only the minimum changes needed.

The Mobile Homes Manufacturers Association has a booklet entitled *Trailer Court Sanitation,* prepared by the United States Public Health Service and distributed by MHMA free of charge as a public service. Get copies right away, so you can do your planning before you submit drawings to your local health officials. Also, get copies of all sanitation laws affecting mobile-home parks in your area.

BILL OF MATERIALS

The third step is to compile a comprehensive bill of materials for the work to be done. It should include all construction items and the equipment and tools needed to operate the park after it is completed.

You'll think of the roads, buildings, sewer system, water system, patios, and so on. But you may overlook the hundred-and-one little things you'll need to operate a park. So, when you compile your bill of materials, remember the lawn-mower, washing machines, chairs, office supplies, desk, jeep, jacks, levels, hand tools, wheelbarrow, rakes, shovels, and so on.

Besides an over-all bill of materials, make separate bills of material for each major item of construction. A sample bill of materials for a sewer line is shown in Table 1.

These are needed to get realistic bids from contractors and building-supply houses. In planning your service building, for example, specify all items you want in the finished building. Then check the contractor's bid to make sure they're included. Find out whether mirrors, hardware, and screens are a part of his bid. Is the hot-water tank 30 or 50 or more gallons? Will

TABLE 1

SAMPLE BILL OF MATERIALS, INCLUDING LABOR ESTIMATE, FOR SECTION OF SEWER-LINE SERVICING 5 SPACES OF 40 FEET EACH

Item	*Quantity Needed*	*Cost*
	MATERIAL	
1. 6-inch tile pipe in 2-foot sections (straight)	100 pieces, including 7 extras	Local wholesale price
2. 6-inch T's	7 pieces	Local wholesale price
3. ⅛-inch bends	5 pieces	Local wholesale price
4. 6×4-inch reducers	5 pieces	Local wholesale price
5. 6-inch covers	2 pieces	Local wholesale price
6. 4-inch covers	5 pieces	Local wholesale price
7. Mortar cement	Sufficient to complete job (estimate) 4 bags	Local wholesale price
8. Portland cement	Sufficient to complete job (estimate) 4 bags	Local wholesale price
9. Sand	1 yard	Local wholesale price
10. Trowel	1	
11. Mortar box	1	
12. Cleanout swab	1	
13. Grade stakes	20	
14. C-clamps (large)	6	
15. Crossboards (1″×6″×8′)	3	
16. Twine	1 ball	
17. Hand level (at least 2 feet)	1	
18. Builder's level or equivalent in professional service	1	
	LABOR ESTIMATE	
1. Trenching and backfilling (sandy soil) 18 inches deep	2 man-days	Prevailing labor scale
2. Pipe-laying	2 man-days	Prevailing labor scale
3. Laying-out and grade-stake-marking (professional service)	1 man-day	Bid from surveyor or civil engineer
4. Inspection of line and cleanup	½ man-day	Owner and labor

the lighting be fluorescent or incandescent? Will toilet compartments be furnished with toilet-tissue holders, racks, and coat-hangers? Such items are easily overlooked, but they'll cost you plenty if you remember them *after* construction has started.

In the case of the laundry, specify the number of drains and cleanouts and check whether the bid includes tie-ins with the sewer system. By making a bill of materials as complete as possible, you avoid difficulties with the contractor and get a better estimate of over-all costs. Construction costs are generally higher than estimates because of the owner's failure to specify in detail the items contracted for.

Compiling a complete bill of materials for all phases of the park's underground and surface improvements will also help you select the right items for subcontracting.

SELECTING THE RIGHT ITEMS FOR SUBCONTRACTING

Before you build, get bids on all items from three or more contractors. This will help you decide which items to subcontract.

In some localities, for example, contractors have little or no experience with sewer construction, so their bids may be considerably higher than reasonable estimates of costs. You may, as a result, be wise to build the sewer system with hired labor

rather than upset your construction budget by contracting it out.

Or you may find that a particular building is much more expensive than your original estimate. If so, you can modify your building plan, reducing its size or changing its design to bring it more in line with your estimate.

Compiling a detailed bill of materials and getting bids on all items of construction helps you decide which items to subcontract, which to build yourself, and what modifications are needed.

HOW TO GET DEFINITIVE BIDS

When your bill of materials has been compiled, you still face the problem of getting definitive bids and picking the right contractor. A definitive bid here means a bid that is complete as to *price, over-all construction detail,* and *time of completion.* It spells out exactly *what the contractor will do, at what price,* and *how soon.*

Wherever possible, get a "fixed-price" bid. "Time-and-material" bids seldom end up within reasonable cost estimates. There is always the tendency to pyramid costs or for the owner to cut the quality of materials to stay within an original estimate.

Make sure the bids you get on any given item of construction cover similar specifications. Some contractors make a practice of bidding low, with the idea of stepping up costs after construction begins. "Unforeseen circumstances" give them an opportunity to tack on "extras." That is why you should make a detailed list of the items contracted for; otherwise, bids from different contractors cannot be compared.

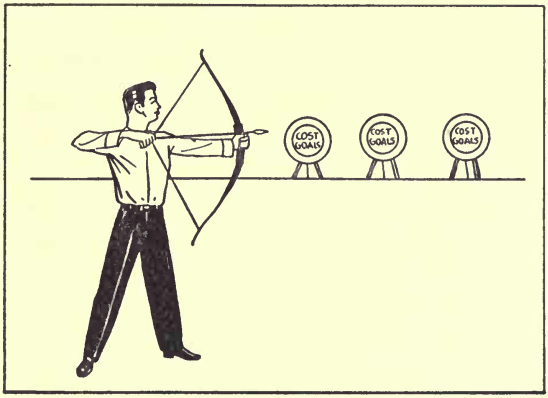
It is a good idea, too, to inquire about the contractors to whom you have submitted drawings and specifications. Find out how people feel about them. Check to see who has the best reputation as a builder. Don't hire the first contractor who comes along, or one who happens to be in the area in which you're building. Getting the best contractor may be cheap in the long run, because he will usually try to live up to his reputation in the community.

All bids should be submitted in writing. Make sure, too, that the kind of material and type of equipment are accurately described. Put a time clause in the contract to keep the contractor on the job after the work is started.

A sample of detailed specifications is found at the end of this chapter. Study it carefully. Remember, however, that these specifications apply only to one type of service building and one area of the country. They are presented here only for the purpose of illustrating *how detailed* building specifications should be. The more detailed you make them, the more realistic the bid you will get, and the less trouble you will have with your contractor.

SETTING COST GOALS AND STAYING WITHIN THEM

Always set cost goals. More important, try to live within them. Even if your cost goals are "guess-estimates," set them up as realistic targets. Setting cost goals—regardless of how



realistic they are—serves the psychological purpose of forcing you to plan and to do some work yourself. Without such goals it is easy to run over on one item only to find that you cannot make it up on another. You then discover, unhappily, that your over-all costs are much higher than you figured because you didn't control some particular item in your schedule.

A practical way to stay within your cost estimates is to keep

a running ledger of construction costs. Since you cannot cut costs after they've been incurred, you have to see the cost build up during construction. A periodic entry system will reflect higher costs as soon as they take place. When any item of cost gets out of line, you can cut on other items by making modifications.

A good idea is to list your original cost estimate of an item and next to it the actual cost of construction. If, for example, you estimated the roof of a building at $1,500, but it actually

EXAMPLE

	Cost Goal	*Actual Cost*
Roof	$1,500.00	$2,000.00
Siding	600.00	750.00
Plaster	375.00	300.00

costs $2,000, you know immediately you have to pick up $500 elsewhere to come within your cost goal.

This is simple enough, but most people hate to keep books. It is a tedious job that the average person lets go until it is too late. Don't make that mistake when you build your park. Record all costs systematically. Keep separate records for each major item of construction; as each item is completed, compare the actual costs with the estimates to find out which items are out of line.

Never assume that *a particular overage is unusual* and that it won't happen again. If you do, you'll find that $100 here and $100 there will throw your cost goals off as much as 25 or 30 per cent.

If the accounting work becomes burdensome, let a local accountant handle it on a part-time basis. Pay all bills by check,

fill out the stubs in detail, and turn all bank statements and check stubs over to the accountant for cost accounting. Have your bank issue you weekly statements during the construction period to help you do the right kind of accounting. Also, check all itemized statements furnished to you by building-supply houses for accuracy.

The accountant will set up each major item of construction on a separate ledger sheet and will give you a periodical accounting based on your check payments. All you have to do is look over his figures and take appropriate action.

You may feel this is a needless expense, but the comparatively small amount you pay the accountant will be returned many times in lowered construction costs. And you'll be surprised how cheap an accountant's services can be, provided you get the figures together for him by filling in your check stubs properly. Later on you can use his accumulated figures as a base for taxes and to determine depreciation charges.

A good example is the case of a recreation building built recently by a park owner. The original design called for a concrete block building 24 by 70 feet, including a store, recreation room, office, and washrooms.

Bids were received from three contractors, but all bids were considerably higher than the original estimate. Several alternatives were possible:

1. Reduce the size of the building
2. Change the type of construction and kind of materials
3. Cut out unnecessary features
4. Do some of the work himself

As it turned out, all four alternatives were used. The building was shortened 10 feet. The washrooms were roughed in, but plumbing fixtures and appointments were left for future improvement. The roof design was changed, and different materials were used. The owner finally decided to do his own painting and decorating, saving about $500 on this item alone. As a result, the recreation building was finished at less than the original estimate; and, although it was smaller than the

original design, it turned out to be adequate for the size of the park.

In the case of roads, alternative materials may increase or decrease costs as much as 100 per cent. Of course, roads must be serviceable, since heavy traffic is involved; even within a high range of serviceability, however, cheaper materials are often satisfactory. Although modern parks need comparatively wide roads (35 feet), the full width of the road need not be hard-topped. Only 18 or 20 feet has to be surfaced; the remainder can be gravel, shell, or marl.

These are just a few examples. The important thing is to look into all alternatives. Don't wait until the job is done before finding out you've overshot your cost goals. Plan and act as you go.

AVOIDING LIABILITY FROM INJURIES DURING CONSTRUCTION

When you build your park, protect yourself against liability from injuries.

The contractors you hire should carry liability insurance on their workers, but some contractors may neglect to do this. Since they may be negligent, protect your interests by getting notarized statements to the effect that they are covered by the proper kind of liability insurance. Moreover, it is not unreasonable to have them furnish proof of liability coverage—and to have them post a bond for satisfactory performance.

As an added protection, cover yourself with *builder's risk*, *public liability*, *fire*, and *extended coverage* insurance. Better still, talk your insurance problems over with a good agent and have him submit a comprehensive insurance plan covering initial construction and subsequent operations. Don't check with just one agent, either. Insurance, like everything else, varies from agent to agent and company to company. Get alternative bids, based on the same type of insurance coverage. Pick a reputable company but get the most for your money. But don't try to get off cheap by not carrying insurance. One accident, one fire, or one hurricane can wipe out all your hard-earned savings.

GETTING WAIVERS OF LIEN ON WORK FULLY PAID FOR

When a construction item is completed and paid for, don't heave a sigh of relief and feel you've taken care of everything. You may find that some worker has put a lien on your property because he claims he hasn't been paid in full. This may happen if some contractor neglected to pay his workers for work performed by them on your buildings or grounds.

When you pay a contractor in full, get waivers of lien from him and his workers. Waivers are easy to get, and they'll protect you against future claims.

The lien laws treat labor as a prior claim on property. Workers can easily place liens against a piece of property, whether they have the money coming or not. Such liens act as a temporary cloud on the title to property and may prevent its transfer until they are cleared up.

Any attorney can draw up a simple waiver of lien that can be used for most construction work.

CONCLUSION

Getting ready to build is not difficult, but it does involve following up on a number of details.

In the long run it is wise to make an inventory of local and state laws, compile a bill of materials, select the right items for subcontracting, get definitive bids, set cost goals, avoid the risks of liability from injuries during construction, and get waivers of lien on work fully paid for.

SAMPLE SPECIFICATIONS FOR SERVICE BUILDING OF ——— MOBILE-HOME PARK BREVARD COUNTY, FLORIDA

General Conditions

Contract for all work shall be subject to the general conditions for the construction of buildings or approved contract form by the owner.

General Contractor

The general contractor shall be responsible for his work as well as all subcontractors working under his contract. The general contractor shall supply all labor, equipment, power, and such facilities as may be necessary

to complete all parts of his contract except such labor, tools, and equipment and materials normally supplied by subcontractors in their work. The general contractor shall be responsible to the owner for the interpretations of the plans and specifications for all general and subcontract work under his contract. Certificate of liability insurance shall be supplied by the general contractor to the owner covering the owner from all forms of damage claims arising from operations under this contract. Such certificate shall carry a five-day cancellation notice and shall be subject to the owner's approval as to reasonable adequacy of protection.

Owner's Responsibility

The owner shall cover the building and its contents with adequate fire and wind insurance in accordance with the state of completion of the work. The owner shall supply the contractor with a certified survey of the property or assume all responsibility for the correct location for the structure involved.

Subcontractors

Each subcontractor shall be responsible for the completion of his work and protection of same and shall protect other contractors' work from damage also. All cutting of other contractors' work as may be required shall be under the supervision of the general contractor.

Permits and Ordinances

The general contractor shall be responsible to the owner that all permits, etc., as may be required are obtained by himself or the subcontractors before start of any work covered by the various permits. The general contractor shall also be responsible to the owner as to the meeting of all local, state, and federal ordinances for the construction of the building, and, where the plans vary from such ordinances, he shall inform the owner of the same and make such corrections as necessary upon proper agreement with the owner.

Site Examination and Layout of Work

All contractors shall examine the site and familiarize themselves with such conditions as may affect the use of equipment, and where temporary roadways may be required they shall notify the owner of the same and make such arrangements with the owner as may be necessary.

Variation from Plan

No variation from the plans or specifications shall be permitted without specific approval from the owner in writing. This includes substitution of equipment and material except where alternates are specified. The owner shall also be responsible on his part that such variations from the plans and specifications he may desire shall be determined sufficiently in advance and notification in writing to the contractors involved from the owner shall be received a minimum of three days prior to the anticipated work to be done as on the plans, which is to

be at variation from them. In the event of such variation or delay, proper arrangement shall be made between the owner and the contractor before continuance of the contract.

Cleaning and Guarantee

The general contractor shall maintain the building site in a neat and orderly manner and shall provide safeguards as may be necessary to protect all persons connected with the construction from danger to life and limb. Upon completion of the work he shall remove all surplus material and debris. The general contractor and his subcontractors shall be responsible for the performance of all workmanship and material to a reasonable degree for a period of one year from the date of completion. The owner shall assume all responsibility for all work not under the general contract.

Scope of Work for All Contractors

Work shall include all necessary material, labor, such preparation as necessary, repair of other contractors' work damage by their own workmen or materials, required inspections, and such corrections as may be necessary to pass such inspections and cleanup and removal of all debris remaining from their work during and upon the completion of their various contracts. Mason contractor shall include as a necessary part of his contract repairing and closing of necessary chases and openings required by other contractors for the performance of their individual contracts, where normally required.

Excavation

All necessary excavation and backfilling shall be done by the general contractor except as required for plumbing, which shall be done by the plumber. All backfilling for excavated areas shall be thoroughly puddled and tamped including fill for floor slabs.

Steel

All steel required for reinforcing shall be provided as shown on the plans or required by conditions. It shall be new stock and free from loose scale or rust. All steel shall be placed accurately, bars lapped a minimum of 20 diameters and tied with 18-gauge annealed wire. All crossings shall be securely tied in the same manner. Floor slab reinforcing shall be 6×6 #10 wire mesh.

Masonry and Concrete

All poured concrete shall be transit mixed and of such proportions to reach a #2000 P.S.I. strength at twenty-eight days. All pours shall be continuous, and concrete shall be properly tamped and puddled to fill all voids and openings. All blockwork shall be set plumb and true, flush joints rubbed, and damaged and chipped corners and surfaces rubbed and filled. Mortar mixes shall be prepared as per manufacturer's directions. All slabs shall be reinforced as detailed, subsurface properly pre-

pared and waterproofed for pouring. Finished surfaces shall be screened, floated, and steel troweled to a smooth even finish for exposed concrete work and otherwise prepared as may be necessary for other surface finishes. A reinforced concrete block lintel shall be poured at all points shown on the plans. Concrete sills shall be formed after placing of windows by other trades and shall be done in such manner as to provide a watertight sill with sharp true edges and proper slope for adequate runoff of water.

Carpenter Work

All lumber shall be dense #2 or better yellow pine or fir and free from loose knots, shakes, or sappy runs and shall be sound dry material. Where the material is to be exposed after completion such as rafters, etc., it shall be selected for uniform appearance. Roof sheathing shall be ½″ interior grade, sound one side, plywood primecoated before erection. All plates, sills, etc., shall be treated with wood preservative where contact is made with masonry surfaces. Plates and sills shall be slushed into place where required for leveling. All plates shall be anchored in place with ½″×8″ anchor bolts at 4′ centers into the poured lintel. All rafters shall be properly crowned and all shall be tied to the roof plates with hurricane straps. Carpenter shall install and properly brace for alignment all door and window frames which also shall be treated with wood preservative. Stall partitions shall be ¾″ plywood, good both sides, open 18″ up from floor and partition section 4′ high. Doors of same material as partition, 24″ wide and same height as partition. All work to be supported with ¾″ galvanized pipe with proper flanges and fittings to provide a rigid and substantial partition. Posts for garbage area are to be treated with wood preservative and placed on a double 90-lb. felt material. All posts to be properly anchored to concrete slab with not less than 2″ angle braces with expansion bolts in the slab. Framework for screening is to be erected as detailed, and all screening to be weatherproof plastic or alumamesh, including screens for operating sash in building.

Doors and Windows

All exterior doors shall be 1¾″ thick and of designs shown. Plank and batten door to garbage area shall be mill built of ¾″ stock with three horizontal cross-battens and two diagonal battens in opposite directions. All jalousie doors shall have wood jalousies. Double-acting door between washroom and vestibules shall be 1¾″ wood louvre door. All exterior doors shall be hung on 3—4″×4″ loose pin hinges. All locks and hardware throughout shall be Schlage or Yale. All locking doors shall be keyed alike. All toilet and shower-stall hardware shall be chrome-plated with door hinges of a type which automatically return to an open position unless fastened on user's side, without spring attachments. Exterior doors to have aluminum interlocking thresholds. All rough and finished hardware to be supplied by the general contractor.

Roofing and Flashing

The roof shall be dried in with rosin building paper immediately upon completion of sheathing work and covered with three layers of 15-lb. felt with the top two layers mopped into place. Tin tagging shall be done with heavy staples through tags into plywood. Care shall be taken to see that the length of the staple is not longer than the thickness of the plywood. After the top felt is mopped, it shall be well graveled and rolled. Heavy-gauge galvanized metal gravel stop and drip shall be applied at all edges. Flashing and counterflashing shall be applied at the junction between the roof over the walkway and the wall of the main building. This shall be let into a raglet in the wall for the top flashing, and the base flashing shall extend a minimum of 8″ up from the flat roof below, over which the counterflashing shall be placed. All felt shall be applied in such fashion as to provide a double lap for each layer of roofing.

Plastering

All interior walls throughout except those which are to be tiled shall have a base coat of vermiculite plaster mixed and applied according to manufacturer's directions. Over the base coat a finish coat of hard white plaster shall be placed, with all surfaces brought to a smooth even plane, all corners neatly made and true and straight. All window jambs shall be formed to provide accurate and neat trim job. The ceilings of all showers, slop-toilet stall ceiling also, shall be plastered in same manner as side wall, using a metal lath base. All ceilings throughout shall be exposed rafters. The walls of the utility room shall be left unplastered.

Waterproofing

All exterior walls including planting bins shall have one coat of sprayed-on waterproofing which shall be applied with not less than 250 lb. pressure on a thoroughly dampened wall. Care shall be taken that the walls are properly prepared before application of material, and all cracks, voids, chipped corners, etc., shall be prepared so as to minimize all such imperfections. This work shall carry a ten-year written guarantee which shall be provided to the owner and shall be stated in such a fashion so as to be applicable to the building in case of change of ownership. All windows, doors, trim, paint, etc., shall be masked in such fashion as to be completely protected while work is being done and after completion masking to be removed and all touching-up necessary so as to leave a workman-like job shall be done before acceptance.

Terrazzo and Tile Work

All window sills shall have a ceramic-tile finish in standard color selections. All stall showers shall be lined with ceramic tile with bullnose return at the entrances. The walls behind the lavatories shall be tiled also to a height of 4′ from the floor, and such tile work shall be

neatly fitted around all lavatory mirrors. The floors of both toilet rooms shall be covered with mono-terrazzo with gray cement base tinted a light blue. Chips are to be white marble with approximately two out of ten parts of pink marble. Floor shall be protected during construction after first grinding, and upon completion of the final work it shall be polished and sealed with terrazzo floor seal.

Painting

All interior walls shall be sealed with a primer and neutralizer before application of paint. All walls shall be painted with two coats of an approved oil-base paint in color selected by owner. All woodwork shall have a prime coat of white fixzite, second coat of equal parts of enamel and flat paint, and third coat of eggshell enamel. Woodwork trim to be in a color selected by owner. Exposed ceilings and rafters shall be painted in same manner as woodwork. All knots, nail sets, cracks, etc., to be carefully puttied and filled, and all work is to be sanded between coats. Exterior work shall be sealed with shellac the day before painting is to be done on all knots, streaks, etc. Prime coat shall be applied shortly after exterior woodwork is erected. The second coat on exterior work shall be tinted to approximate shade of final color selected. Third coat shall be exterior trim enamel in color selected by owner. All doors shall have two coats of trim enamel as well as a prime coat and base coat. The walls and ceiling of the utility room will not be painted, but all shelves, doors, etc., as shown on plans shall be painted the same as specified for woodwork.

Electrical Work

A panel shall be installed in the utility room providing circuits for the following services: one circuit for outside lighting including garbage area and slop toilet, two circuits for each toilet and shower room (one for ceiling lights and one for wall lights), and two circuits for the utility room. All wiring shall be grounded properly. All wiring throughout shall be carried in rigid conduit and where conduit is exposed shall be neatly fastened to the underside of rafters or bridging. All wiring to be not less than #12 wire. Switch and outlet plates to be ivory-faced. Contractor to install fixtures to be provided by the owner with an allowance of $35 for fixture installation. All wiring shall be properly grounded. Contractor to install all porcelain fixtures in utility room, all supply panels, switches, outlet boxes, and plates as a part of his contract. Electrical contractor shall arrange temporary power service with deposit for power paid by the general contractor.

Plumbing

All underground work shall be completed before slab installation. All soil pipe shall be first-quality cast iron, of sizes shown on plans, to point of connection to septic-tank lines on exterior of building. Septic tank and connection to same as well as drainage field are not a part of this contract. The owner shall arrange for a water connection to a point

determined by the plumber within the building foundation. Plumber shall make all connections from there as a part of his contract. All interior hot- and cold-water lines shall be copper tube, and work shall be concealed. Water lines to lavatories and other fixtures on the exterior walls may be carried around exterior perimeter of building in a trench a minimum depth of 8″.

The following equipment shall be installed, description as for "American-Standard." Equipment of equal quality and manufacture may be substituted upon agreement with owner.

Waterclosets.–Flush valve Madbrook or Sciacto; slop toilet without seat or cover

Lavatories.–Hexagon, 20″×18″, pop-up drain, no legs

Urinals.–Bering with one-time flush tank

Showers.–½″ mixing valve, bent arm and head with volume regulator

All exposed trim to be chrome-plated. A continuous-flow system by supplying a return line to the hot-water tank shall be installed for the showers only. All work to be pressure tested before completion of masonry for vents and work below grade. Vents to be installed as required and flashing provided for through roof installation, which shall be provided not later than the day following installation of roof sheathing. Water heater to be a gas-fired 50-gallon water heater with a 50-gallon-per-hour recovery rate at maximum temperature. Outside spigots to be installed where shown on plans.

Glass and Glazing

All windows to be glazed with double-strength "A" glass. Glazing to be done on the site, and all windows are to be backputtied in such a manner as to make a watertight job. A 20″×24″ plate-glass mirror shall be installed above each lavatory with top edge 6′ above the floor. Below the mirror a 4″×20″ bulb-edge plate-glass shelf shall be installed with chrome-bracket supports.

PART II

Building a Mobile-Home Park

CHAPTER 5

Clearing and Grading Your Mobile-Home Site

Clearing and grading the mobile-park site is an important part of park construction. Unless your land is properly prepared, you may face other problems, such as faulty sewage disposal and improper surface drainage. It is as important to clear and grade properly as it is to put a good foundation under a building. Of course, some parks will be built without changing the natural contour; but this will affect the depth of trenching to establish the proper sewer grade and should be taken into account.

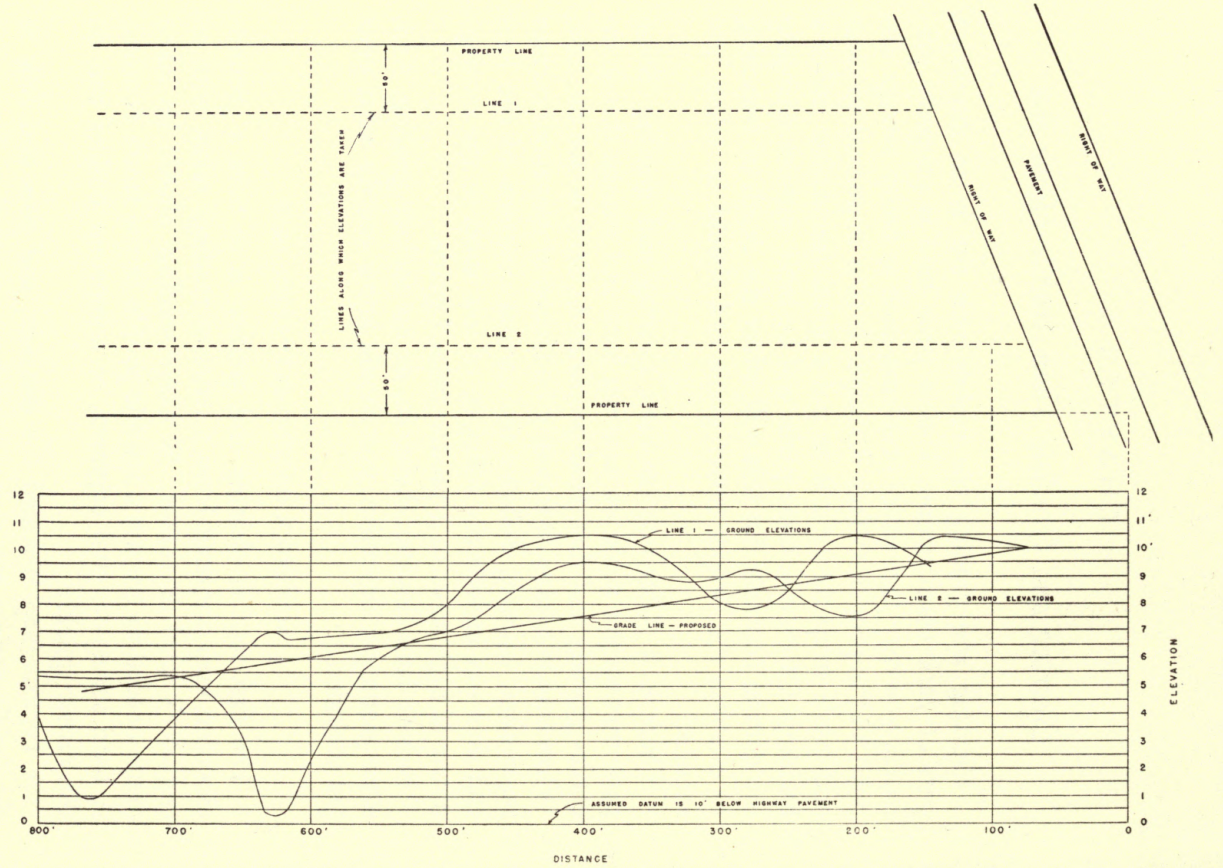
There is a difference between *clearing* and *grading*. Some park owners get a bid on clearing land and assume that it includes grading and final land preparation. Such is not the case. When land is *cleared*, it is simply bulldozed of unwanted surface vegetation. Clearing follows the natural contours of the land and does not include the filling-in of low spots or the cutting-down of high spots to a predetermined grade.

Bids on land clearing, therefore, do not include grading. And, since grading is expensive, you should know exactly what your bid includes.

MAKING A GROUND-ELEVATION MAP

The first step in clearing and grading is to have a ground-elevation map prepared from a series of readings taken with an engineer's level or transit. As many readings should be taken as are needed to prepare a reliable profile of the land's contour. A local surveyor, civil engineer, or competent builder can do this rather quickly.

A typical map is scaled for distance, and rises and falls in the land's surface are exaggerated for easy reading. From this map you can determine how the grading should be done and


PROPERTY LINE
50'
LINE 1
LINES ALONG WHICH ELEVATIONS ARE TAKEN
LINE 2
50'
PROPERTY LINE
RIGHT OF WAY
PAVEMENT
RIGHT OF WAY
LINE 1 — GROUND ELEVATIONS
LINE 2 — GROUND ELEVATIONS
GRADE LINE — PROPOSED
ASSUMED DATUM IS 10' BELOW HIGHWAY PAVEMENT
12
11
10
9
8
7
6
5
4
3
2
1
0
800'
700'
600'
500'
400'
300'
200'
100'
0
DISTANCE
ELEVATION

estimate accurately what the cost should be. You can also make sure that surface dirt is moved the shortest possible distance.

CLEARING AND GRADING EQUIPMENT

The regular bulldozer is used for clearing land. Use as large a bulldozer as practical, since more clearing can be done in a shorter time. A 10-foot bulldozer will do 25 per cent more work than an 8-foot bulldozer, so don't get a per-hour estimate of bulldozer costs without specifying the size of the bulldozer blade. This is particularly important when you award a contract on time and material. See Plate 8.

Even when clearing is done for an agreed-upon price, check the contractor's equipment to see whether it is in good condition and capable of doing the job. Equipment breakdowns may lead to needless delays and *time costs*—that is, you may sacrifice future park income.

A bulldozer may also be used for rough grading; final grading, however, is usually done by a standard grader. See Plate 8.

For an accurate job, grade stakes are set and marked according to the desired slope of the property. The bulldozer or grader operator then moves the dirt back and forth along the grade stakes until the desired slope is obtained.

You can see why high-level land is important to your park. To grade properly, there must be enough dirt to fill in low areas; otherwise, fill dirt has to be trucked in. It is a lot like the barber's problem: *You can always take it off, but you cannot put it on!*

Here, then, are four important steps when clearing and grading your land:

1. *Have* a ground-elevation map prepared by a competent engineer or surveyor
2. *Make sure* the land is high enough so fill dirt will not be needed
3. *Get* a fixed-price bid on clearing and grading and *check* the equipment to be used
4. *Place* finished grade stakes close enough to give the bulldozer and grader operators accurate guides to work to

SOME KEY FACTORS TO KEEP IN MIND

When you clear and grade, you're not just getting rid of undesirable surface vegetation. Land preparation for a mobile-home park affects the roads, sewers, and surface drainage. Too steep a grade will wash down surface-road materials; too flat a grade will hamper the operation of the sewer system.

Sewer systems need a minimum fall to work properly. The desirable amount should be determined by local health officials. If the land is graded correctly, the operation of the sewer system will be greatly facilitated. And, where a complete park sewer system is installed, cross-connections of the various rows and spaces can be achieved by sloping the land to permit a *lateral* as well as a *longitudinal* fall. In other words, the land can be graded like a tilted table.

Landscaping costs can be cut by having a landscaping plan in mind before clearing and grading are done. You can then clear and grade around attractive vegetation, like trees, plants, and bushes. Why waste time and money clearing away good native vegetation, only to replace it with expensive nursery products? Native plants and shrubs do best, so leave them on the site whenever possible.

ESTIMATING THE COST OF CLEARING AND GRADING

It is hard to give reliable cost yardsticks for clearing and grading, since costs vary with locations, characteristics of the site, contour of the land, and subsurface obstacles.

The best way to check costs is to talk with people who have had similar work done. Meanwhile, shop around among contractors to find out what prevailing costs are. Usually, it is cheaper to hire bulldozer equipment and operators and supervise them yourself.

Regardless of how you do it, have a ground-elevation map prepared so you can estimate the cubic yards of dirt to be moved. You can then rule out exceptionally high bids and get closer to a reasonable cost base.

CHAPTER 6

Sewer System

Where sewage disposal is concerned, a mobile-home park is similar to a real estate subdivision. Typhoid, dysentery, diarrhea, and other diseases may be transferred by contaminated food and water, so every effort should be made to put in the best possible sanitation facilities. Where public sewage-disposal systems are not available, satisfactory private installations must be developed.

A sewer system should dispose of human wastes *without* (1) contaminating the water supply; (2) providing a breeding place for insects or rodents; (3) giving rise to odor or unsightly appearance to park residents or adjacent property owners; or (4) polluting bathing beaches, streams, or drinking water.

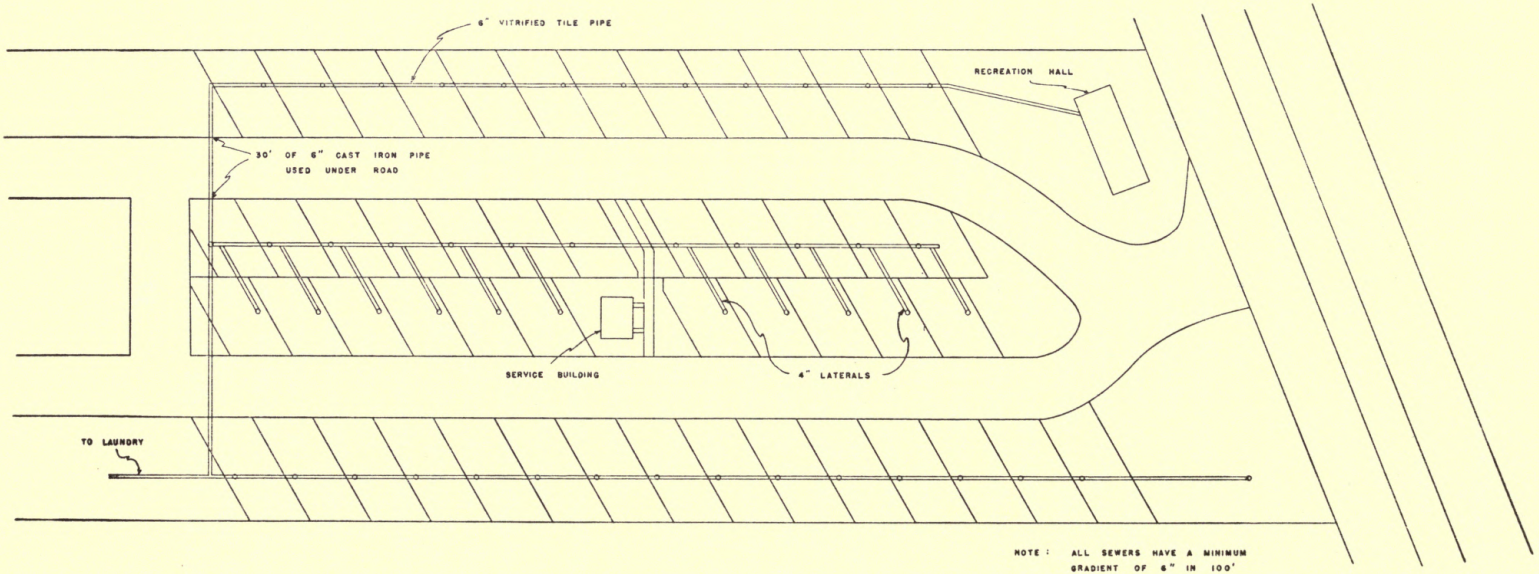
Sewage disposal is complicated because of different state and local laws as well as varying physical and climatic conditions. The ideas presented here, therefore, are merely suggestive in nature. All plans and specifications should be approved by local health officials having jurisdiction.

PLANNING A SEWER SYSTEM

The first step in planning a sewer system is to estimate the amount of sewage to be discharged and the sizes of the pipes and disposal units needed. Generally, 125 gallons of sewage per day per space should be allowed, with an additional allowance for laundry and service buildings.

After estimating the amount of sewage flow, check with the local health officer to find out how large the sewer lines, septic tank, and disposal fields ought to be.

The next step is to consider the location of the septic tank and disposal field with relation to the source of water supply, topography, soil conditions, and so on. For example, all main sewer lines should be below the frost line, and soil conditions should


6" VITRIFIED TILE PIPE
RECREATION HALL
30' OF 6" CAST IRON PIPE
USED UNDER ROAD
SERVICE BUILDING
4" LATERALS
TO LAUNDRY
NOTE : ALL SEWERS HAVE A MINIMUM
GRADIENT OF 6" IN 100'

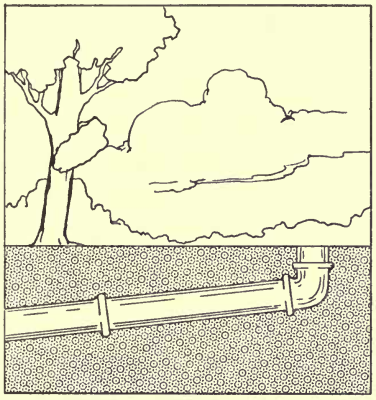
be checked by percolation tests to determine permeability—or equivalent experience data should be obtained from local health officials.

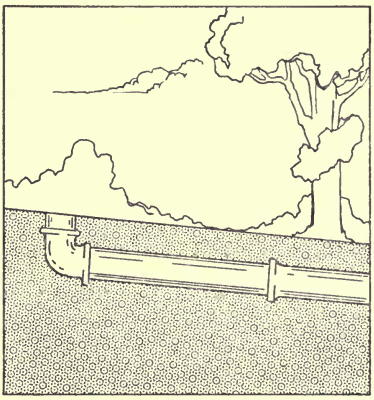
Constructing a sewer system is not simply a case of digging a trench and putting in sewer lines to a septic tank. There are important engineering factors to consider, such as what materials to use, how the sewer system will be installed, and how it will be tested.

HOW TO CONSTRUCT A SEWER SYSTEM

Important Engineering Considerations

For most private sewer systems, preliminary engineering considerations include (1) grading the land; (2) determining the sizes of pipe and the number and sizes of septic tanks to use; and





(3) figuring out how the various rows of spaces will be cross-connected if one main tank is used.

Sewage must have a flow through the sewer lines, and this flow is obtained by grading the land or by sloping the sewer lines when they are installed. Generally, you have to grade a slope into the land, because most states set a maximum limit for the septic tank and disposal field beneath the surface of the ground.

In many states disposal fields cannot be more than 18 inches

below the surface. This means that the sewer line enters the septic tank 1½ feet beneath the ground. Now, if the sewer line is sloped upward from this point, say, a distance of 400–500 feet, with a slope of, say, 6 inches in every 100 feet, the sewer line would come out of the ground after 300 feet. To avoid this, the slope required is graded into the land.

From a ground-elevation map the land level would be known before the sewer system was installed, and grading could be done to provide the proper slope. Knowing the land profile, grade stakes can be set and the bulldozer and grader operators instructed to work to the grade marks.

Planning doesn't end here, either. You may find it wise to break the grade at certain points rather than to have a uniform slope. By breaking the grade, you may save on grading and still provide the minimum slope needed for the sewer system.

The finished slope of your park has a definite effect on surface conditions, such as the drainage of roads and spaces. This is particularly true where fine gravel or shell is used. Even in the case of hard-surfaced roads, water may run down the pavement so fast that it accumulates at the back of the property, creating undesirable pools of water and eroding the subgrade of the road.

When you install the park's sewer system, ask yourself these questions:

1. Will the land be graded to provide the proper slope for sewage flow?
2. Will the slope permit sewage disposal to take place without creating surface drainage problems?
3. Will the sewer system be large enough for maximum park operation?

Specific Construction Techniques

A sewer system is relatively easy to install, provided the following procedures are used.

Materials.—Buy all materials in quantity to take advantage of lower prices and contractors' discounts. Shop around for tile pipe among suppliers who handle it on a wholesale basis.

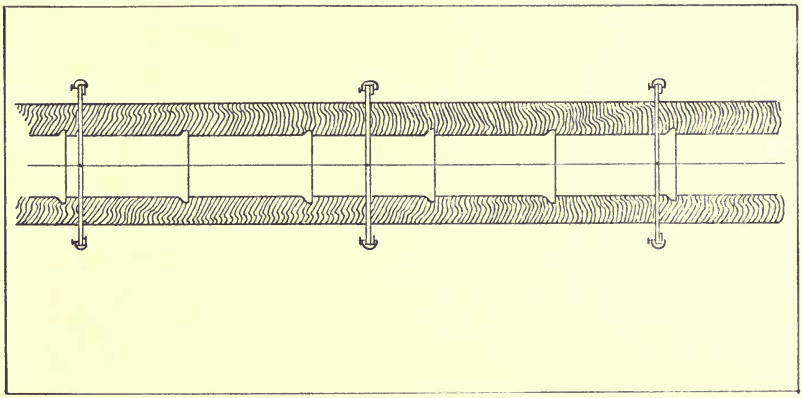
Vitrified tile pipe is generally used for the sewer lines. Tile pipe is durable and easy to maintain; however, substitute materials—like orangeburg—may be used if approved by health authorities.

Main sewer lines in mobile-home parks are usually 6 inches in diameter; 4-inch laterals are used for connecting individual units to the main line. Cleanouts are provided at least every 100 feet or closer, and manholes every 400 feet or where there is a change in direction of 90 degrees.

Standard tile pipe comes in 2-foot lengths, so it is easy to figure how many sections will be needed for any given job. The difficult part is figuring out how many fittings—that is, Y's, T's, and bends—you'll need. These fittings are easy to get when they are part of a large order but may be harder to obtain when only one or two fittings are needed to finish the job. So, compile a complete bill of materials when you do your planning and before you begin to buy. When large quantities are bought at one time, the supplier will usually distribute the pipe alongside the trench in small piles, reducing the amount of labor when the pipe is installed.

Trenching.—The next step is trenching. This may be done by trenching machines similar to the one illustrated. See Plate 8. Where wages are reasonable, however, hand labor can be used. Machines cut trenches quickly, but long, exposed trenches have a tendency to cave or wash in. A simple point—often overlooked—is to keep the excavated dirt on one side of the trench so backfilling can be done quickly from one side.

Grade stakes.—The third step in constructing a sewer system is to set pairs of grade stakes on opposite sides of the trench



about every 20 feet. A 1 by 6-inch crossboard can be clamped to each pair. A uniform slope can then be obtained by stretching a line (between nails on the crossboards) down the center of the trench.

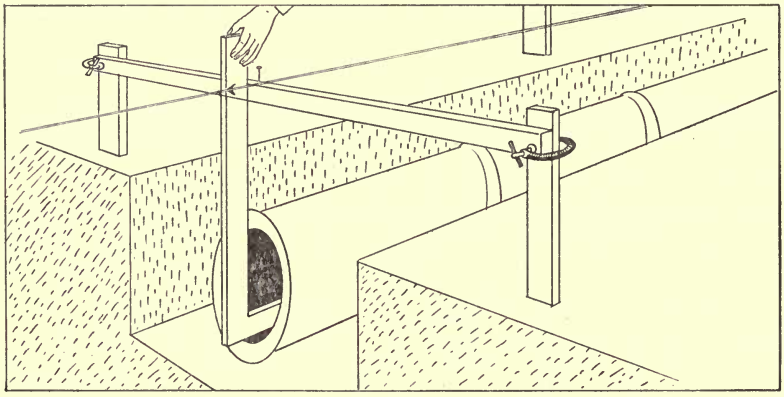
Installing sewer pipe.—Several items are needed to install sewer pipe properly:

1. Hand trowel.
2. Mortar box.
3. Mortar, composed partly of Portland cement, mortar cement, and sand. Good mortar can be made from three parts of Portland cement, three parts of mortar mix, and twelve parts of sand.
4. A gauge stick, inserted into the pipe after it has been installed, to determine whether the pipe has the correct grade. The gauge stick is made so that, when it is placed inside the pipe, its vertical member crosses the string stretched between the grade stakes. The vertical member is marked at the right grade.

The first section of pipe is set into the opening of the septic tank and mortared in place.

The second section is then laid as follows:

1. *Take* some mortar and pat it in the palm of the hand until it forms a flat ovular shape.
2. *Place* two or three pads of the mortar on the lower half of the bell end of the first pipe. The mortar should cover the bottom half of the bell.
3. *Insert* the second section of pipe, with its small end fitting into the bell end of the first pipe.
4. *Place* the gauge stick in the end of the second section of pipe, making sure it rests on the inside of the pipe and not on the bell. The gauge



mark should line up with the string stretched along the trench. If it does not line up, add or remove dirt from under the bell end of the second section until the gauge mark lines up with the string.

5. *Press* mortar between the bell end of the first pipe and the small end of the second pipe, covering the opening remaining at the top half. Using the trowel, make a smooth joint all around.
6. *Take* a stick with a wad of cloth or brush on its end and clean out the excess mortar inside the pipe just laid. Do not move the pipe in the process.

You are now ready to lay the third section of the pipe.

A good worker should lay at least 125 feet of pipe in an eight-hour day. So, check the daily progress on your sewer lines to see you're getting your money's worth. At the end of each day, make sure all exposed sections are plugged and that all T's and Y's are covered. If a trench caves in, or debris is blown into an opening, it may cause faulty sewer operation later on. Tile-pipe covers can be ordered at the time the pipe is bought; these fit into the bell end of the pipe and can be dropped in place as T's and Y's are installed.

Be rather liberal with T's and Y's, because they serve as inspection holes and are convenient places for cleanouts.

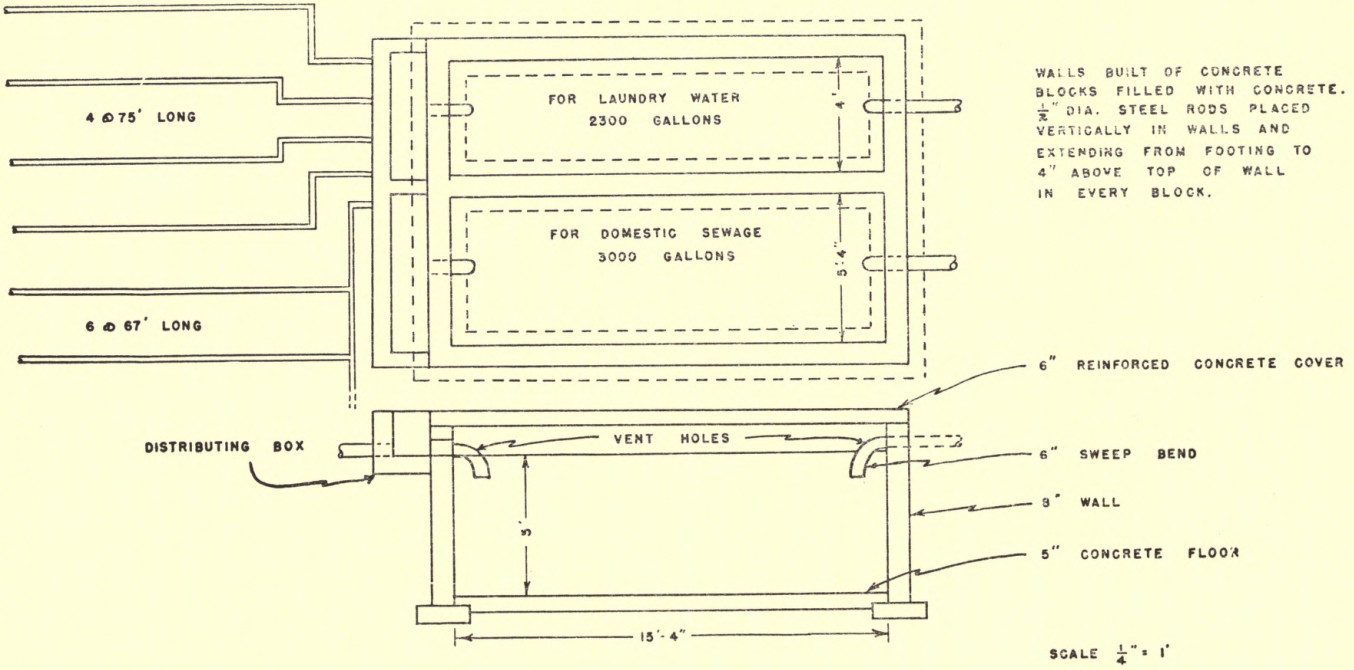
Don't run water in the sewer line until all pipe joints are completely dry. The water will wash away the mortar and result in leaks or weak joints. You can, however, check any section of sewer the day after it has been laid; to do this, simply flush the sewer line with a hose and check for leaks and proper flow.

THE SEPTIC TANK, DISTRIBUTION BOX, AND DRAIN FIELD

The main features of a private sewage-disposal system are illustrated below. The main sewer line empties into the septic tank, which retains the solids from the sewage while the fluid passes from the septic tank into a distribution box which distributes the fluid uniformly along a number of drain fields into the soil. Joints in the drain field are left open for this reason.

If one large septic tank is used, locate it at a low point in the park. This helps insure the slope needed for the sewer lines and permits you to place your wells at some higher point in the park.

Keep sewer lines and drain fields at least 100 feet from water



WALLS BUILT OF CONCRETE BLOCKS FILLED WITH CONCRETE. $\frac{1}{2}$" DIA. STEEL RODS PLACED VERTICALLY IN WALLS AND EXTENDING FROM FOOTING TO 4" ABOVE TOP OF WALL IN EVERY BLOCK.

SCALE $\frac{1}{4}$" = 1'

wells. The distance will vary from state to state, but 100 feet is generally accepted as minimum.

The next step is the construction of a septic tank large enough to service the park. Many factors affect the design and construction of a septic tank. In some areas the water table is so high that a large septic tank would be under water. In this case, several smaller tanks can be used. Where the water table is deep enough, however, one septic tank is preferable, since cleaning and maintenance are simplified. Check with your local health officials as soon as possible and get their suggestions.

Septic Tank

A septic tank is a settling tank that retains the solids in the sewage for a sufficient period to permit satisfactory decomposition by bacterial action.

The septic tank, used with a subsurface drain field, is considered the best way of disposing of sewage where public sewers are not available. Contrary to popular belief, septic tanks are not used to remove disease-producing bacteria from the sewage. They simply separate the solids from the liquid, so the liquid can be disposed of by filtration into the soil. Since solids are retained in the tank, the tank should be large enough so that removal of sludge does not become a problem.

The materials used to build a tank should resist corrosion and decay and should be established a minimum distance of 5 feet from any building. It should be located where there is adequate area for the disposal field.

The size of the septic tank should be based on the maximum daily flow of sewage, a retention period of about twenty-four hours, and adequate sludge storage.

There is little need for partitions, baffle walls, or connecting pipes from various chambers in the tank itself. These simply add to cost and reduce the efficiency of the tank by decreasing sludge storage capacity. They also increase the velocity of flow, which in turn interferes with sedimentation.

Where a large septic tank is used, dosing siphons may be

needed. They are used to flush out the various lines in a disposal field at frequent intervals.

The septic-tank cover or slab should be designed to support a dead load of 150 pounds per square foot. When constructed of concrete, the slab should be reinforced and about 4 inches thick and watertight. If it is constructed in one piece with the tank, it should have at least one manhole cover.

Septic tanks are easy to maintain. With ordinary use, the average septic tank should be cleaned only every two or three years. It is a good idea, though, to inspect the tank every twelve to eighteen months to check the depth of accumulated sludge. Septic-tank sludge may contain disease-bearing bacteria, so it should be disposed of by burial or by other methods approved by the health department.

Distribution Box

A distribution box is a chamber into which the septic tank discharges and from which sewage enters the disposal field. The drain tile from the disposal field is fed through the distribution box, which equalizes the sewage flow in all lines. It also serves as an inspection manhole.

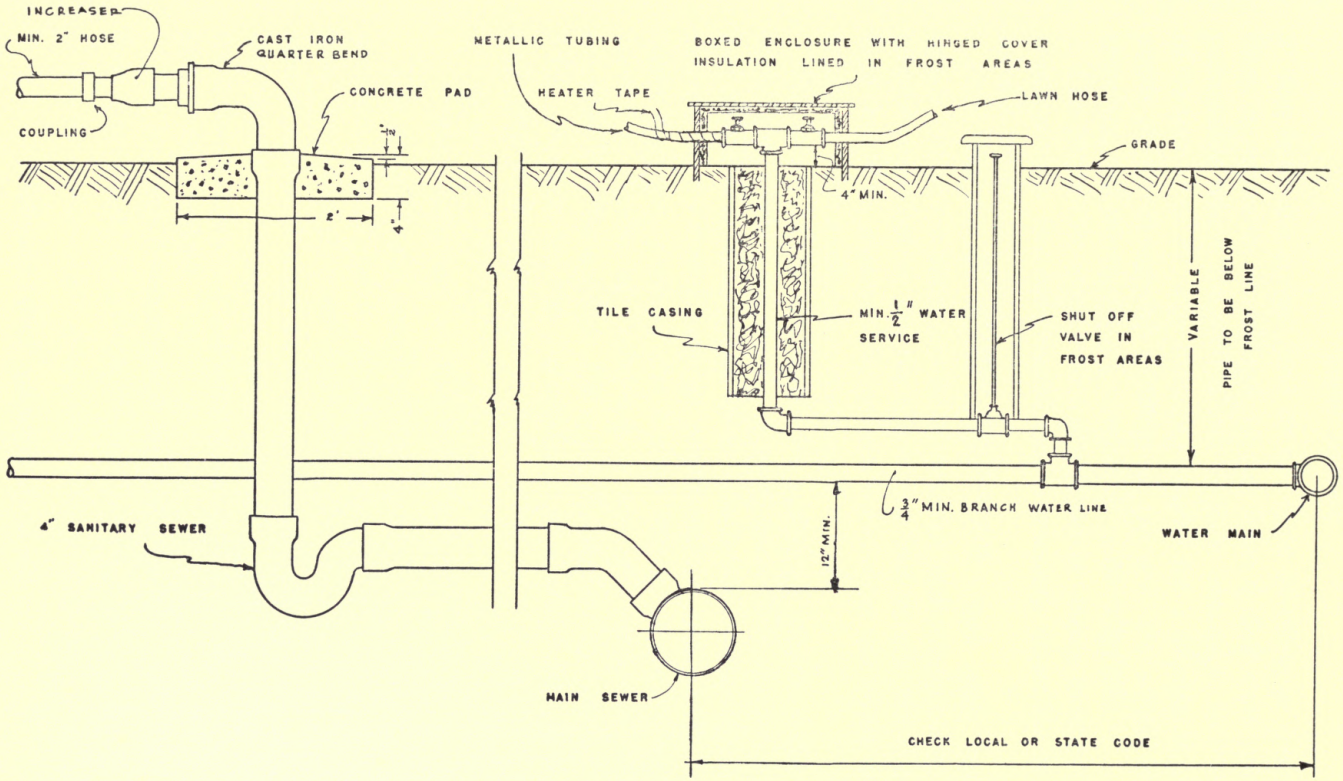
The distribution box is located at the upper end of the drain field and is connected to the septic tank by a short sewer line. The box should extend about 12 inches above the inlet pipe and should have a removable cover. Drainage lines should run in straight lines wherever possible. Horizontal bends should be avoided but, when necessary, should be made with tight joints.

The box need not be more than 18 inches in width nor longer than is necessary to accommodate drains for effective outlet capacity. Diversion baffle boards are advisable in public installations because individual lines can be shut off for repairs when they become water-logged.

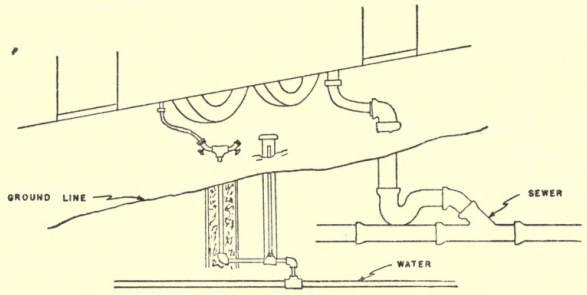
Disposal Field

A disposal field is an open-jointed system of pipe through which sewage fluids are distributed for absorption into the soil.

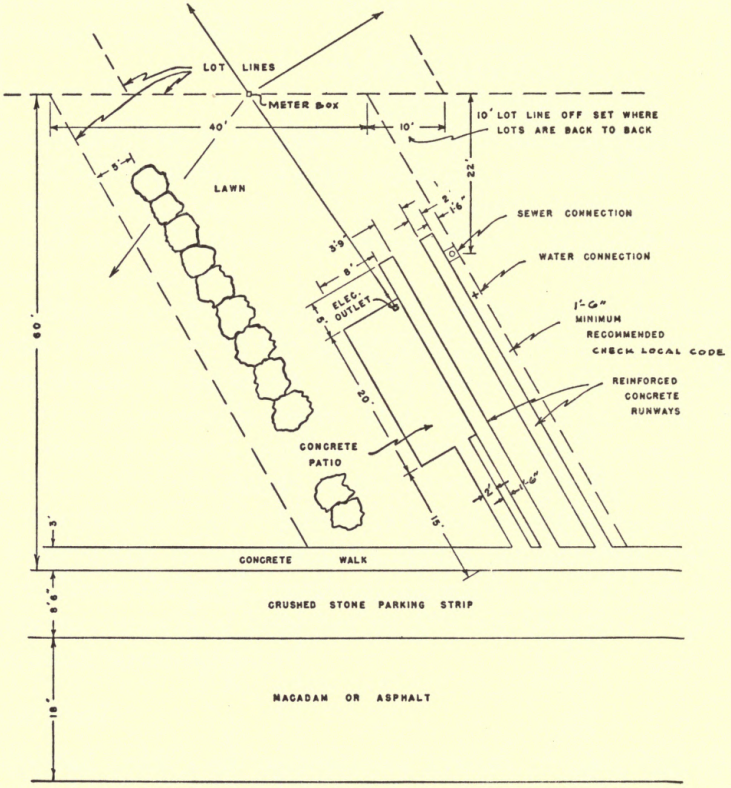
Disposal fields should be at least 100 feet from any water well,



Mobile-Home Sewer and Water Connection



Sewer-Water Connections



Lot Diagram Showing Outlet Locations

25 feet from any stream, and 10 feet from dwelling or property lines. A minimum distance of 50 feet from drilled wells may be permissible where the well casing extends watertight to a depth of 50 feet or more. The footage required for a disposal field depends on the absorptive qualities of the soil, the width of the trenches, and the maximum number of persons served.

The permeable quality of the soil can be determined by percolation tests. But local health authorities can generally supply reliable experience data.

Drain-tile sections should be spaced ¼ to ½ inch apart, and the upper half of the joints should be covered with a strip of asphalt-treated paper before the tile is covered. All lines in the disposal field should be separated by at least three times the width of the trenches, with a minimum spacing of 6 feet.

The grade of the tile should be within 18 inches of the surface, except when the depth of cover must be varied to obtain and maintain an even grade. If the total depth of the field lines exceeds 30–36 inches, seepage pits should be considered. In extreme northern parts of the United States, where the ground freezes to depths of 5 and 6 feet, specially designed disposal trenches may be needed. To avoid placing the tile deeper than 3 feet, the trenches may be excavated to a point below frost line and filled with coarse gravel.

RECOMMENDED MOBILE-HOME SEWER CONNECTION

The mobile-home sewer connection shown in the illustrations is recommended by the Mobile Homes Manufacturers Association. Note that all individual sewer risers are trapped and sealed against undesirable odors. Since the frost line varies with different parts of the country, the trap may be set higher or lower to meet this condition. Drainage should be away from the mobile home when parked.

The locating dimension for the sewer outlet (in a 40 by 60-foot space) is 22 feet from the rear lot line, as illustrated.

CHAPTER 7

Water System

An adequate supply of safe water is needed to service each mobile home in a park. Where public water is available, its treatment will usually meet the requirements of local health officials. Where no public supply is convenient, a private supply that conforms to health regulations must be developed.

Besides the problem of health protection, you must decide how water will be provided for lawn-sprinkling and car-washing. The consumption of water per mobile-home space may increase from 125 to 250 gallons a day if the same water system is used for lawn-sprinkling and other purposes.

Double water lines can be installed where artesian wells are available—one for use by the mobile-home occupants, the other for general use throughout the park. The wells that supply water for the mobile homes can be equipped with pumps and expansion tanks, while the water-sprinkling system can be operated directly from well pressure. Booster pumps can be used where natural pressure is too low.

So study the water problem with care. You may save money on an initial installation, only to find that your operating costs are prohibitive. A greater initial investment, on the other hand, may provide more water at less cost later on.

FACTORS TO CONSIDER WHEN INSTALLING A WATER SYSTEM

The first step is to figure the maximum water demand of your park. Table 2 gives the estimated maximum water demand, based on the number of spaces.

Remember, however, that water pressure means little unless volume is considered. For this reason the size of pipe should be carefully determined in advance. Keep in mind future expansion as well as current needs. Remember, too, that a 2-inch pipe will

deliver four times as much water as a 1-inch pipe because *cross-sectional area increases as the square of the diameter.* This simple relationship is often overlooked, resulting in an inadequate supply of water. When small pipes are used, the volume of water must be obtained by increasing water pressure. This, however,

TABLE 2

ESTIMATED MAXIMUM WATER DEMAND FOR TRAILER COURTS

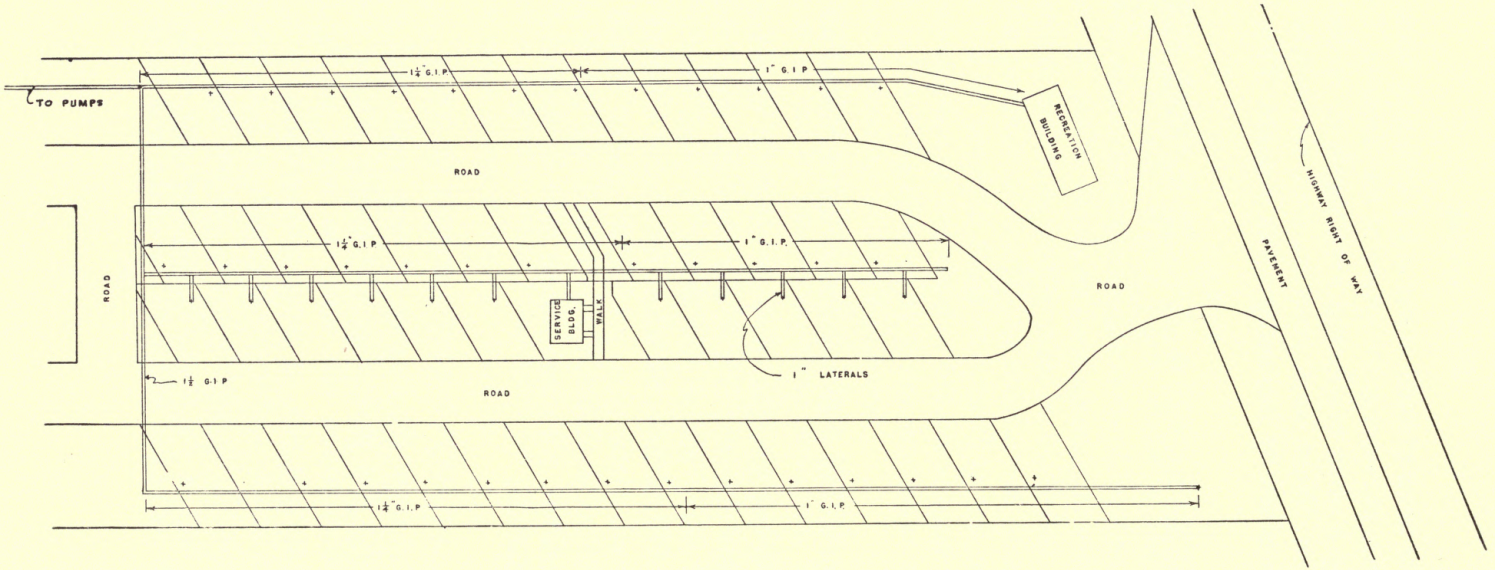
Number of Coach Spaces	*Number of Fixture Units*	*Demand Load (GPM)*
25	150	55
50	300	85
75	450	115
100	600	145
150	900	195
200	1,200	235
250	1,500	270
300	1,800	305

may lead to broken hose connections and increased wear of the pumps.

Pay particular attention to your choice of materials. Where corrosion is a problem, as it is near salt-water areas, treated galvanized or heavy plastic pipe should be used. Plastic pipe has been improved to the point where installation is simple and long life is assured. Metal pipe, preferably copper, should be used above the frost line so electrically heated tape can be applied in freezing weather. All pipe material must be approved by local health authorities.

LOCATION AND DEVELOPMENT OF WELLS

Be careful about the location of your wells. *Pick a point of high elevation* and make sure that neither surface nor underground contamination can enter the water supply from pit privies, subsurface pits, or septic-tank systems. Safe distances should be determined after checking with the local health officer; but wells should generally be located not less than 100 feet from any septic tank or less than 150 feet from any cesspool. Sewer lines should not be laid within 50 feet of the well, unless specially


TO PUMPS
1¼" G.I.P.
1" G.I.P.
RECREATION BUILDING
ROAD
1¼" G.I.P.
1" G.I.P.
ROAD
SERVICE BLDG.
WALK
1" LATERALS
1¼" G.I.P.
ROAD
1¼" G.I.P.
1" G.I.P.
ROAD
PAVEMENT
HIGHWAY RIGHT OF WAY

constructed. The minimum depth at which safe water can be obtained varies with soil formations and local conditions but should never be less than 10 feet.

PUMPING EQUIPMENT

No pumps, well casings, or suction pipes should be located in any pit, room, or space extending below ground level or in any room or space above ground which is walled in or otherwise inclosed, unless it has free drainage by gravity to the surface of the ground. A sanitary seal should be provided for the annular space between the drop pipe and the casing. Pump-room floors should be of impervious construction and should slope from the pump pedestal to the floor drain. The floor drain should not be connected to a sewer or to any pipe in which sewage may back up. The floors of rooms above ground should be at least 6 inches above the outside ground surface, and in every case the pump pedestal should extend at least 12 inches above the floor.

STORAGE

There should be sufficient storage capacity in the system to assure an adequate supply of water at ample pressures in all parts of the system at all times. Where the trailer-court system is connected to a public water supply, storage facilities may not be necessary. Storage reservoirs should be located above groundwater level and in such a location that surface water and underground drainage flow away from the structure. All reservoirs should be constructed of a permanent, watertight material and should be covered.

DISTRIBUTION SYSTEM

A park water system should supply 6–8 gallons per minute at a minimum pressure of 20 pounds per square inch to each mobile-home outlet. An upper pressure of about 40 pounds is customary.

The Mobile Homes Manufacturers Association recommends that water outlets for coaches be located as illustrated on pages

67 and 68. The underground connection is also shown. This gives a neat connection and a short run to the coach outlet.

The connection coming up from the ground should be a minimum of 4 inches above the surface and have two ¾-inch valved outlets. Check valves should not be installed on the riser, because a hot-water tank without a pressure relief valve may explode if the water cannot back into the system.

The outlets should be threaded so that a connection can be made from one outlet to the mobile home, leaving the other for lawn-sprinkling and fire control. The ground around the riser pipe should be graded to divert drainage away from the connection.

In cold climates the riser should be encased in 6-inch vitrified clay pipe, with the intervening space filled with insulation. When the coach space is unoccupied during cold weather, the outlet should be protected from freezing by a heater tape connected to the court's electrical system or by drainage of the pipes.

DISINFECTION OF THE WATER SYSTEM

When they are first installed—or repaired—wells should be disinfected with a chlorine solution recommended by the local health officials. The chlorine should remain in the well for 12 hours or more, after which the pump should be operated until the water is free of chlorine odor.

The expansion tank or reservoir, the water-distribution system, and the piping in all buildings should also be disinfected. The entire system should be filled, and all taps and mobile-home outlets should be opened until the chlorine odor is noticeable in the water coming through. All outlets should then be closed and the solution allowed to remain in the system for 12 hours or more, after which the system may be flushed with water from the wells.

A bacteriological sample should be taken and tested to determine whether the water is free of contamination. Disinfection must be repeated where necessary.

INSPECTION AND MAINTENANCE

A park's water supply system should be approved by the local health officer before and after it is placed in operation. Samples of the water should be collected periodically and tested for unwanted organisms.

SUGGESTIONS FOR INSTALLING METAL WATER PIPE

Certain precautions should be taken when laying water pipes. They should not be laid in water, nor should they be flooded by water or sewage during the laying process. Dirt or other contaminating materials should be kept out of the pipe, and all water pipes should be disinfected before they are placed in service.

Installing the pipe itself is comparatively simple. Galvanized or black pipe comes in 21-foot sections, with a coupling at one end. The male end is brushed clean of dirt prior to being joined with a coupling from another section of pipe. Before being joined, however, pipe compound is placed on the male threads to make the connection watertight and easy to remove later on.

Various fittings are available, like T's, L's, unions, reducers, risers, hose bibs, and valves. A catalogue of fittings will help you recognize them and their functions. Such fittings are used to make bends, to install risers from underground lines, to shut off the water system for repairs, and so on.

You can save money by installing your own water system. And, with some practice, you'll be able to put in hundreds of feet a day. Contracting out a water system is expensive because of the retail price paid for the pipe and the labor cost of installing it. If you do your own work and buy pipe wholesale, you can realize a savings of as much as 30 per cent. If you contract the job out, however, it is still a good idea to know how to install pipe, because you may be called on to do emergency repair work.

CHAPTER 8

Electrical System

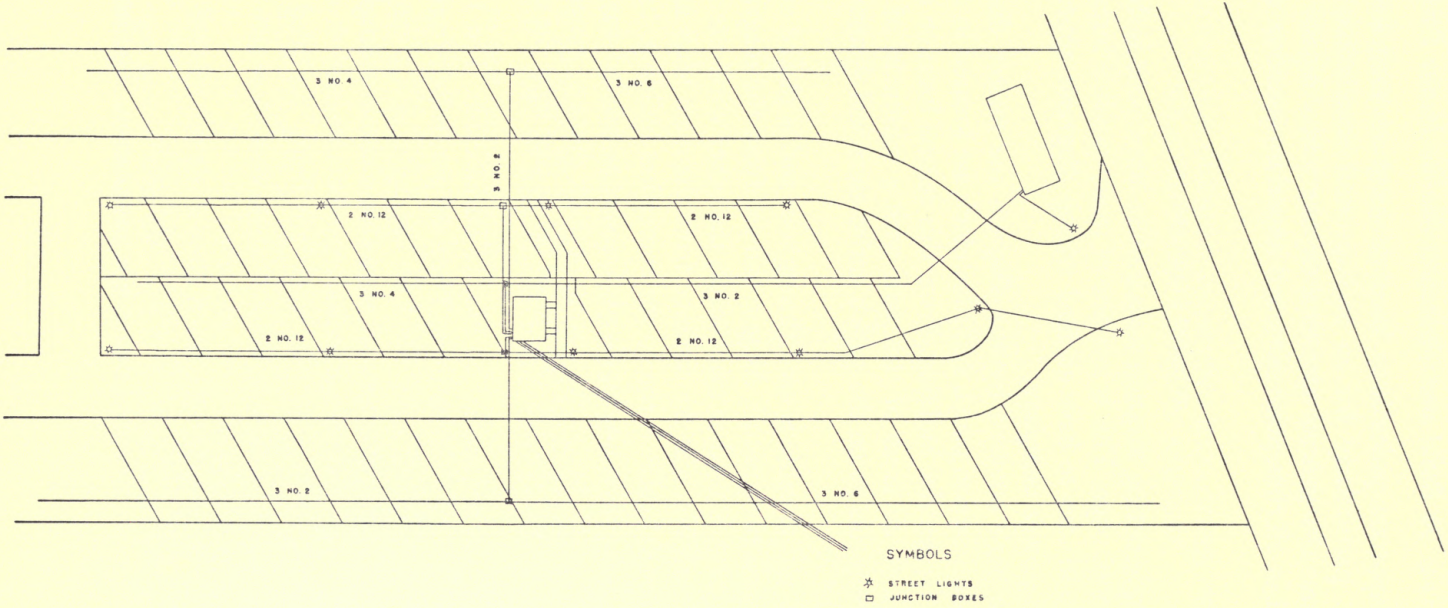
Modern mobile homes are large, luxurious, and come equipped with electric refrigerators, garbage-disposal units, television sets, washing machines, air conditioners, toasters, water heaters, and fluorescent lights. Mobile homes, therefore, use about as much electricity as a house.

An undersized electrical system in a park makes mobile living inconvenient, since trailerists have to turn off some of their appliances when others are in use. All modern parks have heavy-duty electrical wiring—and they publicize it in their promotional program.

There are other items to consider when making your electrical installation, such as street lighting, timing switches, separate disconnects for repair purposes, and meter boxes with tamperproof lids. You must also provide for future expansion or soon find your main and secondary leads from the power source undersized. It is a good idea to provide 220-volt, three-wire service to each space for use of air conditioners or other heavy electrical appliances.

Although it is more costly to install, underground wiring of the direct burial type is generally preferable to protruding poles and overhanging lines. Overhead wiring often gives a cluttered appearance but is justified when an underground system cannot be used.

When underground wiring is installed, wire one size larger is used than when overhead wiring is involved because voltage drop is greater. Moreover, direct burial cable must be placed at least 2 feet or more underground to avoid mechanical injury. So, when repairs are needed, they are usually more costly. On the other hand, there is little danger of storm or wind damage, and the need for poles, insulators, and so on is eliminated.



Sample Wiring Diagram

An important point is to keep on hand an accurate wiring diagram, particularly for an underground installation, so you will know the general electrical layout when repairs are required. List all runs, wire sizes, and important junction and feed points.

WIRING DIAGRAM

A sample wiring diagram for a mobile-home park is shown on the previous page. This is just one of many possible installations. It is a good idea to have all final wiring diagrams approved by the local power company.

In the park covered by the diagram the master disconnect switch, distribution panel, and time clock are located in a locked room of the service building. From this central location electricity is fed to all areas of the park with a minimum of voltage drop. From this room the park's entire electrical system can be controlled.

Direct burial cable is used throughout and is placed at least 2 feet beneath the ground. As you can see from the diagram, No. 2 burial cable is used as main leads; the other wires are reduced to No. 4 and No. 6 as the distance from the main leads increases.

No. 4 burial cable is run to the recreation building, because a variety of facilities are involved. Current is needed for regular lighting, electric hot plates during potluck dinners, general store and grill use, and the 300-watt flood lamps that light the entrance to the park.

Street lights are carried on No. 12 burial cable. Ten 100-watt bulbs are carried on these lines. They are controlled from a time clock which automatically turns on the lights at a given time in the evening and shuts them off at twelve o'clock midnight.

Used light or telephone poles may be obtained from local utility companies at the time they are being replaced. Check with your local company, and you may be able to get some of these poles.

The accompanying tabulation shows the amount of current recommended for various sizes of burial cable.

Plate 9 shows a typical meter-box installation. The box cover

is locked, preventing children or others from tampering with electrical connections.

This MHMA design requires underground conduit and buried wire from the meter box to the patio (see p. 80).

ALLOWABLE CURRENT-CARRYING CAPACITIES OF INSULATED CONDUCTORS IN AMPERES

Size AWG MCM	*Rubber Types R RW RU RUW (14–2) Thermoplastic Types T TW*	*Rubber Type RH*
14	15	15
12	20	20
10	30	30
8	40	45
6	55	65
4	70	85
3	80	100
2	95	115
1	110	130

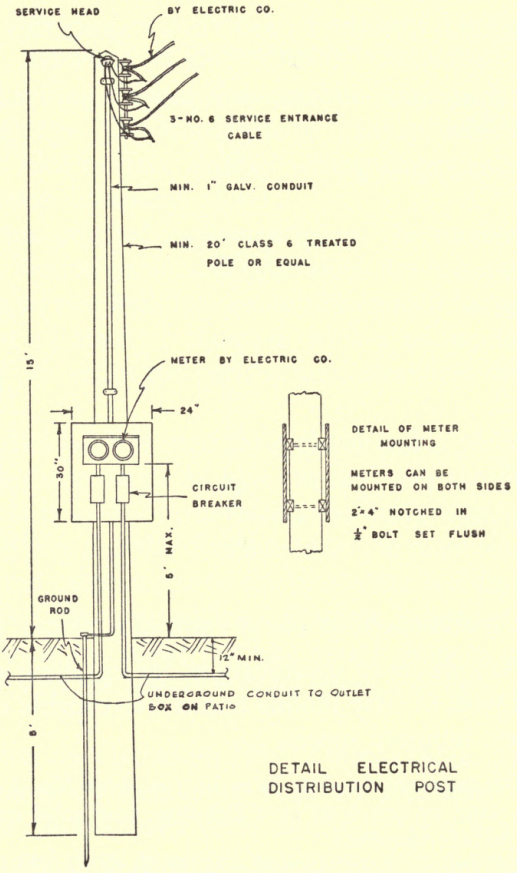
SAMPLE SPECIFICATIONS FOR A PARK ELECTRICAL SYSTEM

Here is a sample set of specifications for installing an electrical system for a park of fifty mobile homes but capable of being expanded to one hundred spaces.

Service.—The main service line is to be run with No. 2 wire in rigid conduit. The main switch is to be a 200-amp. fuse solid neutral disconnect switch, surface-mounted.

Feeds to each mobile-home station.—All feeds to mobile-home stations are to be installed according to plan, and no deviation is permitted. All cable and wire are to be trench-laid, park-way cable or direct burial type. Trenches must be at least 18 inches deep.

Meter stations.—Each station is to have junction boxes buried 18 inches deep, with 1-inch conduit leading to meter housing boxes and No. 8 wire feeding the meters. Splicing in the junction box should be made with split wire connectors and insulated with adequate turns of varnished cambric tape painted well with glytol. Junction boxes are to be filled with insulating compound and tightly covered.



DETAIL ELECTRICAL DISTRIBUTION POST

The main feeds to each row of stations should be switched and fused with 100-amp. 220-volt solid neutral disconnect switches. The meters are to be connected with alternate sides of a 220 circuit to balance the load as nearly as possible.

Meter housing cabinets are to be mechanically grounded and neutral wire grounded to the water pipe at each station.

Street lighting.—All lighting circuits are to be installed as shown, using direct burial wire. Rigid galvanized conduit is to be run from the junction boxes to the weatherhead on the light poles. The lighting will be on two circuits, properly fused and switched. Circuits will be controlled by time clocks.

Conditions.—All meters, fixtures, and labor for the entire electrical installation will be furnished by the contractor. The contractor will furnish posts for meter stations and do all trenching.

The owner will furnish light poles and meters.

CONCLUSION

Once installed, an electrical system is difficult to change. It pays, therefore, to plan on the side of heavier installations. This is particularly true when underground wiring systems are used.

Get all the local technical assistance you can. And, by all means, keep in mind future expansion. This will help you decide on the sizes of wire to use and will assure your guests a sufficient amount of current at all times. As mobile homes get more complicated in electrical equipment, there will be an increased power-use factor over the years.

By planning for the future, you will avoid ending up with an obsolete park.

CHAPTER 9

Building the Roads

Good roads are essential, since mobile-home parks must accommodate heavy traffic. Many parks are obsolete today because their roads are not wide enough nor durable enough to handle the mobile homes being produced.

The width of roads determines how cars will be parked. In older style parks, cars are parked right on the lot alongside the mobile home. This destroys landscaping, particularly after heavy rains, and increases fire hazards.

The Mobile Homes Manufacturers Association recommends road widths of 35 feet, with a hard-topped center of 18–20 feet. Cars may then be parked on either side of the hard-topped roadway.

The parks illustrated in Plates 1, 2, and 3 have excellent road systems. The roads are wide and hard-surfaced, and the park's "entrance neck" is designed to slow down traffic to the recommended speed of 5 miles per hour. Other parks make use of specially designed bumps in the road.

GRADING AND LAYING OUT THE ROADS

Grading and preparing the subgrade are the most critical parts of road construction.

Roadways should be staked out and grade-marked in advance, so the blader can cut the proper contour of the road. It is by no means simple to get proper turning radii and gradual sloping curves, so roads should be laid out with the help of an engineer or road-builder. Turns should be limited to 90 degrees wherever possible.

After the roadway has been staked out, you must decide on the depth and type of subgrade material and grade accordingly. The amount of fill needed depends on (1) the amount of money

you want to put into roads; (2) the type of fill used; and (3) whether hard-surface roads are involved.

The depth and type of fill will depend largely on the area in which you locate. Different kinds of road materials are used in different parts of the country. Where gravel is available, gravel or macadam roads are popular. Where shell and marl are native to an area, roads are made from marl and topped with shell. Where asphalt is readily available, you'll find roads made from gravel, marl, or crushed stone and top-dressed with asphalt. It is always more economical to use native materials, since freight charges and handling are reduced.

Few mobile-home parks have complete concrete roads, because they are comparatively expensive. Many do have asphalt roads, which are easy to repair and capable of carrying heavy traffic.

When building the roads, keep in mind the runways for your mobile homes. A mobile home has to leave the road when it is parked next to a patio; where the natural ground only is used, large mobile homes usually get stuck *backing in* or *pulling out*. You can eliminate this problem by blading out and filling in the runways when you're doing the roads. Or the concrete runners can be used, as shown on page 68.

SUGGESTIONS ON CONTRACTING ROAD WORK

When awarding a road contract, specify in detail the amount and kinds of materials to be used. Try to get a fixed-price bid rather than one based on time and material.

After awarding the contract, check on the depth of fill to be sure you're getting your money's worth. If you contract for 6 inches of fill and get only 5, you're being short-changed 16⅔ per cent. To check for uniform depth of fill, bore small holes at various places on the road and measure the thickness with a scale.

If you're going to act as contractor—that is, hire machines and operators and buy materials yourself—check each truckload of fill to make sure you're getting what you pay for. You can number each truck with a piece of chalk; measure the length, width,

and depth of its body; and record its cubic-yard capacity in a little notebook. Then, as trucks come in with materials for the road, check off their number in the notebook and mark down the number of hauls. You can total up the cubic yards at the end of each day and figure the daily material cost.

Another way to insure the proper amount of fill is to measure the depth of cut made by the blader at the time the roads are graded. Then, hose down the subgrade with water and remove all ridges of sand or dirt. This is important, since mounds or ridges of sand or dirt creep to the surface and eventually make road repairs necessary. *A road is no better than its subgrade,* so smooth it out along its entire length.

Watch the crown and slope for drainage. If the ground has been prepared correctly, there should be a gradual slope, permitting drainage after a rain. But, if this slope is too steep, road materials will wash away—particularly if roads are not hard-surfaced. On the other hand, dips and flats in a road will hold water and present a messy appearance after a rain. A crown in the road will drain water into the edges of the road, so gutters and curbs are good to have. Where the soil is quite permeable, as in sandy areas, they may not be needed, and the money saved can be used for other park improvements.

Ready-mix concrete companies furnish their customers a "concrete calculator" for figuring the cubic yards required for any given job. This type of calculator also can be used for making estimates of the cubic yards of road fill. Get one and keep it handy.

Here's a word of caution. If you hard-top the center of your roads, make your specifications as detailed as possible and get at least three bids. Asking a contractor to hard-surface your roads means nothing, unless you specify the kind of fill, the depth of subgrade, the depth of penetration of the asphalt coating; whether it is going to be a regular road mix or seal coat; and so on. If, for example, a contractor picks up 3 inches of fill and shoots it with asphalt and rolls it, the bid will be considerably higher than if he picks up only 1 inch and shoots it and rolls it. Yet the surface will look the same in both cases. If he picks up 3 inches and

top-dresses it with pebble stone or other surface material, it will be more expensive still. So be specific when you ask for a bid on road work.

CONCLUSION

It is hard to give a reasonable figure for building roads for a mobile-home park because so many different materials and methods can be used.

The best advice is to make sure the roads are wide enough, properly sloped and graded, and based on suitable fill. If you do not hard-top immediately, make sure the road's basic construction will permit you to do so later on.

Do the mobile-home runways when you build the road, since it is easier at that time and more economical.

CHAPTER 10

Patios, Sidewalks, and Shuffleboard Courts

Patios, sidewalks, and shuffleboard courts are essential in an up-to-date park. Consequently, a considerable amount of cement forming and finishing will be required when your park is built.

Patios, sidewalks, and shuffleboard courts should be not less than 4 inches thick and should be reinforced with wire mesh to prevent cracking. When patios and sidewalks are finished, periodic joints should be struck to prevent cracking through the solid face of the concrete. Expansion joints are also worth while.

Some park operators like to color or tint the concrete. Where this is desired, coloring can be dusted onto the top quarter-inch at the time the finishing is done.

PATIOS AND SIDEWALKS

A concrete patio serves as a front porch, whether or not awnings or cabañas are used. Your park will be most successful, therefore, if every space has a patio.

Standard patio size is 20 by 8 feet by 4 inches, but many park operators prefer larger sizes to accommodate cabañas or large awnings. Patios are "slick" finished in some areas, but a "broomed" finish may be desirable where snow or ice prevail.

When sidewalks and patios are installed at the same time, they can be formed and finished as one unit. Standard forms can be used, made from suitable metal strips, or the best grade of straight-edge lumber. The sidewalk is then an integral part of the patio (see p. 68).

When patios and sidewalks are laid out, drainage should be away from the mobile home when parked. Water should not drain toward the mobile home.

Laying Out Patios

Patios can be quickly and accurately laid out by two men working with metal or cloth tapes. After the first patio in a row has been satisfactorily located, the four corners can be set with wooden dowel pins. Using these as reference points, one man can run a tape from one space to another, while the other man holds the center of each pin. A regular square can be used on the corners, after which diagonal readings can be taken to make sure the patio is setting square.

If a transit is available, as well as a person to operate it, all four edges of the first patio can be extended with the aid of the instrument. As one man "sights" through the transit and gives a straight line, the other man runs a tape and accurately locates all patio edges in a given row. It is important, therefore, to get the first patio exact.

Forming and Finishing a Patio

The preparation of sidewalks and patios is similar to any concrete pouring operation. The ground should be watered down until it is free of all ridges. Check the center of the formed area to make sure there are no convex surfaces to cut down the thickness of concrete and weaken the patio. Sections of wire mesh should always be overlapped at least 6 inches.

By using the regular concrete calculator previously described, estimate the amount of concrete needed for any given patio. A patio 20 by 8 feet by 4 inches, for example, takes about 2 cubic yards of concrete. Overlaps in concrete patios are not desirable, so try to order the right amount of concrete.

Get a good grade of concrete and don't pour it too wet; otherwise, it will weaken upon setting. Make sure the cement-finisher uses an edging tool and gives the patio a neat, rounded edge that will not chip or break easily. Have him strike joints cleanly. Sidewalks should have expansion joints about every 30 feet and should be struck every 4 feet. Keep all patios and sidewalks from setting too quickly by watering them down for several days.

After the patios have been finished, specify in your rules and

regulations how holes will be drilled for anchoring awnings or cabañas. Such holes are made by the use of specially hardened drills. A park resident should get your permission to make any necessary holes, should use the proper kind of lead lag liner, and should make a neat screw insertion. Patios are easily mutilated if a person tries to do it in some other way.

Keep cars off your patios! Unless you make it a definite rule not to park or wash cars on patios, someone will unconsciously do it. Patios are not designed for auto traffic, and edges can be easily broken off.

SHUFFLEBOARD COURTS

Shuffleboard is a popular game in mobile-home parks. It is played in most southern parks and is now invading our northern parks.

Building a shuffleboard court is comparatively easy, although the accuracy of forming and finishing is greater than for patios or sidewalks. Be extra careful when preparing the subgrade for a shuffleboard court. Use both wire mesh and felt.

The surface of the shuffleboard court must be *smooth* and *level* in all directions. No slope for drainage is allowed, because the disks used in shuffleboard would slide off the court.

Shuffleboard courts can be made longer than the playing area, so people can stand at either end. In areas where people play in the sun, canopies and benches are often provided.

CONCLUSION

Because a mobile-home park requires a considerable amount of forming and cement finishing, it is a good idea to estimate all such work and drive the best possible bargain with a ready-mix plant and masonry contractor.

Although cement-finishers seem expensive on an hourly basis, it is a mistake to get a cheap cement-finisher who does poor work. Oftentimes, the amount paid per hour is deceiving, since a qualified finisher can cover a larger amount of surface area with better-quality workmanship. Wherever possible, therefore, get a price per square foot of area formed, poured, and finished.

By contracting out all your cement forming and finishing, you can get a better price, since the contractor can depend on a certain amount of work over a given number of days rather than making trip after trip to pour one or two sidewalks or patios. If you get a fixed-price bid on labor for each patio and sidewalk combination, you can order the concrete and pay separately for the labor. Where the cement-finisher furnishes the forms and does the forming, check the forms to make sure they're in good condition. Patios that are out of line do not present a good appearance and make it hard to square-up cabañas when they are installed.

CHAPTER 11

Buildings in a Mobile-Home Park

When you start your mobile-home park, you can be quite flexible about the number and sizes of buildings.

RECREATION BUILDING

In the North it isn't so essential to have a recreation building as in other parts of the country where you cater to resort or retired clientele. You can set aside a recreational area but need not construct a recreation building. The trend, nevertheless, is toward a recreation building, since people prefer it when they live in a park for long periods of time. See Plate 10.

There are compensating factors, too. A recreation building can be self-liquidating by incorporating a park office and store.

If your park is some distance from a shopping area, a small store may be an excellent addition. If it handles grocery items—together with soft drinks, candy, cigars, cigarettes, notions, cosmetics, and a small grill—it can be made to carry the entire overhead of the recreation building and may even make a contribution to net income.

Part of the recreation building can be used for offices and storerooms. This will provide much-needed space for tools and supplies. A washroom can be installed in the recreation building, but check your state laws, since some states *require two washrooms* (men and women)—or *none*. If capital is limited, rough in the plumbing and put in the fixtures later on.

The main recreation room should be designed without interior obstructions, since it will be used for movies, square dancing, and potluck dinners—all of which require a large amount of open area. See Plate 11.

Acoustical materials are desirable, since sound bounces off bare walls, making it hard to hear.

Lighting should be fluorescent to provide good light distribution as well as to reduce power consumption. And, to amortize the building and its upkeep, make the greatest use of coin-operated machines in the recreation room—such as soft-drink, candy, and cigarette dispensers.

Some parks install mailboxes in the recreation room, making a daily mail call on their public-address system. Other parks have private mailboxes. A simple, alphabetically arranged community mailbox can be made from plywood and attached to the wall of the recreation room.

SERVICE-LAUNDRY BUILDING

The service building is the most important single structure in a mobile-home park. When trailerists check a park to decide whether they want to stay, the service building is probably the first thing they look at. If the building is well designed and neat and clean, they usually stay on to see whether they're going to like the management. But, if the service building is not appealing, they pull out or just stay overnight. See Plate 12.

A well-designed service and laundry building is illustrated. The building is 25 by 50 feet, built of Spanish plaster with stainless steel, glass block, and red trim. Putting both facilities in one building allows you to centralize plumbing and heating and to reduce the roof area and the number of outside walls. See Plate 13.

The Mobile Homes Manufacturers Association has an approved design and floor plan for service buildings. It is intended as a basic guide to prospective park operators and points up the features that other designs should incorporate. Architecture, materials, heating, and ventilation will vary with the park's location. But the number of washing machines, showers, and toilets will remain substantially the same.

A washing machine for every 20 spaces will guarantee amortization of equipment and will give adequate service without presenting scheduling problems. A blackboard, however, should be placed in the laundry, so women can write their names opposite the day and time they want to use a machine.

All rooms in the building should be designed for ease of clean-

ing. This usually implies terrazzo or tile floors, tile showers, and easy-to-clean window sills.

Where extreme heat is needed, centralized heating is preferable. Check into the most economical and efficient form of heating for the locality in which you locate.

Finally, ventilation is an important factor and should be given serious consideration.

Landscaping can make a drying yard quite attractive.

The general requirements for service buildings are as follows:

1. Each trailer court should be provided with one or more service buildings adequately equipped with flush-type fixtures. No service building should contain less than two toilets for females, one toilet for males, two lavatories and one shower for each sex, a urinal for males, a laundry tray, and a slop-water closet. To serve more than twenty dependent trailer coaches, additional fixtures should be provided in the ratios mentioned below.
2. Toilet facilities for females should consist of at least one flush-type water closet for every ten dependent trailer coaches; toilet facilities for males should consist of one flush-type water closet or urinal for every ten dependent trailer coaches. Urinals should be substituted for not more than one-third of the toilet fixtures required for men. Each water closet should be in a private compartment.
3. Toilet facilities for males and females should be separated, if located in the same building, by a sound-resistant wall.
4. A lavatory for each sex should be provided for every ten dependent trailer coaches. A bathtub or shower for each sex should be provided for every twenty dependent trailer coaches. Each bathtub or shower should be in a separate compartment.
5. Laundry facilities should be provided in the ratio of one unit for every twenty trailer-coach spaces. Drying space in the ratio of 50 feet to each coach space, or other adequate clothes-drying facilities, should be provided to accommodate the laundry of the trailer-court occupants.

   A slop-water closet should be provided in a separate room in the service building. Each service building should:

   a) Be located not more than 200 feet from any dependent trailer coach and at least 15 feet from any trailer coach and 15 feet or more from any trailer-coach space;

   b) Be of permanent construction and be adequately lighted;

   c) Be of moisture-resistant material to permit frequent washing and cleaning;

   d) Have sufficient toilet and laundry facilities, according to requirements promulgated by the health officer, to serve adequately both males and females;

e) Have adequate heating facilities to maintain a temperature of 70° F. during cold weather and to supply a minimum of 3 gallons of hot water per hour per coach space during time of peak demands;
f) Have all rooms well ventilated, with all openings effectively screened;
g) Have at least one slop-water closet supplied with hot and cold water in a separate room.

HOBBY SHOP AND LATHHOUSE

Resort-type parks are now putting in hobby shops and lathhouses. These are good additions, particularly for semiretired and retired clientele.

Retired people like to do gardening and landscaping. If a lathhouse is operated as part of the park's landscaping program, cuttings can be taken from growing shrubs and started in the lathhouse until they are big enough to transplant. A small lathhouse is shown in the illustration. See Plate 20.

A lathhouse is easy to build and can be made from scrap lumber. Its basic function is to cut down the amount of sunlight, so small cuttings can take root for transplanting.

Larger parks in resort areas are also providing hobby shops for their retired clientele. These people stay for long periods of time, provided the park makes available diverting hobby and craft activities that capture their interest. Such activities include woodworking, ceramics, textile painting, clay-modeling, and other craft activities.

The hobby shop illustrated is 14 by 42 feet and is constructed of concrete block. The roof is aluminum sheeting. It contains a variety of woodworking tools as well as workbenches for people who paint or clay-model. See Plate 20.

Electricity is metered, and the clientele pay a membership fee for the use of tools. To minimize public liability, people are asked to sign waivers of liability in case of injury. The park also maintains adequate insurance coverage.

Storage lockers, available on a rental basis, can be included in the building to make it self-liquidating. See Plate 13.

The most complete mobile-home park, therefore, has the following buildings:

1. Service and laundry building
2. Recreation hall, with store, offices and storerooms
3. Hobby shop
4. Lathhouse

To start a park, however, you need only a service and laundry building and an office at the entrance to the park. If the office is properly designed, it can be made an integral part of a recreation building later on.

CONCLUSION

It is not practical to present standard designs for each of the buildings described. The MHMA, however, has available several drawings and specifications which may be the basis for designing buildings suitable to your park. Study them carefully and incorporate their good points in your building design.

If you intend to build a 50-unit mobile-home park for around $50,000, try to keep over-all building costs below $20,000. You have to equate the advantages of more elaborate buildings with the advantages of more income-bearing spaces. On the other hand, if you put all your money into income-bearing spaces, without suitable recreational or store facilities, you may end up with spaces you cannot rent. As in everything else, it is a case of *interdependence* and *balance*.

You alone must decide, depending on the area in which you operate and the kind of clientele you're going to have, *how many* and *what sizes* of buildings you're going to need. The minimum requirement is a modern service and laundry building and office—with adequate space for a recreation building if you decide to build later on. If you do not allow for it in your original plans, you may not have the land or right location later on.

PART III

Operating a Mobile-Home Park

CHAPTER 12

Before You Open for Business

You need blueprints before you start construction. You also need an operating plan before you open for business.

Generally, this means arranging for licenses, inspections, and insurance; providing for social security taxes and workmen's compensation; promoting and advertising the park; preparing an acceptable and effective set of rules and regulations; using finesse in handling clientele; and learning how to park and connect up a mobile home.

LICENSES, INSPECTIONS, AND INSURANCE

First, make sure you have paid the necessary license fees, have undergone the required inspections, and are covered by the proper kinds of insurance. Park owners eventually take care of these items, but the new operator is so pressed with other problems that he may overlook them.

You must obtain an operating license similar to a hotel or motel. If you're inside the corporate limits of a town or city, you'll need both city and state licenses. If you operate a park store, gas station, or mobile-home sales agency, separate licenses will be needed. Check into the licensing situation and make sure you're covered.

Be sure to become a member of your local or state mobile-home association. They will supply help and advice on many park problems. It is usually a good idea, too, to join the local Chamber of Commerce, since it sells your community to others.

The next step is to get all inspections out of the way. Get your sewer and water systems approved as quickly as possible. This is usually required prior to licensing.

Write to the Mobile Home Manufacturers Association, give them the necessary information on your park, and request a field

inspection as soon as convenient. Try to build a park that qualifies for a "Gold Star" rating. This will have an immediate effect on business, since people are always looking for a park that is rated "Gold Star" by the Mobile Homes Manufacturers Association.

Remember that about 60 per cent of the possible score depends on landscaping, cleanliness, and appearance. So keep this in mind when you landscape and maintain the grounds.

Also, take a close look at your insurance coverage. Do you have public liability insurance? Is its coverage broad enough and high enough to be practical? Are the buildings insured against fire? Have you comprehensive coverage? Are you liable for workmen's compensation insurance?

PROMOTING AND ADVERTISING YOUR PARK

Your park's success is going to be determined by the facilities and services you provide. If you give good service and provide clean and sanitary facilities, people will recommend your park to other trailerists, and your business will grow. This takes two to three years, however, so you should promote and advertise your park right away to start people coming in.

Some of the most effective ways to do this are:

1. Writing, phoning, or visiting the local paper and radio station
2. Using strategic highway signs and markers
3. Printing attractive park folders
4. Supplying picture post cards and personal cards
5. Advertising in mobile-home park directories and trailer magazines
6. Writing personal follow-up letters on reservation requests

Let them know you're in business.—When you open for business, pay a visit to your local paper and tell them about your plans. Do likewise with the local radio station. Usually, editors are more than glad to announce the arrival of a new business. Try, if you can, to place an ad about the same time, so you can hit the reader or listener with the kind of information you want him to have.

Highway signs.—From a map or extensive check of the surrounding area, pick strategic points on incoming roads where

signs can be placed. When using highway signs, look out for these pitfalls:

1. Don't try to put too much lettering on any one sign.
2. Make the letters big enough so they can be easily read.
3. Make sure the sign gives the park's location.
4. Emphasize the park's rating.
5. Give the park a distinctive name—one the average person can remember.
6. Use striking colors and fluorescent materials.
7. Make sure you've received permission from the property owner to place the sign, so it isn't torn down or removed.
8. Don't depend on one sign to do the job. Use a series of signs—or sequences—so trailerists who give a passing glance to the first one will not miss the second. Try to keep all signs similar in pattern and color, to build an association in the person's mind between your park and the signs along the road.

The MHMA has some excellent signs available at low cost, which all prospective operators ought to make use of.

Folders, post cards, and personal cards.—You can promote your park by a descriptive folder that presents the advantages of your park and the area in which it is located. If the folder is written in sparkling language and covers the features the average trailerist is looking for, it will bring people into your park. And, when they leave, let them take some printed folders along to give to others along the road.

Folders should be of such size that they can be inserted into a regular business envelope and preferably printed in two or more colors. Odd-size folders require special envelopes or must be folded several times to fit them into a standard envelope.

Besides a folder, it is a good idea to have colored post cards of the park for your clientele. They generally like to drop a card to their friends in other parks or in other parts of the country; and, in so doing, they give their friends a picture of your park and what it has to offer. Where the landscaping is striking, or where the service or laundry-room facilities are particularly modern, capture these pictures on the card. They will be your best salesmen.

Reservation correspondence.—Perhaps the most effective promotional material is the personal letter you write to people who

want to know about your park after they have seen your ads, signs, or listings.

Treat each letter as a personal item to be answered in detail. It is easy, under the pressure of daily problems, to drop a printed folder in an envelope and mail it. Or to jot down a few lines scribbled in handwriting and to mail it to a person who has asked for information.

It is far better to answer each letter in typewritten form, with a friendly, though not catering, tone of voice. Let the other fellow know you want his business; tell him about your facilities; and make him feel he's welcomed in your park. Do everything you can to write the letter in terms of what a trailerist is looking for.

You may think, and with justification, that this takes a lot of time. Yet, it is your best assurance that people will be favorably impressed and will come to see what you have to offer.

So, write each letter as though it is the last one you have to write. Take the point of view you're going to make this letter the best one you've written. If you do, many people are going to write back saying that they appreciate your taking the time to write such fine letters to them. Even if they don't visit your park, you can be sure they will pass along favorable recommendations to others.

Mobile-home park directories.—In your promotional work check the deadline dates of the various park directories. MHMA has a directory that comes out once every two years. More than 40,000 copies are distributed. Make sure you're included in the latest one, that you have been properly inspected, and that the rating given your park is part of the advertising copy.

If your ad is a large one, have an attractive layout prepared by a local advertising agency. Don't write the ad yourself, unless you have had experience doing so. A little money spent on making the ad effective is good business, since such ads run one to two years before they're revised. When the ad appears in proof form, check the proof carefully to make sure everything is correct—the address, phone number, directions, spelling, and other features that make for a hard-hitting ad.

These are some preliminary promotional ideas that may be of value to you. There are others you will think of; but, if you begin with these, you can expect results.

REGISTERING OF GUESTS

It is important that all guests be registered properly.

The registering of guests is required by law; but, equally important, it provides an opportunity to go over the rules and regulations with your clientele as well as a chance to do a good public relations job. First impressions are often lasting, so make the best impression you can.

If you design your own registration card, include the following information:

1. The names and addresses of all mobile-home occupants stopping in the park
2. The make, model, and license number of each motor vehicle and mobile home

3. The state, territory, or county issuing the mobile-home license
4. The dates of arrival and departure of each mobile home

Some park operators also use the back of the card for recording a person's hobbies, age, interests, and so on. This information is then used in their recreational and social programs.

A sample registration card is illustrated on page 103. It is typical of the many possible styles and has been widely used.

REFUSE DISPOSAL

When getting ready to operate, satisfactory arrangements must be made for storing and disposing of refuse.

Three practical methods are possible:

1. You can provide *centralized holders* with refuse containers. The containers can be set in underground holders. In either case, centralized containers should not be more than 150 feet from any mobile home.
2. You can furnish *individual refuse containers* and have them hauled away periodically or emptied into a garbage truck. Where this is the practice, be careful to keep debris from littering the ground. Also, inspect the containers frequently and clean and disinfect them to eliminate odor and bacteria.
3. A third possibility is to employ a *pick-up service* like the "*Dempster Dumper.*" This consists of a large receptacle with hinged doors, which is left at the park and exchanged for a new receptacle when the old one is filled. Since the receptacle is merely exchanged, there is no transfer of contents and no danger of spillage.

Regardless of which method you use, keep these points in mind:

- The storage, collection, and disposal of refuse should be so managed as to create no health hazards, rodent harborage, insect-breeding areas, accident hazards, or air pollution.
- All refuse must be stored in flytight, watertight, rodent-proof containers, which should be located not more than 150 feet from any mobile-home space. They should be provided in sufficient number and capacity to prevent any refuse from overflowing.
- Racks or holders should be provided for all refuse containers. Such container racks or holders should be so designed as to prevent containers from being tipped, to minimize spillage and container deterioration, and to facilitate cleaning around them.
- All garbage should be collected at least twice weekly. Rubbish should be collected frequently enough to prevent it from overflowing available containers. Where suitable collection service is not available from

XYZ TRAILER VILLAGE

NAME _____ (Last) (First) (Middle)

LOT NO. _____ STREET _____ PHONE _____

TRAILER _____ YEAR _____ MODEL _____ SERIAL NO _____

CAR _____ TYPE _____ TAG No. _____ YEAR _____ STATE _____

ADULTS _____ CHILDREN _____ MEN _____ WOMEN _____

TRAILER

Date in _____

Reg. No. _____

TERMS ☐ Monthly ☐ Weekly ☐ Daily

State _____

Tag No. _____

DATE	O	RENTAL		PERIOD FROM	PERIOD TO	LOCKER		UTILITY CR.				TOTAL CHARGES		PAYMENTS DATE	PAYMENTS RECEIPT No.	PAYMENTS AMOUNT		BALANCE	

municipal or private agencies, the mobile-home park operator should provide this service.

- Where collection service is not available, the mobile-home park operator should dispose of the court refuse by incineration, burial, or transporting to an approved disposal site.
- Garbage should be buried only at a place authorized by the health officer, and should have a minimum of 12 inches of compacted earth cover placed over it.
- Incinerators should be constructed only with approval of the state and local health officers. Such approval should be based on a review of the plans and specifications for such incinerators and approval of the site where they will be located.

FIRE PROTECTION

Be sure you make provisions for adequate fire protection. Here are some ideas to keep in mind:

1. The court area should be subject to the rules and regulations of the [name of political subdivision] fire-prevention authority.
2. Mobile-home court areas should be free of litter, rubbish, and other flammable materials.
3. Portable fire extinguishers of an approved type should be kept in service buildings and in all other locations and should be maintained in good operating condition.
4. Where a public water system is available, standard fire hydrants should be located within 400 feet of each mobile home.
5. Fires should be made only in stoves, incinerators, and other equipment intended for such purposes.

PREPARING EFFECTIVE RULES AND REGULATIONS

Operating a mobile-home park is easy, provided you get off on the right foot with your clientele.

A new operator is so anxious to make a success of his park that he may overlook the need for rules and regulations. As a result we find him making "deals" with some individuals and not with others. He may, for example, establish a rate schedule for one person and a different schedule for another. He may go overboard on taking in children and pets, allowing laundry to hang indiscriminately throughout the park, permitting spaces to be cluttered with unattractive debris, and so on.

Experience proves that trailerists are best satisfied when a definite set of rules and regulations, in printed form, is available for everyone to follow. If you're going to take in children, specify the circumstances. If you want to allow pets, de-

cide what restrictions you're going to have. If you're going to let people hang laundry on their spaces, ask yourself how the unattractive appearance of the park will affect the building-up of new clientele. If you allow people to speed through your park, how are you going to prevent injuries to children and others?

These are some important things to keep in mind. Among others, you must decide how you're going to handle phone calls; how phone calls will be paid for; the office hours you will have; how you will take care of emergency situations; how you're going to schedule the use of the washing machines in the laundry; and so on.

No one set of rules and regulations is going to work for all parks. You must, therefore, design a set of rules and regulations for your own park operation. They can be printed or duplicated in ditto or mimeograph form and made available to each park guest when he registers. A sample set of MHMA rules and regulations are included here for your information. These can be used as is or can be adapted to suit local conditions.

RULES AND REGULATIONS

GENERAL

1. All tenants must register at the office upon arriving in the park, and rents are payable in advance in accordance with the park rates.
2. All tenants should notify the management as far in advance as possible when planning to check out. Tenants must check out at the office for clearance before vacating the park.
3. No loud parties will be allowed at any time, nor will loud radios or other excess noise be tolerated.
4. Drunkenness or immoral conduct will not be tolerated.
5. No alcoholic beverages will be permitted to be served or consumed in any building which is park property.
6. It will be necessary to hold parents responsible for any damages caused by their children, and tenants of mobile-home space responsible for the conduct of their guests and pets.
7. No peddling or soliciting or commercial enterprise is allowed in the Park without first obtaining the consent of the management.

MOBILE-HOME SPACES

1. Mobile homes must be parked on each lot in a uniform manner, and upon arrival in the park the attendant will instruct the driver as to the proper position for parking and assist him if necessary.

2. The park attendant will make the necessary electrical connection to the meter or outlets, and the cord must be rubber covered and weatherproof. No occupant shall tamper with the meter box or other electrical equipment. In case of blown fuses, call the park attendant.
3. The park attendant will assist in completing the water and sewer connections if necessary. In no case shall the sink drain directly on to the ground, nor shall water be thrown onto the ground.
4. Fences around each mobile-home lot tend to make the park more attractive; however, they must all be a uniform 18 inches in height and painted, preferably white.
5. Lawns may not be dug up or disturbed without permission of the management, and any type of temporary or permanent building or masonry work must first be approved by the management, and, if approved, shall not be removed from the park without permission of the management.
6. Each mobile-home space must be kept neat and clean, and no storage of bottles, cans, boxes, or equipment around or under the mobile home will be tolerated.
7. No drying lines for the drying of wash will be permitted on the mobile-home lot. All wash must be hung in the drying area provided by the management.

AUTOMOBILES

1. Cars shall be parked only in the designated areas and, if not being used, shall be taken elsewhere for proper parking or storage.
2. No washing, repairing, or overhauling of cars is permitted around the mobile-home lot or in the roadways.
3. The speed limit in the park of 5 miles per hour must be observed at all times, and we ask that drivers use their brakes instead of their horns whenever possible.

PARK BUILDINGS AND FACILITIES

1. Newspapers or other waste material must not be left in showers, toilet compartments, or other parts of the buildings or park. Deposit in proper containers.
2. All garbage must be wrapped and placed in the proper receptacles.
3. Do not put bottles, cans, and similar rubbish in with the garbage, but only in the receptacles provided for that purpose.
4. No pets will be allowed in the utility buildings at any time.
5. Children under seven will not be allowed in the utility buildings unless accompanied by an adult.

LAUNDRY

1. Use the washing machines only at the time assigned to you by the office.
2. Do not bathe children or pets in the laundry tubs.

3. Do not overload or abuse the washing machines and, in case of any trouble, call an attendant.
4. When drying the wash, it shall be hung only in the designated places.

ANIMALS

1. Permission must be obtained from the management if you wish to keep any pets in the park.
2. If you have obtained permission to keep a pet, it must be kept on a leash at all times—whether being exercised or on your mobile-home lot.
3. Noisy or unruly pets or those that cause complaints will not be allowed to remain.
4. Pets may be bathed on the individual's mobile-home lot only.

And don't skip people. They'll always tell you that they never received a copy and didn't know what the rules and regulations were. So, when anyone registers in the park, hand him a set of rules and regulations. In the long run this will make you more friends than enemies, and your business will grow as a result. Everyone likes to stay in a well-managed park—one they can be proud of and can show to their friends.

TIPS ON HANDLING THE CLIENTELE

Let's discuss briefly some of the ways in which clientele can be handled. Here, again, there's no ideal method. Everyone has to feel his own way and adapt his approach to what the situation requires. We may, however, point out some things that will prove helpful.

The first thing to look out for is the tendency to go overboard in doing things for people. Naturally, this is a matter of degree. You can't be unco-operative or standoffish, or people will feel you don't want their business. But *doing too much* for people and *not charging them for it* creates the precedent that they can continually depend on such service at no cost. When you get busier, you may find yourself pressed to do these things. Some of your people may then feel that, since you now have business, you are independent and no longer care about them. It is possible to be friendly without being too familiar; it is possible to give good service without losing money.

Another precaution is not to meddle into the few squabbles that go on in a mobile-home park. After all, when you have forty or fifty families together in the same community, a certain amount of gossip will take place. If you meddle in this gossip, or begin to sympathize with certain sides, you'll find people much harder to handle. So stay out of these situations. Don't take sides. Just go about your business.

At times people will come to you to have something fixed. It may be a washing machine, faulty plumbing, lack of toilet tissue in the washrooms, or one of a hundred little things that go wrong in any sizable operation. A few of them will come to you in a belligerent tone of voice, or critical frame of mind, and will sound off about why you don't run the park more efficiently. By that time, you may be inclined to fly off the handle and take a defensive point of view. If so, forget it! Keep quiet until the person is finished, then explain as best you can and take steps to see it doesn't happen again. You're always going to run into people like that as long as you're in business. So reconcile yourself to it right away.

Servicing the public is not all peaches and cream. But, if you approach people in the right frame of mind, you will make many friends and find many things to be happy about. You'll meet a large number of persons who will be grateful for your service and hospitality. You'll meet people who will go out of their way to help you overcome your problems. The group will always have more good apples than bad ones; and they, in turn, will force the bad apples to reconcile themselves or get out.

LEARNING HOW TO PARK AND CONNECT UP A MOBILE HOME

A few park operators open for business without having parked or blocked up a mobile home. Unfortunately, people are influenced by first impressions, and some of these are lasting. If they pull into your park, and you cannot park or block up a mobile home properly, they draw the conclusion that you don't know your business.

So, before you open for business, practice parking a mobile

home. Learn how to turn the steering wheel to get the back of the mobile home where you want it. Try to work up a set routine for blocking up and leveling a mobile home. Have a level handy at all times. Be familiar with connecting up mobile homes for water, sewage, and electricity. Know a little about the circuit-breaker system in mobile homes and how to change fuses. Learn how to use a flanging tool and have on hand the necessary male and female fittings to connect up different types of mobile homes for water. And try to keep enough large hose or sewage connections on hand, in the event you have to add a section to a trailerist's outlet.

When a mobile home is being parked and connected up, the owner is anxious to settle down and often gets irritable when asked to put up with needless delays. Nothing is more impressive than a park operator who can park a mobile home quickly, make the necessary connections, and block it up and level it properly. To the trailerist, this is tangible proof that the park is efficiently run and well organized.

CHAPTER 13

How To Keep Useful Business Records

Not long ago the Department of Commerce found out that a large number of businesses fail because people do not keep useful business records.

Keep a good set of business records from the time you begin construction. Construction costs are important because the amount and types of invested capital are needed for tax purposes and when you figure depreciation—particularly if you sell the park later on.

Many people who go into the park business neglect to keep good records of construction costs and then try to estimate their investment. This often leads to an understatement of capital investment, cutting down permissible depreciation and the possibilities of tax savings. The best advice is to go to an accountant and ask him to set you up a simple set of books covering the original cost of construction as well as subsequent operations. Where you can have it done economically, hire an accountant to maintain your accounts periodically.

SOME SIMPLE RECORDS TO KEEP

Accounting systems center around a *journal* and *ledger.*

Journal.—The journal is simply a daily entry of money received and money paid out. It describes, on a day-to-day basis, the financial transactions that take place in your park. If money is received, it is posted in the journal. If money is paid out, it is also posted. That doesn't mean you have to run to the journal every time a customer comes in to pay. Obviously, that would be impractical.

You can, however, keep a receipt book on hand and issue receipts for money received. When checks are written for money paid out, the check stub can be *completely filled in,*

showing the person to whom issued, the date, and purpose of the check. The purpose of the check is particularly important because you must decide later whether it is an *expense item* or *capital item.* One is a cost, the other an asset.

The best way to handle your records is to allow fifteen or twenty minutes at the end of each working day for posting. You can take the receipts of money received and the check stubs for money paid out and simply make journal entries for the entire day's operation. Items not paid by check are recorded from the petty-cash book.

Ledger.—The ledger is simply a way of classifying over-all costs and capital items. If you buy a large number of items from a particular building-supply house, for example, you may want to set them up in a separate account. This can be done in the ledger, which is alphabetically arranged.

Where there are a large number of permanent residents in your park, they can be placed alphabetically on separate ledger sheets, showing space rentals, taxes paid, electricity payments, long-distance calls, and so on.

The ledger is also used for setting aside reserves for maintenance and depreciation. If each item of capital equipment is posted on a separate ledger sheet—buildings, water system, sewer system, and so on—it is easy to figure the annual depreciation on those facilities. The Bureau of Internal Revenue has an approved depreciation schedule for each type of capital equipment and facility. Thus, you can see the full amount of depreciation allowable and be sure the item will be completely depreciated on your books.

PREPARING A BALANCE SHEET AND PROFIT-AND-LOSS STATEMENT

There are three key reasons for keeping accurate records:

1. To *establish capital investment* position for calculation of taxes and possible resale of the park
2. To determine *profits or losses* from operations
3. To *forecast ahead* in terms of income growth or expense reduction

A *balance sheet* and *profit-and-loss statement* (called "P and L") are needed for these reasons.

A sample *balance sheet* is given on page 9. It is simply a financial photograph of your capital position—including all assets and liabilities—as of a given date (say, January 1, 1955). However, it says nothing about whether the park is currently operating at a profit.

A *profit-and-loss statement*, on the other hand, is a *financial moving picture:*

XYZ TRAILER PARK, INC.
PROFIT-AND-LOSS STATEMENT
YEAR ENDING DECEMBER 31, 1954

INCOME		
Rent income from monthly customers	$25,457.75	
Rent income from overnight customers	2,350.66	
Electricity paid by customers (meter income)	1,200.30	
Trailer tax (county, city, and schools) paid by customers	375.00	
Washing machines (meter income)	1,100.25	
Gas dryers (meter income)	.....	
Total Gross Income		$30,483.96
EXPENSES		
Trailer tax	$ 375.00	
Taxes and license	405.50	
Electricity	1,200.00	
Miscellaneous petty-cash items	496.08	
Garbage pickup	175.00	
Fuel	219.80	
Telephone	552.46	
General supplies	752.64	
Soaps, cleaning compounds, etc.	119.90	
Advertising	167.60	
Salaries and Social Security	6,221.60	
Repairs and replacements	593.04	
Insurance	265.36	
Depreciation on buildings and equipment	5,002.24	
		$16,546.22
Net income from park operation		$13,937.74

It shows profits and losses as they are accumulated over short periods of time. Most businessmen prepare a "P and L" statement each month. The profits and losses for the month are then added or subtracted from the balance sheet, giving a new balance-sheet position. When a park is profitable month after month, the result is reflected in the balance sheet through addi-

tions to capital equipment or increases in checking, savings, or cash accounts. Losses, however, cut down the assets on the balance sheet, because capital is being used up and not being replaced from current operations.

You can get a quick view of operations by preparing a simple income-expense work sheet. You simply list the income, by date and name, on the left-hand side of the page and all expenses, properly classified, on the right-hand side of the page. Each day of operation can be seen by simply looking at the work-sheet, which grows longer as the month progresses. At the end of the month, you can use the sheet to prepare your profit-and-loss statement.

When you prepare the statement, bring together the various accounting records. Go over the checking account to see whether the bank's statement and yours coincide. If your check stubs have been carefully filled out, and you have avoided the use of over-the-counter or outlaw checks, you will simply have to account for checks that have not cleared the bank. You will also have to reconcile your receipts for money received against deposits in the bank and make sure that all income and expense items check out.

If all records coincide, then take the work sheet and figure your profit and loss for the month. Items of capital expense should be transferred to the ledger for depreciation purposes. Should there be discrepancies, go to the journal and find out what items are involved.

The only other suggestion is to make sure all accounts are properly segregated for managerial purposes. There should, for example, be a separate laundry account in the ledger, so you can determine how much money has been received from laundry operations. If you have a park store, carry it under a separate ledger account. Other operations, like a gas station or sales lot, should be treated separately. In so doing, you can go to each item and determine whether it is self-sustaining.

CONCLUSION

Keeping a good set of records is not hard. Most people keep a poor set of books because they hate detail or do not want

to take the necessary steps to make sure the accounting is accurate. Yet, taking the necessary steps on a daily basis makes accounting rather simple and relieves you of tax difficulties, penalties, and unnecessary interest charges.

Regardless of how you keep records, the important thing is to record all items of income and expense. Make sure your accounting methods are accurate in every detail. Use standard accounting procedures, wherever possible. Keep a journal; a ledger, alphabetically arranged for classifying expense items and special accounts; a receipt book; a checkbook accurate in detail; a daily work sheet for managerial purposes; and a petty-cash book.

We ought to say a word about the petty-cash book, since you're going to use it every day. It is simply a book in which you record payments of small amounts of money that are inconvenient to pay by check. If the laundry man, for example, should come with clean linens at a time when you're doing something else, pay him in cash and get a receipt. At the end of the day, post it in the petty-cash book. At the end of the month, your petty-cash book should account for all cash items not paid by check.

Wherever possible, however, pay all bills by check.

CHAPTER 14

Increasing Net Income

Much of your income will come from services other than from space rentals. In a mobile-home park these include the laundry, the store, the gas station, mobile-home services and sales, the bottled-gas franchise, the storing of mobile homes, the hauling of mobile homes short distances, telephone calls, and so on.

INCOME FROM THE USE OF TELEPHONES

Install a public telephone for the convenience of your guests and for the income it represents. If public phones are not available, prescribe a charge for all calls in your rules and regulations. Set a definite policy on long-distance calls, preferably having them paid at the time of the call. A good practice is to have trailerists get time and charges on all calls and sign slips specifying the date and place called. This gives you a complete record and insures the payment of all phone charges.

Don't let local calls slip through your fingers. Where public phones are used, this is no problem. But, if your own line is involved, collect all local phone charges.

Have your phone bill set up on a first-of-the-month basis to simplify bookkeeping. Your phone bill and receipts can then be dovetailed with the rest of your accounting records.

INCOME FROM A PARK LAUNDRY

Some income will be realized from the park's laundry, since all machines are metered. See Plate 14.

Park operators differ on the advisability of automatic versus hand-operated machines, but all agree on the desirability of getting the best dollar return from laundry operations.

The easiest way to make the park laundry pay is to install

tamperproof meters that permit trailerists to use washing machines for twenty-five cents for each half-hour. One type of meter comes with a quarter and a dime slot; then, if a woman cannot finish her washing within a thirty-minute period, she can insert a dime and get an equivalent amount of current. Never put in a twenty-five-cent-an-hour meter, because you won't be able to cover expenses, much less make money.

INCOME FROM A PARK STORE

A store may or may not be an advantage. If you're located in an out-of-the-way place, it may be a necessity whether or not income is realized from its operation. Wherever possible, try to lease the store out on a percentage basis, since you will be guaranteed a fixed income with the possibility of realizing more without actually running the business, making out reports, or stocking inventory.

When stocking the store, get a large number of different items rather than a large quantity of fewer items. Use a variable pricing technique to attract business. People are willing to pay more for some items because they need them at the time. There are other items, however, that they prefer to buy at supermarkets.

Arrange for an ice-cream freezer from a local dairy in return for handling their products—and carry a supply of frozen vegetables, fruits, and meats. Milk, cream, bacon, eggs, ice cream, and other staples are also good sellers.

Carry an assortment of notions, patent drugs, and cosmetics. They have a greater profit margin than groceries and are generally bought when needed. Wherever possible, get stamp and cigarette machines installed.

Another profitable line is the sale of hot dogs, hamburgers, chili, soft drinks, coffee, and so on.

Finally, make sure your price policies are realistic. Compare your prices with competitive stores in the area. And, by all means, keep close checks on inventory and operating expense.

A typical, successful park store is shown in the illustration. See Plate 16.

INCOME FROM BOTTLED-GAS FRANCHISE

A bottled-gas franchise is a good income-producer. Mobile homes operate on liquefied petroleum gas, so there is a steady business from your own clientele as well as from transients and other trailerists in the area.

Gas equipment is not too expensive, but insurance rates go up sharply. Before you make a bottled-gas installation, therefore, check insurance rates and the competitive position of other suppliers.

Remember, too, that people run out of gas at all hours of the day and night. So set up regular hours for filling bottles; otherwise, you'll have all kinds of "emergency calls."

MOBILE-HOME SALES AND SERVICE

There is always a demand for mobile-home service and parts. Some mobile-home owners do not have the time or inclination to clean, wax, and maintain their mobile homes. You can hire a handyman interested in doing maintenance and repairs and build this phase into a good source of income without investing capital. See Plate 15.

A mobile-home sales site is a good income-producer, but be careful that you do not divide your time in such a way that the park suffers. It is hard to run a good park. It is twice as hard when you also have a sales lot. Moreover, quite a bit of capital is needed for mobile-home sales, even when they are obtained on consignment. But, if you find you can handle the park satisfactorily, a sales site can be quite profitable.

When you accept used mobile homes in trade for new ones, they can be placed on spaces (until sold) and rented to resort traffic or to residents needing permanent housing.

PARK ELECTRICITY

It is important to have accurate electrical meters for each space, to make sure you collect all electrical charges from your trailerists. Guaranteed, used electrical meters can be bought for about three dollars apiece, but check first with your local

power company to see how metering equipment will be handled.

If you have a large number of permanent trailerists, get their electric bills on a first-of-the-month basis. Then you can set up a monthly routine of reading meters and collecting on electricity. It is a good idea, too, to get space rentals on a first-of-the-month basis. You can prorate a trailerist's space rental for the first month, so all future rent falls due on the first of the month. Of course, this cannot be done with transients.

KEEPING OVERHEAD DOWN

A simple point—often overlooked—is that income can be increased by keeping expenses down. Cost-consciousness is important in any business, but particularly in a mobile-home park, since items of expense seem individually small but add up to large sums of money every month.

Don't let income slip through your fingers because you've neglected to read electric meters. Don't forget to collect money for local and long-distance telephone calls. Check the laundry equipment and meters to make sure they're in good working order. Get the most profitable items in your park store. Capitalize on mobile-home services, rentals, and sales and a bottled-gas franchise.

By all means, keep detailed cost records and scale them down wherever possible.

CHAPTER 15

How To Organize a Recreational Program

Mobile living is popular because it has many advantages over conventional housing. Two key ones are *sociability* and *informality*.

Mobile living allows the individual to have privacy if he wants it, with the ultimate in sociability right at his front door. It is there when people walk to the recreation hall for their mail, when they wash clothes in the laundry, when they enter into the activities in the recreation room and hobby shop. You see it on the beaches while bathing and fishing, on the shuffleboard courts, or along the park grounds and gardens. The illustration shows some of the facilities our better parks are providing for the recreation of their clientele. See Plates 17, 18, and 19.

TYPICAL RECREATIONAL ACTIVITIES

Mobile-home parks offer the widest range of recreational activities. Everyone can find something interesting to do.

Table 3 lists some typical activities and the way different people take to them. A plus sign (+) means the group likes and is generally competent in the activity. A minus sign (—) means the group does not enjoy or is not particularly competent in it.

Square dancing.—Women enjoy square dancing more than men. Among the men the average worker will develop a greater interest and competence in square dancing than professional or businessmen.

Fishing.—Men excel in fishing. Professional men and businessmen prefer artificial bait fishing, but the average worker goes in for live-bait fishing.

Gardening and landscaping.—Everyone is interested in gardening and landscaping. Gardening and landscaping hold great

attraction for all people, regardless of position. They like to see big, flowering bushes grow from little plants or seeds.

Movies, picnics, and potluck dinners.—Movies are shown about once a week, potluck dinners are scheduled once every two weeks, and outdoor barbecues or picnics are put on once a month. Women take particular pride in presenting their special dish at a potluck.

Bingo.—This is a popular game in mobile-home parks. The game combines group conversation with the excitement of the

TABLE 3

RECREATIONAL ACTIVITIES CARRIED ON IN MOBILE-HOME PARKS

	Sex		Occupation of Men	
	Men	Women	Business and Professional	Worker
1. Square dancing	−	+	−	+
2. Fishing	+	−	+	+
3. Gardening and landscaping	+	+	+	+
4. Movies, picnics, and pot-luck dinners	−	+	−	+
5. Bingo	−	+	−	+
6. Photography	+	−	+	−
7. Hobby-shop activities	+	+	−	+
8. Painting or ceramics	−	+	+	−
9. Shuffleboard, horseshoes (mild physical games)	+	−	−	+
10. Gossip	−	+	−	+
11. Discussion and conversations	+	−	+	−
12. Card-playing	+	+	+	+
	(7+) (5−)	(8+) (4−)	(6+) (6−)	(9+) (3−)

game and the possibility of winning prizes or modest sums of money. Bingo is well attended, so games are held once or twice a week. Check, however, to see if bingo is allowed in your state.

Photography.—Photography is well liked by everyone, particularly professional and businessmen. When colored slides are shown, there is friendly competition to see who has the best pictures. Generally, those who show slides or movies like the idea of telling a group where they've been and what they've done.

Hobby-shop activities.—Hobby-shop activities requiring hand or craft skills are liked by both men and women. The most

popular hobbies relate to something the person wants or can use.

Men, for example, like to build their own boats, since they can be used for fishing. Or they may want to make a picket fence for their lot or furniture for their patio.

Women take an interest in painting, clay-modeling, ceramics, and sewing. These activities are liked for their usefulness as well as for intrinsic enjoyment. Women like to pass their handiwork around and make gifts of them to people in the park. Gift-giving of this kind increases one's circle of friends and doesn't cost much, since gifts are usually received in return.

Physical activities.—Physical activities in a mobile-home park are adapted to the various ages of its residents. Shuffleboard, for example, is popular because it combines mild physical activity with personal skill and an opportunity to engage in friendly conversation. Horseshoe-pitching, on the other hand, is strictly a man's game.

Card-playing.—Card-playing is a daily diet in most parks. Trailerists like card games—particularly canasta, bridge, pinochle, and poker.

This summary may give you some idea of the recreational activities carried on in mobile-home parks and the extent to which they appeal to men and women.

MAKING RECREATION PAY

The operator of a park has to schedule his recreational program so that it does not interfere with the park's operation. He must also find ways of making recreation pay for itself.

A good way to do this is to appoint a committee to assist in the park's recreational program. Women make good committee members and usually conduct a recreational program in a systematic way. A committee with a "live-wire" chairman can carry on many recreational activities without involving managerial time.

Try to keep the same activities on the same day, so your clientele get to know the recreational schedule. This reduces the need for announcements or posters and lets the clientele schedule their personal affairs accordingly. It is a good idea,

however, to post standard announcements of the recreational program at the entrance to the park, since this is a good public relations item for potential customers who may visit the park. A fluorescent, plastic letter outfit is handy because the letters can be moved in and out of sliding holders.

Don't start a large-scale recreation program if you're going to have to pay for it out of other park income. When you start a recreational program, make it self-sufficient. If you show movies, for example, have the committee collect voluntary contributions from the group present. When bingo or other evening games are played, have the committee set up a way of paying for electricity or other items of expense.

With some planning, recreational activities can be made a vital part of your promotional program. If you take the easy way out and ignore the need for recreation, you may find your customers moving to parks that have recreational programs.

The chief advantages of a mobile-home park are its sociability and recreation program. Without these you're just catering to people who need housing; and, over the long run, you may miss a big future market—the semiretired and retired individual in this country.

[PRINTED IN U·S·A]

Plates

PLATE 1.—Modern mobile-home park is an attractive community

PLATE 2.—Mobile homes offer a comfortable way of life

PLATE 3.—Eye-appealing decor marks the mobile home

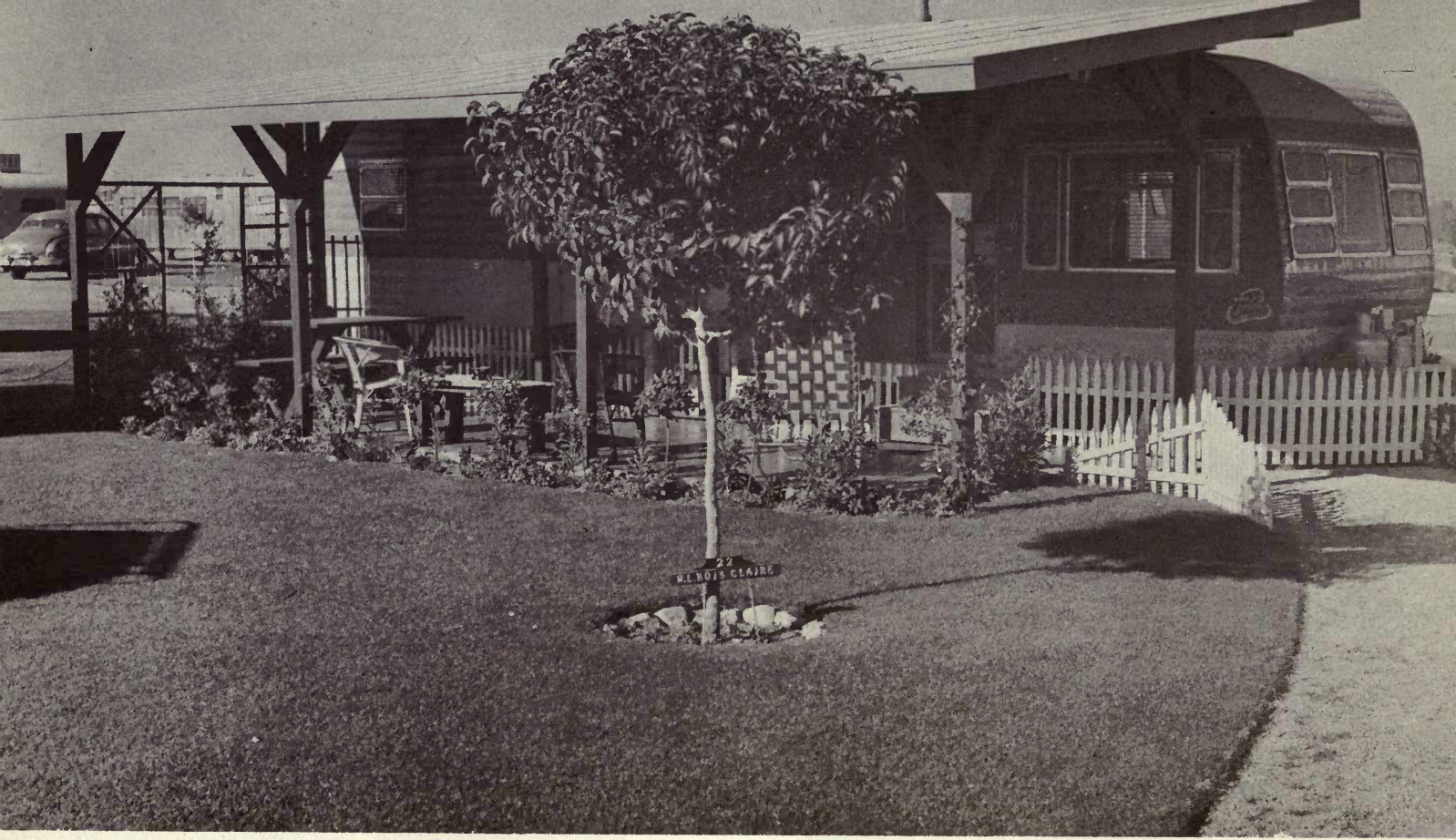


PLATE 4.—The mobile-home resident maintains an attractive lawn area

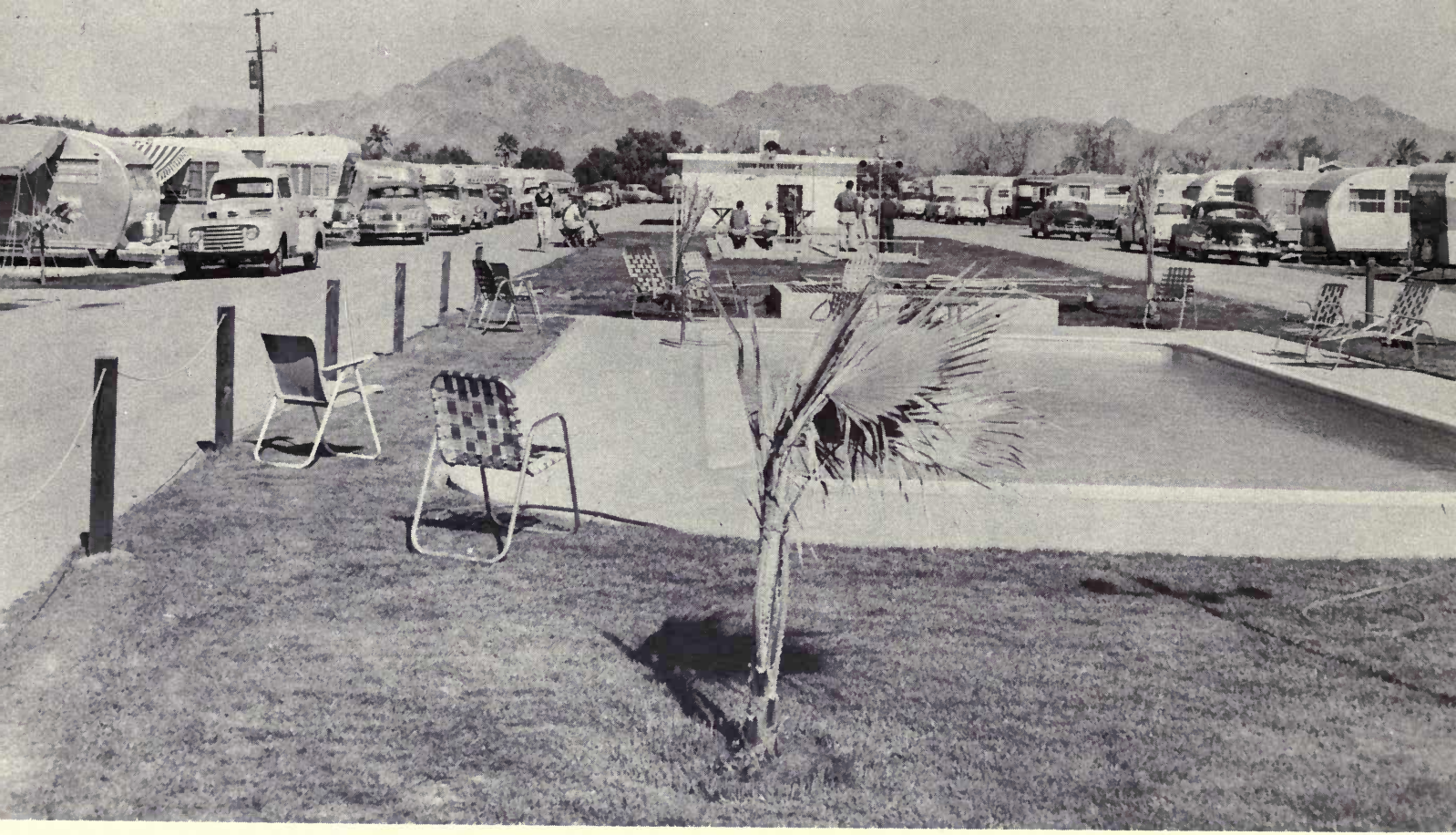


PLATE 5.—Many parks provide recreation facilities—including swimming pools

PLATE 6.—A Bradenton, Florida, grove provides beautiful setting for 1,200 mobile homes—all housing retired folks

PLATE 7.—Tucson, Arizona, park shows outstanding example of attractive entrance

PLATE 8.—Bulldozer and trencher at work preparing land for park construction

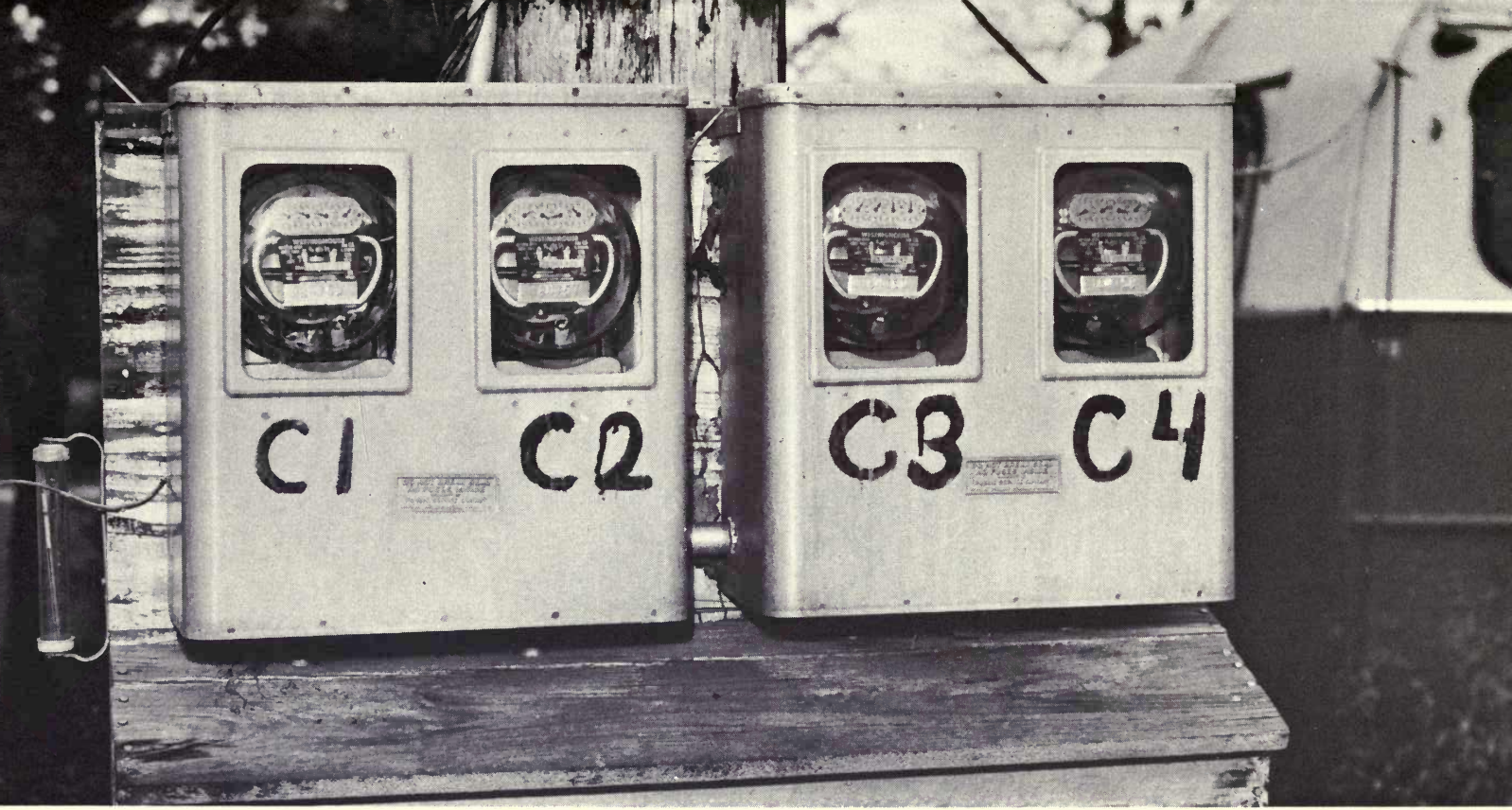


PLATE 9.—Illustration shows typical electric-meter-box installation

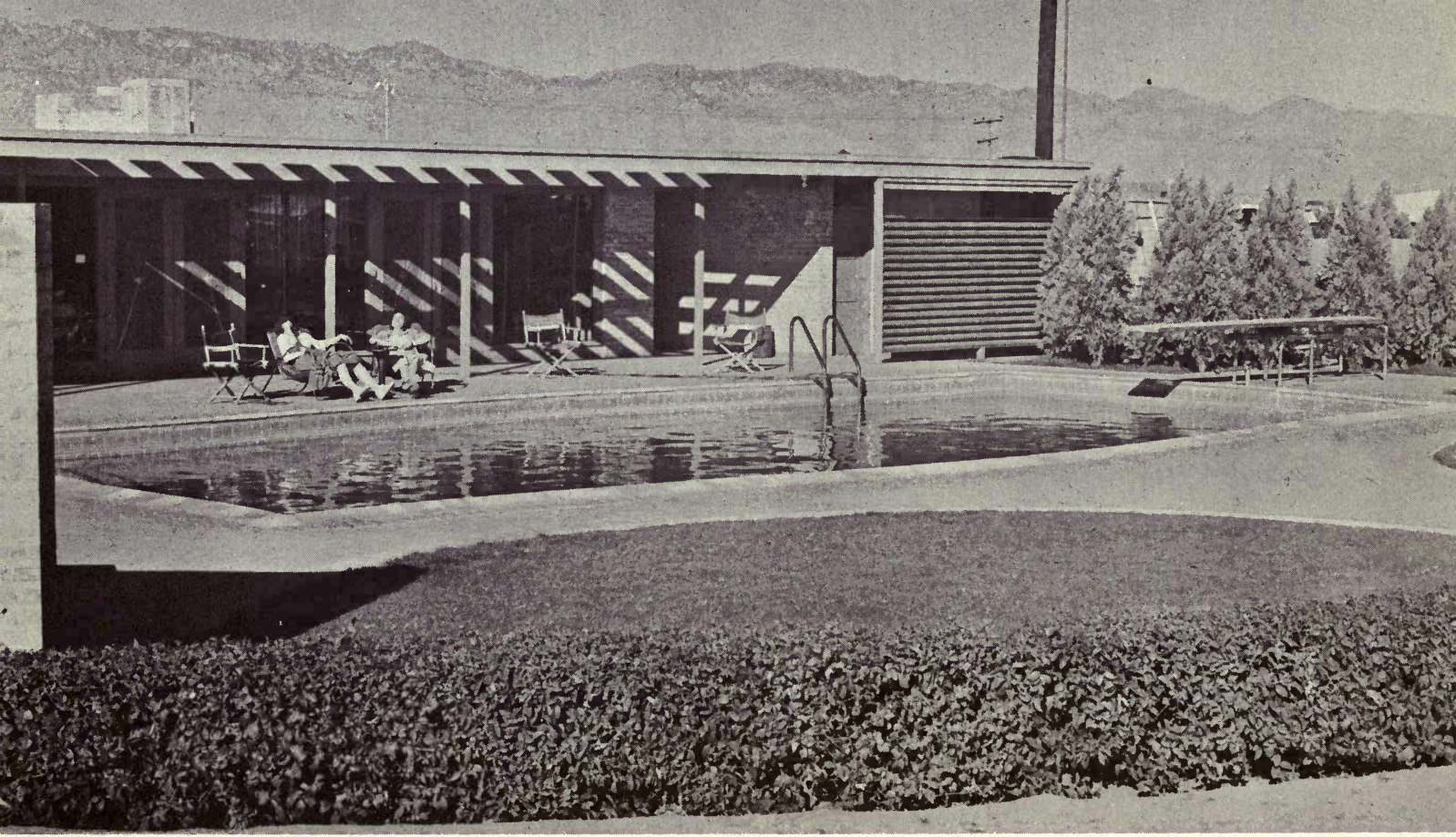


PLATE 10.—Trend in resort park development is toward attractive recreation buildings

PLATE 11.—Recreation building should have bright large room for relaxation

PLATE 12.—Cleanliness is the hallmark of a well-run park

PLATE 13.—Many parks provide storage area in service building

PLATE 14.—Metered washing machines can mean additional park revenue

PLATE 15.—Some parks provide mobile-home repair facilities

PLATE 16.—Large parks warrant store facilities to aid residents—and boost income

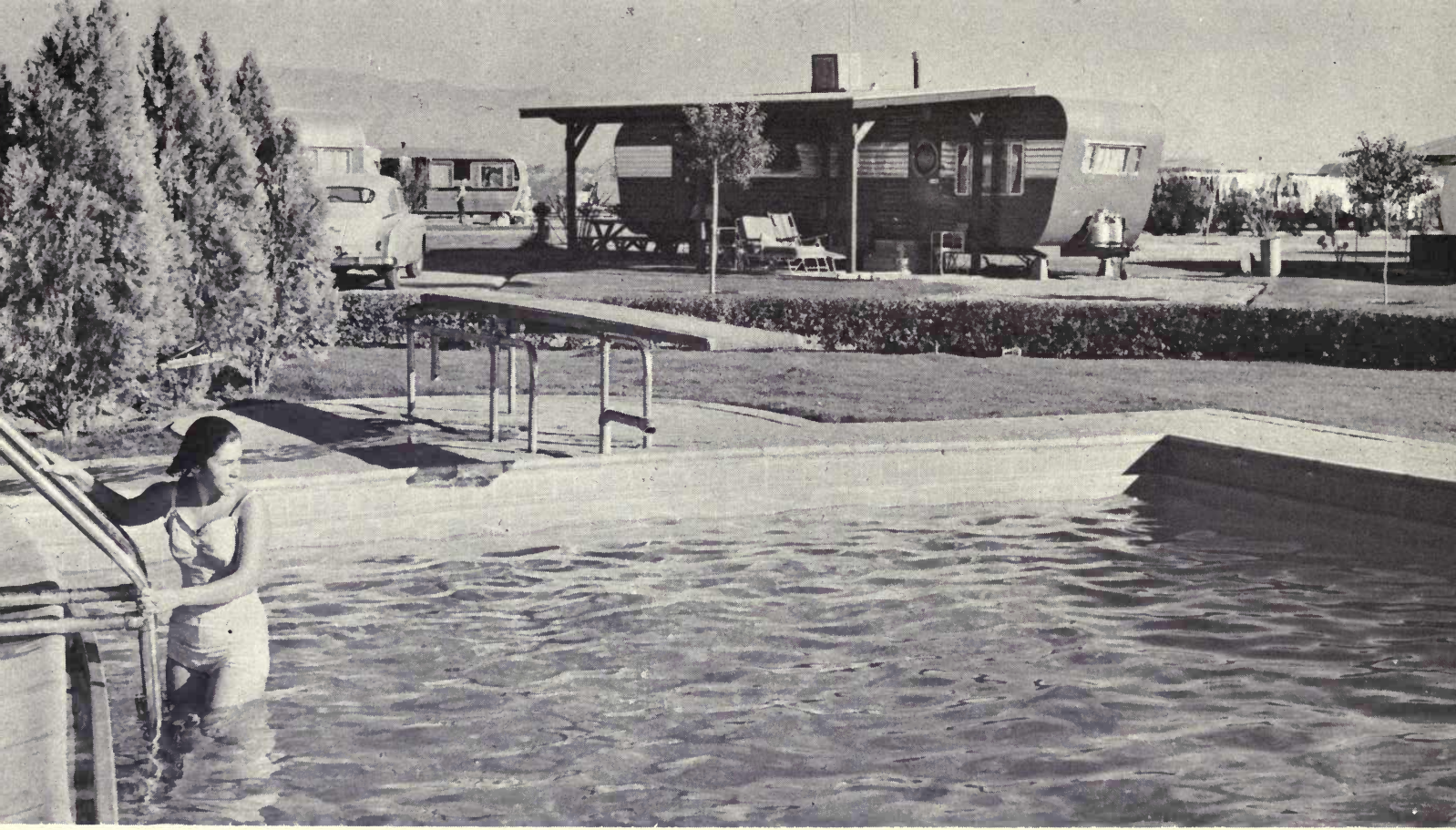


PLATE 17.—Recreational facilities are important to modern park; note neat landscaping

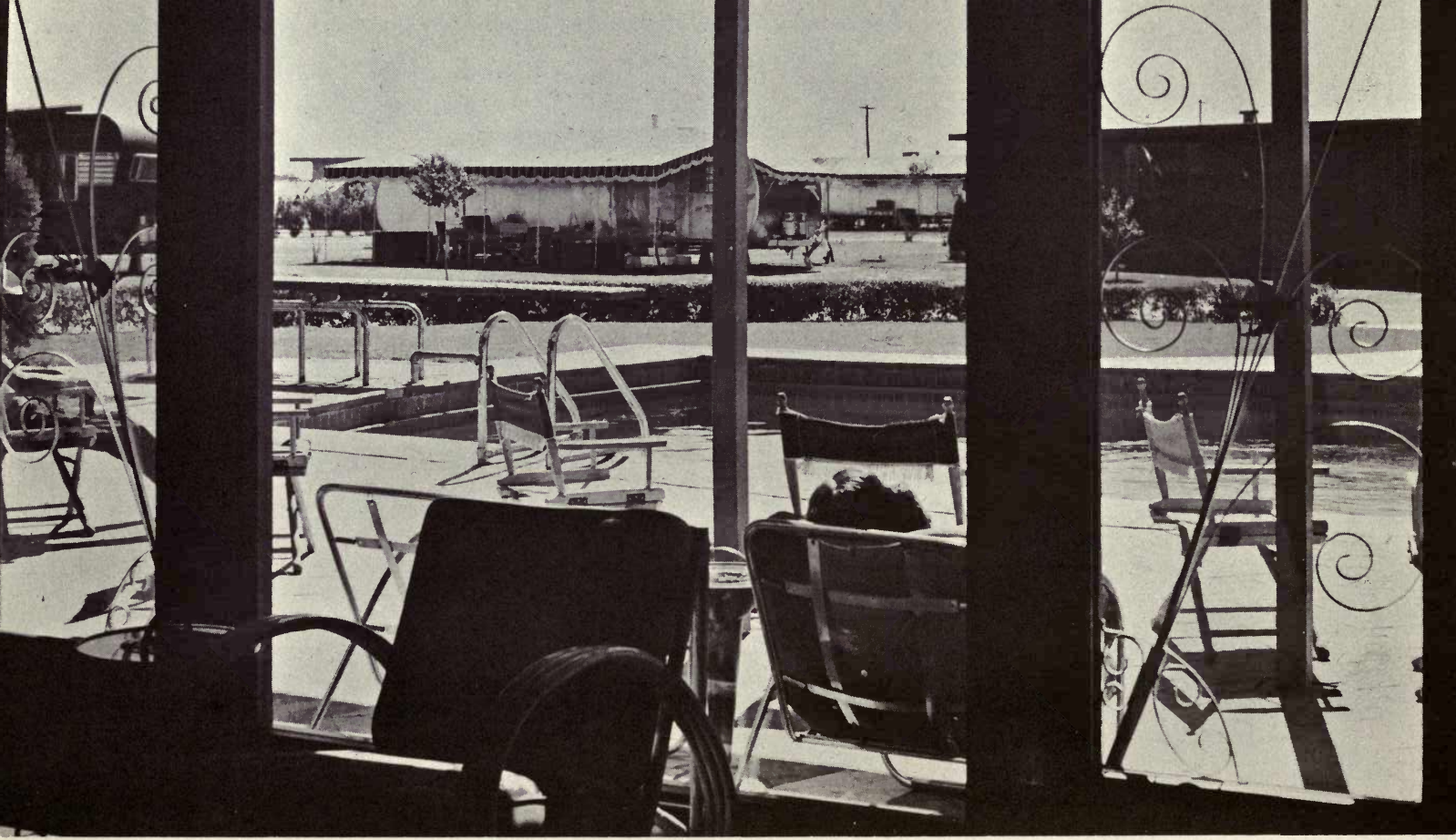


PLATE 18.—Swimming-pool view from park recreation hall

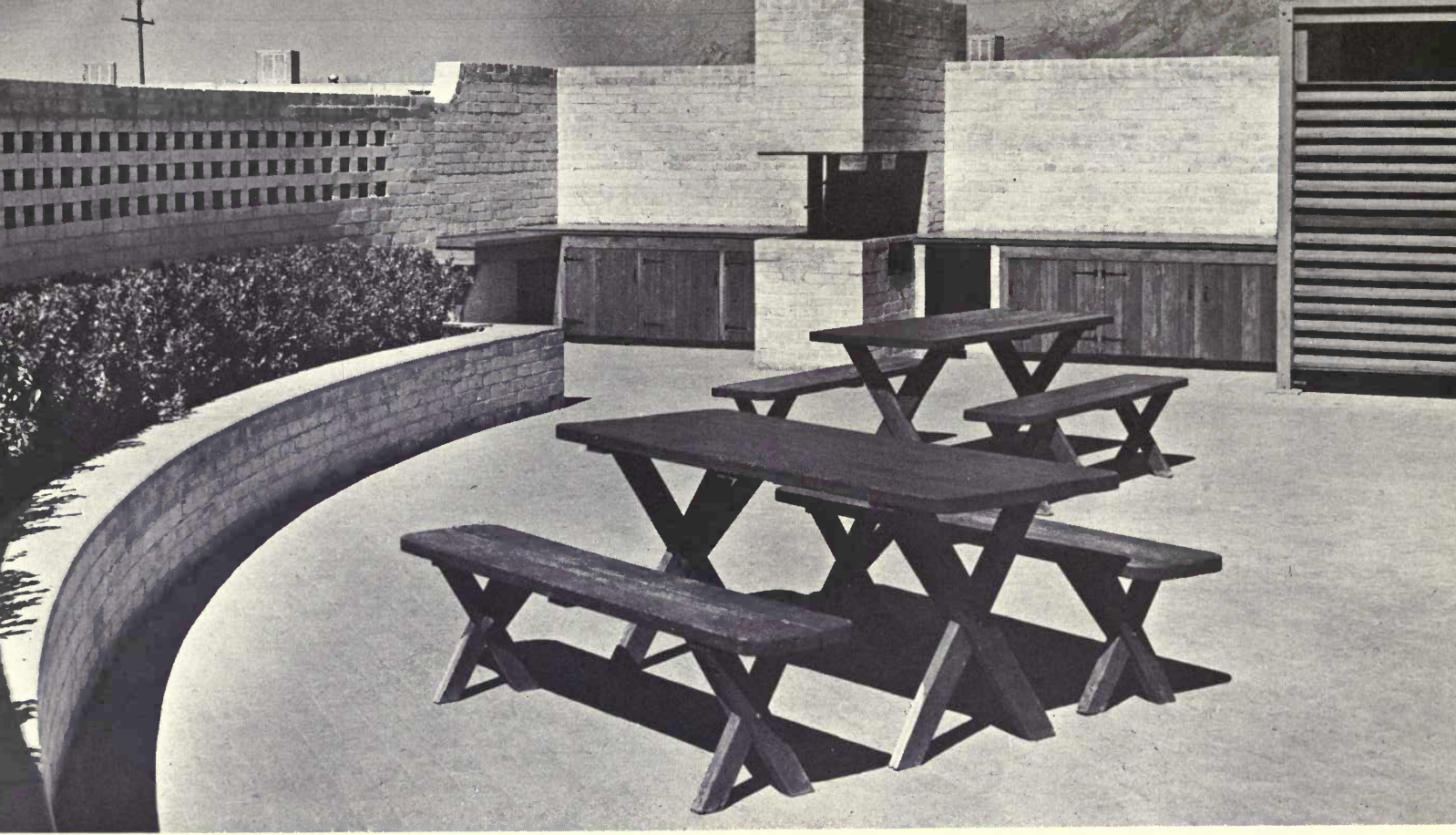


PLATE 19.—Ultra park provides community barbecue equipment and cook-out area

PLATE 20.—Hobby-shop building and lathhouse provide recreation for older park residents