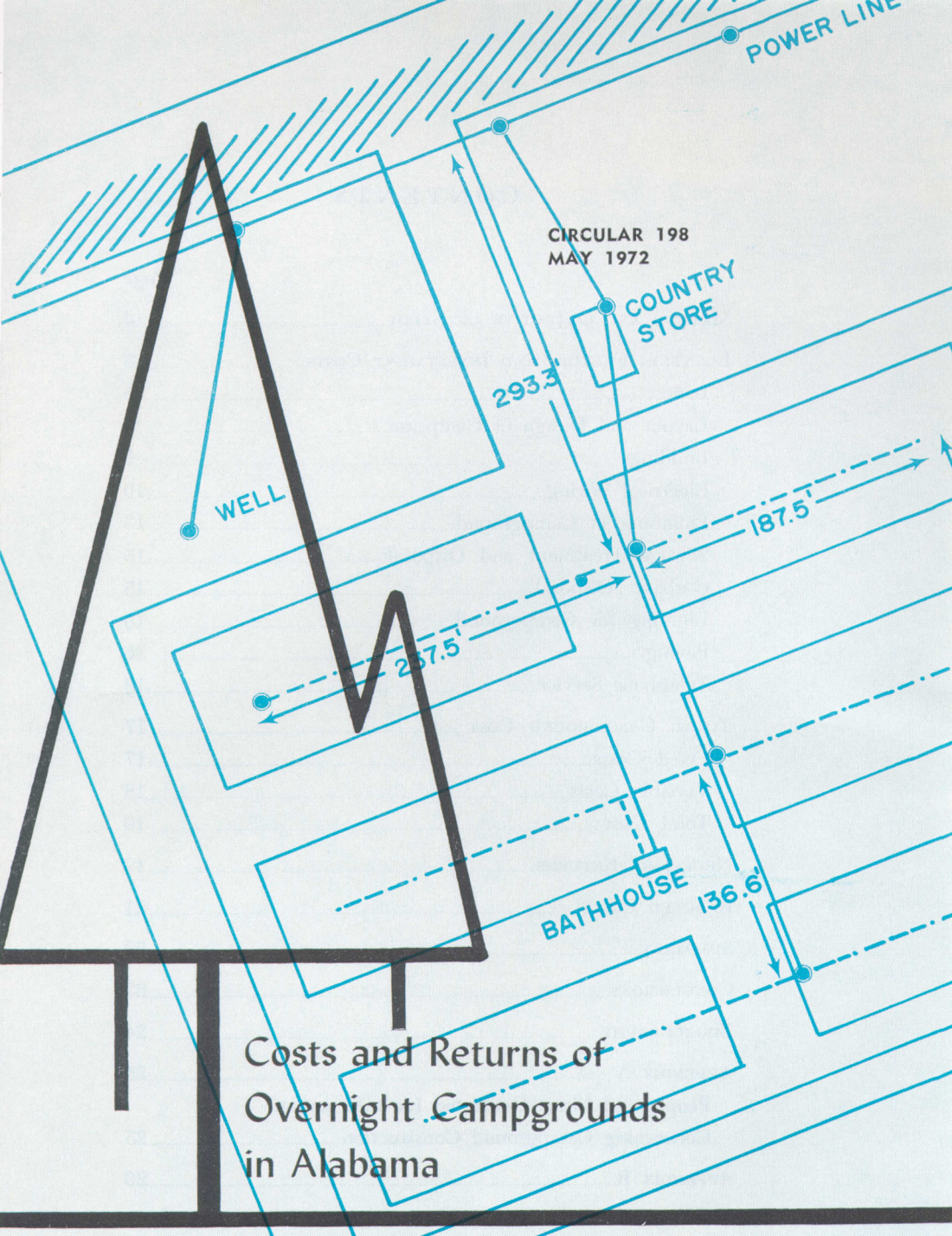

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Costs and Returns of Overnight Campgrounds in Alabama

AGRICULTURAL EXPERIMENT STATION/AUBURN UNIVERSITY

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Costs and Returns of Overnight Campgrounds in Alabama*

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Ye who love the haunts of nature,
Love the sunshine of the meadow,
Love the shadow of the forest,
Love the wind among the branches
And the rain-shower and snow-storm[1] . . .

Would find yourselves in the minority among present-day campers.

Camping represents different things to different people. To some it represents a means to live in and commune with nature. To others it is a method of reducing lodging expenditures while engaging in recreational or vacation activities. To still others it represents an inexpensive second home without commensurate land and utility expenditures.

The camping purists look rather disdainfully on the new breed of campers. As one of these campers expressed it, today's pseudo-camping home with color television, shag carpet, air conditioning, and stereo tape deck cannot be compared favorably with a tent. Nor can today's parking lot campgrounds be called the haunts of nature. "Modern camping more closely resembles an overnight hike through a Marriott Motor Inn."[2]

The trend in camping is toward this sort of pseudo-camping. From 1965 to 1968 the manufacture of self-propelled motor homes

* This study was conducted under Research Project Hatch-299 supported by State and Federal funds.

** Research Associate and Assistant Professor, respectively, Department of Agricultural Economics and Rural Sociology.

[1] HENRY WADSWORTH LONGFELLOW. The Song of Hiawatha.

[2] POWLEDGE, FRED. June 1970. "Walden III." *Esquire*, Vol. 73, p. 101.

rose 400 per cent, sale of travel trailers quadrupled, and the production of truck mounted campers grew fifteenfold.[3] The upgrading of camping facilities from tents and tent trailers to truck campers, travel trailers, and motor homes indicates that many campers are not desirous of "roughing it." While luxury camping is unpalatable to many, the trend is strongly in this direction.

Campground owners have been, or will be, forced to modernize their facilities to meet the rising demand for modern, overnight camping space. Prospective investors in campgrounds have many factors to consider before developing a location,[4] but priority must be given to the type of facilities required by modern campers. A grassy parking area will no longer suffice. Motor homes have power, water, and sewage requirements similar to a small house.

METHOD AND OBJECTIVE OF STUDY

Data regarding campground construction costs in Alabama are necessary before investors can be enticed to improve the State's poorly developed camping facilities. Since such data are not available, this study was done to delineate the type, amount, and cost of facilities required in a modern, overnight campground.

Owners and operators of 35 Alabama campgrounds were interviewed in an attempt to determine construction and operation costs. Problems in determining costs for modern, overnight campgrounds in Alabama arose from two sources. First, much of the site clearance and construction was performed by the operator on owned land; and second, few of the State's campgrounds were equipped to furnish electric power, water, and sanitary facilities needed by modern campers. Since some investors may arrange for contractors to design and build their campgrounds, data on total cost of construction were needed.

While complete cost data were not obtained in the survey, data collected proved valuable in providing background information and in determining current camping needs. Without survey data, there would have been little basis for many construction decisions.

Further study was required to determine the necessary cost

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[3] LIBURDI, F. A. 1970. "Discovering America by Car." Automotive Information, Automobile Manufacturers Association. Detroit, Michigan. Vol. 7, No. 2.

[4] SHERLING, A. B. AND E. W. MCCOY. 1972. Considerations in Establishing Camping Facilities in Alabama. Auburn University (Ala.) Agricultural Experiment Station Cir. 193.

data. Extensive secondary data regarding campground construction costs in National Forests, State Parks, and private campgrounds in other states were utilized. Professors, contractors, and local businessmen were contacted for additional information.[5]

In this study, the cost of building a hypothetical campground in central Alabama was estimated from data sources listed above. Each cost is reported as if it were actually incurred. Prospective campground investors can modify the cost structure to conform to the local situation. In many instances cost may be reduced by use of operator labor or farm equipment in site preparation.

LOCATION FACTORS AND INVESTMENT COSTS

The demand for camping resulted in turn-away business during the camping season. In all areas of the State except the Gulf Coast, the camping season was essentially from the end of school in early June through Labor Day in September. However, the camping season may be extended by locational features in certain areas.

A transient (or overnight) campground should be located near an interstate highway interchange for ease of entry and exit. While proximity to an interstate enhances business to a certain extent, such a location represents a higher land investment than a similar site farther from an interstate. Each investor must weigh his financial resources against expected reduced volume of business with increased distance between campground and major highways.

Land

Thirteen acres were purchased for the hypothetical, central Alabama campground at a price of $1,000 per acre. Cost per acre would vary with distance from the access to an expressway.

[5] See Appendix A for list of contributors and sources of secondary data.

TABLE 1. LAND INVESTMENT COSTS FOR A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item and unit	Number of units	Cost per unit	Total cost
Land, acres	13	$1,000.00	$13,000.00
Clearing and leveling, acres	8	50.00	400.00
Paving-entrance, sq. yd.	444.40	2.50	1,111.00
Paving-parking, sq. yd.	58.30	2.50	145.75
TOTAL			$15,956.75

Only 8 of the acres were developed for immediate use, with 5 held for later expansion, Table 1.

Careful selection of campground location keeps development costs at a minimum. Extensive leveling or filling of terrain creates added expense. In addition to clearing trees and underbrush, some grading probably will be necessary for adequate drainage. Campsites that do not drain properly cannot be used in wet weather or may require a gravel base to speed water runoff. If runoff is too rapid, however, erosion will cause inconvenience and require constant repair. Location near thick stands of trees or swampy land creates problems with mosquitoes and other insects.

Room for expansion was included in land purchase plans.[6] Necessary acreage depends on the number of sites planned, layout of sites, size of sites, and additional facilities required.

Layout and Design of Campsites

A location in a level, wooded area with thick underbrush, typical of many areas of central Alabama, was selected for analysis. Pull-through campsites were considered most feasible and level land is best for such campsites, Figure 1. Level sites are a necessity for large camp-trailers and motor homes. Not only is sloping ground an inconvenience, but some gas appliances cannot be used if the trailer is tilted. Campsites should be arranged to take advantage of campground topography. On a hilly or rough ter-

[6] In 1970, 74 per cent of Alabama campground owners surveyed reported plans for expansion or modernization.

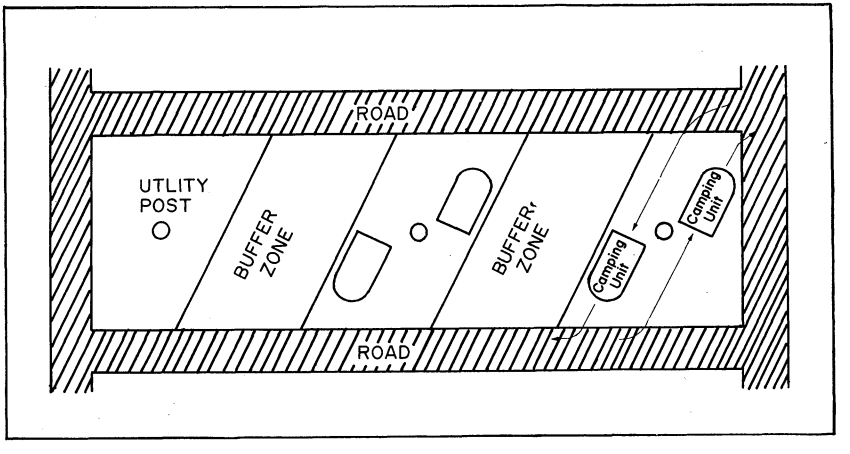

FIG. 1. Pull-through campsites.

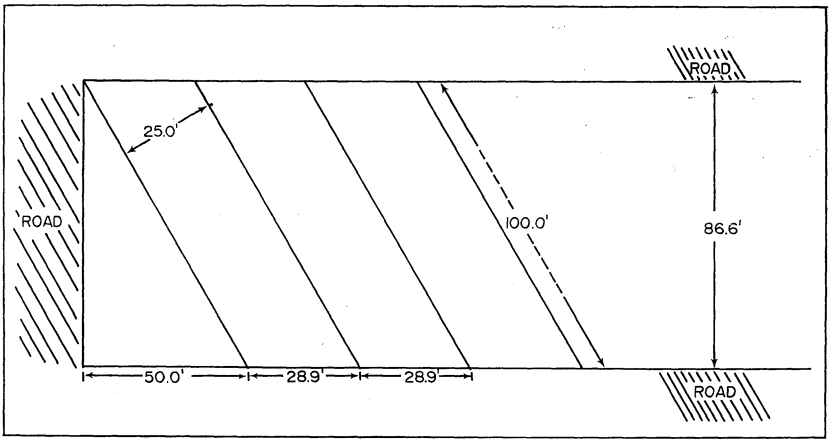

FIG. 2. With 25-foot wide campsites at 60° angle, a layout similar to that in Figure 7 would cover 5.7 acres (8.4 sites per acre).

rain, individual sites should be leveled and cleared, Appendix B, Figure 1.

Campsites were designed with sufficient width to allow two camp-trailers to be pulled through the site and long enough to accommodate two camp-trailers parked at each utility post. To accommodate the largest camp-trailers (8 feet by 30 feet) and an 18-foot car, each site was designed 25 feet by 100 feet. Each family was provided additional space in an adjoining buffer zone, Figure 1. Sites were placed at an angle to entrance roads so drivers would not have to make sharp turns to enter.

When sites are placed at an angle, the actual width of the site and the curb distance (distance across site entrance) are not equal. A site cleared at a 45° angle to the road with a 25-foot entrance will have an actual width of only 17.7 feet.[7] To allow for the necessary 25-foot width with a site placed at 45° angle, an entrance of 35.4 feet must be provided. Sites 25 feet wide placed at a 60° angle to the road have an entrance 28.9 feet wide. The decision to simplify entry to the site automatically reduces the number of sites that can be located in a fixed area.

Sites 25 feet wide with a curb distance of 28.9 feet were laid out at a 60° angle to entrance roads, Figure 2. Sites were placed in blocks of eight in the campground. Six blocks were planned to allow space for 48 camp-trailers, Figure 3. Roads around the campground were 25 feet wide. Roads between blocks were con-

[7] See Appendix B for other campground site configurations.

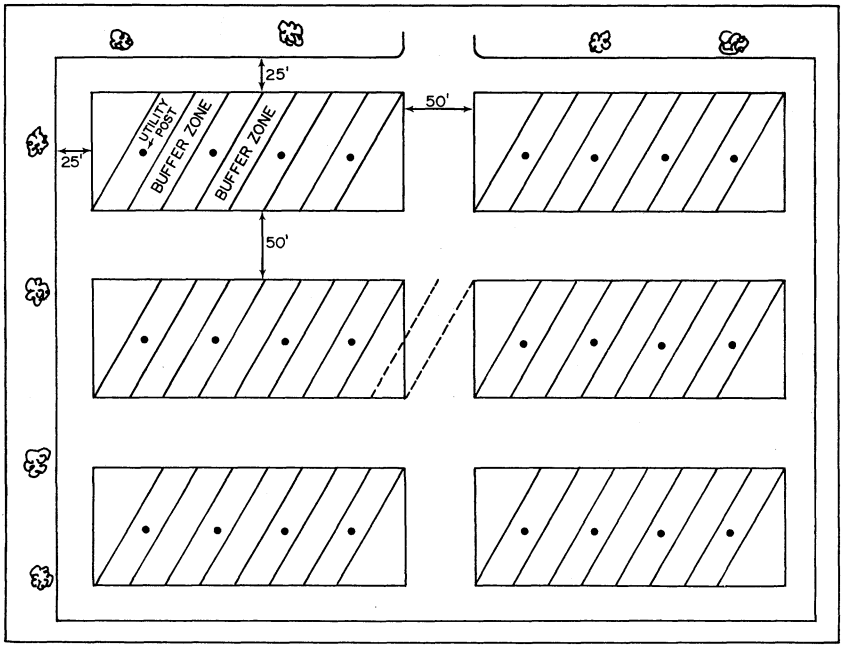

FIG. 3. Campground layout illustrating roads, sites, and possible expansion.

structed 50 feet wide to allow two-way traffic within the campground. Reducing roads between blocks to 25 feet wide would increase the number of sites from 8.4 to 10.0 per acre. If the 50-foot road through the center of the campground were eliminated, three sites could be added at little extra expense.

Although roads and campsites covered only 5.7 acres, an additional 7.3 acres of land were purchased. Included in the additional land were 2.8 acres of land between the campground and the highway and an additional 4.5 acres for possible expansion. Part of this land was covered by a well, a pump, a country store, and a septic field.

Some expansion of the campground would have been possible without additional land purchases. Using buffer zones as campsites would provide for an additional 48 camp-trailers and increase the number of sites per acre from 8.4 to 16.9. Additional wiring and plumbing would be required, but could be planned in developmental stages.[8]

[8] There is evidence that some Alabama campground owners have added campsites to fixed resources.

Buildings

Three buildings were constructed at the campground: a large multiple-purpose building, Figure 4; a small centrally located building to serve only as a bathhouse (discussed under heading of plumbing) Figure 5; and a building for protection of the pump and water tank. Construction cost was as follows:

Building	*Construction cost*
Multiple-purpose building (1,260 sq. ft.)	$17,010.00
Bathhouse (243 sq. ft.)	3,280.50
Pump house (48 sq. ft.)	648.00
TOTAL	$20,938.50

A store can be a valuable source of income because of convenience to campers, especially in campgrounds away from towns.[9] Campers often need supplies of basic food items and convenience products.

The large building at the campground entrance was designed to serve as an office, grocery, laundry, storage room, and bath house. The grocery was designed similar to a small country store with 600 square feet of floor space. Equipment (excluding washers, dryers, and inventory) for the store cost $2,580, Table 2.

Merchandise to supply the store was estimated to cost $5,000. The estimate was made from the retail value of stock in a small self-service store and may vary considerably in other locations.

[9] Twenty-five of 29 campground owners replying in the 1970 Alabama survey maintain a concession stand or country store.

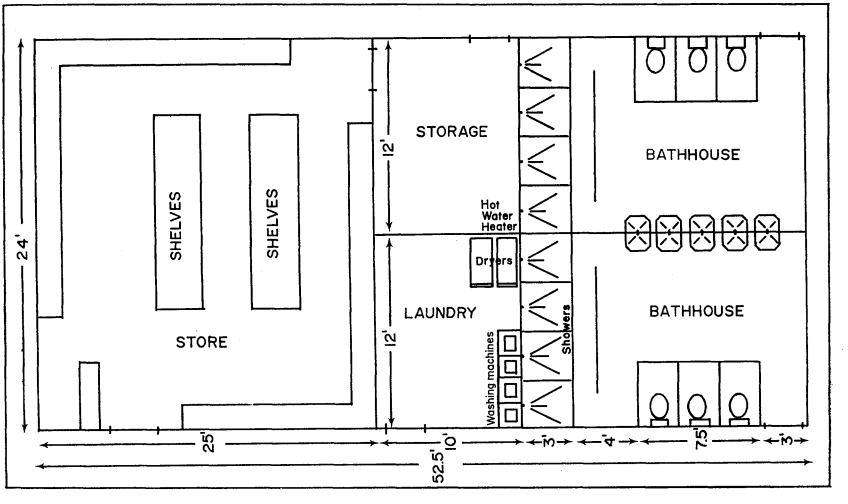

FIG. 4. Layout of main building in campground.

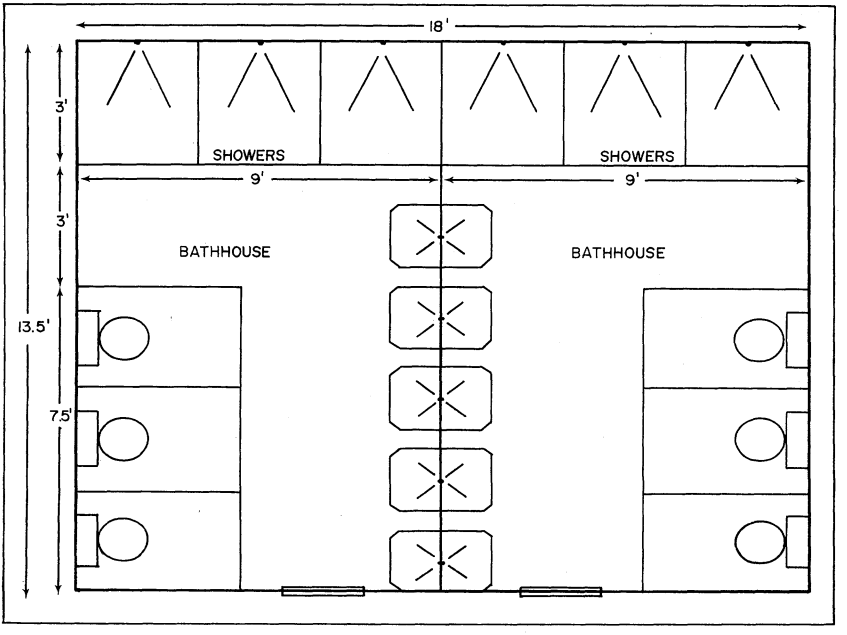

FIG. 5. Layout of concrete block bathhouse.

Following the recommendation of a local laundry owner of one dryer for every two washing machines, four commercial washing machines and two commercial dryers were installed.

Electrical Wiring

To minimize expenses, it was essential that adequate wiring be installed during construction.[10] Before correct wire size could

[10] In the 1970 camping survey, 7 of 25 owners reported replacement of original wiring or adding more outlets.

TABLE 2. INVESTMENT COSTS FOR STORE AND LAUNDRY FURNISHINGS FOR A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item	Number of units	Cost per unit	Total cost
Washing machines	4	$ 300.00	$1,200.00
Dryers	2	500.00	1,000.00
Merchandise racks	3	250.00	750.00
Display freezer	1	550.00	550.00
Drink cooler	1	400.00	400.00
Air conditioner	2	250.00	500.00
Cash register	1	180.00	180.00
Display counter	1	200.00	200.00
Stock inventory	1	5,000.00	5,000.00
TOTAL			$9,780.00

be chosen and priced, it was necessary to determine the electrical requirements of a camp-trailer. Each site should be equipped to accommodate all camp-trailers; therefore, power requirements of the largest camp-trailers were checked. According to a camp-trailer manufacturer, all camp-trailers had 120-volt circuits. Major electric appliance loads were as follows:

Appliance	*Requirement*
Air conditioner (10,000 BTU)	2,500 watts
3-burner electric range	2,000 watts
Refrigerator (6 cu. ft.)	500 watts
Oven	1,000 watts
Electric heater	1,500 watts
Electric frying pan	1,000 watts
Television	300 watts
Lights (10 in camp-trailer)	1,000 watts
Radio	10 watts
Electric mixer	60 watts
Toaster	300 watts
Coffee pot (30-cup)	1,000 watts

Power company engineers aided in determining power requirements and regulations. Probability tables were used to calculate an adequate power supply. Calculations coincided closely with the 6,000-watt load requirement recommended by an experienced campground operator.

Problems were encountered in selecting a wire size because of the long distance (several hundred feet) across which current had to travel. Determination of the most economical wiring system emerged as a complete study within itself and was beyond the scope of this project. However, a feasible and reasonable wiring system is illustrated in Figure 6. U.S.E. cable, which could be buried without conduit, was installed with the water system. Care was taken to bury pipes and wiring deep enough to prevent damage by vehicles and freezing.

Electric meters were installed by the power company at each power pole in the campground. Because service by the power company ends at the last meter, three meters were used to reduce voltage drops within the campground. Meters were also required at the store and at the well pump. If only one meter is used, extremely large wire would be required to carry enough electricity to campsites located some distance from the power supply.

A separate three-wire cable carrying 220 volts was extended from each power pole to each utility post in the same row of campsites. Number four U.S.E. cable was used from the meters to utility posts on the north end of each row. Number six U.S.E.

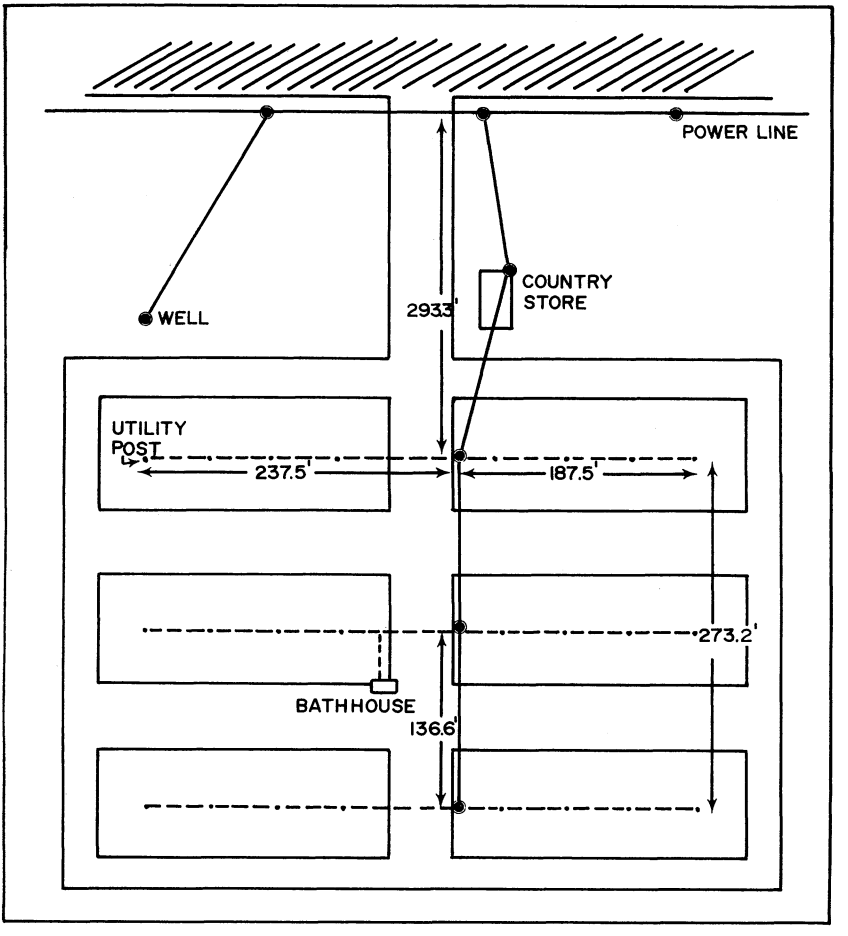

FIG. 6. Layout of electrical wiring. Dotted lines represent underground lines.

cable was extended from the meters to all other utility posts, Table 3.

Separate estimates were obtained for wiring the country store and the small bathhouse. Estimates were $1,300 and $500, respectively. Total cost of wiring the campground, including labor, was $5,201.

Creosote posts 4 inches in diameter were erected in the center of each camping location and a weather-proof fuse box was attached to each post. Four 120-volt weather-proof sockets with 30-amp fuses were wired from each fuse box. With four sockets at each utility post, two camp-trailers could be supplied with power at each location. Two extra sockets on each post were

TABLE 3. INSTALLATION AND MATERIAL COSTS FOR WIRING IN A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item	Number of units	Cost per unit	Total cost
Campground	1	$3,200.00	$3,200.00
Large building	1	1,300.00	1,300.00
Small building	1	500.00	500.00
30-foot poles for vapor lights	6	33.50	201.00
TOTAL			$5,201.00

for the convenience of campers who desired outside lights, and could supply two additional camping spaces if the buffer zones were used for camping.

Plumbing in Campground

A 150-foot well 6 inches in diameter was drilled at a cost of $5.50 per foot. Location of the well, water outlets, and pipe sizes in the campground are illustrated in Figure 7. Water pipe size required, cost of pipe, and installation cost were estimated by a plumbing contractor. Galvanized water pipe was installed, although plastic pipe could be used. A comparison of pipe prices disclosed the following cost per 100 feet:

Pipe size	*Cost of pipe per 100 feet*	
	Galvanized	*Plastic*
1 inch	$ 35.91	$10.80
1¼ inch	48.14	14.29
1½ inch	57.56	18.65
2 inch	76.22	29.04
2½ inch	119.83	39.61

A pump that provided 50 gallons of water per minute – enough for 100 campers to use water simultaneously – was installed at a cost of $400. Additional plumbing costs included a 120-gallon water heater and a 120-gallon, pressurized water-holding tank, Table 4.

Three water faucets were attached to each utility post, two for the two camp-trailers parked at the location and one for outside use. Two additional faucets could be added to each post to allow camping in the buffer zones. Creosote posts not only supported water and electrical outlets, but protected outlets from damage.[11]

Since an Alabama recreation study reported an Alabama camping party consisted of an average of between 3 and 4 people[12], a

[11] One campground owner reported many campers had driven over waterpipes before he installed similar posts.

[12] Actual average was 3.27 people per party.

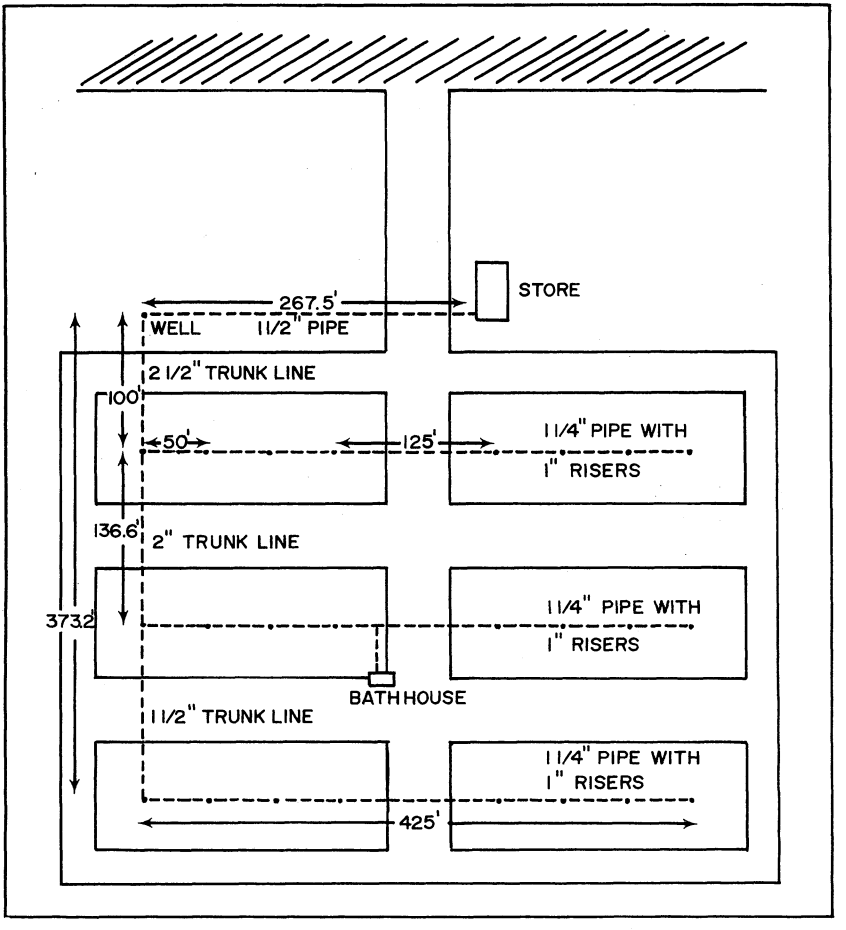

FIG. 7. Plumbing layout of campground.

campground owner with 48 sites could expect 157 campers at full capacity. The bathhouses were built to accommodate 200 people to allow some growth without adding toilet facilities (bath facilities inside motor homes were not considered). Fixture ratios (number of bathroom fixtures provided per person) were obtained from the Auburn University School of Architecture. Ratios used for a campground were:

Type of fixture	*Number using each fixture*
Shower	20 people
Sink	10 people
Toilet	20 people

TABLE 4. INSTALLATION AND MATERIAL COSTS FOR WATER AND SEWAGE SYSTEM IN A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item and unit	Number of units	Cost per unit	Total cost
Well, feet	150	$ 5.50	$ 825.00
Water holding tank, gallons	120	.83	100.00
Pump	1	400.00	400.00
Hot water heater, gallons	120	4.00	480.00
Campground water lines	1	6,000.00	6,000.00
Septic tank and field, 1,000 gal.	6	1,200.00	7,200.00
Plumbing (large building)	1	12,900.00	12,900.00
Plumbing (small building)	1	10,000.00	10,000.00
TOTAL			$37,905.00

Separate cost estimates were obtained for plumbing and fixtures in the two campground buildings. Plumbing and fixtures were $12,900 for the larger building and $10,000 for the smaller building. Total cost of plumbing and installation for the campground was $37,905, Table 4.

Some campgrounds made provision for water draining from camp-homes (sinks and iceboxes). Metal drums (55-gallon size) with the bottom cut out were set in the ground and filled with gravel to provide drains.

Sewage Treatment and Disposal

The best method of sewage disposal depends on the number of people using the facility and on soil percolation tests. Procedures and criteria for sewage treatment and disposal can be obtained from the Bureau of Environmental Health, Alabama State Department of Public Health, Montgomery, Alabama. The estimate for septic tank and field included the cost of a dumping station for travel-trailers. The station is merely a hookup leading to the septic tank which allows trailer owners to empty waste from holding tanks.

Garbage Disposal

Fifty-five-gallon drums were purchased from a local junkyard for use as garbage cans, Table 5, and one can was placed between every two trailers. Campers were given large plastic bags for garbage upon registration to keep garbage from attracting flies into the campground. Garbage was collected each day and hauled to the city landfill dump.

Some problems were experienced with campground litter and various incentives might be necessary to help keep the camp-

TABLE 5. MISCELLANEOUS INVESTMENT COSTS FOR A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item and unit	Number of units	Cost per unit	Total cost
Creosote utility posts, 6′×4″	24	$ 1.10	$ 26.45
Garbage cans, 55-gal.	48	3.00	144.00
Picnic tables, tables	48	25.00	1,200.00
Barbecue grills, grills	48	35.00	1,680.00
Advertising billboards, billboards	2	450.00	900.00
Directional signs	4	150.00	600.00
Playground equipment, equipment	1	100.00	100.00
TOTAL			$4,650.45

ground clean. One incentive might be to pay children several cents per pound of litter turned into the office.

Lighting for Campground

While some lighting was needed in the campground, too much light is undesirable. Six vapor lights were installed in the 13-acre tract.

Vapor lights installed on a new pole cost $4 per month. If installed on an existing pole, the cost is $3 per month. The life of a 30-foot cresote pole, which cost $33.50, was estimated to be 20 years. In that period, the owner would save $206.50 per vapor light minus the pole installation cost by having the lights installed on an existing pole.

Paving

The 200-foot entrance to the campground and a small parking area in front of the store were paved at a total cost of $1,256.75, Table 1. Roads inside the campground were not paved for several reasons: (1) to eliminate as much heat as possible from the campground, and (2) to avoid resource fixity where possible. If an alternative method of land use were more profitable, land could be converted more easily without asphalt roads.

Telephone Service

In addition to a private phone, any one of three other types of telephones might be required for campground use:

PUBLIC TELEPHONE. Public telephones have been abused and prospective locations must be checked by a telephone company representative. Property owners are paid rent for use of space, but owners must provide electricity for lighting.

SEMI-PUBLIC TELEPHONE. More commonly known as a "pay phone", installation of a semi-public telephone required a deposit of $35.00 plus $15.82 per month (plus 14 per cent tax). Money collected from the telephone is credited to the customer's account.

BUSINESS TELEPHONE. Telephones for business purposes require a deposit of $50. In addition to a basic charge of $15.82 per month (plus 14 per cent tax), a $10.00 installation fee is charged.

A business phone and a semi-public phone were installed in the central Alabama campground, Table 8. Total telephone cost was based on an assumption that the semi-public telephone paid for itself 9 months per year. No allowance was made for long distance calls.

TOTAL CAMPGROUND COST

Total investment for the 48-unit campground in central Alabama was $94,431.70, or $1,967.32 per site, Table 6. The entire investment cost, however, would not be charged against the campsites. The portion of the large building used for a country store and the laundry facilities should generate enough revenue to be self-supporting. Removal of these items reduced total campground investment to $72,319.70.

TABLE 6. TOTAL INVESTMENT COST FOR A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item	Total cost	Per site
Land and site preparation	$15,956.75	$ 332.43
Water, plumbing, fixtures, and sewage	37,905.00	789.69
Electric installation, wire, and poles	5,201.00	108.35
Buildings	20,938.50	436.22
Miscellaneous	4,650.45	96.88
Store furnishings and stock	9,780.00	203.75
TOTAL	$94,431.70	$1,967.32

Fixed Costs

The total investment was not charged to the campground in one year. Since the facilities generate income for many years, the investment should be charged over the life of the facilities. Land *per se* does not depreciate; thus, the acquisition cost of the land was removed from total investment before computing depreciation. Total fixed depreciation charge per year was $3,324.07,

TABLE 7. TOTAL AND PER SITE ANNUAL INVESTMENT COST FOR A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item	Cost	Life, years	Annual depreciation	
			Total	Per site
Site preparation	$ 2,956.75	20	$ 147.84	$ 3.08
Water and sewage system	37,905.00	20	1,890.20	39.38
Electric systems	5,201.00	20	260.05	5.42
Buildings[1]	11,218.50	20	560.93	11.69
Miscellaneous	4,650.45	10	465.05	9.69
TOTAL	$61,931.70		$3,324.07	$69.26

[1] 720 square feet utilized for country store and laundry were not charged to campground.

TABLE 8. TOTAL AND PER SITE FIXED COSTS FOR A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item	Yearly fixed cost	Fixed cost per site
Taxes[1]	$ 373.00	$ 7.77
Insurance	634.00	13.21
Maintenance	529.00	11.02
Interest[2]	2,759.00	57.48
Telephones[3]	270.35	5.63
Vapor lamps	216.00	4.50
TOTAL	$4,781.35	$99.61

[1] $2.00 per 100 at 30 per cent assessment rate.
[2] 6.5 per cent on $42,466 borrowed capital.
[3] Does not include $85 deposit for telephone service.

or $69.26 per campsite, Table 7. These costs must be met even if the campground is built but never opened. Additional fixed costs for expenses such as monthly rental on the vapor lamps, taxes, insurance, interest on funds borrowed for campground investment or operation, and maintenance and repairs on buildings and sites, were $4,781.35 per year and $99.61 per site, Table 8. Fixed costs vary according to the property tax levied in the location, amount of investment that is financed, and rate of interest charged.

Variable Costs

Variable costs are for items that change with level of operation of the campground. Amount of electricity used will be directly related to the number of campsites rented. Labor costs will be highly dependent on the level of operation. The campground will require labor for checking in guests, cleaning bathhouses, collecting garbage, and general maintenance and security. For the central Alabama campground, garbage collection was made by a county-wide garbage pickup service. Seasonal labor was

TABLE 9. TOTAL AND PER SITE VARIABLE COSTS FOR A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971[1]

Item	Yearly variable cost	Variable cost per site
Hired labor	$2,524.00	$ 52.58
Utilities	1,041.00	21.69
Garbage service	139.00	2.90
Machine hire	299.00	6.23
Advertising	545.00	11.35
Dues	43.00	0.89
Miscellaneous	585.00	12.19
TOTAL	$5,176.00	$107.83

[1] Costs varied with the level of occupancy. Those listed are based on 50 per cent year-round occupancy.

hired during June, July, and August and rental equipment was used for grass cutting and other maintenance operations. Total variable costs were $5,176.00, or $107.83 per campsite, higher than fixed or investment costs, Table 9.

Total Cost

Cost for operation and maintenance of the 48-unit campground totaled $13,281.42 per year not including any cost for the manager or family labor. This amounted to $276.70 per site, Table 10. The total cost could be modified by exclusion or inclusion of certain features. Availability of a rural water system would eliminate the need for a well, pump, and pumphouse. Family labor could eliminate the seasonal labor turnover. Additional expenses would be incurred if more recreational activities, such as fishing lakes or swimming ponds, were added.

TABLE 10. TOTAL AND PER SITE VARIABLE, FIXED, AND INVESTMENT COSTS FOR A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item	Total cost	Cost per site
Variable cost	$ 5,176.00	$107.83
Fixed cost	4,781.35	99.61
Investment cost (depreciation)	3,324.07	69.26
TOTAL	$13,281.42	$276.70

NECESSARY RETURNS

For feasible operation the campground had to generate enough revenue to pay all expenses, including a return to land, capital, and management. The central Alabama campground charged $3.00 per night plus an additional 50¢ per night charge for air conditioners, with a limit of six persons per site. All additional

persons were charged 50¢ per night. The average nightly charge collected per site was $3.25. The campground was assumed to operate at 50 per cent capacity year round or each site rented 180 days per year. Estimation of the 50 per cent rate was as follows:

Season	*Days rented*
Spring	50
Summer	90
Fall	30
Winter	10
TOTAL	180

Total income from each site was $585, Table 11. The campground operated with returns greater than costs beyond the 20 per cent capacity level. Even when opportunity costs (alternative

TABLE 11. NET INCOME PER SITE WITH RETURNS TO LAND, LABOR, MANAGEMENT, AND CAPITAL FOR VARIOUS CAPACITY LEVELS OF A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item	Returns, by percentage capacity level			
	20	30	40	50
Cash receipts	$ 234.00	$351.00	$468.00	$585.00
Total cost	254.48	265.41	271.37	276.70
Net income	$—20.50	$ 85.59	$196.63	$308.30
Family labor	19.20	28.80	38.40	48.00
Land cost[1]	17.60	17.60	17.60	17.60
Capital cost[1]	26.71	26.71	26.71	26.71
Return to management	$—84.01	$ 12.48	$113.92	$215.99

[1] 6.5 per cent return to land and capital.

TABLE 12. YEARLY NET CASH INCOME AND PER CENT RETURN TO CAPITAL AND MANAGEMENT FOR VARIOUS CAPACITY LEVELS OF A 48-UNIT CAMPGROUND IN CENTRAL ALABAMA, 1971

Item	Return, by percentage capacity level			
	20	30	40	50
Cash receipts	$ 11,232	$16,848	$22,464	$28,080
Less cash expenses	8,892	9,416	9,702	9,957
Net cash income	$ 2,340	$ 7,432	$12,762	$18,123
Less investment cost	3,324	3,324	3,324	3,324
Net income	$ —984	$ 4,108	$ 9,438	$14,799
Less unpaid family labor	922	1,382	1,843	2,304
Return to land, capital, and management	$—1,906	$ 2,726	$ 7,595	$12,495
Return to land, capital, and management	—1,906	2,726	7,595	12,495
Less interest on investment	1,282	1,282	1,282	1,282
Less land cost	845	845	845	845
Return to management	$—4,033	$ 599	$ 5,468	$10,368
Percentage return to land, capital, and management	—2.64	3.77	10.50	17.28

returns on time and funds) were charged against the campground, the returns were positive beyond this level. Returns to management of $215.99 per site or $10,368.00 for the entire campground were reached at the 50 per cent capacity level, Table 12.

REDUCED COSTS

Several ways to reduce campground costs are apparent. One of the most obvious ways to reduce total costs was to build a smaller campground; however, there was doubt whether cost per site would be decreased. Another was to use family labor for construction.

Assumptions were available regarding the hypothetical campground that would reduce costs. One could assume that the campground was located near a town with water and sewage hookup available. This is not unreasonable, for several Alabama campgrounds are in such locations.

By eliminating items that were convenient but not absolutely necessary, costs were reduced to approximately $1,428 per site. Items that could possibly be eliminated included the following.

Item	*Cost*
5 acres of additional land	$5,000
Washing machines and dryers	2,200
Picnic tables	1,200
Playground equipment	100
Paving	1,111
Small bathhouse	13,280
Barbecue grills	1,680
TOTAL	$24,571

By eliminating laundry and storage rooms, additional toilet facilities could be added in the large building. The small bathhouse, which was built in a central location for convenience, would then be unnecessary. The paved entrance road and parking lot were not necessary; however, some road preparation would be necessary so the total cost could not be subtracted.

Other possibilities include using less expensive construction materials. Bathhouses might have been built with lumber instead of concrete block. Barbecue grills consisting of car wheel rims mounted on cast iron pipe would reduce that cost considerably.

Even with these reductions, construction costs remained high and were still a limiting factor in attracting investors. At $1,428 per site, the proposed campground would still cost over $68,000.

SUMMARY

Camping represents different things to different people. It may be thought of as a means to live in and commune with nature, as a method of reducing lodging expenditures while engaging in recreational activities, or as a relatively inexpensive second home without commensurate land and utility expenditures.

Modern camping is looked on disdainfully by many camping purists, but the trend is away from tents and toward air-conditioned mobile homes with modern conveniences.

Prospective investors in campgrounds have many factors to consider before developing a location. High on the priority list must be the type of facilities required by modern campers. A grassy parking area will no longer suffice. Motor homes have power, water, and sewage requirements similar to a small house.

The cost of building a campground in central Alabama was determined based on stated assumptions. Each cost was reported as if it were actually incurred. Prospective campground investors may modify the cost structure to meet the situation in their locality.

Forty-eight pull-through campsites were designed to accommodate the largest camp-trailers. A large multiple-purpose building to serve as a bathhouse and a pump house were constructed at a cost of $20,938.50.

Campground features included a grocery store, a laundry, picnic tables, barbecue grills, water outlets, and electrical hookups. Total investment for the 48-unit campground and additional facilities was $94,431.70, or $1,967.32 per site.

The entire investment cost was not charged to campsites, since the store and laundry should be self-supporting. Removal of these items reduced total campground investment to $72,319.70.

Because the facilities would generate an income over a long period, investment was charged over the life of the facilities. Depreciation costs totaled $3,324.07 per year, other fixed costs $4,781.35, and yearly variable costs $5,176.00. Total cost per year was $13,281.42.

The average nightly charge per site was $3.25. The campground operated at 50 per cent capacity year round or each site was rented 180 days per year. This would generate receipts totaling $28,080.

While receipts totaling above $13,281.42 would provide a net gain for the operator, opportunity costs must be considered. A

manager must consider the cost of using his time, capital, and land in this endeavor. Return to management in the hypothetical campground was $215.99 per campsite.

CONCLUSIONS

As more and more campers "graduate" from tents to truck campers to motor homes, transient campgrounds will become more popular and more crowded. While the demand for developed camping space continues to rise, the supply of such facilities continues to be almost non-existent in Alabama. There are several major reasons for this lack of supply:

(1) Land purchase and construction costs are extremely high. Costs for undeveloped campsites range between $500 and $1,000 per site, and developed sites cost about twice as much.

(2) Resource fixity may discourage some investors. Once a large amount of money is invested it is difficult to discontinue even an unprofitable operation. Land that has been developed as a campground can be converted to other uses only at great expense.

(3) As previously indicated, campgrounds operated at high levels of capacity can be profitable. However, even a profitable operation is not a short-term investment. Most fixed costs in the campground were depreciated over a 20-year period.

Factors contributing to successful campground operation are:

(1) Location. An overnight campground must be located near a large flow of traffic. Campers represent only a small percentage of the population and only a percentage of all campers will stop at a particular campground. However, a large flow of traffic does not necessarily indicate many campers. Local traffic and commuters will not help a campground operator.

(2) Good Management. A reputation is established for a campground through word-of-mouth advertising. A campground with poor service gets little repeat business.

(3) Sufficient Operating Capital. Although sufficient operating capital is part of good management, many campground operators are unaware of the costs of operation when the campground is constructed. Operating costs for the hypothetical campground were over $5,000 per year before opportunity costs were considered. A good manager with good campground location cannot provide adequate service with inadequate operating capital.

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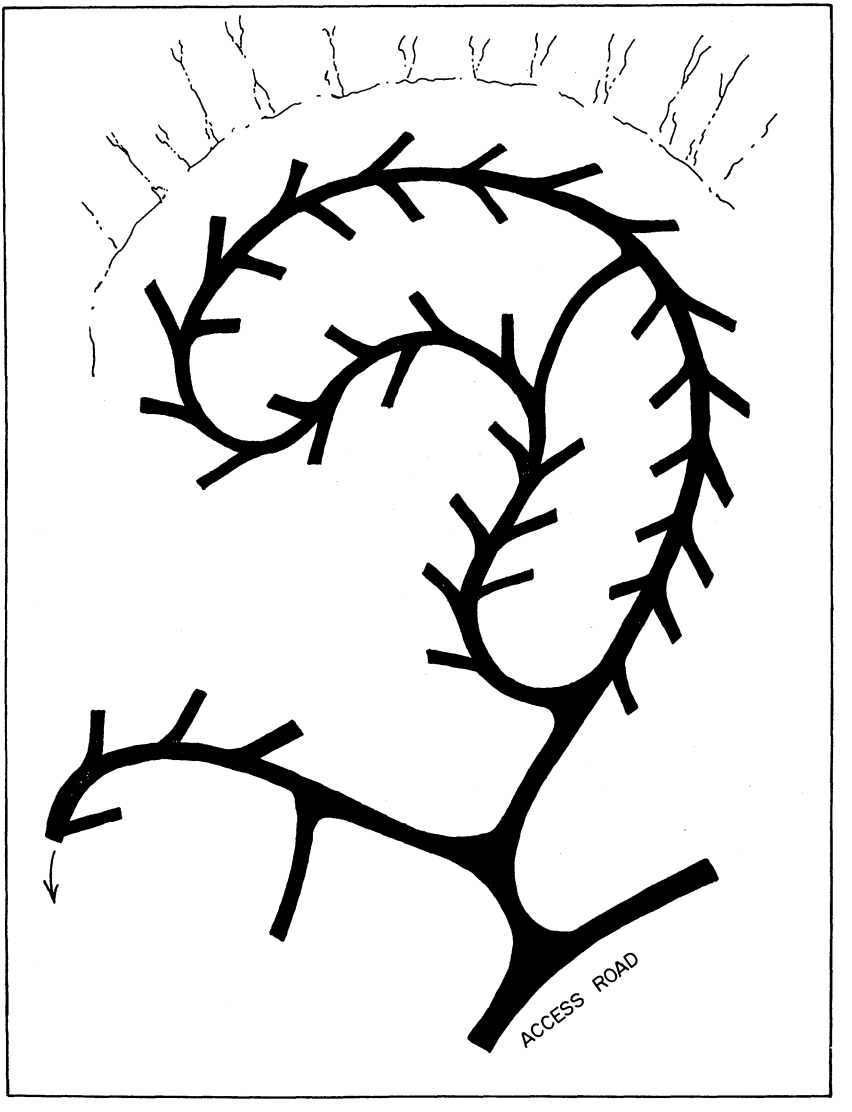
APPENDIX A

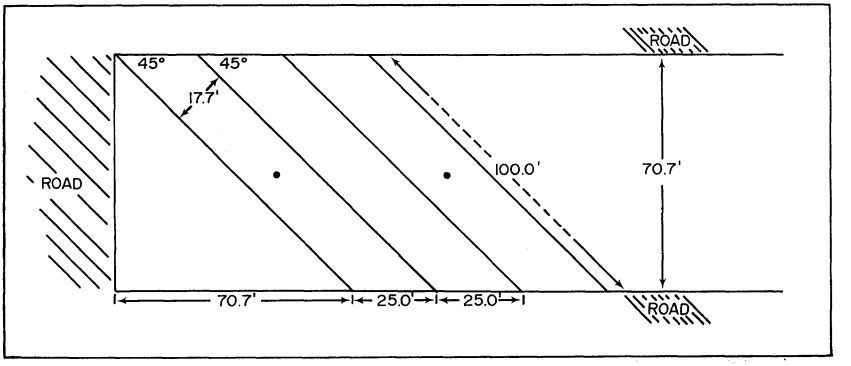
People and Firms Contacted for Information Concerning Campground Construction

Alabama Power Company, Auburn
Auburn Hardware, Auburn
Barnes, R. V., Auburn
Darden, Paul, Professor, Auburn University
Dixie Well Boring Company, LaGrange, Georgia
Edmunson, Jerry, Perdido Bay KOA Campground, Lillian, Alabama
Hilyer Junk Yard, Opelika
John Dorsey & Son Feed Company, Opelika
Jones Inc., Sheet Metal & Machine Works, Opelika
Kyle-Drake Plumbing, Heating, & Air Conditioning, Opelika
Lancaster & Lancaster Architects, Auburn
Lanier, Don, Auburn Electric Company, Auburn
Lee County Asphalt Company, Opelika
Marty, Edward C., Professor, Auburn University
Miller-Averett Marine, Inc., Columbus, Georgia
W. G. Newman Plumbing Company, Auburn
J. C. Penney Company, Inc., Opelika
Price, E. M., Sr., Dothan
Sharpe Sand & Gravel Company, Auburn
Sherling, W. G., Professor, Auburn University
Shuttleworth, Riley, Professor, Auburn University
South Central Bell Telephone Company, Auburn
Spencer Lumber Company, Auburn
Thach Hut Cleaners, Auburn
Thompson, Phil, Opelika Plumbing Supply Company, Opelika

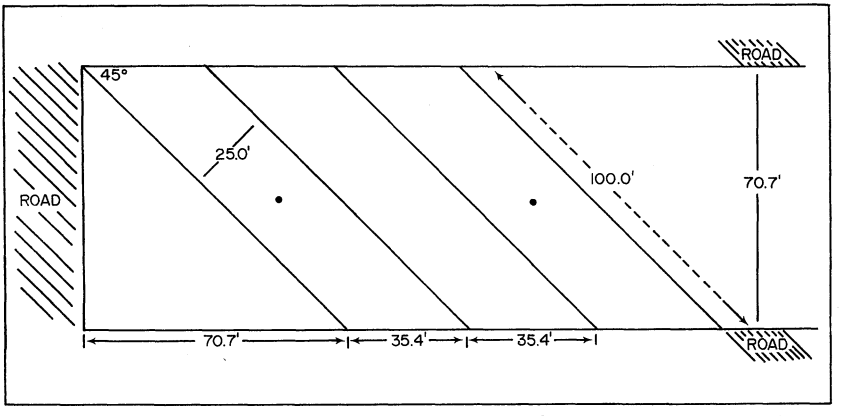
APPENDIX B



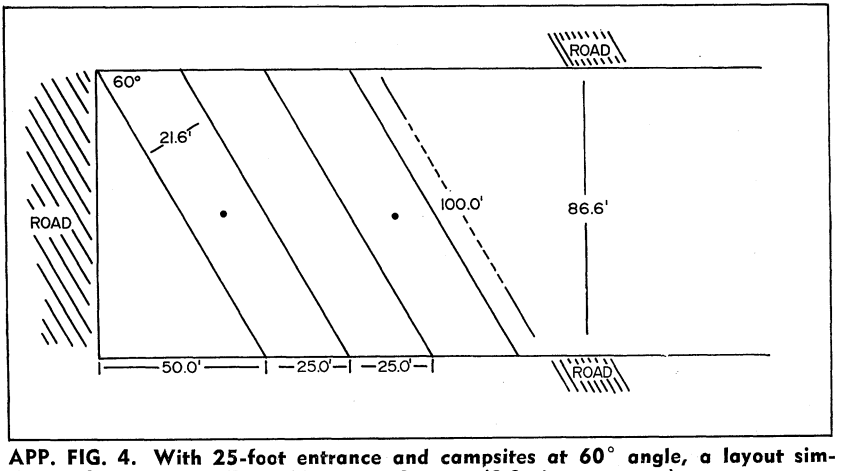
APP. FIG. 1. Layout of campground with back-in campsites.



APP. FIG. 2. With 25-foot entrance and campsites at 45° angle, a layout similar to that in Figure 7 would cover 4.9 acres (9.8 sites per acre).



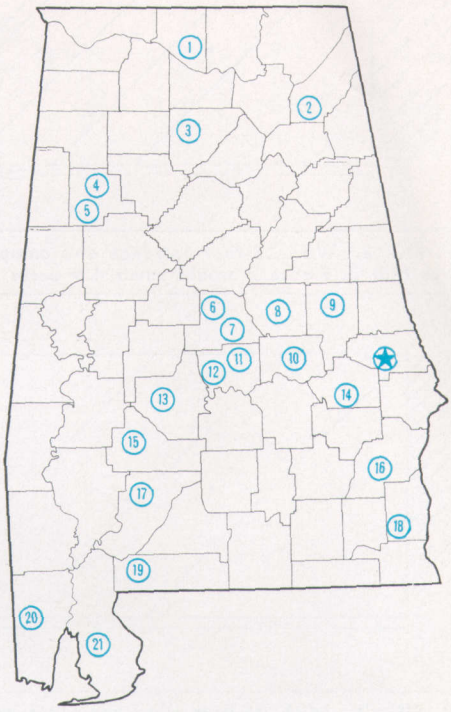
APP. FIG. 3. With 25-foot wide campsites at 45° angle, a layout similar to that in Figure 7 would cover 6.1 acres (7.8 sites per acre).



APP. FIG. 4. With 25-foot entrance and campsites at 60° angle, a layout similar to that in Figure 7 would cover 5.2 acres (9.3 sites per acre).

AGRICULTURAL EXPERIMENT STATION SYSTEM OF ALABAMA'S LAND-GRANT UNIVERSITY

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the State has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



Research Unit Identification

★ Main Agricultural Experiment Station, Auburn.

1. Tennessee Valley Substation, Belle Mina.
2. Sand Mountain Substation, Crossville.
3. North Alabama Horticulture Substation, Cullman.
4. Upper Coastal Plain Substation, Winfield.
5. Forestry Unit, Fayette County.
6. Thorsby Foundation Seed Stocks Farm, Thorsby.
7. Chilton Area Horticulture Substation, Clanton.
8. Forestry Unit, Coosa County.
9. Piedmont Substation, Camp Hill.
10. Plant Breeding Unit, Tallassee.
11. Forestry Unit, Autauga County.
12. Prattville Experiment Field, Prattville.
13. Black Belt Substation, Marion Junction.
14. Tuskegee Experiment Field, Tuskegee.
15. Lower Coastal Plain Substation, Camden.
16. Forestry Unit, Barbour County.
17. Monroeville Experiment Field, Monroeville.
18. Wiregrass Substation, Headland.
19. Brewton Experiment Field, Brewton.
20. Ornamental Horticulture Field Station, Spring Hill.
21. Gulf Coast Substation, Fairhope.