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# Grand Teton National Park **Signal Mountain**

## Environmental Assessment Development Concept Plan

October 1988



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DEVELOPMENT CONCEPT PLAN  
ENVIRONMENTAL ASSESSMENT

SIGNAL MOUNTAIN  
GRAND TETON NATIONAL PARK  
WYOMING

Prepared by  
Rocky Mountain Regional Office  
and  
Grand Teton National Park

United States Department of the Interior  
National Park Service

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Regional Director ~~AC/10/88~~  
Rocky Mountain Regional Office

*10-28-88*  
\_\_\_\_\_  
Approval Date

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## PURPOSE AND OBJECTIVES

The purpose of this study and document is to address the impacts of the changing needs of the visiting public on the facilities at Signal Mountain. Use has steadily increased over the life of the existing facility, creating demands that cannot be adequately addressed within the constraints of existing facilities and topography.

This document includes a description of the existing facility and the issues affecting the area; a proposal for dealing with the issues and an Environmental Assessment (EA) of the proposal. Based on the review of the EA and the results of the review process, the Regional Director will determine whether the proposal will result in significant impacts. If significant impacts are anticipated, an Environmental Impact Statement (EIS) will be prepared. If not, a Finding of No Significant Impact (FONSI) will be prepared. This document is part of the tiered planning process based on the Grand Teton National Park Master Plan (NPS 1976).

## INTRODUCTION

Grand Teton National Park, centrally located between two national forests and south of Yellowstone National Park, draws over two million visitors each year (see Rocky Mountain Region Map). The majority of these visitors arrive in the summer and early fall months to view wildlife, and geologic features and to experience the outdoors. National Park Service (NPS) and concession facilities allow the visitor to do this in a variety of ways ranging from the very primitive to the plush.

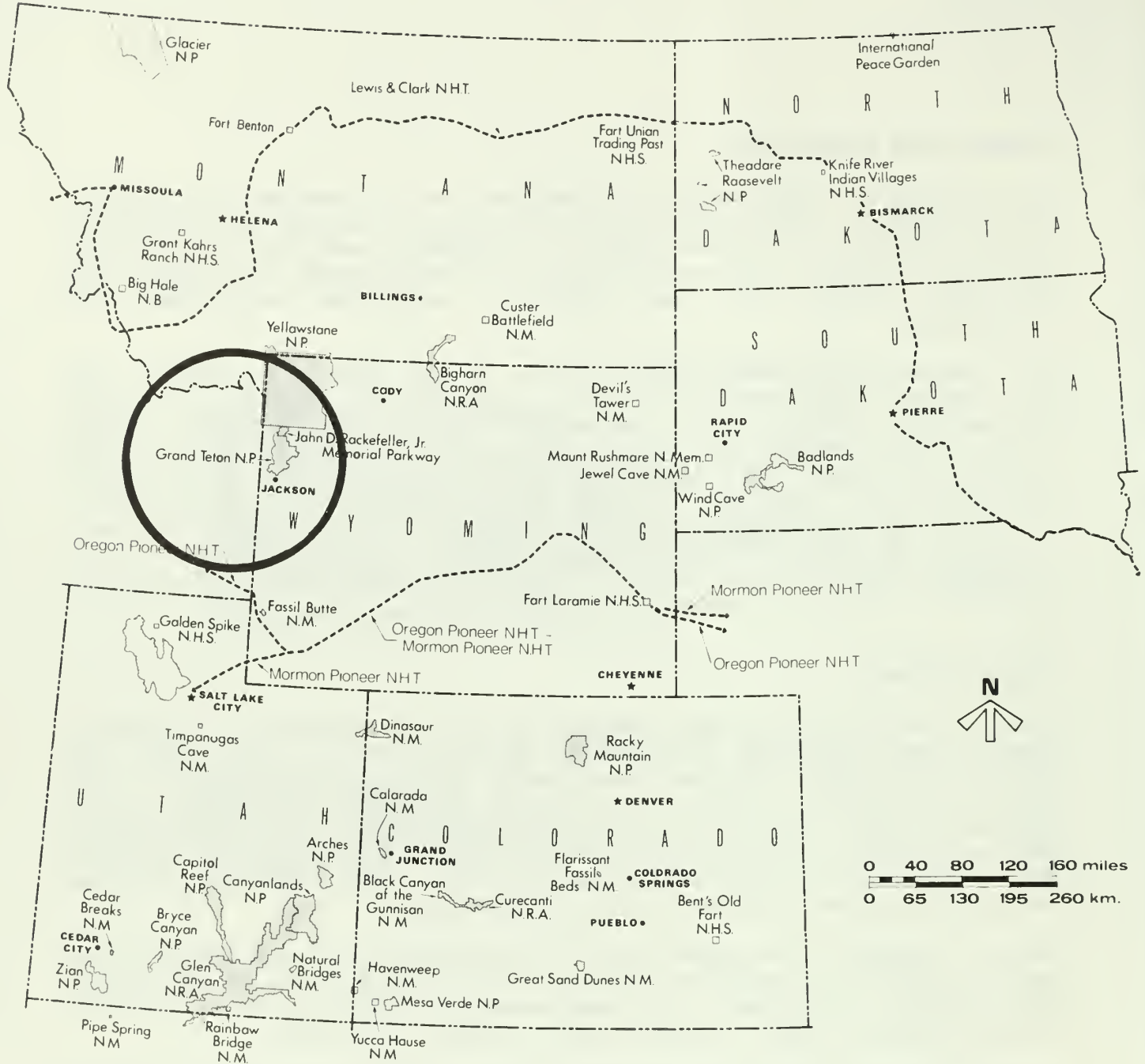
Signal Mountain Developed Area is centrally located within the park, on the east shore of Jackson Lake to the south of the Snake River outlet. It lies on a steep west-facing slope at the foot of Signal Mountain (see Location Map - Signal Mountain).

Signal Mountain Developed Area has been the location of a tourist facility on the shore of Jackson Lake since the late 1920's. Today some of the facilities which constitute the Signal Mountain Developed Area are operated by the National Park Service while the remainder are operated under a concession contract.

## DESCRIPTION OF THE ENVIRONMENT

Refer to "Existing Conditions" maps for the following descriptions. Concession operated facilities now available at Signal Mountain include:





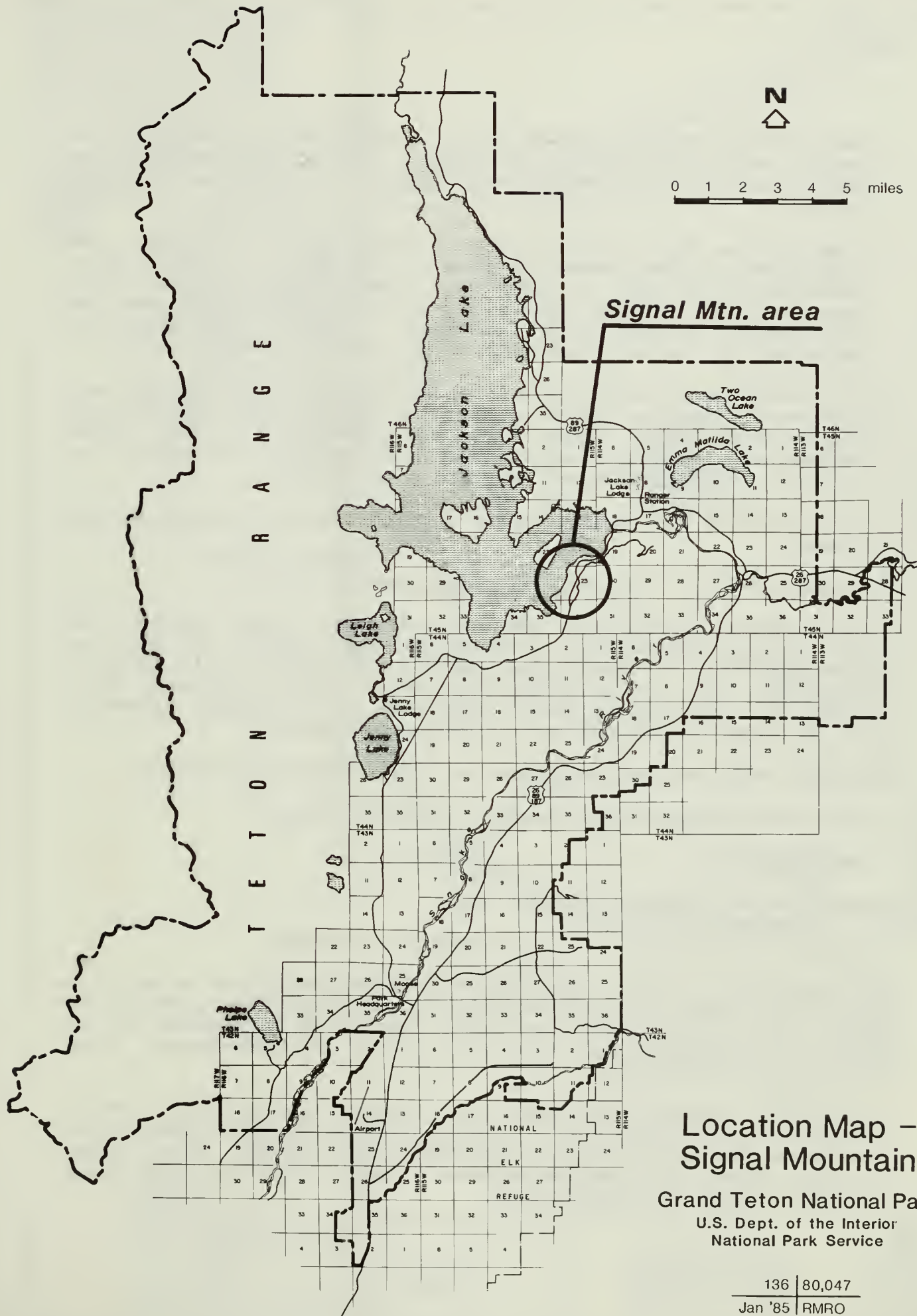
## Legend

- Locations of Major Cities
- \* Locations of State Capitals
- State Boundary Lines
- ▨ National Park Service Areas
- National Park Service Historical Trails

## ROCKY MOUNTAIN REGION

National Park Service

United States Department  
of the Interior



# Location Map – Signal Mountain

Grand Teton National Park  
U.S. Dept. of the Interior  
National Park Service

- Twenty-four overnight guest cabins with a combined total of 79 rental units (total of 363 pillows). The cabins range from log cabins that were constructed in the 1930's to a duplex completed in 1982.
- A main lodge which was built during the Mission 66 Program. The main floor of the lodge contains a gift shop, a coffee shop, restaurant, bar and a wooden deck overlooking the lake. The women's dormitory, the laundry, dry storage, maintenance shop and furnace are located in the basement. There is a wing on the south end of the building housing the men's dormitory.
- The guest registration and office building is a relatively new, three-story modular building near the main lodge. Besides the registration/lobby, this structure contains a gift shop, concessioner office space, living quarters for the manager, an employee laundry, dining area, and some storage.
- A gas station with a grocery and camping/fishing-related service items.
- A marina with a fuel dock and boat rentals.

Other services provided by the concessioner include guided river float trips, windsurfing instruction and rental, as well as snowmobile tours. The Signal Mountain Developed Area is in a Special Use Zone (Statement for Management, 1986), allowing for a variety of recreational uses. The area is a seasonal operation with no plans for expanding into the winter months.

National Park Service facilities at Signal Mountain include:

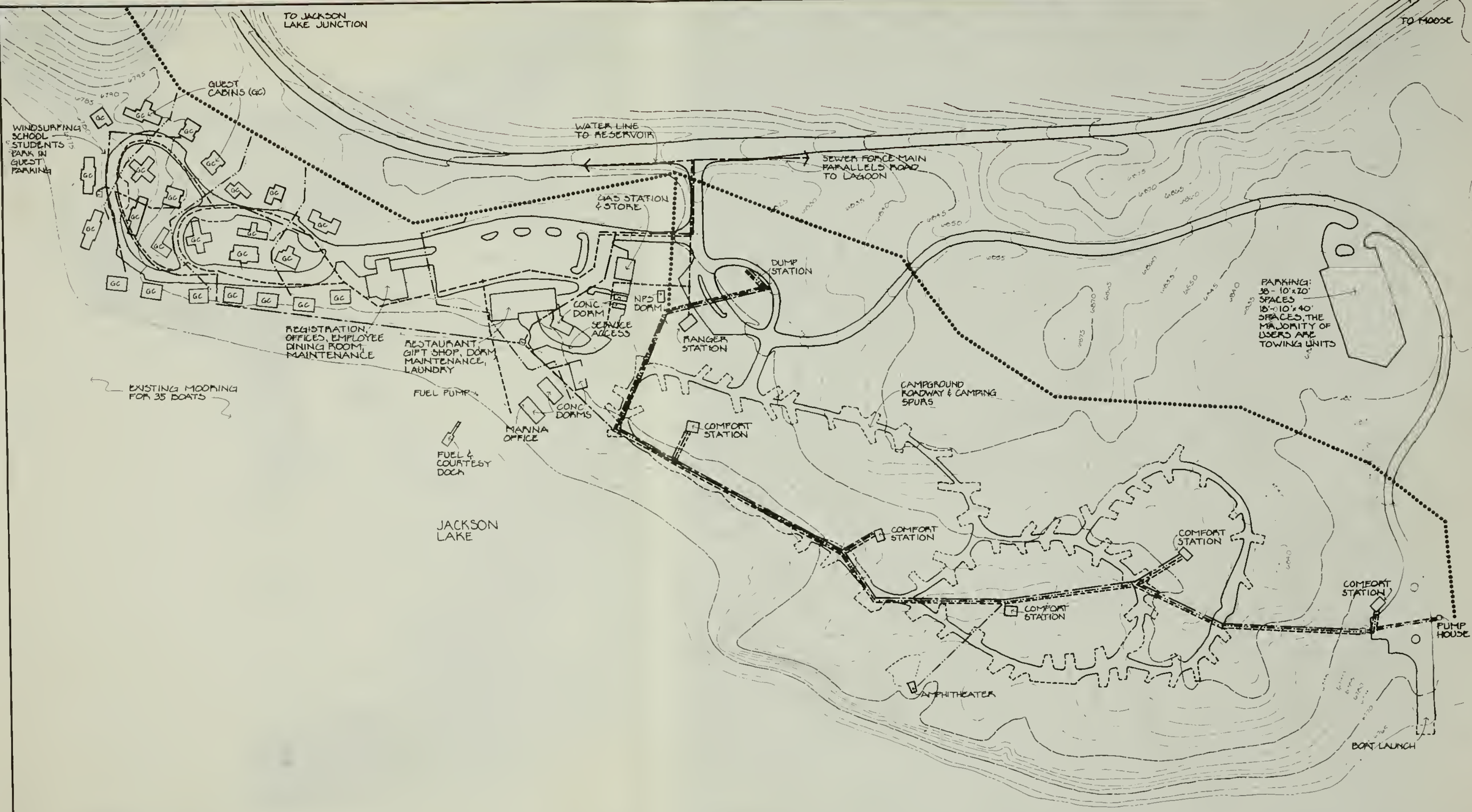
- An 81-site campground adjacent to Jackson Lake.
- Amphitheater.
- Boat launch ramp and parking area.
- Seasonal housing for a camp tender and a ranger.

The vegetation of the Signal Mountain Developed Area is set in a primarily lodgepole pine/subalpine fir plant community, one of the park's five major vegetation types identified in Austin, et al. (1976). In suitable, more open areas (e.g., the campground), aspen and shrubs predominate.

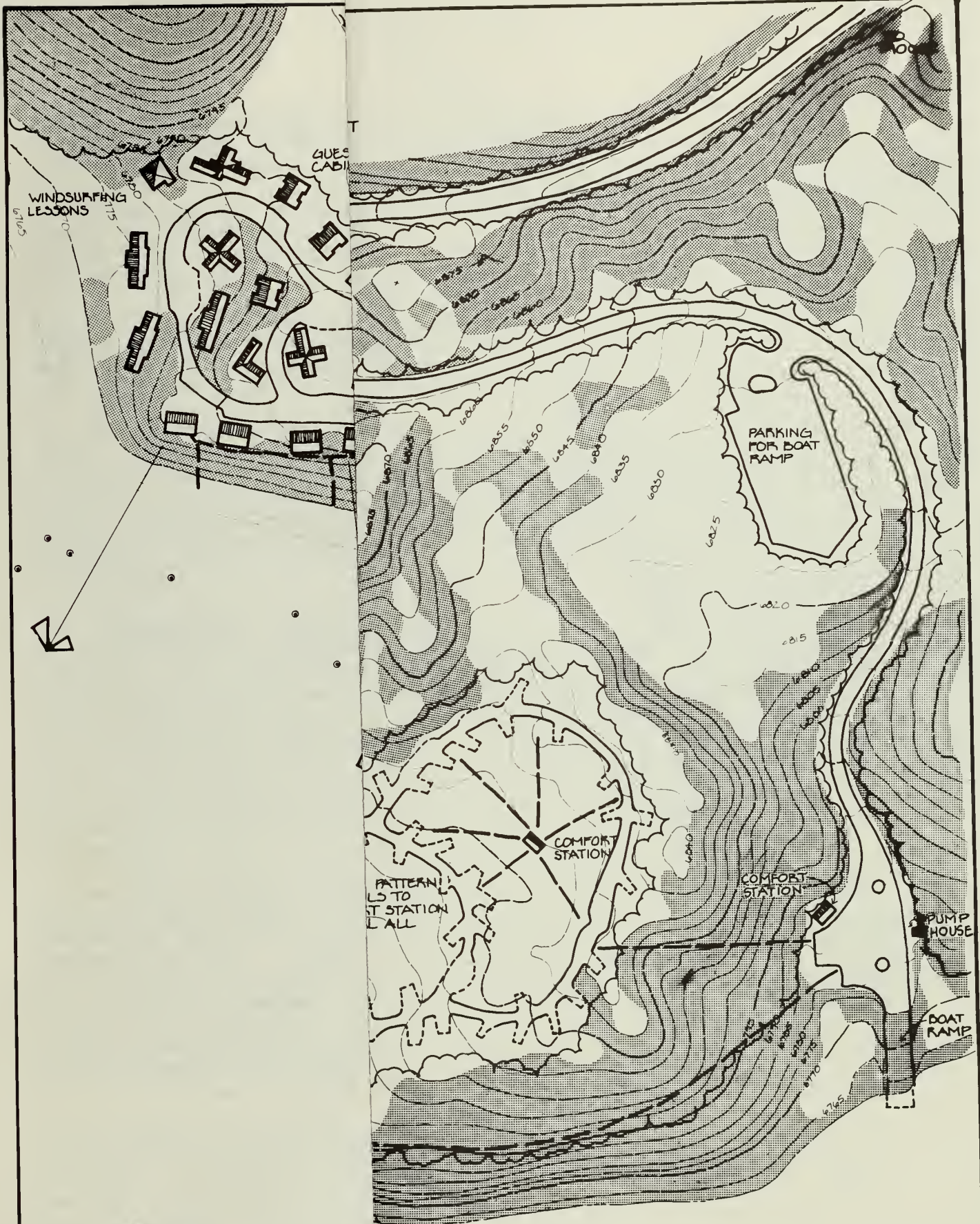
The Signal Mountain Developed Area borders Jackson Lake, which contains a variety of fish. Native species include Snake River cutthroat trout, mountain whitefish, Utah suckers, Utah chubs, speckled dace, and redbside shiners. Brown trout and lake trout are also common in Jackson Lake.









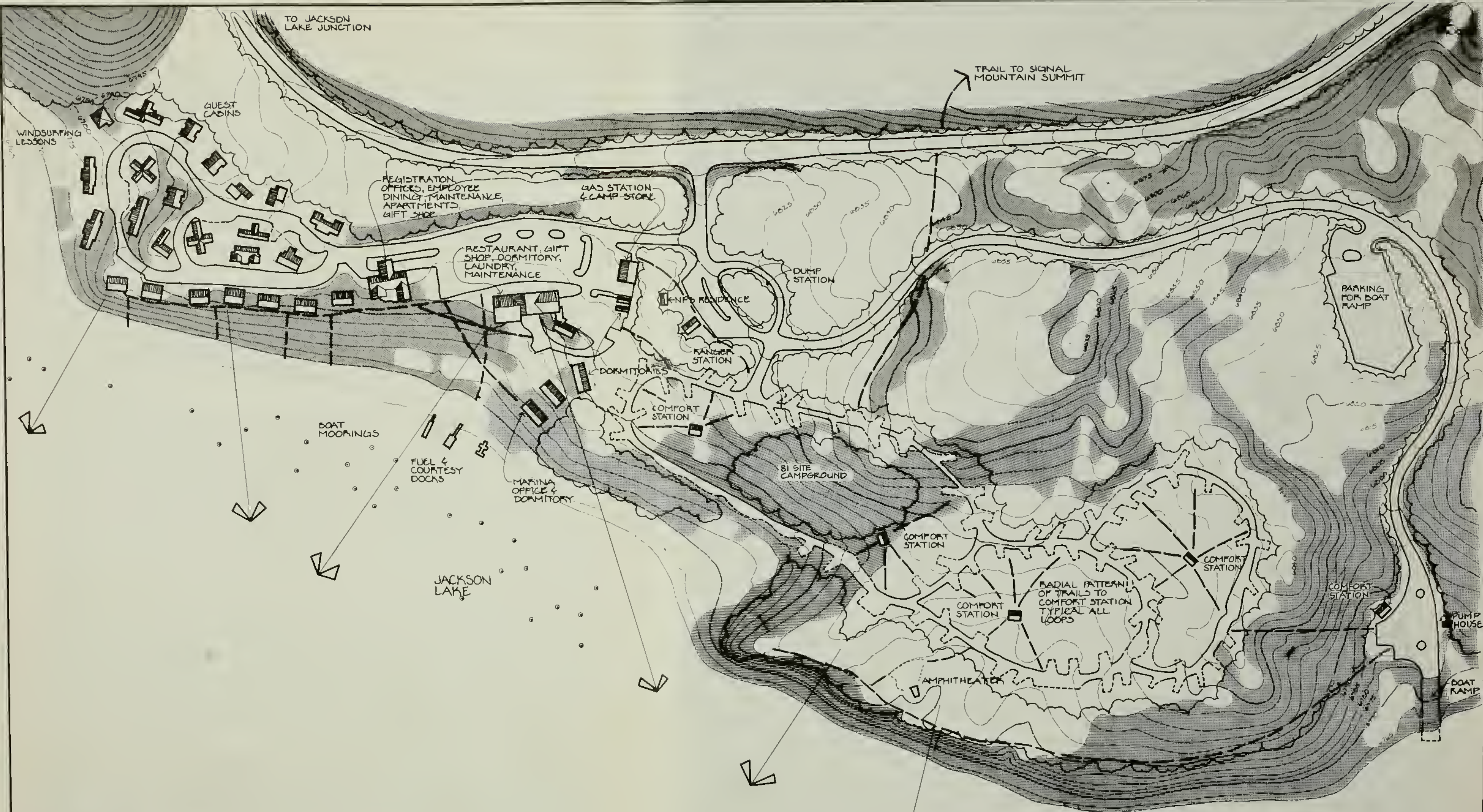


# LEGEND

- EDGE OF CANOPY
- MAJOR TRAILS
- SLOPES OVER 12%
- VISTA

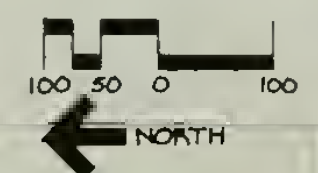
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**LEGEND**

- EDGE OF CANOPY
- MAJOR TRAILS
- SLOPES OVER 12%
- VISTA



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At the elevations present along and above the shoreline of Jackson Lake (6,772 feet above sea level), reptiles and amphibians are of uncommon occurrence.

Over 300 species of birds occur within the park. In the study area, one could expect to see great blue herons, Canadian geese, golden and bald eagles, common ravens, gray jays, Clark's nutcrackers, and a variety of woodpeckers and songbirds.

There are 54 species of mammals known to inhabit the park. In the Signal Mountain Developed Area, visitors are most likely to see mule deer and small mammals such as red squirrels, ground squirrels and chipmunks.

The Natural Resource Management Plan/Environmental Assessment, 1986, describes rare, threatened, and endangered species as follows: "As of July 20, 1984, the gray wolf, American peregrine falcon..., bald eagle..., the whooping crane..., all of which either formerly occurred or presently occur in the park, are federally listed as endangered, and the grizzly bear..., which presently occurs in the north end of the park, is listed as threatened..."

The Interagency Grizzly Bear Guidelines identify land uses appropriate for species conservation and categorizes suitable habitats into "management situations." Three "management situations" (Situation I, highest management priority is given to survival of the species; Situation II survival of the species a high priority, but human land use is also a priority and; Situation III, human land use is the highest management priority), are applied to zones of potential habitat. Signal Mountain Developed Area is a Situation III management zone. It is located between a Situation I zone to the northwest and a Situation II zone to the southeast.

Jackson Lake is the largest body of water in the park (over 25,000 acres at full pool). The Snake River flows into Jackson Lake at the north end and continues in a southerly direction below the Jackson Lake Dam. Based on wells tapped in the area, subsurface water quality is good in the Signal Mountain area. Under the terms of a 1956 Memorandum of Understanding between the NPS and the Bureau of Reclamation (BOR), the BOR retains control over water utilization and the right to raise and lower the lake level as they wish. However, they generally attempt to maintain a constant level during the summer months to accommodate recreational uses.

Prevailing winds come from the southwest and can cause poor boating conditions at the relatively exposed boat launch at Signal Mountain. Severe winters are the norm in the park, but the summer and fall seasons are usually pleasant. Much of the precipitation occurs as snow; and often totals over 15 feet in a season, with typically 7 or 8 feet accumulated at the Signal Mountain Developed

Area.

According to a Development/Study Package Proposal (Grand Teton National Park, 1984), an archeological reconnaissance survey of the Signal Mountain Developed Area was completed in 1983. No archeological evidence was found. Although a few of the log structures are fairly old, some were undoubtedly moved into the area, and the integrity of most of them has been compromised.

## **EXISTING CONDITIONS AND ISSUES**

Concession employees are housed in a variety of facilities in the central portion of the site. The largest concentrations of employees are the women's dormitory in the basement of the lodge and the men's dormitory in a wing, attached by a breezeway on the south end of the lodge. Both dormitories lack privacy and are subject to water seepage. Employees are also housed in two small log cabins which are extremely substandard. These structures are in poor physical condition and are expensive to maintain. In addition, employees are housed in three modular buildings recently located between the lodge and lakeshore. Half of the northern-most modular unit serves as the marina office. These units are located in the center of the view of Mt. Moran from the restaurant and have displaced part of the public area that accesses the lakeshore. This situation has also created an undesirable mix between employees and visitors. Currently employee parking is in a small paved area that serves as the service access for the merchandising operation. Overflow parking for employees is located in the public lot.

The marina operation needs to be upgraded to provide a more efficient operation. The fuel dock needs to be replaced and enlarged. More courtesy dock space needs to be provided and sewage dump facilities should be added to this location. When the modular housing units are replaced a new marina office will have to be provided. A steep hill with multiple gravel paths makes access between the marina and other visitor facilities poor.

The concession does not have adequate storage space to operate efficiently.

Several of the guest log cabins at Signal Mountain are very old and in poor condition. They need work on the foundations, exterior log chinking, doors, windows and porches.

Circulation in the area is confusing to motorists and pedestrians alike. As visitors enter the area from the Teton Park road they have very little time to make decisions before having to react. They must choose between the campground, the road to the boat ramp and the concession. Once they choose the concession area, the locations of gas, food, and lodging must be determined as well as

where to park for each. Frequently visitors stop at the entry into the parking area by the gas station to orient themselves. This creates a hazard due to the lack of space available for pulling vehicles completely out of the traffic. The road through the cabin area is narrow and parking areas are not well defined. When the guest facility is full, it is very difficult and sometimes impossible to get the fire truck around the cabin loop.

Except for the concrete walk in front of the lodge, and a portion of the path to the marina, there are few designated walkways in either the concession area or the campground. As a result, there are numerous, worn, informal trails which detract from the setting. Foot traffic from the campground cuts through the concession service and employee area, adding further to the undesirable mix between concession employees and visitors.

Because of its setting which overlooks Jackson Lake, the campground is consistently filled during the summer. The parking pads are substandard and do not accommodate current forms of recreational vehicles. Because of the heavy use, campsites are denuded of vegetation, severely compacted, and subject to heavy erosion. The improper location of toilet facilities in relation to the campground configuration has compounded circulation problems and site impacts.

Utilities at Signal Mountain were designed only for a summer use facility and the lines were not buried below frost line. Since employees are housed there year-round, water must be bled through the system to keep it operational. The water system does not allow sufficient time in the reservoir for purification during peak use periods. The size of the sewage system is adequate, however, there is a problem with infiltration of ground water and the lagoon does not function properly and should be rehabilitated. Signal Mountain has frequent power outages, partially due to overhead primary lines in a narrow corridor through the surrounding lodgepole forest. The line should be buried to meet the parkwide goal of eliminating overhead transmission lines. The secondary power distribution lines are already buried at Signal Mountain.

To resolve these issues, several preliminary site plans were considered. These plans were reviewed in terms of potential socioeconomic and environmental impacts, programming needs (including funding considerations), and development and implementation phasing.

## **PROPOSED PLAN AND ALTERNATIVE**

### **Proposal**

The management goal for the Signal Mountain Developed Area, in the 1976 Master Plan, is to provide for visitor needs, with



consideration for preservation of the natural resource. The proposal attempts to address the issues discussed above, while preserving the natural resources of the surrounding area.

The goal of the proposal is to tie the area together visually and functionally, while providing a buffer between the NPS facilities and the concession facilities. All abandoned roads or facilities will be obliterated and reclaimed as part of the plan implementation. Refer to "Proposal" map.

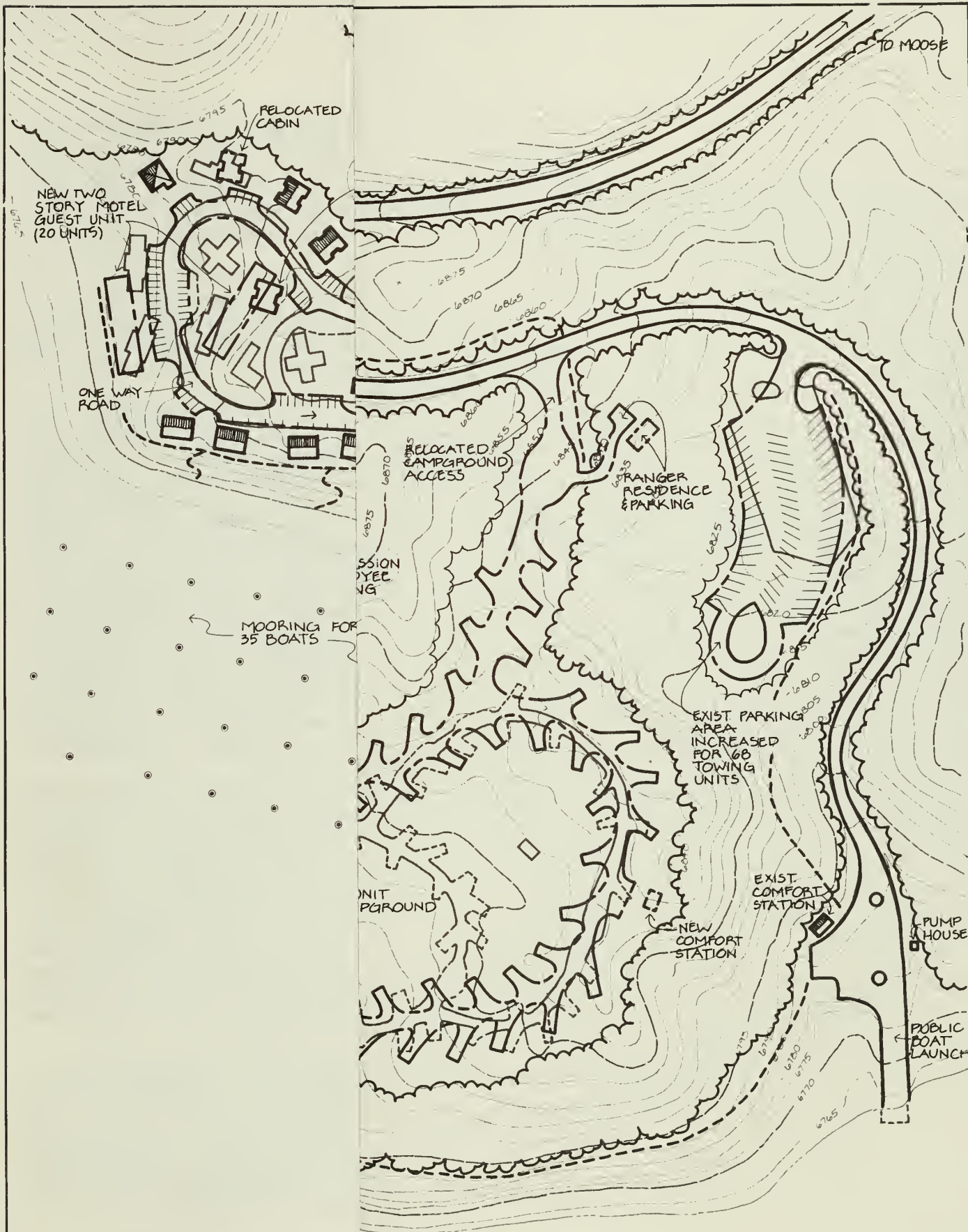
In order to improve the safety of the Teton Park road, a turning lane will be established for the northbound traffic from the top of the grade, approximately 900 feet south of the proposed access in Signal Mountain Developed Area.

The access road to the developed area will be moved to the south approximately 150 feet. The intersection of the concession area and the boat launch/campground access road will be moved to the west of their present locations. This will require removal of the ranger station cabin and the cabin utilized as a NPS dorm. Since these structures have been surveyed and determined to be of no significant value historically, they will be demolished if they cannot be utilized elsewhere. This design solution will provide more time for motorists to more safely orient themselves when they enter the area. The visitor can enter the lodge parking area from its southwest corner, after passing a separate access to the gas station and convenience store. The gas station building will be maintained in its present location, but the gas pumps will be relocated to the south side of the building. The dump station will be relocated in this area also. The advantage of this change is to increase time for decision-making as the visitor drives into the concession area. It allows those people who are only stopping for gas or convenience store items to avoid driving through the main parking area. The islands in the main parking area will be removed and the area expanded to the east. More vehicles will be accommodated and an area provided for oversized vehicles.

As maintenance costs become prohibitive, the visitor cabins will be replaced by the concessionaire with multiple unit, motel-type structures on the north end of the site. The total number of guests accommodated will not change from the present number (363). The replacement units will be a rustic style of architecture blending in with the overall theme established for the area. The outer loop of the road will be realigned as a one-way loop and parking areas will be defined. The access to the registration building will also be realigned.

A major provision of the preferred site design enables the concessionaire to move his employees from the basement of the main lodge and from the three modular dormitories. The modular dorms will be removed. Most concession employees will occupy the two-story dormitories planned to be constructed on a relatively flat





# LEGEND

- HARDENED TRAIL
- NEW CONSTRUCTION
- EXISTING, TO BE RETAINED
- EXISTING, TO BE REMOVED

DESIGNED:

RJG

DRAWN:

RJG

TECH. REVIEW:

DATE:

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DEVELOPED AREA

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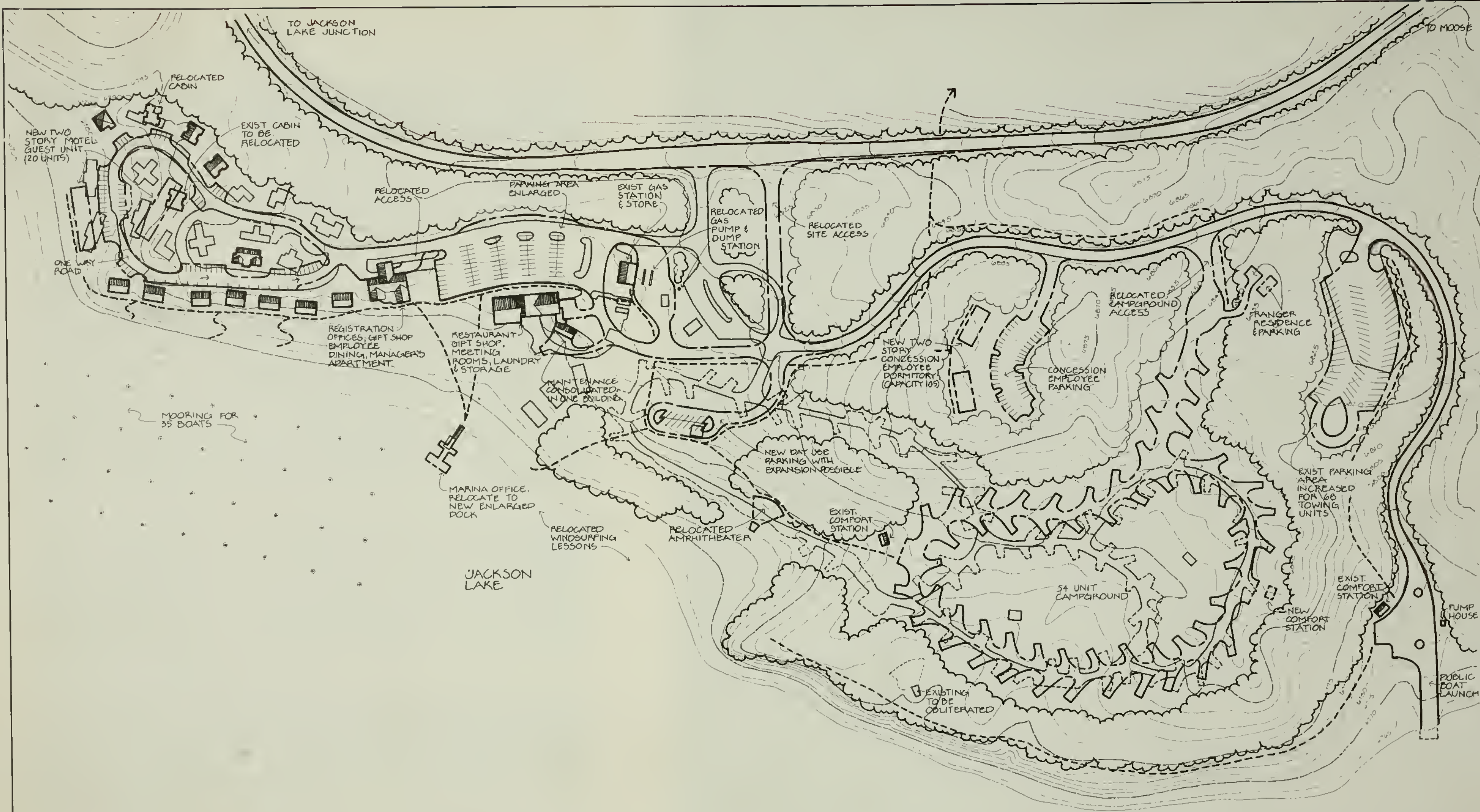
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# LEGEND

- HARDENED TRAIL
- NEW CONSTRUCTION
- EXISTING, TO BE RETAINED
- EXISTING, TO BE REMOVED



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SIGNAL MOUNTAIN  
DEVELOPED AREA



ridge between the marina parking and the gas station. One of the buildings will have efficiency apartments for those employees working odd shifts or positions that warrant separate housing. Access to the new dormitories will be provided by constructing an access road branching westerly from the marina road and terminating in a small (approximately 40-vehicle) parking lot.

The primary functions of the main lodge and the registration building will remain the same, however, their exterior appearance will be modified to conform to the rustic log theme of the area. Meeting rooms, storage and maintenance activities will expand into the basement space vacated by the concession employees.

The campground will be completely redesigned under this alternative, and the number of sites reduced from 81 to 54. Campsites will be spaced at approximately 75 feet on center. A new access road will be provided, branching off to the west from the marina access road. Sites will be arranged around a single, one-way loop, and three of the existing four restrooms will be removed; the site of the second-most northerly restroom will be retained, and a new restroom will be constructed at the south end of the campground. The individual campsites will be redesigned to accommodate various types of recreation camping equipment, ranging from tents to self-contained motorized campers. Sites will be reinforced to minimize vehicular and pedestrian impacts. New restrooms and other supporting facilities will be placed so as to encourage pedestrians to travel on reinforced surfaces. Other formal trails identified in the proposed plan will be hard surfaced and properly signed to minimize pedestrian impacts.

Under this alternative there will be no significant changes made to the shoreline features. The dock will be expanded and upgraded since it is not large enough to accommodate existing levels of use and is nearing the end of its useful life. The marina office which occupied a room in one of the three modular dorms to be removed, will be constructed as part of the dock facility. A holding tank/pumpout unit will also be provided. The parking lot for the boat launch will be redesigned and expanded a short distance westward to accommodate approximately 20 additional vehicles towing trailers. A new residence will also be built for a seasonal ranger near the boat launch parking area.

A separate day use parking area will be established to serve as public access to the lakeshore, marina and the amphitheater. The parking area will be designed for future expansion if necessary. This will be the primary parking for users of the relocated amphitheater. The existing condition requires visitors to drive through the campground to get to the original amphitheater site. The new amphitheater site will also be more centrally located within the Signal Mountain complex.

To meet the seasonal needs of the Signal Mountain water system, a

new well should be drilled near the existing reservoir. A separate well should be dug for the Brinkerhoff cabin, which is currently using the Signal Mountain water system.

The sewer system should be slip-lined to prevent infiltration of groundwater. The lagoons should also be redesigned, lined and a new splitter box installed.



## **Alternative (No Action)**

This alternative will provide for a continuation - in kind and in extent - of existing concessioner and park management activities at the Signal Mountain Developed Area.

The basement of the lodge building will continue to be used as housing for approximately 30 female employees of the concessioner. Male employees will continue to occupy the wing attached to the lodge. The rest of the housing will be occupied as employment conditions dictate, without physical change.

The amphitheater, the marina operation, the RV dump station, the parking lots, and the gas station - all will remain in their present locations.

The number of lodge units (79) and the number of campsites (81) will remain constant. Occupancy rates will be expected to remain high in July and August (over 90%), and (exclusive of July and August) moderate from mid-May to mid-October (25 - 75%). No visitor accommodations will be provided in the winter.

Utilities will be upgraded as needs develop. Some water and sewer pipe is in poor condition, and the circulation and chlorination procedures for potable water may be altered. If funds become available, the powerlines on site will be placed underground. Water will continue to be bled through the lines during the winter to prevent freeze-ups. The sewage lagoons will probably be redesigned to effectively accommodate existing loads under this alternative, and will probably be lined to provide for appropriate percolation rates.

Guest units will be repaired by the concessioner whenever necessary, especially when health and safety deficiencies become apparent. The park will continue to provide visitor protection, interpretive, and maintenance services to the Signal Mountain Developed Area.

## **ENVIRONMENTAL CONSEQUENCES AND MITIGATION**

**No Action.** Under this alternative, there will be no disturbances associated with new construction. Temporary noise impacts and inconveniences will occur during remodeling and repair work.

Visitors will continue to experience confusion and traffic delays at the existing intersection near the gas station. Campers will continue to walk through a cluttered maintenance/dormitory area on their way to the lodge and grocery.

Environmental impacts of this alternative are minimal. Normal regrowth of the lodgepole pine/subalpine fir woodland will be

experienced in areas that have been clear-cut, burned or blown down. Continued erosion of short-cut trails and the bluffs above Jackson Lake near the amphitheater will occur. This could be mitigated by erecting a fence or hardening the problem areas.

Under this alternative, there will be no impacts on threatened or endangered species or on cultural resources. Although floodplains related to the rise and fall of Jackson Lake do occur adjacent to the developed area, no new construction or other new impacts will occur if the "no action alternative" is implemented.

As funds become available, some mitigation of the somewhat hodge-podge appearance of the Signal Mountain Developed Area will be possible. Remaining powerlines carried by poles could be placed underground, some unattractive buildings could be screened with vegetation, and the park and concessioner could cooperatively initiate a program of designing building exteriors, unifying their appearance.

Concession employees will continue to be housed in substandard facilities and the conflicts associated with mixing visitors and concession employees will remain.

**Proposal.** Under this alternative, significant ground disturbances will occur in six areas.

The new access into the site will require clearing 1/2 acre of a moderate stand of lodgepole pine. The existing access will remain in place until the new access is constructed and the fill will have to be removed and the site revegetated.

The construction of turning lanes along the Teton Park road will improve circulation as well as eliminate a safety hazard. This addition will require expanding a cut 10 to 15 feet easterly along the east side of the road for approximately 800 feet. This will require removal of approximately 20-30 lodgepole pines and associated understory vegetation. Mitigation will require grading slopes to a natural appearance and revegetating with native species.

The new campground access road and campsite loop will require cutting, grading, and filling; directly impacting about seven acres. Some conifers, aspen and other vegetation will be removed. This will be mitigated by careful site selection; reduction in total number of existing campsites; obliteration/reclamation of abandoned sites and access trails; and reduction of three restroom facilities. Campers will be able to hike to the lodge area without having to view a cluttered maintenance/dormitory complex. Better spacing of sites will provide more privacy and enhance the aesthetic experience. The access spur road will follow a relatively gentle grade to the sites.



Economic impacts of the new campground will be in two phases. The first will occur during the year of construction and the subsequent year when revegetation is being accomplished. This could create more demand on other camping areas in and near Grand Teton National Park, and could diminish the concessioner's revenue at the gas station, grocery, gift shops, and restaurant. To minimize such potential impacts, construction will be scheduled during the off-season. The second phase, a long-term reduction from 81 to 54 campsites, will reduce what profit the concessionaire might have gained from the 27 campsites to be eliminated.

The modifications to the existing campground will significantly reduce pedestrian and vehicular impacts to the natural resources in the area. The modifications will also improve the visitors' experience as well as enable the National Park Service to improve the design of individual campsites and in turn, improve the capability to accommodate a greater variety of recreation users. Long-term impacts on soil and vegetation will also be reduced by better directing circulation of vehicles and pedestrians.

The new amphitheater will be located at a site above Jackson Lake, within easy walking distance of the campground, the new day use parking lot and the concession lodging. Because of the nature of the slope there, only minimal cutting will be necessary. Only low, scrubby vegetation covering about one acre will be removed. Relocating the amphitheater not only improves access for lodge guests and for visitors from outside the Signal Mountain Developed Area, but it provides the park an opportunity to rehabilitate the heavily-impacted, eroding grounds at the existing amphitheater.

The new dormitories will be located on a relatively level highland, with a short spur access road and parking lot on the same level terrain. About four acres of mature lodgepole pine/subalpine fir woodland will be removed, leaving the surrounding woodland intact and providing almost complete screening. Although a low ridge almost completely blocks the view from the Teton Park road, the two-story dormitories will be visible for brief moments. Visual mitigation will include a building design with low lines and use of blending colors such as brown and grey.

The new day-use parking lot, just northeast of the new amphitheater is sited in an area already impacted by existing campground activity; including the site of the most northerly restroom to be removed. Minimal vegetation loss will occur for the parking lot and access road. The upper slope will have to be cut, and will probably not provide enough fill for the western side of the lot; a relatively small amount of fill will have to be imported.

The new parking area for the lodge will expand into existing graded surface to the south, toward the gas station. Cutting will be required to the east; a surface area of approximately 10 feet by 200 feet will be removed. The vegetation on this strip is low

second-growth, and mitigation will take the form of grading all cut areas to blend with the natural contours of the area and revegetating with native species. Several power poles will have to be relocated further east, or, if funds permit, the lines will be buried.

There will be no new construction at the marina or elsewhere along the shoreline. Therefore, there will be no impacts on floodplains and wetlands.

If this alternative is implemented, several peripheral buildings will be removed; three campground restrooms, three modular dormitories, a log ranger station, and other substandard structures. In all cases, the sites will either be reclaimed or incorporated into the new development. Whenever practical (e.g. for the modular units), the buildings will be removed in such a fashion as to allow for their installation elsewhere.

Replacement of deteriorating log cabins with motel units, will cause a temporary reduction in rental units available to visitors during construction. By scheduling construction in the shoulder and off seasons, this impact can be minimized. The exterior remodeling, aimed at achieving a uniform rustic log appearance throughout the developed area, will greatly enhance the aesthetic experience for lodge guests and day-use visitors.

All appropriate clearances will be obtained from the Wyoming State Historic Preservation Officer and from the Chief, Cultural Resources Division, Rocky Mountain Regional Office before any work is begun on the lodge facilities. If previously unknown archeological resources are encountered during construction, work will be stopped and the offices listed above will be consulted.

Park biologists have indicated that no impacts on threatened or endangered species will occur if this project is implemented. This is based on the premise that not only is proposed development minimal, but such development will be confined to the existing development zone. As indicated earlier, the subject lands have been classified as a situation III management zone. this zone is characterized as an area where "human land use is the highest priority." Furthermore, approximately 95% of the proposed development represents a replacement/relocation rather than expansion of existing facilities. The campground actually represents a reduction of 27 camping sites. In turn this constitutes a reduction of 95 people, and of their associated impacts within the area and potential impacts on wildlife. Nevertheless, if new evidence appears to the contrary, full compliance with Section 7 of the Endangered Species Act will be implemented immediately.



## **Irreversible or Irretrievable Commitments of Resources**

**No Action.** There will be no irreversible commitments of resources under this alternative. Irretrievable loss of optimum visitor enjoyment of the Signal Mountain Developed Area will occur as a result of failure to achieve an aesthetically pleasing and more functional lodge complex; and as a failure to provide campers with an experience more in harmony with the resources that surround them.

**Redesign the Signal Mountain Developed Area.** There will be an irreversible commitment of resources relating to removal of certain buildings, however, in all instances these buildings will not be appropriate constituents of the overall plan. There could possibly be an irretrievable loss of two years of camping opportunity at Signal Mountain during construction and revegetation activities depending on the degree of construction accomplished during the shoulder months. Also, irretrievably lost will be about ten acres of conifer woodland as a result of new construction.

## **CONSULTATION AND COORDINATION**

A variety of private (including concession) and agency personnel were consulted during all stages of this Development Concept Plan/Environmental Assessment. The NPS has undertaken informal consultation with the U.S. Fish and Wildlife Service regarding potential impacts on endangered species. The plan was a cooperative effort between personnel at the park, in the Rocky Mountain Regional Office (RMRO) and in the Denver Service Center.

In accordance with the RMRO planning guidelines, the Wyoming State Archives, Museums and Historic Department (State Historic Preservation Officer), and the Advisory Council on Historic Preservation were also provided draft copies of this document for review and comment.

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## **PLANNING TEAM**

Robin Gregory, Landscape Architect, Grand Teton National Park

Jim Riddle, Environmental Specialist, Rocky Mountain Region

Jack Stark, Superintendent, Grand Teton National Park

Bill Schenk, Deputy Director, Midwest Region, former Assistant Superintendent, Grand Teton National Park

Doug McLaren, retired, former North District Ranger, Grand Teton National Park

Lee Randall, retired, former Concessions Specialist, Grand Teton National Park

Adrian Hatfield, retired, former North District Maintenance Foreman, Grand Teton National Park

## **CONSULTANTS**

Wayne Gardner, Landscape Architect, Rocky Mountain Region

Greg Smith, Manager, Signal Mountain Lodge

Mel Denton, Sub-district Ranger, Grand Teton National Park

Mike Cumiskey, Concessions Analyst, Rocky Mountain Region

Judy Rozelle, Concessions Analyst, Denver Service Center

Pete Hayden, Park Biologist

Marshall Gingery, Assistant Superintendent, Grand Teton National Park

Doug Barnard, Chief Ranger, Grand Teton National Park

Roger Haney, Chief Park Maintenance, Grand Teton National Park

Pat Smith, Chief of Interpretation, Grand Teton National Park

Edna Good, Concessions Specialist, Grand Teton National Park

Doyle Nelson, North District Ranger, Grand Teton National Park

Linda Olson, South District Naturalist, Grand Teton National Park

Joe Bruno, Engineer, Grand Teton National Park

Les Siroky, Architect, Rocky Mountain Region

Joe Helmkamp, Landscape Architect, Rocky Mountain Region

John Criger, Civil Engineer, Rocky Mountain Region

Quentin Smith, Electrical Engineer, Rocky Mountain Region



# COST ESTIMATE

ACTIVITY	GROSS CONSTRUC- TION COST	ADVANCE & PROJECT PLANNING COST	TOTAL PROJECT COST
<b>NATIONAL PARK SERVICE COST:</b>			
Demolish Buildings			
- Ranger station, camp tender cabin, two comfort stations 34,200 cu. ft.	\$11,000	\$ 2,000	\$ 13,000
Obliterate Roads			
- Access from Teton Park road dump station loop access to concession area - 3,958 sq.yd.	42,000	8,000	50,000
Obliterate Existing Campground			
- Parking pad - 5,400 sq. yd.	57,000	11,000	68,000
road - 10,419 sq. yd.	109,000	21,000	130,000
site reclamation - 5 acres	23,000	4,000	27,000
New Campground Construction			
- 54 sites, includes roads, parking, utilities, comfort station	495,000	95,000	590,000
Develop Hardened Trails			
- Asphalt - 4,675 sq. yd.	98,000	19,000	117,000
Amphitheater			
- 250 seats	229,000	44,000	273,000
reclaim old site - 1/2 acre	2,300	400	2,700
Ranger Residence			
- 900 sq. ft.	47,000	9,000	56,000
Parking Areas			
- Day use - 14 cars	29,000	6,000	35,000
Concession employee - 24 cars	50,000	10,000	60,000
boat launch area - 68 cars	116,000	22,000	138,000
Sewer			
- Upgrade existing - 4,500 l.f. rehabilitate lagoon 7.3 AC replace splitter box	815,000	156,000	971,000
Water			
- New well, pump house & controls, new line	163,000	31,000	194,000

ACTIVITY	GROSS CONSTRUC- TION COST	ADVANCE & PROJECT PLANNING COST	TOTAL PROJECT COST
Electricity			
- Underground 5,280 l.f.	104,000	20,000	124,000
Signs			
- 10	3,000	500	<u>3,500</u>
DEVELOPMENT COST SUBTOTAL..\$2,852,200			

**CONCESSIONER COST:**

Construct 2 two-story Motels			
- 10,080 sq.ft. plus linen	814,000	155,000	969,000
hopper, furnishings, fixtures	165,000	32,000	197,000
Reconstruct Guest Area Road			
- 5,000 sq. yd.	72,000	14,000	86,000
Construct Guest Area Parking			
- 80 cars	136,000	26,000	162,000
Develop Hardened Trails			
- Asphalt, 1,758 sq. yd.	37,000	7,000	44,000
Relocate Gasoline Pumps			
- 6 pumps, new storage tanks, islands and paving	105,000	20,000	125,000
Construct Marina office			
-300 square feet	24,000	5,000	29,000
New Dock			
-2,700 square feet	124,000	24,000	148,000
Convert Men's Dormitory to Maintenance			
- 4,000 square feet	105,000	20,000	125,000
Construct Employee Dormitory			
- 11,360 square feet	967,000	185,000	<u>1,152,000</u>
DEVELOPMENT COST SUBTOTAL...\$3,037,000			

**GRAND TOTAL DEVELOPMENT COST.....\$5,889,200**

The dollar amounts identified in the above estimate are based on 1988 costs.



As the Nation's principal conservation Agency, the Department of the Interior has basic responsibilities to protect and conserve land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration. NPS D144.





