NATIONAL PARK SERVICE RUSTIC ARCHITECTURE: 1916–1942
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Introduction

Visitors to our system of national parks and monuments seldom pay much attention to park architecture. This is as it should be, for since its founding over 60 years ago, the National Park Service consistently has sought to provide visitor facilities without visually interrupting the natural or historic scene. Occasionally, however, the park visitor will discover in one of the older parks a structure so highly stylized in its attempt to be non-intrusive that it attracts the immediate attention of those who are accustomed to the simplicity and frequent sterility of contemporary architecture. It may take the form of a pioneer log cabin, or an Indian pueblo, or a New England "salt-box," or it may be built of over-sized, rough-hewn logs and stones. Whatever its style, its obviously intensive use of hand labor and its clear rejection of the regularity and symmetry of the industrial world, mark it as the work of another age, the product of an attitude far removed from our own.

For lack of a better phrase, these varied styles have long been inadequately lumped together under the term "rustic architecture." But perhaps a voice from the 1930s can explain the problem more clearly:

"The style of architecture which has been most widely used in our forested National Parks, and other wilderness parks, is generally referred to as "rustic." It is, or should be, something more than the worn and misused term implies. It is earnestly hoped that a more apt and expressive designation for the style may evolve, but until it appears, "rustic," in spite of its inaccuracy and inadequacy, must be resorted to . . . ."[1]

A superior term has never appeared, so "rustic" it remains.

This paper is an exploration of the rise and fall of National Park Service rustic architecture. As NPS Historical Architect Merrill Ann Wilson has noted, rustic was a function of its times.

"This little noticed movement in American architecture was a natural outgrowth of a new romanticism about nature, about our country's western frontiers . . . The conservation ethic slowly took hold in this atmosphere of romanticism. Part of this ethic fostered the development of a unique architectural style. Perhaps for the first time in the history of American architecture, a building became an accessory to nature . . .

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Early pioneer and regional building techniques were revived because it was thought that a structure employing native materials blended best with the environment . . . No [other] single government agency has to date been responsible for such a revolutionary break in architectural form."[2]

This monograph grew out of a survey of historically and architecturally significant structures in the areas of the Western Region of the National Park Service (California, Nevada, Arizona, and Hawaii). The survey required the evaluation of early rustic structures in the Western Region parks. When it became apparent that available historical data was insufficient for the purpose, this study was initiated. The goal was to develop a history of the NPS rustic architecture movement, delineating its development, the influences it drew upon, its relationship to the history of the national parks, and its relationship to American architecture in general. The authors soon discovered that such a study could not be limited to the Western Region parks. Hence this paper attempts to relate rustic architecture to the history of the entire national park system. Because of the uneven availability of records, Yosemite, Sequoia, Crater Lake and Mount Rainier National Parks received heaviest attention. Consideration was also given to some buildings in Yellowstone, Glacier, Grand Canyon, and General Grant (Kings Canyon) National Parks and in several of the southwestern monuments. Unfortunately data on some other older areas, including Rocky Mountain and Mesa Verde was unavailable within the limited scope of this project. For the same reason Acadia, the only eastern national park during the critical period (1917-1927) when rustic architecture was developing, also received minimal attention.

It is not the intention of the authors to catalog herein all of the significant rustic structures within the National Park Service. Numerous buildings worthy of preservation are not mentioned. Hopefully, this study will serve as a historical base for such an evaluation. A system-wide survey of significant rustic structures is needed. Often rustic structures are too young (less than fifty years) to receive proper attention under the current criteria of the National Register of Historic Places. Each year a few disappear and a good many more are hopelessly altered by renovation or remodeling done without sensitivity to the original design. In this regard the authors can only concur with Ms. Wilson: "The rustic timber and stone buildings found in our national parks . . . represent an important irreplaceable architectural resource which should be used and conserved."[3]
I. In the Beginning: 1872-1916

The first national parks were a response to the romanticism that re-structured the American concept of wilderness in the nineteenth century. As seen in the artistry of John James Audubon, James Fenimore Cooper, Thomas Cole, George Catlin, William Cullen Bryant and others, the idea of wilderness developed during the course of the nineteenth century from an entity to be feared and conquered into a resource that should be preserved and treasured. As early as 1832, the painter George Catlin proposed: "What a beautiful and thrilling specimen for America to preserve and hold up to the view of her refined citizens and the world in future ages... a nation's park, containing man, beast in all the wild(ness) and freshness of their nature's beauty."[1] Besides preserving the land, Catlin's proposal also encompassed the protection of the American Indian in his natural setting. The early wilderness preservation philosophies—expressed through painting, poetry, essays, and later photography—helped lay the foundations for the acceptance of the first national parks.

Beginning with Yosemite in 1866 and Yellowstone in 1872, public lands were set aside as parks. Early administration of these reserves was haphazard. Yosemite fell prey to a politicized board of state commissions, while Yellowstone was given an unpaid superintendent and no appropriations.

In 1883, because of extensive poaching and political scandal, the Army was authorized to protect Yellowstone although it was not called upon by the Secretary of the Interior to do so until 1886. The Army stayed in Yellowstone in an administrative capacity until 1916. After 1890, the Army also was called on to protect Sequoia, General Grant and Yosemite. In each of the Army parks, the War Department was compelled to erect basic facilities for its own use. Fort Yellowstone, Wyoming, was the most important of these complexes. The army buildings there were constructed to standard Army specifications. Many were similar to buildings erected at other non-park military installations of the period. The Fort Yellowstone stables, for instance, were nearly identical to those at the Presidio of San Francisco, while the Double Officers Quarters were similar to those constructed at Fort Lapwai, Idaho and Fort Spokane, Washington.[2]

Typical of the later structures built by the Army at Yellowstone was the second hospital. Completed in 1913, this enormous symmetrical building combined vaguely Georgian and neo-classical elements with a hip roof and projecting dormers reminiscent of early mid-western Prairie Style architecture.
The second Fort Yellowstone hospital and the other Army buildings
in the National Parks were constructed by an organization concerned
primarily with park protection and administration, rather than
scenic values. The Army had no direct interest in the landscape,
and this was echoed in their architecture.

In those early parks where the Interior Department retained admin-
istrative responsibility (including Crater Lake, Mount Rainier and
Glacier) government buildings usually were limited to primitive,
vernacular expressions of facility need. Crude frame shacks, log
cabins, or tent frames usually sufficed. These early government
facilities could be simple because responsibility for housing and
transporting the park visitor was delegated to the park conces-
sioners.

The early park concessioners received little supervision. Their
structures were typical make-shift frontier efforts. Not until
after the completion of the northern transcontinental railroads in
the 1890s, did more advanced concessioner facilities appear in
Yellowstone, for example. Among the first of these was the Lake
Hotel, constructed by the Northern Pacific Railroad in 1890. The
formal classicism of this structure, with its ionic columns, three
projecting porticos and symmetrical facade, made it clear that the
building owed nothing to its setting.

The railroads brought the first major developments to the parks.
At the same time, as a part of this process, they also introduced
their architectural and engineering expertise. The first railroad
design responses to park situations tended, like the Lake Hotel,
to ignore the natural setting. But during the first decade of the
twentieth century, the railroads began to respond more positively.
Doing so, they discovered, was only good business. Distinctive
hotels in romantic settings drew more patrons.

The railroads' search for architectural styles suitable for park
settings occurred at a time when landscape architecture was
beginning to exert major influence on architectural design and
theory. In 1842, landscape architect Andrew Jackson Downing
had publicized his ideas on "picturesque" landscape and the
importance of nature in architectural design in his widely-
distributed book Cottage Residences. Several decades later,
Frederick Law Olmsted, Sr., a friend and pupil of Downing,
working in conjunction with architects such as H. H. Richardson,
strengthened the connections between architecture and landscape
architecture. Their buildings were constructed of "natural"
materials, including native stone, timbers, and shingles. The
building forms responded to their sites, and landscaping became
an integral part of the design.
Another expression of rising concern about the relationship between a structure and its site developed in the San Francisco Bay area of California. Several California architects, including Bernard Maybeck, searched for innovative ways to use natural materials. Every feature of its [the group's] buildings, from the basic mass to the smallest detail, was coordinated to harmonize with the landscape. Ornament for its own sake often became unnecessary for some members of the group as they explored the textural richness derived from juxtaposing materials and shapes. For others, ornament became a way of adding color to the composition or of going a step further to the symbolic or story-like. [3] The relationship of Bernard Maybeck to later National Park Service rustic architecture still lacks clear definition, although the similarity of architectural theory is too great to allow complete separation.

It is clear that Maybeck and his associates began to influence park architecture after 1900. In 1903, the Sierra Club erected LeConte Memorial Lodge in Yosemite Valley. Designed to serve as the Club's summer headquarters, it contained a library and a club information center. Weathered native granite dominated the symmetrical Tudor Revival building, which bore the strong imprint of Maybeck in an exaggerated roofline which comprised more than half of the height of the structure, a huge granite fire-place, and its rough-finish exposed roof beams. The Sierra Club Bulletin stated that the building was designed by "John" White, but the Maybeck influence is so obvious that the building was undoubtedly the work of Mark White, brother-in-law and construction supervisor for Bernard Maybeck. [4]

The development of railroad hotels in national parks and other western areas of scenic beauty accelerated after the turn of the century. At Yellowstone National Park in 1903, the Northern Pacific Railroad constructed the Old Faithful Inn. This six-story resort was in the Swiss Chalet-Norway Villa tradition, but executed in a very western frontier manner. The exterior of the log frame structure was sheathed with shingles, and the building was heavily articulated with logwork piers and corners. Two stories of projecting dormers protruded from the enormous main gable, which was the dominant architectural feature. The combination of the logwork, shingles, and form resulted in a masterful structure. The Inn was designed by Robert Reamer, who is said to have "sketched the plans while coming shakily out of a monumental submersion in malt, and some authorities claim to be able to read that fact in its unique contours." [5]
Army Buildings, Cavalry Barracks, Bldg. #26, 1891;
Second Hospital, 1913, photo dates unknown.
Lake Hotel, 1890, Yellowstone National Park, photo circa 1915.
Le Conte Lodge, 1903, Yosemite National Park, photo circa 1913.
Old Faithful Inn, 1903, Yellowstone National Park, photo circa 1914.
In Arizona, in 1901, the Atchison, Topeka & Santa Fe completed a branch from its Chicago-Los Angeles main line to the south rim of the Grand Canyon, several years before Grand Canyon National Monument was proclaimed. In partnership with the Fred Harvey Company, the railroad built a luxury hotel, El Tovar, at the south rim in 1904. The Santa Fe retained Charles Whittlesley of Topeka, Kansas, to design the building, which boasted more than one hundred bedrooms. It opened in January, 1905.

Built with turn-of-the-century eclecticism, El Tovar incorporated, according to Fred Harvey literature, exterior elements of the Swiss Chalet and Norway Villa, with an exotic combination of interior motifs, including a fifteenth century dining room, and a series of "art rooms" which contained Thomas Moran paintings, Navajo rugs, and other Indian artifacts. The hotel was "stained to a rich brown or weather-beaten color, that harmonized perfectly with the grey-green of its unique surroundings. It is pleasant to the eye."[6] Thus, even within the eclectic design, thought was given to the relationship between the hotel and its setting. Such a concern represented a distinct departure from strictly functional railroad architecture.

Hopi House, directly adjacent to El Tovar, was constructed by Fred Harvey and the Santa Fe in 1905. The building was designed to serve as a gift shop where Native Americans could sell their wares. In that way, it provided an outlet for the Hopi who lived within part of it as well as for the Navajo who built traditional hogans adjacent. Hopi House closely copied the Hopi pueblo at Oraibi, Arizona, and was probably designed by Mary Elizabeth Jane Colter, architect for the Fred Harvey Company. The building was constructed in the traditional pueblo style, an idiom well suited to the setting. The Hopi House work had a lasting effect on park architecture, and on contemporary southwestern architecture, although later pueblo adaptations were generally less concerned with authenticity. The stylistic choice on the part of Miss Colter and the Fred Harvey Company was primarily commercial, designed to stimulate interest in Indian goods. Judged by such standards Hopi House was successful; it served as a handsome marketing facility. Hopi House symbolized the partnership between commercialism and romanticism that typified so much of Fred Harvey architecture.

As park concessioners experimented with park building design, regional variations began to appear. Hopi House represented one possibility. In Yosemite, two buildings erected by the Yosemite Valley Railroad between 1908 and 1910 set another local standard. By 1910, the railroad had constructed a depot at El Portal near
El Tovar Hotel, 1904, Grand Canyon National Park, photo circa 1915.
the park boundary, and a stage depot in Yosemite Valley. Although the Y.V.R.R. operation was on a much smaller scale than those at the Grand Canyon or Yellowstone, the railroad's buildings were significant expressions of local park architecture. Both structures were built in a rustic Stick Style reminiscent of nineteenth century Adirondack camp architecture. The wood frame buildings were covered with panels of decorative boughs. The diagonal brackets of the depot were small logs, complete with protruding knots. The Yosemite Valley Stage Depot, which also served as a telegraph office, had a steeply gabled roof, which comprised more than half the height of the building, and diamond-shaped window panes. Both structures were representative of a local movement of "rustic" architecture that developed in Yosemite after 1900. Several buildings at nearby Camp Curry shared the style.

No national park owes more to its early concessioner than Glacier. Beginning in 1911, when the park was created, the Great Northern Railway built the Glacier Park Hotel, just outside the park boundary, the Lake MacDonald Hotel, the Many-Glaciers Hotel, and nine mountain chalets in more isolated sites. Early Great Northern literature stated: "The chain of mountain hotels and chalet groups, operated by the Glacier Park Hotel Company, that has been established along Glacier Park's principal highways and trails, is one of Glacier Park's most interesting features. These hotels and chalet-groups are all remarkably in rhyme with this mountainland."[7]

The Glacier Park Hotel at Glacier Park Station (East Glacier) had a capacity of 400 guests. Built at a cost of $500,000, the enormous log frame complex was four stories high, and six hundred twenty-eight feet long. Complete with Music and Writing Rooms, sun parlor and emergency hospital, the hotel boasted unpeeled log pillars up to four feet in diameter. Used on both exterior and interior, the logs brought nature inside for the pleasure and comfort of the guests. As described in contemporary promotional literature, the "Forest" lobby included an "open camp fire on the Lobby's floor; here tourists and dignified Blackfeet chiefs and weatherbeaten guides cluster of evenings about a great bed of stones on which sticks of fragrant pine crackle merrily."[8] The structure included on its 160 acre tract a Blackfeet Indian camp. The tourist appeal of this romantic Catlinesque idea was apparent.

The chalet camps scattered throughout the park were log or stone structures, built "on the Swiss style of architecture." Some were
log cabin complexes while others, notably Sperry and Going-to-the-Sun, were stone buildings. Each of the isolated facilities had a "huge stone fire-place."[9] Spaced within easy travelling distance of each other, the chalets were located in the most scenic portions of the park. Though not as impressive as the Glacier Park Hotel or the Many-Glaciers Hotel, they contributed much to the development of non-intrusive architecture through their sensitive use of native materials and architectural forms which were in proportional harmony with the surrounding environment.

About 1914, the Fred Harvey Company initiated a major expansion of its Grand Canyon facilities. One of the first new structures was the Lookout Studio, designed by M. E. J. Colter. Built of native stone, the canyon-rim structure had an uneven parapet roofline which matched the form and color of the surrounding cliffs. The historical romanticism and nostalgia evident at Hopi House had been tempered by fantasy--a metamorphosis away from archaeological authenticity and toward pure romanticism.

Hermit's Rest, another one of Colter's fantasy buildings, was constructed at the head of the Hermit Trail in 1914 to serve as a refreshment stand and giftshop. Constructed of native stones and massive logs, the building seemed to have grown in its setting, and was carefully screened by vegetation. Its most impressive feature was its enormous fireplace.

Parsons Memorial Lodge, constructed by the Sierra Club in 1915 at Tuolumne Meadows in Yosemite seems to share several design concerns with the Hermit's Rest complex. The building was designed by Mark White, brother-in-law of Bernard Maybeck, and presumed designer of LeConte Memorial Lodge. As the construction superintendent of many of Maybeck's buildings, White undoubtedly was influenced in his architectural work by Maybeck. Parsons Lodge was a wide building of low profile, whose walls appeared to be granite dry wall masonry.[10] Actually, White had experimented with a new construction technique so that the battered stone walls had concrete cores. This philosophy of using new building methods in visual imitation of pioneer building techniques matured in the 1920s in structures like Yosemite's Ahwahnee Hotel. Overall, Parsons Memorial Lodge was handsomely scaled in relation to its environment, a result of the parity achieved between the size of the logs and stones used and those surrounding the site. As a contemporary architect stated: "The building seems to grow out of the ground naturally and to belong there just as much as the neighboring trees and rocks."[11]
Sperry Chalet, ca. 1914, Glacier National Park, photo circa 1940.
Lookout Studio, 1914, Grand Canyon National Park, photo circa 1915.
Hermit's Rest, 1914, Grand Canyon National Park, photo 1914.
Parsons Memorial Lodge, 1915, Yosemite National Park, 1915 photo.
Between 1914 and 1916, the Army returned day-to-day control of its western parks to the Interior Department, which attempted to implement a general park management program. Meanwhile, support was rising for a Federal bureau of national parks. (See Chapter II) This increased interest in the parks manifested itself in an enlarged program of hotel construction by the concessioners.

Construction on the Crater Lake Lodge in Oregon began in 1914, although numerous additions were built later. The hotel was constructed directly on the Crater rim approximately 1000 feet above the lake. The original plan was fairly symmetrical. The lower story which was constructed of stone, included handsome arched windows. The upper stories were shingled. The roof, interrupted by rows of dormer windows, had clipped gables at the ends. Although the hotel incorporated local materials into its design in an obvious attempt to subordinate itself to the site, the complex remained relatively intrusive, a result of its siting. The use of stone and shingles was thus a part of an unsuccessful effort, for the highly visible site negated the concessions to environment that had been made with materials.

Glacier Point in Yosemite National Park received a new hotel in 1917. Erected by the Desmond Park Company, the two and three story, shingle-covered structure had a distinctly Swiss chalet design emphasis. The steeply pitched roofs, numerous roof gables and intricate balconies added detail to this alpine structure. Although situated so that it had a magnificent view of the Yosemite high country, the hotel was sufficiently removed from Glacier Point proper to reduce its visual impact. Certainly it was not as objectionably sited as the Crater Lake Lodge.

By 1917, the year the National Park Service commenced operation, the national parks had been the site of a wide variety of architectural experiments. Hotels, railroad stations, studios, shelters, and residences had been built in styles varying from Swiss Chalet to Indian Pueblo. No single style predominated. Instead, a sampler of architectural possibilities had been assembled. Some of the themes and styles explored would be influential in the coming years and some would not. Among the most influential would be the fantasy pueblos of M. E. J. Colter, the "organic" buildings of Mark White, and the Swiss-alpine designs at Glacier. If there was a lesson available from the sample, it was that park buildings properly designed to harmonize with their natural setting were distinctly more appropriate. Such a lesson would be useful, however, only if a competent and efficient park bureau was created to apply it.
II. The Landscape Influence: 1916-1918

Although the years between 1900 and 1915 had witnessed major improvements in park hotels and other tourist facilities, little progress had been made in park administration. By 1915 most of the major parks were nominally under the control of the Department of the Interior, but day-to-day administrative responsibilities were distributed in a confusing manner among numerous offices. This uneven and poorly coordinated park administration system was incapable of developing or implementing organic policies on a multi-park basis.

The crying need for such policies was readily apparent to the small number of Americans actively interested in the park system. A by-product of President Roosevelt's interest in conservation was an increased public interest in natural resources, including parks. Beginning in 1908, J. Horace MacFarland, a concerned businessman from Harrisburg, Pennsylvania, led the campaign for a Federal bureau of national parks. His organization, the American Civic Association (A.C.A.), initiated a lobbying effort toward that end which grew steadily. By 1910, the Secretary of the Interior, Richard A. Ballinger, had been converted to the cause. In his Annual Report for that year Ballinger recommended the creation of "a bureau of national parks and resorts, under the supervision of a competent commissioner, with a suitable force of superintendents, supervising engineers, and landscape architects. . .[1]

The professional services perspective of the A.C.A. was not surprising. The association contained a wide variety of professional men, and it was only natural that they should incorporate their own fields of expertise into their concept of a properly administered national park system. Ballinger's landscape architecture comment is particularly significant in relation to our topic, for it demonstrates that one of the problems the parks bureau would be expected to tackle would be the sensitive development of the parks.

In 1910 the need for landscape improvement in the parks was readily apparent. In most of the parks, little had been done to protect road-side beauty or to screen the necessary evils of development. Butcher shops, markets, cabins, corrals, and their appurtenances had been placed without regard for the environment and scenery.
The campaign to create a professional park bureau accelerated after Ballinger's endorsement. In February, 1912 President Taft added his support when he recommended the establishment of such a bureau to Congress. The 1913 change of administration, however, put new men in Washington's top positions, so MacFarland and the A.C.A had to reorganize their campaign. One of their first new converts was recently-appointed Secretary of the Interior Franklin Lane.

Anticipating the creation of the new bureau, Lane centralized the administration of the existing parks. Adolph C. Miller, an assistant to the Secretary, was assigned responsibility for all aspects of the Interior Department parks program. Miller, in turn, searched for someone to fill the newly created position of General Superintendent of the National Parks. He chose a young acquaintance named Mark Daniels. Daniels was a landscape architect practicing in California, a graduate of the University of California (Berkeley) in 1905. Daniels spent the summer of 1914 visiting the parks and identifying their individual problems. Again during 1915 he went into the field. During the winters he returned to his private practice [2].

During his less than two years in departmental service, Daniels had little opportunity to exercise his landscape skills. Development funding was severely limited, and no major projects were undertaken. It is possible, however, that Daniels played a consulting role in the design of some of the privately built hotels which appeared in the parks during his time and shortly after. Major hotels were either planned or constructed during the Daniels period in Yosemite, Crater Lake, Mount Rainier, and Glacier. Perhaps Daniels' most important significance is the confirmation his appointment gave to the concept of a landscape-oriented national park administration. Daniels' background makes it apparent that the Department of Interior believed in 1915 that the landscape problems of the national parks were important.

The 63rd Congress refused to enact a park bureau bill before it adjourned in 1914, so the campaign was again renewed the following year. Recognizing that the problem was mainly one of salesmanship, Secretary Lane brought Stephen Mather, a wealthy borax promoter and Sierra Club conservationist, into the Department to spearhead the effort. Mather had made his fortune as a promoter and seller of borax products and was a master lobbyist. An 1887 graduate of the University of California, at Berkeley, Mather had developed a deep and sincere interest in conservation. He was an avid participant in the annual Sierra Club trips into the wilderness. Since he had joined the club he had come to know Yosemite intimately. When Lane asked
Mather to apply his persuasive talents to the park bureau campaign, Mather eagerly accepted. He would donate a year to the cause, he vowed.

Mather was doubtlessly familiar with the MacFarland concept of a park bureau containing professional expertise in several fields including landscape architecture. When he arrived in Washington in January, 1915, he accepted the MacFarland concepts without hesitation and plunged into the campaign. Serving as Daniels' immediate supervisor, Mather had no difficulty accepting the idea that a landscape man was appropriate for the position of General Superintendent. Only later, when he began to doubt Daniels' administrative abilities, did Mather ask for his resignation.

Once in Washington, Mather applied himself vigorously to his speciality, publicity. During 1915, Mather and his assistant, Horace Albright, generated a sea of publicity about the necessity of a national park bureau. While they were educating America to the value of the parks, Mather and Albright also took the time to improve their own knowledge regarding their new responsibilities. During the summer of 1915, Mather and Albright undertook a tour of the western parks. Beginning in San Francisco, where they attended a conference of national park superintendents and concessioners, the two journeyed across the West visiting Sequoia, General Grant, Yosemite, Crater Lake, Mount Rainier, Rocky Mountain, and Yellowstone. Seeking contacts with influential local citizens, they cataloged and registered the varied needs of the individual parks. At the same time, Mather and Albright were exposed to the existing structures and facilities in the parks. The variety was enormous, and it was inevitable that they would react by liking some and disliking others. The existing government buildings were mainly small and simple, most only a room or two except in those few parks where the Army had built permanent facilities. Some of the parks had almost nothing to show in the way of permanent development. Sequoia, for example, had only a few frame buildings, and some tents. Glacier, on the other hand, was relatively well developed because the Great Northern Railway had committed itself to a system of hotels, chalets, and roads. Mather must have noted that some of the structures were much more pleasing in relation to their settings than others. The hotels at Glacier, for example, made heavy use of native stone and logs. The harmony of building materials and environment must have been apparent. Certainly, nothing Mather nor Albright saw caused them to reconsider their acquired belief that landscape architecture would, of necessity, be an important facet of their hoped-for bureau.
The year 1915 ended with the park bureau yet unborn, and Mather and Albright agreed to continue the campaign into the new year. Mather, working closely with cooperative portions of the press, flooded the national media with national park news. MacFarland and the American Civic Association continued their efforts, especially in relation to professional groups. When the American Society of Landscape Architects (A.S.L.A.) met in Boston in February, 1916, the A.C.A. lobbyists were there. One session of the conference was donated to the exploration of the national park problem and its relationship to the landscape architecture profession. In response the A.S.L.A. passed a resolution supporting the park bureau bill introduced by Congressman Kent of California in January, 1916.

The A.S.L.A. had no trouble seeing the relationship of the propose bureau to its own activities.

"Whereas, the need has long been felt, not only for more adequate protection of the surpassing beauty of those primeval landscapes which the National Parks have been created to perpetuate, but also for rendering this landscape beauty more readily enjoyable through construction in these parks of certain necessary roads and buildings for the accommodations of visitors in a way to bring the minimum of injury to these primeval landscapes... (it is resolved)... that the American Society of Landscape Architects endorses the Bill (H.R. 8668), entitled a Bill to Establish a National Park Service, and pledges its utmost efforts in cooperation with the American Civic Association, to secure its passage."[3]

The belief that the Mather-Albright administration was properly committed to these landscape values was incorporated in another portion of the resolution.

In another statement made during the same A.S.L.A. session, Landscape Architect James S. Pray of Harvard University, clarified the relationship between the hoped-for bureau and the landscape architecture profession:

"Let me go on the record as believing that the surpassing beauty of our National Parks is neither safe, nor will be made enjoyable for the maximum number of people with the minimum injury to that landscape beauty, unless the administration of the National Park areas employs the best expert council it can secure in the profession of Landscape Architecture..."[4]
Pray went on to specify four areas where landscape expertise was essential:

"First, a careful determination of proper boundaries of the National Parks, not arbitrary, as those at present, but in consonance with the topography and with landscape unity; second, the development of comprehensive general plans for every National Park and Monument showing roads, bridges, trails, buildings, etc., so far as these may be needed, and at the same time can be built without injury to the landscape, and the adoption of a definite policy of development; third, the approval of designs for buildings and other special structures; fourth, prescribing a system of intelligent and scrupulous maintenance having particular regard to the protection of the beauty of the landscape."[5]

Mather was quick to capitalize on the interest of the profession. When he was unable to attend the conference, he sent a message inviting the A.S.L.A. national parks committee to visit the parks during the summer of 1916 and make professional recommendations for their development and improvement. Mather went on to emphasize how much he had learned during his own 1915 summer tour.

The park bureau campaign continued through the spring and summer of 1916. Mather again took to the field. In fact he was near Sequoia National Park when word arrived from Albright in Washington that the Kent bill to create the National Park Service had suddenly passed Congress and been signed by President Wilson on August 25, 1916.

Mather had never intended to administer the new bureau. He had seen his role merely as a facilitator in its creation. After the resignation of Daniels, Mather chose Robert Marshall of the United States Geological Survey for the position of Director. By the end of the summer of 1916, however, Marshall and Mather fell to quarrelling, and Marshall returned to the U.S.G.S. This left Mather and Albright at the helm. Almost before Marshall could clear his office, Mather, too, was temporarily out of the picture. The incredible pace of the past two years had taken a heavy toll, and Mather collapsed with a nervous breakdown. When Congress finally authorized initial funds for the organization of NPS in an act of April 17, 1917, Horace Albright, officially Mather's assistant, was Acting Director. Albright's hopes for professionalism in the bureau had to be put off, however, for the United States had declared war on Germany eleven days before the Service was funded.
When Acting Director Albright filed his first Annual Report of the Director of the National Park Service in October, 1917, he could report only minimal progress toward the resolution of the major problems of the parks. A small building program had been carried forward with funds authorized before the creation of the Service. These few structures were apparently designed by the park managers with such assistance as they could arrange. A five-room ranger house built at the Cedar Creek entrance to Sequoia, for example, was only a plain, if comfortable, board and batten ranch house. On the other hand, two ranger cabins erected at Crater Lake were formally styled log cabins that bear a striking relationship to later, purposely rustic, park structures. Albright included a photo of one of the Crater Lake cabins in his report with the caption that the structure was illustrative of the type of ranger station adopted for that park.

The highly stylized appearance of the two Crater Lake cabins suggests, that either a landscape architect or an architect sensitive to the environment, played a role in the buildings' design. Unfortunately, it has been impossible, as yet, to confirm this supposition.

Mather returned to the Service to assume the Director's position in the spring of 1918, and, together with Albright, he played an important role in the formation of the Service's first Statement of Policy. "In most respects, this statement, dated May 13, 1918, confirmed the MacFarland concept of a professionally oriented National Park Service. The influence of the A.S.L.A. was clearly evident.

"In the construction of roads, trails, buildings, and other improvements, particular attention must be devoted always to the harmonizing of these improvements with the landscape. This is a most important item in our programs of development and requires the employment of trained engineers who either possess a knowledge of landscape architecture or have a proper appreciation of the esthetic value of park lands. All improvements will be carried out in accordance with a preconceived plan developed in special reference to the preservation of the landscape, and comprehensive plans for future development of the national parks on an adequate scale will be prepared as funds are available for this purpose."[6]

The reference to comprehensive plans is apparently a result of the influence of J. S. Pray. Taken as a whole, the above paragraph represents nothing less than the charter of the NPS rustic architecture program of the next twenty years.
Despite the new policy statement, the building program of 1918 closely paralleled that of the previous year. Only a small number of simple structures and related facilities went up in the parks. In Glacier, for example, several rather common bungalow-style residences were built.

In Sequoia, three utility buildings with an interesting exposed redwood frame were erected. Again, the designer is unknown, although one of the Sequoia structures was pictured in the Annual Report as a model for future development in that park. In the case of the Sequoia buildings (and perhaps some of the others) it is not improbable that they were designed by George Goodwin, a civil engineer first employed by Mather in 1916. At least one building proposed for General Grant National Park in 1917 was designed by Goodwin.

Despite the continuing war in Europe, Mather took steps during the summer of 1918 to initiate the professionalization of the NPS building program. On July 19, Charles P. Punchard arrived in Yellowstone bearing a letter from Mather appointing him National Park Service Landscape Engineer. [7] Punchard, previously a landscape architect for the City of Washington, D.C., was suggested to Mather by Arno Cammerer, who would shortly join the Service himself. [8] Punchard's duties were wide and varied. Primarily, Mather visualized his new employee as an advisor in the layout and design of both government and concessioner facilities. As Mather summed it up in his 1919 Annual Report:

"Besides the designing of gateways [for which Mather had a strong affection], it has been the duty of the landscape architect to plan employee's cottages, ranger stations, gasoline and oil stations, automobile checking stations, comfort stations, etc., or to criticize plans submitted by the superintendents for such buildings." [9]

Together Punchard and Civil Engineer Goodwin formed the nucleus for the professional park bureau staff which had been conceptualized by MacFarland before 1910. The policy statement of May, 1918 could now be executed.
III. The Formative Decade: 1918-1927

An enormous task faced newly appointed Landscape Engineer Charles Punchard when he arrived in Yellowstone in July, 1918. Not only was each of the western parks desperately in need of roads, trails and structures, but many of the parks were already the site of existing eyesores in the form of poorly planned or located facilities. Punchard applied himself to his task with a vigor that belied his poor health. His responsibilities included not only the design of new NPS structures, but also the supervision of concessioner facility design and construction, the development of local area plans for NPS utility yards, housing complexes, and administrative site, the planning of campgrounds, and consulting with the NPS Civil Engineering Division to assure proper landscape sensitivity in road and trail projects.

Although he inspected landscape problems in Yellowstone, Yosemite, Grand Canyon, Rocky Mountain, Mount Rainier, Crater Lake, General Grant, Sequoia, and Hawaii National Parks during the following year, most of Punchard's work was done at the first two locations. Yosemite, in particular, received the benefit of his talents. Punchard spent seven and one half months during the winter of 1918-1919 in the park. This long assignment reflected Director Mather's personal interest in the Valley. The Director often admitted that Yosemite was his favorite park, and it was one of his goals to turn it into the showplace of the national park system. Such a transformation required extensive landscape work, for Yosemite Valley had been intensively developed during the period when the State of California administered the area as a state park (1864-1906). Hotels, stores, cottages, corrals, barns, slaughter houses, and worse, were scattered about in careless disregard of the landscape. Some progress in correcting these evils had been made since 1915 when the Interior Department first gained exclusive administrative control of the area, but the landscape still offered large opportunities for improvement.

Of particular interest to Mather was the relocation of the existing commercial village to a new site on the north side of the Valley. One of Mather's first actions as Director was to initiate a search for a new village site. Punchard was assigned to this task during his first stay in the park. During the winter he also spent long hours re-arranging the campgrounds, landscaping existing facilities, and traveling as conditions permitted to out-lying portions of Yosemite Park and to some of the other California parks. At the same time he tried to find time to work
on problems he had identified during his summer visits to the other western parks and to review the large number of concessioner plans sent to him for approval.

A veteran landscape architect with considerable city park experience in Washington, D.C., Punchard, nevertheless, had much to learn about national parks. Like Mather, he doubtlessly was influenced by the concessioner structures built in the parks prior to 1917. During his first visit to the Grand Canyon in January, 1919, he met with architect M. E. J. Colter of the Fred Harvey-Santa Fe interests. Although the main purpose of their meeting was to talk over the future development plans of the Harvey Company in the about-to-be-created national park, Punchard could not help but have taken note of the rustic stone structures Colter had designed for the south rim.[1] (See Chapter I).

If Mather hoped that the appointment of a landscape engineer would resolve the backlog of landscape projects in the parks, he was wrong, for the appointment of Punchard led instead to the identification of large numbers of new problems. Mather admitted as much in his 1920 Annual Report:

"The establishment in 1918 of the landscape engineering department has been fully justified by the excellent results achieved by our landscape engineer, Charles P. Punchard, Jr. The demands for expert advice on landscape problems, however, became so insistent from many directions that it was practically impossible many times during the year to give immediate attention and the proper amount of study and thought to many of the problems presented."[2]

An improvement in funding for the 1920 fiscal year allowed Mather to hire an assistant for Punchard. The Director chose Daniel P. Hull of Milwaukee for the new position of Assistant Landscape Engineer.[3]

During the summer of 1920 Director Mather built a "Ranger's Club" in Yosemite Valley at his own expense. He hoped that this structure would serve as a model for similar buildings in other parks to be paid for by the government. Since it was built with private funds, Mather employed an outside architect, Charles Sumner, to design the structure.[4] Sumner designed a multi-winged, two story wood-frame building with a steeply pitched roof. Dormer windows and jig-saw wood-cut patterns gave it a Swiss chalet appearance. In this respect it was reminiscent of some of the buildings the Great Northern Railway had erected in Glacier Park.

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Ranger's Club, 1920, Yosemite National Park, photo circa 1940.
Punchard's health failed during the fall of 1920, and he died in November. (He had joined the NPS hoping that the drier climates of the west would help his tuberculosis.) Hull was promoted to the position of Landscape Engineer and the assistant's position was filled by Paul P. Kiessig. The 1921 fiscal year witnessed some improvement in park funding, and the need for park buildings of all sorts gave a high priority to construction projects. The administration of this new program fell to Daniel Hull.

Shortly before Punchard's death a headquarters for the NPS landscape program had been established in Yosemite Valley. So it was from that location that Hull and Kiessig planned their 1921 work. Although they were stationed in Yosemite, that park did not receive major emphasis during the 1921 season. Instead nearly every park benefitted from their efforts.

Sequoia received major attention. Plans were drawn for an administration building, the first in the park's thirty-one year history, and that structure was erected during the summer. Standing among the Big Trees of Giant Forest, the new headquarters was distinctly rustic. The exposed frame of the low, gable roofed structure consisted of hand-split redwood posts; the space between the posts was filled with sequoia bark paneling. Shakes covered the pole-raftered roof. Both in coloring and in exterior textures the building harmonized well with its aboreal setting. Nearby, a superintendent's residence and several employee cabins were also erected. In design concept all of the 1921 buildings in Giant Forest were patterned after the Giant Forest warehouse of 1917. (See Chapter II).

Grand Canyon National Park was also the site of major landscape activity. Created in 1919, the park received its first government structures in 1920 when several simple wood frame buildings were put up for temporary use. During the summer of 1921 the NPS erected several permanent structures. In contrast to the situation in Sequoia, the landscape division did not enjoy carte blanche at Grand Canyon with respect to design. The Santa Fe and Fred Harvey had already constructed large plants, so the new NPS facilities were forced to seek harmony with existing pre-park structures. Fortunately the existing buildings were generally of high quality.

Following a precedent set by M. E. J. Colter of the Harvey Company at Phantom Ranch, Hull sought a mixed stone and wood frame solution to their problem. The Grand Canyon National Park Administration Building of 1921 was basically a frame
structure, but with one wing built of stone. The stone wing and several stone columns in the frame portion gave the building a visual tie with the surrounding terrain. Inside, the "Brooklyn Eagle Information Room" was floored and walled with locally quarried limestone. A fireplace and split-level floor emphasized the rustic pioneer atmosphere, an impression strengthened by the exposed hand hewn roof beams.

The Sequoia and Grand Canyon administration buildings were typical of Hull's first attempts to develop non-intrusive park building designs. Smaller buildings erected that same summer in other parks show similar concern for local materials. At Yellowstone, for example, a fire lookout and visitor shelter was erected on the summit of 10,100 feet tall Mount Washburn. Located near timberline, this two-story structure was built entirely of local stone, appearing similar to a small southwestern Indian pueblo. In Rocky Mountain National Park a pioneer style log cabin entrance station was placed at the Fall River entrance. Small log cabins on each side of the road were joined by a large log-framed canopy topped with a gently sloped gabled roof. Roughly shaped stone foundations supported both the two end cabins and the vertical logs pillars of the canopy.[8] These structures are representative of the Service's early attempts to house modern functions in structures with a traditional appearance.

The buildings erected during 1921 to plans developed by the Landscape Engineering Division were the first well-developed examples of a new architectural species, "NPS-rustic." They were a specific response to the commitment made in the 1918 policy statement. Like many pioneering attempts, they were far from perfect. The Grand Canyon Administration Building was pleasing when viewed from the front, but a side view disclosed an unbalanced mixture of massive masonry and light frame construction. The pueblo-like Mount Washburn Lookout seemed oddly out of place a thousand miles from its cultural inspiration. The Sequoia administration building was well designed environmentally, but poorly located in relation to its intended function. Within several years it was converted into a museum.

The awkwardness of some of the early NPS rustic designs was overcome in the next year or two as Hull and Kiessig gained eloquence in the new styles they were pursuing. Hull designed two ranger station-community centers for Yellowstone in 1921. The following summer a third similar structure was erected at Yellowstone Lake. In his Annual Report for 1922 Mather
Giant Forest Administration Building, 1921, Sequoia National Park, photo circa 1921.
Administration Building, 1921, Grand Canyon National Park, 1921 photos.
Canyon Ranger Station, 1922, Yellowstone National Park, 1922 photo.
spoke with pleasure of the new Lake facility calling it "a triumph of woodland architecture." Superintendent Albright of Yellowstone described it in more detail:

"The plans for this building, developed by the landscape engineering division of the Park Service, have given us a structure unique in type and at the same time well suited for its requirements. The large community room forms an octagon in plan which is slightly less than 40 feet across. In the center is a great stone fireplace, open on four sides, which will present a campfire effect. A wing 26 by 38 feet provides quarters for rangers.... Logs have have been utilized in the construction of the station, with a roof of sawed shakes and a broad terrace of flat stones. The Lake Station has become one of the most talked-of structures of the park."[9]

The Lake Ranger Station also documented the development of another facet of NPS-rustic architecture. Not only was it designed to harmonize visually with its immediate environment, but it was also intended to harmonize in a cultural sense. Local woodsman Merritt Tuttle employed pioneer building techniques and standards in its construction. Mather himself ordered that the building be finished in what he called "trapper cabin" style, that is with exposed log ends chopped rather than sawed. The goal was to build a structure that reinforced the historical patterns of the Rocky Mountain region. This theme of regional cultural content as a part of non-intrusive architecture would grow to include not only log cabins, but also Indian pueblos, Spanish colonial adobes, and "New England colonial" frame structures.

Other park buildings erected between 1922 and 1924 document the continued improvement of rustic design. An administration building and checking station erected in Zion National Park in 1922 recalled the then-recent contributions of pioneer Mormon settlers in southern Utah. Built of native red sandstone, the two-winged complex was somewhat reminiscent of the pioneer masonry houses of Utah's Dixie region.[10] In General Grant National Park local cultural content was ignored in the design of a chief ranger's residence. Seeking harmony with the surrounding forest, the structure was built of massive, hand cut and planed redwood planks several inches thick and several feet wide. Placed in a vertical fashion with a log porch and a large stone fireplace, the result was unique, to say the least.
Administration Building, 1922, Zion National Park, photo circa 1930.
As Hull and his assistant improved their grasp of park conditions, they attacked larger problems. Sequoia had long lacked a proper administrative site. The 1921 administration building, although located in the most visited portion of the park, was at too high an elevation to be a good all-year administrative facility. The logical site for such a complex was near the park's western boundary in the canyon of the Middle Fork of the Kaweah River. Here Hull had one of his first opportunities to plan an entire community. Unlike Yosemite Valley or the South Rim of the Grand Canyon, this area was totally undeveloped. Hull responded with a carefully planned community of shake-covered wood-frame buildings. An administration building, a utility yard, and several residences were erected along a network of gracefully curving roadways. To avoid overpowering the foothill environment with its scrub oak and chapparal flora, the buildings were light in appearance and rather small. Half a century later, despite extensive later building on the site, "Ash Mountain" remains one of the most handsome residential areas in the national park system.

Mather's pet project of relocating Yosemite Village proceeded slowly despite the work Punchard had put into it. The Ranger's Club had been a first step in the implementation of the new plan, but the enormity of the project and the press of work in other parks had prevented further progress. During 1923 the Landscape staff finally completed their proposals for the new village, which were accepted and authorized by Mather. The plans called for an administration building, a post office, a museum, several concessioner studios and stores, and a hotel. All were to be located on the north side of the Merced River. It was the most ambitious project the Service had undertaken to date.

Following the precedent set when Sumner designed the Ranger's Club, the Service again turned to an outside architect for assistance in planning the individual structures for the new village. The main consultant was Myron Hunt. Hunt was a well-known southern California architect whose work included Mission Revival designs. Educated at Northwestern University and MIT, he had come west after practicing for a time in Illinois. Hunt's most important effort in the new village was the Administration Building. Erected in the fall of 1924 at a cost of $34,465, it was a two story, wood frame building over 100 feet long. A battered stone veneer encased the lower story, giving the appearance of structural masonry. The upper story was shingled and trimmed with logs. The total effect was horizontal, especially in relation to the surrounding cliffs. The stone and log work showed Mather's preference
Administration Building, 1924, Yosemite National Park, photo circa 1948.
for pioneer style workmanship. The two story Post Office echoed many of the same themes but with subtle variations. Again a wood frame second story rested atop a first floor that appeared to be made of stone. The only major variation was the absence of logs in the rafters and brackets.

The relationship between Hull and Hunt in the design of these buildings is unclear. Hunt probably was responsible for the final design, but he must have consulted extensively with Hull during his work. As a trusted assistant to Mather, there was little built in the parks that Hull did not review.

Another non-Service architect was responsible for the design of the new museum building in Yosemite. In the early 1920's the concept of national park museums was still in its infancy. Several parties and organizations including the American Association of Museums (A.A.M.) were interested in the development of such facilities, however. The A.A.M. was particularly interested in a museum for the new Yosemite Village, and it hired a young architect named Herbert Maier to prepare a proposal. Maier, who had attended the University of California at Berkeley, was then employed by the Buffalo Museum of Science as an exhibit designer. Most of his previous work experience had been architectural, however. His Yosemite proposal for the A.A.M. was presented to the Laura Spellman Rockefeller Memorial Foundation which responded with a grant of $75,000 for the construction of a Yosemite museum.

Maier's architectural proposal was influenced by several obvious constraints. The most obvious was that the museum had to harmonize with the other new structures on the site. Another limitation was the requirement of the Memorial Foundation that part of the resulting structure must be fireproof. The funds available were not sufficient to construct a fully fireproof structure, so compromise was necessary. Maier adapted the two story (one stone, one wood-frame) village motif to his own needs. The first story of the new museum was not merely a wood framed stone veneer, but rather a massive stone and concrete vault, fireproof in every respect. Above this heavy concrete and granite structure he placed a lighter, wood-frame second story containing offices and workrooms. As in the adjacent Administration Building, shingles and logs gave a natural texture to the building. The museum was definitely subordinate to the grand natural setting. Maier wrote:

"To attempt altitudinal impressiveness here in a building would have meant entering into competition with the cliffs;
Yosemite Museum, 1926, Yosemite National Park, photo circa 1948
and for such competition the architect has no stomach. The horizontal key, on the other hand, makes the museum blend easily into the flat ground...."[12]

The three major structures erected at the new Yosemite Village in 1924-1925 represent the approaching maturity of the NPS rustic styles. In a period of several short and busy years Punchard, Hull, and their collaborators had taken a general and vague criteria for park development and developed it into a practical methodology. The Yosemite Village project also demonstrated that the rustic styling was appropriate to larger buildings.

The Maier-A.A.M.-Laura Spellman Rockefeller Memorial partnership continued to bear fruit for several years after the completion of the Yosemite museum in 1926. Next to be completed was the Yavapai Point museum in Grand Canyon National Park, which was designed by Maier in the spring of 1927 and opened in 1928. This structure was a significant departure from Maier's rather traditionally shaped Yosemite Museum. Taking his inspiration from some of the existing M. E. J. Colter buildings of the Fred Harvey Company, Maier designed the new museum along distinctly Indian lines. Flat roofed, and built low to the ground with battered stone walls, the pueblo-like structure was particularly unobtrusive in its canyon rim setting. The large, roofed observation terrace was shaped to conform almost exactly to the rim of the canyon.

During 1928 the Memorial Foundation also provided $118,000 to the A.A.M. for the construction of trail-side museums in Yellowstone. That summer construction started on the first of these, located at Old Faithful, and three additional structures were eventually erected at Madison Junction, Norris Geyser Basin, and Yellowstone Lake.[13] (See Chapter IV)

If Hunt and Maier were instrumental in adapting the rustic ideal to larger structures, it remained for Gilbert Stanley Underwood to produce a truly mammoth rustic edifice. In 1923 Underwood, who had just received his Master of Architecture degree from Harvard, was employed as a consulting architect with the Union Pacific Railroad. During 1923 the Union Pacific had organized the Utah Parks Company to operate the concession rights the railroad had won in Grand Canyon and Zion National Parks, and in Bryce Canyon National Monument.[14] Zion Canyon was closest to the U.P. lines, so the Utah Parks Company began its development program there. During the spring of 1923 Hull met in Zion with an architectural representative of the railroad
Yavapai Point Museum, 1927-28, Grand Canyon National Park showing relationship of structure to rim of canyon.
(probably Underwood) to discuss development plans. During their meetings Hull emphasized the importance of harmonizing the new facilities with the natural setting. A hotel proposal was drawn up and sent to the Fine Arts Commission of Washington, D.C., an organization which Mather often consulted. [15] In this case however, Mather chose to ignore their recommendation that the hotel be built as designed.

"I was never favorable to this project and although plans drawn for the proposed hotel was approved by the Fine Arts Commission I felt that the construction of a large hotel in the canyon was not the proper development. I am glad to say that construction of the hotel was abandoned and instead an ample central building with cottages for sleeping quarters conveniently located nearby is now being constructed." [16]

The central building that the Utah Parks Company and the NPS finally agreed on was considerably larger than the new administration building in Yosemite, though not nearly as large as the proposed hotel would have been. Housing a lobby, a kitchen and a dining area, the central building of the Zion Lodge was a one and two story structure tucked at the base of the towering cliff which forms that south wall of Zion Canyon. The design features were somewhat reminiscent of a complex of similar purpose though smaller scale, erected two years earlier by the Fred Harvey Company in the Grand Canyon. That complex, at Phantom Ranch, designed by Colter, displayed an interesting use of both masonry and wood frame patterns. Rustic native masonry was used in the main building at Phantom Ranch for lower wall sections, pillars and full wall sections near corners and/or windows or doors. The remainder was wood frame.

Mather had not wanted a major hotel in Zion Canyon, but he had another park that was crying for such a structure. Since 1915 he had been trying to organize the construction of a modern hotel in Yosemite Valley. The old Sentinel Hotel, built in the 1880s, was still the main hostelry in the Valley. The Desmond Company had built a modern hotel at Glacier Point in 1917 and had actually begun work on a similar facility for the Valley floor before financial problems halted the company’s development program. In anticipation of a new attempt to construct such a structure, Mather had ordered his landscape engineers to choose a new hotel site as a part of their plan for the new village area. Finally, in 1925, the merger of the two major park concessioners into the Yosemite Park and Curry Company made a new hotel possible. Familiar with his work on the ill-fated Zion Hotel effort, Hull apparently recommended Underwood to the Y.P. & C. Company.
Working together on the Zion project, Hull and Underwood had become fast friends. Each apparently saw in the other new ideas and concepts. Late in 1923 Hull asked permission of Director Mather to move the office of the Landscape Division from Yosemite Valley to Los Angeles, where he could work closely with Underwood. Mather authorized the move, and Hull and his small staff soon were subletting a portion of the Underwood and Company offices at 730 South Los Angeles Street. Hull justified the move as giving access to the 'best architectural and engineering talent....' The move was approved.

As soon as the Zion Inn opened in May, 1925, Underwood turned to the Yosemite hotel project. By fall, he had completed preliminary plans. The new hotel, the "Ahwahnee," was to be a five-story, irregularly shaped structure described by its designer as "megalithic; (with) cyclopean stone piers...." The new structure, opened in July, 1927, was indeed built of large stones, not to mention concrete and steel, but the total effect was not at all over-powering. Set among the cliffs of Yosemite Valley, it seemed almost small.

The Ahwahnee was a major milestone in the rustic architecture movement in the national parks. Through the innovative use of modern construction materials, Underwood designed a structurally modern hotel that appeared to be built of logs and wood. Actually most of the exterior "logwork" and "siding" was made of concrete, molded and painted to look like wood. Only the log roof truss of the dining room was real. The interior was richly fitted with handmade furniture and other accents. Indian designs were used freely.

The success of the Ahwahnee attracted the attention of the Utah Parks Company. Mather had vetoed a hotel in Zion Canyon, but he had no objections to a large structure on the North Rim of the Grand Canyon. By 1927 the Grand Canyon Lodge was under construction at Bright Angel Point. Even more fantastic than the Ahwahnee, Underwood's new hotel was a veritable limestone castle perched on the rim of the gorge. Like the Ahwahnee, it was crowned by an observation tower, but even the view from the tower was bested by the panorama obtained from the hemispheric solarium. Exterior stone played a larger role in the Grand Canyon Lodge than it had in the Ahwahnee. Another significant difference was the split-level floor plan of the new hotel. Structurally, the two hotels were strikingly dissimilar. The Grand Canyon Lodge site was over 200 miles from the nearest railroad and thus hard to supply with concrete and structural steel. As a result the Grand Canyon Lodge made much more extensive use of logs and wood in its structural frame. This reliance on wood proved to be ill-conceived when the Lodge burned in 1932.
Ahwahnee Hotel, 1927, Yosemite National Park, 1975 photo.
Grand Canyon Lodge, 1928, Grand Canyon National Park, tracing of original elevation.
Underwood's adaption of rustic concepts to large structures and modern materials essentially completed the development of a new type of architecture specifically adapted to the national parks. By 1927 the pioneering design work of Punchard, Hull, Underwood, Maier, Sumner, and Hunt had resulted in the creation of an architectural esthetic based on a specific and particular relationship between a building and its natural setting. In 1927, ten years after the founding of the Service, the number of such structures was still small, a result of funding limitations. Nevertheless, an ideal had been established that was almost universally recognized as appropriate to the parks. From the Director down, the Service was committed to this ideal. Only continued lack of construction funds prevented the large scale implementation of the Service's architectural ideals.

Altogether, the Landscape Engineering Division remained in Los Angeles for nearly four years. The close relationship between Underwood and the division continued. With the help and encouragement of Hull, Underwood received a large portion of the concessioners' architectural commissions. For example, in 1926 and 1927, when the new Giant Forest Village complex was being developed in Sequoia National Park, Underwood was commissioned to design both the market and the Lindley Eddy studio, the two major structures on the site. About the same time he designed a lodge complex for General Grant National Park, much of which was never built.

Overwhelmed with work, the small landscape staff of the National Park Service did its best to meet its rapidly growing workload. Even so, Hull did not donate all his time to the parks. Especially during the winter months, when most of the western parks were snowed in, he continued his private landscape practice. Kiessig resigned and was replaced in March, 1923, by Thomas C. Vint, who had joined the landscape staff as a draftsman the previous fall. Vint served as Hull's chief assistant through the remainder of the Los Angeles period. An able designer and manager, he soon proved himself invaluable. By 1926 he was in charge of the day-to-day operations of the landscape program; John Wosky, who joined Vint as an architectural draftsman in March, 1926, reports that by that time Hull was only a "part-time" employee. [20] This situation came to an end in 1927 when the Landscape Division was transferred to San Francisco where it was housed in a joint "Western Field Office" with the NPS Civil Engineering Division. Hull declined to leave his Los Angeles private practice and resigned. Mather appointed Vint to take his place. The formative decade was over.
IV: Maturity Achieved: 1927-1932

The transfer of the NPS landscape office from Los Angeles to San Francisco in 1927 corresponded with the beginning of a period of unparalleled park development. The transfer itself was made to facilitate communications between the various portions of the NPS park development staff. The new joint Field Office in the Sheldon Building also housed the NPS Civil Engineering Division, and the Bureau of Public Roads, which through cooperative agreement was the primary road building arm of the Service.

The creation of the Field Office was made necessary by increased park development activity. During the early 1920s the NPS budget had risen slowly, but it had never come near to meeting park needs. Continued efforts to obtain increased funding finally succeeded in the 1925 fiscal year when the NPS budget received a better than 1/3 boost. In 1926 the Service began to receive regular appropriations for the construction of roads and trails. By 1928 Mather had succeeded in convincing Congress that the road and trail needs of the NPS required a long-term investment of more than $50,000,000. Annual appropriations of up to $7,500,000 for road and trail work began.

Similar progress was made in the "physical improvements" column, which included buildings, utilities, campgrounds and the like. These were not the subject of a special fund like the roads and trails program, but rather were funded within individual park appropriations. Mather was successful in obtaining larger appropriations for these purposes as was Horace Albright who succeeded Mather as NPS Director in early 1929.

The growth of the NPS budget accelerated under President Hoover. The new administration was sympathetic to the Service, and the budgets of the 1931 and 1932 fiscal years were nearly four times as large as that of 1925. Individual park budgets for 1931 and 1932 in most cases represented the highest levels of regular funding reached prior to World War II. The 1933 budget was set at much lower levels than the previous two years, but at the last minute the "Emergency Relief and Construction Act of 1932" added $3,000,000. After further reductions under two "economy acts," the 1933 NPS budget still amounted to over 80% of the record 1932 total. [1]

More money for park development meant more employees for the Landscape Division. When Vint arrived in San Francisco after closing the Los Angeles office he had only one professional assistant, Junior Landscape Engineer John Wosky. During the next year Vint
hired at least two additional landscape architects and two architects. The varied backgrounds of Vint's staff members emphasize the infant state of the art of park design. Vint himself had attended the University of California, graduating with a Bachelor of Science degree in 1920. Before joining the NPS in 1922 he worked for several different architectural firms and did some free-lance landscape work. His training in non-intrusive architecture probably came after he was hired as a NPS draftsman by Daniel Hull. During his first few years with the Service, Vint worked in Yosemite with both Gilbert Stanley Underwood and Herbert Maier. Vint was a quiet, self-confident Scot. Unprepossessing in stature or demeanor, he nevertheless became the controlling figure in the NPS rustic architecture program. [2]

Hull also hired John Wosky. The Iowa-born Wosky came to California in 1924 and obtained a position with Gilbert Stanley Underwood, citing his experience as a draftsman in Des Moines. In early 1926 Wosky resigned and returned to the Midwest. When a change in plans caused him to regret having left southern California, he telephoned Underwood and asked for his job back. Underwood told him to return to California. When he arrived, Wosky found that he was employed by the NPS. Working with Vint, he became an accomplished rustic architect. From 1928 to 1933 he was the resident landscape architect in Yosemite National Park, where he became assistant superintendent in 1934. Thereafter he remained in the managerial ranks, eventually serving as superintendent of Crater Lake and Hawaii National Parks and Regional Chief of Operations. [3]

The first two landscape architects Vint hired after moving to San Francisco came from different backgrounds. E. A. Davidson joined Vint first. Davidson was in his thirties when he came to the San Francisco office, and he had attended Washington State College at Pullman. He did not graduate, however, and one of his contemporaries recalls that he worked for a time as a bank teller. [4] Vint hired him because he liked his drafting style, and Davidson quickly developed into a first-rate landscape architect. He was assigned to the field in the summer of 1927, and for the next several years he supervised the development of Mount Rainier and Glacier National Parks. He remained a landscape man, not an architect. His most significant work came in the form of road design. He died in 1944, still on the job. [5]

Merel S. Sager was hired in the summer of 1928 as a landscape architect. Unlike Davidson, Sager was young and professionally trained in his chosen field. Sager had first worked for the NPS as a summer ranger in Yellowstone in 1922 and 1923, and in Glacier in 1925 and 1926, and he did not forget the beauty of the parks.
After receiving his Master's degree in landscape architecture from Harvard early in 1928, he applied to the Service and was accepted on a temporary basis. After helping Vint write the first civil service exam for landscape architects, Sager passed the test and earned a permanent position. For the next several years he worked mainly in the Pacific Coast parks, especially in Sequoia, Crater Lake, and Lassen Volcanic. Most of his work was in general landscaping, roads, area plans, and construction supervision. Before his retirement Sager would spend twenty years in Washington, D.C., ten as chief of park planning in the National Capital Parks and another ten as Chief Landscape Architect.[6]

English born A. Paul Brown was one of the first two architects hired after the office moved to San Francisco. Like Wosky, he had worked with Underwood before joining the NPS.[7] He soon became a main-stay of the park design program. Unlike the landscape men, Brown seldom went into the field. Instead he remained in San Francisco providing architectural assistance for the field men. Few early NPS building plans were signed by their designers, but it is likely that sizeable numbers of them were done by Brown.

Herbert Kreinkemp was the other architect hired soon after the move. Although he had design capabilities, he spent most of his time on construction supervision and specification writing. He became the specification specialist on Vint's team.[8]

Another early addition to the staff was Harry Langley. English born, Langley took over the field work in the Utah and Arizona Parks. About 1937 he transferred to the Washington office where he supervised project program development until his retirement in 1958.[9]

Charles Peterson joined Vint's staff in January, 1929. Trained in architecture at the University of Minnesota, Peterson remained in the San Francisco office for only a year and a half, working mainly in the southwestern parks and monuments, before he transferred east in mid-1930. Peterson designed the initial developments at the new Colonial National Monument and in the process established himself as the founding father of the NPS historic preservation program. He remained with the Service until 1962 when he accepted a position at Columbia University.[10]

The staff grew steadily. Thomas Carpenter, Frank Mattson, Charles Richey, Howard Baker, and Harlan Stephenson were young college educated landscape men who were used mostly in the field. Structural engineer Edward Nickel was transferred from the civil engineering branch. Hydraulic engineer Kenneth McCarter was transferred from Grand Canyon National Park and converted into
a landscape architect. William (Les) Bigler worked mainly as a draftsman. William Carnes, a Berkeley trained landscape man, served as Vint's office manager.

Although the backgrounds of the staff Vint assembled from 1928 through 1931 varied considerably, all shared one common problem. None had enjoyed previous training in non-intrusive or "rustic" architecture. Even the best landscape schools of the time included little in their curricula that prepared a student for National Park work. Hence the burden of training the new men in the art of non-intrusive design fell to the NPS and especially to Tom Vint.

As a teacher Vint was not a dogmatist. He allowed his men considerable freedom of expression as they developed their own styles and techniques. Openness and honesty were his managerial aims. He worked hard to achieve high levels of cooperation between his architects and his landscape architects. The architects had a better understanding of structures and general building design while the landscape men were generally more sensitive to the park environment. The skills of both were necessary. Vint had a saying which summed up his philosophy of park design: "Spare no expense, but keep it simple."[11]

As the staff was enlarged, the western national parks were organized into definite districts consisting of one or more parks and monuments. A landscape architect was assigned to each district. Under this system E. A. Davidson, for example, was responsible for landscape activities in Glacier and Mount Rainier National Parks while Merel Sager worked in Sequoia, General Grant, Lassen Volcanic, and Crater Lake. When Thomas Carpenter was added to the staff, Sager's responsibilities were halved, with Carpenter taking the two southern parks. The field men generally prepared preliminary plans for developments in parks under their control. (See Appendix B) But when the press of time was too great or the problem was too difficult, they could turn for assistance to one of the architects in the San Francisco office. Usually, final plans, specifications and the like were prepared in the main office so as to allow the field men to accomplish the maximum amount of outdoor work during the short building season. During the winter some of the field men came to San Francisco while others were detailed to winter parks in the Southwest or Hawaii.[12]

Most of the building projects completed between 1928 and 1932 fell into the category of basic park facilities. In 1928 only a few parks had adequate administration buildings or utility areas. None had sufficient employee housing. Roadside visitor facilities like museums, entrance kiosks, rest rooms, information stations, and
interpretive shelters were woefully inadequate. Wilderness patrol cabins were few and far between. Under the generous budgets of the Hoover Administration many of these deficiencies were remedied.

The Mount Rainier National Park Administration Building, located at Longmire, was one of the first major building projects accomplished after the move to San Francisco. E. A. Davidson supervised the construction of the two story log and stone building during the summer of 1928. Several major design features, notably the use of a masonry-veneer first floor and an all-wood second story, were borrowed from the Yosemite Administration Building, but the use of material gave the structure a special relationship to the Mount Rainier area. (See Chapter III) The first story of the 37 by 68 feet structure was constructed of boulder masonry. According to the thought of the time, no type of masonry was more difficult to execute well, for round stones were difficult to mold into a wall displaying visual stability. At Longmire, however, a decision to use stone inevitably required the use of boulders, for the local terrain supplied little else. Visual stability was sought through battering and through the device of decreasing the stone size in the upper part of the walls. These techniques also tied the building to the earth and masked its essentially rectangular foundation lines. The wood frame upper story was finished in horizontally-placed log half rounds, giving the impression of log construction. Each corner of the upper story was a massive vertical log several feet in diameter. The corner logs drew together the masonry of the lower story with the massive rafters, eaves and brackets, which were made of 12-inch logs with "whittled" (rounded) ends. Thick shakes extended the theme of solid pioneer construction to the roof surface. A boulder masonry chimney and a masonry porch framed with logs completed the structure. Numerous windows with heavy log lintels admitted light.

The Mount Rainier Administration Building of 1928 summarized the maturing philosophy of non-intrusive architecture in a forested setting. The lower walls, veneered with native stone, rose irregularly out of the earth. The large logs used in the roof and porch were proportional to the surrounding conifer forest. Shrub screening along the base of the walls established yet another connection between the building and the forest. Completed, the building was a handsome structure with strong visual ties to its environment.

Two of the small museums erected in Yellowstone with funds granted in 1928 by the Laura Spellman Rockefeller Memorial Foundation warrant special attention in this study. Herbert Maier, still working for the American Association of Museums, designed
Administration Building, 1928, Mount Rainier National Park, 1928 photo.
both. Rather than attempt to adapt his earlier Yosemite or Grand Canyon museum designs to Yellowstone, Maier started from scratch, developing unique designs of uncommon quality for each site.

In its shape the Madison Junction museum contained elements reminiscent of the bungalow tradition, but the exaggerated use of stone and logs carried the "L"-shaped structure far beyond the constraints of that style. The exhibit room gable was the main visual feature of the building. The lower portion of this facade was heavily battered irregular rubble masonry. On one corner the battering extended nearly four feet. The gable, which sheltered a large window, was framed with heavy logs 12 inches or more in diameter. The logs were chosen with care; each displayed knot whorls or spiral twisting. Unwhittled log brackets supported this gable. The brackets rested on the top of the masonry, thus the facade of the building was reduced visually to masonry and logs. In the roof, pole rafters and thick shingles balanced the heaviness of the wall masonry. The gentle roof pitch and extended eaves emphasized the horizontal. Several years later an architectural critic would describe the building as "Minor in size, but not in its contribution to park architecture."[13]

In the Norris Geyser Basin museum, the second of Maier's two Yellowstone projects constructed in 1929, Maier again explored new building shapes. He had done this before in the Yavapai Museum at the Grand Canyon, but there he had incorporated pueblo Indian patterns in the structure. At Norris, Maier discarded all previous restraints and produced a truly unique building. The central architectural feature was an open-air foyer protected by a jerkinhead roof. The portals at each end were constructed of cyclopean stones. Rafters and brackets made of logs up to two or three feet in diameter carried the roof. Again, these logs were chosen for their interesting irregularities. Low earth-hugging wings protruded from two sides of the 20-foot tall foyer. The two wings, which contained exhibit rooms and an apartment, were buried beneath extensive roofs with low eaves. From a distance the museum was not a building but a rounded, sculpted hummock, admitting its human origins only through the foyer portals.

The 1931 season produced an uncommon number of first-rate structures in the western parks. A discussion of some of these sheds considerable light on the then contemporary state of NPS architecture. A comparison of two residences built in Yosemite and Sequoia in 1931, for example, demonstrates how buildings designed for similar purposes were adapted to their specific environments.
Norris Geyser Basin Museum, 1929, Yellowstone National Park, photos circa 1935
The Tioga Pass Ranger Station was a one-bedroom residence and ranger station erected at the Tioga Pass entrance to Yosemite National Park. The bulk of the surrounding Sierran peaks easily dominated the weather stunted, timberline forest of the barren locale. Masonry lends itself readily to construction in such settings, and landscape architect John Wosky relied heavily on masonry in his attempt to design a non-intrusive structure for the site. The walls, porch and chimney were all built of local stone. Only the wooden lintels interrupted the lithic texture of the battered, boulder masonry walls. A heavy log roof frame supported the shingles. The front roof line extended downward to form a porch, supported by vertical log and stone pillars. The building was designed so that the log side of the gable roof, which culminated in the porch, ran parallel to the surface of the ground.

At the same time the Tioga station was erected, a ranger residence was built at Giant Forest Village in Sequoia National Park. Like the Tioga station, the Giant Forest Village residence was located in a high-visibility location, in this case on a small hill overlooking the primary commercial complex within the park. Several factors differentiated the two situations, however. The Tioga station needed to be clearly visible, since a part of its purpose was to mark the park boundary. The Giant Forest Village house did not need to be so conspicuous, for high visibility was not an important part of its function. Little similarity existed between the two settings in a natural sense. Whereas the Tioga station stood near the upper edge of a sparse timber-line forest, the Giant Forest Village site was in the midst of a particularly dense forest. Sequoia trees over 200 feet tall stood within yards of the cabin.

Neither masonry nor logs seemed particularly appropriate to the Giant Forest setting. Within the dense forest natural stone played an unimportant scenic role. A stone building would be conspicuously out of place. At the same time it would be impossible to erect a log building on the site that would be truly proportional to the setting. Even the smaller sequoias near the house were often greater than 10 feet in diameter. A number of concession structures already stood in the vicinity. Most were wood frame with exterior surfaces varying from sequoia bark to shingles. Consulting with the superintendent of Sequoia and with the architectural staff in San Francisco, Merel Sager finally chose a wood frame design for the site. The dominant structural feature was a framework of exposed 10 inch square timbers that formed both the vertical and capping horizontal members of the walls. These exceptionally heavy beams gave the building a proportional relationship to the surrounding forest. The foundation and the chimney of granite boulder masonry continued the theme of massiveness.
Tioga Pass Ranger Station, 1931, Yosemite National Park, 1932 photo.
Giant Forest Village Ranger Residence, 1931
Sequoia National Park, 1931 photo.
Unlike some of the other structures discussed above, the Giant Forest house consisted mainly of commercially available materials. The area between the vertical wall posts, for example, was filled with unplaned lap siding, while the gable ends were enclosed with board and batten. The most distinguished design feature about the house was its siting. Although it overlooked the busiest intersection in Sequoia and was within 50 yards of the main coffee shop in the park, it was so situated among the giant trees that it was seldom noticed.

Even by 1931 the national park system included a great deal more than alpine parks. The arid parks of Arizona, in particular, demanded non-intrusive designs far removed from those appropriate to Sequoia or Yosemite. Both Petrified Forest and Casa Grande National Monuments received major building construction funding in 1931. A comparison of the two developments discloses interesting differences.

Casa Grande was set aside to preserve the Indian ruin of the same name, so there was no difficulty discovering a cultural theme for the monument. The Administration Building and Residence Number One, both built in 1931, were patterned after Indian pueblos. Following the model set by the local ruins, the NPS buildings were built of adobe with flat roofs and brush ramada porches. The complex achieved moderate historical authenticity, vigas and lintels were true structural members, but steel sash windows added a discordant note. The lack of detailed authenticity, however, in no way reduced the non-intrusive nature of the structures. The earth colored adobe buildings, with their horizontal shapes, fit well into the sun-baked plains of south-central Arizona.

The natural setting at Petrified Forest National Monument differed in several ways from that at Casa Grande. The topography was more varied, with small mesas and hills dominating. Rock, including petrified wood, was commonly distributed. Moreover, despite the fact that Indian ruins were present in the monument, it had been set aside for natural values. The 1931 construction program at Petrified Forest, which included a museum and several residences, kept within the "southwestern tradition," but was distinctly different from that at Casa Grande. The low, box-like patterns of pueblo architecture were followed, but only in general terms. No attempt was made to achieve authenticity. Instead the buildings were a contemporary adaption of a traditional theme. Although far from perfectly cut and shaped, the stones of the masonry walls were distinctly more regular than in most NPS structures of the period. Carefully shaped stone lintels spanned door and window openings. The museum was less in the pueblo style than the rambling.
Administration Building, 1931, Casa Grande National Monument, photo circa 1935.
Administration Building, 1931, Petrified Forest National Monument, photo circa 1935.
multi-unit apartments. It was obviously symmetrical and even somewhat formal. Its main concession to its setting was its use of rough stone in its exterior walls. From a distance its squarish, stoney exterior resembled one of the many mesas of the Arizona horizon.

Another interesting contrast can be achieved through a comparison of some of the numerous NPS comfort stations erected during the Hoover Administration. Such a comparison is particularly enlightening because the function of a comfort station remained the same regardless of setting. With this in mind it is interesting to observe how comfort station exteriors were adapted to various settings.

The Logan Pass comfort station, Glacier National Park, stood in a harsh alpine setting dominated by vistas of massive peaks. Only a few, weather-stunted trees softened the harshness of the barren site. E. A. Davidson realized that a stone structure could best achieve harmony with such a setting. His design called for a squat, squarish structure built of large stones. Although actually standing on a hillside terrace, the building appeared to be a part of the mountain itself. The windswept nature of the pass removed the usual alpine requirement for a steeply pitched roof. Instead a low gable supported by heavy logs was placed above the stone walls. The pitch was so gentle that the roof surface was not visible from the adjacent parking area. The roof line was broken by four masonry corner pillars rising irregularly several feet above the eave line. Like the walls, the corner pillars closely matched the natural stone bedding patterns of the vicinity.

The Mariposa Grove comfort station, Yosemite National Park, was placed in an environment far removed from bleak, windy Logan Pass. The facility had to harmonize both with the giant sequoia forest setting and with a reconstruction of a pioneer cabin, housing a museum. John Wosky chose to fashion the comfort station after the museum. The resulting structure was a gable roofed log cabin. Imitating the pioneer style, Wosky was careful to mask the foundation so that the structure appeared to rest directly on the earth.

A comfort station built at Giant Forest Village in Sequoia National Park was similar in floor plan and shape to the Mariposa Grove structure. The natural setting of the two facilities was also similar in that both were within sequoia groves. The Giant Forest Village area, however, was already developed with NPS and concessioner structures. So once again the problem was that of finding a design that would harmonize with both nature and man. Merel Sager's solution was a wooden, exposed frame structure. The 10 by 10 inch
Logan Pass Comfort Station, 1931, Glacier National Park, photo circa 1935.
Mariposa Grove Comfort Station, 1931, Yosemite National Park, 1932 photo.
vertical and diagonal beams exposed in the frame gave the building a solid massiveness proportional to its surroundings. Both the roof and the wall panels between the frame members were covered with shingles. No poles or logs were used.

The largess of the Hoover Administration had its effect throughout the national park system. Every area received at least a few new buildings or a new section of road or trail. Some parks received a great deal more. In terms of rustic architecture, Crater Lake was one of the luckiest. In 1931-1932 it was the scene of one of the most comprehensive rustic architecture programs ever undertaken by the National Park Service.

At that time Crater Lake was a part of Merel Sager’s field district, but the scale of the 1931-1932 building program was too much for a single designer, especially one with responsibilities in other parks. Seeking help, Sager requested assistance from the architects in the San Francisco office. During the summer of 1932 alone, plans called for the erection of a superintendent's residence, a naturalist's residence, a ranger's dorm, an oil house, and a machine shop. This was in addition to several projects recently completed or still underway like the Sinnott Memorial and the Watchman (peak) Lookout.

Despite the large number of structures under construction, Sager attempted to achieve high rustic quality in each and every structure. Responding to local geological and meteorological conditions, he chose as a central architectural theme for the government headquarters area, the use of massive stone masonry and steeply pitched shingle roofs.

The superintendent's residence, the naturalist's residence, and the ranger's dorm, all built during the summer of 1932, shared these features. In each structure Sager continued his experiments with the use of wall stones of unprecedented size. He had first attempted this type of work at Crater Lake in the construction of the Sinnott Memorial museum in 1930-1931. Some of the stones incorporated into the government headquarters buildings were as large as 15 cubic feet in volume. Such construction was so unique that new building techniques were required. First, a wooden formwork outlining the interior surface of the outside walls was erected atop a concrete and stone foundation. This form was sufficiently sturdy to support the frame of the second floor roof gable. While the second floor was being constructed, work went forward on the masonry walls. One by one, massive boulders weighing hundreds of pounds each were lifted into place, leaving a space of a few inches between the back of the stones and the wooden formwork. This space was filled with concrete. After the masonry had been completed, the interior form was removed, leaving behind a smooth interior concrete wall finish with nailing.
Superintendent's Residence, 1932, Crater Lake National Park, 1932 photos.
strips imbedded within it. When the interior formwork was removed, the weight of the second story and roof was transferred to the masonry walls.[14]

When completed, the stone buildings with their steeply pitched green shingle roofs had an undeniable air of solidity about them. Some of the irregularly shaped stones near the bottoms of the walls were up to five feet across, and even the smaller stones placed near the top of walls were often two or three feet in diameter. The relationship of the walls to the underlying geology was obvious. The sharply pitched green shingle roofs bore clear resemblance to the pointed spires of the conifer snow-forest of Crater Lake. The buildings were practical, too. The steep roofs shed snow easily. The second story dormer windows were high enough to stay above the deep snow-drifts of winter, and the stone walls provided excellent insulation against low winter temperatures.

The oil house and machine shop buildings shared design features with the three residential structures just described. The Watchman Lookout, however, was a more complex project. Located atop one of the highest points on the lake's rim, the lookout was to be both a trailside museum and a fire lookout. The resulting structure admirably filled both purposes. The flat roofed first floor, built of massive stones, housed the museum room, rest rooms and a storage area. The second story, which rested on only a portion of the irregularly shaped first floor, was a four-sided, glass enclosed observation room. Both the roof of the observation room and the catwalk running around it were made of logs. The effect was striking. The lookout seemed to be a part of Watchman peak.

Buildings were not the only park structures designed to harmonize with the environment during this period. The late 1920s and early 1930s were a period of major road development in the parks, and numerous road related structures were erected as a part of these projects. The field landscape architects were responsible for minimizing the landscape damage done by new roads. Many of the rules of rustic architecture had application to road design. In particular, the landscape architects attempted to avoid straight lines in park roads.

Bridge designs were a particular challenge. Bridges needed to be substantial and easy to maintain, yet modern materials, like concrete, if used honestly, did not blend well with the natural scene. The most frequently used solution to this problem was the concrete and stone arch bridge. First a concrete vault one or two feet thick and 20 to 30 feet wide would be constructed spanning the obstacle in question. Then rustic stone walls would be erected on each side of the concrete vault
Ranger's Dormitory, 1932, Crater Lake National Park, 1934 photo.
Watchman Lookout, 1932, Crater Lake National Park, 1932 photo.
to simulate an arch. Finally the concrete and stone structure above the vault was filled with earth and graded. The result was a trouble free modern concrete bridge with a traditional appearance. If its masonry was properly executed a bridge of this sort could achieve a high degree of sympathy with its natural setting. Many such bridges were designed and constructed by the NPS prior to World War II. The Christine Falls Bridge in Mount Rainier, erected in 1931-1932, is an excellent example.

Occasionally the masonry arch bridge design was rejected in favor of some other design. The El Capitan Bridge in Yosemite Valley, built in 1932, is a good example. Two concrete piers located in the bed of the Merced River, supported three steel "I"-beam spans. But this essentially modern design was masked by placing stone boulder veneers around the piers and abutments and by enclosing exposed steel sides of the bridge with massive logs and pole railings. The result was a steel bridge that appeared to be constructed of local river stones and logs.

Roadside interpretive shelters and signs were another part of the non-intrusive designer's domain. The goal usually was to build with native materials, but to make the structure in question sufficiently obvious to fulfill its functions. A good example can be found in the rustic stone pylons which formed the Raker Memorial Entrance of Lassen Volcanic National Park.

The increase in construction and development activity during the Hoover Administration raised questions about the ultimate direction of park development. Although James Pray of Harvard University had recommended that the NPS employ landscape architects for the purpose of long term planning as early as 1916, (See Chapter II), nothing had been done. About 1929, while visiting Harvard, Vint was again questioned as to what planning procedures the NPS had initiated. He had to admit that very little had been done despite the obvious value of such work. After he returned to San Francisco, Vint talked over the problem of park planning with Merel Sager, who had attended Harvard and was familiar with the concepts Pray proposed.

Together, Vint and Sager prepared a master plan program for the NPS, and Vint presented it at the next park superintendent's conference. The Director and the superintendents were generally pleased with the idea and serious park planning began in the 1931 fiscal year.[15]

The first NPS master plans were actually six-year plans that were to be revised annually as proposed work was accomplished.
Christine Falls Bridge, 1928, Mount Rainier National Park, 1928 photo.
Raker Memorial Gateway, 1931, Lassen Volcanic National Park, 1931 photo.
Each landscape man was responsible for developing plans for his assigned field areas. In many areas the lack of adequate maps and other necessary supporting data made the task difficult. By the middle of 1932, nevertheless, plans had either been prepared or were in process for all the western parks and monuments. Future visitor requirements were estimated, and needed roads, trails, buildings, and utilities were sited and sketched.

This planning activity accelerated during the last year of the Hoover Administration when NPS funds were cut back as a part of an across the board government cost cutting campaign. This lessened construction activity allowed the landscape men to put more time into park plans and to prepare preliminary sketches and building plans for many proposed developments. By the time Franklin Roosevelt was inaugurated in March, 1933, the NPS had specific development plans in its files to run through fiscal year 1939.
In retrospect it is clear that the election of Franklin Delano Roosevelt to the Presidency of the United States opened a new period in the history of the National Park Service. Under Roosevelt the NPS grew rapidly and took on responsibilities far beyond its previous spectrum of activities. The impetus for this change was the Great Depression.

During the Hoover Administration the NPS had succeeded not only in preserving itself in the face of considerable pressure to reduce the size of government, but it had actually grown in number of areas, staffing, and funding. Not until the last year of the Hoover presidency did the NPS suffer a budget cut, and even then the professional design staff of the Landscape Division was preserved intact.

The NPS continued to be favored with presidential attention under the new administration. Initially Roosevelt's interest in the NPS lay in incorporating the expertise of the well organized and highly professional bureau into his expansive relief schemes. FDR had given serious thought to relief projects during the months prior to his inauguration, and he presented the concept of a "Civilian Conservation Corps" to his staff only hours after his oath of office. As proposed by FDR, the "C. C. C." would be an army of young men sent to attack the enemies of erosion and deforestation. The new organization would be a multi-departmental affair. As organized under the March, 1933, "Emergency Conservation Work (E.C.W.) Act," C. C. C. enrollees were recruited by the Department of Labor, organized and transported by the War Department, and put to work by the Departments of Agriculture and Interior. The National Park Service was one of the bureaus designated to receive enrollees under the Interior allotment.

FDR had conceived the C. C. C. as a conservation army doing the simplest type of manual labor. To the several bureaus who would administer the field work, however, the C. C. C. represented an opportunity for accomplishing much more than simple tree planting or gully filling. The NPS, in particular, was quick to sense these potentials. Several days after FDR's first announcement of the C. C. C. program, a selection of officials from the various departments and bureaus involved collected at the Interior building to hear Rex Tugwell explain the President's new program. After Tugwell introduced the simple manual labor concept of the C. C. C., NPS Landscape Architect Charles Peterson pointed out that all such work in the national parks and monuments would be done under
the control of landscape architects and suggested that the other bureaus using C.C.C. crews do the same.[3] Thus the landscape professionals of the NPS made it clear from the beginning that emergency park development would go forward under the same standards that had controlled previous work.

The first C.C.C. camp opened in Virginia in mid-April, 1933, under the supervision of the Forest Service. The first camp in a western national park opened at Sequoia on May 15, when 25 enrollees and an army officer set up camp at Potwisha.[4] This and similar programs in the other parks grew rapidly. By middle summer 70 C.C.C. camps were operating in the national parks and monuments.[5]

Although the field landscape architects were deeply involved in the C.C.C. program in the parks, the C.C.C. did not at first participate fully in all parts of the landscape program. Specifically, the C.C.C. was not a major constructor of rustic buildings in its early phase. The skills required in rustic construction were thought to be too complex for efficient execution by young and generally unskilled enrollees. Another factor which prevented the early C.C.C. from undertaking major structural projects was an administrative dictum that structures erected by the C.C.C. could not cost more than $1,500.[6]

The contribution of the early C.C.C. to park development was not negated by these limitations, however. In the western parks thousands of enrollees labored on road and trail work. As organization improved and available skills were better identified, small structural projects were initiated. During the first summer, these consisted mainly of small, wood frame buildings of simple design. Many of these were intended for C.C.C. temporary use; a few were permanent NPS structures. Generally the permanent park buildings were not intended for public view and use and were not highly stylized. Designed by the Landscape Division these maintenance sheds, barns, and cabins were usually non-intrusive only in that they displayed rough-sawned wood exteriors and were finished in various tones of brown or gray.

The creation of the Public Works Administration in June, 1933, temporarily diverted those interests that might have attempted to remodel the early C.C.C. into a major park development program. Created as a part of the National Industrial Recovery Act, the P.W.A. was charged with broad responsibilities including the awarding of grants to various Federal agencies for the construction of roads, water and sewer systems, buildings, and other physical improvements.[7] The object of the P.W.A. was to stimulate
both industrial production and the employment of skilled labor with the ultimate goal that of rehabilitating the general economy. Roosevelt instructed the administrator of the new agency to proceed with all possible haste in the allocation of grants. In response, the P.W.A. turned to several Federal agencies which habitually prepared plans well in advance of actual construction opportunities. When the P.W.A. invited project proposals in June, 1933, the NPS forwarded major portions of each park's six year master plan to the new agency. In response, on July 21, the first P.W.A. building allotments included 106 major building projects in the western national parks and monuments. The September, 1933 allotments authorized 58 additional projects in the same areas.[8]

The structures erected in the western parks with funds granted in the July and September, 1933 P.W.A. allotments represent a significant chapter in the history of national park building design and construction. Although the 164 allotments included funds for such unspectacular projects as equipment sheds, garages, and campground layouts, the allotments also funded over 150 permanent structures. Designed mainly as a part of the master plan process prior to the creation of the P.W.A., these buildings were products of the design staff Vint had assembled since 1927. Stylistically, the buildings of the July and September allotments were a diverse lot, varying widely in design style and emphasis. To a high degree, however, they followed the definition of non-intrusive design that had matured under the direction of Tom Vint.

Vint's definition required that each structure be individually designed for its specific site. A road checking station located at the Desert View entrance of Grand Canyon National Park, for example, required several specific design adaptations. The building needed to harmonize with its immediate natural setting, with other buildings in the vicinity, and with the general architectural themes utilized by the NPS at the nearby South Rim area. Previous public buildings at the Grand Canyon had utilized large logs and/or native stone. Some had displayed distinctly Indian features while others incorporated gable roofs and alpine details. To complicate the issue further, the Desert View site contained environmental elements not present at the main South Rim area, including a distinctly different vegetative cover. The presence near the entrance of M. E. J. Colter's Desert View Watch Tower, a round concessioner-built masonry tower loosely modeled after prehistoric Indian structures, also was a design factor.

As advanced by Vint's shop, the design solution to this difficult situation was a gable-roofed, stone structure. The pueblo Indian motif was apparently rejected because such a building at Desert
Desert View Checking Station, Grand Canyon National Park, photo circa 1948.
View would not share a sufficient design unity with the more alpine NPS structures at South Rim. On the other hand the lack of alpine forest trees at Desert View made alpine features equally out of character, so the roof rafters, brackets, and window trim were boldly scaled rough-sawned timbers. The stone walls gave it a superficial similarity with nearby pueblo style structures while the gable roof tied it stylistically to the administrative and residential buildings at South Rim. The Desert View entrance station was clearly a compromise dictated by a complex series of factors.

The September allotment contained monies for the construction of ranger station and barn/garage at Toroweap in the newly established Grand Canyon National Monument. Here the design requirements were completely localized. Toroweap was so far removed from the NPS developments at neighboring Grand Canyon National Park that there was no need to seek unifying themes. Moreover, Toroweap, located north of the Colorado River on what is known as the Arizona Strip, was in an area which contained cultural values and themes foreign to the South Rim. The Arizona Strip had been settled by Mormon pioneers coming south out of Utah. Following the precedent set a decade earlier at Zion National Park, the Toroweap Ranger Station probably took its inspiration from the pioneer masonry of the Mormon frontier. The Mormons had turned to masonry as a logical building material in their arid domain. Stone was readily available and provided good insulation against the extremes of the region’s harsh desert climate. The same advantages held at Toroweap. The residence also contained design features outside the Mormon tradition, especially the low, ranch style profile. In this case Vint’s concepts of visual non-intrusiveness overruled the historic style. In sum, the Toroweap house was a solid, well insulated masonry structure incorporating a low visual profile and some local cultural content in its attempt to be non-intrusive. Like many park buildings of its time, it was characterized by pains-taking craftsmanship both in its masonry and wood work.

In many parks the master plans called for further development at sites where initial improvements had already been made. In such situations architectural themes were established, and the design problem became one of adapting existing themes to fill necessary functions. The Naturalist’s Residence at Casa Grande National Monument is a good example. An architectural theme for Casa Grande had been developed in 1931 when the administration building and superintendent’s residence were erected. (See Chapter IV) The master plan called for additional facilities in the same style. The July, 1933 allotment contained funds for the construction of a naturalist’s residence that was a part of the six year plan. The new residence was similar to the superintendent’s residence but smaller by one bedroom. Like its predecessor, the new structure was a one story adobe in the southwestern style.
Toroweap (Tuweap) Ranger Station, 1934, Grand Canyon National Monument, photo circa 1948.
Ideally each park building was individually designed for its site. In practice, this was not always possible. The July, 1933 allotment, for example, contained funds for the construction of a naturalist's residence at Manzanita Lake in Lassen Volcanic National Park. This area, which had not been added to Lassen until 1929, was lightly developed. The only major structure built in the area since its addition to the park was the Manzanita Lake Lodge which had been built in 1933 by two former park rangers, who had gone into business. Don Hummel and Charles Keathley seem to have been influenced in their design by Landscape architect Merel Sager's work at nearby Crater Lake National Park. Their lodge, designed by Eldridge T. Spencer of San Francisco, strongly resembled the residences Sager had constructed in the headquarters area of Crater Lake in 1932.

With this borrowed theme already in place, it was logical for Sager to turn to his Crater Lake designs for the P.W.A.-financed Manzanita Lake naturalist's residence. As built, the Lassen residence was an almost exact copy of the Crater Lake naturalist's residence of 1932. The transfer of design from one locale to another was relatively successful because both settings were alpine, volcanic environments.

Not all the P.W.A. buildings of 1933-1934 were as highly stylized as those at Lassen Volcanic or Casa Grande. A dormitory built at Lodgepole in Sequoia National Park, for example, is stylistically much less extreme than the Manzanita Lake residence. From a design standpoint the two sites shared a number of environmental factors; both were in conifer forests; both were rocky; both were areas that lacked cultural themes that could easily be adapted for larger buildings. The most important difference between the two was that the Lodgepole dorm was well away from public view, located on the end of a service road that passed through a maintenance area. This factor lessened the importance of extreme rustic styling on the site. Nevertheless, the dormitory was carefully designed to harmonize with its natural setting. A steeply pitched roof enclosed the second story, providing protection against heavy snows and giving the building a conifer-like profile when viewed from the side. Rough-sawed lap siding covered the exterior. The general impression was faintly Swiss. While these simple devices were several degrees removed from the rustic style of the Lassen residence, they were sufficient for the site. Interestingly enough the simpler design of the Lodgepole dorm was not less expensive than the highly stylized Lassen residence. The final bookkeeping sheets for the 1933-1934 P.W.A. accounts show that the Manzanita Lake residence cost $3.15 per square foot while the Lodgepole dorm cost $4.00 per square foot. [9]
Manzanita Lake Naturalist's Residence, 1934
Lassen Volcanic National Park, 1934 photo.
Lodgepole Dormitory, 1934, Sequoia National Park, photo circa 1936.
More akin to the Manzanita Lake residence in its high visibility and thoroughly rustic style was the "Stockade" at Yakima Park (Sunrise), Mount Rainier National Park. Sometimes titled an "administration building," the stockade actually was designed to serve as a ranger station and dormitory. Environmental harmony was sought through the implementation of both cultural and natural themes. In appearance the two story log structure was patterned after a pioneer blockhouse. The building sought natural harmony through the structural use of logs closely proportioned to the standing timber in the vicinity and native stone. The hipped roof added a non-intrusive profile. In its simplicity and symmetry the stockade resembled the clearly visible mountain that gave the park its name.

The P.W.A. allotments of July and September, 1933 were particularly generous with Yosemite National Park. This generosity was probably a response to the intensive planning effort initiated in the park by Mather and Albright. Both wanted to make Yosemite a showplace of national park values. Design problems in Yosemite were influenced by a large number of factors including the wide variety of natural environments within the park, the large distances between some of the developed areas, and the stylistic disparity of the existing structures. Laboring under these divergent influences, resident landscape architect John Wosky realized the impossibility of developing a single architectural theme appropriate to the whole park.

The July, 1933 allotment contained funds for the development of facilities at Chinquapin. Wosky's ranger station and comfort station designs for the site developed a cultural theme unknown in the other mountainous parks of the West. The two structures were simple frame buildings with lap siding and gable roofs. The simplicity of the box-like, white painted buildings was reminiscent of colonial New England. Actually Wosky was responding to the nineteenth century building tradition of Yosemite. Many of the region's tourist structures, including the Sentinel and Wawona Hotels, were distinctly reminiscent of earlier East Coast architecture. At Chinquapin, located on the road between the Sentinel and Wawona Hotels, Wosky chose to emphasize the history of the Yosemite region.[10]

Several other buildings constructed in Yosemite during 1933-1934 with P.W.A. funds exhibit much less cultural content in their attempts to harmonize with their environments. The Merced Grove Ranger Station, located in the midst of a towering grove of giant sequoias, was a traditional, if highly stylized log cabin. Using logs scaled to the surrounding forest, the cabin sought
Chinquapin Ranger Residence, 1934, Yosemite National Park, 1934 photo.
Merced Grove Ranger Station, 1934, Yosemite National Park, 1934 photo.
oneness with its environment through the use of native materials. In his Tuolumne Meadows Campground comfort stations, Wosky again developed a non-cultural theme emphasizing native materials. Responding to the alpine environment and to the nearby Tioga Pass station erected several years previously, Wosky chose a heavy masonry design for the facilities. Adapting a plan used two years earlier at another site in the park, Wosky gave maximum emphasis to the horizontal nature of the massive granite buildings. Jerkinhead roofs and battered walls added to the almost geological character of the structures. Viewed from a short distance, each comfort station appeared similar in color and shape to the alpine skyline of Sierran peaks.

Despite the large scale of the P. W. A. program in the national parks in 1933-1934, pressure continued from many field personnel to take advantage of the structural development potential of the C. C. C. The response of the NPS landscape architects and the C. C. C. administrative staff varied considerably in different parks. In Sequoia, C. C. C. crews were undertaking building projects before the end of the summer of 1933. Carefully supervised by the resident landscape architect and his C. C. C. assistants, the enrollees built several acceptable structures including a patrol cabin at Hidden Springs and a residence at Atwell's Mill. This latter structure was not particularly rustic, but its complexity and size demonstrated that C. C. C. crews could build well if properly supervised. The success of the Atwell's Mill project led to the construction during the following year by C. C. C labor of the Hockett Meadow Ranger Station in Sequoia. Located in an alpine meadow surrounded by dense stands of Lodgepole pine and red fir, the Hockett station was a well-executed log cabin. Sensitive styled to be formal yet not objectionable in a wilderness setting, the structure rested on a rustic foundation of native granite and was topped with a staggered shingle roof. The log work in the porch supports and rail was especially successful. An adjacent tack room shared the same architectural themes. Despite misgivings expressed by resident landscape architect Thomas Carpenter in his 1934 report about the suitability of using C. C. C. enrollees in permanent building construction, the Sequoia staff continued to use enrollees in this manner. Several excellent rustic structures resulted in the following years.

Glacier National Park, to present another example, followed a similar pattern. During the summer of 1933, the Glacier C. C. C. was used as conceived, that is almost entirely for landscape improvement and cleanup. During 1934, however, the park staff began to experiment with the use of C. C. C. crews in small building construction. Landscape architect E. A. Davidson objected to this
Tuolumne Meadows Campground Comfort Station, 1934, Yosemite National Park, photo circa 1948.
Hockett Meadow Ranger Station, 1934, Sequoia National Park, photo circa 1938.
use and recommended that the park staff wait for regular appropriations or P.W.A. grants to meet their facility needs. Need overrode patience, however, and after 1934 the C.C.C. played a major role in building construction at Glacier.

C.C.C. crews played a major role in the rustic building program in the eastern parks. Prince William Forest Park and Catoctin Park of the National Capital Parks system as well as Shenandoah National Park and the Blue Ridge Parkway were the scene of much C.C.C. building activity.

The C.C.C. continued to erect structures in the national parks into 1942, when the program was abolished. These structures, however, represent only a small portion of the building construction effort of the Corps. Other Federal bureaus made extensive use of the enrollees for construction purposes. The E.C.W. Act of 1933 also authorized the President to use C.C.C. crews on state and municipal lands, and this became a major part of the E.C.W. program. FDR had sought this authority for the purpose of encouraging and assisting the development of state and county park systems. In April 1933, when existing agencies had been assigned responsibility for various portions of the new program, the NPS was designated to supervise those projects undertaken in various state, county, and metropolitan recreation areas. This responsibility was not placed under Tom Vint, but rather under the Branch of Planning supervised by Conrad Wirth. Within a matter of months the state park assistance program had grown to the point where it was designated as a separate "State Park Division," under supervisor Herbert Evison. The growth of the program continued and the State Park Division was soon regionalized.

From the beginning, the state park assistance staff looked to the work of Vint and his staff as a model. Wherever possible the E.C.W. regional offices of the State Park Division were staffed with professionals who had previous national park experience. For example, Herbert Maier, his work for the American Association of Museums ended by hard times, was appointed Regional Officer for the NPS state park office in Denver (soon moved to Oklahoma City). For the next several years the state park buildings designed by that office often showed Maier's influence. Building on the work of the pre-1933 Landscape Division, the State Park Division designed thousands of rustic structures for parks scattered from Maine to California. Constructed outside the national park system and therefore outside the scope of this paper, the state park buildings were nevertheless one of the major culminations of the National Park Service rustic architecture movement.
The national park design requirements entailed in the P.W.A. and C.C.C. programs placed heavy demands on Vint and his staff. As a result the Landscape Division underwent a metamorphosis. When the first P.W.A. allotments were allocated to the National Park Service in July, 1933, Vint's "Branch of Plans and Design" (it had been renamed earlier that same year) consisted of 16 professional personnel. (See Chapter IV) In the following six months the architectural portion of the staff alone was augmented with seventeen new men. Eight architects were added August 1, 1933; one additional architect joined September 1, and seven architects, a structural engineer, and a mechanical engineer were added in December.[18] These men were all used in the Public Works program. The requirements of the C.C.C. projects added numerous landscape architects to the staff. By 1935 the Branch had 120 professional employees, and this total grew to 220 after some state park responsibilities were added in 1936.[19]

The rapid growth of the Branch placed inevitable strains on its organization. Perhaps the heaviest burden was the training and assimilation of these masses of newcomers. Before 1933 Vint had time to instruct each of his employees personally in the mysteries of park architecture. After 1933 this luxury disappeared. The buildings funded during the first two major P.W.A. allotments had already been designed or at least sketched prior to July, 1933. Working drawings could be completed by the new men without undue difficulty. Henceforth, however, the new staff members were faced with design responsibilities. Whenever possible pre-FDR veterans were placed so that they could exercise control over the new men, but the multiplicity of field projects made full control difficult. This situation was compounded by the demand for advice and assistance rising from the State Park Division.

Seeking a solution to its training problems, the NPS compiled a textbook of park architecture. Funded by the C.C.C. and edited by Albert H. Good of the State Park Division, Park Structures and Facilities was published by the Division of Planning in 1935. Divided into some twenty chapters addressing design problems as divergent as "Signs and Markers," "Concession Buildings," and "Shelters and Recreation Buildings," the 246 page volume was profusely illustrated with photographs and floor plans. In an introductory "Acknowledgement," Conrad Wirth, Chief of the Division of Planning, identified the specific need the volume intended to fill. Few of the design personnel hired under the E.C.W. and P.W.A. programs "had any very extensive experience in meeting the special demands of park structure design as applied to natural areas; nor did any (appropriate) volume...exist...."[20]
In the first chapter of Park Structures and Facilities, Good addressed the question of defining rustic architecture. The resulting essay summarized the design philosophy perfected by the Vint staff.

"Successfully handled, [rustic] is a style which, through the use of native materials in proper scale, and through the avoidance of rigid, straight lines, and over-sophistication, gives the feeling of having been executed by pioneer craftsmen with limited hand tools. It thus achieves sympathy with natural surroundings, and with the past."[21]

Then, after adding the basic point that individual park structures must always be subordinate to their natural settings and to the large park plan, Good proceeded to define the various concepts essential to a philosophy of non-intrusive park design. Buildings were to seek harmony with their physical setting through sensitive use of native and planted vegetation and through the incorporation of natural colors into the building's exterior. Such harmony could be significantly increased through foundations styled to appear as "rough rock footings" or natural outcrops. When appropriate, stone could be used for walls, and battered or buttressed walls presented a more natural appearance. The stones, logs, and other construction members must be carefully proportioned to the natural setting, that is natural materials should be similar in size to their natural correspondents. In mountainous areas, it was often necessary to overscale the members so as to more effectively harmonize with the massive nature of the landscape. Proper scaling and material use was not merely a matter of facade design, for park structures must be designed to be seen from all sides. Vertical emphasis was to be avoided, especially in the form of large, imposing roofs, whose smooth surfaces could demand attention to an unseemly degree. Simple use of local materials did not assure harmony with the environment, however. If the natural materials were too thoroughly processed or too unblemished in their appearance, the effect was lost. Logs with knots and whorls were superior to smooth, clean poles.

The use of rock was a particularly difficult problem. Boulders generally presented the appearance of instability when used in walls and usually were best avoided. Rectangular or irregular rocks were placed along their horizontal axis so as to resemble nature's bedding patterns. In larger walls the size of the stones should decrease as the wall rises. Regularity of rock size should be avoided; the variety of nature being preferrable to the regularity of man.
Roofs for rustic structures were another problem. They must avoid dominating the scene, yet at the same time match the often massive nature of walls and footings. Oversized verge members assisted in this problem as did the use of heavy shakes in place of shingles. As in the rest of the structure, irregular roof lines were generally preferable to the precision of straight lines.

Finally, while seeking harmony with the natural setting and with the past, rustic structures were to achieve thematic harmony with other buildings in the same park or vicinity. This concept was a part of the tenet of the time that attempted to make parks separate and distinct from the larger world.

Although altered and enlarged for the 1938 volume Park and Recreation Structures, Albert Good's introductory chapter in the 1935 text remains the definitive statement on rustic or non-intrusive architecture as practiced by the National Park Service prior to World War II. Like most definitive statements of style, it came near the end of its movement, for by 1935 the NPS rustic architecture program had entered its period of decline.
VI. The Decline: 1935-1942

The decline of National Park Service rustic architecture was a function of changing conditions. In the decade between 1925 and 1935, the NPS grew immensely, adding numerous field units and assuming new responsibilities. The professional staff was enlarged many times over. Total park visitation sky-rocketed. During this decade of rapid institutional growth, the Service attempted to implement on a large scale its internally conceived philosophy of park architecture. Even with the assistance of the C.C.C. and P.W.A. programs, however, it did not prove possible to "catch-up" with the demand for park facilities. After 1935, as the emergency "alphabet programs" were reduced, an awareness emerged within the NPS that park architecture might have to change to meet these challenges. Ultimately that change included the abandonment of the several rustic styles.

The decline of the C.C.C. and W.P.A. programs was real. In terms of actual expenditures both peaked during the 1935 fiscal year. The P.W.A. program in the parks that year included many of the projects funded in the two large allotments of 1933. Later P.W.A. allotments were generally small, and although the program continued to provide funds to the National Park Service until the beginning of World War II, it ceased after 1935 to be the predominant force in the park development program. The decline of the C.C.C. was less abrupt. The peak of activity reached during the 1935 fiscal year was only slowly reduced. As late as 1941 there were still nearly as many C.C.C. camps in the national parks as there had been in 1934. The number of enrollees dropped considerably, however, and this led to a decline in camp productivity. The number of state park C.C.C camps under NPS supervision was reduced steadily after 1935. By 1938 there were only half as many state park camps active as there had been in 1936.

To a certain extent the decline of the emergency programs in the national parks was counteracted by a rise in the level of regular appropriations. The regular NPS budget had first peaked in 1932 at a level of about $12,000,000. In 1933 and 1934 it had been reduced to near $10,000,000, but the emergency programs had more than made up the difference. In 1935 the level of regular appropriations rose again to match that of 1932. During the next four fiscal years the Park Service budget rose steadily, finally reaching a pre-war peak of almost $27,000,000 in 1939. The enlargement of the regular appropriations took some of the sting out of the decline of the C.C.C. and P.W.A., but the loss in total park support was real and apparent.
After the end of the 1939 fiscal year, funding dropped rapidly and remained low for the duration of the Second World War. Throughout all these fluctuations park visitation grew. In 1935, the Service reported total park visitation of 6,337,206 persons; by 1941 that figure rose to 16,741,855.[1] The composite effect of the lessening of development funds and the steady rise in park visitation was to place considerable pressure on the NPS to achieve greater efficiency. One response to this pressure for efficiency was the NPS reorganization of 1937. Following the successful model of the E.C.W. State Park Division, the entire NPS was regionalized into four parallel geographical units. Thomas Vint and the heart of his Branch of Plans and Design staff were moved to Washington, D.C. Portions of Vint's staff were also distributed among the regional offices. The resident landscape architects were left in the parks. The general effect was to decrease the centralization of the Branch and to make it more susceptible to external architectural influence.

The enormous increase in the size of the professional landscape and architectural staffs between 1933 and 1936 had also tended to make the NPS architectural staff more aware of "modern" architecture. The numerous young professionals added to the Service between 1933 and 1936 brought with them architectural philosophies that had matured in the period following the first World War. These new concepts, which included the "International Style," emphasized a philosophy of simplicity and structural honesty. The new architectural ideas were also in line with changing economic conditions and new building materials. Generally, they were based on a rejection of the romanticism basic to NPS rustic architecture.

Vint and his associates recognized that the barriers separating NPS architecture from that going on "outside" were falling. Park Structures and Facilities had been a response to that problem. In 1938 a greatly enlarged text, entitled Park and Recreation Structures, was published by the NPS. It summarized the successes attained in park design under the P.W.A. and C.C.C. programs and pointed the way to yet higher levels of achievement. Actually the volume would come closer to being an epitaph for the rustic movement.

When viewed in relation to the accelerating park facility needs of the late 1930s, NPS rustic architecture had distinct and growing disadvantages. It required large amounts of labor, not only in the form of skilled and unskilled workmen, but also in the form of highly trained professionals. Effective use of masonry and logs required frequent inspection during construction to gain good results. Moreover, once a rustic structure was completed, its maintenance
was often a problem. Custom hardware, pole rafters, hand-split shakes, and log trim were hard to replace when damaged. Such problems were often beyond the capabilities of small park maintenance staffs.

Subject to rising visitor facility demand, decreased development funding, and increased outside influence, it is not surprising that the NPS building program of the last years of the Depression was characterized by uneven quality and diversity. Seeking to limit design costs, the Branch of Plans and Design turned more frequently to copying previous designs. The well-executed log ranger station at Redwood Meadow in Sequoia National Park (built in 1938-1939) is nearly identical to the earlier Hockett Meadow Ranger Station in the same park and to the Horseshoe Lake Ranger Station at Lassen Volcanic. A ranger station erected in the Many Glaciers section of Glacier National Park during the summer of 1938 shared its chalet appearance with earlier NPS and concessioner structures.

Especially in the case of residences and utility buildings, increased emphasis on efficiency and functionalism was visible. Fewer examples of "exaggerated rustic" were appearing. Many NPS residences built in the late 1930s made only minor concessions to their immediate settings. Quite often these were rather unexceptional wood-frame houses incorporating rustic siding and stone veneer foundations. Generally comfortable and well built, these late 1930s residences are present in many western parks.

The loss of creative impulse among the landscape architects and architects was far from universal. Especially at sites where there had been little previous development, some interesting design work was accomplished. The Painted Desert Inn at the northern end of Petrified Forest National Monument was constructed in the late 1930s around an earlier structure. A rambling 28-room Indian pueblo, the Inn was handcrafted by C.C.C. crews working with P.W.A. funds (a rare combination). A roadside ranger residence built at Emigrant Junction, Death Valley National Monument, in 1941-1942 made good use of stone in its masonry exterior. Two ski huts, one at Pear Lake in Sequoia and the other at Ostrander Lake in Yosemite, both built in 1940-1941, also made superior use of local stone. The Pear Lake shelter was one of the most environmentally successful alpine structures ever designed by the NPS. It was built with C.C.C. labor.

If the Pear Lake shelter represents the traditional outlook as practised in 1940, several buildings designed for the new Kings Canyon National Park in that same year document alternative options.
Many Glaciers Ranger Residence, 1938, Glacier National Park, 1938 photo.
Pear Lake Ski Hut, 1940-41, Sequoia National Park, 1976 photo.
In the spring of 1940 General Grant National Park was merged with the new and much larger Kings Canyon National Park. The General Grant area had never been adequately developed, and the merger placed additional visitor pressure on it. In response the NPS secured a P.W.A. allotment for facilities development at Grant Grove. Staff housing in the area was particularly poor so three residences were built with the P.W.A. funds. Two of these were located in Grant Grove proper while the third was placed at nearby Redwood Saddle.

Residence number 117 at Grant Grove was designed by Cecil Doty. Doty had just been transferred from the Santa Fe regional office of the Service. Earlier he had worked for Herbert Maier in the Oklahoma City E.C.W. office. Several of Doty's rustic designs were featured in Park and Recreation Facilities. In the 117 residence, Doty rejected his rustic training, seeking instead to achieve simplicity and efficiency. In nearly every respect the rectangular, gable roofed house was a model of functionalism. Its severe simplicity extended even to the point of omitting overhanging eaves from the roof line. The only design concessions to the setting were the use of wooden exterior textures (rustic siding and shingles) and a stone veneer on the chimney and foundation. The veneer was never completed.

The Redwood Saddle residence was also part of the 1940-1941 P.W.A. program in the Grant Grove Section of Kings Canyon National Park. It shared many design features with the two smaller residences built at the same time in Grant Grove proper, but it was a much more complex undertaking. The residence was sited on a steep hillside so that a portion of the understory could be developed into rooms. The upper portion of the structure was quite simple. Overhanging eaves were omitted and the emphasis was on verticality. Board and batten emphasized the height of the tall gable housing the living room. Large windows set into the gable face did nothing to lessen the impression. A low-roofed porch on the uphill side added a ranch house touch while a stone chimney and stone veneer around the exposed portion of the understory granted some minimal harmony with the immediate setting. It was the type of house Americans would build in large numbers after the end of World War II. In 1941 at Redwood Saddle it symbolized the end of the rustic architecture movement in the national parks.

Confirmation that the Redwood Saddle house was in the contemporary mainstream of park architectural design is found in an article published in the 1940 edition of the Department of the Interior annual publication, Park and Recreation Progress. Published by the National Park Service during the latter years of the Depression, this journal provided "a
Residence #117, 1940, Kings Canyon National Park, photo circa 1948.
Redwood Saddle Ranger Residence, 1940, Kings Canyon National Park, 1975 photo.
forum for the expression of progressive thought on parks and recreation conservation...."[3] Within the text of "Architecture and its Relationship to the Design of Parks" landscape architect and author George Nason explored several aspects of the relationship between park development and park building design. The reader did not have to go far into the text before the author's views on rustic architecture became clear.

"Rude buildings are an affectation. They can only be produced by an effort so deliberate and self-conscious that they lay the designer open to the charge of sophistication. They are not a protest against over-elaboration but an elaborate protest against progress in architecture."[4]

Nason returned to the theme a paragraph later.

"The glorified pioneer structures of today are a species of tawdry circus showmanship, not examples of simple honesty. They are designed to awe rather than usefully charm."[5]

As to positive architectural virtues, Nason suggested that "simplicity and restraint are cardinal virtues in parks."[6] He admitted that buildings could look well when constructed of indigenous materials, but warned that such materials could be misused. His recommendation was that NPS architecture should come to grips with contemporary architectural progress and strive toward "well conceived, well built, modern buildings...."[7] The Redwood Saddle residence met Nason's prescription.

Nason and his followers were not advocating a rejection of non-intrusive design in the parks. They were, however, redefining that concept. Henceforth, they believed, harmony with nature could best be achieved through modest functional design. It was a case of modern realism versus romanticism.

In basic terms the new philosophies expressed by Nason and others replaced those that Vint had perfected in the 1920s. Despite the two textbooks it had proved impossible to indoctrinate the large numbers of professionals added to the Service between 1933 and 1936 into the intricacies of NPS rustic styling. The rise in park visitation placed additional pressure on the park designers, especially when the levels of funding declined in the late 1930s. As a result, simplicity of design and efficiency became not only the philosophy of the outside architectural world, but also a NPS budgetary requirement.

Rustic architecture did not die easily. During its years of ascendency it had gained many adherents. Newton Drury, NPS Director from 1940
to 1951, was one. More than a decade after his retirement he would recall that one of the pleasures he enjoyed as Director "was knocking many a plan which called for these contemporary designs that have since blossomed forth."[8] Drury's opportunities for encouraging rustic architecture were limited, however, for during and after the war the NPS labored under a severely limited budget. Not until the mid-1950s did the NPS finally obtain sufficient funding to allow the resumption of park development on a significant scale. In the meantime, the demand for park facilities continued to balloon. The "Mission 66" building program, which began in the middle 1950s, reflected the utilitarian outlook that had emerged among park designers in the last years before the war. Rustic-trained NPS veterans like Merel Sager and William Carnes supervised much of the Mission 66 program, but the press of visitor need did not allow much opportunity to work toward old goals. Occasionally, when a structure was to be added to an area where pre-war rustic structures predominated, attempts were made to erect new rustic structures. Generally, these attempts were unsuccessful, a result of labor and cost factors. Intensive labor projects had become uneconomical, and even when they could be afforded, stone masons and log builders were difficult to find.

The few post-war attempts at NPS rustic construction were unsuccessful because rustic architecture was specifically adapted to the pre-war world. The successful implementation of the NPS rustic architecture philosophy had been possible only in a park system of limited size and scope. An architectural philosophy which called for high levels of design input from a small staff of specially trained professionals was difficult to implement on a larger scale. At best, this problem was only partially overcome during the early period. Later it became insurmountable. NPS rustic architecture was also specifically adapted to the pre-war situation in its intensive use of professional, skilled, and unskilled labor. This intensive labor use was becoming uneconomical by the late 1930s. Hence the economical coefficients of NPS rustic were such that it was not able to fulfill the rising demand for park facilities.

Nevertheless, NPS rustic architecture earned for itself a secure place in the history of modern American architecture. It was an expression of the romanticism of pioneer America. Like the parks themselves, it may have been a reaction to the closing of the frontier. For two decades rustic provided an alternative to the increasingly functional trends of twentieth century urban architecture.

Rustic architecture was integral to the since-abandoned philosophy that national parks were distinct entities, separate from the rest of the nation. Stephen Mather formulated this policy, which was
intended to remove the management of the parks from the realm of politics and traditional land management attitudes. Although the parks were actually an experiment in a radically new form of land use, Mather purposefully created for them a conservative, "all-American" image. The "pioneer" aspects of rustic architecture were a part of this process.

Rustic architecture achieved its goals. It allowed the development of necessary park facilities without needless disruption of the natural scene. It facilitated the separation of the parks from the rest of the world, allowing them to become reserves governed by well-obeyed rules far different from those typical of the non-park situation. It assisted in the formulation of a conservative image for the parks, an image that for better or worse still dominates the public's park expectations to much larger degree than is generally appreciated. At its best, rustic architecture produced buildings of rare and distinctive beauty. A unique expression of twentieth century American architectural thought, the pre-1942 rustic buildings of the National Park Service are a priceless heritage, to be treasured and conserved.
FOOTNOTES

Introduction:

3. Ibid., 7.

Chapter I:

8. Ibid., 4.
9. Ibid., 7.

Chapter II:

1. Shankland, 52.
4. Ibid., 119.
5. Ibid., 120.

Chapter III:

3. Ibid., 170.
4. Charles Sumner, designer of the Ranger's Club, was originally named Charles Sumner Kaiser, but he dropped the last part during World War I.
6. Ibid., 275.
7. Ibid., 276.
8. Ibid., 73.
10. Ibid., 55.
11. Albright Letter.

Chapter IV:

2. Interview, Charles Peterson by Laura Soulliere (1933), September 15, 1976.
3. Wosky Interview.
6. Sager Interview.
7. Carnes Interview.
11. Wosky Interview; Baker Interview.
15. Sager Interview.

Chapter V:

1. During his first year in office, President Roosevelt also transferred numerous National Monuments and Battlefields to the NPS from the Departments of War and Agriculture, as well as assigning the agency responsibility for the operation of numerous Federal office buildings.
3. Peterson Interview.

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8. Ibid., 2-6.
9. Ibid., sheet 2.
10. Wosky Interview. Wosky's Chinquapin designs were strikingly similar to contemporary historic reconstructions then underway at Williamsburg, Virginia.
17. The Palo Duro Canyon State Park (Texas) building pictured on page 101 of Park Structures and Facilities certainly shows Maier's influence. Compare it to the Yavapai Museum at the Grand Canyon.
19. A Brief History of the National Park Service, 2.
21. Ibid., 3-4.

Chapter VI:

4. Ibid., 57.
5. Ibid.
6. Ibid.
7. Ibid.
8. H. C. Bryant and N. B. Drury, Development of the Naturalist's Program in the National Park Service (transcript of interview by Amelia Fry, University of California at Berkeley Cultural History Project, Bancroft Library, 1964), 45.
Sherman Oaks, California.
Bryant, Harold C. and Newton B. Drury, Development of the Naturalist's Program in the National Park Service, transcript of interview by Amelia Fry, University of California at Berkeley Cultural History Project, 1964.
Carnes, William, Interview by William Tweed, August 31, 1976.
Doty, Cecil, Letter to Laura E. Soulliere, August, 1976, Walnut Creek, California.
Great Northern Railway, "Glacier National Park, Hotels and Tours," promotional pamphlet, circa 1915.
Judd, Hank, Interview by Laura Soulliere and William Tweed, September 14, 1976.
——, Personnel file, Herbert Maier.
——, Personnel file, Thomas C. Vint.
——, Branch of Plans and Design, Landscape architect's field reports, unpublished manuscripts in Federal Records Center, San Bruno, California. The following files were consulted:
    - Crater Lake National Park, FRC Box 306854
    - General Grant National Park, FRC Box 306854
    - Glacier National Park, FRC Box 306854
    - Lassen Volcanic National Park, FRC Box 306849
    - Mount Rainier National Park, FRC Box 306849
    - Sequoia National Park, FRC Box 306849
    - Yosemite National Park, FRC Box 306849
Peterson, Charles E., Interview by Laura Soulliere, September 15, 1976.
APPENDIX A

PERSONNEL OF THE BRANCH OF PLANS AND DESIGN,
WESTERN DIVISION, July 1933

Thomas C. Vint
Chief Architect

(Office Personnel)

Thomas Carpenter
A. Paul Brown
Herbert A. Kreinkamp
Edward A. Nickel
William G. Carnes
William Bigler

Landscape Architect
Assistant Landscape Architect
Assistant Landscape Architect
Associate Structural Engineer
Junior Landscape Architect
Junior Landscape Architect

(Field Personnel)

Ernest A. Davidson
John B. Wosky
Merel S. Sager
Harry Langley
Kenneth C. McCarter
Charles A. Richey
Frank E. Mattson
Howard W. Baker
Harlan B. Stephenson

Associate Landscape Architect
Assistant Landscape Architect
Assistant Landscape Architect
Assistant Landscape Architect
Assistant Landscape Architect
Junior Landscape Architect
Junior Landscape Architect
Junior Landscape Architect
Junior Landscape Architect

"In the above group, under the classification of office personnel, three were architectural, although holding positions of a different title, namely, A. Paul Brown, Herbert A. Kreinkamp and Edward A. Nickel."

(From "Report on the Building Program From Allotments of the Public Works Administration, 1933-1937," by Edward A. Nickel, an unpublished manuscript in the Department of the Interior Library, Washington, D.C.)
APPENDIX B

NATIONAL PARK SERVICE LANDSCAPE ARCHITECT
FIELD ASSIGNMENTS CIRCA 1931

E. A. Davidson: Mount Rainier, Glacier, and the Alaska areas.

Merel Sager: Crater Lake, Lassen Volcanic, General Grant, and Sequoia. (When Thomas Carpenter was assigned Sequoia and General Grant, Sager took charge of work in Hawaii.)

John Wosky: Yosemite and nearby smaller areas.

Charles Peterson: Southwestern parks and monuments. (Peterson transferred east in 1931 and was replaced in the Southwestern areas by Charles Richey.)

Harry Langley: Utah areas and Grand Canyon.

Kenneth McCarter: Yellowstone, Grand Teton, and Craters of the Moon.

Howard Baker: Rocky Mountain, and smaller areas in Wyoming, Nebraska and South Dakota.
APPENDIX C

RUSTIC STRUCTURES IN WESTERN REGION, NATIONAL PARK SERVICE, WHICH APPEAR TO QUALIFY FOR NATIONAL REGISTER OF HISTORIC PLACES

(From Western Region List of Classified Structures, 1976)

I. NPS Owned Buildings:

CASA GRANDE NATIONAL MONUMENT, ARIZONA
Oil House
Warehouse
Equipment Building
Shop Building

CHIRICAHUA NATIONAL MONUMENT, ARIZONA
Visitor Center
Residences B-2, B-3, B-4
Shop and Apartment B-5
Gas and Paint Storage Building
Garage and Equipment Building
Office and Laundry
Comfort Station B-10
Seasonal Quarters B-11
Geological Exhibit Building
Cap Magazine

DEATH VALLEY NATIONAL MONUMENT, CALIFORNIA
Old Administration Building
Texas Spring Campground Comfort Station

GRAND CANYON NATIONAL PARK, ARIZONA
Superintendent's Residence
Ranger's Dormitory
Operations Building
Yavapai Point Museum
Tusayan Museum
Old Post Office
Toroweap (Tuweap) Ranger Residence and Garage-Barn
Grand Canyon Lodge Complex
North Rim Residences 18, 92, 93, 121
North Rim Entrance Station, Gateway Residence and Garage
Trailside Shelters 141, 142, 143, 179
Fossil Fern Exhibit Case and Structure
Phantom Ranch Mule Shelter and Corral
North Rim Exhibit Shelter
HALEAKALA NATIONAL PARK, HAWAII
Observatory

HAWAII VOLCANOES NATIONAL PARK, HAWAII
Footprints Shelter
Hilina Pali Shelter

LASSEN VOLCANIC NATIONAL PARK, CALIFORNIA
Headquarters Service Station
Manzanita Lake Naturalist's Residence
Manzanita Lake Comfort Station
Northwest Entrance Kiosk and Residence
Horseshoe Lake Ranger Station
Mount Harkness Lookout and Pit Toilet

LAVA BEDS NATIONAL MONUMENT, CALIFORNIA
Superintendent's Residence
Gas Station

MONTEZUMA CASTLE NATIONAL MONUMENT, ARIZONA
Residences 4, 5

PETRIFIED FOREST NATIONAL PARK, ARIZONA
Residences 76, 77
Painted Desert Inn

PINNACLES NATIONAL MONUMENT, CALIFORNIA
Chief Ranger's Residence
Comfort Stations 17, 18
Fire Cache
Horse Barn
Visitors' Center

SAGUARO NATIONAL MONUMENT, ARIZONA
Comfort Station, Sus Picnic Area
Ramada and Comfort Station, Ez-Kim-In-Zin Picnic Area
Ramada and Comfort Station, Signal Hill Picnic Area
Ramada and Comfort Station, Mam-A-Gah Picnic Area
Comfort Station, Cam-Bah Picnic Area

SEQUOIA AND KINGS CANYON NATIONAL PARKS, CALIFORNIA
Residence 4, Ash Mountain
Giant Forest Village Ranger Residence
Cabin Creek Naturalist's Residence and Ranger Dormitory
Hockett Meadow Ranger Station and Tack Room
Redwood Meadow Ranger Station and Tack Room
Kern Canyon Ranger Station
Old Chief Ranger's Residence, Grant Grove
Old Superintendent's Residence, Grant Grove
TUMACACORI NATIONAL MONUMENT, ARIZONA
Museum
Residence 1
Comfort Station 4

TUZIGOOT NATIONAL MONUMENT, ARIZONA
Museum
Storage Building

YOSEMITE NATIONAL PARK, CALIFORNIA
Residences 1-14, 16-21, 34-37, 39-48, 54-63, 66-67, 70
Garages and Woodsheds 301, 313, 315
Administration Building
Old Museum
Post Office
Le Conte Lodge
Pohono Studio
Comfort Station 2104, Hetch Hetchy
Tuolumne Meadows Ranger Station, Visitor Center, Mess Hall,
three Comfort Stations
Tioga Pass Ranger Station and Comfort Station
Mariposa Grove Museum
Henness Ridge Lookout
Parsons Memorial Lodge

II. Buildings Owned by Concessioners:

GRAND CANYON NATIONAL PARK (Fred Harvey, Inc.)
El Tovar Hotel
Bright Angel Lodge
Lookout Studio
Hopi House
Desert View Watch Tower
Phantom Ranch
Hermit’s Rest

SEQUOIA AND KINGS CANYON NATIONAL PARKS (Government
Services, Inc.)
Giant Forest Lodge
Camp Kaweah
Giant Forest Village

YOSEMITE NATIONAL PARK (Yosemite National Park and Curry
Company)
Ahwahnee Hotel
Camp Curry
Yosemite Village
AUTHORS' NOTE:

Major research was initiated by W. C. T., L. E. S., and H. G. L. during spring and summer 1976. Subsequent research was done on Chapters I and IV by L. E. S., on Chapters II and III by W. C. T., and on Chapters V and VI by H. G. L. The Introduction and Chapters II through VI were written by W. C. T.; Chapter I was written by L. E. S.; plates were prepared by H. G. L.

W. C. T.
L. E. S.
H. G. L.