

The Merced Canyon Travel Corridor Yosemite National Park, California

A Determination of Eligibility For listing on The National Register of Historic Places

Prepared for:

Yosemite National Park
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Appendix A, B, and C and specific site location information were excluded from this document in keeping with the provisions of Section 304 of the National Historic Preservation Act, as amended through 1992.

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Thanks to you all!

S. Carpenter

INTRODUCTION

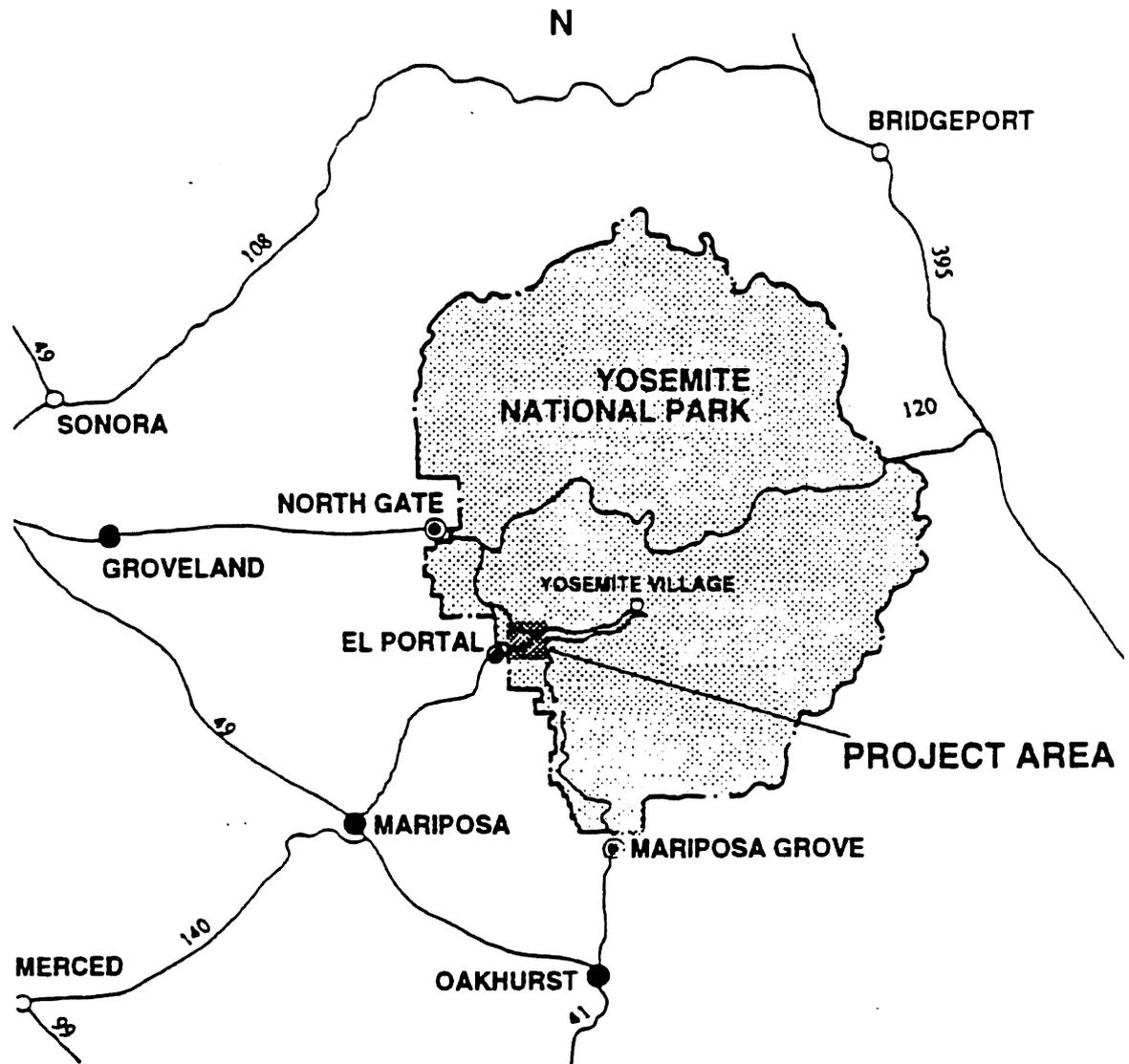
The El Portal Road, in Yosemite National Park, is one of the main entrances to Yosemite Valley (Fig. 1.). The existing roadway, carrying thousands of visitor vehicles each year, was constructed during the early 20th century. The route of the road follows earlier historic and prehistoric trail ways extending from the lower reaches of the Merced Canyon to Yosemite Valley. Hence, the property exhibits a long chronology of related development and use as a travel corridor along the Merced River canyon.

This report constitutes a determination of eligibility for listing the Merced Canyon Travel Corridor on the National Register of Historic Places (NRHP). The property, the Merced Canyon Travel Corridor, contains numerous cultural resources exemplifying several thousand years of utilization of the area by prehistoric and historic period peoples.

In January 1997, major flooding occurred along the Merced River causing extensive damage to the El Portal Road and related infrastructure and features. Similar high water events occurring almost every ten years since the road's completion in 1907. Subsequent to the floods of 1997, the National Park Service (NPS) initiated planning efforts to make improvements to the road. Such improvements are planned to lessen the effects of future flooding and construct a road structure safer for existing traffic.

Soon after the 1997 floods, cultural resources staff of Yosemite National Park embarked on a survey to locate and record all prehistoric and historic resources along the road corridor. Environmental documentation for emergency road repairs, an Environmental Assessment, and related supporting studies were prepared for Yosemite National Park by the VOLPE National Transportation Systems Center with contracted services provided by Science Applications International Corporation (SAIC).

Figure 1.
Regional Area



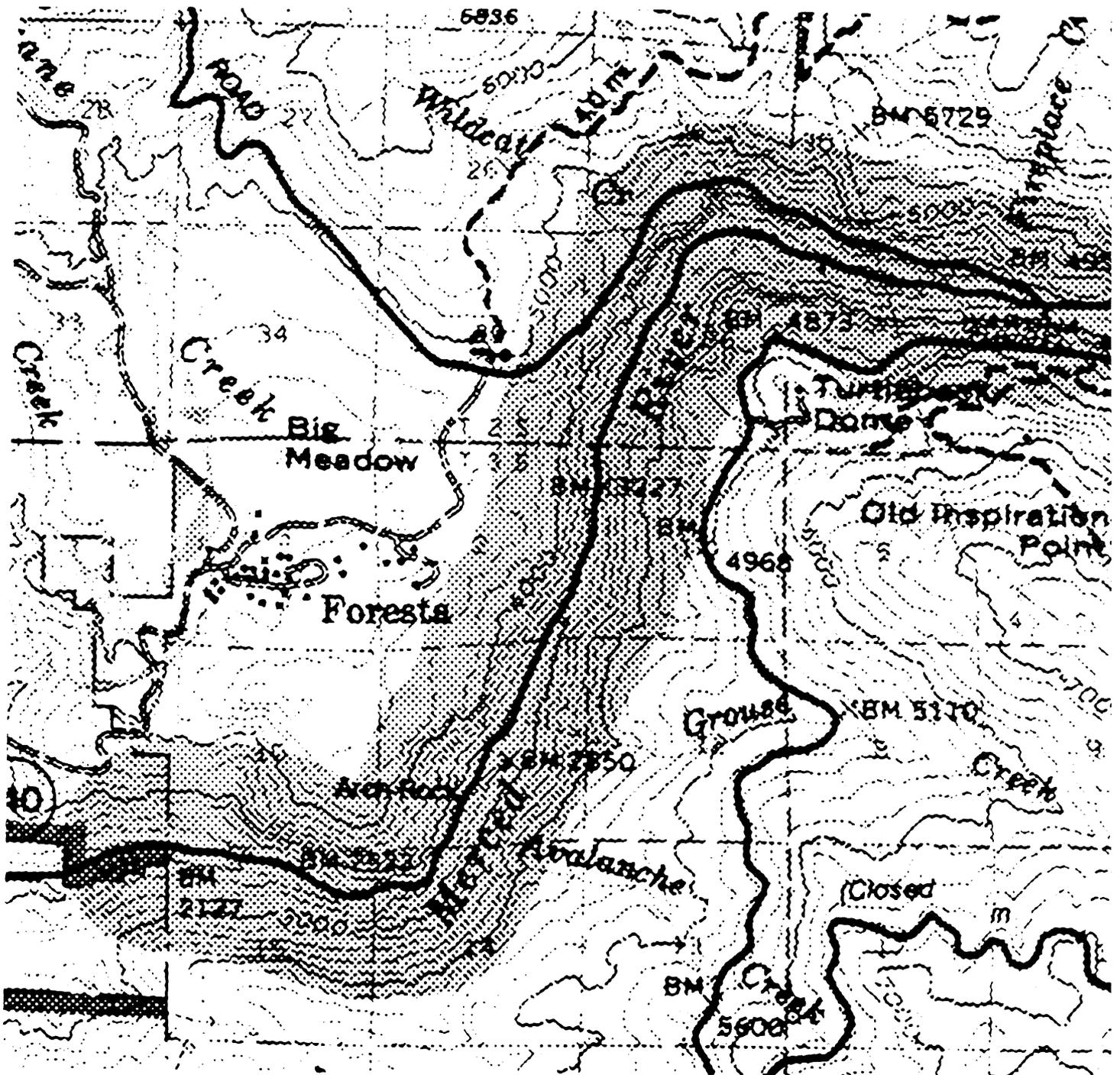


Fig. 2. Map showing project area for the Merced Canyon Travel Corridor

The Merced Canyon Travel Corridor area (Fig. 2.) contains 26 recorded historic period resources as well as four prehistoric/historic period Native American sites. These cultural resources include the El Portal Road, Yosemite hydroelectric plant, Civilian Conservation Corps (CCC) camp, NPS residences, and related sites and features (see Appendix A). Of these 30 cultural resources, 19 are considered as contributing elements of the property that is determined eligible. The other nine resources pertaining to the hydroelectric district (including the diversion dam, Park hydroelectric plant, related historic Park residences, and penstock structures) do not relate historically nor contribute to the cultural significance of the Merced Canyon Travel Corridor.

Compilation of information from historical documents and cultural resources field surveys led the NPS to pursue this determination of eligibility (DOE) for listing the Merced Canyon Travel Corridor on the National Register of Historic Places (NRHP), pursuant to the National Historic Preservation Act of 1966 (NHPA)(Public Law 89-665) and 36 CFR Part 60. The travel corridor is being considered eligible for listing on the NRHP, representing the continual use of the transportation route from the lower Merced River canyon at El Portal to Yosemite Valley. The basis of this determination is not on any singular historical or cultural significance of individual features or sites, but rather on the aggregate importance of the travel route utilized for at least 2,000 years of prehistory plus more than 120 years of the historic period of development of Yosemite National Park. In short, as prehistoric native peoples utilized the Merced Canyon area for resource procurement and travel from lower elevations to Yosemite Valley and the high country beyond, historic Anglo-Europeans utilized the same area for development and use of one of America's first and grandest National Parks.

This report summarizes the background material pertinent to the DOE. It includes sections on the description of the property, historical documentation, as well as an examination of the property based on the National Register Criteria for Evaluation (U.S. Department of Interior n.d.). Locations along the El Portal Road given in this report are referenced to stationing in feet along the center line of the existing road

beginning at the Parkline boundary (0 + 00) and continuing north and east toward Pohono Bridge (e.g., 105 + 75 is 10,575 feet east along the center line from the Parkline boundary).

This project was conducted for Yosemite National Park (National Park Service, U.S. Department of the Interior) by the VOLPE National Transportation Systems Center. Cultural resources field work and report preparation was carried out under contract with Science Applications International Corporation (SAIC). This report was prepared by Scott L. Carpenter of InteResources Planning, as a consultant to SAIC.

PHYSICAL DESCRIPTION OF RESOURCES

The Merced Canyon Travel Corridor District is located within the boundaries of Yosemite National Park along the route of the existing El Portal Road. The road joins California State Highway 140 at the Park's west boundary near El Portal on the west and terminates at Pohono Bridge at the west end of Yosemite Valley (fig. 1). The travel corridor is defined as the area paralleling the existing El Portal Road, extending approximately 300 feet on both sides of the road. The corridor passes through the following sections as listed on the U.S.G.S. 15' Quadrangle maps titled El Portal and El Capitan, California:

T. 3 S./R. 20 E.
Sections 1, 2, 10, 11, 14, 15,

T. 2 S./R. 20 E.
Sections 25, 36

T. 2 S./R. 21 E.
Undesignated sections, west end of Yosemite Valley

For ease of presentation, the description of the contributing resources is separated into the following divisions:

- El Portal Road
- Historic Period Sites
- Landscape
- Prehistoric/Historic Native American Sites

El Portal Road

The El Portal Road (recorded with temporary site designation number Y97B-1 (Appendix B) is composed of approximately 7.5 miles of roadway and related road structures extending north and east from California State Highway 140 at the west boundary of Yosemite near El Portal, California. The road extends past the junction with the Big Oak Flat Road to the junction with Pohono Bridge at the west end of Yosemite Valley. The recording of the road included the documentation of 284 related features and artifacts including hand-laid granite guardwalls, retaining walls, culvert headwalls and drainage structures, utility line covers (manholes), vehicle pullouts, park entrance sign, and other items. The list of artifacts includes isolated remnants of corrugated metal pipe, heavy wire and cable, rock drill bits, as well as assorted cans, bottles, and historic period ceramics.

The earliest portion of the El Portal Road was constructed in 1874 between Pohono Bridge and Cascade Creek as a segment of the Coulterville and Yosemite Turnpike (Coulterville Road)(Quinn 1991). Another portion of what was to become the lower end of the El Portal Road was maintained as a trail from the Hennessey Ranch from the present location of El Portal to Yosemite Valley beginning in the 1870's (Greene 1987).

In 1907, after two years of construction, a dirt wagon road was completed by the Yosemite Valley Railroad from its railway terminus in El Portal to Yosemite Valley, thus completing the total length of the El Portal Road (Green 1987:425-430). Maintenance and construction along the route followed on a nearly continual basis, providing grading,

widening, as well as the installation of stone walls and other structures. Major work began in 1925 to widen, pave, and generally improve the entire length of the El Portal Road (Green 1987:554). In response to periodic flooding, rock falls, and heavy use, continual maintenance and site specific reconstruction has continued on the road to this day. The El Portal Road sustained major flood damage in 1924, 1937, 1950, 1955, 1964, 1969, 1983, as well as 1997 (Green 1987, Quinn 1991). A sewer line from Yosemite Valley to El Portal was constructed beneath the road surface in 1977.

El Portal Road can be described as that of the park rustic style utilizing local materials (granite stone) for walls and drainage structures, and following a sinuous, organic alignment sympathetic with the natural topography and landscape of the Merced River canyon (see figure 3). Its subtle blending of scale, materials, construction methods, curved alignment, as well as views of the Merced River and surrounding canyon yield the unique qualities that enhance the visitors' introduction to the Park prior to entering Yosemite Valley. Although the El Portal Road corridor has been continually used, maintained, and partially reconstructed in various areas, it has continued to hold the route, appearance, and compatibility with the landscape that attests to its historic and visual significance.

Historic Period Sites

Along with the El Portal Road, there are an additional 16 historic period sites recorded along the travel corridor. These sites, nine of which are directly related to the development and use of the road, are all determined to be contributing elements of the Merced Canyon Travel Corridor historic district. The list of sites is contained in Appendix A of this report, and a brief summary description and location reference for each resource is presented in this section.

Historic Trash Scatter (Y97B-2)

Small trash scatter located near bank of Merced River, west



Fig. 3. Photograph of typical section El Portal Road showing sympathetic design with surrounding landscape, curved alignment, and local materials.

of Arch Rock Entrance Station. Includes artifacts dated to pre-1950's. Possibly related to use of Arch Rock area and residence prior to established trash collection and disposal.

Rock Quarry (Y97B-3)

Rock quarry located on north side of road, utilized in

construction maintenance of road. Possibly dates to 1913 and/or 1925 road widening and construction of guardwalls.

Arch Rock Entrance Station Complex (Y97B-4)

Built in 1925 to supply added services to the increased visitation that resulted from the widening and construction of "The All-Year Highway," a ranger station/residence and check station was constructed with later additions of a parking lot, restrooms, and additional entrance station kiosk. The area is highlighted by the drive-thru rock formation "Arch Rock" and views of the Merced River and Canyon. The Arch Rock area is listed on the National Register of Historic Places (Greene 1987).

Sections of Pre-1925 Road Bed (Y97B-5, -13, -25)

Intermittent sections of previous road bed with dry-laid rock work adjacent to existing alignment that was widened and repositioned in 1925.

Coulterville Road Blacksmith Shop (Y97B-6)

Blacksmith shop site in rock talus near intersection with Coulterville and El Portal Roads where a forge was constructed in 1874 to serve the traffic on the old road (Greene 1987:98).

Aligned Rock Structure (Y97B-7)

Dry-laid rock alignment for undetermined structure south of El Portal Road.

Trail Segment (Y97B-9)

Short section of unmaintained trail with dry-laid rock work leading to historic section of overhead electrical power line (now abandoned). Trail segment may be portion of earlier 19th century trail in canyon.

Historic Camp Area (Y97B-11)

Non-extant remains of historic camp with dry-laid aligned rock foundation stones on north side of El Portal Road, undetermined function.

Cascade Falls Trail (Y97B-12)

Section of trail to Cascade Falls from El Portal Road, east of Cascades Creek.

Possible Privy (Y97B-14)

Possible privy or other pit structure of undetermined origin located south of El Portal Road.

CCC Camp (Y97B-17)

Non-extant remains of Civilian Conservation Corps Camp located at Cascades Picnic Area, erected in 1933. Destroyed by Merced River flooding in December 1937. As main service camp of the Yosemite Valley area, it was relocated to Yosemite Valley in 1938 (Greene 1987:854).

Possible Privy (Y97B-23)

Possible privy or other pit structure of undetermined origin located north of El Portal Road.

Pohono Pit (Y97B-24)

Large granite quarry at the west end of Yosemite Valley near Pohono bridge. Utilized for early road and bridge construction in Yosemite Valley. Largely abandoned and cleaned up in 1931 (Greene 1987:810).

Rock Quarry (Y97B-26)

Rock quarry utilized in construction and utilization of road. Located on north side of road. Possibly dates to 1913 and/or 1925 road widening and construction of guardwalls and related structures.

The historic sites that constitute direct contributing elements of the El Portal Travel Corridor are obvious. The remains of the Coulterville Road blacksmith shop (Y97B-6) is perhaps the oldest remaining feature of the

first wagon road dating to the 1870's. The numerous segments of abandoned trail, although difficult to accurately document as to date of construction, may in fact relate to the access routes through the corridor dating back as far as the mid-19th century or earlier Indian trails. The Pohono Pit (Y97B-24) and two other rock quarries (Y97B-3 and Y97B-26) are directly related to the construction and maintenance of the El Portal and other roads in the Yosemite Valley area.

The remaining sections of earlier road alignments with associated rock retaining walls (Y97B-5, B-13, and B-25) are remnants of the earlier segments of the El Portal Road. The Arch Rock Entrance Station (Y97B-4) and associated historic trash scatter (Y97B-2) played an important role in the utilization of the El Portal Road in bringing visitors to and from Yosemite Valley. Lastly, the blacksmith shop (Y97B-6) at the Cascades intersection of the older Coulterville Road is perhaps one of the oldest remaining vestiges from the historic period of the corridor.

The additional seven sites may or may not be directly related to the development and use of the travel corridor, other than related to their physical proximity and access to the roadway itself. The unidentifiable rock structures (Y97B-7), historic camp area (Y97B-11), and two potential privy pits (Y97B-14 and Y97B-23) do not possess adequate documentation to determine their function and association with the travel corridor. The Cascades Falls trail segment (Y97B-12), trail segment to the old power line (Y97B-9), and CCC Cascades Camp (Y97B-17) served some park functions unrelated to the construction, use, and maintenance of the El Portal Road, but were none the less located within the corridor because of the easy, all-year access provided by the corridor.

Landscape

Landscape characteristics are the tangible evidence of the activities and habits of the people who occupied, developed, used, and shaped the land to serve human needs (McClelland, et al n.d.:3). The Merced Canyon Travel Corridor, although not greatly altered by human development, exhibits important historical landscape elements and

values. Available historical documentation (see next section on Historical Documentation) indicates that planned conscious decisions were made in the development of the route and structure of the road.

The landscape of the El Portal Road is one that indicates a purposeful response to the natural environment of the Merced River canyon. The object of the road was to transport thousands of visitors each day, through all seasons of the year, along the side of a picturesque river canyon to one of the most breathtaking and awe-inspiring destinations in the world — Yosemite Valley.

Specific elements of the landscape include the preserved natural setting and views of the Merced River canyon, natural vegetation, topography, and exposed rock. Additionally, the construction of historical trails, wagon roads, and 20th century roadways utilized such details as rock walls, drainage structures, alignments conforming to the natural topography, and use of natural materials to situate the travel corridor sympathetically with the natural landscape.

Prehistoric/Historic Native American Sites

Located within the Merced Canyon Travel Corridor are four prehistoric/historic Native American sites. Appendix C contains detailed site records. Although no subsurface testing or extensive research has been completed beyond initial field survey recording, it is likely that the sites relate to similar sites in El Portal and Yosemite Valley, and reflect cultural activity areas utilized within the routes of travel between the lower and upper elevations of the Merced River canyon, as well as access to other spots along the Sierra foothills.

Archeological evidence, ethnographic information, and historical records indicate human occupation in the central Sierra Nevada for the past 10,000 years (Hull, et al 1997:1.5). According to Hull, Moratto, and their coauthors, the cultural habits of these early people are poorly known. The inhabitants of the central Sierra prior to 3000 years ago probably were mobile, occupying small settlements in various areas throughout the year to take advantage of seasonally available plant

resources and/or to pursue game.

Numerous prehistoric and historic period Native American sites are known in the El Portal and Yosemite Valley areas of the Merced Canyon. Many of these sites reveal evidence of habitation and use ranging back to over 2,000 years ago. It is safe to surmise that the sites in the Cascades area utilized by American Indians were used at least on a seasonal basis in relationship to the sites in Yosemite Valley and El Portal. Although no exact locations for early Indian trails among the three areas are known, it is likely that early historic trails used by Anglo-Europeans may have followed earlier routes established by native peoples.

The Cascades area along the Merced River, as well as the extreme west end of Yosemite Valley near Pohono Bridge exhibit the only locations within the project area with sufficient habitable land, containing gentle slopes, suitable for the establishment and preservation of such sites. There are four known prehistoric/historic Native American sites in the area.

04-MRP-55

The site consists of four granite boulders with at least eight mortar cups, two possible rock shelters, a reported midden area, a reported house site, a concentration of historic debris, and one flake of obsidian. The site is located on both the up slope and downslope sides of the El Portal Road at a point between the diversion dam and Pohono Bridge. Dates of occupation are undetermined. Impacts may have occurred to the site as a result of the construction and maintenance of the El Portal Road. Integrity of subsurface cultural deposits is undetermined at this time.

04-MRP-241

The site consists of two granite boulders with a total of at least nine mortar cups, and one possible rock shelter. The site is located immediately west of Cascade Creek Bridge, north of the El Portal Road. Dates of occupation are undetermined. Potential impacts to the site may have resulted from the construction of the El Portal Road. Integrity of subsurface cultural deposits is undetermined at this time.

04-MRP-242

The site consists of one granite boulder with a total of six mortar cups and possible midden deposit indicating habitation area. The site is located in the Cascades area, east of Cascades Creek Bridge, immediately west of NPS residence #101, and north of the El Portal Road. The site has been impacted by the construction and maintenance of the NPS residence and the El Portal Road. Dates of occupation are undetermined. The integrity of any subsurface cultural deposits has not been determined.

04-MRP-369

The site consists of two granite boulders with a total of at least 13 mortar cups, and potential rock shelter. The site is located in the Cascades area on the north side of the Merced River, bisected by the El Portal Road. NPS Residence #102/818 is situated near the center of the site. Dates of occupation are undetermined. The site has been partially impacted by the construction of the El Portal Road, NPS residence, and related development. Integrity of subsurface cultural deposits is undetermined at this time.

These prehistoric/historic period Native American sites have the potential to provide research data important to the interpretation of the

cultural chronology and lifeways of the early inhabitants of the Merced River canyon area.

HISTORICAL DOCUMENTATION

Examination of available archeological data from El Portal and Yosemite Valley (Baumler and Carpenter 1982, Hull, et al 1997, etc.), linked with preliminary cultural site inventories made within the Cascades area and west end of Yosemite Valley (Napton, et al 1974)(see Appendix C), indicates that prehistoric native peoples have occupied and utilized sites within the Merced River canyon for at least the past 2,000 years, and possibly earlier. Although specific research information regarding site use, cultural affiliation, and chronology is not available for the four prehistoric/historic period Native American sites within the subject area, it is surmised that they were linked by seasonal travels between the lower Merced Canyon and Yosemite, as well as to other areas along the Yosemite foothills. Hence, the establishment of the Merced Canyon Travel Corridor has its foundation in prehistoric times. Trails for people most likely followed game trails and other accessible routes along the river, canyon slopes and areas above. Ethnographic accounts of Native American inhabitants in Yosemite Valley were documented by Bunnell during the 1870's and by James Hutchings, who described Indian daily life in 1886 (Greene 1987:26). The Native Americans living in Yosemite Valley, during its early settlement by Anglos, occupied three main villages until the 1930's.

Downstream along the Merced River, in the area of El Portal, it is known that Indians occupied the Rancheria Flat area in the 1850's and 1880's (Bates and Wells 1981:5), and at scattered sites along the Merced River in the early 1900's. The last Indian village in the El Portal area was abandoned in the late 1940's (Bates and Wells 1981:6-12).

Although there is no ethnographic information or direct historical data related to the Native American occupations at the Cascades area and near Pohono Bridge, these sites were not locales of isolated human activity. The people using these sites would have traveled through

these areas between Yosemite Valley and the lower elevations of the Merced River canyon.

Following the “discovery” of Yosemite Valley by Euro-Americans in the mid-19th century, historical travel into the Merced River canyon continued. As early as the 1870's transport from El Portal to Yosemite Valley was established. James A. Hennessey started an orchard at the site of the present El Portal trailer court, and supplied vegetables, fruits, and berries as far east as Bodie as well as to Wawona, the Yosemite Valley hotels, and Hite's Cove on the South Fork of the Merced River (Greene 1987:242). The rugged trail became the winter mail route for Yosemite Valley. Although the exact location of the entire trail network used by Hennessey is not known, portions skirted the Merced River and upper canyon slopes. Presumably, some of the trails followed the earlier routes used by Native Americans.

The earliest portion of the El Portal Road was the portion of the Coulterville Road between Cascade Bridge and Pohono Bridge at the west end of Yosemite Valley, completed in 1874 (Greene 1987, Quinn 1991). The segment was part of the larger Coulterville and Yosemite Turnpike, a private toll-road from the town of Coulterville through Foresta and then down the canyon side to the Merced River just below Cascade Creek. The Coulterville Road brought the first flows of visitors to the Yosemite Valley for sightseeing and relaxation. The steep grades of the rocky road required various elements of support including a blacksmith's forge (site Y97B-6) for repairing wagon parts and wheel rims. One such shop was located immediately west of the Cascades area near the junction of the Coulterville Road with the present El Portal Road (Green 1987:98).

During the period from 1905 to 1907, the Yosemite Valley Railroad was completed from the town of Merced to its terminus at El Portal (Greene 1987:513). To transport goods and visitors from the new rail line, a graded dirt road from El Portal, along the Merced Canyon was constructed (Greene 1987:425-430). According to Greene, the Yosemite Valley Railroad Company had offered to build a wagon road from El Portal connecting with the Coulterville toll-road. Upon

completion, the road would become a public highway. The company planned the construction, at an estimated cost of \$80,000, if Congress made no similar appropriation for such a project. When Congress did not, the company planned to proceed and have both its railroad and the wagon road in operation for the 1907 travel season. To complement that endeavor, the Department of the Interior designated \$8,000 to improve the roads connecting the east end of the El Portal wagon road with the existing Yosemite Valley road system.

Although the new wagon road aided travel to Yosemite from El Portal, it was found by many to be quite uncomfortable with steep grades, narrow passage, an uneven rocky surface, and high levels of dust. In 1908, Acting Superintendent Benson complained about the deplorable road conditions into and around the valley by stating, "The one great drawback to the visitor's pleasure is the fact that he is driven over rough roads so dusty that when he arrives at his destination his dearest friend could not recognize him" (Department of Interior 1908:425). Throughout his discourse, Benson pleads for improvements of the Yosemite roads by widening, macadamizing, and regular watering for dust abatement.

The first improvements to Yosemite roads by the federal government in the early 20th century occurred on the El Portal and Yosemite Valley roads beginning in 1909. Work was first initiated on the roads in the valley by constructing macadam surfaces, constructing culverts, and installing water storage and sprinklers.

After early, isolated attempts at motorized travel into Yosemite beginning in 1900, the Secretary of Interior, at the prompting of Acting Superintendent Benson, successfully banned the automobile from Yosemite Valley in 1907. Then, at the second National Parks Conference held in 1912, the question of the use of motor cars in National Parks was ultimately addressed (Greene 1987:433-434). Showing support, John Muir declared that the era of the automobile had commenced and that he believed that autos would allow more people to enter Yosemite Valley. In April of 1913, Secretary of the Interior Franklin Lane rescinded the order barring automobiles from Yosemite

National Park.

As tourism and individual travel in the west and Yosemite continued during the ensuing years, demands on the former wagon roads and dusty paths increased drastically. Construction activities to widen the lower portions of the road within the Merced Canyon began in May of 1913. By October, a total of two miles of the road had been widened from ten to twenty-five feet, and included the construction of stone guardwalls, ditches, and a full eighteen-foot roadbed. Where the earlier wagon route tended to narrowly skirt the winding topography and rock outcrops, the new construction of the time utilized more blasting to widen and straighten the road, as well as quarry granite for rock structures. Where the construction techniques of the wagon roads resulted in steeper grades, the later widening and straightening was also undertaken to reduce gradients on the road by realignment. Although many improvements and repairs have been made since that time, the basic road dimensions remain the same today.

Realizing the importance of planning and designing park roads in concert with concerns for positive visitor experience, the National Park Service sought to develop guidelines for systematic construction planning. Beginning as early as 1917, the Park Service focused its planning efforts for road construction through the office of the Chief Engineer (Greene 1987:553). Reiterating such a need for effective planning, the NPS and the Bureau of Public Roads made an agreement under which major park roads would be built and maintained. The Bureau's Senior Highway Engineer, Frank A. Kittredge, developed the first service-wide road program in 1926. The plan stressed the importance of maintaining the natural landscape amidst road construction:

“. . . almost from the beginning, the maintenance of close relations with the Bureau [of Public Roads] has been a function of landscape architecture rather than engineering. The competence of Bureau engineers has seldom been subject to question; on the other hand, Service concern in road design and in road construction practices has been with fitting these “necessary evils” into the landscape with the

least damage, unobtrusively, softening the lines of demarcation between road construction and the bordering undisturbed landscape.

This has called for the special skills of the landscape architect. Thus the flattening and rounding of cut slopes, the provision of natural-looking vista clearing, and the wedding of the road margins with the adjacent land through carefully planned planting of native vegetation have given a special and widely copied character to park and parkway roads." (Greene 1987:553, Evison 1964:454)

During the early 1920's, because of continuing pressure from motorists' groups, the State of California began the construction of the "All-Year Highway" (Highway 140) from Merced, California, to El Portal. By 1923, this paved road had been extended as far as Briceburg, 17 miles below El Portal, and continued plans for construction of the remaining eastern portion to the entrance of Yosemite (Quinn 1991). In 1924, Congress appropriated funds to upgrade the El Portal Road to meet the expected increase in traffic. The improvements to the roadbed, surfacing with crushed rock, and construction of a new entrance station at Arch Rock were completed by the end of 1926 (Quinn 1991, Greene 1987).

In 1925, NPS Director Stephen Mather announced a major alteration in the road construction program at Yosemite (Greene 1987:554). He stated that the NPS would henceforth build the best mountain roads that money and the science of highway engineering could devise. Greene notes that this was obviously in response to the imminent completion of the All-Year Highway from El Portal, which park officials realized would result in a large increase in the number of new visitors.

To accommodate the growing national trends in increased automobile traffic, the National Park Service and the Bureau of Public Roads signed a Memorandum of Agreement in 1926 for the construction of major roads within the national parks. In California, the district engineer of the bureau in San Francisco assigned an engineer to do reconnaissance work in Yosemite and lay out an integrated road system enabling future

work to be planned and undertaken with the system-wide road plan as a guide.

Continued work on roads in Yosemite Valley and elsewhere revolutionized travel in the park. Not only did it allow for the increasing numbers of visitors and their automobiles, the program made travel safer and more pleasant, and improved the vistas and vegetation along the roadside that was formerly obscured by road dust.

During 1927, the Park Service began to plan for five new bridges in Yosemite Valley, including a new replacement for the Pohono Bridge at the east end of the El Portal Road (Greene 1987:556). In keeping with the formation of NPS policies to plan and design structures in harmony with their natural surroundings, Director Mather made it known that the design of bridges in the parks was one of the Park Service's most important architectural problems. Because some earlier structures had drawn considerable criticism from architects, landscape engineers, and others, Mather was determined to achieve the best possible structures in terms of both design and execution for any particular location. The current Pohono Bridge was so completed in 1928.

Although established as one of two main camps to serve all of Yosemite, the CCC camp was established at Cascades in 1933 because of its access to the El Portal Road. The camp was located between the El Portal Road and the Merced River, west of Cascade Creek, in the present location of the Cascades picnic area. It served as a primary residence and work dispatch center for other seasonal spike camps throughout the park. The camp was destroyed by the flooding of the Merced River in 1937, after which it was relocated to Yosemite Valley.

The continued use of the El Portal Road saw an organic structure requiring continual maintenance and localized repairs to sustain operation. In 1931 and 1932, the road shoulders were widened in several places, and 46 turnouts with attendant rock work were constructed (Quinn 1991, Greene 1987). Over the past 70 years, since completion of the last major features of the route, the El Portal Road has been resurfaced several times, the opening in Arch Rock was

enlarged by blasting in 1948, and a sewer line was laid under the road in 1977 to the new sewage treatment plant in El Portal (Quinn 1991). Within the same time period, the road has sustained serious flood damage eight times, requiring reconstruction of bridges, sections of roadbed, guardwalls, drainage structures, and portions of the road surface (Greene 1987, Quinn 1991). For example, during the flood period of November-December, 1950, the El Portal road lost more than 700 feet of retaining and guardwalls to the Merced River (Greene 1987:795). Similarly, rockslides and vehicle collisions resulted in damage to historic fabric and road details. Maintenance, repair, replacement, and removal of structures throughout history have changed individual elements of the corridor but strengthened the continuity of use.

EVALUATION

The Merced Canyon Travel Corridor is a unique multiple resource historical property eligible for listing on the National Register of Historic Places. The travel route from El Portal to Yosemite Valley was utilized for at least the past 2,000 years, spanning a myriad of cultural needs satisfied by the natural landscape and its resources. The area reflects the special relationships between the land and the people, continuing the environmental-cultural links to the present day. Just as the Native Americans of the area followed the route of the Merced River to procure resources through hunting, gathering and trade, people of the past 120 years have plied the canyon to pursue exploration, recreation, and development in one of America's premier scenic areas. Prehistoric and historic native habitations and food-processing areas, historic work camps, remnants of earlier historic roads and trails, plus the continually used and maintained fabric and landscape of the El Portal Road all contribute to the area's historical significance.

Individually, many of the cultural features within the corridor such as prehistoric sites, stone walls, camps, or trash scatters may not possess enough historical significance or physical integrity to justify separate listing on the National Register. However, taken as the sum of

contributing parts, all of the described resources combine to form a thorough and complete picture of historical activity. The combination of Native American habitations, historic sites, the structure of the El Portal Road, and the associated landscape is the key to evaluating the historical significance of the area.

The Merced Canyon Travel Corridor is eligible for listing on the National Register based on the relationship of the historical context (summarized above) to the criteria established for evaluating properties for the Register. Specifically, the corridor property is eligible under Criterion A (resources associated with events that have made a significant contribution to the broad patterns of our history), Criterion C (resources that embody the distinctive characteristics of a type, period, or method of construction), and Criterion D (resources that have or may likely yield information important to prehistory or history).

Criterion A — Resources that are associated with events that have made a significant contribution to the broad patterns of our history.

The Merced Canyon Travel Corridor, El Portal Road, associated features, sequences of alignments and roadbeds, and historic trails are significant according to Criterion A as established by the National Register of Historic Places.

At the national level of significance, the creation and development of Yosemite National Park was one of the cornerstone events that forged the concept of natural area preservation and the national park idea in America and throughout the world. Although Yosemite was established as a national park after the initial designation of Yellowstone National Park, the notion of setting aside a permanent preserve was fostered with the designation of the Yosemite Grant in the 1864. The construction of early trails and wagon routes into Yosemite Valley along the Merced Canyon was a significant part of the early development and operation of the park.

Similar in national significance, the planned road system for the National Park Service in the early 20th century and specifically pertaining

to the early development in Yosemite is a key example of large-scale planning to provide public access to the "scenic wonders" of the United States. The scope and size of the planning and construction effort mirrored the near explosive rates that automobile traffic and leisure recreation opportunities presented. The directorate of the National Park Service developed and executed a plan for design and construction to link the California State highways with the special demands and properties of Yosemite. Major efforts were devised to supply safe and efficient access while blending road structures sympathetically to the natural landscape.

At the state level of significance, the complex of wagon roads and the permanent automobile route of the El Portal All-Year Highway was important to the development of the surrounding towns and approach roads to the Park.

Contributing Elements

Under the requirements outlined by Criterion A for the National Register of Historic Places, the following elements are identified as supporting the determination of eligibility for the property:

1. The El Portal Road (Y97B-1), including the associated guardwalls, retaining walls, drainage structures, road alignment, Pohono Bridge and related structures.
2. The Arch Rock Entrance Station Complex (Y97B-4), and associated historic trash scatter (Y97B-2).
3. Rock quarries (Y97B-3 and Y97B-26) and Pohono Pit (Y97B-24).
4. Sections of older road beds with associated rock work (Y97B-5, Y97B-13, Y97B-25).
5. Site of Coulterville Road Blacksmith Shop (Y97B-6)

6. Historic trails (Y97B-9 and Y97B-12).
7. Aligned rock structures of historic camps (Y97B-7 and Y97B-11) and historic privies (Y97B-14 and Y97B-23).
8. Cascades Area CCC Camp (Y97B-17).

Justifications

Under Criterion A, the following justifications are presented:

1. The earlier wagon road route from the Coulterville Road Junction at Cascades to the Pohono Bridge, the El Portal Road, associated road structures, rock quarries, Pohono Bridge, and Arch Rock Entrance Station Complex have been constructed as part of the planned road system in Yosemite National Park, and subsequential to the early plans to provide access to and develop the Yosemite area for visitor enjoyment and recreation.
2. The CCC camp at Cascades, other historic camp areas and trails are all within the access corridor of the El Portal Road and supported the development, maintenance and utilization of Yosemite National Park.
3. The eligible properties meet the requirements pertaining to integrity of location within the Merced Canyon Travel Corridor.

Criterion C — Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Under Criterion C the El Portal Road exhibits significance at the national

level through the evolution and continuation of a design philosophy from the Yosemite Valley Rail Road to the efforts of the Bureau of Roads and National Park Service. The use of the road corridor has remained the same since the early wagon days of the 19th century, however changes have been made to meet the demands of increased traffic, the advent of the automobile, development of new technologies, visitor needs and safety. What one sees today does not exist exactly as the road was first constructed. The road alignments, width of roads, surfacing materials, guardwalls, culverts, and related features have changed and been altered. Despite these changes, it is the continuation of the philosophy of design that is most important. A philosophical standard to build a safe and efficient roadway for conditions current at the time, but with a strong sympathetic relationship to the surrounding natural landscape. The road width, alignment, materials, and structures are significant taken together as contributing to the road's character over time. The designed features such as the guardwalls, retaining walls, drainage structures, designed pullouts, and sinuous route of the road are all part of the travel corridor that instills in the visitor a feeling of traveling through and "blending with nature." To this day, many of the historic components exist along with more recent improvements, but the design philosophy has remained through the needs for reconstruction and localized maintenance.

As the first supervisors of Yellowstone National Park, the U.S. Army enlisted the services of landscape architects for road design with the early plans for the Yellowstone road system in the 1880's (Culpin 1994). Yellowstone's early road design served as the foundation for a design philosophy that was strengthened through time, following the establishment of the National Park Service in 1916. Design and construction techniques used at Yellowstone, Yosemite, Sequoia, and other early National Parks of the west have been a model for state park systems and state highway departments. Methods of using native materials, design compatible with natural landscape and topography, as well as concern for limiting excavation and scarring to surrounding hillsides, all contributed to a genre of construction style that clarified the unique melding of built structures within the natural landscape.

From the early designed roads in Yellowstone, through the introduction of the automobile as the primary means of travel, the National Park Service sought to formalize its standards for consistent road design. The relationship established between the Bureau of Public Roads and the National Park Service in 1926 cast the die for a significant national program. Realizing the importance of the NPS philosophy and its impact across the country, Deputy Chief Engineer of the Bureau of Public Roads L.I. Hewes stated,

“In all the work in the National Parks, the Bureau of Public Roads has been guided in its design by the Landscape Division of the National Park Service. . . . The influence of the park landscaping methods has been felt by the bureau’s entire organization and has resulted in better looking roads outside the parks. The highway departments of the Western states have been influenced by the results achieved on the park roads, and there has been a noticeable improvement during the last few years in the appearance of the roads constructed by the states themselves.” (Hewes 1932)

As was shared by other Bureau of Roads and NPS engineers, Hewes stressed that early planned roads in the National Parks were constructed to the highest standards of cross-section, alignment, and grade. Dr. Hewes pointed out that every curve should receive careful attention and individual design. Recognizing that park roads were not primarily built for thoroughfares but for recreation, the engineers had to consider safety and high levels of traffic (Culpin 1994:144). Hewes further elaborated that in regard to the construction of road curves, “operating safety is never sacrificed to landscaping effects.” Engineers developed, “long, carefully compounded curves with gradual changes in length and radii.” Hewes also addressed design issues related to drainage ditches, culverts, headwalls, guardwalls, retaining walls, gentle slope cuts, and even the type of rustic native stone masonry so characteristic of park roads as the El Portal Road.

Of importance to the determination of state significance of the Merced Canyon corridor is the importance of road design and construction

techniques that were transferred to other National and State Parks, as well as state highways throughout California. Glimpses of the styles of construction, use of native materials, rustic form, and relationships with natural landscape and views are seen throughout the state.

Contributing Elements

Under the requirements outlined by Criterion C for the National Register of Historic Places, the following elements are identified as supporting the determination of eligibility for the property:

1. The El Portal Road (Y97B-1), including the associated guardwalls, retaining walls, drainage structures, road alignment, Pohono Bridge and related structures.
2. The Arch Rock Entrance Station Complex (Y97B-4), and associated historic trash scatter (Y97B-2).
3. Rock quarries (Y97B-3 and Y97B-26) and Pohono Pit (Y97B-24).

Justifications

Under Criterion C, the following justifications are presented:

1. The El Portal Road, Pohono Bridge, and associated structures including guardwalls, retaining walls, drainage structures, and road alignment have sufficient integrity to express the design philosophy of the National Park Service — that of designing and constructing roads and structures with harmony to the surrounding landscape and natural environment.
2. Pohono Bridge and other identified eligible structures along the El Portal Road (stone walls, drainage structures,

etc.) are eligible despite later maintenance and reconstruction, because such changes have been accomplished with adherence to the original design.

3. The site of the CCC camp at Cascades is included under Criterion C because of its direct association as a labor work center involved with various phases of construction of the Arch Rock as well as subsequent repairs and reconstructions to the El Portal Road.

Criterion D — Resources that have yielded, or may likely yield, information important in prehistory and history.

The three prehistoric/historic period archeological sites in the Cascades area and the one located west of Pohono Bridge have the potential to yield information important to the study and understanding of past lifeways and cultures. The Archeological Research Design (Moratto 1981) and subsequent draft Archeological Synthesis and Research Design (Hull, et al 1997) outlines a detailed strategy and questions for conducting research on prehistoric and historic sites in the Yosemite area. Studies from the past dozen years indicates that even a limited amount of data from specific cultural components can be used to address research domains regarding paleoenvironment and climate, resource procurement, changing economic patterns, social structure, and related topics.

The location of the four subject sites within the Merced Canyon Travel Corridor, linked with available historical and ethnographic information, indicates that there was a direct link between habitations of the lower Merced Canyon and Yosemite Valley — not unlike the link provided by the historic trails, wagon roads, as well as the current El Portal Road. Although the sites have not been subjected to controlled subsurface examination, they do indeed have the potential to yield important information about the hundreds, and possibly thousands, of years travel through the Merced River canyon.

Contributing Elements

Under the requirements outlined by Criterion D for the National Register of Historic Places, the following elements are identified as supporting the determination of eligibility for the property:

1. Archeological sites 04-MRP-55, 04-MRP-241, 04-MRP-242, and 04-MRP-369.

Justifications

Under Criterion D, the following justifications are presented:

1. The designated archeological sites have the integrity of spatial location and surface indication of cultural features to suggest the potential to provide important information regarding prehistory and history of the Native American occupation of the Yosemite Area. This potential is greatly enhanced by the existence of a developed Archeological Research Design for Yosemite and research data available from similar period sites in El Portal and Yosemite Valley.

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