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I write to present my comments concerning the proposed development at 1900 Fourth Street in the city of Berkeley. As is well documented, a significant archaeological site known as the West Berkeley Shell Mound (CA-ALA-307) was located in this area. My comments are twofold. First, as an archaeologist, I want to emphasize the significance of the West Berkeley Shell Mound in regards to the history of the greater San Francisco Bay Area. Second, I want to highlight my support for preserving the 1900 Fourth Street site as an open space area. This space could be employed to both memorialize the ancient people of the area and to celebrate the lives of contemporary Native people and their dynamic communities today.

1. Significance of the West Berkeley Shell Mound. There are four reasons for recognizing the importance of the site in the discipline of archaeology.

First, it is the earliest known shell mound site in the region. Archaeological research indicates that Native people first began to occupy the West Berkeley Site about 4900 years ago (4840-4980 cal yr B.P.) and that they used this place for at least the next 3700 years, until about 1200 years ago (1170-1280 cal yr B.P.). After that, Native people may have revisited the place sporadically, but the archaeological evidence is ambiguous about this later time. Because the top of the West Berkeley Site had been extensively disturbed before systematic archaeological work began, the latest aboriginal occupation for this place remains unknown.

Second, considerable archaeological work had been undertaken at the site before much of the aboveground mound structure was destroyed. Archaeologists from the newly created Anthropology Department at UC Berkeley first conducted scientific investigations at the site from 1902-1908. The Berkeley archaeologists mapped the site, took some photographs, and undertook some limited excavations. At this time, the visible mound structure measured about 120 by 45 feet in size and rose about 18 feet above the ground surface. They also recorded artifacts, shellfish, and other archaeological remains extending well beyond the standing mound, probably from the destruction and movement of materials from a once much larger mounded area.

While sporadic archaeological investigations continued in subsequent years, the next major pulse of fieldwork took place from 1950-1954 when the expansion of a nearby factory complex threatened the total destruction of the remaining mound structure. At this time, Professor Robert Heizer signed an agreement with Troiel Companies, Inc. that allowed UC Berkeley archaeologists and students from the California Archaeological Survey (now

Archaeological Research Facility) to mount a major excavation of the extant mound before it disappeared forever. They described the site as being only a few yards from the north bank of Strawberry Creek and near an expansion of tidal marsh to the west that has now been filled and built upon. The remnant of the mound was tightly wedged between two factory buildings near Hearst and 2nd Streets. It had been reduced in size (45 by 100 feet) and height (15 feet) over the last half century when some of the mound deposits had been scraped away and the top had been leveled to make room for the base of a water tower. A series of 5 by 5 feet units were excavated across the mound revealing a complex stratigraphy of shellfish, charcoal and ash, rocks, artifacts, burials, animal remains, and other archaeological remains in an 18 feet thick profile that consisted of the mound and a three feet thick deposit that extended underground. The archaeological fieldwork involved the excavation of at least 14,000 square feet of the mound and subsurface deposits. Over 3400 artifacts were recovered by archaeologists from the mound, along with thousands of shellfish remains and hundreds of faunal (animal remains).

Third, subsequent laboratory research on the archaeological materials from the site (which continues today) has revealed an amazing historical narrative about one of the earliest habitations established along the greater San Francisco Bay. When people first began intensively using this place about 5000 years ago, building up an accumulation of shellfish, rocks, ash, soil, and other materials upon a sterile yellow clay substratum, they left behind a record of the stories of multiple generations of people who made their living along the bay.

The archaeological record attests that they were highly skilled hunters, fishers, and gatherers. Native people harvested a diverse range of local animals for food, skins, feathers, and raw materials for making bone tools. The most common terrestrial game they searched for was black-tail deer, along with pronghorn elk, cottontail, and jackrabbit. The hunters employed large spear or dart points manufactured from nonlocal obsidian, multi-colored cherts, basalt and other rocks, which appear to have been highly effective in capturing large game animals. Significantly, the area of the mound investigated by archaeologists appears to pre-date the common use of the bow and arrow in the region. While modern methods for systematically recovering charred plant remains have yet to be employed at the site, excavators did record charred acorns and a large number of grinding implements, including mortars and pestles.

But what really makes the West Berkeley people exceptional was their sophisticated maritime lifeway. Rather than thinking of the site as simply a large mounded settlement, we need to re-conceptualize it as an important place on the bay where an active port was maintained over hundreds of years. At any one time during its occupation there were probably dozens of boats, similar to the tule balsas described by early European explorers, pulled up along the shore at the base of the mounded structure. These boats were used for shellfishing forays, for fishing and hunting, and for ferrying people and goods across the bay. While a number of species of shellfish were brought back to the site by both foot and boat, the vast majority used for food were bay mussel, oyster, and mud clam. Some of the boats appear to have been equipped with gill and/or seine nets for capturing white and green sturgeons, salmon, bay ray, thresher shark, leopard shark, and surfperch. A large number of notched stones used for weighing down these nets were recovered from the excavation. Large rocks were also recovered which have been interpreted as anchor stones for mooring or securing boats. Only one curved fishhook has been reported from the site, suggesting that hook-and-line fishing may have been limited. Boats and

nets were probably also used for hunting some of the abundant waterfowl and sea mammals found at the sites. These include a plethora of sea otters, ducks, geese, cormorants, and murre, along with some harbor seal, sea lion, and even common dolphin and bay porpoise.

The archaeological record provides ample evidence for what the West Berkeley people did when they were not hunting, fishing, gathering, and ferrying themselves across the bay. The daily practices involved preparing and cooking terrestrial game, plant foods, shellfish, and other maritime delicacies in underground ovens, fireplaces or hearths, and cooking areas comprised of dense concentrations of cracked and broken rocks. One can imagine women and men working at the site filleting fish and game portions, grinding and pounding seeds and nuts, and heating mussels, clams, and oysters until the tender meat popped out of the shell. The archaeological record speaks to a diverse range of tools used by the West Berkeley people to perform their domestic chores. There are many sharpened edged stone knives, scrapers, and choppers. But what really stands out is the spectacular assemblage of worked bone tools of many shapes, sizes, and uses. There are many bone awls, pins, and needles that were probably used for making baskets, cordage, nets, and mats. While these perishable craft goods are rarely found in archaeological sites, it is significant that archaeologists recovered the remains of a charred basket fragment that had a protective coating of hematite and pitch. Analysis of this fragment indicates that the weaving technique employed was lattice twining in a tight weave of 14 warps and 25 wefts per 10 cm area. Also recovered was what appears to be checker weave mat of shredded bark or tule, along with three bowls hollowed out of whale vertebrates.

The underground ovens, hearths, work areas and diverse range of stone tools, worked bone objects, baskets, mats, whale bone bowls, and other objects of daily life were probably associated with households undertaking activities within and around their abodes erected on the mound. The excavations revealed several compacted areas, one with a central hearth, which have been interpreted as possible house floors. The paucity of post molds and other architectural embellishments suggests that these were probably ephemeral tule thatched domiciles similar to what was observed by early European explorers who entered the bay region in the late 1700s.

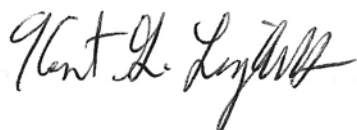
Fourth, there is no question about the spiritual significance of the West Berkeley site to both the ancient and contemporary indigenous people of the Bay Area. Ceremonial gatherings played a paramount role in the lives of the people who lived at the mounded site. Although domestic quarters appear to have been rather short-lived, the excavations unearthed a large, substantial building that has been interpreted as a ceremonial structure. The foundation of the ancient building had been impacted by the construction of an adjacent factory complex. But it is estimated to have been about 40 feet long and 20-25 feet wide with a two to three inch floor of prepared hard-packed yellow clay with a series of post-holes spaced about 8-12 inches apart within and around the structure. While the exact use of this building remains unknown, it probably served as a special gathering place for meetings, rituals, dancing, and singing. It may have also functioned as a place for holding mortuary ceremonies when people died. The excavations at the site from 1902-1908 and 1950-1954 unearthed 78 and 93 burials, respectively, representing children, adolescents, adult females, and adult males. They were buried in a loosely flexed position in shallow graves. Some received special treatment that included the liberal use of bright red ochre, and offerings of shell beads, abalone ornaments, and other mortuary goods. People were not the only creatures buried and treated with great respect. The archaeological

work revealed multiple coyote (or dog) burials, some with discrete offerings, and the special interment of at least one magnificent California Condor. The sacred nature of the West Berkeley Site is amply demonstrated by not only the ceremonial structure, human graves, and intentional animal burials, but also the recovery of phallic and other shaped charmstones, quartz crystals, bird bone whistles, and bird bone tubes, which still have significant ritual meaning to members of the contemporary tribes of the Bay Area.

2. Creating an Open Space Area. If the City of Berkeley decides to support the idea of preserving the proposed development site (1900 Fourth Street) as an open space area in the heart of the vibrant Fourth Street shopping zone, then it opens up the possibility of developing an interpretive center that can serve to memorialize the ancient people of the area and to celebrate the lives of contemporary Native people and their dynamic communities today. In working with Native peoples, historians, archaeologists, and other concerned citizens, the City of Berkeley could create a cutting-edge interpretive program that could draw many hundreds of people to the Fourth Street shopping zone. For example, I would be pleased to work with the City of Berkeley, fellow archaeologists, and the local Native community in developing plans for interpretive exhibits and outreach programs about the findings from previous and on-going investigations of the archaeological materials from the West Berkeley Shell Mound (and other nearby sites). The Phoebe A. Hearst Museum of Anthropology at UC Berkeley could also be consulted about the possibility of including artifactual material from the previous excavations in specially designed exhibits. Most importantly, the proposed interpretive center could provide a voice to local Native peoples about the lives of their past ancestors and the many challenges and issues that confront indigenous communities living in the greater San Francisco Bay Area today.

Please let me know if you have any questions with my comments.

Sincerely,



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