

A preliminary evaluation of the physical condition of the "Driftwood Charlie Site."

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This report is based upon observations made at the site on June 1, 1977.

The site consists of statuary, pavements and stone alignments integrated into a natural desert setting. Most striking are the free standing cast-concrete sculptures.

These are typically constructed of poured cement reinforced by various items of metal scrap. The consistency of the concrete is highly variable due no doubt to the local origin (river bottom) of the sand and aggregate used in its manufacture.

Such alluvial materials in desertic environments are often contaminated with soluble mineral salts. These impurities impair the bonding of the cement mass and the resultant structure is quite friable.

Apart from this inherent vice, some of the concrete structures resting directly upon the soil surface show evidence of salt erosion. That is the absorption of mineralized groundwaters, during wet periods, by capillary action. Upon evaporation, the remaining crystallized salts break down the structure of the cement causing the sloughing of material from the base of the sculpture.

Another obvious problem with the cement sculpture is that of exfoliation. Diurnal temperature changes of up to 40° are not uncommon in this area. The resultant expansion and contraction of the surface of the concrete causes flakes, often quite large, to separate from the main body of the statue. This temperature fluctuation also causes the separation of cement from the natural rock incorporated in some of the pieces.

Another form of construction the nature of which I was not able to determine is shown in picture #7. It resembles the "drizzled sand technique" used by builders of sand castles at the beach. Although the bonding agent is unknown, it seems very friable and subject to weathering.

Of course the sun has taken its toll on the painted surfaces and many are quite faded.

In all, before any specific stabilization project could be undertaken, a detailed analysis of the materials involved would be essential. In this the Ruins Stabilization Unit of the National Park Service would be an excellent source for consultation.

For the time being at least, the structures seem to be able to withstand the ravages of the elements fairly satisfactorily. Of prime immediate concern is vandalism. Although the site is semi-isolated, it receives a heavy influx of winter visitors in the fall, also, its proximity to the border exposes it potentially to the traffic of illegal aliens and drug smugglers.

I do not think removal to another location of some or all of the constructions can be advised.

First, the natural setting is an intrinsic part of the entire work, physically and aesthetically. Second, the inherent instability of many of the structures would make any movement very hazardous.