

1. Four 155 mm M1 (Battery Homestead)
2. Four 155 mm M1 (Battery Kahana)
3. Two 6-inch BC (Puu-o-Hulu)
4. Two 6-inch BC (Sand Island)
5. Two 6-inch BC (Ft. DeRussy)
6. Two 8-inch BC (Ft. Kamehameha).

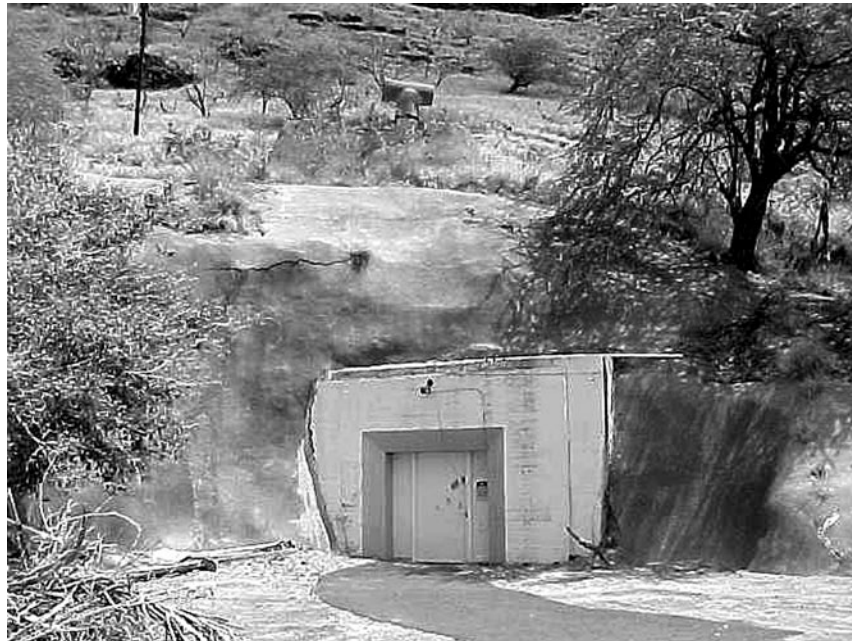
6-inch M1903A2 Gun on Barbette Carriage M4

Caliber:	50
Total weight:	20,550 lbs
Max. Range:	27,500 yards
Muzzle velocity:	2,800 fps
Elevation:	-5° to +47°
Loading Elevation:	+10°
Elevation:	Electrical-hydraulic/manual
Life of gun tube (Approx.):	1,000 rounds
Telescopic sight:	M31 Telescope
Projectiles:	90 lb HE or 105 lb AP
Propelling Charges (Bag):	32 lb and 37 lb
Firing rate:	3 rounds per min. @ +45° 8 rpm at +10°
Fuzes:	MkII or MkIIA1 delay or superquick
Primer:	MkXVM1 (electric or percussion)
Gas Ejection System:	Compressed air
Subcaliber weapon:	75 mm T-16

Source: TM 9-428

The standard 200/300 series batteries were to be issued 600 AP and 400 HE projectiles, along with propelling charges, primers, and fuzes.(31)

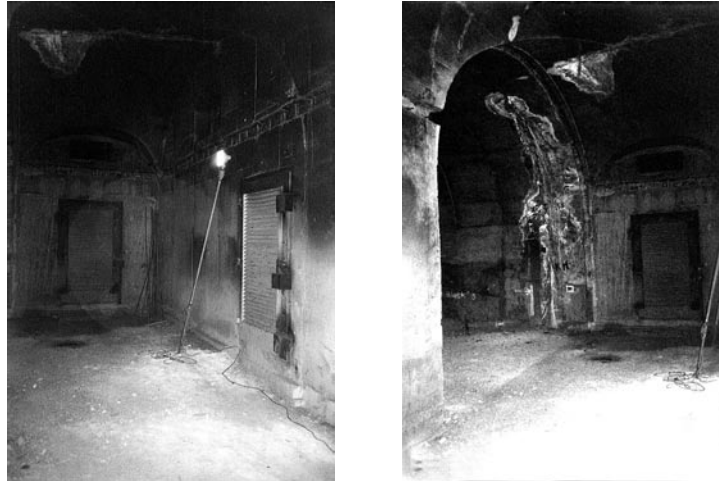
Fire control for the 200/300-series batteries included an M8C or M8G gun data computer, a backup plotting board, M7 data transmission system, spotting and correction boards, and a fire control switchboard. Optical FC instruments normally included M1910A1 azimuth instruments and one M2 depression position finder, located in the splinterproof BCS.(32) A 1994 photograph of the BCS shows front wall to mount observing instruments.(33)



Portal No. 1 to BCN-303's support tunnels. *Author, 2000*



Portal No. 2, BCN-303. *Author, 2000*



(Left) End of Corridor No. 2. *Guidry* (Right) Transverse tunnel on the left. *Guidry*

Support Tunnels (BCN-303)

Most of the 6-inch modernization program batteries on Oahu, BCNs 302, 303, and 304, deviated from the standard design of the 200-series batteries constructed in the Continental U.S. and elsewhere. These tunneled batteries included bombproof support rooms tunneled into mountainsides composed chiefly of basalt rock.

BCN-303's design incorporated a series of tunnels bored into the northwest slope of Puu-o-Hulu. Two access tunnels were dug about 90 feet above sea level. Additional tunnels were dug to house battery support functions, e.g. one powder and one projectile magazine, a compressor room for air scavenging, three generators for emergency power, plotting and fire control switchboard/radio room, ventilation and air conditioning room, first aid room, and equipment and storage rooms. While Continental 200-series batteries had only one latrine for officers and enlisted men, some, if not all, 300-series batteries on Oahu were to have separate latrines. This was the case for BCN 302 and is presumed to have been the intent at BCN 303. A galley might be added, depending on the distance from the base camp.(34)

Emergency power would be supplied by three 125 KVA 3-phase 440 V 60-cycle generators driven by diesel engines, the standard power units for 200/300-series batteries.(35) The exhaust from the diesel

exited above grade, north of the radar room's right sidewall.

Other equipment presumed scheduled for installation in the tunnel complex included evaporative coolers, fuel pumps, and switchgear, all standard equipment for the 200/300-series batteries. Diesel fuel, presumably at least 10,000 gallons for the generators, would be stored in an underground fuel tank.(36) The operations, projectile, and powder rooms all ran off the transverse tunnel; a niche at the northwest end housed the emergency water tank.

Tunnel Portal No. 1 was some 33 yards north of Battery Hulu's Emplacement No. 1. The portal included a thick rectangular concrete facade with a recessed steel door. Gunite sprayed on the outside of the portal's adit stabilized the cut in the slope and prevented rock from being dislodged.

Portal No. 2 was some 30 yards north of Emplacement No. 2. The corridor was arched, with slab walls and floors. The crown, sidewalls, and floor were covered with a layer of concrete. The portal, which did not include a concrete façade, was left unfinished, but gunite was applied to the exterior of

probably added after construction to prevent unauthorized entry.(37)

Photographs taken during a 1994 site reconnaissance by CDSG member Lee Guidry show that the tunnels, and projectile and powder rooms had a layer of concrete, and the partitioning of individual rooms in the operations tunnel segment had been started. The vertical vent/escape shaft from the transverse tunnel was completed and lined with concrete, with a series of staggered metal ladders to landings.

Updated Fire Control Radar Authorized

A study completed on May 31, 1945, by the 2274th HSAC, successor to the HSAC, recommended 6-inch and the 8-inch naval turret (NT) batteries were to be furnished the -1 model with a maximum tracking range of 28,000 yards, the -2 model was to equip all others. Since the 8-inch NT batteries had a maximum range some 3,000 yards greater than the AN/FPG-1's range, these batteries were also recommended for the -2 model. All existing SCR-296 radar sets were to be removed when the newer radar arrived.(38)

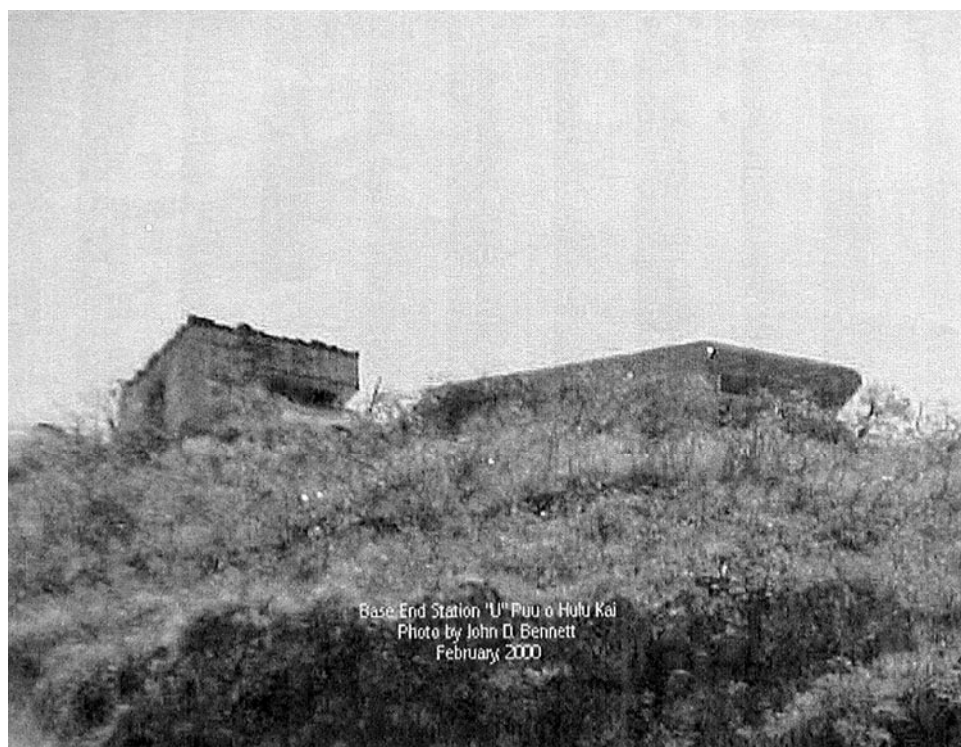
Project Shuts Down

Construction of BCN-303 slowed in late 1944 as the war moved closer towards the Japanese home islands and the threat of invasion to Hawaii continued to diminish. Construction, which had been proceeding slowly all along, was entirely suspended by May 31, 1945, when the battery was assigned a deferred rating. However, BCN-303 was initially to be retained in the post-war Hawaiian defenses. The May 31, 1945, study recommended completion of BCN-303. Remaining work consisted of installing the guns and power plant, constructing and finishing the interior rooms, and installing electrical wiring and Signal Corps equipment.(39)

tunnels and support rooms were abandoned. It is believed that neither 6-inch guns was ever mounted, although they had been shipped to Oahu.



Fire Control Station "U." Original station is above left and 1934 station is in the foreground. Guidry



Station "U" showing the southern-most 1920s station on the left with the Hulu Group CP on the right, *Author*, 2000