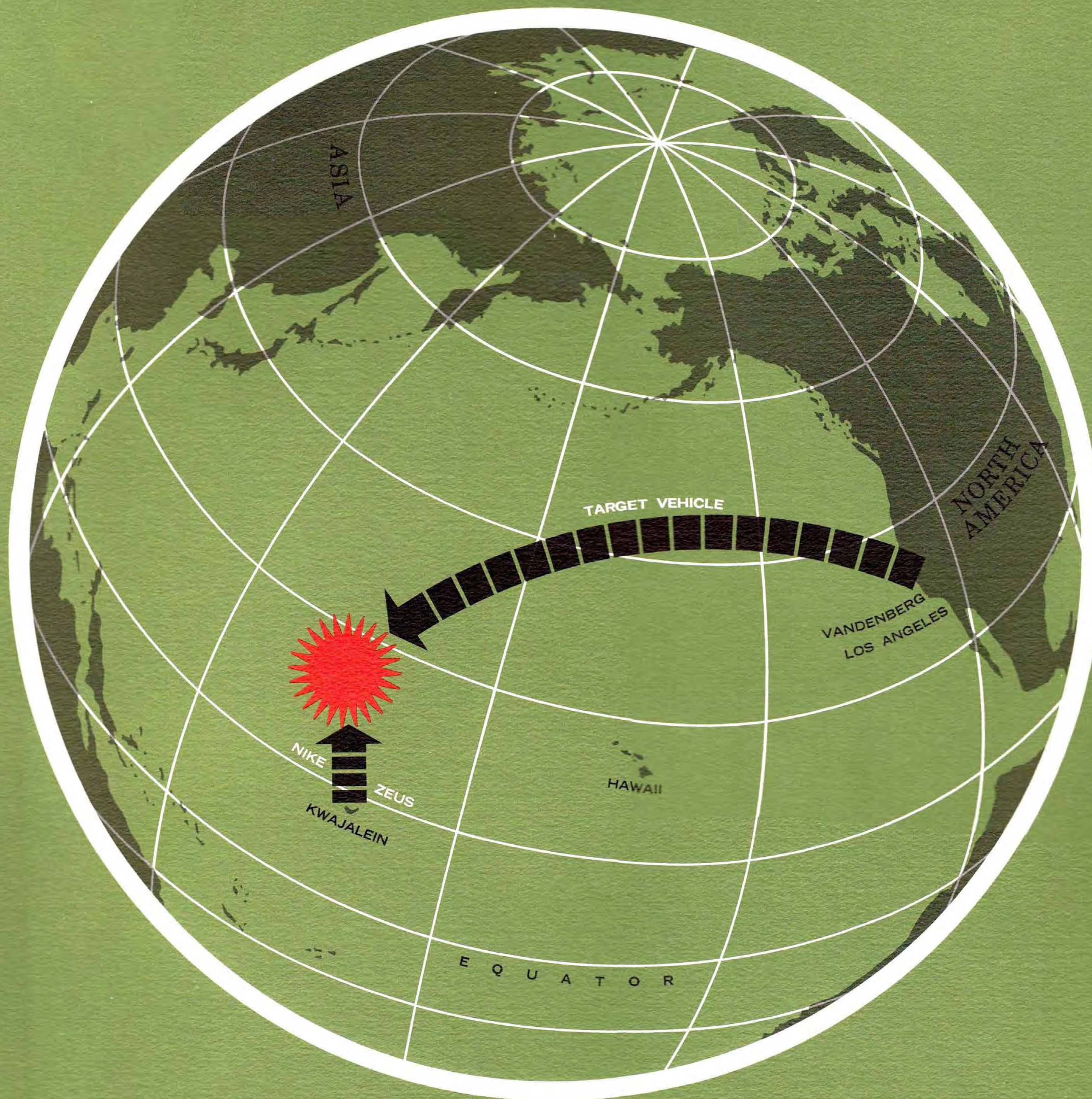


Thank You

We proudly present this brochure to all of the key employees of PACIFIC-MARTIN-ZACHRY and PMZ Constructors for their hard work and high morale . . . to our subcontractors for their splendid cooperation . . . and to the personnel of the CORPS OF ENGINEERS for their efficiency and get-it-done spirit. All concerned made the following pages possible.

Loyd W. Martin



The Project

Nike-Zeus at Kwajalein is a research and development project under the U.S. Army Ordnance Missile Command.

The objective is to test a method of detecting an ICBM missile traveling about 15,000 miles per hour, and then destroying it.

Another mission of the test is to select an actual warhead from among decoys.

To carry out such a test, radar detection facilities and Nike-Zeus missile launching facilities have been built at Kwajalein.

The communication system extends to two nearby islands, Ennylabegan and Gugeegue.

The principal tests are conducted against target re-entry bodies launched by Atlas boosters from Vandenburg Air Force

Base, 4,500 miles from Kwajalein, over the Pacific Missile Range.

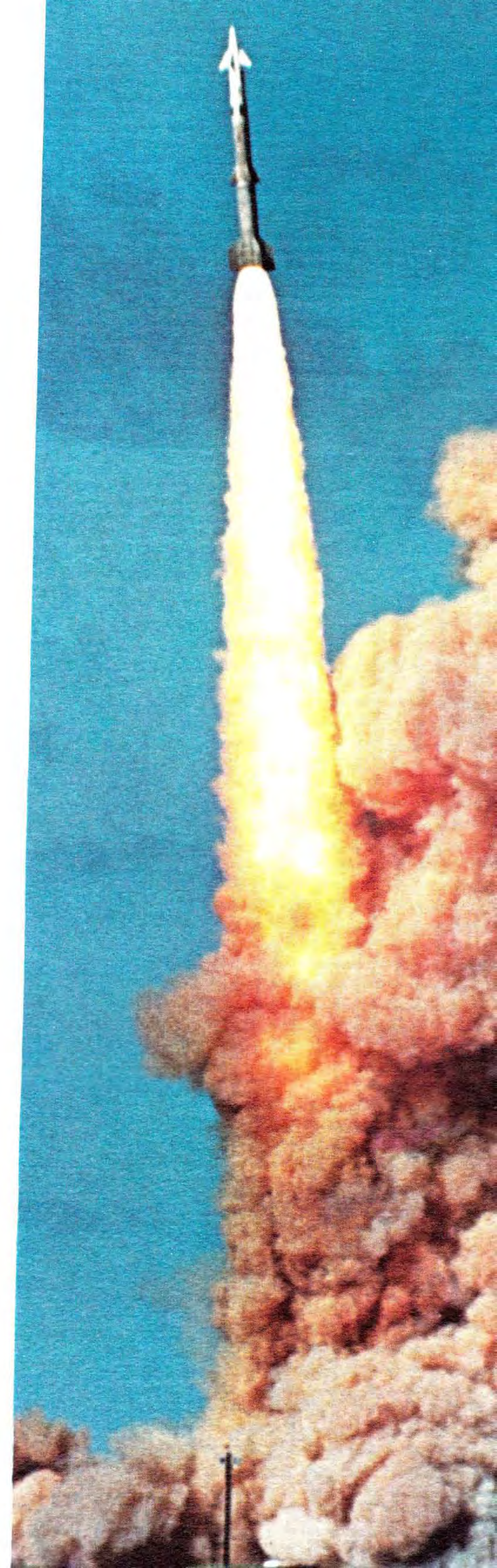
Also, pre-tests call for firing smaller "Speedball" rockets from Roi-Namur island fifty miles north of Kwajalein, which required additional missile facilities.

At the same time a ballistic missile defense research project is underway known as "Project PRESS." These facilities have also been erected on Roi-Namur island.

To conduct such tests requires many months and thousands of people.

Therefore, administration, housing, feeding, recreational facilities, etc. have also been part of the construction required by the Nike-Zeus project at Kwajalein.

Zeus out of Kwajalein Launchers.





The Construction

On June 30, 1959 the general contract for the construction of the initial elements at the Kwajalein Nike-Zeus Test Facilities was awarded the joint venture firm of Pacific-Martin-Zachry by the U. S. Army Engineer District, Honolulu, Corps of Engineers.

The first four facilities constructed under the original contract were:

- (1) ZAR (Zeus Acquisition Radar) Antenna Foundation
- (2) ZAR Receiver Building
- (3) ZAR Transmitter Building
- (4) TTR (Target Track Radar) #4

Three principal problems faced the constructors. First was *time*. This was a crash program.

Second was *precision*. Tolerances in many cases were, like the name of the area of islands, microscopic.

Third was *flexibility*. This was the most complete Nike-Zeus test

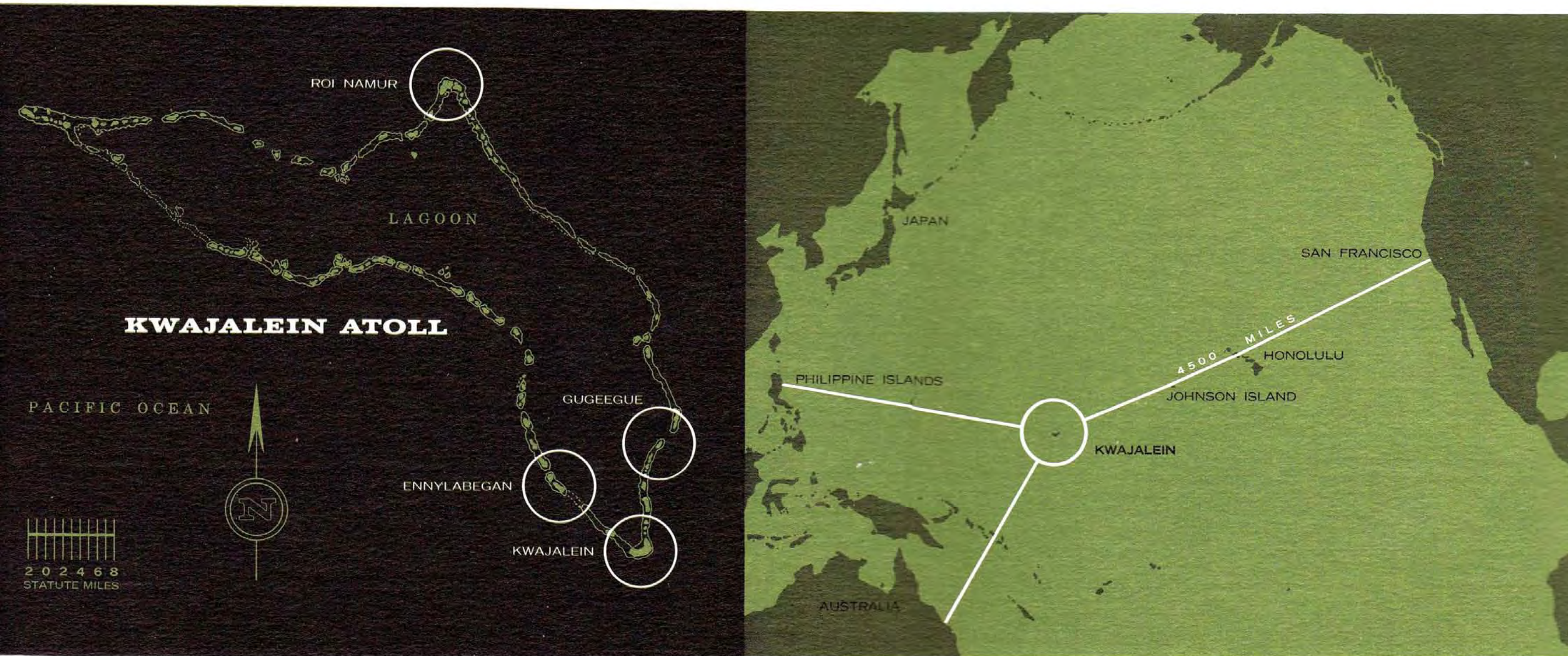
facility. Partial installations had been constructed on Ascension Island, South Atlantic; Whippany, New Jersey and at White Sands, New Mexico. Improvements were being made daily at these stations and relayed to Kwajalein. Result — more than 22,000 drawing changes were made on the project before it was completed.

Also the scope of the project grew. New contracts were awarded on the basis that the contractor was performing on schedule, the men and equipment were present, the project was a test establishment and... again... time was of the essence.

Contracts awarded included launching areas, power plants, Bachelor Quarters, barracks, mess halls, streets, sewers, additional technical buildings and many other facilities.

The following pages give a cross section of the variety of the construction at Kwajalein done by Pacific-Martin-Zachry.

“Kwajalein”



Kwajalein Atoll is part of the Marshall Islands which is in turn part of a group of islands north of the Equator and East of the Philippines called Micronesia... so named because practically all of the islands are microscopic in size.

The principal island of Kwajalein has a land area of just 600 acres. It received a bombardment which left only three coconut palm trees standing before the landing of the 7th Army Division during World War II.

The average elevation is about 4 feet above high tide. It is comparatively hot and humid. The temperature average is 83° and the average humidity is 82%, making air-conditioning a necessity for technicians and delicate instruments.

The rainfall averages 101 inches annually. Fresh water must be derived from this rain by means of catchment basins which border the aircraft runways. The water supply is augmented in dry seasons and in emergencies by large salt water distillation equipment.

Wind velocities of 52 knots have been recorded.

All of these climatic conditions were determining factors in much of the construction at Kwajalein.



BATTERY CONTROL BLDG.
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PHOTO LABORATORY

WEAPON-BATTERY POWER PLANT

DR BUILDING

R BLDGS.

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LIVE ASSEMBLY & INVENT SUPPORT BAYS

LIVE STORAGE BAYS

NAVY OPERATION CONTROL CENTER

JOINT TECH. OP.

NAVY COMMUNICATIONS BUILDING

ZAR. RECEIVER ANTENNA

ZAR. POWER PLANT

ZAR. TRANSMITTER BUILDING

AR. RECEIVER BLDG.

STN. POWER PLANT

MOBILE HOMES PARK

ADMINISTRATIVE MESS AND CLUB

DEPENDENT'S
SCHOOL

BACHELOR QUARTERS

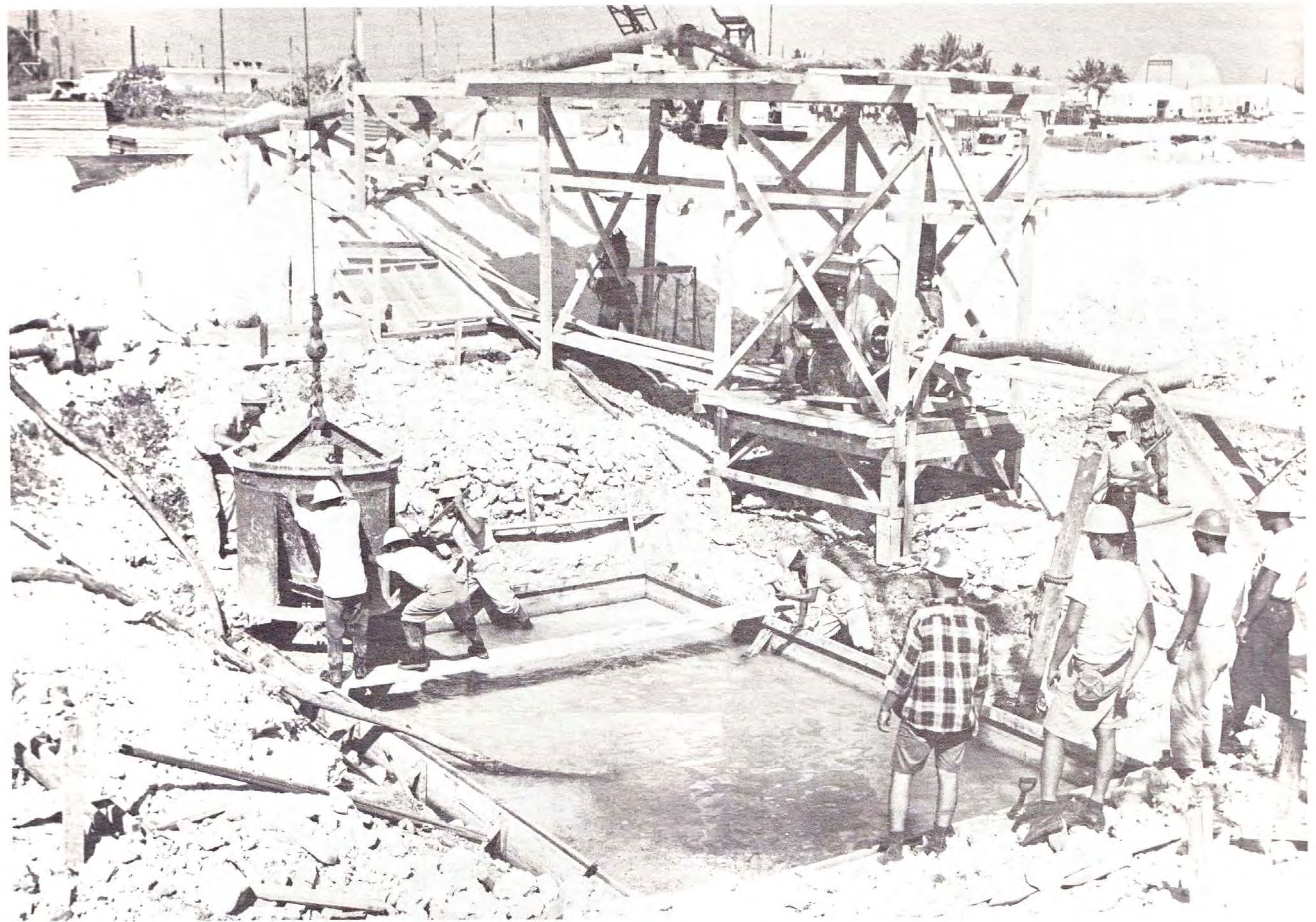
500 MAIL

FILL AREA

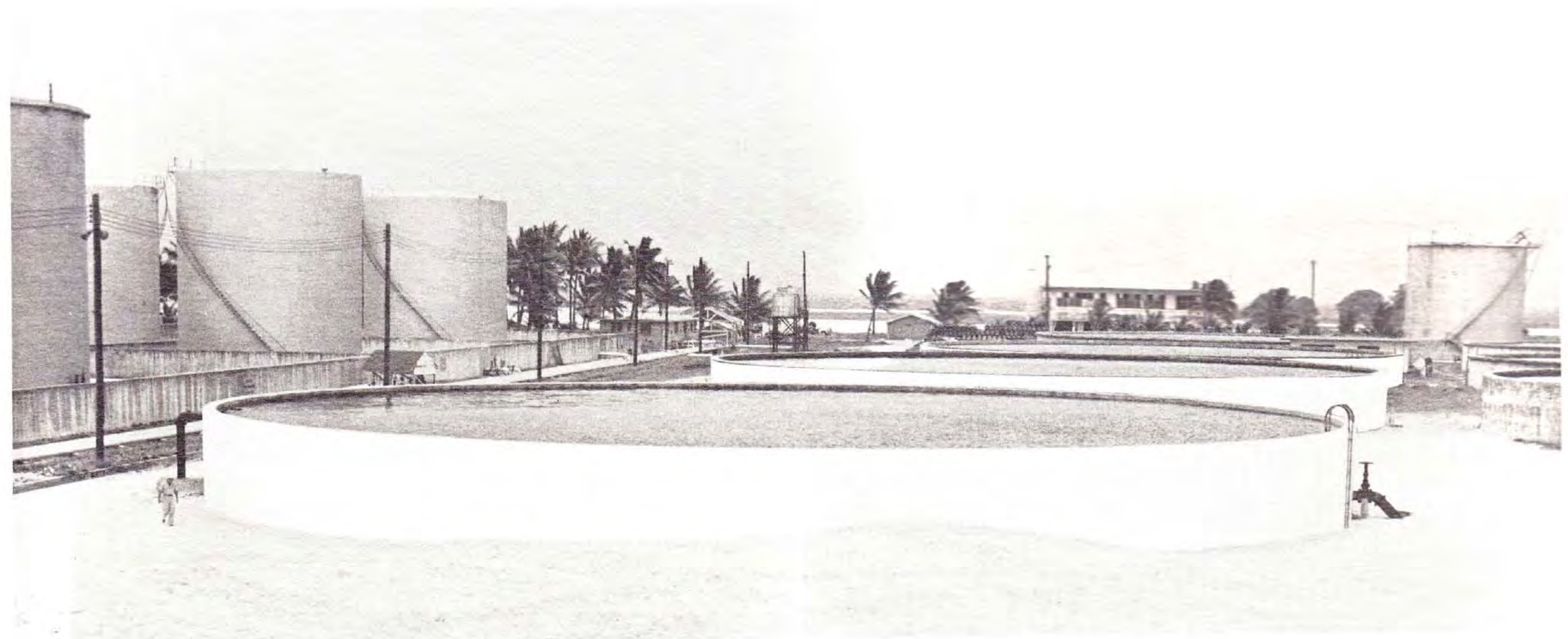
Nike-Zeus

Preliminary Construction

Tremie concrete for foundations.
Well-point systems were designed and
installed for many other foundations.



Preliminary site work included repairing, cleaning
and extending fresh water distribution system,
rehab of fourteen 1,000,000 gallon concrete
tanks and construction of new 1,000,000 gallon tank.
Sea Water system was expanded, and a new
100,000 gallon elevated steel tank constructed.



Administration Buildings

Navy Communications Center — 110' x 82' structure with 8" concrete block walls and structural steel frame. Houses extensive communication facilities and in one shielded room very delicate instruments.



Joint Technical Operations Building — 218' x 83' two story steel framed concrete block building, with 218' x 121' single floor storage and repair facilities attached. Total floor area of building is 62,570 sq. ft.



Navy Operations Control Center — 96' x 60' structure with 12" reinforced concrete block walls. Building features 2495 sq. ft. of movable metal floor system on 3' adjustable jacks.

