REEF RUNWAY 8R-26L PROJECT

AT

HONOLULU INTERNATIONAL AIRPORT

HAWAII

INTRODUCTION:

The Reef Runway, 8R-26L is located 6,700 feet (2042m) south and parallel to Runway 8L-26R on a fringing coral reef. The Reef Runway structure is 16,100 feet (4907m) by 2,050 feet (625m) with the runway proper 12,000 feet (3658m) by 200 feet (61m). Over 1,000 acres of new land were created by the dredging of over 19 million cubic yards of material. All dredged fill was placed in 1 to 30 feet (1/3 to 9m) of water. The circulation channels were dredged to -45 feet (14m) MSL.

DESIGN PROJECT SCHEDULE:

Conceptual/Feasibility Study	1968
Preliminary Design	1970
Final Design	1972
Construction Start	May 1973
Reef Runway Opening	Oct 1977
Scheduled Completion	Dec 1977

CONSTRUCTION PHASE I - DREDGED FILL & PROTECTIVE STRUCTURE

Construction Period	May 1973 - August 1976
Project Cost	U. S. $52 million
New Land Area Created	1000 acres (400 hectares)
Runway	12,000 ft. x 200 ft. (3658m x 61m)

DREDGE CORAL FILL:

Structural Fill (Under Pavements)	6 million c.y. (4.8 million m^3)
Common Fill	13 million c.y. (9.9 million m^3)
Structural Fill Specification	Less than 15% passing U. S. No. 200 sieve

PROTECTIVE STRUCTURE:

1. Shallow Reach (Sta. 148 to Sta. 246)

Length	9800 l.f. (2,987m)
Water Depth	(-) 1 ft. msl to (-) 6 ft. msl (-) 1/3m msl to (-) 2m msl
Stone Riprap Core	120,000 c.y. (91,750m^3)
Quarry Stone Revetment (Ave. 200# stone)	51,000 c.y. (39,000m^3)

PROTECTIVE STRUCTURE (Cont'd)

2. Deep Reach (Sta. 85 to Sta. 148)

Length	6,300 l.f. (1,920m)
Water Depth	(-) 6 ft. msl to (-) 30 ft. msl (-) 2m msl to (-) 9m msl
Quarry Run Core	322,000 tons (292,100 mt)
Quarry Stone Underlayer & Armor	321,000 tons (291,200 mt)
Dolos Armor	
4 ton (3.6 mt)	13,790 units
6 ton (5.4 mt)	4,516 units

CONSTRUCTION PHASE II - PAVEMENTS, INCREMENT 1

Construction Period	September 1975 - September 1976
Project Cost	U. S. $8.35 million

RUNWAY PAVEMENT SECTION:

Structural Coral Fill Subgrade - 95% compaction	
Crushed Rock Subbase	9 inch (23 cm)
Asphalt Stabilized Base	7 inch (18 cm)
Asphaltic Concrete Surface Course	5 inch (13 cm)

QUANTITIES:

Asphaltic Hot Mix	274,250 tons (248,800 mt)
Crushed Rock Subbase	84,900 c.y. (64,911 mt)

CONSTRUCTION PHASE III - COMPLETION OF PAVEMENTS & LIGHTING, INCREMENT 2

Scheduled Construction Period	November 1976 to September 1977
Estimated Project Cost	U. S. $11.2 million

PROJECT FEATURES:

- Completion of Taxiway Pavements
- Pavement of Runway and Taxiway Shoulders
- Complete Airfield Lighting and Navigation Equipment Installation

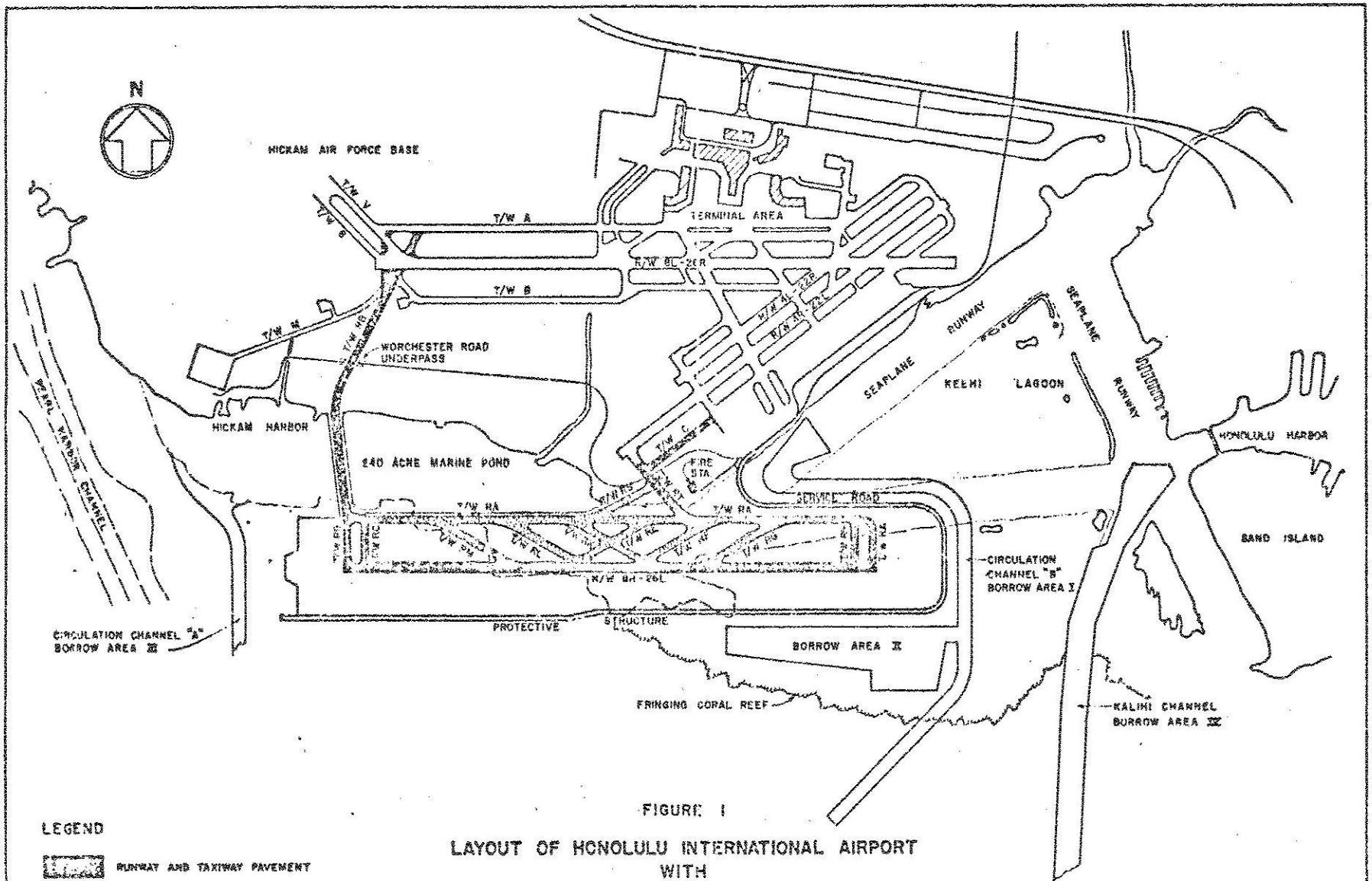
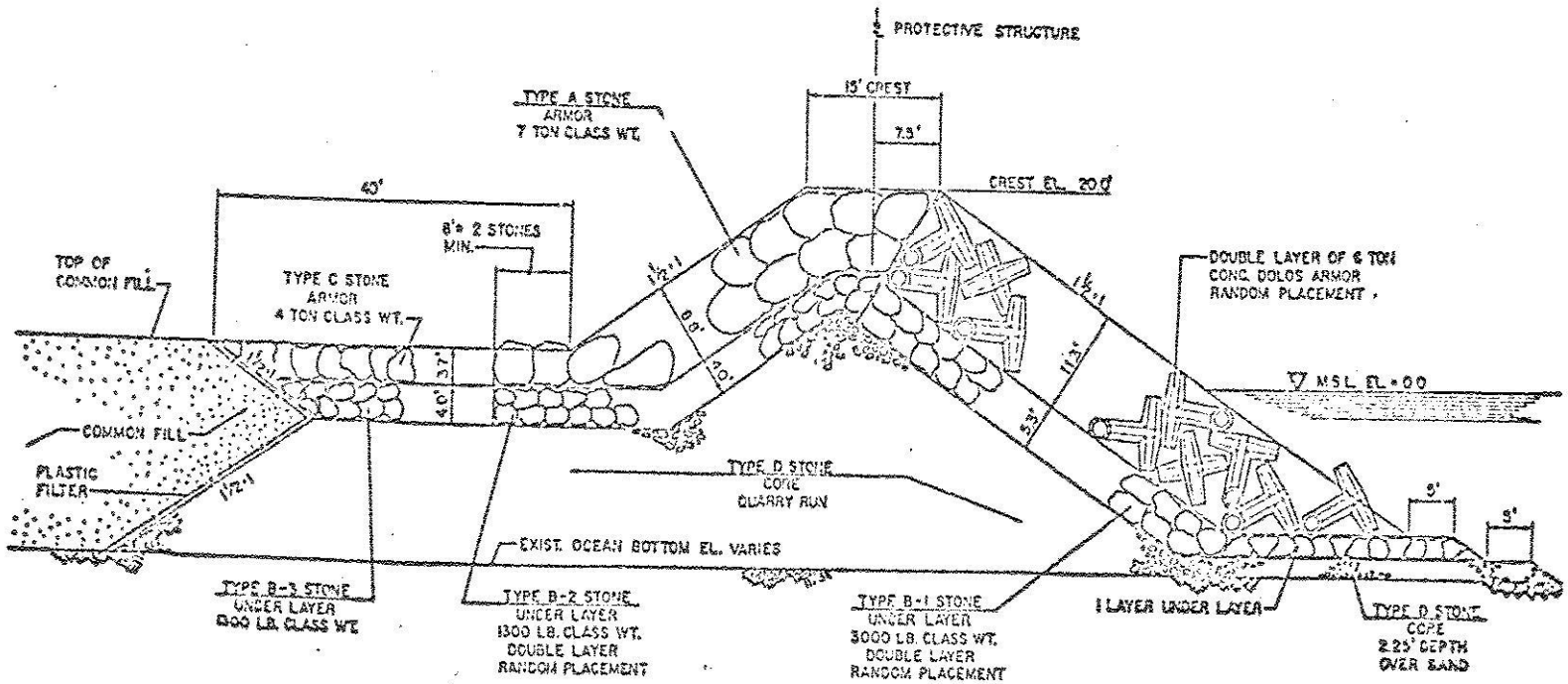


FIGURE 1

LAYOUT OF HONOLULU INTERNATIONAL AIRPORT
WITH
REEF RUNWAY



TYPICAL PROTECTIVE STRUCTURE SECTION