FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL		TOTAL SHEETS
HAWAII	HAW.	83D-01-98	2000	3	19

## GENERAL NOTES

### **DESIGN SPECIFICATIONS:**

AASHTO LRFD Bridge Design Specifications, Second Edition, 1998

## MATERIALS:

- A. Reinforced Concrete: Class A (f'c = 3,000 psi min.)
- B. Reinforced Steel: ASTM A 615, Grade 60, except stirrups which shall meet ASTM 615 Grade 40, Yield strength Fy = 60 ksi
- C. Admixture in Concrete: See Special Provisions
- D. All expansion and premolded joint filler shall be incidental to concrete and will not be paid for separately.
- E. All structural steel plates shall be ASTM A 36, hot-dip galvanized after fabrication.
- F. All anchor bolts, nuts and washers shall be ASTM A 325, hot-dip galvanized after fabrication, unless noted otherwise.
- G. All welding shall be in accordance with the current edition of Reinforcing Steel Welding Code AWS D 1.4.
- H. All structural steel pipe shall be ASTM A53 Type S, Grade B, hot-dip galvanized after fabrication.
- I. Galvanizing shall be in accordance w/ ASTM A123, A143, \$\phi\$ A153.
- J. Non-shrink grout: Non-shrink grout shall meet requirements of Section 712.04 Grout of Standard Specifications

#### **CONSTRUCTION REQUIREMENTS:**

- A. Refer to Hawaii Standard Specifications for Road, Bridge and Public Works Construction, (Hawaii 1994 edition and Special Provisions).
- B. Except as noted otherwise, all vertical dimensions are measured plumb.
- C. For steel reinforcing, stagger all splices where possible.
- D. Steel reinforcing shall be supported, bent and placed as per the ACI Detailing Manual, 1994.
- E. For cast-in-place concrete, minimum reinforcement cover: Concrete cast against earth: 3"
- F. At time concrete is placed, reinforcing shall be free from mud, oil latance or other coatings adversely affecting bond capacity.
- G. Reinforcement, dowels and other embedded items shall be positively secured before pouring.
- H. Minimum clear spacing between parallel bars shall be one and one-half (1½) times the diameter of the bars (for non-bundled bars). But in no case shall the clear distance between the bars be less than one and one-half (1½) times the maximum size of the course aggregate.
- I. All dimensions relating to reinforcing bars (e.g. spacing of bars, etc.) are to centers of bars unless noted otherwise.
- J. All footings shall bear on firm undisturbed natural soils or properly compacted structural fill. The Engineer shall visit the construction site and shall determine whether foundation material is suitable or not. The contractor shall notify the Engineer when unsuitable materials are encountered.

#### REFERENCE:

A. Refer to Standard Plans for additional details and notes not covered by details and typical drawings.

#### **GENERAL:**

- A. The Contractor shall conduct his work in such a manner and provide such temporary shoring or other measures as may be necessary to insure the safety of all concerned and to protect existing structures.
- B. In the event of over-excavation, the space between the footing or footing key and ground shall be filled with a minimum of Class D concrete at the Contractor's expense at no cost to the State.
- C. Unless noted otherwise, chamfer all exposed concrete edges three-quarters (3/4) of an inch.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GENERAL NOTES

In The Vicinity of Polinalina Road

Proj. No. 83D-01-98

Scale: 1"=40'

Date: Nov. 1999

SHEET No. 1 OF 1 SHEETS