

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83G-01-03M	2005	25	47

GENERAL NOTES

DESIGN SPECIFICATIONS:

A. AASHTO 1998 LRFD Bridge Design Specifications, Third Edition, including all interim revisions.

MATERIALS:

A. Reinforced Concrete: Class A, unless otherwise noted

B. Reinforcing Steel: ASTM A 615, Grade 60

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 shall be ASTM A 36, hot-dip galvanized after fabrication.

F. All anchor bolts, washers and nuts 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 Bridge Welding Code ANSI/AASHTO/AWS D 1.5

CONSTRUCTION METHODS:

A. Refer to Hawaii Standard Specifications for Road, Bridge and Public Works Construction, 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 per LRFD Bridge Design Specifications.

E. For cast-in-place concrete, minimum reinforcement cover:
Concrete cast against earth: 3"
Concrete cast against a smooth surface or finished to a smooth surface: 2"

F. At time concrete is placed, reinforcing shall be free from mud, oil, laitance 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 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 ground or properly compacted structural fill.

K. In the event of over-excavation, the space between the footing/slab/wall and the ground shall be filled with a minimum of Class D concrete at the Contractor's expense at no cost to the State.

L. Where the plans call for reinforcement bars to be embedded or anchored into existing concrete, see Special Provisions Section 674--Concrete Retrofit.

M. Where the plans call for placing fresh plastic concrete against existing concrete, see Special Provisions Section 674--Concrete Retrofit.

REFERENCE:

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

GENERAL:

A. All items noted incidental will not be paid for separately.

B. The Contractor shall verify the locations of all existing utility lines and notify their respective owners before commencing with any work.

C. The Contractor shall verify all grades and dimensions before commencing with any work.

D. The Contractor shall be solely responsible for the protection of adjacent property, utilities and existing and new structures from damage due to construction. Repairing any damage shall be at no cost to the State.

E. The Contractor shall provide temporary shoring or other measures as may be necessary to insure the safety of all concerned and to protect existing structures.

F. Unless noted otherwise, all exposed concrete edges shall be chamfered ¾".

SYMBOLS AND ABBREVIATIONS

Detail or Section designation
Sheet No. Section is cut or
Detail Location

Adj. Adjacent
Alt. Alternate
Approx. Approximate

Bas. Baseline
Bal. Balance
Bet., Btwn. Between
B.F. Back Face
B.F.E. Bottom Footing Elevation
Bk. Back
Blt. Bolt
B. Bot., Bott. Bottom
B.O.S. Bottom of Slab

CL Center Line
CIP Cast in Place
Cl., Clr. Clear
Conc. Concrete
Cont. Continuous
C.Y., Cu. Yd. Cubic Yards

Det. Detail
Dia., Ø Diameter
Dim. Dimension
Dwg., Dwgs. Drawing, Drawings

EA, Ea., ea. Each
E.F. Each Face
El., Elev. Elevation
Eq. Equal
Est. Estimated
E.W. Each Way
Exc. Excavation
Exlst. Existing
Exp., (E) Expansion
Ext. Exterior

F.F. Front Face
Fin. Finish
Fin. Gr. Finish Grade
Ftg. Footing

Gr. Grade
Grd. Ground

Horiz. Horizontal
Hwy. Highway

I.B. Inbound
I.F. Inside Face
In. Inch
Int. Interior
Inv. Invert

Jt. Joint

L L
L.F., Lin. Ft. Linear Feet
Lg. Long
Longit. Longitudinal
L.S. Lump Sum
Lt. Left

Max. Maximum
Min. Minimum
Misc. Miscellaneous

N North
N.F. Near Face
No., # Number
N.T.S. Not To Scale

O.B. Outbound
o.c. On Center
Op'n'g Opening

R Radius
Rdwy Roadway
Ref. Reference
Reinf. Reinforcement
Ret. Retaining
Req'd Required
R.F. Rear Face
Rt. Right
R/W Right Of Way

Sect. Section
Shldr. Shoulder
Sht. Sheet
Sp. Space
Spd. Spaced
Spcg. Spacing
Spec. Specification
Sta. Station
Std. Standard
Stirr. Stirrup
Str. Straight
Struct. Structural
Symm. Symmetrical

T Top
Temp. Temporary
Thk. Thick, Thickness
T.O.S. Top of Slab
T.O.W. Top of Wall
Tot. Total
Transv. Transverse
Typ. Typical

Var. Varies
Vert. Vertical

w/ With
W.P. Working Point
W.W. Wingwall

INDEX TO DRAWINGS

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
GENERAL NOTES, SYMBOLS & ABBREV.
ESTIM. QUAN. and INDEX to DRAWINGS
KAMOOALII STREAM BRIDGE
KAMEHAMEHA HIGHWAY RESURFACING
Kahiko Street to Pali Highway
Project No. 83G-01-03M
Scale: As Noted Date: Feb, 2005