FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(246)	2004	73	105

GENERAL NOTES FOR SIGN SUPPORT STRUCTURES

1. Design Specifications

   2001 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Current Edition.

2. Design Data

   Wind Loading: Design Wind Speed = 105 MPH with Gust Factor of 1.14 for wind load normal to face of sign and transverse to face of sign, See Design Specifications

   Wind importance factor shall be based on a recurrence interval of 100 years.

   Fatigue importance factor shall be based on Fatigue Category I. The effects due to truck induced gust (based on vehicle speed of 65 mph) and natural wind gust shall be considered in fatigue design.

   Walkways: See Note on Sheet No. S8.

   Ice Load: None

   Structural Steel: ASTM A36

   High Strength Bolts: ASTM A325 (Friction Type - Connection)

   Aluminum Members: Aluminum Alloy 6061-T6

   Steel Pipe: ASTM A53 Type E Grade B

3. Welding

   All welding to be continuous welds as noted on the plans. All welding shall conform to the requirements of ANSI/AASHTO/AWS D1.5M/D1.5:2002, "Bridge Welding Code".

4. Materials

   A. Sign support box truss members and supporting posts; sheet metal siding and edgings; connection bolts; nut and washers; to be structural steel. All surfaces shall be hot-dipped galvanized after fabrication prior to painting. See specifications and "Ribbed Sheet Metal Notes" on sheet No. S6.

   B. Galvanized surfaces of overhead sign support structures (Note A. above) shall be painted to warm gray color. See Specifications.

   C. Contact surfaces in high strength (H.S.) bolt connections shall not be painted. The galvanizing on these surfaces shall be lightly scored by wire brushing prior to assembly.

   D. High strength bolts shall be galvanized, furnished and installed in conformance with current ASTM A325 with lubricated nuts.

   E. Anchor bolts shall be galvanized.

   F. Aluminum members and surfaces in contact with structural steel, See Note A on sheet S7.

5. Construction Method

   See Hawaii Standard Specifications for Road and Bridge Construction, 1985 Edition, 2001 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Current Edition and Special provisions for this project.

6. General

   A. Prior to fabrication of the sign support structures, the Contractor shall verify in the field the exact location of each of the anchor bolts installed and the post elevation at the top of the supporting concrete.

   B. Payment for the overhead sign support structure shall be made as described in the Special Provisions.

   C. All sign support structures are viewed in the direction of traffic, unless noted otherwise.

   D. The Contractor shall probe to locate the existing utilities and shall notify the respective owners prior to commencing with foundation work.

7. Legend and Abbreviations

&	And		
@	At		
Alum.	Aluminum	LT.	Left
℄	Baseline	Min.	Minimum
BOT.	Bottom	O.C.	On Center
BRG.	Bearing	O.D.	Outside Diameter
℄	Centerline	OPNG.	Opening
CL., CLR.	Clear	O/S	Offset
Conc.	Concrete	℗	Plate
Conn.	Connection	PVMT.	Pavement
Cont.	Continuous	RECT.	Rectangular
Dia.	Diameter	RELOC.	Relocated
Diag.	Diagonal	REQ'D	Required
DO.	Ditto	RT.	Right
E.F.	Each Face	SECT.	Section
EMS	Electronic Message Sign	SHT.	Sheet
EQ.	Equal	S.S.	Stainless Steel
EQ. SPC.	Equal Spaces	STD.	Standard
Exist.	Existing	STIFF	Stiffener
Flex.	Flexible	SYMM.	Symmetrical
FM	Fixed Message	t., THK.	Thick
FMS	Fixed Message Sign	Typ.	Typical
Galv.	Galvanized	ULT	Ultimate
GR.	Ground	VERT.	Vertical
Hex.	Hexagonal	WP	Weatherproof
H.S.	High Strength	W/	With
JT.	Joint		

8. Foundation

   A. The capacities of 5'-0" diameter drilled shafts are as follows:

Working Capacity (KIPS)	Ultimate Capacity (KIPS)
85	255

ORIGINAL PLAN
NOTE BOOK
No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

J:/ZIPPER EXTENSION/STRUCT/SS01.dgn

HUI PANG CHEN
LICENSED PROFESSIONAL ENGINEER
No. 3865-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Hui Pang Chen

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES

INTERSTATE ROUTE H-1 ZIPPER LANE EXTENSION
RADFORD DRIVE OVERPASS TO KEEHI INTERCHANGE
FEDERAL AID PROJECT NO. NH-HI-1(246)

Scale: None Date: Mar. 2, 2004

SHEET No. S1 OF 13 SHEETS