

BRIDGE GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-H2-1(32)	2004	17	32

1. General Specifications: Hawaii Department of Transportation, Standard Specifications for Road, and Public Works Bridge Construction, 1994, together with Special Provisions prepared for this contract.
2. Design Specifications: AASHTO 1998 LRFD Bridge Design Specifications (Second Edition) and its subsequent interim specifications with interim supplements and modifications by the Highways Division, Department of Transportation, State of Hawaii. California Department of Transportation seismic specifications and methodology.
3. Loads:
- (A) Dead Load: An allowance of 25 PSF for future wearing surface of asphalt concrete has been provided for in the design.
- (B) Live Load: AASHTO HL-93 Truck Loading
- (C) Seismic Loads: Acceleration coefficient - 0.17  
Seismic Performance Zone - 2  
Importance Category - Critical  
Soil Profile - Type 1

4. Materials:
- (A) All concrete strengths shall be as noted below:

Item No.	Structural Parts	Classes of Concrete	Compressive Strength, f'c (28 Days)
(1)	Abutment and Retaining Walls	-	4000 PSI
(2)	Except as noted otherwise, all others	A	3000 PSI

All concrete with the exception of Class A concrete shall have a maximum W/C Ratio of 0.45. The W/C Ratio for Class A concrete shall follow the Standard Specifications.

- (3) The use of any calcium chloride in any concrete is prohibited.
- (4) All reinforcing steel shall be ASTM A 615 Grade 60 unless otherwise noted.
- (5) Reinforcing steel shall be ASTM A 706 where welded connections are required.
- (6) All structural steel shapes and plates shall meet the requirements of ASTM A36 and be hot-dipped galvanized after fabrication, unless noted otherwise.
- (7) Steel pipes shall conform to ASTM A53 Type E or S, Grade B, Schedule 40.
- (8) All anchor bolts, washers and nuts shall be ASTM A449 hot dip galvanized after fabrication, unless otherwise noted.
- (9) Unless shown otherwise, all connections shall be ASTM A325N bolts and galvanized.

5. Structural Steel:
- (A) Workmanship shall be in accordance with the latest AASHTO and AWS codes.
- (B) Unless shown otherwise, all embedded bolts, anchors, plates, pipes, inserts, etc., shall be hot-dipped galvanized after fabrication.
- (C) No holes other than those specially detailed shall be allowed through structural steel members.

6. Reinforcement:
- (A) The minimum cover measured from the surface of the concrete to the face of any reinforcing bars shall be as follows, except as otherwise shown:
- (1) Concrete cast against and permanently exposed to earth = 3"
- (2) All others unless otherwise noted = 2".
- (B) Reinforcing bars shall be detailed in accordance with the latest edition of the A.C.I. Detailing Manual unless otherwise noted.
- (C) Minimum clear spacing between parallel bars shall be 1 1/2 times the diameter of bars (for non bundled bars). In no case shall the clear distance between the bars be less than 1 1/2 times the maximum size of the coarse aggregate or 1 1/2".
- (D) All dimensions relating to reinforcing bars are to centers of bars unless otherwise noted.
- (E) Reinforcing bars shall be securely tied at all intersections and lap splices except where the spacing of intersections is less than one foot in each direction, in which case alternate intersections shall be tied.

7. Construction Notes:
- (A) See Standard Specifications and Special Provisions.
- (B) The Contractor shall verify all dimensions and site conditions and shall report any discrepancies in writing to the Engineer before commencing work or ordering materials.
- (C) The Contractor shall verify all site conditions and not rely upon these plans for existing stream channel location, roads, roadway gutters, curbs and sidewalks, etc.. Conditions may differ from those shown.
- (D) The Contractor shall be solely responsible for the protection of adjacent properties, utilities and existing and new structures from damage due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
- (E) The Contractor shall verify the location of all utility lines and notify the respective owners before commencing with excavation, and any temporary piling or sheeting.
- (F) Large impacting or vibratory type of equipment will not be permitted in the drilling of holes.
- (G) The concrete surfaces which new concrete is poured against shall be cleaned and roughened to a full amplitude of 1/4 of an inch.
- (H) Unless otherwise noted all finish grades shall match existing grades.
- (J) Except as otherwise noted, all vertical dimensions are measured plumb.
- (K) For concrete finish see Standard Specifications and Special Provisions.
- (L) Construction joints may be relocated or additional ones added subject to the approval of the Engineer.
- (M) Unless otherwise noted, all exposed concrete edges shall be chamfered 3/4" x 3/4".
- (N) The Contractor shall refer to the existing drawings for the approximate location and size of all existing reinforcing bars prior to drilling.

8. General:
- (A) The scope of work for this project consists of the seismic retrofit construction of Meheula Parkway and Pineapple Road Bridges.
- (B) The Contractor's attention is directed to the following Sections of the Special Provisions : Subsection 107.13 - Public Convenience and Safety; Subsection 107.21 - Contractor's Responsibility For Utility Property And Services; and Section 645 -Traffic Control.
- (C) At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
- (D) The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
- (E) The Contractor shall notify in writing, the Oahu Transit Services, Inc. Roads Supervision Office, 811 Middle St., Hon., HI 96819 (telephone no. 848-4571) seven (7) days prior to any paving operations.
- (F) The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
- (G) Smooth riding connections shall be constructed at all limits of resurfacing, including the beginning and end of project, connecting approaches, side streets and driveways as shown on the plans and/or as directed by the Engineer.
- (H) Dressing of shoulder, sidewalk and bus turnout shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to the various contract items.
- (J) Existing drainage system will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to various contract items.
- (K) Earth swale shall be graded to drain. This work shall be considered incidental to the various contract items.
- (L) The Contractor shall provide for access to and from all existing side streets at all times.
- (M) All saw cutting work shall be considered incidental to Excavation for Reconstruction of Pavement Areas.
- (N) No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way except at locations designated in writing and approved by the Engineer. If use of location is approved by the Engineer, the Contractor shall obtain a permit to use the property within the highway right-of-way from the State Right-Of-Way Branch at telephone no. 692-7332.
- (P) All items not listed in the proposal schedule shall be incidental to the various items of work and will not be paid for separately.
- (Q) Standard detail drawings refer to all structures in general, except for modifications as may be required for special conditions. For such modifications refer to the corresponding detailed drawings.

- (R) The Contractor shall provide adequate traffic signage and warning devices for motorist throughout the work.
- (S) Additional as-built plans for the existing structures are available from the Highways Design Branch located at the Department of Transportation, Highways Division, Kakuhihewa Building, Room 609, 601 Kamokila Boulevard, Kapolei, HI 96707. The telephone number is 692-7583.
- (T) The Contractor shall follow the manufacturer's recommendations for the installation of the epoxied bolts, epoxy bonding agent, or epoxy grout.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature: David K. Fujimura  
EXPIRATION DATE OF THE LICENSE: 4-30-06

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
BRIDGE GENERAL NOTES  
  
INTERSTATE ROUTE H-2 SEISMIC RETROFIT  
MEHEULA PARKWAY  
AND PINEAPPLE ROAD BRIDGES  
PROJ. NO. BR-H2-1(32)  
  
SCALE: NONE      DATE: DECEMBER 2003  
  
SHEET No. S0.2 OF 18 SHEETS

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