

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(49)	2000	3	16

## GENERAL

- The scope of work for this project consists of: Seismic retrofit of bridge abutments. This includes concrete blocking, pipe restrainers, bolsters, pedestals, and access hatches.
- The contractor is reminded of the requirements of Subsection 108.01 – Subletting of Contract, which requires him to perform work amounting to not less than 50 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
- 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.
- 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.
- 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.
- The existing bridge information shown in these drawings was obtained from the original bridge drawings and is presented for reference purposes only. No responsibility is assumed for the accuracy of the existing information presented. It is the Contractor's responsibility to verify independently all of the as-built information.
- The Contractor shall visit the construction site and shall verify all dimensions and conditions prior to starting any work. The Hawaii Department of Transportation (D.O.T.) Representative shall be notified immediately of any discrepancies found.
- The Contractor shall be Responsible for Coordination of all work and Materials including those furnished by sub-contractors.
- The Contract Structural Drawings and Specifications represent the finished structure and they do not indicate the method of construction. The Contractor shall provide all measures necessary to protect the structure from damage during construction.
- All holes, depressions and wheel ruts shall be filled and compacted with Asphalt Concrete Pavement, Mix No. V
- Smooth riding connections shall be constructed, including the beginning and end of project, connecting approaches.
- 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.
- Earth swale shall be graded to drain. This work shall be considered incidental to the various contract items.
- The Contractor shall provide for access to and from all existing side streets at all times.
- All work to remove temporary facilities by the Contractor shall be considered incidental to various contract items in the proposal.

## BASIS FOR SEISMIC RETROFIT:

- Design Specifications: AASHTO, Standard Specifications for Highway Bridges, 16th Edition (1996)
- Seismic Loading:
  - Seismic Performance Category \_\_\_\_\_ D
  - Acceleration Coefficient \_\_\_\_\_ 0.36
- The intent of the project is to retrofit the structure to prevent collapse due to a design seismic event with a maximum acceleration coefficient of 0.36
- Concrete abutment blocking is provided to engage the soil behind the back wall in resisting longitudinal movement of the bridge during a seismic event. A small gap is provided to permit normal movement.
- Abutment shear key (Pipe Restrainer) retrofit is provided to prevent large transverse movements of the bridge at the abutments.
- Catcher (Pedestal) retrofit is provided to prevent girder drop due to seismic movements.

## STRUCTURAL MATERIALS:

- General Specifications: Hawaii Standard Specifications for Road, Bridge, and Public Works Construction, 1994, together with Special Provisions.
- Concrete Classes:
  - Existing:
    - Columns, Pier Cap Beams (Assumed) \_\_\_\_\_  $f'c = 4,000$  psi
    - Footings (Assumed) \_\_\_\_\_  $f'c = 4,000$  psi
  - New:
    - Bolsters, Pedestals \_\_\_\_\_  $f'c = 3,000$  psi
    - Abutment Concrete Blocking \_\_\_\_\_  $f'c = 2,500$  psi
- Reinforcing Steel:
  - Existing:
    - Column Main Reinforcing and Dowels \_\_\_\_\_  $f_y = 40,000$  psi
    - All Others \_\_\_\_\_  $f_y = 40,000$  psi
  - New:
    - All Bars, Dowels and Stirrups – ASTM A615 –  $f_y = 60,000$  psi
- Structural Steel:
  - Steel Plate for Pipe Guide – ASTM A36 –  $f_y = 36,000$  psi
  - Steel Pipe Restainer – ASTM A53, Grade B –  $f_y = 35,000$  psi

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	



THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>GENERAL NOTES</b>	
SEISMIC RETROFIT OF VARIOUS BRIDGES VICINITY OF SOUTH OF HONOKAA FEDERAL AID PROJECT NO. BR-019-2(49)	
SCALE: AS NOTED	DATE: October 1999
SHEET No. S1 OF 16 SHEETS	