



The Honorable
Eddie Baza Calvo
Governor

The Honorable
Ray Tenorio
Lieutenant Governor

SEP 09 2016

Mr. William Castro
Director
Bureau of Statistics & Plans
P.O. Box 2950
Hagatna, Guam 96932



*Recd
Comp 9/15/16*



Director
FELIX C. BENAVENTE
Deputy Director

TN10-1502

Attn: Administrator, Guam Coastal Management Program

Subject: Ajayan Bridge Replacement Project, Inarajan, Guam
Project No. GQ-ER-0004 (114)
Coastal Zone Management Act (CZMA) Program Consistency Determination

Dear Mr. Castro:

The U.S. Federal Highway Administration (FHWA) and the Government of Guam Department of Public Works (DPW) propose to replace the Ajayan Bridge located on Route 4 on the boundary between the Municipalities of Merizo and Inarajan, Guam.

Project Description

The existing Ajayan Bridge is a single-span cast-in-place concrete box girder bridge that was constructed in 1968 with a span of approximately 76.2 feet and a skew of 40 degrees. It consists of two lanes that cross over the Ajayan River just upstream of the river mouth as it enters the ocean, as shown in Appendix A – Project Location Map. Abutments are founded on concrete piles; the deck has an asphalt concrete-wearing surface. The most recent bridge inspection report, dated May 27, 2004, noted that the substructure and channel are rated in serious condition. The damage noted includes cracking and differential movement of substructure units and significant scour at abutments, as shown in Appendix B – Site Photographs. The channel alignment and waterway opening are also noted as deficient.

The existing bridge will be demolished and replaced with a new 40-foot-wide by 105-foot-long bridge. The proposed improvements include two 12-foot-wide lanes with 8-foot-wide paved shoulders. Roadway alignment and grade will match the existing at the points of tie-in.

To accommodate traffic while the new bridge is being constructed, the existing bridge will be demolished in two phases (i.e., demolishing one side [longitudinally] of the bridge at a time). This will allow two-way traffic (one lane, controlled by traffic lights) to use the bridge during demolition and construction.

The project will include demolishing and removing the existing bridge structure and existing pile

caps. The existing piles below the waterline will be cut and capped at the mudline but left in-place. This will allow for minimal disturbance of the aquatic ecosystem. Roadway work within the project limits will include removing the existing pavement, replacing full-depth pavement, and replacing the guardrails. The proposed action will also include geotechnical sampling, testing, and analysis. As shown in Appendix C – Proposed Geotechnical Soil Boring Locations, there will be two soil boring locations for bridge foundations, one at each proposed substructure unit, to a depth of at least 100 feet or at least 10 feet into competent bedrock, whichever is shallower. Additionally, there will be two shallow borings to a depth of 15 feet within the roadway approach area.

Demolition and Construction Methods

Demolition

Bridge demolition will include removing the existing bridge deck, box beam, abutments, wing walls, guardrails, and parapet. The existing bridge is approximately 29.6 feet wide and will be demolished in two phases to allow for one lane to remain open to traffic. Phase 1 will include sawcutting the westbound portion of the existing bridge and removing it by crane. Phase 2 will include the same actions to the eastbound portion of the existing bridge. Before demolition and removal, a temporary concrete barrier will be installed on the existing bridge, and existing utilities will be temporarily relocated to the opposite portion of the bridge during each phase.

Demolition of the existing abutment walls will be accomplished using jackhammers and/or hoe rams, and removed via mechanical equipment such as a backhoe. The existing bridge abutments will be demolished, and the existing piles will be cut down to the river bed. The soil between the old abutment and new abutment will be excavated, and 48-inch-thick grouted riprap will be placed on a gradual slope from the new abutment to the remaining old pilings as shown in Appendix D – Bridge Profile. A combined total of approximately 540 cubic yards of soil and concrete abutment wall material will be excavated from below the Mean High Water (MHW) line of the Ajayan River. The combined total linear disturbance to the stream channel from the excavation of the soil and concrete abutment wall material will be approximately 407 linear feet.

Construction

Construction of the new bridge will also be performed in two phases so that two-way signal-controlled traffic can be maintained in one lane during construction. Phase 1 will include demolishing the existing westbound portion of the bridge and constructing the new westbound portion of the bridge. During Phase 1, utilities and two-way signal-controlled traffic will be temporarily relocated to the eastbound portion of the existing bridge. Phase 2 will include demolishing the existing eastbound portion of the bridge and constructing the new eastbound portion of the bridge. During Phase 2, utilities will be permanently installed in the westbound portion of the new bridge, and two-way signal-controlled traffic will be temporarily relocated to the westbound portion of the new bridge. Work areas for Phase 1 and Phase 2 are shown in Appendix E – Traffic Control Plans.

A new bridge foundation will be constructed inland, or behind, the existing abutment to minimize disturbance to the river channel. The proposed abutments will be set back from the existing abutments. The soil and grouted riprap between the existing piles and the new abutment will be sloped back at a 3H:1V ratio. The two new abutments will be constructed at the top of the slope and supported by 12 piles (per abutment), for a combined total of 24 new octagonal 16.5-inch-diameter concrete piles (100 tons per pile). The new abutments and abutment piles will

be constructed above the MHW line.

Approximately 947 cubic yards of grouted stone riprap will be placed along the abutment walls, below the MHW line, to protect the abutment from erosion caused by waves. The riprap (fill material) will be placed along approximately 401 linear feet of the stream channel. The riprap will be placed within the excavation footprint and will not impact additional areas of the stream channel.

Construction Best Management Practices (BMPs) will include catchment platforms and protective netting, silt screen fences, and turbidity curtains. Catchment platforms and protective netting will be installed under the bridge to keep debris from falling into the water. Silt screen fences will be placed at the slope toe around the river edges to prevent erosion and rubbish from going into the water. Turbidity curtains will be installed at both river banks surrounding the work areas to prevent the spread of silt and sediment into the river and bay (see Appendix F – BMP Drawings).

The project is funded through the U.S. Department of Transportation, FHWA Federal-Aid highway program. DPW is seeking a Department of the Army permit for work in waters of the United States, and is providing its consistency certification for this project to the Bureau of Statistics and Plans, Guam Coastal Management Program, in accordance with the Coastal Zone Management Act section 307(c)(3) and 15 CFR part 930, subpart D. In addition to the Federal Consistency package, DPW will submit a 401 Water Quality Certification package to the Guam Environmental Protection Agency for their review and processing.

The proposed action to replace the Ajayan Bridge is consistent with the policies of the Guam Coastal Management Program (CZMA), in accordance with the Guam Coastal Management Act of 1972 (P.L. 92-583). A consistency assessment package is enclosed that discusses each of the 16 enforceable policies with findings that the proposed action and its effects are consistent with these policies.

Please contact Joaquin Blaz, Acting Program Administrator, Department of Public Works at (671) 649-3121 or Michael Lanning, Program Manager, Parsons Transportation Group at michael.lanning@parsons.com or by phone at (671) 648-1060 if you need additional information.

Sincerely,



GLENN LEON GUERRERO
Director

Enclosure: GCMP Federal Consistency Assessment Package

cc: Joaquin Blaz, DPW (via email)
Richelle Takara, FHWA (via email)
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