26 November 2021

TERMINATION LETTER REPORT

SUBJECT: Saipan Beach Road Coastal Storm Risk Management Study, Island of Saipan, Commonwealth of the Northern Mariana Islands

1. **Purpose:** To provide information concerning termination of the subject study.

2. **Authority:**

The study was conducted under Section 444 of the Water Resources and Development Act (WRDA) of 1996 (Public Law 104-303), as amended by Section 207 of WRDA 1999. The authority states:

> "The Secretary may conduct studies in the interests of water resources *development including navigation, flood damage reduction, and environmental restoration in that part of the Pacific region that includes American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands."*

The study was funded under Additional Supplemental Appropriations for Disaster Relief Act of June 6, 2019 (Public Law 116-20). Public Law 116-20 appropriated funds for the following:

> *"Necessary expenses related to completion, or initiation and completion, of authorized studies of flood and storm damage reduction, including shore protection."*

Corps Policy Guidance for Implementation of Public Law 116-20 specifies that:

> *"Feasibility studies that are predominantly for flood and storm damage reduction are eligible to be considered for FY19 Supplemental Investigations funds."*

Funding was received in January 2020 to initiate a Feasibility Study at full Federal expense under Public Law 116-20 and a Feasibility Cost Sharing Agreement (FCSA) was executed on March 10, 2020.

The non-federal sponsor (NFS) for the study was the Commonwealth of the Northern Mariana Islands (CNMI). This report briefly summarizes the engineering and cost details of the Tentatively Selected Plan (TSP), which was the National Economic Development (NED) plan. Although, the U.S. Army Corps of Engineers, Honolulu District (Corps) identified a project with Federal interest in the TSP, the NFS requested termination of the study on September 23, 2021, due to non-concurrence with the recommended plan.

3. Congressional Delegation: Delegate Gregorio Kilili Camacho Sablan (I) has an interest in the subject project.

4. Project Purpose and Need: The study assessed coastal storm risk management (CSRM) alternatives to reduce tropical cyclone (typhoon/storm) induced damages and long-term erosion to Beach Road, a seaward pedestrian walkway, and landward infrastructure and structural property. Long-term coastal erosion is threatening Beach Road, a primary territorial highway and main public thoroughfare on the island of

Saipan. The shoreline in the study area is near the seaward traffic lane of Beach Road. A significant storm event (*e.g.*, typhoon) may result in catastrophic failure of Beach Road due to storm-induced erosion. Potential damages include: 1) storm-induced flooding of landward infrastructure; 2) utility, water line, and sewer line impacts; and 3) traffic detours or delays.

5. Project Location: The Island of Saipan is the largest island of the Northern Mariana Islands, a commonwealth of the United States in the western Pacific Ocean, located approximately 120 miles north of Guam (Enclosure A). Beach Road (Highway 33) is Saipan's only coastal highway. The two-mile study area extends along the shoreline bordering Saipan Lagoon adjacent to Beach Road from Chalan Monsignor Guerrero Road (Highway 31) north to the 13 Fishermen's Memorial.

6. Reasons for Study Termination: The study was terminated at the request of the NFS because the NFS did not support the TSP. The NFS requested study termination because the TSP did not meet the objectives of the NFS to reduce risk with natural and nature-based solutions. Throughout the study process, the NFS expressed interest in nature-based solutions, such as a hybrid or living shoreline or similar soft erosion control measures to address coastal storm damage to Beach Road. The study team engaged with national experts to evaluate and assess nature-based solutions. The assessment indicated that nature-based solutions could partially work in CNMI; however, the cost of constructing them and maintaining them are not within the Federal interest for CSRM. The scientific literature suggests that onshore nature-based solutions are not expected to survive in high energy wave environments, as in this study area. As such, the nature-based solutions investigated would not provide economically justified, CSRM benefits at the project site over the 50-year economic evaluation period. A hybrid seawall, described below, was identified as the TSP and NED Plan with a Federal interest (it has a benefit to cost ratio above 1.0). The TSP included some nature-based measures, including planting vegetation. However, lacking additional nature-based measures, the hybrid seawall did not meet the objectives of the NFS and the NFS provided notice to terminate the study in September 2021.

7. TSP: Based on the evaluation and comparison of the alternatives, a hybrid seawall was selected as the TSP. The hybrid seawall design includes locally sourced limestone grouted stone wall superstructure constructed over a pre-cast concrete block foundation. The wall location would be immediately seaward of the pedestrian pathway and would include planting of vegetation on the shoreline and/or placement of edging/sills to reduce erosion and manage coastal storm damage risk. The TSP has a total project first cost of approximately $39.5 million (at FY2021 price levels), total net benefits of $1,322,700, and a benefit-cost ratio of 1.73. By comparison, the vegetation only alternative has a total project first cost of approximately $23 million (at FY2021 price levels), total net benefits of -$1,014,500, and a benefit-cost ratio of .03.

8. Project Cost Allocation Summary: In accordance with the cost share provisions of Section 104 of WRDA 1986, as amended (33 U.S.C. 2213), the Federal share (65%) of the project first cost is estimated to be $25.4 million and the non-Federal share (35%) is

estimated to be $14 million, which includes $373,000 in lands, easements, rights-of-way, relocations, and disposals.

9. Summary of Expenditures Federal Costs: Although the NFS signed a cost-share agreement, the study was fully Federally funded. Federal funds of $1,721,000 were provided for this study and $1,321,291.32 were expended as of November 16, 2021. The final cost for the study is estimated to be $1,354,018.15.

Enclosure:

A: Map of the Saipan Beach Road study area.