

Phase 1-A: Scope of Work Summary Description

Program Management Support for the Guam Commercial Port Improvement
Program

Contract No. DTMA1D10002

Revision FINAL DRAFT

Prepared for



DOT/Maritime Administration, MAR-380

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Scope of Work Summary Description

EA Engineering, Science, and Technology Inc. (EA) prepared this Scope of Work (SOW) Summary to provide a synopsis of the features to be considered for inclusion in a revised Joint Port Authority of Guam (PAG)/ Maritime Administration (MARAD) Implementation Plan (IP) to support the Guam Commercial Port Improvement (GCPI) Program. The SOW is a collaborative effort reflecting comments and input from MARAD staff, PAG Board, PAG Management, the Port Users Group and the OAE.

The summary describes the project arrangement presented in the PAG drawing "Guam Port Improvement Project, Phase 1-A Base Execution Package, dated July 7, 2011. The drawing provides a graphic supplement to the PAG letter dated July 20, 2011 which provided comments on the May 2011 IP.

Upon approval by the PAG Board, this SOW Summary will serve as a basis for the preparation of engineering cost estimates. The estimates will, to the maximum extent possible, be based on previous cost estimating and preliminary engineering. In some cases, the current SOW deviates substantially from the July 2010 Preliminary Engineering Design, and cost estimates will be based on concept level preliminary engineering.

To complete a cost estimate for the Modernization, a number of needed items required from PAG or their OAE are enumerated below and needed dates are indicated.

I. Wharf Improvements

The following elements of the program are under design by PAG to improve the condition of the Wharf structures. In addition, MARAD is performing an independent evaluation and inspection. At the conclusion of the independent evaluation, the elements described below may be refined or revised.

I.1. F5 Structural Repairs and Cathodic Protection

An independent evaluation is underway; however, there is a need to:

- Complete repairs to spalling/cracking concrete in Berth F5 pilings and cargo deck/beams.
- Implement cathodic protection of steel components, as needed.

Structural repairs to concrete superstructure and piles, concrete coating to slow down future chloride penetration and cathodic protection for steel reinforcing bars within the concrete is envisioned. PAG's Owner Agent Engineer (OAE) is currently developing repair plans and cost estimates .

I.2. Marine Repairs

Repairs and rehabilitation of dock and related structures include:

- sacrificial anode type cathodic protection for F3, F4, and F6 sheetpile bulkhead,
- miscellaneous debris removal,
- fender repairs,
- concrete spalls at the fascia beam and cranes stops at Berths F4 and F6
- repairs to Existing Outfalls Bottom Debris Removal.

PAG is preparing DB plans, specs, cost estimates and an update to a PDRR.

I.3. F4 and F6 Ground Improvements

Liquefaction potential exists at Berth F4&F6. Some form of ground improvement such as the use of stone columns (similar to past improvements at F5) and cathodic protection for existing sheet pile bulkhead will be implemented.

PAG is preparing DB plans, specs, cost estimates and an update to a PDRR.

II. Break Bulk Cargo Improvements

II.1. Demolition

II.1.a. Warehouse 2

Demolition of Warehouse 2 structure down to the existing ground slab. Does not include removal of foundations. All infrastructure lines are to be capped and sealed.

II.1.b. Restrooms adjacent to Warehouse 2

Demolition and removal of restrooms.

II.1.c. Pac Rim Ice

Demolition and removal of Pac Rim Ice machine facility.

II.1.d. Scale

Remove scale and defer the removal of the drum lot.

II.1.e. Concrete Slab Adjacent to Warehouse 1

Demolition and removal of existing concrete slab adjacent to Warehouse 1.

II.1.f. Gas Station

Demolition and removal of existing Gas Station.

II.1.g. Old Guam Waterworks Association (GWA) Pump Station

Demolition and removal of existing GWA Pump Station located north of the existing Break Bulk (BB) area.

II.1.h. Oil/Water Separator (OWS) Slab

Selective demolition needed to improve concrete berm and OWS.

II.1.i. Existing BB Gate and CMU Wall

Demolition and removal of existing BB Gate and adjacent CMU wall in accordance with the July 2010 Preliminary Engineering Design.

II.1.j. Curbs signage and medians

Demolition and removal of signage and medians adjacent to and affected by the expansion of the existing BB Area according to the July 2010 Preliminary Engineering Design.

II.1.k. Light poles (in coordination w/ Department of Homeland Security (DHS) Grant Project)

Repair or replacement of existing light poles in the existing and expanded BB area per PB drawing Phase 1-A Base Execution Package. Requires new lighting design for expanded BB yard.

II.2. New BB Area Improvements

II.2.a. BB Gate and CMU Walls

Construction of new BB Gate and extension of existing CMU walls to incorporate new layout for the BB area per the July 2010 Preliminary Engineering Design.

II.2.b. BB Guard Shack

Construction of a BB guard shack per specifications in the July 2010 Preliminary Engineering Design.

II.2.c. Paving of expanded BB Area

Requires completion of related site work preparation and paving in order to expand existing BB area to a total area of 9.3 acres.

- Expanded BB Yard- Demo existing parking pavement and construct pavement patch profile as per the July 2010 Preliminary Engineering Design.
- Gas Station/Pump Station/ Slabs (and other demo areas) - Construct pavement patch profile as per the July 2010 Preliminary Engineering Design.
- Utility cuts (Utility corridor to Admin Building, utility cuts for new lighting and CFS upgrades) - Construct pavement patch profile as per July 2010 Preliminary Engineering Design.

II.2.d. Chain-link Fence and Gates Adjacent to Warehouse 1

Construction of new chain-link fence and gates as per the July 2010 Preliminary Engineering Design to separate port operations from Casamar and all other tuna operations in the adjacent area located west of the expanded BB area.

II.2.e. BB Lighting

Repair and/or replace existing 50' lighting in BB yard and installation of additional lighting for expanded BB area.

II.2.f. CFS Building Upgrades

Reduced upgrades, from the July 2010 Preliminary Engineering Design, to include modifications to exterior doorways, exterior bathrooms, roof ventilators, and the build-out of office space as discussed with PAG Operations. – See sketches of exterior elevation and interior floor plan.

II.2.g. Combined Drum Lot and Equipment Wash-down Area with OWS.

Modify and upgrade existing Drum Lot facility. Install OWS and make berm improvement on lot with OWS per the Storm Water Pollution Prevention Plan (SWPPP) requirements consistent with the July 2010 Preliminary Engineering Design.

Designated area for machinery and equipment wash-down will be adjacent to or in conjunction with Drum Lot OWS.

III. Existing Container Yard (CY) Improvements

Demo of existing facilities will require patching work and any other incidentals.

III.1. Demolition

III.1.a. Selected Fencing

Demolition of fencing near existing gate and demolition of existing fencing along eastern border of Area A2 to allow access into expanded container yard per PB drawing Phase 1-A Base Execution Package.

III.1.b. Chassis Wheel Stops

Removal of existing damaged chassis wheel stops (to be replaced)

III.1.c. Crane Shop

Demolition and removal of crane shop.

III.2. New

III.2.a. Low Voltage Electrical/Communication Lines

Utility trench/buried conduits to provide communication/security links between Existing Container Gate, High Tower, Existing Admin Bldg IT Spaces, new Gate Complex, Port Police, new BB Gate, and the proposed new Emergency Operations Center (EOC) Building adjacent to the existing Administration Building. Common trenches/duct banks will be required for and throughout the CY Expansion and new Gate Complex. No trenching for LV/Communication lines or future unfunded facilities will be done in the existing yard aside from short connections to the “backbone trench” from the Existing Container Gate to the Existing Administration Building.

III.2.b. Chassis Wheel Stops

Replacement of approximately (TBD) new chassis wheel stops in existing locations

III.2.c. Crane Shop

Pave demolished area using pavement repair sections consistent with the July 2010 Preliminary Engineering Design.

III.3. Upgrades and Improvements in the Existing CY

III.3.a. High Tower

Renovations and upgrades are required. MARAD will work with Port develop requirements and provide upgrades to electrical, lighting and plumbing to finish stage. Enclosure and final structural finish is not part of the Modernization Program.

III.3.b. Existing Gate Admin Building

Renovations and upgrades to be completed as discussed with PAG Operations. MARAD will work with Port to develop requirements and prepare sketch including a sanitary sewage line pumping into the existing force main.

III.4. Do Not Demo:

For clarification the following facilities will not be demolished

III.4.a. Old Seaman’s Club and slab

III.4.b. Unitek hazardous waste building

III.4.c. Load Center (LC) 3. Will be not demolished because it serves the lighting for western portion of the existing CY and a costly cable run would be required from LC-5 across the existing CY

New CY

IV.1. Demolition:

IV.1.a. Selected Fencing

Demolition and removal of selected fencing along north eastern borders of the existing container yard needed to allow access into the newly expanded CY and terminal gate area.

IV.1.b Existing High Mast Light Poles in CY Expansion Area (Boonie Yard)

Demolition of poles interfering with expansion area.

IV.2. New

IV.2.a. CY Paving

Paving of new CY as per pavement sections developed in the July 2010 Preliminary Engineering Design in order to allow for 4-high stacking of containers and grounded operations.

IV.2.b. Inbound/ Outbound Trouble Truck Parking and Gate Employee Parking

Identification and markings for the newly designated gate employee parking and trouble truck parking area per PB drawing Phase 1-A Base Execution Package.

IV.2.c. Water System

IV.2.c.1. Alternative Water Main Bypass

Installation of main water line bypass from existing water main along Route 11A near southeastern portion of the new CY to northern border of the expanded CY and terminal gate area. Bypass will be coordinated with placement of new water tanks near the existing CY gate. Port water service will be routed from the water tanks to the existing line servicing the existing port facility and the buildings on the western end of the terminal. The existing continuous line through the Port will serve the remainder of Cabras Island. See EA sketch.

IV.2.c.2. Water Tanks and Pumps

Construct water storage tanks and pump station to provide minimum required water flow for entire port facility at build out consistent with the July 2010 Preliminary Engineering Design.

IV.2.d Fire Hydrants and Associated Piping

Install fire hydrants and necessary infrastructure in new CY and new gate area in accordance with relevant codes and consistent with specifications outlined the July 2010 Preliminary Engineering Design.

IV.2.e. New Electrical

IV.2.e.1 LC 5

New LC and infrastructure to power:

- Lights in new CY
- Half Reefers

- New Gate Complex and lighting
- Gate Admin Building
- Firewater System

New LC building would be sized to accommodate genset(s) to be purchased and installed by the PAG separately from the GCPI Program. The building will be constructed per the 30% design drawings but relocated next to existing container gate building. EA to verify if the current capacity required and make minimum provisions for PAG to expand through the installation of electrical components to the capacity shown in the July 2010 Preliminary Engineering Design.

IV.2.e.2. Electrical Distribution

Install conduits and cabling for electrical distribution from new LC-5 to new gate structure, existing gate structure, new water pump station, and new lighting in new CY and gate area. Conduit capacity only would be provided for ½ of the reefers.

IV.2.f. High-mast Lighting

Construction of foundations and installation of 100' high mast poles and lighting fixtures in the expanded CY.

IV.2.g. Low-voltage Electrical/Communication Lines

Conduit runs need to be placed for the low voltage communication, security and TOS/GOS. Utility trench/buried conduits to provide communication/security links between New Container Gate, Existing Container Gate, High Tower, Existing Admin Bldg IT Spaces.

IV.2.h. Fencing

Installation of necessary fencing along southern border, eastern border and as needed within the new container yard.

IV.2.i. Storm Drainage

Construction of storm drainage system for the new gate complex and new CY. Utilize outfall location(s) identified by PAG in the July 2010 Preliminary Engineering Design and NEPA documentation.

New Terminal Gate Area

V.1. Demo

V.1.a. Selected Fencing

Demolition and removal of selected fencing along north eastern borders of the existing CY needed to allow access into the newly expanded container yard and terminal gate area.

V.2. New

V.2.a. Gate Complex Paving

Paving and markings of new 3.7 acre terminal gate area. Utilize appropriate paving profiles from the July 2010 Preliminary Engineering Design.

V.2.b. New Gate Structure

Construction of a new 4-lane gate and canopy structure. Wider islands and shade booths will be provided so manual operations can continue until full automation is achieved and for emergency operation. Gate structure will make minimum provisions to permit future construction of a 7-lane structure. Subsurface conduit runs would be installed to the southernmost edge of the structure to allow for the expansion to the 7-lane as shown in the July 2010 Preliminary Engineering Design.

V.2.c. Low-voltage Electrical/Communication Lines

Installation of low voltage electrical and communication conduits within new terminal gate complex and to/from relevant structures within the area (future Inbound/Outbound OCR Canopy, Existing Gate Structure, New Gate Structures, and WIM).

V.2.d. Fencing

Extend the existing CMU wall along the northern border of the new gate complex. Install any necessary fencing around the perimeter of the expanded CY.

Administrative Area

VI.1. New

VI.1.a. Low-voltage Electrical/Communication Lines

Utility trench/buried conduits to provide communication/security links between New Container Gate, Existing Container Gate, High Tower, Existing Admin Bldg IT Spaces.

VI.1.b. DHS lighting Grant Project

This is a separate project funded by existing DHS grant for improvement to lighting in existing Container Yard. The implementation of DHS grant project as a standalone project will be coordinated with total program and to provide for the efficient synergy between DHS grants project and overall GCPI program.

Items required for completion of cost estimate.

Item	Feature	Item Required	Responsible Party	Date Required
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1.	F5 Structural Repairs and Cathodic Protection	Conceptual repair performance plans, specifications, and cost estimates.	PAG/PB	2 Sept 2011
2.	Marine Repairs	conceptual repair plans and cost estimates	PAG/PB	1 Sept 2011
3.	F4 and F6 Ground Improvements	Geotechnical Deliverables with Memo	PAG/PB	25 August
4.	F4 and F6 Ground Improvements	Preliminary Design Requirements Report Addenda	PAG/PB	26 August
5.	F4 and F6 Ground Improvements	conceptual repair plans and cost estimates	PAG/PB	8 Sept 2011
6.	Low-voltage Electrical/Communication Lines	provide requirements for all LV/Comm/TOS-GOS Lines for routing through the terminal.	PAG/PB	2 Sept 2011
7.	Chain-link Fence and Gates Adjacent to Warehouse 1	provide changes due to security and operations conflicts, if any, need to be addressed.	PAG/EA	9 Sept 2011
8.	Wheel Stops in the Existing Yard	Estimate of the number of wheel stops damaged	PAG/EA	9 Sept 2011
9.	Existing Gate Admin Building	Renovations and upgrades to be completed as discussed with PAG Operations	PAG/EA	9 Sept 2011