Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Manila

04 JUN 2018

MEMORANDUM

FOR : **Secretary MARK A. VILLAR**
Secretary
This Department

This refers to the Memorandum dated 03 May 2018 of **DPWH Region XI Regional Director ALLAN S. BORROMEO, CESO IV**, requesting for the approval of the Modification of the hereunder project for FY 2018 General Appropriation Act (GAA), to wit:

As per GAA/Original			***As Modified***		
Project Description					
UACS No. 310204100107000 **Project ID: P00201551MN** OO1: Ensure Safe and Reliable National Road System Network Development Construction of By-Pass and Diversion Roads Davao City Coastal Bypass Road at Jct Davao-Cotabato Road-Bago Aplaya-Talomo-Matina Aplaya-Roxas Avenue-Sta. Ana Wharf-R. Castillo (Bago Aplaya-Times Beach), Package 4, incl. Bridge and ROW, Davao City			OO1: Ensure Safe and Reliable National Road System Network Development Construction of By-Pass and Diversion Roads Davao City Coastal Bypass Road at Jct Davao-Cotabato Road-Bago Aplaya-Talomo-Matina Aplaya-Roxas Avenue-Sta. Ana Wharf-R. Castillo (Bago Aplaya-Times Beach), Package 4, incl. Bridge and ROW, Davao City		
Physical Target	**Unit Cost (P'000)**	**Allocation (P'000)**	**Physical Target**	**Unit Cost (P'000)**	**Estimated Cost (P'000)**
CW1 Construction of Asphalt Road: 1.987 Lane Km	₱ 77,207.77/ Lane Km	**₱ 153,411.84**	CW1 Construction of Asphalt Road: **1.548** Lane Km	**₱ 136,761.17/** Lane Km	**₱ 211,706.288**
CW2 Construction of Road Slope Protection Structure: 5,464.800 sq.m.	₱ 32.90/ sq.m.	**₱ 179,779.50**	CW2 Construction of Road Slope Protection Structure: **3,818.90** sq.m.	**₱ 32.74/** sq.m.	**₱ 125,040.475**
CW3 Construction of Concrete Bridge: 410.130 sq.m.	₱ 129.41/ sq.m.	**₱ 53,075.00**	CW3 Construction of Concrete Bridge: **323.40** sq.m.	**₱ 141.88/** sq.m.	**₱ 45,884.089**
			CW4 Construction of Gravel Road: 0.480 lane km	**₱ 7,573.93/ sq.m.**	**₱ 3,635.488**
EAO	-	**₱ 17,509.66**	EAO	-	**₱ 17,509.66**
ROW: 10 000.000 sq.m.	₱ 9.65/ sq.m.	**₱ 96,500.00**	ROW: 10 000.000 sq.m.	₱ 9.65/ sq.m.	**₱ 96,500.00**
	Total:	**₱ 500,276.00**		**Total:**	**₱ 500,276.00**

Justification:

Decrease in physical target from 1.987 lane km to 1.548 lane km for construction of asphalt road due to the following:

- The road component mainly involves massive embankment from borrow (up to 7 m high) since alignment of the coastal road was moved towards the sea (maximum of 20 meters) from its original coastline alignment due to the reclamation of the proposed adjacent esplanade funded under FY2018 GAA (attached are back-up computations);
- Based on new the alignment, most portion has higher depth of up to 5 m which requires huge volume of 34,107.42 cu. m. of backfill sand. This also includes separation geotextile (basal reinforcement woven geotextiles) with an area of 27,578.37 sq.m., drainage geotextiles (bi-axial separation and protection non-woven geotextile for geotube) with an area of 5,748.29 sq.m and (bi-axial separation and protection non-woven geotextile for geotube and hydraulic filter (geotube) to withstand pressures/forces as well as stability against sea waves;
- The road component also covers the construction of 4-lane (15.4 m) with insertion lane of 3.35 m (along junction), 100 mm thick asphalt pavement and construction of sidewalk, curb and gutter, and bicycle lane with a total width of 7.54 m. The entire width of the road including off-carriageway is 22.94 m. or almost equivalent to a 7-lane road. Hence, embankment works shall be extended to consider off-carriageway; and
- The source of sand and rocks is from the Mabuhay Quarry, General Santos City, Region XII which will be transported via Barge (distance from quarry site for the materials to wharf is 35 km).

Decrease in physical target for road slope protection structure from 5,464.80 sq.m. to 3,818.90 sq.m. since the average height of the structure as per design is 5.5m (mostly one side, portions with both sides) instead of the estimated average height of 5m (both sides) due to change in alignment from the coastline.

Decrease in physical target for construction of bridge from 410.13 sq.m. to 323.40 sq.m. due to the following:

- As per actual survey and design, the required length and width of bridge (4 lanes) is 21 m and 15.4 m, respectively, instead of the estimated 21 m and 19.53 m; and
- The appropriate foundation based on structural analysis is bored piles (length=30 m) instead of RC piles, hence, higher unit cost.

Additional type of work (construction of gravel road) to serve as an access road (with an average height of 3 m and width of 6 m) is necessary for the supervision and monitoring of the project as well as for the mobilization of equipment in the implementation of the project as there is no existing road.

Please see attached summary of cost per component for the project.

Based on our evaluation, the herein request is found in order, hence approval is hereby recommended.

RAFAEL C. YABUT
Senior Undersecretary
Undersecretary for Regional Mindanao Operations

APPROVED/~~DISAPPROVED~~:

MARK A. VILLAR
Secretary

RAFAEL C. YABUT
Senior Undersecretary
Officer-In-Charge

2.1 MSQ/ACF/RCY

Department of Public Works and Highways
Office of the Secretary
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