



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

29 JUN 2018

MEMORANDUM

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

ATTENTION : **Undersecretary MARIA CATALINA E. CABRAL, PhD**
Undersecretary
Planning and PPP

This refers to the Memorandum dated 25 June 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			Project Description		
UACS No. 310204100180000 Project ID: P00200409MN OO1: Ensure Safe and Reliable National Road System -Network Development Program Construction of Bypass and Diversion Roads Malagamot Road-Jct Mudiang Road Bypass, incl. Bridge, Davao City			OO1: Ensure Safe and Reliable National Road System -Network Development Program Construction of Bypass and Diversion Roads Malagamot Road-Jct Mudiang Road Bypass, incl. Bridge, Davao City		
Physical Target	Unit Cost (P'000)	Allocation (P'000)	Physical Target	Unit Cost (P'000)	Estimated Cost (P'000)
CW-1 Road Widening: 1.442 lane km	P 9,650/ lane km	P 13,915.30	CW-1 Road Widening: 0.334 lane km	P 14,389.93/ lane km	P 4,806.23590
CW-2 Replacement of Bridge: 421.50 sq.m.	P 91.578/ square meter	P 38,600.00	CW-2 Replacement of Bridge: 421.50 sq.m.	P 137.03/ square meter	P 57,758.88725
CW-3 Replacement of Bridge: 354.06 sq.m.	P 91.578/ square meter	P 32,424.00	CW-3 Replacement of Bridge: 354.06 sq.m.	P 123.43/ square meter	P 43,701.22787
CW-4 Reconstruction from Paved to Concrete: 1.442 lane km	P 24,897.268/ lane km	P 35,901.86	CW-4 Reconstruction to Concrete Pavement: 2.216 lane km	P 34,042.53/ lane km	P 75,438.25692
CW-5 Off-Carriageway Improvement: Shoulder Paving / Construction: 24,712.00 sq.m.	P 6.734/ sq.m.	P 166,414.25	CW-5 Construction of Drainage Structure Along Road: 155.826 lm	P 16.75/ lineal meter	P 2,610.39206
EAO		P 10,418.59	ROW : 1,147.83 sq.m.	P 3.36/ sq. m.	P 3,860.00
			EAO		P 6,825.00
			EXC		P 102,674.00
Total:		P 297,674	Total:		P 297,674

Justification:

Decrease in physical target from 1.442 lane km to 0.334 lane km for widening with higher unit cost due to the following:

- The original scope of work for the road is widening including reconstruction of existing road of the entire 721 lm;
- As per survey, the 167 lm (0.334 lane km) out of 721 lm does not need any reconstruction, only widening;
- The remaining 554 lm out of the original length of 721 lm was considered under the component for reconstruction (into 4 lanes) since said section forms part of the approaches of the bridges for reconstruction/replacement (into 4 lanes) instead of widening including reconstruction; and
- Higher unit cost since the width of additional 2 lanes will be 6.7 m (instead of 5.5m) to make the road of standard width.

For bridges, there is no change in the physical targets for the two bridges, but with higher unit costs due to:

- Consideration for design of the bridges (foundation) is two lines of piles per abutment instead of one line to make the bridges more resilient especially to earthquakes;
- Includes protection works for the road and bridge due to presence of meandering creek which overflows especially during heavy downpour wherein the existing creek can no longer accommodate the volume of water. There is a need for protection works (gabion revetment) not only to prevent flooding in the area but also to protect the bridges and their approaches/bypass project (only 50 m away from the creek) and most especially the residents and properties surrounding the area. There is considerable cost for protection works since height of structures is 3 m (3 layers) and due to inclusion of creek widening within the periphery of the bridge having a volume of 30,892 cu. m. (designed bottom width is 8 m and length considered is 1,020 lm) since the creek is already heavily silted. There is a need to widen the cross-sectional area of the creek to increase the volume capacity and prevent inundation of the area. The residents including concerned LGU requested/recommended for the construction of protection structures along the area due to the perennial flooding being experienced.

Increase in physical target from 1.442 lane km to 2.216 lane km for reconstruction of concrete due to the following:

- The original length for reconstruction (2 lanes) is the existing road of the entire 721 lm or 1.442 lane km, however, as per actual survey, the length needed for reconstruction is the 554 lm (4 lanes) road which forms part of the approaches of the two bridges;
- Higher unit cost for reconstruction due to embankment works (up to 3.5 m high), since the road forms part of the approaches of the two bridges. The road section is a flood prone area and the existing bridge does not have adequate free board especially during heavy downpour. Hence, the need to reconstruct and provide sufficient free board distance of 1.5 from designed flood level. This is also in accordance with the design guidelines, criteria and standards; and
- Higher unit cost is also due to inclusion of retaining wall (steel sheet piles, height of 12 m) to protect the school building adjacent to road project against scouring and due to protection works (gabion revetment) to protect the bypass road from flooding.

Deletion of type of work (off-carriageway improvement: sidewalk, curb and gutter) due to:

- As per actual survey, construction of closed drainage (sidewalk, curb and gutter) is not practical as of the present due to abrupt run-off waters from the upper portion of the project area. There is no proper drainage system (lateral drainage) at the upper portion of the area, hence, run-off waters especially during heavy downpour, abruptly flows causing inundation at the lower area including the road. Hence, the road section requires an open canal to address surface runoff.

Additional project component/type of work (construction of drainage along road) due to:

- The existing RCPC (910 mm dia.) is insufficient to accommodate the run-off waters. This also causes flooding in the area, hence, the need to construct an appropriate structure, which is the single barrel box culvert (3mx1.5mx16m) including drainage going to outfall to prevent flooding.


Justification:

Additional project component/type of work (ROW) due to:

- As per survey, there are structures/improvements that will be affected by the project. Hence, the need for ROW budget as payment for said affected structures.

Component costs for Civil Works, ROW and EAO were adjusted based on the remaining length and work for the bypass road and total required amount, hence, with excess funds of ₱ 102.674 Million.

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


RAFAEL C. FABUT
Senior Undersecretary
Undersecretary for Regional Mindanao Operations

APPROVED/DISAPPROVED:


MARK A. VILLAR
Secretary

2.1 VVD/ACF/RCY

Department of Public Works and Highways
Office of the Secretary



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