

## Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

#### OFFICE OF THE SECRETARY

Manila

September 05, 2022

#### **MEMORANDUM**

TO

KHADAFFY D. TANGGOL

Regional Director DPWH-CAR

Engineer's Hill, Baguio City

Transmitted herewith are the **APPROVED** requests for **modification** of the hereunder stated projects:

- 1. OO1: Ensure Safe and Reliable National Road System Asset Preservation Rehabilitation/ Reconstruction of National Roads with Slips, Slope Collapse, and Landslide Tertiary Roads along Claveria CalanasanKabugao Rd K0646 + 450 K0646 + 472 - - - - **P96,552,000.00.**
- 2. OO1: Ensure Safe and Reliable National Road System Asset Preservation Rehabilitation/ Reconstruction of National Roads with Slips, Slope Collapse, and Landslide Tertiary Roads *Jct Talubin-Barlig-Natonin-Paracelis-Calaccad Rd K0380 + 1112 K0380 + 1295 - - - - P175,000,000.00.*
- 4. OO1: Ensure Safe and Reliable National Road System Asset Preservation Rehabilitation/ Reconstruction of National Roads with Slips, Slope Collapse, and Landslide Secondary Roads *Mt Prov-Cagayan via Tabuk-Enrile Rd K0418 + 580 K0418 + 623, K0418 + 780 K0418 + 898-------***P150,000,000.00.**

- 7. OO1: Ensure Safe and Reliable National Road System Asset Preservation Rehabilitation/ Reconstruction of National Roads with Slips, Slope Collapse, and Landslide Tertiary Roads *Gov. Bado Dangwa National Rd K0319 + 572 K0319 + 736 - - - - - P120,000,000.00.*

Please be reminded that all approved modifications **shall be posted in the DPWH website within five (5) days** from its approval. Failure to comply with this requirement shall be dealt with accordingly.

Under ecretary for Regional Operations in CAR, Regions I, II, IX, X, XI, XII and XIII

2.3 aap/AVS/AGC/ERP



## Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

#### OFFICE OF THE SECRETARY

Manila

July 28, 2022

#### **MEMORANDUM**

FOR

MANUEL M. BONOAN

Secretary

This Department

This refers to the memorandum dated July 4, 2022 of **DPWH CAR Regional Director KHADAFFY D. TANGGOL** requesting for the approval of the **Modification** of the project under FY 2022 General Appropriation Act (GAA), to wit;

-	s per GAA/Orig	inal	As Modified			
		Project D	escription			
UACS No. : Project ID:	310109100778 P00611405LZ	000				
OO1: Ensure S System	Safe and Reliable	National Road	OO1: Ensure S System	afe and Reliable I	National Road	
Reconstruction Slope Collapse	e, and Landslide -		Asset Preservation - Rehabilitation/ Reconstruction of National Roads with Slips, Slope Collapse, and Landslide - Tertiary Roads			
Jct Talubin-Barlig-Natonin-Paracelis-Calaccad Rd - K0381 + 162 - K0381 + 362			Jct Talubin-Barlig-Natonin-Paracelis-Calaccad Rd - K0380 + 1112 - K0380 + 1295			
Physical Target	Unit Cost P	Allocation P ('000)	Physical Target	Unit Cost P	Estimated Cost P ('000)	
CW1 Construction of Road Slope Protection Structure: 9,722.220 Square meters	₽ <b>17,370.00</b> / Square meters	₽ 168,875.000	CW1 Construction of Road Slope Protection Structure: 6,495.500 Square meters	<b>25,998.77</b> / Square meters	₽ 168,875.000	
EAO	-	₽ 6,125.000	EAO	-	₽ 6,125.000	
	Total:	₽ 175,000,000	1.1	Total:	<del>1</del> 75,000.000	
Justification: We from per (file)						

 The revised station limit reflects the exact section which needs immediate slope mitigation due to its susceptibility to soil/ rock collapse

• The decrease from 9,722.220 square meters to 6,495.500 square meters in the physical target is due to the decrease in length of the structure and the decrease in average slant height from 49 meters to 35 meters based on the result of the stability analysis.

UACS No.: 310109100778000 Project ID: P00611405LZ

Page 2 of 2

 The increase in unit cost is due to the design length of 5 meters permanent ground anchors, as recommended in the design analysis. Also, the utilization of the prevailing construction material cost of system components of the Active Protection System contributed to the increase in unit cost thereon causing a deduction in the target area of the proposed slope mitigation.

• The derived unit cost is based on the approved Detailed Unit Price Analysis and Program of Work which consider the lowest canvass cost for high tensile wire mesh, with joint rod, wire

rope, rope grips, coupling coil, pin anchors, and cross clips/ anchors.

See attached Certificate of Reasonableness of Estimates approved by the Regional Director.

 See also the attached evaluation of the Bureau of Construction on the unit cost of the similar type projects.

Based on our evaluation, the submitted request for modification of the said project is in order. Hence, the said request is hereby recommended for Secretary's consideration and approval.

ADOR G. CANLAS

Assistant Secretary for Regional Operations Regions I, II, CAR, IX, X, XI, XII and XIII

APPROVED/DISAPPROVED:

MANUEL M. BONOAN Secretary

3.5 dlbc/ldam/AVS/AGC

Department of Public Works and Highways
Office of the Secretary

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# Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS CORDILLERA ADMINISTRATIVE REGION

Engineer's Hill, Baguio City

July 4, 2022

#### **MEMORANDUM**

FOR

: MANUEL M. BONOAN

Secretary

THRU

: ROBERTO R. BERNARDO

Undersecretary for Regional Operations

Regions I, II, III, IV-A, V & CAR

**SUBJECT** 

: Request for the Modification of the Project: ORGANIZATIONAL OUTCOME 1: Ensure Safe and Reliable National Road System - Asset Preservation Program - Rehabilitation/ Reconstruction of Roads with Slips, Slope Collapse, and Landslide - Tertiary Roads - Jct Talubin-Barlig-Natonin-Paracelis-Calaccad Rd - K0381 + 162 -

K0381 + 362

We are respectfully submitting the modification of the above project in the amount of **One Hundred Seventy-five Million Pesos (Php 175,000,000.00)**, as indicated below:

	As per GAA/Original	As Modified	
Project ID	P00611405LZ		
UACS	310109100778000		
Project Title	Jct Talubin-Barlig-Natonin- Paracelis-Calaccad Rd – <b>K0381 + 162 - K0381 + 362</b>	Jct Talubin-Barlig-Natonin- Paracelis-Calaccad Rd – K0380 + 1112 / K0380 + 1295	
Physical Target	<b>9,722.220</b> Square meters	<b>6,495.500</b> Square meters	

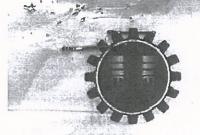
The supporting documents based on D.O. No. 37, series of 2018 are attached for your ready reference.

For the consideration of the Secretary.

KHADAFFY D TANGGOL

Regional Director

CAR.1 CGCE/EFFD/JWC/ABM



# Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS CENTRAL OFFICE

Manila

July 27, 2022

#### **MEMORANDUM**

FOR

: Assistant Secretary ADOR G. CANLAS.

For Regional Operations in REGIONS I, II, CAR, IX, X, XI, XII & XIII

Subject

: 001: Ensure Safe and Reliable National Roads with Slips Slope Collapse and Landslide — Secondary Roads, Rehabilitation/Reconstruction of National Roads Banaue — Mayoyao A Lista — Isabela Bdry. Road P85,905,000.00 and three (3) others.

Forwarded herewith are the result of evaluation for the above-mentioned projects which were referred to this office.

#### PROJECT NO. 1

The amount of Eighty Five Million Nine Hundred Five Thousand Pesos (P85,905,000.00) for 3,140.50  $m^2$  of Slope Protection Structures as submitted was found to be reasonable as evaluated based on the items of work involved and its quantities as reflected in the submitted Program of Works and design plans duly approved by Regional Director, DPWH-CAR.

#### **SCOPE OF WORK**

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ITEM NO.	DESCRIPTION		OUNT cal Cost)	PERCENT Weight (%)
Part A	Facilities for the Engineer	Р	203,439.60	0.25%
Part B	Other General Requirements	P	1,532,726.30	1.85%
Part C	Earthworks	Р	223,796.35	0.27%
Part G	Drainage & Slope Protection Structures	P.	80,769,413.00	97.43%
Part H	Miscellaneous Structures	Р	168,028.00	0.20%
	GRAND TOTAL	P	82,897,403.25	100.00%

Cost of slope protection per  $m^2$  =  $\frac{P82,897,403,25}{3,140.00 \text{ m}^2}$  =  $\frac{P26,400.45}{m^2}$  Cost per kilometer of Road (Exclude Part A, B, C & H) =  $\frac{P80,769,413.00}{3,140.00 \text{ m}^2}$  =  $\frac{P25,722.74}{m^2}$ 

The estimated cost of **P26,400.45** per square meter of slope protection structures for the Rehabilitation/Reconstruction of National Roads with Slips Slope Collapse and Landslide - Secondary Roads – Banaue - Mayoyao A Lista – Isabela Bdry. Road at 3,140.00 square meter is due to design requirements which mainly involved Erosion Control Mat (Type 4), Permanent Ground Anchor, Hydroseeding and Active Wire Mesh System (High Tensile) at **97.43%** of the total project cost coupled with recent price escalation of construction materials and fuel and it is 394.50 km away to project site.

#### (Part A, B, C & G are excluded)

If Facilities for the Engineer, Other General Requirements, Earthworks, and Miscellaneous Structures along the stations as reflected in K0350+650 — K0350+760 per approved plans and location map of the proposed new road alignment are excluded in the computation the resulting cost is only P25,722.74 per square meter, hence it is considered reasonable as the Unit Costs of the items of work involved are within the range of the prevailing cost of the Department.

#### PROJECT NO. 2

The amount of Three Hundred Million Pesos (P300,000,000.00) for 11,394.00 m² of Slope Protection Structures as submitted was found to be reasonable as evaluated based on the items of work involved and its quantities as reflected in the submitted Program of Works and design plans duly approved by Regional Director, DPWH-CAR.

#### **SCOPE OF WORK**

ITEM NO.	DESCRIPTION		OUNT tal Cost)	PERCENT Weight (%)
Part A	Facilities for the Engineer	P	375,580.80	0.13%
Part B	Other General Requirements	Р	2,559,573.20	0.88%
Part C	Earthworks	Р	474,665.97	0.16%
Part D	Subbase and Base Course	Р	158,117.45	0.05%
Part E	Surface Course	Р	1,407,120.60	0.49%
Part F	Bridge Construction	Р	120,689.44	0.04%
Part G	Drainage & Slope Protection Structures	Р	284,252,869.60	98.19%
Part H	Miscellaneous Structures	Р	147,484.80	0.05%
	GRAND TOTAL	P	289,496,101.86	100.00%

Cost of slope protection per  $m^2$  =  $\frac{P289,496,101.86}{11,394.00 \text{ m}^2}$  =  $\frac{P25,407.77/m^2}{11,394.00 \text{ m}^2}$  =  $\frac{P284,252,869.60}{11,394.00 \text{ m}^2}$  =  $\frac{P24,947.59/m^2}{11,394.00 \text{ m}^2}$ 

The estimated cost of **P25,407.77** per square meter of slope protection structures for the Rehabilitation/Reconstruction of National Roads with Slips Slope Collapse and Landslide - Secondary Roads – Mt. Province – Cagayan via Tabuk – Enrile Road at 11,394.00 square meter is due to design requirements which mainly involved Erosion Control Mat (Type 4), Permanent Ground Anchor, Hydroseeding and Active Wire Mesh System (High Tensile) at **98.19%** of the total project cost coupled with recent price escalation of construction materials and fuel and it is 422.48 km away to project site.

#### (Part A, B, C, D, E, F & H are excluded)

If Facilities for the Engineer, Other General Requirements, Earthworks, Subbase Course, Surface Course, Bridge Construction and Miscellaneous along the stations as reflected in K0406+453 – K0406+692 per approved plans and location map of the proposed new road alignment are excluded in the computation the resulting cost is only **P24,947.59** per square meter, hence it is considered reasonable as the Unit Costs of the items of work involved are within the range of the prevailing cost of the Department.

#### PROJECT NO. 3

The amount of Sixty Nine Million Pesos (P69,000,000.00) for 2,507.00 m² of Slope Protection Structures as submitted was found to be reasonable as evaluated based on the items of work involved and its quantities as reflected in the submitted Program of Works and design plans duly approved by Regional Director, DPWH-CAR.

#### **SCOPE OF WORK**

ITEM NO.	DESCRIPTION	AMOUNT (Total Cost)		PERCENT Weight (%)
Part A	Facilities for the Engineer	Р	203,439.60	0.31%
Part B	Other General Requirements	Р	1,511,469.80	2.27%
Part C	Earthworks	Р	228,436.93	0.34%
Part G	Drainage & Slope Protection Structures	P	64,640,950.30	97.08%
	GRAND TOTAL	P	66,584,296.63	100.00%

Cost of slope protection per m <sup>2</sup>	=	P66,584,296.83 2,507.00 m <sup>2</sup>	=	P26,559.35/m <sup>2</sup>
Cost per kilometer of Road (Exclude Part A, B & C)	=	P64,640,950.30 2,507.00 m <sup>2</sup>	=	P25,784.18 m <sup>2</sup>

The estimated cost of **P26,559.35** per square meter of slope protection structures for the Rehabilitation/Reconstruction of National Roads with Slips Slope Collapse and Landslide - Secondary Roads – Banaue - Mayoyao A Lista – Isabela Bdry. Road at 2,507.00 square meter is due to design requirements which mainly involved Erosion Control Mat (Type 4), Permanent Ground Anchor, Hydroseeding and Active Wire Mesh System (High Tensile) at **97.08%** of the total project cost coupled with recent price escalation of construction materials and fuel and it is 402.80 km away to project site.

#### (Part A, B & C are excluded)

If Facilities for the Engineer, Other General Requirements and Earthworks, along the stations as reflected in K0358+842 – K0359+047 per approved plans and location map of the proposed new road alignment are excluded in the computation the resulting cost is only P25,784.18 per square meter, hence it is considered reasonable as the Unit Costs of the items of work involved are within the range of the prevailing cost of the Department.

#### PROJECT NO. 4

The amount of One Hundred Fifty Million Five Hundred Fifty Thousand Pesos (P150,550,000.00) for 5,853.04 m² of Slope Protection Structures as submitted was found to be reasonable as evaluated based on the items of work involved and its quantities as reflected in the submitted Program of Works and design plans duly approved by Regional Director, DPWH-CAR.

#### **SCOPE OF WORK**

ITEM NO.	DESCRIPTION	AMOUNT (Total Cost)		PERCENT Weight (%)
Part A	Facilities for the Engineer	P	281,685.60	0.19%
Part B	Other General Requirements	Р	1,787,292.50	1.23%
Part C	Earthworks	P	417,767.82	0.29%
Part F	Bridge Construction	Р	6,171,515.37	4.25%
Part G	Drainage & Slope Protection Structures	Р	136,619,434.98	94.04%
	GRAND TOTAL	P	145,277,696.27	100.00%

Cost of slope protection per m <sup>2</sup>	=	P145,277,696.27 5,853.04 m <sup>2</sup>	=	P24,820.90/m <sup>2</sup>
Cost per kilometer of Road (Exclude Part A, B, C & F)	=	P136,619,434.98 5,853.04 m <sup>2</sup>	=	P23,341.62/m <sup>2</sup>

The estimated cost of **P24,820.90** per square meter of slope protection structures for the Rehabilitation/Reconstruction of Roads with Slips Slope Collapse and Landslide - Secondary Roads - Baguio - Bontoc Road, Sabangan, Mt. Province at 5,853.04 square meter is due to design requirements which mainly involved Erosion Control Mat (Type 4), Permanent Ground Anchor, Hydroseeding and Active Wire Mesh System (High Tensile) at **94.04%** of the total project cost coupled with recent price escalation of construction materials and fuel and it is 385.30 km away to project site.

#### (Part A, B & C are excluded)

If Facilities for the Engineer, Other General Requirements, Earthworks and Bridge Construction along the stations as reflected in K0374+120 – K0374+285 per approved plans and location map of the proposed new road alignment are excluded in the computation the resulting cost is only P23,341.62 per square meter, hence it is considered reasonable as the Unit Costs of the items of work involved are within the range of the prevailing cost of the Department.

ARISTARCO M. DOROY

OIC - Director, Bureau of Construction

Cc: Undersecretary MAXIMO L. CARVAJAL for Technical Services

6.1.1 JAM/CBC/GEC

Desktop reasonableness CAR Ref. No.: 6.1-405-5550/358-02

		A. (	GENERAL				
1. REGION  Cordillera Adminis	trative Region	2. DEO  Mt. Province Distr	ict Engineering Office	МО		PROVINCE (LONE	
В	. ORIGINAL PROJI	ECT	C. PROPOSED REVISED PROJECT				
4. UACS (Unified Accordance 310109100778000	ount Code Structure as o	defined in GAA)					
5. Project Id P00611405LZ							
6. Project Category OO1: Ensure Safe a	y and Reliable Nation	al Road System					
7. Sub-Program (P, Asset Preservation Roads		econstruction of Natio	onal Roads with Slips,	Slope Collapse	, and Lan	dslide Tertiary	
8. Operating Unit Central Office			18. Operating Unit (Change subject to DBM approval) Central Office				
9. Type of Work (E	nter Details for all Comp	onents below)	19. Type of Work (E	Type of Work (Enter Details for all Components below)			
Component ID	Type of Work		Component ID	Type of W	Type of Work		
CW1	Construction of Road Slope Protection Structure		CW1	Construct Structure	Construction of Road Slope Protection Structure		
EAO			EAO				
	RIPTION (as recorded Natonin-Paracelis-C	in GAA) alaccad Rd - K0381 +	20. PROJECT DESCR Jct Talubin-Barlig-N - K0380 + 1295				
11. ALLOTMENT (P'000) (as recorded in GAA) 175,000			21. REVISED ESTIMATED COST (P'000) (Equal to, or lower than GAA allotment)  175,000  22. CAF (To be obtained from Financial Management office WYES)			•	
12. PHYSICAL TAR	GET (Enter Details for a	ill Components below)	23. PHYSICAL TARG	ET (Enter Details	for all Com	ponents below)	
Component ID	Target	Target Unit	Component ID	Target		Target Unit	
CW1	9,722.220	Square meters	CW1	6,495.500		Square meters	
EAO			EAO				
13. UNIT COST (Ent	er Details for all Compo	nents below)	24. UNIT COST (Ente	r Details for all Co	mponents	below)	
Component ID	Component Cost (P'000)	Target Unit Cost (P'000/Target Unit)	Component ID	Compone (P'000)	nt Cost	Target Unit Cost (P'000/Target Unit)	
CW1	168,875.000	17.370	CW1	168,875.0	000 /	25.999	
EAO	6,125.000		EAO	6,125.000	/		

14. PROJECT WORK LOCATION (Must be defined in strict accordance with DO 65 Series 2014)  Click here to enter text.				THE PART OF THE PA
Start X	End X	Start X	End X	
Start Y	End Y	Start Y	End Y	
15. ROAD CLASS Tertiary Road	IFICATION (if applicable)	26. ROAD CLASSI	FICATION (if applicable)	
16. IMPLEMENT the original project) Regional Office O	ING OFFICE (Record the Implementing	27. IMPLEMENTII proposed revised pro		ementing Office of the
17. PROJECT IMI	PLEMENTATION PLAN (PIP)	28. PROJECT IMP	LEMENTATION PLAN (PIR	P)
Planned Start Da 06/25/2022	Planned End Date 05/20/2023	Planned Start Date 06/25/2022	Planned En 05/20/2023	
		29. OVERLAP?  ⊠ NO □ Y		WARRANTY?  ☐ YES
	D. ATT	ACHMENTS & JUSTIFICATI	IONS	
■ NO  32. TECHNICAL J  • The rev suscept  • The decrease on the decrease of the Act area of the Act area of the decrease of t	PACT ANALYSIS ATTACHED? (For Final YES N/A  USTIFICATION (Explain in detail in Burised station limit reflects the excibility to soil/ rock collapse crease from 9,722.220 square more in length of the structure and result of the stability analysis. The rease in unit cost is due to the design analysis. Also, the utilizative Protection System contribute the proposed slope mitigation. Fived unit cost is based on the area the lowest canvass cost for we are anchors, and cross clips/ anchors ached Certificate of Reasonable and the stability of the stability analysis.	neters to 6,495.500 square rather decrease in average sladesign length of 5 meters perion of the prevailing constructed to the increase in unit comproved Detailed Unit Price wire mesh, high tensile, withours.	mediate slope mitigation meters in the physical ta ant height from 49 mete ermanent ground anchor uction material cost of so ost thereon causing a de e Analysis and Program of a joint rod, wire rope, ro	arget is due to the ars to 35 meters based ars, as recommended aystem components of duction in the target of Work which pe grips, coupling
33. PHOTOS SUB □NO ⊠YES	MITTED			
34. A MAP OF TH	HE PROPOSED PROJECT WORK LO	OCATION SUBMITTED		

	35. P	REPARED BY	<b>f:</b>
Name:	ERLINDA F. DOLIENTE	Position:	Chief, Planning Section
Office:	Cordillera Administrative Region	Date:	
36. REVII	EWED BY DISTRICT OFFICE (If Required)	38. REV	IEWED BY REGIONAL OFFICE
Name:		Name:	ANGELITA B. MABITAZAN
Position:		Position:	Chief, Planning and Design Division
Date:		Date:	
37. RECOM	MENDED BY DISTRICT OFFICE (If Required)	39. RE0	COMMENDED BY REGIONAL OFFICE
Name:		Name:	KHADAFFY D TANGGOL
Position:		Position:	Regional Director
Date:		Date:	

<b>UACS</b> (Unified Account 310109100778000	Code Structure as	defined in GAA)			
Project Id P00611405LZ					
	40. DPWH	OFFICE OF TI	HE UNDERSECRETARI	ES FOR OPERATIONS U	JSE ONLY
Category of Modifica (choose one)	ation	Category B - Category C - Category D - Adjustment Modification Augmentation	- Change in Location - Change in Operating Unit - Send to PS-PD to amend n does not comply with DBI	MYPS VI Categories	in budget
Primary Reason for F	Request (based	on Category	of Modification): (ch	oose one)	
Category A	Category B		Category C	Category D	Adjustment (Must be no change to target or GAA line item)
on Project Work  Description Change  Project Description due to in decrease		pping Sections of In No such Barangay In No such City/Municipality In Physical Target		☐ Change in (IO), requiring a change in the (OU)	☐ Typographical error on Project Component Description ☐ Typographical error on other fields not included in, or not consistent with GAA ☐ Move funds between Project Components ☐ Add/delete Project Components Change of Itemized Project Component: ☐ Various ☐ Description ☐ Location ☐ Amount ☐ Target
	R	eviewed by (	Office of the Underse	cretary for Operations	
Name: I Signature	Engr. ANTONIO	V. SOBREVI	ÑAS, JR.		
Position:	Project Manage	er II			
Date:		7/18/1	7		
		41. DPWH	PLANNING SERVICE	OFFICE USE ONLY	
Category of Modifica (choose one)	ition	Category B - Category C - Category D - Adjustment	- Change in Location - Change in Operating Unit - Send to PS-PD to amend n does not comply with DBI	MYPS	in budget
			Reviewed by Planning	Service	
Name:	CHRISTYBEL C.	CANUEL	Name:	PETER PAUL R. CO	RTEZ
Signature		M	Signature	H laul	3/
Position:	Regional Coord	inator,	Position:	OIC – Chief, Progra	mming Division
Date:		5/3/-	WWW Date:		

### Annex A to Form for Modification Request

Component ID	Section ID	Start Limit LRP + Disp	End Limit LRP + Disp	Start Chainage	End Chainage	Length (m)	Type of Work	Detail Scope of Work	Target Unit	Physical Target
P00611405LZ - CW1	S00534LZ	K0380 + 1112	K0380 + 1295	4997	5180	183	Construction of Road Slope Protection Structure	Rockfall Netting with Erosion Control Mat, Hydroseeding and Permanent Ground Anchor (R/S), Stone Masonry (L/S)	Square meters	6,495.5