

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

OFFICE OF THE SECRETARY

Manila

September 5, 2022

MEMORANDUM

:

TO

KHADAFFY D. TANGGOL

Regional Director DPWH-CAR

Engineer's Hill, Baguio City

Transmitted herewith are the **APPROVED** requests for the **modification** of 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 Gov. Bado Dangwa National Rd K0319 + 310 K0319 + 460 - ₱120,000.000
- 2. 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 **K0406 + 746 K0406 + 941** - ₱**250,000.000**
- 3. OO1: Ensure Safe and Reliable National Road System Network Development Program Construction of Missing Links/ New Roads Baguio-La Trinidad-Itogon-Sablan-Tuba and Tublay, Kamog Jct.-Calot-Pappa-Bagong-Balluay-Tuel Jct. (Section 2 of BLISTT Outer Ring Circumferential Road), Package 2, Benguet - **P177,000.000**
- 4. OO1: Ensure Safe and Reliable National Road System Asset Preservation Rehabilitation/ Reconstruction of National Roads with Slips, Slope Collapse, and Landslide Secondary Roads Baguio Bontoc Rd K0379 + 880 K0380 + 020, K0380 + 917 **K0380 + 986** - ▶ **P160,000.000**

It is informed that **a project can only be modified once** as prescribed under the FY 2022 General Appropriations Act (GAA). Further, it is 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.

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



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

due to its susceptibility to soil/ rock collapse.

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;

	As per GAA/Orig	inal	As Modified			
		Project D	escription			
UACS No.: Project ID:	310108100830 P00611341LZ	000				
OO1: Ensure S System	Safe and Reliable	National Road	OO1: Ensure S System	Safe and Reliable	National Road	
Reconstruction Slope Collapse	servation - n of National R e, and Landslide - yan via Tabuk-Enr 18 + 630	Secondary Roads	Asset Preservation - Rehabilitation/Reconstruction of National Roads with Slips, Slope Collapse, and Landslide - Secondary Roads Mt Prov-Cagayan via Tabuk-Enrile Rd - K0406 + 746 - K0406 + 941			
Physical Target	Unit Cost P	Allocation P ('000)	Physical Target	Unit Cost P	Estimated Cost P ('000)	
CW1 Construction of Road Slope Protection Structure: 13,888.890 Square meters	₽ 17,370.00 / Square meters	₽ 241,250.000	CW1 Construction of Road Slope Protection Structure: 9,473.000 Square meters		₽ 241,250.000	
EAO	-	₽ 8,750.000	EAO	-	₽ 8,750.000	
	Total:	₽ 250,000,000	1 4	Total:		
Justification: • The revised station limit rejects the exact section which needs immediate slope mitigation						

The decrease from 13,888.890 square meters to 9,473.000 square meters in the physical target is due to the increase in length of the structure and the decrease in average slant

height from 82 meters to 48 meters based on the result of the stability analysis.

UACS No.: 310108100830000 Project ID: P00611341LZ

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



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 - Secondary Roads - Mt Prov-Cagayan via Tabuk-Enrile Rd - K0418 + 460 - K0418 +

630

We are respectfully submitting the modification of the above project in the amount of Two Hundred Fifty Million Pesos (Php 250,000,000.00), as indicated below:

	As per GAA/Original	As Modified
Project ID	P00611341LZ	
UACS	310108100830000	
Project Title	Mt Prov-Cagayan via Tabuk-Enrile Rd – K0418 + 460 - K0418 + 630	Mt Prov-Cagayan via Tabuk-Enrile Rd – K0406 + 746 - K0406 + 941
Physical Target	13,888.890 Square meters	9,473.000 Square meters

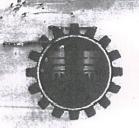
The supporting documents based on D.O. No. 37, series of 2018 are attached for your ready reference.

For the consideration of the Secretary.

Regional Director

Telefax: (074) 444-6460/(074) 444-8838

E-mail address: dpwh_car@dpwh.gov.ph



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 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

ion tok

ITEM NO.	DESCRIPTION		OUNT cal Cost)	PERCENT Weight (%)
Part A	Facilities for the Engineer	P	203,439.60	0.25%
Part B	Other General Requirements	Р	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 m² P82,897,403,25 P26,400.45/ m² 3,140.00 m² Cost per kilometer of Road P80,769,413.00 P25,722.74/ m² (Exclude Part A, B, C & H)

3,140.00 m²

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	P	2,559,573.20	0.88%	
Part C	Earthworks	P	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	=	P289,496,101.86 11,394.00 m ²	=	P25,407.77/m ²
Cost per kilometer of Road (Exclude Part A, B, C, D, E, F & H)	=	P284,252,869.60 11,394.00 m ²	=	P24,947.59/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		DUNT tal Cost)	PERCENT Weight (%)	
Part A	Facilities for the Engineer	P	203,439.60	0.31%	
Part B	Other General Requirements	P	1,511,469.80	2.27%	
Part C	Earthworks	Р	228,436.93	0.34%	
Part G	Drainage & Slope Protection Structures	Р	64,640,950.30	97.08%	
	GRAND TOTAL	P	66,584,296.63	100.00%	

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

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		OUNT tal Cost)	PERCENT Weight (%)
Part A	Facilities for the Engineer	P	281,685.60	0.19%
Part B	Other General Requirements	P	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 ²	=	P145,277,696.27 5,853.04 m ²	=	P24,820.90/m ²
Cost per kilometer of Road (Exclude Part A, B, C & F)	=	P136,619,434.98 5,853.04 m ²	=	P23,341.62/m ²

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 Administrative Region	2. DEO Mt. Province District Engineering Office	3. LEGISLATIVE DISTRICT MOUNTAIN PROVINCE (LONE DISTRICT)				

Cordillera Adminis	strative Region	Mt. Province Distric		MOUNTAIN PROVINCE (LONE DISTRICT)			
В	. ORIGINAL PROJEC	Т	C. PROPOSED REVISED PROJECT				
4. UACS (Unified Acc	ount Code Structure as def	rined in GAA)					
5. Project Id P00611341LZ //	/						
6. Project Categor OO1: Ensure Safe	y and Reliable National	Road System					
7. Sub-Program (P Asset Preservation Roads	/A/P) n - Rehabilitation/ Rec	onstruction of Natio	nal Roads with Slips,	Slope Collapse	e, and Lan	dslide Secondary	
8. Operating Unit Central Office			18. Operating Unit	(Change subject to	DBM appro	oval)	
9. Type of Work (E	nter Details for all Compo	nents below)	19. Type of Work (E	nter Details for al	l Componen	ts below)	
Component ID	Type of Work		Component ID	Type of V	/ork		
CW1		Construction of Road Slope Protection Structure		Construct Structure	Construction of Road Slope Protection Structure		
EAO			EAO				
	CRIPTION (as recorded in via Tabuk-Enrile Rd - I		20. PROJECT DESCRIPTION (of the revised project) Mt Prov-Cagayan via Tabuk-Enrile Rd - K0406 + 746 K0406 + 941				
11. ALLOTMENT (P'000) (as recorded in GAA) 250,000			21. REVISED ESTIMATED COST (P'000) (Equal to, or lower than GAA allotment) 250,000				
12. PHYSICAL TAR	RGET (Enter Details for all	Components below)	23. PHYSICAL TARG	ET (Enter Details	for all Com	ponents below)	
Component ID	Target	Target Unit	Component ID	Target		Target Unit	
CW1	13,888.890	Square meters	CW1	9,473.000)/	Square meters /	
EAO			EAO				
13. UNIT COST (Er	nter Details for all Compon	ents below)	24. UNIT COST (Ente	er Details for all C	omponents	below)	
Component ID	Component Cost (P'000)	Target Unit Cost (P'000/Target Unit)	Component ID	(P'000)	ent Cost	Target Unit Cost (P'000/Target Unit)	
CW1	241,250.000	17.370 ~	CW1	241,250.	000 /	25.467 /	
EAO	8,750.000		EAO	8,750.00	0 /		

14. PROJECT WORK LOCATION (Must be defined in strict accordance with DO 65 Series 2014) Click here to enter text.			25. PROJECT WORK LOCATION (Must be defined in strict accordance with DO 65 Series 2014. Also complete "ANNEX A" for National Road projects under OO-1 and LP) Click here to enter text.					
Start X		End X		Start X		End X		
Start Y		End Y		Start Y		End Y		
	AD CLASSIFICATION (if a ary Road	applicable)		26. ROAI Secondar	CLASSIFICATION (i	f applicable)		
16. IMPLEMENTING OFFICE (Record the Implementing Office of the original project) Regional Office CAR			proposed r	EMENTING OFFICE (evised project) Office CAR	Record the Implem	enting Office of the		
17. PRO	DIECT IMPLEMENTATION	N PLAN (PIP)	28. PROJ	ECT IMPLEMENTAT	ON PLAN (PIP)		
Planne 06/25/2	d Start Date 2022	Planned 05/20/20	End Date	Planned 06/25/20	Start Date	Planned End 05/20/2023	Date	
				29. OVEF	RLAP?	30. UNDER W ⊠ NO	/ARRANTY? ☐ YES	
			D. ATTACHMEN	ITS & JUS	TIFICATIONS			
31. PRO □ NO	DJECT IMPACT ANALYS ☑ YES	IS ATTACH		ol Projects)				
 32. TECHNICAL JUSTIFICATION (Explain in detail in Bullet point format; minimum of 2 points) The revised station limit reflects the exact section which needs immediate slope mitigation due to its susceptibility to soil/ rock collapse. The decrease from 13,888.890 square meters to 9,473.000 square meters in the physical target is due to the increase in length of the structure and the decrease in average slant height from 82 meters to 48 meters based on the result of the stability analysis. 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 considers the lowest canvass cost for wire mesh, high tensile, 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. 								
33. PHOTOS SUBMITTED □NO ⊠YES								
34. A M	34. A MAP OF THE PROPOSED PROJECT WORK LOCATION SUBMITTED							

	35. P	REPARED BY	/:
Name:	ERLINDAF. DOLIENTE	Position:	Chief, Planning Section
Office:	Cordillera Administrative Region	Date:	
36. REVIE	EWED BY DISTRICT OFFICE (If Required)	38. REV	TEWED BY REGIONAL OFFICE
Name:		Name:	ANGELITA B. MABITAZAN
Position:		Position:	Chief, Planking and Design Division
Date:		Date:	
37. RECOMI	MENDED BY DISTRICT OFFICE (If Required)	39. REC	COMMENDED BY REGIONAL OFFICE
Name:		Name:	KHADAFRY D. TANGGOL
Position:		Position:	Regional Director
Date:		Date:	

UACS (Unified Account 310108100830000	t Code Structure as defined in GAA	A)					
Project Id							
P00611341LZ							
	40. DPWH OFFICE OF	THE UNDERSECRETARII	ES FOR OPERATIONS U	JSE ONLY			
Category B - Category of Modification (choose one) Category D - Category D - Adjustment		 Typographical Errors Change in Station Limits, due to increase or decrease in budget Change in Location Change in Operating Unit (requires DBM approval) Send to PS-PD to amend MYPS does not comply with DBM Categories 					
Primary Reason for	Request (based on Categor	y of Modification): (cho	oose one)				
Category A	Category B	Category C	Category D	Adjustment (Must be no change to target or GAA line item)			
☐ Typographical error on Project Description ☐ Project Description needs items removed due to typo error	Work Change in station limits,	□ No such Barangay □ No such City/Municipality	☐ 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			
	Reviewed by	Office of the Undersed	retary for Operations				
Name:	Engr. ANTONIO V. SOBREV	IÑAS, JR.					
Signature	My						
Position:	Project Manager II						
Date:	7/28/	2V					
	41. DPW	H PLANNING SERVICE	OFFICE USE ONLY				
Category of Modifica (choose one)	ation Category D Category D Adjustmen	— Typographical Errors — Change in Station Limits, of — Change in Location — Change in Operating Unit It — Send to PS-PD to amend on does not comply with DBN cion	(requires DBM approval) MYPS	in budget			
		Reviewed by Planning	Service				
Name:	CHRISTYBELG, CANUEL	Name:	PETER PAUL R. CORTEZ				
Signature	114	Signature	t lands	n/			
Position:	Regional Coordinator	Position:	OIC – Chief, Progra	mming Division			
Date:	8/3/-	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
P00611341LZ- CW1	S00514LZ	K0406 + 746	K0406 + 941	15091	15286	195	Construction of Road Slope Protection Structure	Rockfall Netting with Erosion Control Mat, Hydroseeding and Permanent Ground Anchor (L/S)	Square meters	9,473