

REVISED ENVIRONMENTAL & SOCIAL MANAGEMENT/MITIGATION PLAN
April 29, 2015

Name of Road : **Namabbalan Norte-Baliuag-Bical Cabbo Farm to Market Road With Bridges**
 Location : **Tuguegarao City and Penablanca, Province of Cagayan**
 Implementing LGU : **Provincial Government of Cagayan**
 Estimated Number of Beneficiaries : **_____ households**
 New or Rehab : **Construction and Rehabilitation**
 Estimated Total Cost : **Php _____**

1. The Road does not encroach into or traverse any declared protected area of natural habitat
2. The subproject will not displace, disfigure or render inoperable/inaccessible any monument or physical structure of known cultural and historical significance.

A. Environmental Issues and Mitigation Measures

Issue (Potential Impact)	Assessment (Sample assessments)	Mitigation Measure	Schedule/ Duration of the Mitigation Measures	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible Unit
1. Loss of soil nutrients	Removal of the vegetative cover due to road opening.	Re-use of removed top soil in other road maintenance and other land levelling activities. Proper disposal and compaction of soil will be done. Enhance vegetative cover along steep slopes to control soil erosion.	Pre-implementation	Contract	PEO/contractor
2. Potential contamination of surface and groundwater with oil/grease due to presence of heavy equipment	Waste oil and grease from equipment could contaminate surface and ground water.	Store used oil in containers for disposal to those who will use as additive to paints and other similar substances.	During construction	Contract	PEO/contractor
3. Disturbance of livestock (cattle, carabaos etc.)	Presence of cattle, carabaos, etc. grazing in the area.	Transfer meantime to other grazing areas.	During construction	Contract	VET/owner
4. Possible traffic in the road.	The construction will affect daily movement of residents, school children, commuters and farmers.	Provide traffic signage on detours along the affected school zones, and road directions for warning, regulatory & information at the project site. Place reflectorized sign on sharp curve. Set up speed limit on residential areas. Avoid working during night time to minimize disturbance.	During construction.	Contract	PEO/contractor
5. Potential dust/mud	Roads could become powdery during dry	Fill potholes & provide drainage during rainy days	During implementation	Contract	PEO/contractor

nuisance during construction	days and muddy during rainy days of the construction period.	& do regular sprinkling of the ground during dry season.	ion		
6. Temporary increase of soil erosion and siltation of water ways during rainy days.	Stock pile of soils and rocks will be eroded during heavy rains and silt up creeks.	Select safe stockpiling area. Undertake proper planning of earth fill surface. Stations: STA 2+940-3+120(Road 3 with retaining wall), STA STA 2+120-2+160(road 2) STA 0+560-0+700, STA 0+900-0+940, 3+100, STA 1+140-1+480, STA 2+980-3+020(road 1), STA 4+080-4+100, STA 4+300-4+340, STA 4+620-4+700, STA 5+460-5+480, STA 5+520.	During implementation	contract	PEO/contractor
7. Removal of affected trees, miscellaneous species and shrubs,	Presence of miscellaneous species and shrub at some portions of the road to be opened.	Secure cutting permit. Re-plant the area cleared according to the tree planting guidelines of the DENR.	Pre-implementation & post implementation	contract	PNREO
8. Degradation of top soil on ISF areas along the road.	Farmers should practice soil and water conservation measures in ISF areas.	Apply SALT and regulate the use of herbicides.	Pre, during implementation & post implementation	contract	OPA
9. Occurrence of erosion on exposed roadsides through widening	Occurrence of slight erosion on exposed portion of roadside.	Adopt erosion control measures such as construction of retaining wall to mitigate erosion: STA H720-H760, STA 2+760-2+800, STA 2+940-3+120	Pre & During implementation	Contract	PEO/Contractor
10. Possible soil erosion and siltation of creeks during heavy rains.	Lack of drainage canal and barriers to control soil erosion.	Provide drainage canal and enclose hazardous areas with barriers. Station 1: STA 2+950-3+350, Station 2: STA 3+200-3+300, STA 3+430-3+580, Station 3: STA 2+960-3+90	During implementation	contract	PEO/Contractor
10. Smoke pollution and nuisance to residence, school children and commuters.	Occurrence of smoke pollution and nuisance to residence, school children and commuters during construction.	Conduct regular maintenance work on equipment. Set up speed limit for vehicles passing along residential areas.	During construction	Contract	PEO/Contractor
11. Injuries due to unavoidable actions during work.	Workers are exposed to injuries during work.	Issue safety gadgets to workers.	During implementation	contract	PEO/Contractor
12. Unawareness of the project.	Some of the residents are not aware of the existence of the project.	Conduct regular information and dissemination campaigns among members about the project through the tri-media. Install billboards/placards in strategic areas.	Pre-implementation	Billboards, placards, contract	Barangay officials, Provincial Agriculturist Office,
13. Occupational accidents on the	Lack of technical knowledge on the	Provide trainings about the operation and	Pre-implementation	contract	TESDA/contractor

operation of devices and other electro-mechanical equipment.	use of gadgets and equipment.	maintenance of devices and other mechanical equipment used in the operation.	ion & during implementation		
14.Conflict among affected areas	Possible issue on conflict on affected areas along the FMR	Follow strictly the steps embodied in the Grievance & Redress Mechanism	Pre-implementation phase	O & M	GRM Point Person
15.Availability of Quarry Sources	DPWH & the local government identified qualified quarry sources Large volume of quarry materials are utilized by other projects	Obtain necessary permits for the quarry sourcing. Identify other nearby alternative sources of quarry materials	Pre construction	contract	PEO/Contractor
16. Impacts of hauling of Quarry Materials on existing roads	Possible road damage & disturbance to the nearby communities	Transport & hauling of quarry materials should conform to load limits	During construction	Contract	Contractor
17.Scattered/littered quarry materials along the way to stock pile	Possible disturbance of commuters on highways due to scattered quarry materials.	Strictly implement mandatory safety measures like the placing of nets on top of trucks loaded with quarry materials. Post permanent street sweepers. Conduct regular monitoring of the shipment.	During construction	Contract	Contractor PNREO
18.Discovery of artefacts during construction	Limited chance of artefact recovery in the site	Immediately implement the Archeological/ Paleontological Chance Finds Procedure when necessary.	During Construction	Contract	Contractor/ PEO
19. Trees to be cut as affected on road right-of-way	Some trees along the FMR need to be cut.	Apply for tree cutting permit.	During pre implementation	Contract	PNREO
20. Forest Areas	Increase of access to nearby forest areas	Place signages at strategic points along the boundary of the forest area (e.g. no cutting of trees, no bird hunting etc.)	During & after construction	O.M.	PLGU
19.Road opening on portion of ISF & Pastureland areas	Segment 3 of the FMR traverse ISF & Pastureland areas	Apply for a Special Land Use Permit	During pre construction	contract	Contractor SES
21. Below Standard Compensation on Local Skilled Workers	Construction will provide local hire employment opportunities	In the hiring of workers, priority will be given to residents in the locality. Ensure strict compliance to the labor law provisions on wages.	During construction	contract	PEO/Contractor
22. Land acquisition of the Batching Plant site	The Batching Plant will be located in the Provincial Government property or in the alternative in a lot area to be leased by the PG/Contractor	PG to provide the lot area or the contractor will lease appropriate land area as BP site	Before construction	Contract	PG/Contractor
23. Batching Plant location	The BP site will not be located in	The site is far from critical slopes and erosion-prone	During construction	Contract	Contractor

	hazardous areas	areas			
24. Potential noise generation during construction of the Batching Plant	Batching plant can be located away from the communities	No construction work during night time	During construction	O.M.	Contractor
25. Temporary increase of solid waste during Batching Plant construction	There will be significant volume of waste generated during clearing & operation	Dumping of construction waste materials at designated areas in the barangays.	During construction	Contract	Contractor
26. Batching plant operation	Possible littering of waste materials such as cement bags	Collect empty cement bags for disposition to be utilized for other purposes.	During construction	contract	PEO/Contractor
27. Potential heavy equipment hazards i.e. dump trucks, concrete mixers, payloaders etc. during transport of aggregates & fresh concrete	BP can be located away from populated/residential areas	Operate and maintain heavy equipment with caution especially during the transport & unloading of materials.	During Construction	O.M.	Contractor
28. Occupational health hazards to Batching Plan workers	BP workers can be exposed to hazardous conditions	Require all workers to strictly observe safety standards, don personnel protective equipment & put-up safety signs within the BP site. Provide potable water & sanitary facilities like toilets and wash rooms for workers within the facility.	During BP operation	O.M.	Contractor
29. Potential Right of Way issues	Right of way should be secured prior to construction/project implementation	Secure waivers from concerned PAPs and obtain necessary permits from the concerned agencies.	Before project implementation	Contract	Project proponent
30. Potential increase in the use of pesticides due to intensification of cash crop production in the area	There is existing DA-IPM (kasakalisan) in the road influence area	Strengthen & further support the IPM through: 1. The conduct of farmer's training with emphasis on IPM issues within the RIA 2. Establish techno-demo following IPM interventions	During & after the construction phase	Contract	Project proponent

Prepared by:


MARIO HIPOLITO

CDQ II

Adopted by M/PPMIU:

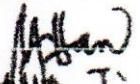

DR. MILDRED S. ABELLA

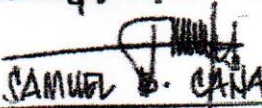
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Noted by the local community:



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Endorsed By


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