

Social and Environmental Impacts

Environmental Issues and Mitigation Measures

Issue (Potential Impact)	Assessment	Mitigation Measure	Schedule/ Duration of the Mitigation Measures	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible Unit
1. Temporary increase in sedimentation during construction	<input checked="" type="checkbox"/> Topography of the road alignment necessitate massive earthmoving and cutting of clayey topsoils	<input checked="" type="checkbox"/> Earthmoving/cutting of slopes to be done during dry months <input checked="" type="checkbox"/> Proper disposal and compaction of spoils	During construction	DED/POW; Contract	Contractor, LGU
2. Potential contamination of surface and groundwater with oil/grease	<input checked="" type="checkbox"/> Waste oil and grease from equipment could contaminate surface water <input type="checkbox"/> There will be no or insignificant amount of waste oil/grease	<input checked="" type="checkbox"/> Proper handling and disposal of waste oil and grease	During construction	Contract	Contractor
3. Potential contamination with human waste	<input checked="" type="checkbox"/> Construction workers would be temporarily housed in a base camp <input checked="" type="checkbox"/> Workers would be mostly locals and are expected to go home to their respective houses after	<input checked="" type="checkbox"/> Set up adequate latrine/toilet facility at the base camp	During construction	Contract	Contractor and LGU

Issue (Potential Impact)	Assessment	Mitigation Measure	Schedule/ Duration of the Mitigation Measures	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible Unit
	works				
4. Potential disruption of traffic flow	[✓] The access road and/or segments to be rehabilitated need is vital to daily activities of the residents and farmers and need to be kept open to traffic during construction	[✓] Keep the road open to traffic flow and minimize disruptions along the access road and/or construction area; Provide adequate warning signs and traffic personnel when necessary; [✓] Undertake regular maintenance measures on the passable portions of the roads	During construction	Contract, DED and POW	Contractor
5. Potential dust/mud nuisance during construction	[✓] Access road and/or the construction/ rehabilitation works passes through a populated area	[✓] Undertake sprinkling of road (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas [✓] Set up speed limits for vehicles, especially within residential areas	During construction	Contract	Contractor
6. Landslide/ erosion of exposed road sides resulting	[✓] The road will traverse a mountainous area	[✓] Include slope protection works at the following	During construction	DED/POW	Contractor

Issue (Potential Impact)	Assessment	Mitigation Measure	Schedule/ Duration of the Mitigation Measures	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible Unit
in sedimentation of waterways	necessitating deep cuts on mountainsides, [✓] The exposed slopes will likely consist of highly erodible loose materials	stations: 3+220 to 3+420 3+500 to 3+780 with grouted riprap			
7. Inadequate drainage resulting in flooding or ponding	[✓] The road will block runoff, resulting in flooding on one side of the road during rainy days.	[✓] Installation of cross drain between station 0+180, 0+380, 1+020, 1+460, 1+700, 2+480, 3+220, 3+920, 4+380, 5+120, 5+820, 6+200, 6+640, 7+200, and 7+820	During construction	DED	Contractor
8. Potential increase use of pesticides due to intensification of cash crop production in the area	[✓] There is an ongoing IPM program of DA in the service area	[✓] DA to continue to support IPM program [✓] LGU to Coordinate with DA on IPM training	After turnover	Capacity Building Plan O&M Plan; Capacity Building Plan	LGU and DA
9. Potential acceleration of denudation of the upland/hilly areas due to intensification	[✓] The proposed road will connect to the market an upland/hilly area where farmers	[✓] DA to coordinate with LGU for the introduction of sustainable upland farming systems in	After turnover	O&M Plan; Capacity Building Plan	LGU and DA

Issue (Potential Impact)	Assessment	Mitigation Measure	Schedule/ Duration of the Mitigation Measures	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible Unit
of crop production	are currently practicing erosive farming techniques. The road could help accelerate the denudation of the upland/hillsides rendering them unproductive in a few years	the area			
10. Potential increased in encroachments of human activities into the nearby public forest	<input type="checkbox"/> The proposed road will improve human access to the nearby public forest, resulting in increase slash and burn cultivation, illegal logging and poaching. <input checked="" type="checkbox"/> The proposed road does not improve access to a public forest	<input checked="" type="checkbox"/> Coordinate with DENR for the enactment of ordinance deputizing the local community to enforce forestry laws	After Turnover	O&M Plan; Capacity Building Plan	LGU
11. Quarrying/ Extraction of aggregates	<input checked="" type="checkbox"/> Excessive quarrying causes soil destabilization and erosion in the quarry area. <input checked="" type="checkbox"/> Quarrying	<input checked="" type="checkbox"/> Required aggregates sourced from quarry(ies) approved by DPWH and operating with Permit to Quarry	During construction	Procurement receipt with Permit to Quarry issued to operators be kept on file at the temfacil and	LGU and Contractor

Issue (Potential Impact)	Assessment	Mitigation Measure	Schedule/ Duration of the Mitigation Measures	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible Unit
	results disrupted ecosystem (i.e. surface water, groundwater, flora and fauna etc.	issued by DENR/LGU concerned.		LGU; Contract	
12. Local employment	[✓]Construction will provide local employment opportunities	[✓]Hiring priority shall be given to qualified local residents; implement RI Manual on local hiring	During construction	IMA	LGU and Contractor

Prepared by:


RICARDO M. MADRID
Municipal Engineer

Adopted by MPMIU:


MIGUEL N. QUIÑO
Municipal Administrator
MPMIU Head

Noted by the local community:

ROGER A. GUILAYAN
Barangay Captain - Minsuro


HERMENEGILDO P. BUNAYOG
Barangay Captain – Mantibugao

Endorsed By:


ROGELIO N. QUIÑO
Municipal Mayor

