

FOR ROADS AND BRIDGES
ENVIRONMENTAL MANAGEMENT PLAN

/POTENTIAL IMPACT PER PROJECT ACTIVITY PER PROJECT PHASE	MITIGATING MEASURES	RATING/ PERFORMANCE OF MITIGATING MEASURES
A. Construction Phase		
A.1 Site Development including excavation (Clearing and Grubbing)		
Dust emission from site preparation	Maintain a misty access road surface within the project site by sprinkling water at least thrice (3x) a day during the dry season	100% no dust generation
Noise pollution from delivery trucks	Use of mufflers and exhaust silencers	100% Noise within standard((NPCC MC 002 Series of 1980)
Generation of noise from heavy equipment	<p>Use of mufflers and exhaust silencers for construction equipment</p> <p>Provision of appropriate noise mitigating measures (such as construction of fences, enclosure of stationary work areas and equipment, maintenance of equipment, etc.) whenever applicable</p>	100% Noise within standards((NPCC MC 002 Series of 1980)
Generation of spoils (including excavated soils)	<p>Excavated materials shall be properly stockpiled and properly disposed or reused. Excess soil materials shall not be deposited along areas traversed by runoff and away from waterways and valuable crops. The proponent shall identify stockpile sites (with geographical coordinates)</p> <p>Spoil materials will be hauled by third party hauler with approved permit/clearance from LGU or the proponent should identify disposal sites (with geographical coordinates)</p> <p>Trucks should be thoroughly washed before leaving the project site to avoid the transfer of mud/dirt in the road</p>	100% no spoil materials will be left unattended and no mud/dirt shall be transferred in the road

	Use of spoils as fill materials in lower areas subject to the approval of LGU	
Generation of construction debris	Segregation and proper storage of construction debris to be hauled by a contractor.	100% hauled/collected by the third party and should always be stockpiled in a safe place
Potential siltation due to soil erosion	Construction of soil erosion control measures either by/such as but not limited to sediment trap and barriers or planting of grasses/trees. Stockpiles shall be placed away from the watercourses to prevent the transport of soil and sediment.	100% no soil erosion/siltation
A.2 Construction of Roads and Bridges		
Potential siltation of nearby bodies of water due to surface water run-off	Provision of sediment trap/siltation pond Construction of soil erosion control measures either by/such as but not limited to sediment trap and barriers or planting of grasses/trees. Stockpiles shall be placed away from the watercourses to prevent the transport of soil and sediment..	100% no siltation
Degradation of surface water quality due to contamination from oil, fuel or other lubricant agents leaks from works, installation and other construction works	Implement organized waste storage, where bulk waste oils and lubricants are placed in impermeable area with appropriate secondary containment	100% compliance with RA 9275
Dust emission	Implement speed limit for heavy equipment/vehicles Maintain a misty access road surface within the project site by sprinkling water at least thrice (3x) a day during the dry season	100% no dust emission
Noise pollution from heavy equipment facilities	Use of mufflers and exhaust silencers Limit the construction time to given	100% no noise pollution

	<p>standard hours or limit night work to avoid the distraction of nearby establishments like residential areas</p> <p>Work involving the handling of noisy and/or vibrating power tools/ equipment shall be with a maximum of 2 hours per day (for 8-hour work, duty cycle should be 1:4)</p>	
Generation of used oil (from motor pool) and other hazardous materials	Provision of storage facility/area and collected by hazardous wastes DENR accredited 3 rd party hauler and treater	100% compliant to RA 6969
Generation of construction debris	<p>Proper collection of construction debris Solid Waste Management Program in compliance to RA 9003</p> <p>Collection of construction debris third party hauler with valid permit/clearance from LGU</p>	100% collected/hailed construction debris
A.3. Construction Installation, and operation of temporary site facilities (field offices and barracks)		
Generation of solid Wastes	<p>Segregation of wastes and provision of waste storage facility</p> <p>Provision of an MRF including composting area</p> <p>Hauling of solid wastes by third party hauler with permit/clearance from LGU</p>	100% conformance to RA 9003
Degradation of air quality due to use of generator set (if any)	Regular maintenance of the generator set	100% compliance to RA 8749
Generation of hazardous materials	<p>Provision of centralized storage facility/area and collected by hazardous wastes DENR accredited 3rd party haulers/treaters.</p> <p>Hazardous waste generation ID shall be secured from EMB.</p>	100% compliant to RA 6969
Degradation of surface water quality due to contamination from domestic wastewater	<ul style="list-style-type: none"> Provision of (<u>indicate number</u>) portalets for construction workers <p><i>Note: at least one (1) portalet for 60 workers where the number of</i></p>	100% no discharge of domestic wastewater to nearby bodies of water

	<p><i>male workers exceeds 500 (as per IRR- Industrial Hygiene, PD 856 Amending Administrative Order 111 Series of 1991)</i></p> <p><i>Note: at least one (1) portalet for 25 workers where the number of male workers exceeds 100 (as per IRR- Industrial Hygiene, PD 856 Amending Administrative Order 111 Series of 1991)</i></p> <ul style="list-style-type: none"> • Provision of septic tank or wastewater collection system for workers <p>Hauling of wastewater from portalets/ septic tank by third party contractor with licensed/permit from LGU and with valid Discharge Permit for wastewater treatment facility</p>	
Generation of effluents due to wastewater generation	<ul style="list-style-type: none"> • Monitoring of the following significant effluent quality parameters: <ul style="list-style-type: none"> ☑ BOD ☑ Total Suspended Solids ☑ Oil and Grease 	100% compliance with DENR effluent standards (RA 9275); (i.e.DAO 2016-08 and DAO 2021-19)