n. Annex II Attachment 14-6

Environmental Monitoring Form
North-South Commuter Railway (Malolos – Tutuban) Project

1. General Information

a. Environmental Monitoring Results: 1st Quarter of 2025

b. Date of Preparing This form: 15 April 2025

c. Person Preparing This form: Environmental Consideration Unit
Department/Organizations: North-South Commuter Railway (Malolos – Tutuban) Project

2. Monitoring Results - Construction Phase

(1) Impact on Land

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	Monitoring Date
1	Soil contamination due to oil and lubricant spill	Oil spill	Ocular inspection	Weekly, immediately after spills	All construction sites (Malolos,Guiguinto, Balagtas, Bocaue, Marilao, Meycauayan and Valenzuela City)	N.A.	**Meycauayan** - Estimated 2 Liters of Lube Oil from heavy equipment/vehicle dripped, affecting less than 1.0 m^2 area within the alignment.	16 January 2025
							Malanday Depot - No Oil spill observed	16 January 2025
							Malolos - No Oil Spill Observed	17 January 2025
							Guiguinto - No Oil Spill Observed	22 January 2025
							Bocaue - No Oil Spill observed	27 January 2025
							Marilao - Estimated 2 Liters of Lube Oil	27 January 2025

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	**Monitoring Date**
							from heavy equipment/vehicle dripped, affecting less than 2 m^2 area within the alignment.	
							Balagtas - Estimated 0.4 Liters of Lube Oil from heavy equipment parked in the alignment dripped, affecting less than 1.0 m^2 area.	06 February 2025
							Malolos, Balagtas, Guiguinto - No Oil Spill Observed (by Third-Party Auditor)	12 February 2025
							Malanday Depot, Meycauayan - No Oil Spill Observed	18 February 2025
							Malolos - No Oil Spill Observed	20 February 2025
							Bocaue - No Oil Spill Observed	27 February 2025
							Marilao - Estimated 1 Liter of Lube Oil from heavy equipment parked in the alignment dripped, affecting less than 2.0 m^2 area.	28 February 2025
							Malanday Depot, Meycauayan - No Oil Spill Observed	06 March 2025
							Guiguinto - No Oil Spill Observed	12 March 2025

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	**Monitoring Date**
							Balagtas - No Oil Spill Observed **Marilao** - No Oil Spill Observed **Bocaue** - Estimated 2-3 Liters of Lube Oil/ Motor Oil, possibly from heavy equipment/vehicle, dripped/spilled, affecting less than 2.0 m^2 area in the alignment. Also, the collected used oil was improperly stored in a container without cover. **Details of Rectification: See Annex A[1]**	20 March 2025 27 March 2025 27 March 2025
2.	Worker and community exposure to health and safety hazards due to working in areas with the excavation of such soils	Proper removal and disposal of excavated soil from RAMCAR battery site	Compliance to RA 9003, RA 6969 and DAO 2013-22	N.A.	RAMCAR battery site	Environmental Standard for Soil Pollution (Japan): 150 mg/kg Dutch Standards of References Values for Soil: 85 mg/kg German Federal Soil Protection and Contaminated Site Ordinance: 200 mg/kg DAO 2013-22: <1 mg/L	Excavation of contaminated soil in Meycauayan was completed. Appropriate PPE was provided to workers directly involved in the hauling of the contaminated soil. Contaminated soil was treated and disposed to a DENR-accredited TSD Facility. Certificate of Treatment was provided in previous reports.	N.A.
3.	Generation of solid waste; land and water contamination; aesthetic	Proper waste management and disposal	Checking compliance with RA 9003	Weekly	All construction sites (Malolos, Guiguinto, Balagtas,	N.A.	**Solid Waste Management**	N.A.

[1] **Annex A**. Oil spills and rectification measures

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	Monitoring Date
	impacts; spread of diseases		and RA 6969		Bocaue,Marilao,Meycauayan and Valenzuela City)		1. Appropriate waste bins with cover are provided in active construction sites. 2. Color coded waste bins are properly, labeled recyclables (red), non-recyclables/residuals (blue), biodegradables (green), and special waste, household healthcare waste (yellow). 3. The recyclables were segregated from residuals. The residual wastes are being collected by the LGUs and some private haulers and disposed to the disposal facility. 4. Recoverable waste materials are recycled and reuse on site. Non-recyclable scrap materials will be disposed to junkshops. 5. In accordance to Health Safety, disposal mask/ gloves and tissues are directly stored and disposed in a separate waste bag/bin (yellow). 6. Food wastes from worker's meals were discouraged to be disposed at site and suggested to take it home as animal/ pet food consumption or plant fertilizer. - **Solid Waste Generated:** 720.485 tons/quarter - **Recyclable:** 195.241 tons/quarter - **Biodegradable:** 1.927 tons/quarter - **Residual:** 523.317 tons/quarter	

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	Monitoring Date
							Hazardous Waste Management 1. The hazardous wastes are stored in separate containers according to its classification and are labeled. 2. Hazardous wastes are stored in bunded area or with secondary containment to avoid direct spillage to the ground. 3. These wastes are temporarily stored at temporary storage facility. An accredited TSD facility is employed for the proper disposal of the hazardous wastes generated on site. Hazardous Waste Generated for the Quarter: - **Mercury and Mercury Compounds:** 0.00565 ton - **Lead Compounds**: 0.0 ton - **Used Industrial Oil including sludge:** 0.074 ton - **Oil Contaminated materials:** 0.23965 ton - **Containers previously cont. toxic chemicals:** 0.20405 ton - **Waste Electrical and Electronic Equipment:** 0.01 ton - **Pathological Waste:** 0.0 ton - **Solvent Based:** 0.031 ton **Grey water disposal and treatment** Provision of septic tanks, sanitation facilities and portable toilets are available within construction areas. Liquid wastes (i.e., grey water from portalets) are siphoned regularly twice	

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	**Monitoring Date**
							a week by a licensed sewage treater service (Soliman, Ezkleen, and Envirokonsult). Grey water from kitchen sinks, clean water from washing go through a grease trap before discharge to local drainages See **Annex B and C**[2]	
4.	Ground subsidence	Level of ground subsidence	Measurement of level	Monthly	Valenzuela Depot	N.A.	N.A.	N.A.
5.	Removal of Narra trees along with alignment form Caloocan to Tutuban and at Valenzuela depot, and other trees.	1. Number of trees cut 2. Number of trees replaced 3. The survival rate of species introduced 4. Provision of the corresponding number of tree seedlings	Ocular inspection	N.A.	Designated tree planting site and/or reforestation area designated by DENR-EMB National Capital Region (NCR)	85-90% survival rate of trees planted as prescribed by the LGU	1. Trees Cut 2. 3. Trees Earthballed 4. Replacement Seedlings 3.1. CP01 3.1.1 Replacement seedlings - 71,000 seedlings in Mt. Balagbag (84.5 ha) - 18,500 seedlings in Mt Balagbag (16.65 ha) - 8,000 seedlings in La Mesa Watershed (20 ha) - 300 bamboo seedlings handed over to Meycauayan LGU 1.2 Transplanted Trees in NFA Compound, Malanday, Depot - One of the two transplanted trees survived. 3.2. CP02 3.2.1 Replacement seedlings - 33,650 seedlings in Mt. Balagbag (52.8 ha)* - 4,000 seedlings in Mt. Balagbag (4.0 ha)*	N.A.

[2] **Annex B** and **C** present some measures implemented on-site to mitigate possible impact on water quality.

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	Monitoring Date
							- 4,700 seedlings in Mt. Balagbag (4.0 ha) Note: *Protection and maintenance already done in 2021. Note: Protection and maintenance activities for the planted seedlings were completed in 2022. DENR-NCR and DENR-Region 3, through CENRO Guiguinto, issued a Certificate of Completion for the Planting and Maintenance Activities. Copy of Certificate of Completion annexed in the 4th quarter 2023 report.	
5	Loss of small swampy area used for migratory and resident birds due to development of depot	Seasonal bird count	Ocular Survey	Annually	Adjacent offset wetland of Valenzuela depot	N.A.	No Bird count has been conducted yet in the offset wetland. The Memorandum of Agreement between DOTr and DENR-National Capital Region (NCR), and Work and Financial Plan (WFP) for the conservation of Tanza Marine Tree Park (TMTP), as part of the NSCR offset wetland management project, was signed and Notarized. The documentary requirements for the Disbursement of Fund were requested to DENR-NCR on 15 September 2023. On 30 November 2023, a response letter was received from DENR-NCR, which raised concerns on the current land classification of the TMTP (may not be compliant with the MOA). On 12 January 2024, DOTr and DENR-NCR conducted an online meeting to	N.A.

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	Monitoring Date
							discuss the issues and concerns on the proposed site. In July 2024, DOTr sent a letter to DENR requesting a recommendation for new offset wetland site. On 06 November 2024, DENR presented La Mesa Watershed as an alternative offset wetland site.	

(2) Impact on Water

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase (2013)	Pre-construction Phase (2019)	Result (Annex D)[3]	Monitoring Date
1	Increase in suspended solid of receiving water/ pollution of receiving water bodies	1. pH 2. DO 3. Oil & Grease 4. BOD 5. Fecal 6. TSS	Water sampling (DAO 34-1990), DENR-EMB Manual for Ambient Water Quality Monitoring Volume I (2008), and Water Quality Guidelines and General Effluent Standards of (DAO 2016-08)	Quarterly	1. Guiguinto River 14.830339 N; 120.878609 E	For Class "C" freshwater[4]: 1. pH: 6.5 to 9.0 2. DO: 5.0 mg/L 3. Oil & Grease: 2.0 mg/L 4. BOD: 7.0 mg/L 5. Fecal Coliform: 200 MPN/100mL 6. TSS: 80 mg/L	Guiguinto River 1. pH: 8.8 2. DO: 2.3 mg/L 3. Oil & Grease: 0.8 mg/L 4. BOD: 12 mg/L 5. Fecal Coliform: 44 MPN/100mL 6. TSS: N.A.	Guiguinto River 1. pH: 7.43 2. DO: ND 3. Oil & Grease: ND 4. BOD: 3.26 mg/L 5. Fecal Coliform: $4.9x10^3$ MPN/100mL 6. TSS: 8.6 mg/L	Guiguinto River 1. pH: 7.16 2. DO: 0.74 mg/L 3. Oil & Grease: 2.69 mg/L 4. BOD: 12.7 mg/L 5. Fecal Coliform: 1,700 MPN/100mL 6. TSS: 8.6 mg/L	Guiguinto River: 10 February 2025
					2. Santol (Balagtas) River 14.818506 N; 120.913071 E		Santol (Balagtas) River 1. pH: 7.6 2. DO: 4.5 mg/L 3. Oil & Grease: 0.6 mg/L 4. BOD: 2 mg/L 5. Fecal Coliform: $1.3x10^4$ MPN/100mL 6. TSS: 8.8 mg/L	Santol (Balagtas) River 1. pH: 7.63 2. DO: 2.39 mg/L 3. Oil & Grease: ND 4. BOD: 8.01 mg/L 5. Fecal Coliform: $3.5x10^3$ MPN/100mL 6. TSS: 26.3 mg/L	Santol (Balagtas) River: 1. pH: 7.27 2. DO: 0.88 mg/L 3. Oil & Grease: 3.83 mg/L 4. BOD: 15.1 mg/L 5. Fecal Coliform: 1,200 MPN/100 mL 6. TSS: 52.7 mg/L	Santol(Balagtas) River: 10 February 2025
					3. Bocaue River 14.80575 N; 120.9268 E		Bocaue River: 1. pH: 7.9 2. DO: 8.2 mg/L 3. Oil & Grease: 0.7 mg/L 4. BOD: 4 mg/L 5. Fecal Coliform: $3.5x10^4$ MPN/100mL	Bocaue River: 1. pH: 7.4 2. DO: 7.2 mg/L 3. Oil & Grease: 3 mg/L 4. BOD: 12 mg/L 5. Fecal Coliform: $3.3x10^4$ MPN/100mL	Bocaue River:[5] 1. pH: 6.98 2. DO: 1.3 mg/L 3. Oil & Grease: 4 mg/L 4. BOD: 54 mg/L 5. Fecal Coliform: 1,600,000	Bocaue River: 25 February 2025

[3] **Annex B** and **C** presents some measures implemented on-site to mitigate possible impact on water quality.
[4] DAO 2016-08: Water Quality Guidelines and Effluent Standards of 2016
[5] The level of BOD in the Bocaue River was observed to have increased compared to the baseline data (2019) and is higher than the standard limit set by the DENR. According to the Water Quality Monitoring Report for 1Q 2025, there are residential and commercial areas (i.e. hardware stores, junk shops, grocery stores, public markets and warehouses) upstream of the river. NO construction activities related to the Project were observed during the water quality monitoring. Also, it was observed that the water sources were grayish to black in color. Further, sludge accumulated near the residential area was observed in the surface water, and unpleasant odors (sewage) were perceived. Community garbage was also observed floating on the monitoring station.

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase (2013)	Pre-construction Phase (2019)	Result (Annex D)[3]	Monitoring Date
							6. TSS: 44 mg/L	6. TSS: 46 mg/L	MPN/100mL 6. TSS: <2 mg/L	
					4. Marilao River 14.76135 N; 120.9507 E		Marilao River: 1. pH: 7.8 2. DO: 7.1 mg/L 3. Oil & Grease: 0.8 mg/L 4. BOD: 8 mg/L 5. Fecal Coliform: $3.5x10^4$ MPN/100mL 6. TSS: 36 mg/L	Marilao River: 1. pH: 7.6 2. DO: 7 mg/L 3. Oil & Grease: <1 mg/L 4. BOD: 18 mg/L 5. Fecal Coliform: $3.1x10^5$ MPN/100mL 6. TSS: 17 mg/L	Marilao River:[6] 1. pH: 6.98 2. DO: 1.1 mg/L 3. Oil & Grease: 2 mg/L 4. BOD: 121 mg/L 5. FecalColiform: 3,500,000MPN/100mL 6. TSS: 6 mg/L	Marilao River: 24 February 2025
					5. Meycauayan River 14.73063 N; 120.9644 E		Meycauayan River: 1. pH: 7.4 2. DO: <2.0 mg/L 3. Oil & Grease: 0.6 mg/L 4. BOD: 9 mg/L 5. Fecal Coliform: N.A. 6. TSS: 17 mg/L	Meycauayan River: 1. pH: 7.5 2. DO: 6.8 mg/L 3. Oil & Grease: <1 mg/L 4. BOD: 25 mg/L 5. Fecal Coliform: $1.3x10^6$ MPN/100mL 6. TSS: 33 mg/L	Meycauayan River:[7] 1. pH: 6.93 2. DO: 1.3 mg/L 3. Oil & Grease: 3 mg/L 4. BOD: 132 mg/L 5. Fecal Coliform: 3,500,000 MPN/100mL 6. TSS: 16 mg/L	Meycauayan River: 24 February 2025
					6. Valenzuela Depot 14.713699 N; 120.961019 E		Valenzuela Depot: 1. pH: 6.6 2. DO: <2.0 mg/L	Valenzuela Depot: 1. pH: 7.6 2. DO: 4.2 mg/L	Valenzuela Depot:[8] 1. pH: 6.84 2. DO: 0.9 mg/L	Valenzuela Depot: 25 February

[6] The level of BOD in the Marilao River was observed to have increased compared to the baseline data (2019), while the level of DO decreased. According to the Water Quality Monitoring Report (1Q 2025), along the river stretch are residential and commercial areas. Light industries (i.e. auto supplies and services, packaging, and food manufacturing plants) are located near the river, upstream of the sampling station. During the sampling, community garbage was observed in the river waters. No Project-related construction activities were observed.

[7] The levels of Oil & Grease and BOD in the Meycauayan River were observed to have increased compared to the baseline data (2019), while the level of DO decreased. According to the Water Quality Monitoring Report (1Q 2025), the monitoring station during the sampling was covered with waste from community garbage and vegetations. There are residential and industrial areas along the river, upstream of the sampling station. At the downstream portion of the river, approximately 800 meters, is the Meycauayan Market and Bagsakan Center and other small businesses. Residential and industrial areas discharge their waste to the river as there are drainage systems going to the river from public markets and other facilities. No Project-related construction activities were observed during the sampling.

[8] Similarly, the levels of Oil & Grease and BOD in the ACA Creek was observed to have increased compared to the baseline data (2019), while the level of DO decreased. According to the Water Quality Monitoring Report (1Q 2025), upstream of the ACA creek is a community canal from Brgy. Dalandanan, which drains into it. Residential, industrial and commercial establishments are within the vicinity like factories and groceries. Construction activities in the West

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase (2013)	Pre-construction Phase (2019)	Result (Annex D)[3]	Monitoring Date
							3. Oil & Grease: 0.7 mg/L 4. BOD: 55 mg/L 5. Fecal Coliform: N.A. 6. TSS: 9 mg/L	3. Oil & Grease: 2 mg/L 4. BOD: 65 mg/L 5. Fecal Coliform: $4.9x10^5$ MPN/100mL 6. TSS: 9 mg/L	3. Oil & Grease: 3 mg/L 4. BOD: 138 mg/L 5. FecalColiform: 35,000,000 MPN/ mg/L 6. TSS: 15 mg/L	2025
					7. Tullahan River 14˚40.672'N 120˚58.315'E		Tullahan River[9] - N.A.	Tullahan River - N.A.	Tullahan River - N.A.	Tullahan River: N.A.
					8. Estero de Maypajo 14˚38.113'N 120˚58.6'E		Estero de Maypajo - N.A	Estero de Maypajo - N.A.	Estero de Maypajo - N.A.	Estero de Maypajo: N.A.

Valenzuela Station and Depot are ongoing during the sampling.

To monitor the Contractors' compliance with their Contractor Environmental Management and Monitoring Plan (CEMMP), a weekly walkthrough inspection is conducted on the Project site. This includes monitoring for oil spills, leaks, or illegal disposal of used oil and oil-contaminated materials. During the first quarter monitoring, several observations of minor oil spills and leaks were noted. However, these incidents did not contaminate any water bodies. The Contractors promptly implemented measures to prevent further oil spills and leaks, and the contaminated soil was removed for proper disposal. Additionally, during walkthrough activities, no oil films or concentrated flows from the station or site to any water body were observed. Proper waste management practices are also being enforced by the Contractors, with regular hauling of solid and liquid wastes. Therefore, the increases in the levels of BOD and oil and grease, along with the decreases in the level of DO, cannot be attributed to the Project activities. **Annex B and C** present some measures implemented on-site to mitigate potential impacts on water quality.

In 2001, the Department of Environment and Natural Resources (DENR) identified Marilao, Meycauayan, Bocaue, Balagtas and Guiguinto rivers as "biologically dead". Most of the pollutants are from tanneries and jewelry maufacturers (https://www.philstar.com/nation/2001/02/23/104518/denr-says-5-bulacan-rivers-145dead146). Additionally, according to J. Pleto et. al (2020; https://doi.org/10.5696/2156-9614-10.26.200609), deterioration of the Meycauayan River is a result of rapid industrialization, urbanization and population growth. On the other hand, ecohubmap.com has listed tanneries, textile factories, piggeries, gold refineries, and municipal dumps as the primary sources of Marilao River pollution. These industries contribute to the contamination, making the water hazardous for use. The dumping of non-recyclable materials, such as plastic bottles, on the water's surface further exacerbates the issue. Additionally, the water contains rocks bearing heavy metals, posing a health hazard to the residents.

[9] Water quality monitoring was not conducted at Tullahan River, and Estero de Maypajo since Section1 of Contract Package 01 has not yet been handed over to the contractor.

(3) Impact on Air

No.	Potential Impact	Parameter	Method	Frequency	Location[10]	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[11]	Pre-construction Phase (2019)	Result[12,13] (Annex E)	Monitoring Date
1	Generation of dust and particulate matter, and gas emissions.	1. TSP 2. $PM_{2.5}$ 3. PM_{10} 4. NO_2 5. SO_2,	Clean Air Act of 1999 (RA 8749) 1. TSP: High Volume Gravimetric Method 2. $PM_{2.5}$: High Volume w/2.5-micron particle size inlet, Gravimetric 3. PM_{10}: High Volume w/10-micron particle-size inlet, Gravimetric 4. SO_2: Pararosaniline Method 5. NO_2: Griess	Quarterly, immediately based on complaints	1. Malolos 14°51'14.53"N 120°48'50.96"E	**National Ambient Air Quality Guideline Values (NAAQGV) [14]** **24-Hr Monitoring:** 1. TSP:230 µg/Ncm 2. $PM_{2.5}$: 30 µg/Ncm[15] 3. PM_{10}: 150 µg/Ncm 4. SO_2: 180 µg/Ncm 1. NO_2: 150 µg/Ncm **National Ambient Air Quality for Source-Specific Air Pollutants from Industrial Sources / Operations** **1-Hr Monitoring:** 2. TSP:300 µg/Ncm 3. $PM_{2.5}$: N.A 4. PM_{10}:200 µg/Ncm 5. SO_2: 340 µ/Ncm 6. NO_2: 260 µ/Ncm	**24-Hr Monitoring:** Malolos (2012): 1. TSP: 95 µg/Ncm 2. $PM_{2.5}$: N.A. 3. PM_{10}: 61.8 µg/Ncm 4. NO_2: 3.093 µg/Ncm 5. SO_2,: <0.05 µg/Ncm 1. TSP: 585 µg/Ncm 2. $PM_{2.5}$: N.A. 3. PM_{10}: 91.3 µg/Ncm 4. NO_2: 2.7 µg/Ncm 5. SO_2,: <0.05 µg/Ncm	**24-Hr Monitoring:** Malolos: 1. TSP: 297 µg/Ncm 2. $PM_{2.5}$: 94.1 µg/Ncm 3. PM_{10}: 198 µg/Ncm 4. NO_2: 18.9 µg/Ncm 5. SO_2,: <25.5 µg/Ncm	**24-Hr Monitoring:** Malolos: 1. TSP: 239 µg/Ncm 2. PM_{10}: 128 µg/Ncm 3. $PM_{2.5}$: 29.2 µg/Ncm 4. SO_2,: <0.271 µg/Ncm 5. NO_2: 8.45 µg/Ncm Resampling Result: TSP: 101 µg/Ncm	**24-Hr Monitoring:** Malolos: 22 January 2025 18 March 2025
					2. Guiguinto 14°49'31.06"N 120°54'21.05"E		Guiguinto (2013): 1. TSP: 20.20 µg/Ncm 2. $PM_{2.5}$: N.A. 3. PM_{10}: 26.83 µg/Ncm 4. NO_2: 8.67 µg/Ncm 5. SO_2,: 3.68 µg/Ncm	Guiguinto: 1. TSP: 188 µg/Ncm 2. $PM_{2.5}$:<47.2 µg/Ncm 3. PM_{10}: 187 µg/Ncm 4. NO_2: 11.3 µg/Ncm 5. SO_2,: <25.5 µg/Ncm	Guiguinto and Malolos Boundary: 1. TSP: 121 µg/Ncm 2. PM_{10}: 66.2 µg/Ncm 3. $PM_{2.5}$: 14.0 µg/Ncm 4. SO_2,: <0.271 µg/Ncm 5. NO_2: 17.4 µg/Ncm	Guiguinto and Malolos Boundary: 21 January 2025
					3. Balagtas 14°50'21.90"N 120°51'31.28"E		Balagtas: N.A.	Balagtas: 1. TSP: 271 µg/Ncm 2. $PM_{2.5}$: 67.9 µg/Ncm 3. PM_{10}: 189 µg/Ncm 4. NO_2: 19.7 µg/Ncm 5. SO_2,: 25.7 µg/Ncm	Balagtas: 1. TSP: 360 µg/Ncm 2. PM_{10}: 179 µg/Ncm 3. $PM_{2.5}$: 29.6 µg/Ncm 4. SO_2,: <0.271 µg/Ncm 5. NO_2: 6.81 µg/Ncm Resampling Result: TSP: 156 µg/Ncm PM10: 77 µg/Ncm	Balagtas: 22 January 2025 18 March 2025

[10] Indicates the location of the 2021 1st quarter air quality monitoring station.
[11] Source: NSCR EPRMP, March 2015
[12] The concentration level of TSP in Malolos, and TSP and PM_{10} in Balagtas Monitoring Station are higher than the prescribed guideline values in the NAAQGV. Due to the extremely hot weather in the area, the ground easily dries up after the water misting activities, generating a high volume of dust. The Contractor carried out corrective actions by increasing the frequency of water misting and strict implementation of speed limits. A resampling was then conducted to re-evaluate the concentration levels of TSP and PM10 in the concerned monitoring stations. Dust Mitigation measures are presented in **Annex F**.
[13] Ambient air quality monitoring was not conducted in Caloocan, Manila, Solis and Tutuban stations since Section1 of Contract Package 01 is not yet handed over to the contractor.
[14] Philippine Clean Air Act of 1999 (RA 8749)
[15] DAO 2013-13 – Establishing the Provisional NAAQGV for Particulate Matter 2.5 ($PM_{2.5}$)

No.	Potential Impact	Parameter	Method	Frequency	Location[10]	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[11]	Pre-construction Phase (2019)	Result[12,13] (Annex E)	Monitoring Date
			Saltzman Reaction							
					4. Bocaue 14°48'2"N 120°55'53"E		Bocaue (2012): 1. TSP: 133 µg/Ncm 2. $PM_{2.5}$: N.A. 3. PM_{10}: 67.9 µg/Ncm 4. NO_2: 2.7 µg/Ncm 5. $SO_{2,}$: <0.05 µg/Ncm 1. TSP: 145 µg/Ncm 2. $PM_{2.5}$: N.A. 3. PM_{10}: 104.4 µg/Ncm 4. NO_2: 2.7 µg/Ncm 5. $SO_{2,}$: <0.05 µg/Ncm	Bocaue: 1. TSP: 98.8 µg/Ncm 2. $PM_{2.5}$: 17.3 µg/Ncm 3. PM_{10}: 43.8 µg/Ncm 4. NO_2: 3.6 µg/Ncm 5. $SO_{2,}$: 1.0 µg/Ncm	Bocaue: 1. TSP: 92.45 µg/Ncm 2. PM_{10}: 32.53 µg/Ncm 3. $PM_{2.5}$: 11.93 µg/Ncm 4. $SO_{2,}$: <0.15 µg/Ncm 5. NO_2: 9.55 µg/Ncm	Bocaue: 13 February 2025
					5. Marilao 14°45'44"N 120°57'2"E		Marilao: N.A.	Marilao: 1. TSP: 55.2 µg/Ncm 2. $PM_{2.5}$: 6.1 µg/Ncm 3. PM_{10}: 47.5 µg/Ncm 4. NO_2: 4.1 µg/Ncm 5. $SO_{2,}$: 0.6 µg/Ncm	Marilao: 1. TSP: 24.09 µg/Ncm 2. PM_{10}: 16.04 µg/Ncm 3. $PM_{2.5}$: 6.66 µg/Ncm 4. $SO_{2,}$: <0.15 µg/Ncm 5. NO_2: 7.81 µg/Ncm	Marilao: 12 February 2025
					6. Meycauayan 14°44'20"N 120°57'39.32"E		Meycauayan: N.A.	Meycauayan: 1. TSP: 61.6 µg/Ncm 2. $PM_{2.5}$: 14.6 µg/Ncm 3. PM_{10}: 15 µg/Ncm 4. NO_2: 5.1 µg/Ncm 5. $SO_{2,}$: 0.8 µg/Ncm	Meycauayan: 1. TSP: 26.68 µg/Ncm 2. PM_{10}: 12.38 µg/Ncm 3. $PM_{2.5}$: 4.40 µg/Ncm 4. $SO_{2,}$: 0.29 µg/Ncm 5. NO_2: 8.37 µg/Ncm	Meycauayan: 11 February 2025
					7. Valenzuela 14˚42'51" N 120°57'39"E		Valenzuela (2013): 1. TSP: 37.52 µg/Ncm 2. $PM_{2.5}$: N.A. 3. PM_{10}: 49.68 µg/Ncm 4. NO_2: 10.43 µg/Ncm 5. $SO_{2,}$: 3.96 µg/Ncm	Valenzuela: 1. TSP: 27.3 µg/Ncm 2. $PM_{2.5}$: 5.3 µg/Ncm 3. PM_{10}: 12.5 µg/Ncm 4. NO_2: 4.9 µg/Ncm 5. $SO_{2,}$: 1.2 µg/Ncm	Valenzuela: 1. TSP: 60.01 µg/Ncm 2. PM_{10}: 14.79 µg/Ncm 3. $PM_{2.5}$: 9.92 µg/Ncm 4. $SO_{2,}$: 0.27 µg/Ncm 5. NO_2: 4.36 µg/Ncm	Valenzuela: 10 February 2025
					8. Caloocan 14˚39'28.3" N 120°58'26.2"E		Caloocan (2014): 1. TSP: 97.28 µg/Ncm 2. $PM_{2.5}$: N.A. 3. PM_{10}: 97.60 µg/Ncm 4. NO_2: 30.81 µg/Ncm 5. $SO_{2,}$: 15.53 µg/Ncm	Caloocan – N.A.	Caloocan – N.A.	Caloocan: N.A.

No.	Potential Impact	Parameter	Method	Frequency	Location[10]	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[11]	Pre-construction Phase (2019)	Result[12,13] (Annex E)	Monitoring Date
							1. TSP: 86.3 µg/Ncm 2. $PM_{2.5}$: N.A. 3. PM_{10}: 30.5 µg/Ncm 4. NO_2: 10.6 µg/Ncm 5. $SO_{2,}$: 0.4 µg/Ncm			
					9. Manila 14˚37'26.75" N 120°58'25.52"E		Manila – N.A.	Manila – N.A.	Manila – N.A.	Manila – N.A.
					10. Solis 14˚37'56" N 120°58'34.6"E		Solis (2014). 1. TSP: 84.6 µg/Ncm 2. $PM_{2.5}$: N.A. 3. PM_{10}: 30.5 µg/Ncm 4. NO_2: 10.9 µg/Ncm 5. $SO_{2,}$: 0.9 µg/Ncm	Solis – N.A.	Solis – N.A.	Solis – N.A.
					11. Tutuban 14˚36'22" N 120°58'17"E		Tutuban (2014): 1. TSP: 81.3 µg/Ncm 2. $PM_{2.5}$: N.A. 3. PM_{10}: 46.7 µg/Ncm 4. NO_2: 12.7 µg/Ncm **5.** $SO_{2,}$: 2.3 µg/Ncm	Tutuban – N.A.	Tutuban – N.A.	Tutuban – N.A.

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard[16]	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[17]	Pre-construction Phase (2019)[18]	Result (Annex G)[19]	Monitoring Date
2	Noise pollution	Noise level	Noise level meter	Monthly, immediately based on complaints	Abangan Norte Elementary School, Marilao	Class AA - Morning: 50 dB - Daytime: 55 dB - Evening: 50 dB - Nighttime: 45 dB	N.A.	- Morning: 70.1 dB - Daytime: 71.84 dB - Evening: 70.83 dB - Nighttime: 63.5 dB	- Morning: 56.9 dB - Daytime: 67.2 dB - Evening: 61.1 dB - Nighttime: 51.5 dB - Morning: 54.5 dB - Daytime: 65.4 dB - Evening: 55.8 dB - Nighttime: 47.5 dB - Morning: 48.7 dB - Daytime: 61.9 dB - Evening: 60.4 dB - Nighttime: 51.1 dB	09-10 January 2025 06-07 February 2025 06-07 March 2025
					Tabing Ilog Elementary School, Marilao	Class AA[20] - Morning: 50 dB - Daytime: 55 dB - Evening: 50 dB - Nighttime: 45 dB	N.A.	- Morning: 77.8 dB - Daytime: 78.93 dB - Evening: 76.8 dB - Nighttime: 68.42 dB	- Morning: 69.5 dB - Daytime: 71.1 dB - Evening: 69.1 dB - Nighttime: 62.5 dB - Morning: 69.2 dB - Daytime: 70.9 dB - Evening: 68.8 dB - Nighttime: 63.5 dB - Morning: 70.2 dB - Daytime: 72.1 dB - Evening: 71.4 dB - Nighttime: 62.6 dB	08-09 January 2025 05-06 February 2025 05-06 March 2025

[16] Environmental Quality Standards for Noise in General Areas (NPCC, Memorandum Circular No. 002 Series of 1980). Note: For stations which indicates “Class 3-4; Class A”, Standard for ‘Class 3-4 Construction activities’ was adopted for Morning and Daytime, and the Standard for ‘Class A General Areas’ was adopted during Evening and Nighttime. Also, a corrective factor was applied for stations directly facing 2-lane and 4 or more-lane road as indicated in the NPCC MC No. 1980-002.
[17] Source: NSCR EPRMP, March 2015
[18] Based on the pre- construction phase study conducted on 2019, elevated Noise level was already higher than the standard guideline values stipulated in National Pollution Control Commission (NPCC 1980). Significant noise came from the community.
[19] Annex G: Noise Level Monitoring Results for 3Q 2025
[20] With Correction factor of +5 dBA applicable for areas directly facing 2-lane road

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard[16]	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[17]	Pre-construction Phase (2019)[18]	Result (Annex G)[19]	Monitoring Date
					Near St. Mary Meycauayan College	Class AA[21] - Morning: 55 dB - Daytime: 60 dB - Evening: 55 dB - Nighttime: 50 dB	N.A.	- Morning: 86.45 dB - Daytime: 86.0 dB - Evening: 87.760 dB - Nighttime: 86.90 dB	- Morning: 78.8 dB - Daytime: 78.9 dB - Evening: 80.2 dB - Nighttime: 79.0 dB - Morning: 78.9 dB - Daytime: 78.7 dB - Evening: 81.7 dB - Nighttime: 80.0 dB - Morning: 78.9 dB - Daytime: 79.4 dB - Evening: 79.8 dB - Nighttime: 79.2 dB	08-09 January 2025 05-06 February 2025 05-06 March 2025
					Front of Meycauayan College	Class AA[22] - Morning: 55 dB - Daytime: 60 dB - Evening: 55 dB - Nighttime: 50 dB	N.A.	- Morning: 86.28 dB - Daytime: 86.58 dB - Evening: 86.73 dB - Nighttime: 86.41 dB	- Morning: 79.3 dB - Daytime: 79.6 dB - Evening: 80.0 dB - Nighttime: 78.0 dB - Morning: 81.2 dB - Daytime: 80.4 dB - Evening: 80.9 dB - Nighttime: 79.3 dB - Morning: 81.0 dB - Daytime: 80.8 dB - Evening: 81.4 dB - Nighttime: 80.0 dB	07-08 January 2025 04-05 February 2025 04-05 March 2025
					Malinta Elementary School	Class AA - Morning: 45 dB - Daytime: 50 dB	N.A.	Inside Malinta Elementary School (Class AA): - Morning: 65.25 dB	- Morning: 59.0 dB - Daytime: 59.5 dB - Evening: 55.4 dB - Nighttime: 54.1 dB	07-08 January 2025

[21] With Correction factor of +10 dBA applicable for areas directly facing 4-lane or wider
[22] With Correction factor of +10 dBA applicable for areas directly facing 4-lane or wider

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard[16]	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[17]	Pre-construction Phase (2019)[18]	Result (Annex G)[19]	Monitoring Date
						- Evening: 45 dB - Nighttime: 40 dB		- Daytime: 60.88 dB - Evening: 66.85 dB - Nighttime: 61.61 dB Outside campus Malinta Elementary School - Morning: 85.68 dB - Daytime: 85.53 dB - Evening: 85.3 dB - Nighttime: 85.86 dB	- Morning: 56.9 dB - Daytime: 58.1 dB - Evening: 53.5 dB - Nighttime: 49.6 dB - Morning: 57.1 dB - Daytime: 59.9 dB - Evening: 59.2 dB - Nighttime: 54.4 dB	04-05 February 2025 04-05 March 2025
					Holy Infant Elementary School, Malolos	Class AA[23] - Morning: 50 dB - Daytime: 55 dB - Evening: 50 dB - Nighttime: 45 dB	N.A.	- Morning: 66.62 dB - Daytime: 65.71 dB - Evening: 67.05 dB - Nighttime: 64.7 dB	- Morning: 61.0 dB - Daytime: 59.1 dB - Evening: 58.2 dB - Nighttime: 55.1 dB - Morning: 61.0 dB - Daytime: 59.0 dB - Evening: 59.1 dB - Nighttime: 53.3 dB - Morning: 62.6 dB - Daytime: 62.0 dB - Evening: 62.6 dB - Nighttime: 56.7 dB	16-17 January 2025 04-05 February 2025 05-06 March 2025

[23] Additional +5 dBA since the sampling point is located beside/facing the access road which is also connected to the T-intersection highway (4 lanes)

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[24]	Pre-construction Phase (2019)	Result (Annex H)	Monitoring Date
3	Increase in ground vibration level due to the operation of heavy equipment and machinery	Vibration level	Vibration level meter	Quarterly, immediately based on complaints	Holy Infant School, Malolos City	[25]55 VdB or 0.0056 m/s^2	N.A.	- Daytime: 0.69 mm/s or 0.00069 m/s2	Morning (0500H-0900H) - x: ND y: ND z: ND Daytime (0900H-1800H) - x: 33.6 VdB y: 34.3 VdB z: ND Evening (1800H-2200H) - x: ND y: ND z: ND Nighttime (2200H- 0500H) - x: ND y: ND z: ND	04-05 February 2025

[24] Source: NSCR EPRMP, March 2015
[25] "Technology and Laws Regulation for Pollution Control, 2000", Japan Environmental Management Association for Industry

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[24]	Pre-construction Phase (2019)	Result (Annex H)	Monitoring Date
					Abangan Norte Elementary School, Marilao	[26]55VdB or 0.0056 m/s^2	N.A.	- Morning: 53 VdB - Daytime: 63 VdB - Evening: 57 VdB - Nighttime: 56 VdB	Morning (0500H-0900H) - x: 39.8 VdB y: 41.9 VdB z: 43.6 VdB Daytime (0900H-1800H) - x: 51.8 VdB y: 55.1 VdB z: 58.2 VdB Evening (1800H-2200H) - x: 40.4 VdB y: 42.3 VdB z: 40.6 VdB Nighttime (2200H- 0500H) - x: 38.9 VdB y: 40.4 VdB z: 37.3 VdB	06-07 February 2025

[26] "Technology and Laws Regulation for Pollution Control, 2000", Japan Environmental Management Association for Industry

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[24]	Pre-construction Phase (2019)	Result (Annex H)	Monitoring Date
					Tabing Ilog Elementary School, Marilao	[27]55dB or 0.0056 m/s^2	N.A.	- Morning: 63 VdB - Daytime: 70 VdB - Evening: 68 VdB - Nighttime: 60VdB	Morning (0500H-0900H) - x: 50.7 VdB y: 43.2 VdB z: 51.0 VdB Daytime (0900H-1800H) - x: 57.5 VdB y: 49.7 VdB z: 59.7 VdB Evening (1800H-2200H) - x: 56.0 VdB y: 47.7 VdB z: 57.2 VdB Nighttime (2200H- 0500H) - x: 46.3 VdB y: 44.5 VdB z: 45.9 VdB	05-06 February 2025
					St. Mary College, Meycauayan		N.A.	- Morning: 72 VdB - Daytime: 76 VdB - Evening: 77 VdB - Nighttime: 78 VdB	Morning (0500H-0900H) - x: 52.1 VdB y: 50.5 VdB z: 57.6 VdB Daytime (0900H-1800H) - x: 64.1 VdB y: 60.5 VdB z: 73.8 VdB Evening (1800H-2200H) - x: 63.3 VdB y: 61.7 VdB z: 72.9 VdB	05-06 February 2025

[27] "Technology and Laws Regulation for Pollution Control, 2000", Japan Environmental Management Association for Industry

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[24]	Pre-construction Phase (2019)	Result (Annex H)	Monitoring Date
									Nighttime (2200H- 0500H) - x: 65.4 VdB y: 66.0 VdB z: 75.6 VdB	
					Meycauayan College, Calvario, Meycauayan City, Bulacan	[28]55dB or 0.0056 m/s^2	N.A.	Meycauayan College (Category 3): - Morning: 66 VdB - Daytime: 68 VdB - Evening: 70 VdB - Nighttime: 67 VdB	Morning (0500H-0900H) - x: 38.2 VdB y: 36.3 VdB z: 41.9 VdB Daytime (0900H-1800H) - x: 50.8 VdB y: 48.9 VdB z: 55.0 VdB Evening (1800H-2200H) - x: 50.2 VdB y: 47.7 VdB z: 55.2 VdB Nighttime (2200H- 0500H) - x: 49.4 VdB y: 48.2 VdB z: 56.3 VdB	04-05 February 2025
					Malinta Elementary School, Valenzuela City (Category 3)		Valenzuela: - ND	- Morning: 59 VdB - Daytime: 57 VdB - Evening: 58 VdB - Nighttime: 55 VdB	Morning (0500H-0900H) - x: 26.3 VdB y: 26.6 VdB z: 26.3 VdB Daytime (0900H-1800H) - x: 45.7 VdB	04-05 February 2025

[28] "Technology and Laws Regulation for Pollution Control, 2000", Japan Environmental Management Association for Industry

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Baseline		Latest Monitoring Result in 1st Quarter of 2025	
							Feasibility Study Phase[24]	Pre-construction Phase (2019)	Result (Annex H)	Monitoring Date
									y: 46.2 VdB z: 46.2 VdB Evening (1800H-2200H) - x: 42.8 VdB y: 43.5 VdB z: 42.4 VdB Nighttime (2200H- 0500H) - x: 37.2 VdB y: 37.9 VdB z: 36.2 VdB	

(4) Impact on People

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	Monitoring Date
1	Traffic conditions	Traffic flow (congestion)	Ocular inspection	Weekly	A major intersection in the vicinity of constriction sites	N.A.	To manage traffic flow, the contractors provided flagmen with proper traffic gears, and cautionary signages. **Contract Package 01** Provision of flagmen with proper traffic gears: 1. Mc Arthur Hi-way, Malinta, Valenzuela City – 2 (On an 8-hour shift with night duty flagman). 2. ACA Rd, Brgy Malanday, Valenzuela City – 4 (Flagman is on a 4-hour shift, two shifts per day). 3. Bancal, Meycauayan, Bulacan - 2 (Flagman is on a 4-hour shift, two shifts per day) 4. CW3 Entrance- 2 (On an 8-hour shift with night duty flagman) 5. Gov. Halili Ave., Biñang 2nd, Bocaue-4 flagmen (Deployment during the PC Segment Erection with day and night shifts) 6. Ciudad de Victoria (CDV) Bypass Road – 2 flagmen (Deployment during the PC Segment Erection with day and night shifts) 7. Meycauayan Traffic and Parking Bureau has 5 personnel deployed to assist in the delivery of segments.	N.A.

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	Monitoring Date
							8. Marilao Traffic Sector has 5 traffic enforcers- assisting the delivery of segments and are on an on-call status, when needed can be deployed to assist and manage traffic at their AOR. 9. Bocaue Traffic Management Division has 5 10. Traffic Enforcers - deployed to assist traffic management. **Contract Package 02** Provisions being implemented on site such as cautionary signages, re-routing schemes, banksmen, traffic assessment and traffic engineering works. Traffic Management Officer is full time designated on site. Conducted monthly traffic impact assessment at Malolos, Guiguinto, and Balagtas area along major routes of third-party vehicles as required by DOTr. Malolos, Guiguinto and Balagtas Project Site have pedestrian access routes. Each Site has 10, 15, and 8, respectively. TMP provisions the placement of traffic and safety signages and deployment of flagmen in all road intersections of the transportation route. See **Annex I**	

No.	Potential Impact	Parameter	Method	Frequency	Location	Standard	Latest Monitoring Result in 1st Quarter of 2025	
							Result	Monitoring Date
2	Loss of old Philippine National Railway (PNR) stations	Status of old PNR stations	Ocular inspection and Monitoring	Monthly until preservation work of station is completed	Malolos Station, Guiguinto Station, Bigaa (Balagtas) station.,Meycauayan Station, Polo/Valenzuela Station, and Tutuban Station	Status of Old PNR stations	- The structures are still intact with no sign of damage and no sign of significant change on the crack monitoring results. - The vicinity of the old PNR Stations is properly maintained, vegetations were cleared, and Housekeeping in the area is accomplished regularly. - Protection fence and nets are being maintained to provide safety and security. - Measures to mitigate deterioration of the structures are carried out accordingly. See **Annex J** for the observations and findings during inspections.	**Valenzuela Old PNR Station:** 28 January 2025 20 February 2025 25 March 2025 **Meycauayan Old PNR Station:** 28 January 2025 20 February 2025 25 March 2025 **Bigaa (Balagtas) Old PNR Station** 28 January 2025 28 February 2025 27 March 2025 **Guiguinto Old PNR Station**: 28 January 2025 28 February 2025 27 March 2025 **Malolos Old PNR Station:** 28 January 2025 28 February 2025 27 March 2025

[redacted]

Attachment 3:

RAP Implementation Monitoring Form as of March 2025

Annex II Attachment 14-10

RAP Implmentation Monitoring Form

For North-South Commuter Railway (Malolos - Tutuban) Project

1. General Information

a. RAP Implementation Monitoring Results: 1st Quarter of 2025

b. Date of Preparing this Form: 30 April 2025

c. Person Preparing this Form: Office of the Project Manager, Right of Way Acquisition, ISFR and Livelihood Units, Environmental Considerations

Department/Organizations: North-South Commuter Railway (Malolos Tutuban) Project

2. Scale of Land Acquisition and Resettlement

- Update after finalization of RAP during DED stage

2.1. Project Affected Households (PAHs) and Project Affected Persons (PAPs)

Items	Unit	Per RAP	Actual Number	Remarks
Total Project Affected Households (PAHs)	household	Legal: 395 HH	Legal: 463 Property Owners under Negotiated Sale and Expropriation 96 Project-Affected Renters 83 Business Owners 34 Displaced Employees	1 lot and structure owner (Pin 14005) (Structure tag 2022-B217-2-117) and 1 structure only added (Structure tag 2022-B217-2-116) in CP05 under Negotiation
		Informal: 438 (ISFs)	Informal: 1,275 ISFs	-per NHA validation, including CP05 -additional 12 PAPs (approved inclusion under BSAAC Deliberation)
PAHs which need relocation (as resident)	household	Legal: 88 HH	Legal: 239 HH with affected structures 96 Project-Affected Renters	2 structure added (Structure tag 2022-B217-2-117, Structure tag 2022-B217-2-116) in CP05 under Negotiation
		Informal: 416 (ISFs)	Informal: 933 ISFs (485 relocated)	-per DOTr validation -138 was already endorsed to LA (Overlapping in SBT area) - 19 ISFs (SC) -16 ISFs-non reloc
PAHs which do not need relocation (as resident)	household	Legal: 307 HH	463 Property Owners under Negotiated Sale and Expropriation	1 lot and structure owner (Pin 14005) (Structure tag 2022-B217-2-117) and 1 structure only added (Structure tag 2022-B217-2-116) in CP05 under Negotiation
		Informal: 22 (ISFs)	Informal: 268 ISFs	-Additonal 138 PAPs endorsed to LA and 19 PAPs endorsed to SC -16 ISFs- non Reloc
Business owners who need relocation	persons	14 persons	18 persons	

Business owners who do not need relocation	persons	24 persons	8 persons	
Total PAPs	persons	Legal: 575 persons	Legal: 213 persons to be displaced 463 Property owners under Negotiated Sale and Expropriation (358 Negotiated Sale; 106 Expro) 2 persons to donate property 3 persons to execute quitclaim 83 persons with excluded properties 7 unidentified persons (TOTAL: 771 persons)	4 of the structures in CP05 Manila was transferred from NVS to expropriation and 2 Structure owner added in CP05 Manila under negotiation
		Informal: 1752 persons	Informal: 5,100 persons	x4 per ISF(approximate), incluiding CP05
PAPs who need relocation (as resident)	persons	Legal: 268 persons	Legal: 213 persons	
		Informal: 1448 persons	Informal: 3,732 persons	x4 per ISF(approximate)
PAPs who do not need relocation (as resident)	persons	Legal: 88 persons	Legal: 462 persons	1 lot and structure owner (Pin 14005) (Structure tag 2022-B217-2-117) and 1 structure only added (Structure tag 2022-B217-2-116) in CP05 under Negotiation
		Informal: 304 persons	Informal: 1,072 persons	x4 per ISF(approximate) -16 ISFs-non reloc. -Additonal 138 PAPs endorsed to LA and 19 PAPs endorsed to SC

2.2. Total Areas to be Acquired

Total	Details
Total areas: 186,102.04 m2 inlcuding CP05	Residential: 17,274.04 m2 Commercial: 11,367.0 m2 Industrial: 140,035.0 m2 Agricultural: 10,881.0 m2 Mixed Use: 1,079.0 m2 Road Lot: 67.0 m2 No Data: 481.0 m2 Government: 4918.0 m2

2.3. Structures and Improvements

Legal Structures	CP01 & CP02 - 180 (under Negotiated Sale and Expropriation Only) [146 Structures and 34 Improvements] CP05 - 231 (under Negotiated Sale and Expropriation Only) [208 Structures / 23 - Improvements]

Illegal Structures	CP01 - 244 (222 Demolished and Cleared) CP02 - 12 (12 Demolished and Cleared) CP05 - 295 (35 Demolished and Cleared) (151 Structures endorsed to LA & 12 Structures Endorsed to SC)

2.4. Crops and Trees

Trees	Fruit trees: 409 Forest Trees and Cash Crops: 135 Ornamental Plants and Palms: 2,633 Other Plants and Trees: 19

3. Monitoring Results

3.1. Progress of Land Acquisition and Resettement

(1) Summary of Progress: Number

As of (d/m/y)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Land (HH)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Structure (HH)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Improvement (HH)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Crop/Tree/ Perennial (HH)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Income (HH)	Number of PAHs Receiving All Full Entitlement (HH)	Number of PAHs Move Out Current Place (HH)	Number of ISFs Moving into Resettle- ment Site (HH)	Land Area Already Acquired (m2)
31/03/2025	104 out of 322 Lots	104 out of 354 Structures	17 out of 57 Improvements	20 out of 30 crops and trees owners [Php 148,825.90 of Php 278,643.42]	58 out of 117 business owners and displaced employees	444 out of 933 ISFs	485 out of 933 ISFs	485 out of 933 ISFs	169,169.60 sqm out of 186,361.84 sqm

(2) Summary of Progress: Percentage

As of (d/m/y)	Percentage of PAHs Receiving All Compensation / Subsidy for Loss of Land (%)	Percentage of PAHs Receiving All Compensation / Subsidy for Loss of Structure (%)	Percentage of PAHs Receiving All Compensation / Subsidy for Loss of Improvement (%)	Percentage of PAHs Receiving All Compensation / Subsidy for Loss of Crop/Tree/ Perennial (%)	Percentage of PAHs Receiving All Compensation / Subsidy for Loss of Income (%)	Percentage of PAHs Receiving All Full Entitlement (%)	Percentage of PAHs Move Out Current Place (%)	Percentage of ISFs Moving into Resettlement Site (%)	Percentage of Land Area Already Acquired (%)
31/03/2025	32.30%	29.38%	29.82%	66.67%	49.57%	48.00%	52.00%	52.00%	90.77%