

Environmental Monitoring Form Metro Manila Subway Project

1. General Information:

- a. Environmental Monitoring Results:
- b. Date of Preparing This Form:
- c. Person Preparing This Form:

Progress Status Report (PSR) covering July-December 2023

31 May 2024

Name: Christine T. Cerezo

Position: Environment Team Leader

Department/Organization: Department of Transportation - Railways

Pre-Construction and Construction Phase:

2. Response and Actions to Comments and Guidance from Government Authorities and the Public

Table 1. Monitoring Items and Results

Monitoring Items	Monitoring Results during Report Period
Number and contents of formal comments by the public	1
Number and contents of formal comments by government agencies	0

3. Pollution

3.1 Environmental Monitoring Activities

The Environmental Compliance Certificate (ECC-CO-1708-0017), initially issued by DENR on 25 October 2017, with subsequent amendments on 22 November 2019, and 29 April 2021, imposes a crucial condition for the Metro Manila Subway Project (MMSP) to adhere strictly to all environmental mitigation and prevention measures. The Project Management Office (PMO) commits to upholding these measures, aligning all operations and activities with the approved Environmental Impact Statement (EIS) and Environment Management and Monitoring Plan (EMMoP).

This section outlines the environmental monitoring activities scheduled from July to December 2023 concerning the MMSP.

3.1.1 Air Quality Monitoring

- i. The air quality monitoring assesses the pollutant levels present in the air through the measurement of quantity and types of different pollutants.
- ii. Table 2 shows the air quality monitoring baseline data conducted in all active CPs until December 2023. For CP101, the baseline results are available for Tandang Sora Station (TSS), Quirino Highway Station (QHS), North Avenue Station (NAS), and Depot. For CP102, the station with baseline monitoring for air is only available for Quezon Avenue Station (QAS). For CP103, the baseline results for both Anonas Station (ANS) and Camp Aguinaldo Station (CAS) are available. For CP104, the baseline data for Shaw Boulevard Station (SBS) and Ortigas Station (OAS) are also indicated below.

Table 2. Baseline Data for the Air Quality Monitoring

Location	Sampling Date	Parameters µg/Ncm						OVERALL REMARKS
		24-hr	TSP	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
CP 101								
Tandang Sora Station (Landcom Village)	October 27-28, 2020	7.76	6.55	4.76	0.37	4.61	<0.00005	PASSED
Quirino Highway Station (near Pacific Global MC)	October 28-29, 2020	34.77	5.68	30.25	0.61	13.34	<0.00005	PASSED
North Avenue Station (Road 10, Brgy. Project 6)	October 29-30, 2020	27.75	6.81	22.13	0.97	19.23	<0.00005	PASSED
Depot (San Pedro IX Chapel)	October 30-31, 2020	11.27	6.21	10.39	0.86	4.94	<0.00005	PASSED
DENR Ambient Air Quality Guideline Values for Criteria Pollutants 24-hr Averaging Time (DAO 2000-81)		230	150	50	180	150	1.5	-

CP102								
Avida Tower (Quezon Avenue)	August 4, 2023	21	19	ND	<7	<1	ND	PASSED
	August 4-5, 2023	ND	ND	10.8	ND	ND	ND	PASSED
DENR Ambient Air Quality Guideline Values for Criteria Pollutants 24-hr Averaging Time (DAO 2000-81)		300	200	35	340	260	-	-
CP 103								
Anonas Station (World Citi Medical Center)	February 9-10, 2023	25.2	14.8	29.6	<4	2.7	ND	PASSED
Camp Aguinaldo Station (Blue Ridge A Multipurpose Hall)	February 8-9, 2023	27.7	23.9	19.4	<4	4.4	ND	PASSED
DENR Ambient Air Quality Guideline Values for Criteria Pollutants 24-hr Averaging Time (DAO 2000-81)		230	150	50	180	150	1.5	
CP 104								
Shaw Boulevard Station (Capitol Commons Estancia Mall)	December 27-28, 2022	187	66.10	0.0000 2	<32. 7	11.8	ND	PASSED
Ortigas Station (MMDA Impounding Area)	February 27-28, 2023	193	123	0.016	<33. 2	7.5	ND	PASSED
DENR Ambient Air Quality Guideline Values for Criteria Pollutants 24-hr Averaging Time [National Ambient Air Quality Standards (NAASQSSAP) and National Ambient Air Quality Guideline Value (NAAAQGV)]		300	200	50	340	260	-	-

- iii. The provided data in Table 2 represents the baseline air quality monitoring results for various locations and sampling dates. The parameters measured include 24-hour concentrations of Total Suspended Particulates (TSP), PM10, PM2.5, SO2 (Sulfur Dioxide), NO2 (Nitrogen Dioxide), and Pb (Lead). The measurements are expressed in micrograms per normal cubic meter ($\mu\text{g}/\text{Ncm}$). All stations in CP101 have concentrations below the DENR Ambient Air Quality Guideline Values, indicating that they passed the air quality standards. The baseline monitoring at QAS has concentrations below the DENR Ambient Air Quality Guideline Values for all parameters on both sampling dates, demonstrating compliance with air quality standards. Both ANS and CAS show concentrations below the DENR Ambient Air Quality Guideline Values, meeting the air quality standards for all measured parameters. For CP104, both stations exhibit concentrations below the DENR Ambient Air Quality Guideline Values and National Ambient Air Quality Standards, indicating compliance with air quality standards. In summary, the air quality monitoring results for all CPs indicated that the measured parameters are within the acceptable limits set by the DENR, suggesting compliance with environmental standards for the specified locations and sampling periods.
- iv. Air quality monitoring was conducted in identified stations. The results of the monitoring for the 2nd Quarter to 4th Quarter of 2023 for CP101 are indicated below. The results in Table 3 are compared with the DENR Department of Environment and Natural Resources (DENR) Ambient Air Quality Guideline Values for Criteria Pollutants (DAO No. 2008-81) based on 24-hour and 60-minute averaging time.

Table 3. Summary of 2nd Quarter Results for Air Quality Monitoring (CP101)

Monitoring Location	Averaging Time	Date (Time)	TSP	PM10	PM2.5	SO2	NO2	Pb	O3	OVERALL REMARKS
			$\mu\text{g}/\text{Ncm}$							
North Avenue Station (Road 10, Project 6, Quezon City)	24 hours	May 8-9, 2023	ND	ND	9.79	ND	ND	ND	ND	PASSED
	1 hour	May 8, 2023	34.5	15.5	ND	6.1	24.9	ND	ND	PASSED
Tandang Sora Station (Landcom Village II, Brgy. Tandang Sora, Quezon City)	24 hours	May 9-10, 2023	ND	ND	12.93	ND	ND	ND	ND	PASSED
	1 hour	May 9, 2023	105.9	43.4	ND	4.3	0.7	ND	ND	PASSED

Quirino Highway Station (Old Sauyo Rd., Brgy. Talipapa, Quezon City)	24 hours	May 10-11, 2023	ND	ND	9.49	ND	ND	ND	ND	PASSED
	1 hour	May 10, 2023	42.9	37.7	ND	7.8	6.8	ND	ND	PASSED
Depot Area (San Pedro IX Chapel, Brgy. Bagbag, Valenzuela City)	24 hours	May 11-12, 2023	ND	ND	5.71	ND	ND	ND	ND	PASSED
	1 hour	May 11, 2023	54	8.7	ND	3.6	9.4	ND	ND	PASSED
(a) DENR National Ambient Air Quality Guideline Values for Criteria Pollutants based on 24-hour Averaging Time			230	150	50	180	150	1.5	0.03	
(b) DENR National Ambient Air Quality Guideline Values for Criteria Pollutants based on 60-minute Averaging Time			300	200	35	340	260	NS	NS	

- v. Table 3 provides a summary of the 2nd Quarter results for Air Quality Monitoring at CP101, indicating the levels of various pollutants measured at different stations and time intervals. The results show compliance with the DENR National Ambient Air Quality Guideline Values for Criteria Pollutants, both for the 24-hour averaging time and the 60-minute averaging time. The "PASSED" remarks signify that the observed pollutant levels fall within the acceptable limits defined by environmental standards.
- vi. Table 4 presents the summary of Air Quality Monitoring results for the 3rd Quarter of 2023 at various stations within CP101. The table includes data on Total Suspended Particles (TSP), PM10, PM2.5, SO2, NO2, Pb, and O3, measured at different time intervals. The monitoring locations include North Avenue Station, Tandang Sora Station, Quirino Highway Station, and the Depot Area in Valenzuela City. The results are compared against the DENR National Ambient Air Quality Guideline Values for Criteria Pollutants, providing insights into the air quality status in the specified areas.

Table 4. Summary of 3rd Quarter Results for Air Quality Monitoring (CP101)

Monitoring Location	Averaging Time	Date (Time)	TSP	PM10	PM2.5	SO2	NO2	Pb	O3	OVERALL REMARKS
			µg/Ncm							
North Avenue Station (Road 10, Project 6, Quezon City)	24 hours	August 7-8, 2023 0916H - 0916H	ND	ND	16.41	ND	ND	ND	ND	PASSED

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	1 hour	August 7, 2023 0916H - 1016H	77.5	37.9	ND	7.9	5.3	ND	ND	PASSED
Tandang Sora Station (Landcom Village II, Brgy. Tandang Sora, Quezon City)	24 hours	August 8-9, 2023 1124H - 1124H	ND	ND	5.36	ND	ND	ND	ND	PASSED
	1 hour	August 8, 2023 1124H - 1224H	115.7	10.4	ND	6.7	11.9	ND	ND	PASSED
Quirino Highway Station (Old Sauyo Rd., Brgy. Talipapa, Quezon City)	24 hours	August 9-10, 2023 1227H - 1227H	ND	ND	1.39	ND	ND	ND	ND	PASSED
	1 hour	August 9, 2023 1227H - 1327H	71.9	7.0	ND	9.9	4.5	ND	ND	PASSED
Depot Area (San Pedro IX Chapel, Brgy. Bagbag, Valenzuela City)	24 hours	August 10-11, 2023 1403H - 1403H	ND	ND	0.09	ND	ND	ND	ND	PASSED
	1 hour	August 10, 2023 1403H - 1503H	149.7	5.2	ND	6.7	8.7	ND	ND	PASSED
(a) DENR National Ambient Air Quality Guideline Values for Criteria Pollutants based on 24-hour Averaging Time			230	150	50	180	150	1.5	0.03	
(b) DENR National Ambient Air Quality Guideline Values for Criteria Pollutants based on 60-minute Averaging Time			300	200	35	340	260	NS	NS	

- vii. The data reveals that for each monitoring location, both the 24-hour and 1-hour average concentrations of pollutants fall within the DENR National Ambient Air Quality Guideline Values for Criteria Pollutants. The "PASSED" remarks indicate compliance with environmental standards, suggesting that the air quality in CP101 during the 3rd Quarter of 2023 meets the defined regulatory thresholds. This information is crucial for assessing the impact of air quality on the surrounding environment and public health, ensuring that the Metro Manila Subway Project adheres to environmental regulations and standards.
- viii. Table 5 outlines the Air Quality Monitoring results for the 4th Quarter of 2023 at specific locations within CP101. The data encompasses Total Suspended Particles (TSP), PM10, PM2.5, SO2, NO2, Pb, and O3, measured during 24-hour and 1-hour intervals. The monitoring stations include North Avenue Station, Tandang Sora Station, Quirino Highway Station, and the Depot Area in Valenzuela City. This information is critical for assessing air quality standards and ensuring environmental compliance for the project.

Table 5. Summary of 4th Quarter Results for Air Quality Monitoring (CP101)

Monitoring Location	Averaging Time	Date (Time)	TSP	PM10	PM2.5	SO2	NO2	Pb	O3	OVERALL REMARKS
			µg/Ncm							
North Avenue Station (Road 10, Project 6, Quezon City)	24 hours	November 6-7, 2023 0900H-0900H	ND	ND	0.98	ND	ND	ND	ND	PASSED
	1 hour	November 6, 2023 0900H-1000H	<1.7	<1.7	ND	3.6	19.8	ND	ND	PASSED
Tandang Sora Station (Landcom Village II, Brgy. Tandang Sora, Quezon City)	24 hours	November 7-8, 2023 1105H-1105H	ND	ND	6.73	ND	ND	ND	ND	PASSED
	1 hour	November 7, 2023 1105H-1205H	<1.7	<1.7	ND	10.6	<2.7	ND	ND	PASSED
Quirino Highway Station (Old Sauyo Rd., Brgy. Talipapa, Quezon City)	24 hours	November 8-9, 2023 1214H-1214H	ND	ND	4.7	ND	ND	ND	ND	PASSED
	1 hour	November 8,	65.6	10.4	ND	27.3	2.7	ND	ND	PASSED

		2023 1214H-1314H								
Depot Area (San Pedro IX Chapel, Brgy. Bagbag, Valenzuela City)	24 hours	November 9-10, 2023 1341H-1341H	ND	ND	0.44	ND	ND	ND	ND	PASSED
	1 hour	November 9, 2023 1341H-1441H	13.7	3.4	ND	15.7	8.4	ND	ND	PASSED
(a) DENR National Ambient Air Quality Guideline Values for Criteria Pollutants based on 24-hour Averaging Time			230	150	50	180	150	1.5	0.03	-
(b) DENR National Ambient Air Quality Guideline Values for Criteria Pollutants based on 60-minute Averaging Time			300	200	35	340	260	NS	NS	-

- ix. For each monitored location during the 24-hour and 1-hour intervals, the concentrations of pollutants remain within the DENR National Ambient Air Quality Guideline Values for Criteria Pollutants. The "PASSED" remarks signify adherence to environmental standards, indicating that the air quality in CP101 during the 4th Quarter of 2023 complies with regulatory thresholds. These findings are significant in evaluating the potential impact on both the environment and public health, underscoring the project's commitment to meeting stringent environmental regulations.
- x. The Air Quality Monitoring data for CP102 during the third and fourth quarter of 2023 is unavailable due to operational constraints. This absence of quarterly data is primarily attributed to the achievement of reasonable site access for Quezon Avenue Station (QAS), as recorded on November 30, 2023. The crucial prerequisite of reasonable site access was met only on November 30, 2023. For this reason, the initiation hampered the installation of monitoring equipment and impeded the collection of air quality data. Despite the commencement of demolition activities on December 5, 2023, the scope was restricted to preparatory works.
- xi. The ensuing data represents the Air Quality Monitoring outcomes for CP103 during different intervals across the 3rd to 4th Quarter of 2023. Specifically, it includes readings for Total Suspended Particles (TSP), PM10, PM2.5, SO2, NO2, Pb, and O3 at the Blue Ridge A Multipurpose Hall on Katipunan Avenue. The monitoring periods are August 30-31, and November 28-29, 2023. These findings are vital for gauging the environmental impact of activities within this location and ensuring compliance with air quality standards.

Table 6. Summary of 3rd and 4th Quarter Results for Air Quality Monitoring (CP103)										
Monitoring Location	Averaging Time	Date	TSP	PM10	PM2.5	SO2	NO2	Pb	O3	OVERALL REMARKS
Blue Ridge A Multipurpose Hall, Katipunan Avenue			µg/Ncm						(ppm)	
	24 hours	August 30-31, 2023 1030H-1030H	66.6	60.8	11.6	<4	0.5	ND	ND	PASSED
	24 hours	November 28-29, 2023 1033H-1033H	23.4	13.9	9.7	<4	<0.4	ND	ND	PASSED
National Ambient Air Quality Standards for Source Specific Air Pollutants from Industrial Sources or Operations (DAO 2000-81)			230	150	35	150	180	-	-	-

- xii. Throughout the year, the monitored parameters consistently fall within the National Ambient Air Quality Standards for Source Specific Air Pollutants from Industrial Sources or Operations (DAO 2000-81). The recorded values for TSP, PM10, PM2.5, SO2, NO2, Pb, and O3 during 24-hour intervals demonstrate compliance with the stipulated regulatory limits. The "PASSED" remarks affirm that the air quality at the Blue Ridge A Multipurpose Hall in CP103 adheres to the prescribed standards, underscoring the project's commitment to environmental responsibility.
- xiii. For each monitored location during the 24-hour and 1-hour intervals, the concentrations of pollutants remain within the DENR National Ambient Air Quality Guideline Values for Criteria Pollutants. The "PASSED" remarks signify adherence to environmental standards, indicating that the air quality in CP103 during the 3rd and 4th Quarter of 2023 complies with regulatory thresholds. These findings are significant in evaluating the potential impact on both the environment and public health, underscoring the project's commitment to meeting stringent environmental regulations.
- xiv. The air quality monitoring results for CP104 at Shaw Boulevard Station, spanning from 2nd Quarter to 4th Quarter of 2023, offer crucial insights into the environmental conditions surrounding Capitol Commons Estancia Mall. The interpretation of this data not only serves as a comprehensive evaluation of compliance with DENR Ambient Air Quality Guideline Values but also provides a basis for understanding potential localized variations and sources affecting air quality at specific time intervals.

Table 7. Summary of 2nd to 4th Quarter Results for Air Quality Monitoring (CP104)										
Monitoring Location	Averaging Time	Date	TSP	PM10	PM2.5	SO2	NO2	Pb	O3	OVERALL REMARKS
			µg/Ncm	(ppm)						
Shaw Boulevard Station (Capitol Commons Estancia Mall)	24 hours	June 8-9, 2023	ND	ND	0.0311	ND	ND	ND	ND	PASSED
	1 hour	June 8, 2023	148	95.2	ND	<33.6	25.1	ND	ND	PASSED
	24 hours	September 6-7, 2023	ND	ND	0.0457	ND	ND	ND	ND	PASSED
	1 hour	September 6, 2023	59.7	30.2	ND	<33.4	<7.37	ND	ND	PASSED
	24 hours	December 6-7, 2023	ND	ND	0.038	ND	ND	ND	ND	PASSED
	1 hour	December 6, 2023	66.9	32.9	ND	<33.2	48.2	ND	ND	PASSED
DENR Ambient Air Quality Guideline Values for Criteria Pollutants 24-hr Averaging Time [National Ambient Air Quality Standards (NAASQSSAP) and National Ambient Air Quality Guideline Value (NAAAQGV)]			300	200	50	340	260	-	-	-

- xv. Table 6 summarizes the air quality monitoring results for CP104 at Shaw Boulevard Station during the second to fourth quarters of the monitoring period. In June 2023, the 24-hour average showed negligible levels of TSP and PM10, with PM2.5 at 0.0311 µg/Ncm, all within the permissible limits. The 1-hour monitoring during the same period indicates a spike in particulate matter, notably PM10, which may be attributed to localized activities. In September 2023, the 24-hour average exhibits similarly low levels, ensuring air quality compliance. The 1-hour reading, however, depicts a slight increase in TSP, PM10, and PM2.5.

- xvi. In December 2023, the air quality monitoring results for Shaw Boulevard Station (Capitol Commons Estancia Mall) at CP104 exhibited compliance with established standards, with concentrations of PM2.5 and PM10 well below the DENR Ambient Air Quality Guideline Values. Other monitored pollutants, including SO2, NO2, and O3, also remained within acceptable limits. Overall, CP104 maintains satisfactory air quality standards, with occasional short-term variations possibly linked to specific temporal activities or events. Continuous monitoring and prompt mitigation strategies remain integral to sustaining the positive air quality profile at Shaw Boulevard Station.

3.1.2 Air Quality (Dust) and Noise Impact Survey Results

- i. In the pursuit of understanding the potential ramifications of diverse activities, projects, or sources on both air quality (dust) and noise levels within a specific locale, survey activities have been conducted within the project. This survey encompasses the systematic collection of pertinent information, an evaluation of the acquired data, and an informed estimation of the potential magnitude of impacts. The objective is to gauge and address any conceivable influences on stakeholders and individuals residing in the vicinity of the construction site, thereby ensuring a proactive and responsible approach to environmental and noise management.
- ii. This table presents the results of the air quality (dust) and noise level surveys conducted for CP101 from April to September 2023. The impact severity is categorized into four levels: None, Mild, Moderate, and Severe. The survey captures the number of respondents and the corresponding percentage for each category. The survey was conducted at different locations, including NAS, Depot, QHS, and TSS. The results offer valuable insights into the perceived impact of construction activities on air quality and noise levels, providing a nuanced understanding of the community's experiences throughout the specified period.

Table 8. Air Quality (dust) and Noise Level Survey Results for CP101

Impact Severity	Air Quality		Noise Level	
	No. of Respondents	Percentage (%)	No. of Respondents	Percentage (%)
April 2023 (NAS)				
None	28	93.33	29	96.67
Mild	2	6.67	1	3.33

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Moderate	0	0	0	0
Severe	0	0	0	0
April 2023 (Depot)				
None	26	86.67	27	90
Mild	4	13.33	3	10
Moderate	0	0	0	0
Severe	0	0	0	0
April 2023 (QHS)				
None	29	96.67	28	93.33
Mild	1	3.33	2	6.67
Moderate	0	0	0	0
Severe	0	0	0	0
April 2023 (TSS)				
None	29	96.67	29	96.67
Mild	1	3.33	1	3.33
Moderate	0	0	0	0
Severe	0	0	0	0
May 2023 (NAS)				
None	29	96.67	30	100
Mild	1	3.33	0	0
Moderate	0	0	0	0
Severe	0	0	0	0
May 2023 (Depot)				
None	28	93.33	27	90
Mild	2	6.67	3	10
Moderate	0	0	0	0
Severe	0	0	0	0
May 2023 (QHS)				
None	30	100	25	83.33
Mild	0	0	5	16.67
Moderate	0	0	0	0

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Severe	0	0	0	0
May 2023 (TSS)				
None	30	100	30	100
Mild	0	0	0	0
Moderate	0	0	0	0
Severe	0	0	0	0
June 2023 (NAS)				
None	27	90	25	83.33
Mild	3	10	5	16.67
Moderate	0	0	0	0
Severe	0	0	0	0
June 2023 (Depot)				
None	25	83.33	27	90
Mild	5	16.67	3	10
Moderate	0	0	0	0
Severe	0	0	0	0
June 2023 (QHS)				
None	29	96.67	25	83.33
Mild	1	3.33	5	16.67
Moderate	0	0	0	0
Severe	0	0	0	0
June 2023 (TSS)				
None	29	96.67	28	93.33
Mild	1	3.33	2	6.67
Moderate	0	0	0	0
Severe	0	0	0	0
July 2023 (NAS)				
None	29	96.67	29	96.67
Mild	1	3.33	1	3.33
Moderate	0	0	0	0
Severe	0	0	0	0

July 2023 (Depot)				
None	29	96.67	26	86.67
Mild	1	3.33	4	13.33
Moderate	0	0	0	0
Severe	0	0	0	0
July 2023 (QHS)				
None	25	83.33	29	96.67
Mild	5	16.67	1	3.33
Moderate	0	0	0	0
Severe	0	0	0	0
July 2023 (TSS)				
None	30	100	30	100
Mild	0	0	0	0
Moderate	0	0	0	0
Severe	0	0	0	0
August 2023 (NAS)				
None	30	100	30	100
Mild	0	0	0	0
Moderate	0	0	0	0
Severe	0	0	0	0
August 2023 (Depot)				
None	30	100	28	93.33
Mild	0	0	2	6.67
Moderate	0	0	0	0
Severe	0	0	0	0
August 2023 (QHS)				
None	29	96.67	26	86.67
Mild	1	3.33	4	13.33
Moderate	0	0	0	0
Severe	0	0	0	0
August 2023 (TSS)				

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None	30	100	30	100
Mild	0	0	0	0
Moderate	0	0	0	0
Severe	0	0	0	0
September 2023 (NAS)				
None	30	100	30	100
Mild	0	0	0	0
Moderate	0	0	0	0
Severe	0	0	0	0
September 2023 (Depot)				
None	27	90	26	86.67
Mild	3	10	4	13.33
Moderate	0	0	0	0
Severe	0	0	0	0
September 2023 (QHS)				
None	29	96.67	27	90
Mild	1	3.33	3	10
Moderate	0	0	0	0
Severe	0	0	0	0
September 2023 (TSS)				
None	30	100	30	100
Mild	0	0	0	0
Moderate	0	0	0	0
Severe	0	0	0	0
October 2023 (NAS)				
None	28	93.33	27	90
Mild	2	6.67	3	10
Moderate	0	0	0	0
Severe	0	0	0	0
October 2023 (Depot)				
None	26	86.67	22	73.33

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Mild	4	13.33	8	26.67
Moderate	0	0	0	0
Severe	0	0	0	0
October 2023 (QHS)				
None	28	93.33	26	86.67
Mild	2	6.67	4	13.33
Moderate	0	0	0	0
Severe	0	0	0	0
October 2023 (TSS)				
None	30	100	30	100
Mild	0	0	0	0
Moderate	0	0	0	0
Severe	0	0	0	0
November 2023 (NAS)				
None	28	93.33	29	96.67
Mild	2	6.67	1	3.33
Moderate	0	0	0	0
Severe	0	0	0	0
November 2023 (Depot)				
None	22	73.33	21	70.00
Mild	8	26.67	9	30.00
Moderate	0	0	0	0
Severe	0	0	0	0
November 2023 (QHS)				
None	29	96.67	30	100
Mild	1	3.33	0	0
Moderate	0	0	0	0
Severe	0	0	0	0
November 2023 (TSS)				
None	29	96.67	29	96.67
Mild	1	3.33	1	3.33

Moderate	0	0	0	0
Severe	0	0	0	0
December 2023 (NAS)				
None	28	93.33	29	96.67
Mild	2	6.67	1	3.33
Moderate	0	0	0	0
Severe	0	0	0	0
December 2023 (Depot)				
None	26	86.67	26	86.67
Mild	4	13.33	4	13.33
Moderate	0	0	0	0
Severe	0	0	0	0
December 2023 (QHS)				
None	29	96.67	26	86.67
Mild	1	3.33	4	13.33
Moderate	0	0	0	0
Severe	0	0	0	0
December 2023 (TSS)				
None	30	100	30	100
Mild	0	0	0	0
Moderate	0	0	0	0
Severe	0	0	0	0

Note: Mild refers to the experienced discomfort once a day for at least one-hour duration within an 8-hour interval. Moderate indicates the experienced discomfort more than twice a day for the same period/interval. Severe impact severity occurs when the discomfort occurs more than three times a day.

- iii. In April 2023, the air quality (dust) and noise level survey at CP101 reflected positive results across all monitored locations. At North Avenue Station (NAS), Depot, Quirino Highway Station (QHS), and Tandang Sora Station (TSS), most respondents, ranging from 86.67% to 96.67%, reported experiencing none for both air quality and noise levels. The

impact severity remained minimal, with only a small percentage reporting mild discomfort, indicating generally satisfactory environmental conditions.

- iv. May 2023 continued the trend of favorable survey results at CP101. North Avenue Station (NAS), Depot, Quirino Highway Station (QHS), and Tandang Sora Station (TSS) recorded high percentages (90% to 100%) of respondents reporting None for air quality and noise levels. No instances of Moderate or Severe impact severity were reported. Mild impact severity, although present, remained at a minimal level, suggesting that the environmental conditions were well within acceptable limits.
- v. The air quality and noise level survey in June 2023 sustained the positive findings at CP101. North Avenue Station (NAS), Depot, Quirino Highway Station (QHS), and Tandang Sora Station (TSS) consistently reported high percentages for None, ranging from 83.33% to 90%. Mild impact severity was minimal, indicating occasional and minor discomfort. The overall trend suggested that the environmental conditions during June were generally favorable and aligned with acceptable standards.
- vi. July 2023 demonstrated a continuation of satisfactory environmental conditions at CP101. North Avenue Station (NAS), Depot, Quirino Highway Station (QHS), and Tandang Sora Station (TSS) maintained high percentages (96.67% to 100%) for None, signifying that most respondents experienced minimal impact on air quality and noise levels. Mild impact severity remained at low percentages, reinforcing the notion that the conditions were generally acceptable with occasional, minor discomfort.
- vii. In August 2023, the air quality (dust) and noise level survey at CP101 reaffirmed positive results. Across North Avenue Station (NAS), Depot, Quirino Highway Station (QHS), and Tandang Sora Station (TSS), respondents consistently reported None for both air quality and noise levels, with percentages reaching 100%. Mild impact severity was sporadic and reported at low percentages, indicating that the environmental conditions during August were well within acceptable limits.
- viii. Another survey activity in September 2023 has highly favorable results at CP101. At North Avenue Station (NAS), 100% of respondents reported None for both air quality and noise levels, indicating an absence of any perceived discomfort. No instances of Mild, Moderate, or Severe impact severity were reported, emphasizing the overall satisfaction of respondents with the environmental conditions at this location. Similar patterns were observed at Depot, Quirino

Highway Station (QHS), and Tandang Sora Station (TSS), where the majority of respondents reported None, and the percentages for Mild impact severity were minimal.

- ix. In October 2023, the majority of respondents at NAS reported none to mild impact severity for both air quality and noise level, with percentages ranging from 93.33% to 100%. Similar trends were observed at Depot, QHS, and TSS, indicating a prevalent perception of minimal impact severity during this period.
- x. Moving to November 2023, the survey results continued to reflect a predominance of non-to- mild impact severity across all stations. While there were slight variations in the percentages of respondents reporting none versus mild impacts, the overall pattern remained consistent with previous months.
- xi. In December 2023, the survey results mirrored those of the preceding months, with the majority of respondents at all stations reporting none to mild impact severity for both air quality and noise level. Once again, the data indicated a prevailing perception of minimal impact severity throughout the surveyed areas during this period.
- xii. On the other hand, the absence of survey activities for CP102 QAS during the specified period is attributed to the limited construction activities undertaken at the site. The project records indicate that reasonable site access for CP102 was only achieved on November 30, 2023. However, despite achieving access, significant construction operations did not commence immediately. Although demolition works commenced on December 5, 2023, they were restricted to preliminary tasks. Consequently, the lack of substantial construction activities during the survey period for CP102 resulted in the absence of corresponding survey activities, underscoring the direct correlation between construction progress and survey implementation.
- xiii. The survey for CP103 CAS aimed to assess the environmental impact of construction activities on individuals passing through the designated area regularly. Participants were asked to provide feedback on their experiences regarding dust exposure and noise pollution emanating from the construction site. Participants were invited to provide comments and suggestions regarding their experiences and potential improvements. Dust exposure and noise pollution emerged as prominent concerns, with respondents expressing varying degrees of discomfort and annoyance (**Annex 1**).

- xiv. To proactively mitigate the potential dust and noise impact on the general public, CP104 consistently conducts monthly surveys aimed at assessing these impacts, relying on feedback from pedestrians and stakeholders. The survey evaluates various parameters to gauge the level of impact on the public, including changes in air quality, the influence of construction noise on daily activities, feelings of stress attributed to construction noise, perceptions of excessive noise emission from equipment and machinery, and the effectiveness of information dissemination by the Contractor, Tokyu Tobishima Megawide Joint Venture (TTM-JV). The survey encompasses feedback from a total of fifteen (15) respondents.

Table 9. Summary Table for CP104 Public Perception Surveys (July - December 2023)

Month	Air Quality (No Significant Change)	Construction Noise Discomfort (Strongly Disagree)	Construction Noise Stress (Strongly Disagree)	Equipment Noise (Acceptable Levels)	Info Dissemination (TTM-JV Effective)	Other Notes
July	73%	47%	93%	87%	47%	Understanding project inconveniences; minor work delays
Aug	75%	75%	83%	75%	50%	Project purpose understood; work delays for some, minimal impact on well-being
Sept	100%	93%	100%	93%	67%	Construction necessity understood; work delays due to road closures, minimal impact on well-being
Oct	60%	73%	80%	73%	87%	National growth understood; work delays due to road closures, minimal impact on well-being

Nov	87%	73%	93%	80%	40%	Project's role understood; work delays due to road closures, mixed opinions on impact
Dec	87%	69%	80%	73%	60%	Construction's role in national growth understood; work delays due to road closures, mixed opinions on the impact

- xv. In July 2023, our survey conducted with random pedestrians and stakeholders revealed that a majority of respondents perceived no significant changes in air quality despite the initiation of pre-construction activities by CP104. Approximately 73% strongly disagreed with any noticeable alterations, and 13.5% disagreed, while an equivalent percentage expressed neutrality. Regarding noise, 47% strongly disagreed that they felt discomfort, with 3/15 remaining neutral and 5/15 strongly agreeing, mainly delivery riders affected by road closures. Surprisingly, 14 out of 15 respondents strongly disagreed that the construction noise was stressing them out, emphasizing that the ongoing measures taken by the contractor minimized the impact. A vast majority (87%) strongly disagreed that MMSP CP104's equipment emitted excessive noise, indicating a perception of acceptable noise levels. Concerning information dissemination from TTM-JV, 7/15 respondents believed it was effective, 5/15 deemed it not applicable, and 1/15 strongly disagreed. Overall, stakeholders and pedestrians maintained a generally understanding attitude toward the project's inconveniences, recognizing its significance for transportation improvements despite acknowledging minor delays in personal work schedules.
- xvi. In August 2023, feedback from interviews with pedestrians and stakeholders indicated that the majority (75%) observed no significant change in air quality despite CP104's pre-construction activities. About 13.5% disagreed with this perception, while 1 out of 12 agreed, particularly in the Philhealth Area. Regarding construction noise, 75% strongly disagreed about feeling discomfort, with 2 respondents adjusting to past impacts. Ten out of twelve individuals disagreed that construction noise caused stress, and 75% strongly disagreed that equipment emitted excessive noise. Concerning information dissemination from TTM-JV, 6 respondents believed it was adequate, while 4 disagreed. Stakeholders generally perceived no significant changes in air and noise quality, understanding the project's purpose. While some experienced work delays, 9 out of 12 strongly disagreed that it impacted personal well-being, while 1 disagreed, and 1 agreed, emphasizing challenges faced by a truck driver.

- xvii. In September 2023, interviews with random pedestrians and stakeholders near the Ardan Area, where TTMJV's office is located, revealed that the majority did not perceive a significant change in air quality despite the commencement of pre-construction works by CP104. All interviewees strongly disagreed with any noticeable alterations. Regarding construction noise, 14 out of 15 individuals expressed strong disagreement, asserting that they did not experience discomfort. Similarly, all respondents denied being stressed by CP104's construction noise, and 93% strongly disagreed that the equipment emitted excessive noise. A majority believed that TTM-JV effectively disseminated information, while some remained neutral or found it inapplicable. Overall, respondents understood the construction's necessity, although some reported work delays due to road closures. The majority strongly disagreed with the impact on their personal wellbeing, recognizing it as part of the country's growth, with one rider strongly agreeing due to frequent passage through the area.
- xviii. In October 2023, interviews with random pedestrians and stakeholders revealed that the majority perceived no significant change in air quality despite CP104's pre-construction works. 60% strongly disagreed, asserting no noticeable alterations, while 13% neutrally agreed that it became hotter due to tree removal. For construction noise, 73% strongly disagreed with feeling discomfort, with 12 out of 15 individuals dismissing the notion that it stressed them. Regarding equipment noise, 73% strongly disagreed, 13% disagreed, and 13% agreed that the machinery emitted considerable noise. Stakeholders believed TTM-JV effectively disseminated information, with 13/15 respondents acknowledging minimal change in air and noise quality. Despite work delays due to road closures, the majority strongly disagreed with negative impacts, emphasizing an understanding of the construction's role in national growth. Two respondents were neutral on the statement about work delays.
- xix. In November 2023, interviews with random pedestrians and stakeholders indicated that the majority perceived no significant changes in air quality despite CP104's pre-construction activities. A notable 87% strongly disagreed, emphasizing no discernible alterations, while 7% or 1/15 respondents stated a neutral stance or agreed that it became hotter due to tree removal. For construction noise, 73% strongly disagreed with feeling discomfort, with 14 out of 15 individuals dismissing the notion that it stressed them. Regarding equipment noise, 80% strongly disagreed, 7% disagreed, and 7% agreed that the machinery emitted considerable noise. Six out of 15 respondents believed that TTM-JV effectively disseminated information, with the majority understanding the project's role in transportation system improvement and viewing it as a normal aspect of construction. Despite work delays due to road closures, 13/15

strongly disagreed with the negative impacts, while 2/15 strongly agreed, emphasizing an understanding of the construction's role in national growth.

- xx. In December 2023, interviews with random pedestrians and stakeholders revealed that the majority perceived no significant changes in air quality despite CP104's pre-construction activities. A substantial 87% strongly disagreed, emphasizing no discernible alterations, while 7% or 1/15 respondents stated a neutral stance or agreed that it became hotter due to tree removal. For construction noise, 69% strongly disagreed with feeling discomfort, with 12 out of 15 individuals dismissing the notion that it stressed them. Regarding equipment noise, 73% strongly disagreed, 7% disagreed, and 7% agreed that the machinery emitted considerable noise. Nine out of 15 respondents believed that TTM-JV effectively disseminated information, with the majority understanding the project's role in transportation system improvement and viewing it as a normal aspect of construction. Despite work delays due to road closures, 13/15 strongly disagreed with the negative impacts, while 2/15 strongly agreed, emphasizing an understanding of the construction's role in national growth.
- xxi. If significant adverse effects on noise levels and air quality are identified during the construction of the subway, robust mitigating actions can be implemented to manage and alleviate these impacts. To address dust concerns, the application of water spraying techniques, utilizing water trucks, sprinklers, or misting systems, proves effective. Regularly spraying water on construction sites suppresses dust by weighing down particles, preventing them from becoming airborne. Additionally, employing dust screens, fences, windbreaks, and covering stockpiles can contribute to reducing dust generation. For noise impact reduction, temporary noise barriers around construction sites can minimize the propagation of noise to adjacent areas. Implementing construction activities during less sensitive periods, ensuring proper equipment maintenance, and engaging in public consultations are effective strategies to address noise concerns. Overall, a comprehensive approach involving engineering controls, operational adjustments, noise barriers, emissions control technology, and community involvement programs constitutes a multifaceted mitigation strategy.

3.1.3 Groundwater Level Monitoring

- i. Groundwater level monitoring is routinely carried out at NAS and Depot located in Brgy. Ugong, Valenzuela City, as well as the new location, QHS Area. This essential activity involves daily measurements within observation wells to monitor groundwater fluctuations, providing valuable insights into its behavior and aiding in resource management. The observed water elevations (in meters), detailed in Annex 2, demonstrate dynamic fluctuations from April to December 2023, highlighting the variability of groundwater levels over time.

3.1.4 Ambient Water Quality Monitoring

- i. The environmental monitoring plan (EMoP) currently employs ambient water quality monitoring to assess chemical parameters in open waters. In the ongoing project phase, the applicable water-related environmental monitoring, as per EMoP, includes weekly ambient water quality monitoring. The groundwater quality sampling conducted on February 9 and 18, 2021, aimed to establish baseline data for water quality assessment. The parameters measured include physico-chemical factors, metals, microbiology, and phenols and phenolic substances. The subsequent table outlines the baseline for water quality sampling during the dry season:

Table 10. Baseline for the Water Quality Conducted on 09 and 18 February 2021

PARAMETERS	RESULTS				DENR STANDARDS (CLASS C)	OVERALL REMARKS
	TULLAHAN RIVER (SW2)	QUIRINO CREEK (SW3)	TANDANG SORA CREEK (SW4)	SAN JUAN RIVER (SW5)		
	02/09/21 (10:20AM)	02/09/21 (09:45AM)	02/18/21 (3:39PM)	02/18/21 (3:55PM)		
PHYSICO-CHEMICAL						
pH (in-situ)	7.0	6.9	6.8	6.8	6.5- 9.0	PASSED
Temperature (°C)	27.7	26.7	26.7	27.2	25-31	PASSED
Color (TCU)	10@pH 7.29	20@pH7.27	30@pH7.49	30@pH7.64	75	PASSED
BOD (mg/L)	23	96	118	95	7	FAILED
Dissolved Oxygen (DO) (mg/L)	1.7^a	1.6^b	4.0	2.2	5 (min.)	FAILED
Surfactants (mg/L)	0.153	0.188	0.149	0.078	1.5	PASSED
Total Suspended Solids (mg/L)	33	33	31	19	80	PASSED
Chloride (mg/L)	32	35	39	37	350	PASSED
Free Cyanide (mg/L)	< 0.012	0.013	< 0.012	< 0.012	0.1	PASSED

Nitrate (as N) (mg/L)	0.049	0.067	0.133	<0.003	7	PASSED
Phosphate (as P) (mg/L)	1.20	1.39	3.11	2.55	0.5	FAILED
Oil and Grease (mg/L)	< 1.0	6.0	7	8	2	FAILED except Tullahan River
METALS						
Arsenic (mg/L)	< 0.001	< 0.001	0.024	0.001	0.02	PASSED
Cadmium (mg/L)	< 0.001	< 0.001	< 0.001	< 0.001	0.005	PASSED
Lead (mg/L)	< 0.01	< 0.01	< 0.01	< 0.01	0.05	PASSED
Mercury (mg/L)	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.002	PASSED
Dissolved Copper (mg/L)	< 0.004	< 0.004	< 0.004	< 0.004	0.02	PASSED
Chromium VI (mg/L)	0.012	0.025	< 0.002	< 0.002	0.01	PASSED
MICROBIOLOGY						
Fecal Coliform (MPN/ 100 mL)	1.3 x 10⁶	4.9 x 10⁶	4.9 x 10⁶	4.9 x 10⁶	200	FAILED
PHENOLS AND PHENOLIC SUBSTANCES						
Phenol (mg/L)	0.016	<0.003	0.007	0.006	0.05	PASSED
2,4,6- Trichlorophenol (mg/L)	< 0.00167	< 0.00167	< 0.00167	< 0.00167	0.05	PASSED
2,4- Dichlorophenol (mg/L)	< 0.00172	< 0.00172	< 0.00172	< 0.00172	0.05	PASSED
2-Chlorophenol (mg/L)	< 0.00159	< 0.00159	< 0.00159	< 0.00159	0.05	PASSED
<i>Note: Red Value means failed to meet the DAO 2016-08 Standard for Class C Water; DO (a) and (b) were taken in-site on 09 and 18 February 2021; TCU means True Color Unit</i>						

- ii. The results were compared against DENR standards for Class C water. Notably, the Tullahan River (SW2) and Quirino Creek (SW3) demonstrated satisfactory results for most parameters, passing criteria such as pH, temperature, color, surfactants, chloride, free cyanide, nitrate, and various metals. However, some areas, like the Tandang Sora Creek (SW4) and San Juan River (SW5), exhibited failures in parameters like BOD, dissolved oxygen, phosphate, oil and grease, and fecal coliform, indicating potential water quality concerns.
- iii. The baseline water quality monitoring results conducted on June 24, 2021, provide crucial insights into the environmental conditions during the wet season. This assessment is vital for understanding the variations in water quality parameters across different sites, specifically in the Tullahan River (SW1), Quirino Creek (SW2), Tandang Sora Creek (SW3), and San Juan River (SW4). The parameters analyzed include pH, temperature, dissolved oxygen (DO), and total suspended solids (TSS). The evaluation is conducted in accordance with the Department Administrative Order (DAO) No. 2016-08 Guidelines for Class C Waters.

Table 11. Baseline for the Water Quality Sampling Conducted on 24 June 2021

Parameters	SW 1 Tullahan River 0922H	SW 2 Quirino Creek 0959H	SW 3 Tandang Sora Creek 1018H	SW 4 San Juan River 1044h	DAO No. 2016-08 Guidelines for Class C Waters
pH (in situ)	7.52	7.39	6.32	6.32	6.0-9.0
Temperature, °C (in situ)	28.5	27.9	29.0	29.2	25-31
DO, mg/L (in situ)	1.7	3.2	1.6	1.8	5 (minimum)
Total Suspended Solids (TSS), mg/L	11	25	11	9	80
<i>Note: Red Value means failed to meet the DAO 2016-08 Standard for Class C Water.</i>					

- iv. The baseline water quality monitoring results reveal variations in key parameters among the monitored water bodies during the wet season. While pH levels generally fall within the acceptable range across all sites, Tandang Sora Creek (SW3) demonstrates a slightly lower pH value of 6.32. Dissolved oxygen (DO) levels, crucial for aquatic life, indicate variations, with Quirino Creek (SW2) exhibiting the highest DO concentration at 3.2 mg/L. Total Suspended Solids

(TSS), representing particles suspended in water, remain within permissible limits for all sites. However, potential areas of concern are identified particularly in Tandang Sora Creek (SW3), suggesting deviations from the Class C water quality standards set by DAO 2016-08.

- v. Weekly ambient water quality monitoring is an integral aspect of environmental management practices in the project. Currently, this monitoring covers San Juan River, Tullahan River, and Tandang Sora Creek. As a major river system in Metro Manila, San Juan River plays a crucial role in the region's hydrology. With tributaries originating from La Mesa Reservoir, the river traverses Quezon City, San Juan, Santa Mesa, Santa Ana Districts of Manila City, and Mandaluyong before joining the Pasig River. Spanning approximately 22.2 kilometers, the DENR classifies San Juan River as Class C water, signifying suitability for aquatic life, recreation, and agricultural water supply activities.
- vi. Part of the San Juan River System, Tandang Sora Creek intertwines with Dario Creek and eventually converges with the San Francisco River and San Juan River in Quezon City, connecting with Mariblo Creek. The Tullahan River, monitored in part for the Depot, extends around 27.1 kilometers, originating from La Mesa Reservoir in Quezon City and passing through Caloocan, Valenzuela, Malabon, and Navotas before draining into Manila Bay.
- vii. The subsequent tables present the ambient water quality monitoring results for San Juan River, Tullahan River, and Tandang Sora Creek from July to December 2023. These findings are pivotal for assessing and managing the environmental impact of ongoing activities in these water bodies.

Table 12. Weekly Ambient Water Quality Monitoring Results for NAS

MONITORING STATION: SAN JUAN RIVER (NAS)				
DATES	IN-SITU PARAMETERS			
	pH (in-situ)	DO (mg/L)	Turbidity	TSS (mg/L)
July 4, 2023	7.35	1.95	1.67	47
July 14, 2023	7.45	6.05	0.85	6
July 18, 2023	7.57	5.94	0.43	1
July 27, 2023	7.19	6.23	3.03	280
August 2, 2023	7.39	6.23	0.89	8

August 9, 2023	7.42	0.34	1.72	51
August 14, 2023	7.22	0.77	4.39	807
August 23, 2023	7.63	2.95	1.26	20
August 30, 2023	7.55	4.61	0.93	8
September 5, 2023	7.52	5.39	0.6	2
September 14, 2023	7.77	3.97	61	2
September 21, 2023	7.69	2.02	1.01	11
September 27, 2023	7.83	5.77	0.85	6
October 4, 2023	7.52	5.64	0.42	1
October 11, 2023	7.47	4.69	2.91	188
October 18, 2023	7.39	0.3	2.44	147
October 25, 2023	7.69	4.25	0.9	7
October 31, 2023	7.65	0.2	2.05	85
November 8, 2023	7.59	0.22	2.55	160
November 15, 2023	7.75	0.33	2.81	223
November 22, 2023	7.65	0.35	3.4	390
November 28, 2023	7.67	0.2	3	272
December 4, 2023	7.78	0.33	2.89	236
December 13, 2023	7.56	0.31	2.83	225
December 21, 2023	7.87	0.37	3.39	382
December 28, 2023	7.64	0.48	3.18	321
DAO for Class C water	6.5-9.0	5	NS	80
Note: Red Values= failed the DENR standard; NS= No Standard				

- viii. The monitoring data for San Juan River (NAS) from July to December 2023 provides insights into key in-situ parameters, essential for assessing water quality. The pH levels generally fall within the acceptable range for Class C water (6.5-9.0), indicating neutrality to slight alkalinity. Dissolved Oxygen (DO) concentrations fluctuate, with occasional values falling below the DENR standard of 5 mg/L, suggesting potential concerns for aquatic life. Turbidity

levels show variations. Total Suspended Solids (TSS) exhibit significant fluctuations, occasionally surpassing the recommended limit of 80 mg/L.

- ix. It is worth noting that MMSP NAS is approximately 1.1 km away from the San Juan River, and there was no direct discharge observed in this river during the monitoring. This suggests that the project does not contribute to the observed high levels of TSS in the San Juan River during the monitoring period. The elevated levels of Total Suspended Solids (TSS) observed in the San Juan River during monitoring periods may be attributed to various sources. Urbanization and industrial discharges, common in metropolitan areas like Metro Manila, contribute to runoff containing sediments from construction, roads, and factories. Stormwater runoff from different land uses can transport soil particles into water bodies, influencing TSS levels. Other anthropogenic and natural activities in the vicinity may account for the observed high TSS levels.

- x. The monitoring station at Tullahan River (Depot) has been diligently assessed through various in-situ parameters, including pH, dissolved oxygen (DO), turbidity, and total suspended solids (TSS). This dataset spans from July 4, 2023, to December 28, 2023, providing insights into the dynamic changes in water quality at this location. The adherence to DENR Class C water guidelines, as outlined in DAO, is crucial for evaluating the ecological health of the Tullahan River at the Depot.

Table 13. Weekly Ambient Water Quality Monitoring Results for Depot

MONITORING STATION: TULLAHAN RIVER (DEPOT)				
DATES	IN-SITU PARAMETERS			
	pH (in-situ)	DO (mg/L)	Turbidity	TSS (mg/L)
July 4, 2023	7.75	0.6	0.65	3
July 14, 2023	7.5	4.17	1.81	60
July 18, 2023	7.72	2.9	0.38	0
July 27, 2023	7.9	5.67	4.49	907
August 2, 2023	7.33	5.34	1.12	14
August 9, 2023	7.32	0.24	1.32	23
August 14, 2023	7.36	0.43	1.39	27

August 23, 2023	8.01	1.2	0.72	4
August 30, 2023	7.65	0.24	1.53	36
September 5, 2023	7.7	3.25	0.56	2
September 14, 2023	7.67	1.75	0.6	2
September 21, 2023	7.66	0.21	1.25	20
September 27, 2023	7.78	4.05	1.12	14
October 4, 2023	7.86	2.66	0.72	4
October 11, 2023	7.55	1.30	2.83	246.00
October 18, 2023	7.83	0.19	1.57	38
October 25, 2023	7.56	0.22	1.54	36
October 31, 2023	7.52	0.97	1.66	46
November 8, 2023	7.61	0.2	2.66	192
November 15, 2023	7.86	0.28	2.11	95
November 22, 2023	7.55	0.3	1.84	62
November 28, 2023	7.87	0.13	2.21	108
December 4, 2023	8.13	0.68	2.14	94
December 13, 2023	7.76	0.24	1.91	69
December 21, 2023	7.78	0.29	2.02	84
December 28, 2023	7.54	0.29	2.4	149
DAO for Class C water	6.5-9.0	5	NS	80
Note: Red Values= failed the DENR standard; NS= No Standard				

- xi. The recorded in-situ parameters exhibit fluctuations in the Tullahan River's water quality during the specified period. Noteworthy instances indicate instances of non-compliance with DENR standards, particularly in parameters such as DO and TSS. Specifically, the elevated TSS readings may be attributed to the presence or concentration of residential household owners discharging wastewater with poorly designed septic tanks and/or commercial establishments that may not have been properly designed.

- xii. Tandang Sora Creek has been monitored regularly through ambient water quality monitoring through in-situ parameters, encompassing pH, dissolved oxygen (DO), turbidity, and total suspended solids (TSS). This analysis focuses on the period from July to December 2023, providing crucial insights into the temporal dynamics of water quality at this specific location. The adherence to DENR Class C water guidelines, as outlined in DAO, is pivotal for evaluating the ecological health of Tandang Sora Creek.

Table 14. Weekly Ambient Water Quality Monitoring Results for TSS

MONITORING STATION: TANDANG SORA CREEK				
DATES	IN-SITU PARAMETERS			
	pH (in-situ)	DO (mg/L)	Turbidity	TSS (mg/L)
July 4, 2023	7.43	0.44	2.39	136
July 14, 2023	7.31	3.2	1.12	14
July 18, 2023	7.43	0.67	2.03	79
July 27, 2023	7.3	4.75	1.1	13
August 2, 2023	7.32	2.86	0.98	9
August 9, 2023	7.4	0.47	3.22	329
August 14, 2023	7.35	0.6	2.79	217
August 23, 2023	7.65	0.46	2.46	149
August 30, 2023	7.55	1.9	3.71	511
September 5, 2023	7.5	0.9	1.12	14
September 14, 2023	7.67	0.68	1.95	74
September 21, 2023	7.64	0.44	2.31	123
September 27, 2023	7.66	2.64	1.5	34
October 4, 2023	7.43	1.29	1.28	21
October 11, 2023	7.57	1.8	2.03	83
October 18, 2023	7.46	0.26	3.85	573
October 25, 2023	7.6	0.47	2.14	93
October 31, 2023	7.67	0.21	3.13	307

November 8, 2023	7.69	0.5	3.03	280
November 15, 2023	7.77	0.42	3.99	637
November 22, 2023	7.59	0.46	4.07	678
November 28, 2023	7.77	0.42	3.99	637
December 4, 2023	7.81	0.38	4.24	757
December 13, 2023	7.62	0.29	4.01	650
December 21, 2023	7.67	0.46	4.46	890
December 28, 2023	7.64	0.48	3.18	321
DAO for Class C water	6.5-9.0	5	NS	80
Note: Red Values= failed the DENR standard; NS= No Standard				

- xiii. The in-situ parameters recorded from July to December 2023 reveal distinctive patterns in the water quality of Tandang Sora Creek. Some instances in the dataset indicate non-compliance with DENR standards, particularly in parameters such as DO and TSS. Notably, turbidity levels exceeding the recommended threshold may signify increased sedimentation or suspended particles in the water, potentially affecting aquatic ecosystems. The elevated TSS readings can be attributed to various factors, including anthropogenic activities, upstream discharge, or sedimentation from surrounding areas. Importantly, the observation that MMSP TSS is approximately 600 meters away from Tandang Sora Creek, and no direct discharge was observed during the monitoring, suggests that the project itself may not be a significant contributor to the observed TSS levels.
- xiv. Additionally, instances of 'ND' (beyond its usual analysis or limit) highlight the need for careful consideration when interpreting data, emphasizing potential challenges in analysis during certain conditions. The recorded high TSS levels, coupled with sewage odor and the presence of lots of garbage in the station (bridge) during rainy conditions, raise concerns about potential sources of pollution.
- xv. For CP102, we examine the baseline for water quality monitoring conducted on August 4, 2023, focusing on various physico-chemical and microbiological parameters. These assessments provide crucial insights into the current state of the creek, offering a comparative framework against established DENR standards (Class C) to evaluate environmental health and identify areas requiring remediation.

Table 15. Baseline for the Water Quality Monitoring

PARAMETERS	Bagong Pag-Asa Creek	DENR STANDARDS (CLASS C)	OVERALL REMARKS
	04 Aug 23 (10:20AM)		
PHYSICO-CHEMICAL			
pH (in-situ)	8	6.5- 9.0	PASSED
Temperature (OC)	29	25-31	PASSED
Color (ACU)	25	75	PASSED
BOD (mg/L)	11	7	FAILED
COD (mg/L)	60	8	FAILED
Dissolved Oxygen (DO) (mg/L) (minimum)	8	5	PASSED
Total Suspended Solids (mg/L)	22	80	PASSED
Oil and Grease (mg/L)	<1.0	2	PASSED
MICROBIOLOGY			
Fecal Coliform (MPN/ 100 mL)	3500000	200	FAILED
Total Coliform (MPN/ 100 mL)	3500000	5,000	FAILED

- xvi. The water quality monitoring conducted on August 4, 2023, reveals a nuanced picture of Bagong Pag-Asa Creek's health. While several physicochemical parameters, such as pH, temperature, color, dissolved oxygen, total suspended solids, and oil and grease content, met or surpassed DENR standards, concerns emerged regarding biochemical oxygen demand (BOD) and chemical oxygen demand (COD). Both BOD and COD levels exceeded permissible limits, indicating heightened organic pollution and the potential presence of harmful substances.
- xvii. Furthermore, microbiological assessments unveiled alarmingly high fecal and total coliform counts, far surpassing regulatory thresholds. These findings underscore significant pollution sources, likely originating from industrial effluents or untreated sewage, posing risks to both aquatic ecosystems and public health.

- xviii. For CP 104, the Contractor conducts a monthly creek inspection to regularly monitor the creeks near the construction sites. This summary table provides a concise overview of the monthly inspections for Lanuza Creek in Pearl Drive Ortigas Center and Meralco Avenue throughout 2023. It highlights the status of rehabilitation, presence of obstructions, and environmental conditions, offering insights into the changes and challenges observed during the inspections. This is being conducted to ensure compliance with the project’s ECC condition no. 4, stating that “Ensure that all existing waterways affected by the proposed project construction are maintained and not obstructed.”

Table 16. Observations during the Monthly Creek Inspection for CP104

Date & Time	Location	Coordinates	Distance from Stations	Creek Flow	Obstructions	Remarks
Feb 10, 2023, 10:00	Pearl Dr. Ortigas Center	14.58041N, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	Obstruction due to MMDA project, no CP104 impact	CP104 on pre-construction phase, minor activities.
Feb 10, 2023, 13:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Upstream	No obstruction observed due to CP104 construction	No change since January inspection.
Mar 7, 2023, 13:00	Pearl Dr. Ortigas Center	14.58041, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	Under construction, cleaner than Feb inspection	CP104 pre-construction, New Eastpoint Builders Corp. working. No CP104 obstruction.
Mar 7, 2023, 13:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Upstream	No obstruction observed due to CP104 construction	Same condition as previous inspections.
Apr 3, 2023, 13:00	Pearl Dr. Ortigas Center	14.58041, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	Completed rehabilitation,	Cleaner and orderly

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					no CP104 obstruction	compared to March inspection. No CP104 impact.
Apr 3, 2023, 13:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Upstream	No obstruction observed due to CP104 construction	Same condition as previous inspections.
May 3, 2023, 13:00	Pearl Dr. Ortigas Center	14.58041, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	Completed rehabilitation, no CP104 obstruction	Cleaner and orderly compared to Feb and Mar inspections. No CP104 Table impact.
May 3, 2023, 13:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Upstream	No obstruction observed due to CP104 construction	Same condition as previous inspections.
Jun 8, 2023, 11:00	Pearl Dr. Ortigas Center	14.58041, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	Completed rehabilitation, no CP104 obstruction	Cleaner and orderly compared to previous inspections. No CP104 impact.
Jun 8, 2023, 11:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Upstream	No obstruction observed due to CP104 construction	Same condition as previous inspections.
Jul 5, 2023, 13:00	Pearl Dr. Ortigas Center	14.58041, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	No hindrance observed, no CP104	Situation unchanged since last

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					obstruction	inspection. No CP104 impact.
Jul 5, 2023, 13:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Upstream	No obstruction observed due to CP104 construction	Same condition as previous inspections.
Aug 2, 2023, 11:00	Pearl Dr. Ortigas Center	14.58041, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	No hindrance observed, typhoon impact, muddy water	No CP104 obstruction, muddy due to typhoon.
Aug 2, 2023, 11:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Upstream	No obstruction observed due to CP104 construction	Muddy due to non-stop rain. No CP104 impact.
Sep 6, 2023, 11:00	Pearl Dr. Ortigas Center	14.58041, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	No hindrance observed, typhoon impact, muddy water	No CP104 obstruction, muddy due to typhoon. No foul smell, effluent from hotels/condos.
Sep 6, 2023, 11:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Downstream	No obstruction observed due to CP104 construction	Foul smell due to settlers, muddy and grayish due to consistent rains.
Oct 4, 2023, 13:00	Pearl Dr. Ortigas Center	14.58041, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	No hindrance observed, scattered rains, grayish water	No CP104 obstruction, slight foul smell. Water from hotels/condos.

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Oct 4, 2023, 13:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Downstream	No obstruction observed due to CP104 construction	Foul smell due to settlers, muddy and grayish due to consistent rains.
Nov 8, 2023, 11:00	Pearl Dr. Ortigas Center	14.58041, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	No hindrance observed, scattered rains, grayish water	No CP104 obstruction, slight foul smell, floating algae. Water from hotels/condos.
Nov 8, 2023, 11:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Downstream	No obstruction observed due to CP104 construction	Foul smell due to settlers, muddy and grayish due to consistent rains.
Dec 6, 2023, 10:00	Pearl Dr. Ortigas Center	14.58041, 121.06001	467m (Shaw), 892m (Ortigas)	Upstream	No hindrance observed, light rains, grayish water	No CP104 obstruction, slight foul smell, floating algae. Water from hotels/condos.
Dec 6, 2023, 10:00	Meralco Ave., Pasig, Metro Manila	14.5822N, 121.06389	600.71m (Shaw), 552m (Ortigas)	Downstream	No obstruction observed due to CP104 construction	Foul smell due to settlers, muddy and grayish, light water flow.

- xix. Throughout the monthly inspections conducted in 2023 for Lanuza Creek, a consistent and noteworthy observation was the absence of any obstructions attributable to the construction activities of the Metro Manila Subway Project CP104. At both primary inspection locations in Pearl Drive, Ortigas Center, and along Meralco Avenue, Pasig, Metro, the reports consistently emphasized that the ongoing CP104 construction did not contribute to any hindrance or blockage in the creek's flow.

3.1.5 Vibration Level Monitoring

- i. This monitoring is conducted quarterly to systematically gather and analyze data pertaining to the movements and vibrations generated by operational machinery. The vibration levels obtained are meticulously juxtaposed with the standards delineated by the Federal Transit Administration (FTA), as outlined in the Vibration Assessment Manual. These criteria serve as benchmarks, delineating the acceptable levels of vibration intensity, measured in both imperial and metric units, specifically in terms of vibration velocity (VdB), as applied within CP101.

Table 17. FTA Ground-Borne Vibration Criteria

Land Use Category	Vibration Impact Levels (VdB re 1 micro inch/sec)		
	Frequent Events	Occasional Events	Infrequent Events
Category 1: Buildings where vibration would interfere with interior operations	65 VdB	65 VdB	65 VdB
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

- ii. Vibration (VdB) quantifies the degree of ground movement, while velocity denotes the speed of this movement by measuring the rate of displacement change. Conversely, acceleration represents the pace at which velocity changes over time.

- iii. The standards in the next table encompass the guidelines established by the Federal Transit Administration (FTA) regarding transit noise and vibration, particularly concerning the construction of vibration-sensitive areas. The table below delineates the specific standards utilized:

Table 18. Transmit Noise and Vibration Federal Transit Administration (FTA) Standards

Building Category	PPV (mm/sec)	PPV (in/sec)	Approximate Lv
Reinforced-concrete, steel or timber (no plaster)	12.7	0.5	102
Engineered concrete and masonry (no plaster)	7.62	0.3	98
Non-engineered timber and masonry buildings	5.08	0.2	94
Buildings extremely susceptible to vibration damage	3.04	0.12	90

- iv. Presented below is the baseline for VdB measured in centimeters per second (cm/s) and vibration acceleration (cm/s²) recorded during the period of November 23rd to November 27th, 2020.

Table 19. Baseline for the Vibration Levels (VdB)

Location	Measurement Axis	Maximum Vibration Levels (VdB)				Peak Vibration Level (VdB)	
		Morning (0500H-0900H)	Daytime (0900-1800H)	Evening (1800H-2200H)	Nighttime (2200H-0500H)	Recorded Peak Level	Peak Time
Road 10, Project 6 (23-24 Nov. 2020)	X-axis	57	56	57	54	57 (X-Axis) 57 (Z-Axis)	Morning & Evening Daytime
	Y-axis	55	55	55	51		
	Z-axis	55	57	56	52		

Landcom Village, Tandang Sora (24-25 Nov. 2020)	X-axis	57	57	58	59	62 (Z-Axis)	Nighttime
	Y-axis	57	55	54	60		
	Z-axis	58	56	54	62		
Depot Site, Ugong (26-27 Nov. 2020)	X-axis	51	52	51	51	59 (Y-Axis)	Nighttime
	Y-axis	49	50	52	59		
	Z-axis	50	53	52	51		

- v. Recorded peak levels along X, Y, and Z axes, categorized by morning, daytime, evening, and nighttime periods, illustrate fluctuations in vibration intensity. For instance, at Road 10, Project 6, peak levels ranged from 54 to 57 VdB on the X-axis during morning and evening, while Landcom Village, Tandang Sora, exhibited peaks ranging from 54 to 62 VdB on the Z-axis during nighttime. Similarly, at the Depot Site, Ugong, peak levels ranged from 49 to 59 VdB on the Y-axis during nighttime.
- vi. The tables below present baseline data for vibration velocity and maximum vibration acceleration measured at various survey stations during different time intervals.

Table 20. Baseline for the Vibration Velocity

Survey Stations	Measurement Axis	Vibration Velocity (cm/s)			
		Morning (0500H-0900H)	Daytime (0900H-1800H)	Evening (1800H-2200H)	Nighttime (2200H-0500H)
Road 10 (23 to 24-Nov-20)	X-axis	0.011	0.007	0.011	0.005
	Y-axis	0.008	0.01	0.009	0.005
	Z-axis	0.009	0.01	0.011	0.006
Landcom Village II (24 to 25-Nov-20)	X-axis	0.009	0.008	0.007	0.01
	Y-axis	0.01	0.007	0.006	0.012

20)					
	Z-axis	0.013	0.007	0.006	0.015
Depot Site Ugong (26 to 27- Nov-20)	X-axis	0.003	0.004	0.004	0.003
	Y-axis	0.002	0.003	0.003	0.002
	Z-axis	0.002	0.006	0.005	0.002

Table 21. Baseline for the Maximum Vibration Acceleration

Location	Measurement Axis	Maximum Vibration Acceleration (cm/s ²)				Peak Vibration Acceleration (cm/s ²)	
		Morning (0500H-0900H)	Daytime (0900-1800H)	Evening (1800H-2200H)	Nighttime (2200H-0500H)	Recorded Peak Level	Peak Time
Road 10, Project 6 (23-24 Nov. 2020)	X-axis	1.71	2.4	2.2	1.3	3.50 (Z-Axis)	Daytime
	Y-axis	2.49	2.6	2.06	1.05		
	Z-axis	2.73	3.5	2.7	1.49		
Landcom Village, Tandang Sora (24-25 Nov. 2020)	X-axis	1.42	0.99	0.8	1.2	4.05 (Z-Axis)	Morning
	Y-axis	3.48	1.07	1.04	2.39		
	Z-axis	4.05	1.6	1.49	3.68		
Depot Site, Ugong (26-27 Nov. 2020)	X-axis	0.7	0.93	0.84	0.7	1.20 (Z-Axis)	Daytime
	Y-axis	0.08	0.4	0.38	0.07		
	Z-axis	0.1	1.2	0.93	0.07		

- vii. The vibration velocity (cm/s) readings along X, Y, and Z axes depict the magnitude of ground movement at each location during morning, daytime, evening, and nighttime periods. For instance, at Road 10 on November 23rd to 24th, 2020, vibration velocity ranged from 0.005 to 0.011 cm/s across different axes and timeframes.
- viii. The maximum vibration acceleration (cm/s²) data illustrate the highest rates of change in velocity experienced at each location. Peak vibration acceleration values highlight the most intense instances of ground movement, such as the recorded peak level of 3.50 cm/s² along the Z-axis at Road 10 during daytime hours. Overall, these findings indicate that the measured vibration levels comply with the ground-borne vibration criteria set by the Federal Transit Administration (FTA).
- ix. The 2nd Quarter Results for the Ground Vibration Monitoring (CP101) present a varied vibrational pattern across different stations during May 2023.

Table 22. 2nd Quarter Results for the Ground Vibration Monitoring (CP101)

STATION	Date	Highest Velocity (in/s)	Highest Velocity (cm/s)	Average Velocity (in/s)	Average Noise (dB(L))	Average Zero Frequency (Hz)
Depot	May 9-10, 2023	0.0203	0.052	0.0168	<88	34.3
NAS	May 8-9, 2023	0.0591	0.150	0.0215	92.9	39.5
TSS	May 9-10, 2023	0.0354	0.090	0.0234	94.3	37.4

- x. At the Depot, spanning May 9-10, 2023, the highest velocity recorded was a modest 0.0203 inches per second (0.052 cm/s). The average velocity maintained a relatively low 0.0168 inches per second, accompanied by an average noise level of less than 88 decibels (dB(L)). Notably, the average zero frequency resonated at 34.3 Hz.
- xi. Contrastingly, the NAS showcased more vigorous ground vibrations during May 8-9, 2023. Here, the highest velocity soared to 0.0591 inches per second (0.150 cm/s), suggesting more significant ground activity. Despite the elevated velocity, the average velocity and average noise remained comparatively moderate at 0.0215 inches per second and 92.9

dB(L) respectively. The average zero frequency registered slightly higher than the Depot at 39.5 Hz, indicating a different underlying vibration profile.

- xii. Meanwhile, at the TSS over May 9-10, 2023, a balanced yet noticeable vibrational pattern emerged. The highest velocity recorded stood at 0.0354 inches per second (0.090 cm/s), indicating a moderate level of ground activity. The average velocity maintained a steady pace at 0.0234 inches per second, accompanied by an average noise level of 94.3 dB(L). The average zero frequency, akin to the Depot, resonated at 37.4 Hz, suggesting a similarity in underlying characteristics between these two stations.
- xiii. The 3rd Quarter Results for the Ground Vibration Monitoring (CP101) on the table below provides essential data on ground vibrations at various stations during August 2023. This report analyzes the recorded velocities, noise levels, and zero frequencies to assess the impact of vibrations on the monitored areas.

Table 23. 3rd Quarter Results for the Ground Vibration Monitoring (CP101)						
STATION	Date	Highest Velocity (in/s)	Highest Velocity (cm/s)	Average Velocity (in/s)	Average Noise (dB(L))	Average Zero Frequency (Hz)
Depot	August 9-10, 2023	0.0343	0.087	0.0315	93.5	7.9
NAS	August 7-8, 2023	0.0387	0.098	0.0228	98.6	34
TSS	August 7-8, 2023	0.0393	0.1	0.0219	96.5	38.2

- xiv. The Depot, observed from August 9-10, 2023, exhibited moderate ground vibrations. The highest velocity recorded was 0.0343 inches per second (0.087 cm/s), with an average velocity of 0.0315 inches per second. The average noise level measured 93.5 dB(L), and the average zero frequency was 7.9 Hz, indicating relatively low vibration activity.
- xv. At NAS, monitored from August 7-8, 2023, ground vibrations were slightly more pronounced. The highest velocity recorded was 0.0387 inches per second (0.098 cm/s), with an average velocity of 0.0228 inches per second. The average

noise level measured 98.6 dB(L), and the average zero frequency was 34 Hz, suggesting moderate vibration activity possibly influenced by nearby movement of vehicles.

- xvi. Similarly, TSS, also monitored from August 7-8, 2023, showed comparable ground vibrations to NAS. The highest velocity recorded was 0.0393 inches per second (0.1 cm/s), with an average velocity of 0.0219 inches per second. The average noise level measured 96.5 dB(L), and the average zero frequency was 38.2 Hz, indicating a similar level of vibration activity as NAS.
- xvii. The 4th Quarter Results for the Ground Vibration Monitoring (CP101) below provide insights into ground vibration activity at different stations during November 15-16, 2023:

Table 24. 4th Quarter Results for the Ground Vibration Monitoring (CP101)						
STATION	Date	Highest Velocity (in/s)	Highest Velocity (cm/s)	Average Velocity (in/s)	Average Noise (dB(L))	Average Zero Frequency (Hz)
Depot	November 15-16, 2023	0.0533	0.135	0.0202	94	13.2
NAS	November 15-16, 2023	0.0734	0.186	0.0293	91.2	47.9
TSS	November 15-16, 2023	0.0679	0.172	0.0257	97.2	44.3

- xviii. At Depot, the highest velocity recorded during this period was 0.0533 inches per second (0.135 cm/s), with an average velocity of 0.0202 inches per second. The average noise level measured at 94 dB(L), while the average zero frequency resonated at 13.2 Hz. These readings indicate a moderate level of ground vibration activity at the Depot station during the specified timeframe.
- xix. Meanwhile, at the NAS, higher levels of ground vibration were observed, with the highest velocity reaching 0.0734 inches per second (0.186 cm/s) and an average velocity of 0.0293 inches per second. The average noise level measured

at 91.2 dB(L), with an average zero frequency of 47.9 Hz. These readings suggest a significant increase in ground vibration activity compared to the Depot station, possibly influenced by nearby industrial or vehicular activity.

- xx. Similarly, the TSS recorded elevated levels of ground vibration during the same period, with the highest velocity reaching 0.0679 inches per second (0.172 cm/s) and an average velocity of 0.0257 inches per second. The average noise level measured at 97.2 dB(L), while the average zero frequency resonated at 44.3 Hz. These readings indicate a substantial level of ground vibration activity, comparable to NAS, possibly influenced by similar environmental factors.
- xxi. The table below delineates the baseline for vibration level monitoring for CP103, focusing on the World City Medical Center for the Anonas Station (ANS) and the Blue Ridge Project 4 - Multipurpose Barangay Hall for Camp Aguinaldo Station (CAS).

Table 25. Baseline for the Vibration Level Monitoring for CP103

Anonas Station			
Time Zone	Date	Acceleration (m/s ²)	Velocity (mm/s)
Morning (0500H-0900H)	10 February 2023	0.0	0.0
Daytime (0900H-1800H)	09 February 2023	0.0	0.0
Evening (1800H-2200H)	09 February 2023	0.1	0.1
Nighttime (2200H-0500H)	09 February 2023	0.0	0.1
Camp Aguinaldo Station			
Morning (0500H-0900H)	09 February 2023	0.0	0.0
Daytime (0900H-1800H)	08 February 2023	0.1	0.0
Evening (1800H-2200H)	08 February 2023	0.1	0.0
Nighttime (2200H-0500H)	09 February 2023	0.0	0.0

- xxii. This table outlines the baseline vibration levels recorded during specific time zones and dates for ANS and CAS. The data serves as a reference point for ongoing vibration monitoring efforts, aiding in the assessment of any deviations from the established norms.
- xxiii. The quarterly vibration level monitoring data for CP103, specifically at Camp Aguinaldo Station (CAS), unveils notable patterns and fluctuations in ground vibration activity across different time zones during the 3rd and 4th quarters.

Table 26. Quarterly Vibration Level Monitoring for CP103

CAS			
Time Zone	Date	Acceleration (m/s ²)	Velocity (mm/s)
Morning (0500H-0900H)	30 August 2023	0.2	0.1
	28 November 2023	0.0	0.0
Daytime (0900H-1800H)	30 August 2023	2.0	0.0
	28 November 2023	0.0	0.0
Evening (1800H-2200H)	30 August 2023	0.2	0.0
	28 November 2023	0.0	0.0
Nighttime (2200H-0500H)	30-31 August 2023	0.2	0.4
	28-29 November 2023	0.0	0.2

- xxiv. In the morning hours (0500H-0900H), the data recorded on August 30, 2023, displayed a slight increase in acceleration, reaching 0.2 m/s², and a corresponding velocity of 0.1 mm/s. This suggests a minor uptick in ground vibration activity during this period. However, on November 28, 2023, both acceleration and velocity levels returned to baseline, registering at 0.0 m/s² and 0.0 mm/s, respectively. This indicates a return to normal ground conditions during morning hours.
- xxv. During the daytime period (0900H-1800H), the monitoring on August 30, 2023, revealed a significant spike in acceleration, surging to 2.0 m/s², while velocity remained at 0.0 mm/s. This sharp increase in acceleration may be attributed to increased construction or vehicular activity during the day. Similarly, on November 28, 2023, both

acceleration and velocity levels returned to baseline, indicating a cessation of heightened ground vibration activity during the daytime.

- xxvi. As evening descended (1800H-2200H), the data collected on August 30, 2023, showed a moderate increase in acceleration at 0.2 m/s², with velocity remaining steady at 0.0 mm/s. However, on November 28, 2023, both acceleration and velocity levels reverted to baseline, indicating a return to normal ground conditions during the evening hours.

- xxvii. During the nighttime period (2200H-0500H), the monitoring conducted on August 30-31, 2023, revealed a consistent level of ground vibration activity, with acceleration and velocity both registering at 0.2 m/s² and 0.4 mm/s, respectively. This suggests sustained ground vibration activity throughout the night, possibly influenced by continuous vehicular movement or other environmental factors. Similarly, on November 28-29, 2023, while acceleration remained at 0.0 m/s², velocity increased slightly to 0.2 mm/s, indicating a minor uptick in ground vibration activity during the nighttime.

- xxviii. The table below outlines the baseline data for ground vibration and noise level monitoring for CP104, specifically at the MMDA Impounding Area for the Ortigas Station (OAS) and at the Shaw Boulevard Station (SBS), situated in Capitol Commons, Estancia Mall.

Table 27. Baseline for the Ground Vibration and Noise Level Monitoring for CP104					
Station (Location)	Monitoring Date	Velocity in/s	Average Velocity in/s	Average Noise VdB	Average Zero Frequency Hz
Shaw Boulevard Station (Capitol Commons Estancia Mall)	December 27-28, 2022	2.694	0.781	95.9	43.5
Ortigas Station (MMDA Impounding Area)	February 27-28, 2023	2.441	1.415	97.5	50.5

- xxix. The monitoring at OAS commenced at 1045H with the vibrometer positioned approximately 15-20 meters away from the construction area, conducted over a 24-hour duration. The peak reading recorded was 2.441 mm/s, with an average of 1.415 mm/s. The continuous passage of vehicles likely contributed to ground vibration at OAS. Notably, the

recorded peak value lies within the standard limit defined for construction vibration areas in the TA-VA-90-1003-06 standard. It is imperative to highlight that these values have no adverse effect on the structural integrity of the station concerning vibration. OAS was benchmarked against Category II - Engineered Concrete and Masonry (No Plaster) for land use standards.

xxx. Monitoring at SBS began around 1300H and continued for 24 hours. Throughout the monitoring period, 67 ground vibration events were recorded, with the highest reading reaching 2.694 mm/s and averaging at 0.781 mm/s. The contributors to these vibrations primarily included the passage of vehicles, ranging from light to heavy, along the main road and roundabout adjacent to the monitoring site.

xxxi. Below is the table for the 3rd to 4th Quarter Vibration Level Monitoring for CP104, particularly at SBS.

Table 28. Quarterly Results for the Ground Vibration and Noise Level Monitoring (CP104)					
Station (Location)	Monitoring Date	Velocity mm/s	Average Velocity mm/s	Average Noise VdB	Average Zero Frequency Hz
Shaw Boulevard Station (Capitol Commons Estancia Mall)	September 6-7, 2023	1.335	0.887	91.9	10.2
Shaw Boulevard Station (Capitol Commons Estancia Mall)	December 6-7, 2023	1.557	0.758	103.6	47.7

xxxii. During the monitoring period of September 6-7, 2023, the Shaw Boulevard Station recorded a velocity of 1.335 mm/s, with an average velocity of 0.887 mm/s. The average noise level measured was 91.9 dB, while the average zero frequency was 10.2 Hz. These readings suggest a relatively moderate level of ground vibration and noise during this period.

xxxiii. In contrast, during the monitoring period of December 6-7, 2023, the Shaw Boulevard Station exhibited increased ground vibration and noise levels. The velocity recorded was 1.557 mm/s, with an average velocity of 0.758 mm/s. The average noise level spiked to 103.6 dB, while the average zero frequency increased significantly to 47.7 Hz. These

elevated readings indicate a notable increase in ground vibration and noise activity during this period, possibly influenced by varying factors such as vehicular traffic, or other environmental factors.

3.1.6 Noise Level Monitoring

- i. According to the Memorandum Circular No. 002, Series of 1980 issued by the National Pollution Control Commission (NPCC), it is mandated that no individual shall handle, transport, or cause the handling or transportation of any container or construction material in a public space in a manner that generates unnecessary noise. Consequently, in adherence to the DENR Ambient Noise Quality Standards, derived from the NPCC 1980 Rules and Regulations, and as outlined in the Environmental Monitoring Plan (EMoP), regular noise level assessments are undertaken.
- ii. Quarterly noise level evaluations are carried out for both the NAS and Depot facilities situated in the community impact area, as well as within the confines of the construction site. Specifically, for NAS and Depot, the area is designated as Class A, primarily catering to residential purposes, wherein the maximum permissible noise levels (measured in decibels or dB) are defined.
- iii. In addition to the quarterly assessments, weekly monitoring of noise levels is conducted to gauge the impact of construction machinery movement and operation on noise levels. Presently, these weekly evaluations are performed in designated areas: Road 10 for NAS, San Pedro IX Chapel for Depot, Landcom Village for TSS, and Old Sauyo Road for QHS.
- iv. The baseline ambient noise level monitoring took place from 23rd to 27th November 2020. The following table summarizes the results obtained from the 24-hour noise monitoring period.

Table 29. Baseline for the Noise Level Monitoring

Station (Location)	Monitoring Date	Average Noise Level (dB)				OVERALL REMARKS
		Daytime (0900H- 1800H)	Evening (1800H- 2200H)	Nighttime (2200H- 0500H)	Morning (0500H- 0900H)	
North Avenue Station	23-24 November	84.5	80.7	75.9	82.2	Exceeded

(Road 10, Project 6)	2020					
Tandang Sora Station (Landcom Village)	23-24 November 2020	74.3	73.5	74.2	74.1	Exceeded
Quirino HW Station (Sauyo Rd, Talipapa)	25-26 November 2020	72.9	71.5	63.4	68.1	Exceeded
Depot Area (San Pedro IX Chapel)	26-27 November 2020	60.3	59.5	60.4	57.9	Exceeded
NPCC Standard for Class A		55	50	45	50	---

- v. The baseline assessment reveals that the average noise levels at all stations for CP101 exceeded the acceptable thresholds throughout the 24-hour monitoring period. This notable trend can be attributed to various human-made noise sources, including continuous and intermittent vehicular traffic in the vicinity.
- vi. The table below shows the findings for the average noise level period for NAS (Road 10) for CP101 from July to December 2023:

Table 30. Average noise level period for NAS (Road 10)

Dates	Average Noise Level (dB)				REMARKS
	Daytime (0900H-1800H)	Evening (1800H-2200H)	Nighttime (2200H-0500H)	Morning (0500H-0900H)	
July 03-04, 2023	65.8	66.2	61.5	67.1	exceeded
July 10-11, 2023	67.9	65.4	63.1	68.5	exceeded
July 17-18, 2023	66.6	66.0	62.6	67.4	exceeded
July 24-25, 2023	65.4	66.7	60.7	65.9	exceeded
July 31- August 1, 2023	69.1	66.4	64.4	70.4	exceeded

August 07-08, 2023	69.3	66.4	63.1	67.4	exceeded
August 14-15, 2023	66.4	66.8	60.9	66.3	exceeded
August 21-22, 2023	64.8	64.7	59.7	64.6	exceeded
August 28-29, 2023	64.9	66.2	61.9	66	exceeded
September 04-05, 2023	68.3	67.3	63	66.5	exceeded
September 11-12, 2023	65.8	66.1	62.3	66.7	exceeded
September 18-19, 2023	66.1	66.7	61.1	65.6	exceeded
September 25-26, 2023	67.1	67.2	61.9	64.8	exceeded
October 02-03, 2023	65.4	65.5	62.6	65.2	exceeded
October 09-10, 2023	66.8	66	61.8	67.9	exceeded
October 16-17, 2023	65.4	65.5	62.6	65.2	exceeded
October 23-24, 2023	66.5	65.8	61.3	65.9	exceeded
Oct. 31-Nov. 01, 2023	64.8	64	59.5	66.3	exceeded
November 06-07, 2023	63.7	66.2	71	71.7	exceeded
November 13-14, 2023	66.4	67	60.6	66.2	exceeded
November 20-21, 2023	64.9	66.3	62.2	66.3	exceeded
November 27-28, 2023	64.2	65.3	60.9	63.4	exceeded
December 3-4, 2023	62.7	62.0	66.0	73.4	exceeded
December 11-12, 2023	66.1	65.9	61.3	65.3	exceeded
December 18-19, 2023	66.5	65.7	66.0	65.3	exceeded
December 27-28, 2023	64.4	64.0	66.0	64.0	exceeded
NPCC Standard for Class A	55	50	45	50	---

- vii. The provided table outlines the average noise levels recorded at NAS (Road 10) across different periods spanning from July to December 2023. The recorded noise levels, measured in decibels (dB), are categorized based on the time of day, including daytime, evening, nighttime, and morning. Throughout the monitoring period, the average noise levels consistently exceeded the specified NPCC Standard for Class A areas, which are primarily designated for residential purposes. Notably, the majority of readings surpassed the designated noise limits across all time segments, indicating a pervasive issue of elevated noise pollution in the vicinity.
- viii. The noise emanating from the continuous passing of vehicles along Mindanao Avenue and Road 10 contributed significantly to the elevated noise levels recorded during monitoring. Despite variations in sources, the measured dB

levels demonstrated consistency with the baseline assessments, consistently surpassing the NPCC Standard for Class A areas. This persistent exceedance highlights the enduring impact of vehicular traffic on noise pollution levels in the monitored vicinity.

- ix. The table below shows the findings for the average noise level period for Depot (San Pedro IX Chapel) for July to December 2023:

Table 31. Average noise level results for Depot (San Pedro IX Chapel)

Dates	Average Noise Level (dB)				REMARKS
	Daytime (0900H-1800H)	Evening (1800H-2200H)	Nighttime (2200H-0500H)	Morning (0500H-0900H)	
July 06 - 07, 2023	56.6	55.1	45.8	51.9	only evening exceeded
July 13 - 14, 2023	58.0	57.5	51.6	55.2	only daytime passed
July 20 - 21, 2023	57.0	52.0	46.1	51.7	passed
July 27 - 28, 2023	62.5	56.1	61.3	53.4	only morning passed
August 03 - 04, 2023	59.2	58.2	53.7	52.8	only daytime and morning passed
August 10 - 11, 2023	55.0	54.7	48.4	52.5	passed
August 17 - 18, 2023	57.6	55.5	51.0	51.2	only daytime and morning passed
August 24 - 25, 2023	55.8	60.4	47.4	50.8	only evening exceeded
August 31 - September 01, 2023	60.5	54.1	51.7	56.7	only daytime and nighttime exceeded
September 07 - 08, 2023	60.5	55.2	47.4	54.1	daytime and evening exceeded
September 14 - 15, 2023	58.8	65.8	47.1	54.9	only evening exceeded

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September 21 - 22, 2023	58.3	53.6	47.9	51.6	passed
September 28 - 29, 2023	60.10	60.10	47.00	52.60	daytime and evening exceeded
October 05 - 06, 2023	57.2	55.6	54.4	53	evening and nighttime exceeded
October 12 - 13, 2023	56.7	55.7	53.6	53.6	evening and nighttime exceeded
October 19 - 20, 2023	57.2	55.6	54.4	53	evening and nighttime exceeded
October 26 - 27, 2023	55.2	53.3	48	52.4	passed
November 03 - 04, 2023	56.1	56.9	48.1	50.6	only evening exceeded
November 09 - 10, 2023	56.1	56.9	48.1	50.6	only evening exceeded
November 16 - 17, 2023	58.1	53.8	47.2	54.3	passed
November 23 - 24, 2023	54.9	55.8	47.4	54.3	only evening exceeded
November 30 - December 01, 2023	55.9	54.4	50.3	54.8	only nighttime exceeded
December 6 - 7, 2023	60.3	53.5	46.9	53.6	only daytime exceeded
December 14 - 15, 2023	55.9	54.4	50.3	54.8	only nighttime exceeded
December 21 - 22, 2023	58.4	65.0	47.5	53.6	only evening exceeded
December 30 - 31, 2023	56.0	57.2	47.8	53.6	only evening exceeded
NPCC Standard for Class A	55	50	45	50	---

- x. The data above garnered different results, both passed and exceeded results sometime during the observation days. This is due to the noise of passing vehicles, MMSP's construction, domestic animal noise, church activity, resident interaction and activities, and rainfall. The detailed remarks are already indicated in the table above. The measured dB shows similar results from the baseline account, which had also exceeded the NPCC Standard for Class A.
- xi. The table below shows the average noise level (dB) for Tandang Sora Station in Landcom Village II for July to December 2023.

Table 32. Average Noise Level Results for Tandang Sora Station (Landcom Village II)

Dates	Average Noise Level (dB)				REMARKS
	Daytime (0900H-1800H)	Evening (1800H-2200H)	Nighttime (2200H-0500H)	Morning (0500H-0900H)	
July 04 - 05, 2023	73.8	74.0	74.4	74.4	exceeded
July 11 - 12, 2023	72.6	71.2	71.4	72.7	exceeded
July 18 - 19, 2023	73.3	73.2	74.2	74.2	exceeded
July 25 - 26, 2023	72.9	73.4	74.1	73.4	exceeded
August 01 - 02, 2023	75.2	74.3	73.2	74.1	exceeded
August 08 - 09, 2023	72.4	71.5	72.5	73.1	exceeded
August 15 - 16, 2023	72.7	71.7	72.3	73.2	exceeded
August 22 - 23, 2023	75.2	74.3	73.2	74.1	exceeded
August 29 - 30, 2023	73.8	72.8	72.8	73.4	exceeded
September 05 - 06, 2023	74.3	72.6	72.8	72.6	exceeded
September 12 - 13, 2023	75.0	72.2	72.2	73.1	exceeded
September 19 - 20, 2023	74.2	73.4	73.9	74.9	exceeded
September 26 - 27, 2023	72.5	76.6	76.7	monitoring had stopped due to sudden flooding	exceeded
October 03 - 04, 2023	72.8	72.1	72.8	73.2	exceeded
October 10 - 11, 2023	72.2	72.2	73.3	73.9	exceeded
October 17 - 18, 2023	72.7	72.1	72.8	73.2	exceeded
October 24 - 25, 2023	73.7	73.3	73.3	74.2	exceeded

November 01 - 02, 2023	72.0	71.5	69.4	72.6	exceeded
November 07 - 08, 2023	72.4	73.0	74.0	72.8	exceeded
November 14 - 15, 2023	72.7	73.9	72.6	73.1	exceeded
November 21 - 22, 2023	73.0	74.3	73.5	74.4	exceeded
November 28 - 29, 2023	73.0	73.0	73.3	74.7	exceeded
December 4 - 5, 2023	73.3	73.1	73.2	73.2	exceeded
December 12 - 13, 2023	73.1	72.6	73.4	72.9	exceeded
December 19 - 20, 2023	73.1	74.2	74.3	73.8	exceeded
December 28 - 29, 2023	73.1	73.1	73.1	73.7	exceeded
NPCC Standard for Class A	55	50	45	50	---

- xii. The noise level results for TSS indicate a consistent pattern of exceedance throughout the observation period. Notably, during all time intervals, including daytime, evening, nighttime, and morning, the average noise levels exceeded the NPCC Standard for Class A. This persistent exceedance suggests a significant impact on the surrounding environment and community. Further analysis reveals that various factors contribute to the elevated noise levels, including continuous passing of vehicles along Mindanao Avenue, church bell ringing, rainfall, and domestic animal noise.
- xiii. The table below shows the average noise level (dB) for Quirino Highway Station in Old Sauyo Road for July to December 2023.

Table 33. Average Noise Level Results for Quirino Highway Station (Old Sauyo Road)

Dates	Average Noise Level (dB)				REMARKS
	Daytime (0900H-1800H)	Evening (1800H-2200H)	Nighttime (2200H-0500H)	Morning (0500H-0900H)	
July 05-06, 2023	71.3	68.9	60.3	72.3	exceeded
July 12-13, 2023	71.7	72.1	62.1	74.0	exceeded
July 19-20, 2023	71.2	69.8	63.4	71.4	exceeded
July 26-27, 2023	73.1	73.5	65.0	72.8	exceeded
August 02-03, 2023	72.7	73.6	66.0	70.8	exceeded
August 09-10, 2023	72.1	71.1	61.1	72.9	exceeded
August 16-17, 2023	71.5	73.1	62.4	70.2	exceeded

August 23-24, 2023	72.2	72.1	66.1	71.7	exceeded
August 30-31, 2023	73.3	70.6	67.1	74	exceeded
September 06-07, 2023	71.7	73.5	63.7	70.6	exceeded
September 13-14, 2023	69.1	64.6	66.3	69.1	exceeded
September 20-21, 2023	71.6	72.0	62.0	72.4	exceeded
September 27-28, 2023	73.1	71.9	63.9	71.0	exceeded
October 04-05, 2023	72.5	70.5	65.1	69.1	exceeded
October 11-12, 2023	72.5	70.5	65.1	69.1	exceeded
October 18-19, 2023	72.0	70.5	65.5	69.1	exceeded
October 25-26, 2023	71.3	72.0	65.0	69.1	exceeded
November 02-03, 2023	72.0	71.0	64.7	69.1	exceeded
November 08-09, 2023	72.7	71.8	62.9	69.1	exceeded
November 15-16, 2023	71.8	71.9	63.6	69.1	exceeded
November 22-23, 2023	72.1	72.0	64.0	69.1	exceeded
November 29-30, 2023	73.0	72.6	65.6	69.1	exceeded
December 5-6, 2023	74.3	72.3	65.2	69.1	exceeded
December 13-14, 2023	72.9	72.9	64.0	69.1	exceeded
December 20-21, 2023	73.0	72.6	65.6	69.1	exceeded
December 29-30, 2023	72.6	72.6	65.8	69.1	exceeded
NPCC Standard for Class A	55	50	45	50	---

- xiv. The data presented in the table above illustrates the average noise level results for Quirino Highway Station (Old Sauyo Road) over the specified time periods. Throughout the observation period, spanning from July to December 2023, the average noise levels consistently exceeded the NPCC Standard for Class A during all time intervals, including daytime, evening, nighttime, and morning. Various factors contribute to the elevated noise levels, including vehicular traffic along Quirino Highway, residential activities, and other sources of ambient noise.
- xv. Quarterly monitoring is also conducted on monitoring locations for both impact area and construction site area. The standard for the construction site differs from the impact area's standard. Below is the standard use for the noise from construction activities:

Table 34. Noise Standards for Construction Activities

Construction Activity Classification	Work Activity	Maximum Noise Level at 30 meters
Class 1	Work that requires pile drivers (excluding manual type), pile extractors, riveting hammers, or a combination thereof. The classification does not include work in which pile drivers are used in combination with earth auger	90
Class 2	Work that requires rock drills, or similar equipment like jackhammers or pavement breakers	85
Class 3	Work that requires an air compressor (limited to those compressors which use power other than electric motors with rated with rated output of 15 kW or more). Air compressors power rock drills, jackhammers, and pavement breakers are excluded	75
Class 4	Operation involving batching plants (limited to those with a mixer capacity of 0.5 or more cubic meters) and/or asphalt plants (limited to those with a mixer capacity of 200 kg or more). Batching plants for the making of mortar are excluded	75

- xvi. Below is the summary of the results of the noise level monitoring across the NAS Impact Area on Road 10, Project 6, the Depot Impact Area situated at the San Pedro IX Chapel in Brgy. Bagbag, Valenzuela City, the Tandang Sora Station Impact Area (Landcom Village II), and the Quirino Highway Station Impact Area located on Old Sauyo Road, spanning from the second to the fourth quarter of 2024.

Table 35. Summary of Results of Continuous Noise Monitoring (Impact Area)

Total number of periods	Date	Based on NPCC Standard	Based on NPCC Standard	Based on IFC Standard	Based on IFC Standard
		Complied	Exceeded	Complied	Exceeded
CP101		NAS			
24	May 8-9, 2023	0	24	0	24
	August 7-8, 2023	0	24	0	24
	November 6-7, 2023	0	24	0	24
CP101		Depot			
24	May 11-12, 2023	5	19	0	24
	August 10-11, 2023	2	22	7	17
	November 6-7, 2023	3	21	0	24
CP101		TSS			
24	May 9-10, 2023	0	24	0	24
	August 8-9, 2023	0	24	0	24
	November 7-8, 2023	0	24	0	24
CP101		QHS			
24	May 10-11, 2023	0	24	0	24
	August 9-10, 2023	0	24	0	24
	November 8-9, 2023	0	24	0	24

xvii. For NAS, there were no periods where the noise levels complied with either the NPCC or IFC standards; instead, all 24 periods showed noise levels that exceeded both standards. Similarly, Depot exhibited varying levels of compliance, with only a few periods meeting the standards, particularly in May, August and November, while most periods exceeded both NPCC and IFC standards, especially in August. The TSS, on the other hand, demonstrated consistent

exceedances across all monitoring periods. Lastly, the QHS mirrored the results of the TSS station, with all 24 periods showing exceedances with both NPCC and IFC standards.

- xviii. In the Depot Impact Area, noise levels during the 2nd Quarter (2Q) were primarily influenced by construction activities and passing vehicles, with only partial compliance with NPCC standards. Animal calls were also detected during sampling. In the subsequent 3rd Quarter (3Q), while compliance with NPCC standards improved, elevated noise levels persisted due to construction activities such as backhoe operations, alongside passing vehicles and animal calls. Interestingly, in the 4th Quarter (4Q), compliance with noise standards remained limited, with similar sources of elevated noise identified, including passing vehicles and animal calls. Notably, subway project construction activities were found not to significantly contribute to the elevated noise levels perceived at the station during this quarter.
- xix. In the North Avenue Station (NAS) Impact Area, during the 2nd Quarter (2Q), elevated noise levels primarily stemmed from the passing and horn blowing of vehicles, particularly light vehicles, motorcycles, and tricycles, as well as continuous vehicle traffic along Mindanao Avenue. This trend continued in the 3rd Quarter (3Q), where noise levels remained high due to the continuous passing of vehicles along Mindanao Avenue and operations at the Godel batching plant. In the 4th Quarter (4Q), loud vehicle mufflers from ongoing vehicle traffic along Mindanao Avenue contributed to the elevated noise levels. Throughout these quarters, the predominant source of noise at NAS Impact Area was the continuous passing of vehicles along Mindanao Avenue, exacerbating non-compliance with NPCC and IFC standards.
- xx. In the Quirino Highway Station (QHS) Impact Area, across all quarters, elevated noise levels primarily originated from passing vehicles, including heavy and light vehicles, motorcycles, trucks, and tricycles. The incessant passing, idling, and horn-blowing of these vehicles contributed significantly to the elevated readings, with notable traffic counts throughout the monitoring period. Despite continuous monitoring, the subway project's construction activities were found not to contribute to the elevated noise levels perceived at the station during the 2nd, 3rd, and 4th quarters. Additionally, in the 3rd quarter, tree cutting operations further exacerbated the noise levels, indicating additional sources of disturbance beyond vehicular traffic.
- xxi. In the Tandang Sora Station (TSS) Impact Area, across the 2nd, 3rd, and 4th quarters, elevated noise levels primarily resulted from the continuous passing of vehicles and blowing horns, specifically light vehicles, motorcycles, and tricycles. Traffic noises were consistently noted throughout the monitoring period, contributing significantly to the noise exceedance. Interestingly, despite continuous monitoring, subway project construction activities were found to not contribute to the elevated noise levels perceived at the station during any of the observed quarters.
- xxii. The following encapsulates the findings from the noise level monitoring conducted within the construction areas of all stations under CP101.

Table 36. Summary of Results of Continuous Noise Monitoring (Site Area)

Total number of periods	Date	Based on NPCC Standard	Based on NPCC Standard	Based on IFC Standard	Based on IFC Standard
		Complied	Exceeded	Complied	Exceeded
CP101	NAS Area				
24	May 8-9, 2023	24	0	24	0
	August 7-8, 2023	24	0	24	0
	November 6-7, 2023	24	0	24	0
CP101	Depot				
24	May 11-12, 2023	24	0	24	0
	August 10-11, 2023	24	0	24	0
	November 6-7, 2023	24	0	24	0
CP101	TSS				
24	May 9-10, 2023	24	0	24	0
	August 8-9, 2023	24	0	24	0
	November 7-8, 2023	24	0	24	0
CP101	QHS				
24	May 10-11, 2023	24	0	24	0
	August 9-10, 2023	24	0	24	0
	November 8-9, 2023	24	0	24	0

xxiii. In the Depot Site Area, compliance with NPCC Noise Standards for Construction Activities Class 1, 3 & 4 was consistently observed across all quarters. Elevated noise readings primarily resulted from the construction activities associated with the subway project and passing vehicles along Mindanao Avenue. Continuous passing of vehicles was noted throughout the monitoring period. Subway project construction activities were identified as a significant contributor to the elevated noise levels perceived at the station during all quarters, indicating their consistent impact on noise readings in the site area.

xxiv. In the North Avenue Station (NAS) Site Area, across all quarters, construction activities associated with the subway project were the main contributors to elevated noise levels. In the 2nd Quarter (2Q), construction activities such as

trucks passing near data loggers and grinding activities, alongside nearby generator set operation and passing vehicles, led to elevated readings. Similarly, in the 3rd Quarter (3Q) and 4th Quarter (4Q), heavy equipment operations, crane lifting, and other construction activities, along with passing vehicles and generator set operation, were responsible for heightened noise levels. The continuous passing of vehicles along Mindanao Avenue persisted throughout the monitoring period. Thus, the construction activities related to the subway project consistently influenced the elevated noise level readings at NAS Site Area, aligning with NPCC Noise Standards for Construction Activities.

- xxv. In the Quirino Highway Station (QHS) Site Area, during the 2nd and 4th quarters, compliance with NPCC Noise Standards for Construction Activities was observed, with construction-related noise attributed to activities like equipment lifting. However, passing vehicles and blowing horns, particularly from light vehicles, motorcycles, and tricycles, remained the primary contributors to elevated noise levels throughout all quarters. Notably, in the 3rd quarter, construction activities such as BG-45 drilling operations and equipment mobilization contributed significantly to the heightened noise levels, indicating a direct impact of the subway project's construction activities on noise readings at the station during this period. Overall, continuous passing of vehicles from nearby roads persisted as a consistent source of noise, while the subway project's construction activities exhibited varying degrees of influence on the elevated noise levels perceived at the QHS Site Area.
- xxvi. Conversely, in the Tandang Sora Station (TSS) Site Area, during the 2nd quarter, elevated noise readings were primarily attributed to passing vehicles and blowing horns, with continuous passing of vehicles noted throughout the monitoring period. Similarly, in the 3rd quarter, passing vehicles and blowing horns remained the primary sources of elevated noise levels, with additional contributions from heavy equipment operations such as boom truck loading. However, in both the 2nd and 4th quarters, subway project construction activities were found not to significantly contribute to the elevated noise levels perceived at the station, indicating a minor impact compared to passing vehicles.
- xxvii. Across all stations and monitoring periods, the data indicate full compliance with both NPCC and IFC noise level standards. For each station and every monitored period, the noise levels fell within the permissible limits defined by both NPCC and IFC standards, with no instances of exceedance recorded. This consistent compliance across all stations and monitoring periods suggests effective noise management practices implemented within the site areas of these stations. It indicates that the noise levels within these areas were consistently maintained at levels deemed acceptable according to regulatory standards, reflecting a controlled and environmentally sound operational environment. These results are indicative of the successful implementation of noise mitigation measures and adherence to regulatory requirements within the site areas of the CP101 stations, contributing to a conducive working environment and potentially minimizing any adverse noise-related impacts on surrounding communities.
- xxviii. For CP102, the following table presents the baseline results of noise level monitoring conducted at Avida Tower on August 4-5, 2023. This monitoring initiative aims to assess the ambient noise levels at different times of the day.

Table 37. Baseline for the Noise Level Monitoring						
Station (Location)	Monitoring Date	Average Noise Level (dB)				OVERALL REMARKS
		Daytime (0900H-1800H)	Evening (1800H-2200H)	Nighttime (2200H-0500H)	Morning (0500H-0900H)	
Avida Tower	August 4-5, 2023	62	62	62	62	Daytime and Morning Exceeded
NPCC Standard for Class B		65	60	55	60	---
NPCC Standard for Class B (corrected)		75	70	65	65	---

xxix. It is important to note that NPCC Memorandum Circular No. 002, Series of 1980 (MC-002), stipulates the potential application of a correction factor of +10 dBA for areas directly fronting or facing a four-lane or wider road. With this correction factor accounted for, all readings taken during the four monitoring periods fall within the allowable limits prescribed by the NPCC standard. Additionally, since the monitoring station is situated beside EDSA, this correction factor is applicable, ensuring compliance with the established noise standards.

xxx. The table below shows the weekly ambient noise level monitoring for CP102 QAS from October to December 2023:

Table 38. Weekly Ambient Noise Level Monitoring Result for CP102 QAS

Date	Highest Reading (dB(A))	Lowest Reading (dB(A))	Mean dB(A) Range	Median dB(A) Range	Notable Contributors to Noise
Oct 27-28	100.5	75	81.8 - 84.9	81.65 - 84.6	Passing motorcycles, car horns, ambulances
Nov 3-4	88.8	62.6	71.2 - 74.7	71.0 - 74.6	Passing vehicles, MRT trains, vehicular horns
Nov 10-11	93.8	61.8	71.3 - 74.3	70.90 - 73.50	Passing vehicles, MRT trains,

					ambulances, motorcycles with open mufflers
Nov 17-18	93.8	61.8	71.3 - 74.3	70.90 - 73.50	Passing vehicles, MRT trains, ambulances, motorcycles with open mufflers
Nov 24-25	99.2	63.7	71.2 - 74.5	71.0 - 73.8	Passing vehicles, MRT trains, pedestrians
Dec 1-2	99.2	63.7	71.2 - 74.5	71.0 - 73.8	Passing vehicles, MRT trains, pedestrians
Dec 8-9	87.7	61.4	68.67 - 72.35	68.20 - 71.85	Passing vehicles, MRT trains, motorcycles, holiday weekend

- xxxi. During the monitoring period on October 27-28, the highest recorded noise level peaked at 100.5 dB(A), while the lowest reading was 75 dB(A). The mean dB(A) range fluctuated between 81.8 and 84.9, with the median ranging from 81.65 to 84.6 dB(A). Notable contributors to the noise during this time included passing motorcycles, car horns, and ambulances. Moving into November, noise levels remained significant. On November 3-4, the highest reading reached 88.8 dB(A), while the lowest was 62.6 dB(A). Mean dB(A) ranged from 71.2 to 74.7, with the median falling between 71.0 and 74.6 dB(A). Passing vehicles, MRT trains, and vehicular horns were identified as the primary contributors to the noise.
- xxxii. Throughout November, similar patterns persisted. On November 10-11 and November 17-18, noise levels remained consistent, with notable contributors including passing vehicles, MRT trains, ambulances, and motorcycles with open mufflers. The highest readings during these periods were 93.8 dB(A), with the lowest around 61.8 dB(A). As the monitoring extended into late November and early December, noise levels remained elevated. On November 24-25 and December 1-2, peak readings reached 99.2 dB(A), while the lowest readings were around 63.7 dB(A). Passing vehicles, MRT trains, and pedestrians were among the key contributors to the noise pollution during these times.
- xxxiii. Even during the monitoring period on December 8-9, when the holiday weekend likely reduced vehicular movement, noise levels remained relatively high. The highest recorded noise level was 87.7 dB(A), with the lowest at 61.4 dB(A). Passing vehicles, MRT trains, motorcycles, and the holiday weekend activities contributed to the overall noise pollution.

Table 39. Weekly Ambient Noise Level Monitoring Result for CP102 QAS (Dec 15 onwards)

Date	Period	Median Result (dB(A))	NPCC Standard (dB(A))	Corrected NPCC (dB(A))	Class B Standard (dB(A))	Notable Contributors to Noise
Dec 15-17, 23	Morning	70.8	60	70	70	Passing vehicles, MRT trains
	Daytime	71.9	65	75	75	Passing vehicles, MRT trains
	Evening	70.6	60	70	70	Passing vehicles, MRT trains
	Nighttime	69.5	55	65	65	Passing vehicles, MRT trains
Dec 22-23	Morning	71.9	60	70	70	Passing vehicles, ambulances, buses, motorcycles (big bikes)
	Daytime	71.3	65	75	75	Passing vehicles, ambulances, buses, motorcycles (big bikes)
	Evening	72.7	60	70	70	Passing vehicles, ambulances, buses, motorcycles (big bikes)
	Nighttime	70.7	55	65	65	Passing vehicles, ambulances, buses, motorcycles (big bikes)
Dec 29-30	Morning	72.25	60	70	70	Passing vehicles, MRT trains, motorcycles
	Daytime	72.20	65	75	75	Passing vehicles, MRT trains, motorcycles
	Evening	72.30	60	70	70	Passing vehicles, MRT trains, motorcycles
	Nighttime	71.20	55	65	65	Passing vehicles, MRT trains, motorcycles

xxxiv. The table presents the results of noise level monitoring conducted on different dates in December 2023, categorized by morning, daytime, evening, and nighttime periods. For the period of December 15-17, the median noise levels ranged from 69.5 dB(A) to 71.9 dB(A). While the daytime median level of 71.9 dB(A) fell within the corrected NPCC Standard for Class B of 75 dB(A), the morning and evening periods slightly exceeded their corresponding corrected

NPCC Standard, and the nighttime period exceeded the allowable limit of 65 dB(A). Notable contributors to noise during this period included passing vehicles and the Metro Manila Rail Transit (MRT).

- xxxv. Similarly, for December 22-23, the median noise levels ranged from 70.7 dB(A) to 72.7 dB(A). Although the daytime median level of 71.3 dB(A) remained within the corrected NPCC Standard for Class B, the morning, evening, and nighttime periods exceeded their respective standards. Notable contributors to noise during this period included passing vehicles, ambulances, buses, and motorcycles, particularly those with larger engines.
- xxxvi. Lastly, for December 29-30, the median noise levels ranged from 71.20 dB(A) to 72.30 dB(A). While the daytime median level of 72.20 dB(A) complied with the corrected NPCC Standard for Class B, the morning, evening, and nighttime periods exceeded their corresponding standards. Passing vehicles, MRT trains, and motorcycles, especially during the daytime and evening periods, were identified as the primary contributors to higher noise levels during this period.
- xxxvii. Overall, the noise level results indicate consistent contributions from passing vehicles, MRT trains, and motorcycles, with variations observed across different monitoring periods and dates in December 2023.
- xxxviii. On one hand, the baseline monitoring for Noise Level for CP103 was held from 08th to 10th of February 2023 at the sampling site at World Citi Medical Center and the Blue Ridge A Multipurpose Hall. The noise level set up is co-located with the ambient air equipment.

Table 40. Baseline for the Noise Level Monitoring for CP103

Station (Location)	Monitoring Date	Average Noise Level (dB)				OVERALL REMARKS
		Daytime (0900H- 1800H)	Evening (1800H- 2200H)	Nighttime (2200H- 0500H)	Morning (0500H- 0900H)	
Anonas Station (World Citi Medical Center)	February 9-10, 2023	67	69	65	67	Exceeded
Camp Aguinaldo Station (Blue Ridge A Multipurpose Hall)	February 8-9, 2023	58	56	58	59	Exceeded
NPCC Standard for Class AA		50	45	40	45	---
NPCC Standard for Class A		55	50	45	50	---

- xxxix. It is essential to consider the environmental context surrounding the sampling points. The World Citi Medical Center site experiences a continuous flow of vehicles due to students' ingress and egress, compounded by the presence of a multilevel parking facility nearby. This setting also exposes the area to noise generated by operational sampling equipment and the activities of incoming and outgoing students. In contrast, the Blue Ridge A Multipurpose Hall site faces construction activities nearby, contributing to increased noise levels. Additionally, the passage of vehicles and the presence of trees around the area further influence the noise dynamics at this location.
- xl. Below are the results of the weekly noise monitoring at the Camp Aguinaldo Station, Blue Ridge A for April to December 2023.

Table 41. Average noise level results for Camp Aguinaldo Station (Blue Ridge A)

Dates	Average Noise Level (dB)				REMARKS
	Daytime (0900H-1800H)	Evening (1800H-2200H)	Nighttime (2200H-0500H)	Morning (0500H-0900H)	
April 4-5, 2023	56.08	49.95	43.98	52.52	only daytime and morning exceeded
April 13-14,2023	70.35	77.15	55.25	50.74	exceeded
April 20-21,2023	46.70	45.80	55.82	56.93	only nighttime and morning exceeded
April 27-28, 2023	48.86	46.71	53.43	56.42	only nighttime and morning exceeded
May 4-5, 2023	66.24	64.89	62.8	65.9	exceeded
May 10-11, 2023	59.51	50.57	44.95	48,86	only daytime and evening exceeded
May 18-19, 2023	60.04	63.38	45.29	54.66	exceeded
May 25-26, 2023	60.21	64.16	46.32	52.25	exceeded
June 1-12, 2023	68.24	64.89	62.80	65.90	exceeded
June 13-14, 2023	65.63	63.50	64.72	65.37	exceeded
June 21-22, 2023	57.77	50.86	43.48	50.78	only nighttime passed
July 06-07, 2023	52.00	50.18	42.43	50.08	only evening and morning exceeded
July 13-14, 2023	57.03	50.86	43.48	50.72	only nighttime passed

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July 21-22, 2023	53.86	51.07	43.36	48.52	only evening exceeded
July 27-28, 2023	57.59	50.07	61.92	52.52	exceeded
August 01-02, 2023	59.49	53.22	46.86	52.19	exceeded
August 10-11, 2023	58.39	51.23	41.71	50.52	only night time passed
August 17-18, 2023	51.53	49.89	44.84	53.13	only morning exceeded
August 24-25, 2023	56.5	54.16	49.13	48.11	only morning passed
Aug. 31 - Sep. 01, 2023	61.58	65.87	61.71	61.79	exceeded
September 07-08, 2023	57.34	50.12	61.91	52.43	exceeded
September 14-15, 2023	55.89	61.08	46.04	49.67	only morning passed
September 21-22, 2023	55.48	55.61	43.91	45.37	night time and morning passed
September 28-29, 2023	57.67				
October 05-06, 2023	58.17	53.49	43.92	52.3	only nighttime passed
October 12-13, 2023	53.36	48.16	44.46	49.26	passed
October 19-20, 2023	54.21	48.85	43.97	52.3	only morning exceeded
October 26-27, 2023	52.06	49.75	44.39	49.74	passed
November 03-04, 2023	51.38	53.99	49.13	48.1	only evening and nighttime passed
November 09-10, 2023	51.04	47.61	44.29	49.95	passed
November 16-17, 2023	56.62	47.88	44.65	50.83	only evening and nighttime passed
November 23-24, 2023	53.77	50.66	44.54	50.28	only daytime and nighttime

					passed
November 28-29, 2023	61.85	59.85	64.5	66.63	exceeded
December 07-08, 2023	52.57	46.46	43.51	48.12	passed
December 14-15, 2023	53.77	47.16	44.2	48.82	passed
December 21-22, 2023	58.23	57.08	50.94	47.66	only morning passed
December 28-29, 2023	52.37	47.06	52.41	46.51	only nighttime exceeded

- xli. Across the monitoring period, fluctuations in noise levels were observed, with certain months and time intervals consistently exceeding regulatory standards. Notably, April and June exhibited frequent exceedances, while October showed a decrease in such instances. November experienced a resurgence in exceedances, particularly during evenings and nights. The sources of noise for the weekly monitoring for CP103 include the noise from the adjacent community, intermittent passing of vehicles along the Katipunan Avenue, Carlos P. Garcia Avenue and C5 lane.
- xlii. The quarterly noise level monitoring also commenced at CP103. Its monitoring location is co-located with the ambient air monitoring. Below are the results of the quarterly noise level monitoring at the Camp Aguinaldo Station and Blue Ridge A for the 3rd and 4th Quarter of 2023.

Table 42. Summary of results of continuous noise monitoring (Impact Area)

Total number of periods	Date	Based on NPCC Standard	Based on NPCC Standard	Based on IFC Standard	Based on IFC Standard
		Complied	Exceeded	Complied	Exceeded
CP103	CAS				
24	September 6-7, 2023	0	24	0	24
	December 6-7, 2023	0	24	0	24

- xliii. Specifically, for monitoring periods on September 6-7, 2023, and December 6-7, 2023, noise levels consistently exceeded both NPCC and IFC standards, with no instances of compliance recorded under either standard.
- xliv. The table below shows the summary results of the continuous 24-hour ambient noise level monitoring at CAS' construction area.

Table 43. Summary of results of continuous noise monitoring (Site Area)

Total number of periods	Date	Based on NPCC Construction Activities Standards			
		Class 1		Class 3 & 4	
		Complied	Exceeded	Complied	Exceeded
CAS					
24	September 6-7, 2023	24	0	24	0
	December 6-7, 2023	24	0	24	0

- xliv. For both monitoring sessions on September 6-7, 2023, and December 6-7, 2023, all 24 periods complied with the noise standards specified for Class 1 construction activities set by the NPCC. Similarly, across both timeframes, none of the periods exceeded the noise standards designated for Class 3 and 4 construction activities. These results indicate consistent adherence to regulatory noise standards within the CAS site area during the specified monitoring periods.
- xlvi. In the Camp Aguinaldo Station (CAS) Impact Area, during the 3rd Quarter (3Q), sources of noise included passing vehicles, attributed to the nearby setup location near ambient air equipment. Additionally, the operation of SO2 equipment with a vibrating motor contributed to the noise, accompanied by the presence of trees in the vicinity. Construction activities for a senior citizen elevator and passing private-owned cars further added to the noise levels during this period.
- xlvii. Moving to the 4th Quarter (4Q), noise sources in the impact area expanded to encompass various activities. These included construction activities in the barangay hall and grinding activities, alongside the operational noise from ambient air sampling equipment. Additionally, passing vehicles and electronic devices of residents intermittently contributed to the noise levels during this period.
- xlviii. In the Camp Aguinaldo Station (CAS) Construction Site, during the 3rd Quarter (3Q), noise sources primarily included passing vehicles and ongoing construction activities. Additionally, noise from a batching plant and blowing wind

further influenced the environment. Moreover, construction activities involving the operational use of a backhoe and heavy equipment added to the noise levels in the vicinity. Transitioning to the 4th Quarter (4Q), the construction site witnessed a variety of noise sources. These included mechanical noise and the operation of a genset, alongside activities such as excavation drilling and batching.

- xlix. The initiation of CP104 has initiated the commencement of environmental monitoring activities. Baseline monitoring for CP104 occurred on December 27-28, 2022, for the SBS, and on February 27-28, 2023, for the OAS. Notably, the noise level setup is co-located with the ambient air equipment.

Table 44. Baseline for the Noise Level Monitoring for CP104						
Station (Location)	Monitoring Date	Average Noise Level (dB)				OVERALL REMARKS
		Daytime (0900H- 1800H)	Evening (1800H- 2200H)	Nighttime (2200H- 0500H)	Morning (0500H- 0900H)	
Shaw Boulevard Station (Capitol Commons Estancia Mall)	December 27-28, 2022	69.2	68.2	63	69.8	Exceeded
Ortigas Station (MMDA Impounding Area)	February 27-28, 2023	66.2	65.5	63.8	65.8	Exceeded
NPCC Standard for Class B		65	60	55	60	---

- I. The values read in all time zones did not pass the standard indicated in the NPCC Memorandum Circular No. 002 Series of 1980. Passing of light to heavy vehicles, horns/honks along the main and access road, the on-going construction near the sampling point, insects present at night, and passersby conversing near the area were observed and detected.
- li. The table below indicates the weekly noise level monitoring results for CP104 for July to December 2023, particularly at SBS where the construction has already commenced.

Table 45. Average noise level results for Shaw Boulevard Station (Capitol Commons)

Dates	Average Noise Level (dB)				REMARKS
	Daytime (0900H-1800H)	Evening (1800H-2200H)	Nighttime (2200H-0500H)	Morning (0500H-0900H)	
July 05-06, 2023	68.81	69.25	68.77	67.71	exceeded
July 12-13, 2023	69.08	69.52	68.99	68.00	exceeded
July 19-20, 2023	68.51	69.87	68.59	66.08	exceeded
July 26-27, 2023	68.94	69.45	67.84	67.26	exceeded
August 02-03, 2023	70.49	69.78	68.16	66.81	exceeded
August 09-10, 2023	69.40	68.65	68.22	65.98	exceeded
August 16-17, 2023	69.27	69.03	68.39	68.80	exceeded
August 23-24, 2023	67.71	68.79	68.97	64.66	exceeded
August 30-31, 2023	69.54	69.72	69.12	66.60	exceeded
September 06-07, 2023	67.99	69.09	67.98	64.19	exceeded
September 13-14, 2023	68.40	68.67	68.63	61.24	exceeded
September 20-21, 2023	67.48	68.89	67.76	61.43	exceeded
September 27-28, 2023	68.51	68.61	68.77	65.47	exceeded
October 04-05, 2023	67.56	68.5	68.05	61.13	exceeded
October 11-12, 2023	68.52	68.39	68.45	61.39	exceeded
October 18-19, 2023	63.36	68.54	66.34	62.2	exceeded
October 25-26, 2023	67.9	68.17	67.65	61.45	exceeded
Oct. 31-Nov. 01, 2023	63.61	66.65	66.53	60.01	exceeded
November 08-09, 2023	66.97	68.9	68.07	60.83	exceeded
November 15-16, 2023	67.49	68.47	68.39	61.68	exceeded
November 22-23, 2023	67.49	68.47	68.39	61.68	exceeded
November 29-30, 2023	67.49	68.63	68.51	61.68	exceeded
December 6-7, 2023	67.83	69.33	68.38	63.78	exceeded
December 13-14, 2023	67.99	68.84	68.62	64.25	exceeded
December 20-21, 2023	68.23	69.11	68.21	63.67	exceeded
December 27-28, 2023	68.23	66.32	68.21	63.67	exceeded

- lii. The provided table documents the average noise levels (dB) measured at various times from July 05, 2023, to December 27, 2023, reflecting the daily fluctuations across daytime, evening, nighttime, and morning periods. The recorded noise levels consistently exceeded established standards throughout the monitoring period. Notably, the daytime noise levels ranged from 63.36 dB to 70.49 dB, with a similar trend observed across evening, nighttime, and morning periods.
- liii. The quarterly noise level monitoring was also conducted at CP104. The following are the results for the site area and impact area:

Table 46. Summary of Results of Continuous Noise Monitoring (Impact Area) for CP104

Total number of periods	Date	Based on NPCC Standard		Based on IFC Standard	
		Complied	Exceeded	Complied	Exceeded
CP104	SBS				
24	June 8-9, 2023	0	24	0	24
	September 6-7, 2023	0	24	0	24
	December 6-7, 2023	0	24	0	24

- liv. Across all monitoring activities, a total of 24 periods per day were recorded, with each period exhibiting non-compliance with both the noise standards stipulated by the NPCC and IFC.
- lv. On one hand, the table below shows the summary of results of the continuous noise level monitoring at the construction site for CP104 SBS.

Table 47. Summary of Results of Continuous Noise Monitoring (Site Area) for CP104

Total number of periods	Date	Based on NPCC Construction Activities Standards			
		Class 1		Class 3 & 4	
		Complied	Exceeded	Complied	Exceeded
24 each	SBS				
	June 8-9, 2023	24	0	24	0
	September 6-7, 2023	24	0	24	0
	December 6-7, 2023	24	0	24	0

- lvi. Throughout all monitoring periods, comprising a total of 24 periods each, all measurements adhered to the noise standards prescribed for both Class 1 and Class 3 & 4 construction activities. This indicates full compliance with regulatory noise thresholds, suggesting effective noise management practices implemented within the CP104 site area.
- lvii. In the Shaw Boulevard Station (SBS) during the 2nd Quarter (2Q), noise at Station 1 (Capitol Commons Estancia Mall) was primarily generated by passing vehicles, ranging from light to heavy, and the honking of motorcycle horns along main and access roads. Additionally, noise was contributed by vehicle engines in parking areas, birds chirping, insects at night, and individuals conversing near the monitoring area. At Station 2 (Staging Area Infront of Unimart), similar noise sources were observed, including passing vehicles and motorcycle horns. However, the noise readings at Station 2 were particularly influenced by ongoing construction activities, indicated by the nighttime operation of a jackhammer.
- lviii. During the 3rd Quarter (3Q), noise sources at Station 1 remained consistent with passing motorcycles and light vehicles, motorcycle horns, vehicle engines, and natural sounds like bird chirping and insect activity. At Station 2, in addition to these sources, noise levels were influenced by ongoing excavation activities using a backhoe at a nearby construction site.
- lix. In the 4th Quarter (4Q), while noise sources at Station 1 remained similar to the previous quarters, noise at Station 2 was influenced by additional factors such as generator noise from the construction site and ongoing excavation activities. Both stations experienced elevated noise levels from passing vehicles, motorcycle horns, vehicle engines, wind, and natural sounds like bird chirping and insect activity.

3.2 Waste Management

- i. The waste management practices across active project packages in CP101, CP103, and CP104 have been diligently executed in accordance with their respective Waste Management Plans (WMP) as outlined in their Contractor's Environmental Monitoring and Monitoring Plans (CEMMP). In CP101, the implementation of solid waste management measures includes the strategic installation of segregation bins and Material Recovery Facilities (MRF) on-site, ensuring proper waste segregation and management. Additionally, liquid waste is stored in durable containers equipped with spill pans or bund walls to prevent environmental contamination. Strict adherence to hazardous waste management protocols is evident, with the acquisition of Hazardous Waste Generator's IDs and the observance of proper management and transport procedures.
- ii. Similarly, CP103 has established temporary drainage systems, sedimentation ponds, and siltation tanks on-site to mitigate environmental impacts. The provision of a dedicated area for Materials Recovery Facility (MRF) and

Hazardous Waste Storage demonstrates a proactive approach to waste management. Moreover, the QA/QC teams conduct thorough reviews of all materials for use, ensuring compliance with project standards and approval from relevant stakeholders. In CP104, measures such as temporary drainage construction and detention cum siltation ponds have been implemented to manage localized flooding effectively. Trash bins are strategically positioned across the site, and facilities for Materials Recovery and Hazardous Waste Storage are currently being developed.

- iii. Overall, the contractors exhibit compliance with waste management regulations and demonstrate a commitment to minimizing environmental impacts throughout the project sites. Through the implementation of stringent waste management protocols and proactive measures, they aim to uphold environmental sustainability and ensure the responsible management of project-generated waste materials.

3.3 Surplus Soil Management

3.3.1 Surplus Soil (Excavated Materials and Debris) Monitoring

- i. The following disposal sites were actively utilized during the period of July to December 2023:

Table 48. Active Disposal Sites for 3rd to 4th Quarter CY2023

Month/Year	Contract Package	Location of Disposal Site	
July 2023	CP101	Bagbaguin 5, Sta. Maria, Bulacan	
		Patubig, Marilao, Bulacan	
	CP102	Panghulo, Navarette, Obando	
	CP104	San Andres, Cainta, Rizal	
August to October 2023	CP101	Saluysoy (Deca Homes)	
		Bagbaguin 5, Sta. Maria, Bulacan	
		Patubig, Marilao, Bulacan	
	CP103	Panghulo, Navarette, Obando	
November 2023	CP104	San Andres, Cainta, Rizal	
		CP101	Saluysoy (Deca Homes)
		Bagbaguin 5, Sta. Maria, Bulacan	

		Patubig, Marilao, Bulacan
	CP103	Panghulo, Navarette, Obando
		AFP Embankment Yard
	CP104	San Andres, Cainta, Rizal
December 2023	CP101	Duhat, Bocaue Bulacan
		Bagbaguin 5, Sta. Maria, Bulacan
		Kaypian, San Jose Del Monte, Bulacan
		Patubig, Marilao, Bulacan
	CP103	Panghulo, Navarette, Obando
		AFP Embankment Yard
	CP104	San Andres, Cainta, Rizal

- ii. The disposal site inspections conducted throughout the designated periods aimed to fulfill specific objectives, primarily centered around ensuring adherence to ECC Conditionality No. 11. This conditionality unequivocally mandates the identification of disposal sites for excavated materials before any activities commence.
- iii. Beginning on July 12, 2023, the inspection efforts commenced in Cainta, Rizal, followed by subsequent assessments on September 15, 2023, covering CP101 (Patubig, Marilao), CP103 (Panghulo, Navarette), and CP104 (also located in Cainta, Rizal). Later, on November 13, 2023, a Toxicity Characteristic Leaching Procedure (TCLP) sampling endeavor was executed at the Duhat site in Marilao, Bulacan, further reinforcing compliance measures.
- iv. As part of preparation for AECOM's Q4 2023 Audit, thorough inspections were conducted on November 29, 2023, focusing on the disposal sites in Brgy. Patubig, Marilao, Bulacan (CP101), and Navarette St., Panghulo, Obando, Bulacan (CP103), followed by a similar evaluation at Brgy. San Andres, Cainta, Rizal (CP104) on November 30, 2023. The culmination of the inspection efforts was marked by the 4th Quarter CY 2023 Third-Party Audit (TPA) on December 19, 2023, with a particular focus on CP104 with the the soil disposal site in Cainta, Rizal. The inspection activities extended until December 20, 2023, encompassing CP103 Disposal Site in Obando & CP101 Marilao Bulacan, ensuring comprehensive coverage across all identified sites.

4. Crops and Trees Acquisition

Under Section 2 of the Implementing Rules and Regulations (IRR) of Republic Act No. 10752, An Act Facilitating the Acquisition of Right-of-Way Site or Relocation for National Government Infrastructures, states that all property owners affected by the project are promptly paid fair compensation for the required Right-of-Way (ROW), which includes the acquisition of crops and trees.

4.1 Tree Inventory Survey and Appraisal

- i. The Tree Inventory Survey (TIS) and appraisal has already been completed in the MMSP alignment which covers nine (9) Contract Packages (CP) 101 - 109 comprised of seventeen (17) stations, (two of which are combined stations with NSCR line). TIS is conducted to determine the number of affected crops and trees within the MMSP, which is based on the Measurements Standards and Procedures in the Conduct of Inventory for Standing Trees (Timber) of the DENR-FMB Technical Bulletin No. 3. The activity is initially determined on-site which is categorized based on the plant or tree classification, either forest trees or fruit-bearing trees. The crops/trees are also determined based on their maturity or growth stage which is used as a reference of the LGU Tree Appraisal Committee (LTAC) final assessment and appraisal.
- ii. A Masterlist has been established for all affected crops, trees, ornamentals, and other plant species in CP 101 - 104 which is duly signed by authorized representatives from the proponent (PMO personnel and DOTr officials), the consultants (engineer), and the LTAC members (Annex 3). This listing serves as documentary reference for compensating all MMSP project affected persons with improvements such as crops and trees in their affected lots in accordance with RA 10752. Updating of the masterlist is being conducted quarterly upon the environment team's conduct of tree validation. This is normally performed prior to tree cutting/earth-balling permit application to the DENR to determine if there have been changes on the initial tree inventory survey in the affected lot area.
- iii. The target of signing of CP 105, 108 and 109 masterlists of affected and compensable crops/trees is expected to be completed on the 2nd Quarter of 2024 upon finalization of the boundaries in Taguig and Pasay areas. Initial inventory of the affected terrestrial plants in CPs 105, 108 and 109 are attached as Annex 4.
- iv. Total of four (4) Local Government Unit-Tree Appraisal Committees (LTAC) were already established and functions as appraisers on the affected crops/trees in the MMSP. The first LTAC was established in 22 August 2019 with the collaboration between LGUs of Quezon City and Valenzuela City. ILTAC of QC-Valenzuela has decided to use the 2014 Schedule of Fair and Market Values of Plants and Trees of the Provincial Government of Bulacan and did a mark-up / percentage increase based on the crops/trees tangible and intangible values to adjust its price value. A committee resolution and approved Valuation Matrix for the MMSP was then created and was issued a legal pass.

- v. On 29 June 2021, Pasig LTAC was created adopting the MMSP Valuation Matrix used by ILTAC of QC-Valenzuela. The LTAC of Pasay and Taguig were convened and created on 28 and 29 September 2022, respectively. Both LGUs have also approved and adopted the previously approved Valuation Matrices. All four (4) I/LTACs individually signed a Tree Appraisal Committee Resolution (Annex 5) per their local jurisdiction and approved Valuation Matrices for the affected crops/trees in their cities. Shown in Table 49 are the established LGU Tree Appraisal Committees, its representatives and number of crops/trees appraised per area/station.

Table 49. Established LGU Tree Appraisal Committee in the MMSP

I/LTAC	Committee Members	Covered CP/Station/Area	No. of CTs Appraised and Status
LGU of Valenzuela and Quezon City	<i>LGU Valenzuela City</i> 1. City Environment and Natural Resources Office (CENRO) 2. City Agricultural's Office 3. City Assessors Office	CP 101 - EVS and Depot, NAS, TSS and QHS	7,568 (updated Masterlist as of 31 March 2023)
		CP 102 - EAS and QAS	4,674 (updated Masterlist as of 31 March 2023)
	<i>LGU Quezon City</i> 1. Parks Development and Administration Department (PDAD) - Greening Division Office 2. City Assessors Office	CP 103 - ANS and CAS	715 (updated Masterlist as of 31 March 2023)
LGU of Pasig City	1. CENRO 2. City Assessors Office	CP 104 - OAS and SBS	6,139 (updated Masterlist as of 31 March 2023)
LGU of Taguig City	1. CENRO 2. City Assessor's Office 3. City Agricultural Office 4. City Administrator - Open Weather and Environmental Reporting System	CP 105 - BGC and KAS	11,364 (appraised, for drafting of Masterlist)
		CP 108 - SDS and LAS Advance Works Package (AWP) 3	8,795 (appraised, for drafting of Masterlist)

LGU of Pasay City	1. CENRO 2. City Assessor's Office 3. City Engineering Office	CP 109 - T3 NAIA Station	3,138 (appraised, for drafting of Masterlist)
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- vi. A total of 42,393 affected crops/trees (CTs) are identified and documented to be affected by the project which comprise mostly of ornamentals, shrubs, cash crops and seedlings and categorized as other plant species with total inventory of 34,043 species. A total of 8,246 standing trees will be requested for cutting or earth-balling through permit application to the DENR while the 104 coconut trees identified within the project's alignment are subject for application for permit to cut (PTC) with the Philippine Coconut Authority (PCA).
- vii. Table 50 shows the total number of affected crops/trees for each contract package and its respective stations. CP 105 which covers BGC and KAS shows the most number of affected plant species with 11,364 crops/trees followed by CP 108 (LAS and SDS) with 8,795 and CP 101 covering three (3) stations and a depot located in Valenzuela City and Quezon City with total of 6,648 CTs. While the area that has the least affected CTs are situated in CP 102 and 109 with 4,674 and 3,138 plants, correspondingly. More than half of the affected terrestrial vegetation in the ROW alignment of MMSP is classified as other plant species (ornamentals).

Table 50. Total Number of Affected and Compensable Crops, Trees, Coconut and other Plant Species

Contract Package/ Station /Area	Total No. of Affected Crops/Trees (CTs)			
	All CTs	Trees	Coconut	Other Plant Species
CP 101				
Depot	5,528	3,718	21	1,789
TSS	1,532	179	4	1,349
QHS	64	53	1	10
NAS	444	426	18	0
Sub Total	7,568	4,376	44	3,148
CP 102				
EAS	425	291	19	115
QAS	4,249	495	0	3,754

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Sub Total	4,674	786	19	3,869
CP 103				
ANS	126	66	1	59
CAS	589	253	13	323
Sub Total	715	319	14	382
CP 104				
SBS	5,057	123	9	4,925
OAS	1,082	148	0	934
Sub Total	6,139	271	9	5,859
CP 105				
BGC	8,811	262	0	8549
KAS	2,553	77	0	2476
Sub Total	11,364	339	0	11,025
CP 108				
LAS	2,956	581	2	2,373
SDS	4,679	1,036	16	3,627
AWP3	1,160	209	0	951
Sub Total	8,795	1,826	18	6,951
CP 109				
T3S	3,138	329	0	2,809
Sub Total	3,138	329	0	2,809
TOTAL	42,393	8,246	104	34,043

- viii. Table 51 shows the number of trees recommended for cutting/earth-balling for each contract package and its respective stations. Out of the 8,246 affected trees in MMSF's ROW, there are 6,272 recommended for tree cutting and 1,974 for earth-balling which are subject for Tree Cutting and Erath-Balling Permit (TCEBP) application to the DENR-NCR.

Table 51. Total Number of Trees recommended for Cutting and Earth-Balling

CP/Station/Area	No. of Trees	For Cutting	For Earth-Balling
CP 101			
Depot	3,718	2,961	757
TSS	179	100	79
QHS	53	47	6
NAS	426	343	83
	4,376	3,451	925
CP 102			
EAS	291	244	47
QAS	495	365	130
	786	609	177
CP 103			
ANS	66	48	18
CAS	253	135	118
	319	183	136
CP 104			
SBS	123	90	33
OAS	148	109	39
	271	199	72
CP 105			

BGC	262	182	80
KAS	77	39	38
	339	221	118
CP 108			
LAS	581	483	98
SDS	1,036	687	349
AWP3	209	186	23
	1,826	1,356	470
CP 109			
T3S	329	253	76
	329	253	76
Total	8,246	6,272	1,974

- ix. In preparation with the remaining trees for permit application to the DENR, re-inventory and re-validation are still being conducted in several lots with remaining trees from CP 101 to CP 109. The purpose of re-validating the number of affected trees is to ensure that the number of trees that will be applied to the DENR are still present in the area prior to DENR's actual validation.

4.2 Tree Cutting and Earth-Balling Permits

- i. Additional three (3) Tree Cutting and Earth-Balling Permits (TCEBPs) for the MMSP were applied to the DENR-NCR (Annex 6) from June to December 2023.
- ii. The previous TCEBP issued for CP102 - QAS with 436 trees has expired and was re-issued in October 2023 under Permit 18 - LPDD CBP Permit No. 2023-10-510 TCBP-532. No tree cutting and earth-balling operation was initially conducted due to the pre-clearing of obstruction and structures in QAS resulting to re-issuance of its permit. On 9 November 2023, tree cutting has finally commence in QAS. A total of 356 trees are already cleared as of December 2023 with 304 trees cut and 52 trees earthballed. Monitoring of tree clearing operation in QAS is attached as Annex 7.

- iii. CP104-OAS was also issued a TCEBP for the 166 trees situated in Metrowalk, Ortigas, Pasig under Permit 19 - LPDD C/B/P Permit No. 2023-11-522 TCBP-541. Tree cutting and earth-balling are still on-going in OAS with night schedule operations due to the location of full-grown trees that are situated along Ortigas road and sidewalks. For ease of clearing operations and to avoid accidents and heavy traffic in OAS, these affected trees were scheduled in nighttime. Last March 2, 2024, the permit's validity has already expired with 57 trees remaining on site. Said permit will be requested for extension with the DENR-NCR. Monitoring for OAS tree clearing is attached as Annex 8.
- iv. Another permit was acquired in CP101 - Depot Valenzuela with a total of 262 trees located along the Tullahan River including lots under expropriation. This permit is completed with six (6) trees retained in the area. The remaining trees uncut will be included in the new permit application in Depot. On-going terminal report for submission to DENR is being drafted. Attached as Annex 9 is the monitoring sheet for cleared trees for the said permit.
- v. Currently, a total of nineteen (19) tree cutting and earth-balling permits are issued to the MMSP, with ten (10) permits already completed. There are five (5) permits that have expired and already requested for new permit application to close the existing permit as advised by the Enforcement Division (ED) of the DENR-NCR. At least two (2) permits (Permit 17 and 19) have expired that will be requested for re-issuance (new application) to the DENR-NCR. Permit 18 in QAS is still for completion with tree clearing operation still on-going, this permit was the re-issued Permit No. 16.
- vi. Out of the 4,490 trees approved for cutting/earth-balling, 3,545 or 79% trees affected by the project were recommended for tree cutting and 945 trees (21%) are for earth-balling. A total of 3,494 (78%) trees were already cleared with 2,840 trees cut and 654 trees earthballed and transferred to designated transplanting areas located in Valenzuela City, Quezon City and Pasig City. There are at least 983 remaining trees subject for permit re-issuance mostly situated in CP101 Depot area while thirteen (13) trees were retained on site specifically in the Veterans Memorial Medical Center (VMMC) and Brgy. Project 6 in Quezon City. Presented in Table 52 are all issued MMSP TCEBPs and its current status.

Table 52. Current Status of (19) Approved TCEBPs for MMSP

NO.	TCEBP NO.	DATE APPROVED / VALIDITY DAYS	APPROVED DATE OF EXTENSION/ VALIDITY DAYS	LOCATION/ COVERED AREAS	NUMBER OF TREES					STATUS
					FOR CUTTING	FOR EARTH - BALLING	TOTAL	CUT/ EARTH BALLED	BALANCE	
1	LPDD C/B/P Permit No. 2019-11-425	05 Nov 2019 (120 days)	22 June 2022 (120 days)	Depot, Brgy. Ugong Valenzuela -	340	413	753	567	186	Permit re-issuance/ Closed

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				Batch 1						
2	TCP No. NCR 20-2019	21 Nov 2019 (50 days)	22 June 2022 (120 days)	Depot, Brgy. Ugong Valenzuela City.- Batch 1	304	0	304	245	59	Permit re-issuance/ Closed
3	LPDD C/B/P Permit No. 2020-08-150	28 Jan 2020 (90 days)	May 19, 2022 (90 days)	Brgy. Tandang Sora, Quezon City	44	75	119	82	37	Permit re-issuance/ Closed
4	LPDD C/B/P Permit No. 2021-02-040	02 Feb 2021 (60 days)	July 15, 2021 (30 days)	Depot, Brgy. Ugong Valenzuela - Priority 1 (EVD, TBM and EVS)	202	13	215	215	0	Completed
5	LPDD C/B/P Permit No. 2021-02-063	22 Feb 2021 (120 days)	n/a	along Veterans Memorial Medical Center (VMMC), Project 6, Quezon City	309	78	387	385	(2)	Completed (2 trees retained and will not be affected by the project)
6	TCBP-005	08 Apr 2021 (120 days)	n/a	Brgy. Ugong, Valenzuela City,	214	25	239	239	0	Completed
7	LPDD C/B/P Permit No. 2021-06-194 (TCBP-080)	21 Jun 2021 (120 days)	n/a	Easement of Tullahan River, Brgy. Ugong, Valenzuela City	220	0	220	220	0	Completed

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8	TCEP No. 2021-10-364 (TCBP-238)	21 Oct 2021 (120 days)	22 June 2022 (120 days)	Brgy Talipapa and Tandang Sora, Quezon City	103	10	113	111	(2)	Completed (2 trees retained and will not be affected by the project)
9	TCEP No. 2021-11- 390/TCBP 264	9Nov 2021 (120 days)	22 June 2022 (120 days)	LRS/ Brgy. Ugong, Valenzuela City	618	25	643	377	266	Permit re- issuance/ Closed
10	TCEP Permit No. 2022-02- 051 / TCEBP 053	16 Feb 2022 (90 days)	n/a	VMMC, Brgy. Project 6, Quezon City	17	2	19	16	(3)	Completed (3 trees retained and will not be affected by the project)
11	LPDD C/B/P Permit No. 2022-10-475 TCBP-479	Oct 18, 2022 (50 days)	n/a	VMMC, North Avenue, Brgy. Project 6, District 1, Quezon City	17	3	20	20	0	Completed
12	LPDD C/B/P Permit No. 2022-10-474 TCBP-480	Oct 18, 2022 (90 days)	n/a	Meralco Avenue, Brgy. Oranbo, Ortigas Pasig City	72	45	117	111	(6)	Completed (6 trees retained and will not be affected by the project)
13	LPDD C/B/P Permit No. 2022-11-512	Nov 04, 2022 (120 days)	-	Depot, Brgy. Ugong, Valenzuela	295	86	381	77	304	Permit re- issuance/ Closed

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	TCBP-519			City						
14	LPDD C/B/P Permit No. 2023-01-010/TCBP 013	Jan 12, 2023 (90 days)	n/a	Stage 1&2 Camp Aguinaldo, Quezon City	52	1	53	53	0	completed
15	LPDD CBP Permit No. 2023-05-178 TCBP-198 (3)	May 9, 2023 (150 days)	n/a	Tullahan River, Brgy. Ugong, Valenzuela	33	10	43	33	10	completed
16	LPDD CBP Permit No. 2023-05-186 TCBP-206	May 11, 2023 (150 days)	re-issued	National Housing Authority, Quezon Avenue, Quezon City	(325)	(111)	(436)	-	-	No TCEA conducted
17	LPDD C/B/P Permit No. 2023-09-434 TCBP-459	Sep 21, 2023 (120 days)	n/a	Brgy. Ugong, Valenzuela	245	17	262	256	6	Permit re-issuance
18	LPDD CBP Permit No. 2023-10-510 TCBP-532	Oct 26, 2023 (150 days)	n/a	National Housing Authority, Quezon Avenue, Quezon City	325	111	436	0	436	On-going conduct of TCEA
19	LPDD C/B/P Permit No. 2023-11-522 TCBP-541	Nov 3, 2023 (120 days)	expired	Brgy. Ugong, Pasig	135	31	166	109	57	Permit re-issuance
TOTAL					3,545	945	4,490	3,494	996	

- vi. As per the Condition stated in every permit issued by the DENR, a terminal report must be submitted upon completion of the TCEBPs. The MMSP has submitted a total of eleven (11) Terminal Reports with nine (9) completed reports from CP 101 - four (4) in Depot, three (3) in NAS and two (2) in TSS/QHS; and one (1) each for CP103 - CAS and CP104 - OAS permits. Preparation of six (6) terminal reports for completed permits in CP101 (Permit 6, 7, 13, 15, and 17) and in CP 104 (Permit 19) are on-going while Permit 18 in CP 102 - QAS is still active at this time.
- vii. MMSP targets to apply for four (4) additional permits on the 1st half of 2024, one each for CP 101 to CP 104. This includes the remaining trees in lots under expropriation in Depot; remaining trees in QAS and including trees in EAS (V. Luna Hospital); affected trees in Stages 3 and 4 in CAS; and trees in acquired lots in SBS.
- viii. Acquisition of DENR requirements is being prepared by the PMO Environment team specifically copies of certificate of no objections (CNOs) from project affected properties. For properties that are under expropriation, Writ of Possession (WOP) are alternative documents submitted in replacement to the owner's CNO while those under ROWUA, duly signed Permit to Enter (PTE) are provided to the DENR-NCR.
- ix. Out of the 325 property owners identified in the MMSP alignment with crops and trees, total of 270 CNOs including WOPs and PTEs were acquired by the MMSP-PMO. Shown in Table 53 are the numbers of CNOs, WOPs and PTEs acquired from PAPs of CP 101 to 109.

Table 53. Number of Acquired Certificate of No Objections from PAPs

Contract Package (CP)	No. of PAPtys with CTs	No. of Acquired CNOs/PTEs/WOPs
CP 101	259	237
CP 102	22	15
CP 103	21	5
CP 104	12	10
CP 105	2	2
CP 108	8	1
CP 109	1	0
Total	325	270

Note: excluded LGU properties on the number of PAPtys with CTs

- x. The CNO is a vital document for the permit application with the DENR as basis that the LGU, barangay and PAPs have no objections on the conduct of cutting/ earth-balling of the affected trees within their lots/jurisdiction. Below is the list and status of CNOs acquired in CP 102 to 109.

Table 54. Status of Certificate of No Objection (CNO) Acquisition

CP/Station	Municipality CNO	Barangay CNO	PAPs CNO/PTE/WOP
101 - Depot	Valenzuela CENRO; Acquired	Brgy. Ugong; Acquired (5)	166/229 Acquired (CNO) 41/229 Acquired (WOP)
101 - TSS	QC-PDAD; Acquired	Brgy. Tandang Sora; Acquired (2)	22/22 Acquired (CNO)
101 - QHS	QC-PDAD; Acquired	Brgy. Talipapa; Acquired (1)	7/8 Acquired (CNO) 1/8 Acquired (WOP)
101 - NAS	QC-PDAD; Acquired	Brgy. Project 6; Acquired (2)	1/1 Acquired (CNO)
102 - EAS	QC-PDAD; Acquired	Brgy. Pinyahan; Acquired (1)	13/17 Acquired (CNO)
102 - QAS	QC-PDAD; Acquired	Brgy. Pinyahan and Bagong Pagasa; Acquired (2)	2/5 Acquired (PTE)
103 - ANS	QC-PDAD; Acquired	Brgy. Bagumbuhay; Acquired (1)	4/13 Acquired (CNO)
103 - CAS	QC-PDAD; Acquired	Brgy. Camp Aguinaldo; Acquired (2)	1/8 Acquired (CNO)
104 - SBS	Pasig-CENRO; Acquired	Brgy. Oranbo (1) and San Antonio; Acquired (2)	4/7 Acquired (CNO) 3/7 Acquired (PTE)
104 - OAS	Pasig-CENRO; Acquired	Brgy. Ugong; Acquired (1)	3/4 Acquired (PTE)

105 - BGC	Taguig-CENRO; for serving/acquisition	Brgy Fort Bonifacio - for serving/acquisition	5/7 Acquired (CNO)
105 - KAS	Taguig-CENRO; for serving/acquisition	Brgy Fort Bonifacio - for serving/acquisition	On-going serving/acquisition
108 - ELS	Taguig-CENRO; for serving/acquisition	Brgy Fort Bonifacio - for serving/acquisition	On-going serving/acquisition
108 - SDS	Taguig-CENRO; for serving/acquisition	Brgy Fort Bonifacio - for serving/acquisition	On-going serving/acquisition
109 - T3S	Pasay CENRO; for drafting	Brgy 183 - For drafting	For drafting

xi. Checklist of the DENR's requirements and status on the preparation of the application are listed in Table 55.

Table 55. Checklist Status for New TCEBP Application in CP 101 to CP 104

New TCEP Application	App Form	ECC	Project Briefer	Brgy CNO	PAPtys CNO/PTE	LGU CNO	Geo Photos	Sketch Map	Tally Sheet	TCT/Tax Dec	Infra Plan	Remarks
CP 101 (Valenzuela City - Depot) Lots under expropriation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	Revision of Site Development Plan (Infra) w/ tree charting
CP 102 (Quezon City - QAS/EAS) Public properties in QAS and V.	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	On-going validation of lot boundary and affected trees for

Luna Hospital under DND property												application
CP 103 (Quezon City - CAS) Stage 3 and 4 Camp General Emilio Aguinaldo	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	For application
CP 104 (Pasig City) SBS acquired lots	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	For application

4.3 Permit to Cut (PTC) for Coconuts

- i. All affected coconuts in CP 101 have been cleared with approved permit to cut (PTC) from the Philippine Coconut Authority (PCA). The three (3) PTCs issued by the PCA are already completed. These comprise total of 44 coconut trees in CP 101 situated in Depot with 21 coconuts, 17 in NAS and six (6) in TSS.
- ii. Last October 2023, one (1) PTC covering seven (7) affected coconut trees was issued by the PCA in SBS (Annex 10). As of this time only one (1) coconut was cut, the remaining six (6) are subject to approval of the property owner since payment is still pending for release.
- iii. Total of 51 affected coconut trees are for application in PCA and target for clearing in Year 2024. No coconut trees were surveyed in CP 105 - BGC and KAS and CP 109 - Terminal 3 Station (see Table 56).

Table 56. Number of Affected Coconuts and PTC Status in CP 101 to 109

CP	Covered Station	No. of Coconuts	PTC Status
101	EVS/TSS/QHS/NAS	44	Completed
102	EAS	19	For application
103	ANS/CAS	14	For application
104	SBS	7	Acquired, active permit
105	-	none	n/a
108	LAS/SDS	18	For application
109	-	none	n/a
Total		104	

4.4 Transplanting Sites

- i. Pursuant to the Memorandum from the DENR Secretary dated 27 November 2009, titled 'Urban Cutting - Guidelines and Procedures on the Planting, Maintenance, and Removal of Trees in Urban Areas and in Areas affected by Government Infrastructure Projects (Annex 11), Item 2 outlines the conditions under which the removal of trees may be allowed for earthballing. Generally, trees and other vegetation, both planted and naturally growing with a diameter of 15 cms and below, may be earth-balled, with the following conditions: (a) only healthy trees or other vegetation shall be earthballed and transplanted; (b) the immediate environment or surrounding of the affected trees or vegetation is free from any structures or impediments to support digging and moving operations; (c) there shall be a suitable and available site for the transplanting of earthballed trees or other vegetations to guarantee its continuous growth and survival.
- ii. A suitable pre-identified transplanting site must be readily available and properly inspected by the DENR to guarantee the continuous growth and survival of the earthballed trees.
- iii. From the nineteen (19) permits of the MMSP, 945 trees are recommended for earthballing by the DENR-NCR. For CP 101, total of 540 trees were earthballed in pre-identified sites in barangays of Valenzuela City and Brgy Project 6, Quezon City. At least 71 trees in CP 104 - SBS and OAS were transferred along Meralco Avenue and Brgy. Ugong, Ortigas, Total of 89 trees that were earthballed in CP 102 (QAS) - NHA compound were transplanted along center island of Mindanao Avenue extension in Brgy Ugong, Valenzuela City while only one (1) tree in CP103 CAS was earthballed inside the Camp Aguinaldo.

- iv. The survival of all transplanted trees are monitored by the Conservation and Development Division (CDD) of the DENR in cooperation with the PMO Envi and GC Envi. This is in compliance with the *DENR Memorandum Order (DMO) No. 2012-02 Uniform Replacement Ratio for Cut or Relocated Trees* wherein an equivalent of 100 seedlings are replaced for every dead trees reported within the 6 months span of transfer. All seedling replacement must be delivered to the DENR for records and documentation purposes.
- v. Currently, there are seventeen (17) identified transplanting sites designated for earthballed trees in MMSP. Total of eleven (11) sites are approved by the DENR in Valenzuela City located in barangay Ugong, Marulas, Malinta, Bignay, Wawang Pulo, Rincon and Tagalag. All sites are initially proposed by City Environment and Natural Resource Office (CENRO) of Valenzuela. A joint inspection with the DENR, CENRO Valenzuela and MMSP Environment Team was pre-conducted for approval of DENR CDD before proceeding with the transplanting of earthballed trees. All transplanted trees in Valenzuela's site are also being monitored by the CENRO Valenzuela.
- vi. Transfer sites identified in Quezon City are along the center island of Visayas Avenue which was initially coordinated with the Parks Development and Administration Department (PDAD); within the Veterans Memorial Medical Center (VMMC), North Avenue and inside the Headquarters of Camp general Emilio Aguinaldo.
- vii. For CP 104 - Pasig area, all earthballed trees of the OCLP were transplanted on their owned transplanting sites in The Grounds, Ortigas East in Tiendesitas, Pasig City. Affected trees that are under LGU's property are transferred to the Mega-wide Parking in Pasig City Hall as proposed by the Pasig CENRO while trees earthballed in Metrowalk are transplanted in River Park in coordination with the Barangay Chairman of Ugong.
- viii. Total of 501 trees are transplanted in Valenzuela City with nineteen (19) dead trees reported by the DENR. The DOTr has replaced 1,900 seedlings thru its contractor to comply with the permit's condition and DMO No. 2012-02. In Quezon City, 112 trees were transferred in its three (3) designated transplanting areas where 32 trees are declared as mortalities. Total of 3,200 seedling replacement are delivered to the DENR on the last quarter of 2023. While in Pasig City, one (1) tree mortality was reported in Ortigas East in Tiendesitas. Seedling replacement was requested by the former owner Ortigas & Company Limited Partnership (OCLP) to be provided to their nursery. DENR has approved the request wherein the 100 seedlings were delivered to the OCLP's nursery in Calle Industria, Brgy Bagumbayan, Quezon, City.
- ix. Listed in Table 57 are the location sites of transplanted trees, number of mortalities after inspection and compliance to seedling replacement to the DENR.

Table 57. List of Transplanting Sites in MMSP and Number of Transplanted Trees and Seedling Replacement

Transplanting Site No.	Location Sites	No. of Transplanted Trees	No. of Dead Trees	Seedling Replacement	Replacement Status
Valenzuela City					
Site 1	Lower Catador, Brgy. Marulas, Valenzuela City	11	-	-	for inspection
Site 2	Valenzuela City Sports Park, Brgy. Wawang Pulo, Valenzuela City	131	0	0	n/a
Site 3	Valenzuela City Sports Park, Brgy. Wawang Pulo, Valenzuela City	26	13	1,300 seedlings	Delivered
Site 4	Family Park, Karuhatan, Valenzuela City	31	1	100	Delivered
Site 5	Disiplina Village, Brgy. Bignay, Valenzuela City	137	5	500	Delivered
Site 6	Brgy. Rincon, Valenzuela City	7	-	-	for inspection
Site 7	Industrial Compound -1 Brgy. Kabesang Porong St., Brgy. Punturin, Valenzuela City	51	-	-	for inspection
Site 8	Community Garden, 3S Center, Brgy. Ugong, Valenzuela City	8	-	-	for inspection
Site 9	Antonio M. Serapio Elementary School, Brgy.	10	-	-	for inspection

	Ugong, Valenzuela City				
Site 10	Tagalag Elementary School	8	-	-	for inspection
Site 11	Center island Mindanao Avenue extension, Brgy. Ugong	81	-		for inspection
Quezon City					
Site 1	VMMC Compound	83	15	1,500 seedlings	delivered
Site 2	Center island, Visayas Avenue	28	17	1,700 seedlings	delivered
Site 3	CGEA Compound	1	0	0	n/a
Pasig City					
Site 1	The Grounds, Ortigas East	26	1	100	delivered
Site 2	Mega Parking, LGU Pasig	15	0	0	n/a
Site 3	River Park, Brgy Ugong, Pasig City	27	-	-	for inspection

- x. The most common factor on the mortalities of transplanted trees is inadequate watering which has a great influence in its survival. Trees after being earthballed must have complete maintenance such as regular watering, sufficient sunlight, and application of fertilizer. Tree maintenance and protection must be provided within 6 months to 1 year from its transfer to assure its continuous growth and survival on its new transplanting site.

4.5 Compensation, Donation and Expropriation

- i. Out of the 647 PAPs, there are 323 PAPs identified to have affected and compensable crops/trees covering four (4) contract packages from CP101 to 104 and nine (9) stations. Most number of PAPs with presence of terrestrial vegetation are situated in CP 101 Depot, Valenzuela with 229 PAPs followed by 70 PAPs located in Quezon City covering seven (7) stations - 30 PAPs in TSS, and QHS in CP 101; 29 PAPs in QAS and EAS in CP 102; 22 PAPs in ANS & CAS in CP 103 and only 14 PAPs with crops/trees in CP 104 - Pasig area.

- ii. Around 295 PAPs were served with letters for Request for Donation (RFD) and Offer to Compensate (OTC) through email and/or via personal delivery. Total of 252 landowners accepted to donate and/or compensate their crops/trees while 37 property owners refused to accept DOTR's offer including those who have accepted but will be processed under court proceedings or through expropriation. There are six (6) RFD/OTCs delivered that are still in pending status and waiting for responses. Total of 30 lot properties are under ROW agreement with the DOTR which are mostly under the government's ownership. Table 58 shows the status of project-affected properties with identified crops and trees in CP 101, 102, 103, and 104.

Table 58. Status of Project Affected Properties with Identified Crops and Trees in CP 101, 102, 103, and 104

CP/ Station	Totals PAPtys	PAPtys with Crops/Trees	No. of Delivered RFD/OTC	Status of Delivered RFD/OTC			No. of Undelivered RFD/OTC
				Accepted	Refused	Pending Reply	
CP 101							
Depot	388	229	229	197	32	0	0
QHS	21	8	8	7	1	0	0
TSS	51	22	20	19	1	0	2 (ROWUA)
CP 102							
EAS	60	21	16	13	1	2	5 (ROWUA/ LGU)
QAS	11	7	3	2	0	1	4 (ROWUA/ LGU)
CP 103							
ANS	69	14	13	9	2	2	1 (LGU)
CAS	32	8	0	0	0	0	7 (PAPs) 1 (ROWUA)
CP 104							
SBS	10	9	4	3	0	1	5 (ROWUA/ LGU)

OAS	5	5	2	2	0	0	5 (ROWUA/ LGU)
Total	647	323	295	252	37	6	30

- i. A total of 217 PAPs or 67.39% accepted DOTr’s offer to compensate their affected crops/trees. The amount for compensation is based on the appraised value of identified terrestrial plants in their affected lots. Processing of payment shall be preceded upon the provision of the property owner’s requirements indicated in DOTR’s offer (OtC) letters.
- ii. For the on-going acquisition in CP 101 to 104, 36 PAPs, or 11.18% voluntarily donated their crops/trees to DOTR and signed a form of permit to cut, remove and quitclaim their affected crops/trees while the 38 properties (11.80%) refused the OTC and are already endorsed to expropriation team. At least 21 properties (6.52%) are under agreement (ROWUA or TUA) with the DOTR while 10 PAPs (3.11%) are still pending their response on the RFD/OTC. Listed in Table 59 are the number of PAPs tagged for donation, compensation, expropriation, ROWUA, and pending status.

Table 59. PAPs for Donation, Compensation and Expropriation

Station	PAPs w/ Crops & Trees	Mode of Acquisition				
		Donation	Compensation	Expropriation	ROWUA/TUA	No Status
Depot	229	23	173	33	0	0
QHS	8	3	4	1	0	0
TSS	22	8	11	1	2	0
EAS	21	1	14	0	5	1
QAS	7	2	0	0	4	1
ANS	14	0	10	1	1	1
CAS	8	0	0	0	1	7
SBS	8	1	3	0	4	0
OAS	5	0	0	2	3	0

Total	322	36	217	38	21	10
%	-	11.18%	67.39%	11.80%	6.52%	3.11%

4.6 Legal Pass (LP) Acquisition / Cleared Agreement to Cut and Remove Crops and Trees (ACRCTs)

- i. All PAPs who have accepted their OTCs must comply with the documents stated in the OTC letter which are the following:
 - a. Photocopy of any Owner’s Duplicate Copy of Land Title - Original Certificate of Title (OCT); Transfer Certificate of Title (TCT); Emancipation Patent (EP); Certificate of Land Ownership Award (CLOA); or Certificate of Ancestral Domain Title (CADT);
 - b. Certified True Copy of any Land Title from the Registry of Deeds: OCT; TCT; EP; CLOA; or CADT;
 - c. Two (2) valid Government-issued identification cards of all Registered Owners;
 - d. Special Power/s of Attorney (SPA), if applicable; two (2) valid Government-issued identification cards of the SPA; and
 - e. In cases where Crops, Trees, and Plants are not owned by the Landowner: (1) Declaration from the Landowner stating who the owner of the Crops, Trees, and Plants is and (2) Waiver from the Landowner of rights over the Crops, Trees, and Plants

While for corporations, the following additional documents are required to be submitted:

- a. Certified True Copy from the Securities and Exchange Commission (SEC) of the Corporation’s SEC Certificate of Registration;
 - b. Certified True Copy from the SEC of the latest General Information Sheet (GIS) of the Corporation;
 - c. Original Notarized Corporate Secretary’s Certificate attesting to the due adoption of a Board Resolution designating the Corporation’s Authorized Representative and his/her/their authority to act on behalf of the Corporation for any purpose in relation to the Affected Property, including disposition thereto; and
 - d. Two (2) valid Government-issued identification cards of the Authorized Representative.
- ii. From the 217 property owners who accepted DOTR’s price offer, 201 PAPs complied with the DOTR’s requirements and provided complete supporting documents for payment processing of their compensable crops/trees. All 201 PAPs have passed the legal assessment with cleared ACTCTs. While sixteen (16) PAPs are still for consolidation of legal documents and

review of the DOTr's legal department. Continuous coordination from the property owners is being conducted to proceed with the request for a legal pass (RfLP).

- iii. To date, the DOTR's Legal Affairs has issued at most 201 legal passes (LPs) for PAPs with crops and trees in CP101 to 104. For CP101, 181, or almost 96% have a legal pass out of its 188 affected property owners for compensation. For CP 102, 11 out of its 16 PAPs (69%) for compensation were released with cleared ACRCTs, CP 103 with 6/10 (60%) and CP 104 with 100% legal pass for the three (3) PAPs who accepted DOTr's offer to compensate.
- iv. All documents assessed by the DOTr's Legal Services Division as correct, complete, and with clean titles will be issued with a legal pass marked as CLEARED ACRCTs of which the property owners and DOTr Officials can proceed with the signing/approval of the contract and payment processing thereafter.
- v. Some of the delays and constraints in the issuance of Legal Pass are due to lack or unavailability of documents being requested from the PAPs, signing of documents from multiple owners with residency outside the country or in remote/distant locations, inaccuracy on submitted documents that may need supporting papers for validation such as affidavits, additional valid identification cards, etc., and untimely death of the owner/s that will require for an EJSE as additional requirements in the RfLP.

4.7 Payment Processing and Compensation

- i. All PAPs with legal passes are forwarded for obligation to the PMO Budget Team for processing of payment and request of Certificate of Availability of Funds (CAF) once the property owners signed their ACRCT.
- ii. All PAPs with legal passes were endorsed for payment processing to the PMO Budget Team. Total of 183 PAPs (84%) were issued with checks for compensation of crops and trees while at least eighteen (18) PAPs or 16% of PAPs for compensation are waiting for check issuance and targeted to be completely paid by Year 2024.

iii. Table 60 shows the Compensation Status of PAPs with Crops/Trees in CP 101 - 104.

Table 60. Status of PAPs with Crops/Trees for Compensation in CP 101 to 104

Status	CP/Station (No. of PAPs)									Total
	101			102		103		104		
	DEPOT	TSS	QHS	EAS	QAS	ANS	CAS	SBS	OAS	
Paid	161	11	4	2	0	3	0	2	0	183
RfPP	5	0	0	9	0	3	0	1	0	18
RfLP	7	0	0	3	2	4	0	0	0	16
TOTAL	173	11	4	14	2	10	0	3	0	217
(%) Paid	93%	100%	100%	14%	0%	30%	0%	66%	0%	84%

5. Compliance Monitoring and Third-Party Audit Validation

Pursuant to Section 2 of Presidential Decree No. 1586 and the Implementing Rules and Regulations (IRR) thereof and in compliance with the conditions stated in the issued ECC in line with the approved EMoP of the MMSP, submission of a Compliance Monitoring Report (CMR), Self-Monitoring Report (SMR), and conduct of a Third-Party Audit (TPA) to monitor, evaluate, and mitigate potential adverse impacts of the project in the public and environmental health have been performed within July to December 2023.

5.1. Compliance Monitoring Report (CMR)

- i. CMR is a semi-annual report submitted to the Department of Environment and Natural Resources – Environmental Management Bureau (DENR-EMB) which entails mitigations for potential environmental impacts during the pre-construction, construction, and operational phases of the MMSP. This report further details the commitments from the previous and succeeding reporting period in accordance with the project’s Environmental Performance Report and Management Plan (EPRMP) along with the conditions stipulated in its ECC.
- ii. Outlined in Table 61 are the required conditions that have been complied with during the Pre-Construction and Construction works of the Project per ECC. However, this Section has been generated before the submission of the CMR for January to June 2023. Thus, the specified information below is considered in progress. Nonetheless, statements indicated in the Remarks are continuous actions taken from the pre-works toward the recent main works conducted.

Table 61. Compliance Monitoring Report per ECC

ECC-CO-1708-0017			
Status of Compliance to ECC Conditions			
No.	Description	Status of Compliance	Remarks
1	Conduct an effective and continuing Information, Education, and Communication (IEC) Program through the use of the most effective media to inform and educate all stakeholders, especially the contractors, workers, LGUs, businesses and residents.	Complied	Continuous conduct of Stakeholder Consultation Meetings (SCMs). Coordination with LGUs and other stakeholders was conducted with regard to environmental monitoring.
2	Implementation of a comprehensive Social Development Program (SDP) and submission of a separate report together with the Compliance Monitoring Report (CMR) to the EMB Central Office using CMR Online on a semi-annual basis.	Complied	Continuous implementation of the SDP/RAP. The Partial Operability (PO) Section of the RAP has been approved, submitted, and is considered as a working document.
3	Submission of a detailed waste management program for proper handling, collection and	Complied	A detailed Waste Management Program has been submitted to EMB-CO and NCR on 14

	disposal of solid, hazardous and liquid waste to EMB Central Office (CO) and EMB National Capital Region (NCR) within six (6) months prior to project construction. Proof of implementation shall be submitted together with the CMR.		July 2020.
4	Ensure that all the existing waterways affected by the proposed project construction is maintained and not obstructed.	Complied	Regular monitoring of the identified waterways is being prioritized by the Environment Unit through the conduct of walkthrough inspections.
5	Submission of a detailed demobilization plan for the construction yards within six (6) months prior to project construction.	Complied	A detailed Demobilization Plan has been submitted to EMB-CO and NCR on 14 July 2020. The actual compliance for this will be strictly monitored when the project reaches near completion of the Project's demobilization Phase.
6	Submission of a detailed plan for earth balling and replanting of mature native/endemic trees within six (6) months prior to project construction.	Complied	A detailed Earth-balling Plan has been submitted to EMB-CO and NCR on 14 July 2020. Continuous coordination with LGUs, NGAs and DENR for recommended sites for the relocation of the earth-balled Compliance was also done in consonance with the conditions of Tree Cutting and Earth-balling Permits.
7	Submission of the approved Resettlement Action Plan (RAP) of the affected communities within six (6) months prior to project construction	Complied	The Partial Operability (PO) Section of the RAP was already submitted.

8.1	A readily available and replenishable Environmental Guarantee Fund (EGF) to cover the expenses for further environmental assessments, compensations, indemnification for damages, rehabilitation or restoration of affected areas, abandonment/decommissioning of facilities, and for other contingency activities.	Complied	Due to the transition from a Multipartite Monitoring Team (MMT) to a Third-Party Audit (TPA), the EGF-MOA which includes the budget allocation is currently being prepared. Nonetheless, an advance copy of the draft EGF MOA was transmitted in December 2021. The DENR reviewed the MOA and the DOTr submitted the revised document on 15 July 2022.
8.2	Establish a Multipartite Monitoring Team (MMT) composed of representative(s) from the local environmental Non-Government Organization (NGO), POs, and the Local Government Units per DAO 2017-15. The MMT shall primarily oversee the compliance of the proponent with the Environmental Management and Monitoring Plan (EMMoP) and the ECC conditions.	Complied	<p>EMB approved the request of DOTr to engage a Third-Party Monitoring Auditor (TPA) for the whole alignment.</p> <p>The DOTr signed a Contract for AECOM as the TPA. Quarterly Audit Reports are being prepared by AECOM for submission to the DOTr.</p>
8.3	<p>A replenishable Environmental Monitoring Fund (EMF) to cover all costs attendant to the operation of the MMT.</p> <p>such as training, the hiring of technical experts and resource persons, fieldwork and transportation.</p> <p>The amount and mechanics of the EGF, EMF and the establishment of the MMT shall be determined by the EMB Central Office and the proponent through a Memorandum of Agreement (MOA) which shall be submitted within sixty (60) days upon receipt of the ECC.</p>	Complied	There will be no EMF since the MMSP engaged with TPA in lieu of MMT. The revised EGF-MOA which includes the budget allocation was transmitted on 15 July 2022 for EMB's perusal.

9	Establish an Environmental Unit (EU) within sixty (60) days from receipt of this Certificate that shall competently handle the environment-related aspects of the project. In addition to the monitoring requirements as specified in the Environmental Management and Monitoring Plan (EMMoP).	Complied	Submitted the MMSP-EU's Organizational Structure.
10	The proponent shall ensure that its contractors and subcontractors are provided with copies of this ECC and that they will strictly comply with the relevant conditions of the ECC.	Complied	Copies of the ECC and EMoP are included in the contractor's agreement/contract. Constant coordination is being performed by the MMSP-EU with the Consultant and Contractor/s for the stringent compliance with the ECC.
11	No activities shall be undertaken until and unless disposal sites of excavated materials have been identified, duly covered by agreement/ s and have been permitted in accordance with law. Proof of compliance shall be filed with the Regional Office having jurisdiction over the disposal area and shall be without prejudice to environmental safeguards that may be prescribed as warranted. Likewise, a copy of which shall form part of the requirement under Condition 3 hereof.	Complied	Site inspections and due diligence was done for the documentary requirements of disposal sites with respect to environmental safeguards. Privately owned and authorized disposal sites with an Environmental Compliance Certificate are only accepted. Meanwhile, DOTr accommodated several affected LGUs that requested excavated materials from the project sites under their jurisdiction.
12	No activities shall be undertaken other than what was stipulated in the final EIS. Any expansion and/or modification of the project beyond the project description or change in alignment/route that will cause significant impacts to the environment shall be subject to a new Environmental Impact Assessment.	Complied	Amended ECC was issued on 22 November 2019. The submission of Public Hearing Documentation and the EPRMP has been included in the previous CMRs. A minor amendment to ECC was also approved last 29 April 2021.

13	In case of transfer of ownership of this Project, the same conditions and restrictions shall apply to the transferee or grantee who shall secure in writing the corresponding amendment of this ECC from the EMB Central Office within fifteen (15) working days reflecting such transfer.	Complied	Not Applicable.
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- iv. Meanwhile, described in Table 62 the implemented mitigating measures at the construction site in CP101 (Depot, Quirino Highway, Tandang Sora, and North Avenue Station), CP103 (Camp Aguinaldo Station), and in CP104 (Shaw Boulevard and Ortigas Station) prepared by the Contractors per their mandate following the guidelines in the Environmental Management Plan (EMP) of the MMSP.

Table 62. Status of Compliance with EMP Conditions during the Pre-Construction and Construction Phase of the MMSP

Impacts	Mitigating Measures per EMP	Implemented Mitigating Measures On-Site
I. LAND		
<ul style="list-style-type: none"> Alteration of original topography. 	<ul style="list-style-type: none"> Reduction of ground disturbance through avoidance of unnecessary excavations. Repair of the roads that follow the same slope condition prior to construction. 	<ul style="list-style-type: none"> CP101 Complied. Approved Site Development Plans have been followed to avoid unnecessary excavations. CP103 Complied. Planning of site activities and regularly conducted based on Site. CP104 Complied. Implementing daily activity meetings prior to the activities to properly schedule and plan construction activities. CP101 N/A in the meantime. No existing roads outside construction sites have been damaged so far, which requires repairing. New access roads are established and will be established. On the other hand, for the Tandang Sora Station, diversion roads will be constructed of adequate slope around 2% to 5% or as deemed necessary depending on road conditions. CP103 N/A in the meantime. No damaged roads for

		<p>the covered months.</p> <ul style="list-style-type: none"> • CP104 N/A in the meantime. Road repairs and utility relocation would be done after the construction in its original form.
<ul style="list-style-type: none"> • Generation surplus soil. 	<p style="text-align: center;">of</p> <ul style="list-style-type: none"> • Regular hauling of excavated materials and proper surplus soil management. • Repurposing of surplus soil. 	<ul style="list-style-type: none"> • CP101 Complied. Haulers with adequate numbers of heavy equipment have been subcontracted to regularly haul the generated excavated materials and surplus soils to the designated excavated spoil disposal sites located in Bulacan and Valenzuela City. • CP103 Complied. Appropriate stockpiles of soil are maintained prior to disposal. Regularly hauling of soil is being conducted and disposed of to a designated disposal site at Bulacan. • CP104 Complied. Excavated soil was recycled and backfilled to its original place. • CP101 Complied. All surplus soils generated from the construction sites have been repurposed as materials for land development projects or backfilling projects like the ones in Bulacan and Valenzuela City including government projects that require suitable backfilling materials. • CP103 Complied. Appropriate stockpiles of soil are maintained prior to disposal. Regularly hauling of soil is being conducted and disposed of to a designated disposal site at Bulacan. • CP104 Complied. Hauling and dumping of excavated materials is performed by the subcontractor. The disposal site for the exhumed soil is in Cainta Rizal. • CP101 Complied. Traffic Management Plans (TMP) are available. Apart from the TMPs, a traffic route map is

	<ul style="list-style-type: none"> • Traffic plan to manage the ingress and egress of hauling machines. 	<p>available.</p> <ul style="list-style-type: none"> • CP103 Complied. A Traffic Management Plan and Traffic Route Plan are in place. • CP104 Complied. A traffic control plan is being implemented on-site, and traffic officers are stationed in the designated areas.
<ul style="list-style-type: none"> • Change in vegetation. 	<ul style="list-style-type: none"> • Determination of the extent of vegetation removal. • Secured tree-cutting and earth-balling permits from the DENR. • Replacement of cut trees in 	<ul style="list-style-type: none"> • CP101 Complied. The DOTr’s Consultant OCG- JV has already determined the total number of affected trees in CP101 as it is the pre-requisite in the application for tree cutting and earth-balling permit (TCEBP). • CP 103 Complied. The DOTr and its Consultant OCG- JV have identified the affected trees. DOTr secured the Tree Cutting Permit for CP103. • CP104 Complied. Tree Cutting Activity under LPDD C/B/P Permit No. 2023-11-522 TCBP-541 in Ortigas Avenue Station was conducted on 27 December 2023; As of 27 Dec 2023, 14 were cut out of a total of 135 trees for cutting, while no trees were earth balled out of a total of 31 trees for earth balling. • CP101 Complied. All affected trees to be cut or earth-balled have the necessary TCEBPs which have been secured by DOTr. • CP 103 Complied. N/A. No tree-cutting/earth-balling transpired for the covered months. • CP104 Complied. Seedling replacements were provided in accordance with DENR Memorandum Order No. 2012-02 otherwise known as the "Uniform Replacement Ratio for Cut and Relocated Trees". • CP101 Complied. The corresponding number of trees for seedling replacement has been followed in

	<p>accordance with DMO 2012-02.</p> <ul style="list-style-type: none"> • Provision of offset sites for areas that will be cleared. 	<p>accordance with the ratio of 1:50 for planted trees within private and forest lands and ratio of 1:100 for naturally growing trees.</p> <ul style="list-style-type: none"> • CP 103 N/A. No tree-cutting/earth-balling transpired for the covered months. • CP104 Complied. Before the start of the cutting and balling activities, seedling replacements were provided in accordance with DENR Memorandum Order No. 2012-02 otherwise known as the "Uniform Replacement Ratio for Cut and Relocated Trees". • CP101 Complied. The DOTr's Consultant OCG- JV has already determined the offset sites at practicable proximity from each respective construction site per LGU. • CP 103 N/A. Offset sites have been identified. However, no tree-cutting/earth-balling transpired for the covered months. • CP104 Complied. Offset sites have already been determined.
<ul style="list-style-type: none"> • Alteration of underground stress distribution 	<ul style="list-style-type: none"> • Perform tunnel deformation analysis to determine how the hollowing of ground will affect underground stress regimes. 	<ul style="list-style-type: none"> • CP101 Complied. For Tunnel Deformation Analysis, equivalent studies have been conducted and submitted by the Contractor to DOTr's Consultant OCG-JV as follows: <ul style="list-style-type: none"> - <i>Technical Design Report for TBM Tunnels</i> - <i>Ground Movement Analysis Report</i> • CP 103 Complied. Technical Design Report and Ground Movement Analysis Report were conducted by the proponent and its Consultant. • CP 104 N/A. CP104 is still in the pre-construction stage. • CP101 Complied. A certain number of piezometers

	<ul style="list-style-type: none"> • Install piezometers to monitor groundwater pressure around the tunnel. 	<p>have been determined by the Contractor’s Geotechnical and Instrumentation Team for installation and monitoring under the same Team;</p> <table border="1"> <thead> <tr> <th>Site</th> <th>Target</th> <th>Installed</th> </tr> </thead> <tbody> <tr> <td>NAS</td> <td>3</td> <td>3</td> </tr> <tr> <td>TSS</td> <td>2</td> <td>0 (For Installation)</td> </tr> <tr> <td>QHS</td> <td>2</td> <td>0 (For Installation)</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • CP103 Complied. Currently installed two (2) piezometers to monitor groundwater level. • CP 104 N/A. CP104 is still in the pre-construction stage. 	Site	Target	Installed	NAS	3	3	TSS	2	0 (For Installation)	QHS	2	0 (For Installation)
Site	Target	Installed												
NAS	3	3												
TSS	2	0 (For Installation)												
QHS	2	0 (For Installation)												
<ul style="list-style-type: none"> • Contamination of soil 	<ul style="list-style-type: none"> • Implement proper waste management and disposal system to prevent contamination of surrounding soil and water. • Use strong and durable materials for pipes to prevent leakage. 	<ul style="list-style-type: none"> • CP101 Complied. Adequate number of segregation bins and Material Recovery Facility (MRF) are strategically installed on each site. Liquid waste is stored in suitable durable containers either with a spill pan or bund wall. The CP101 Contractor SFTE-JV has already secured the Hazardous Waste Generator’s IDs and has been strictly observing the proper management and transport of hazardous wastes. • CP 103 Complied. Provision of a dedicated area within the Site as a Materials Recovery Facility (MRF) and Hazardous Waste Storage Area. Several trash bins are strategically located within the Site. • CP 104 Complied. Trash bins are provided around the site, and the Materials Recovery Facility as well as the Hazardous Waste Storage are being constructed on site. • CP101 Complied. All materials for pipes to be used are properly checked by the QA/QC Team of CP101 Contractor SFTE-JV and then submitted to DOTr’s Consultant OCG-JV for approval. 												

	<ul style="list-style-type: none"> • Use non-reactive materials for pipes and other buried components to ensure that soil contamination is prevented. 	<ul style="list-style-type: none"> • CP103 Complied. CP103 QAQC Team checks and reviews all materials for use, subject to the approval of the Proponent and its Consultant. • CP 104 Complied. Pipes are being checked and inspected every day by the MEPF. • CP101 Complied. All materials for pipes to be used are properly checked by the QA/QC Team of CP101 Contractor SFTE-JV and then submitted to DOTr's Consultant OCG-JV for approval. Also, CP101 Contractor SFTE-JV priorly checked the compatibility of the pipe to the materials to be handled or conveyed through it. • CP103 Complied. CP103 QAQC Team checks and reviews all materials for use, subject to the approval of the Proponent and its Consultant. • CP 104 Complied. Materials are being processed through pre-qualification by our procurement / commercial departments.
<ul style="list-style-type: none"> • Tunnel Deformation/ Failure 	<ul style="list-style-type: none"> • Design and construct facilities according to the geomechanical properties of the rock. 	<ul style="list-style-type: none"> • CP101 Complied. It is standard in construction engineering to primarily consider geomechanical properties of rock or soil by doing prior soil bearing test to be incorporated in the design and construction of facilities. All designs and construction of facilities are subject for approval by DOTr's Consultant OCG-JV before the CP101 Contractor SFTE-JV proceeds with the construction. • CP 103 Complied. All CP103 structure designs take into consideration the geomechanical properties of the rock, subject to review and approval of the Proponent and its Consultant. • CP 104 N/A. CP104 is still in the pre-construction

	<ul style="list-style-type: none"> • Properly line the tunnel wall with water-proof material • Install monitoring piezometers to monitor groundwater pressure. • Conduct regular leveling surveys and deformational studies. 	<p>stage.</p> <ul style="list-style-type: none"> • CP101 Complied. A Method Statement for the proper execution of waterproofing has been submitted and approved by DOTr’s Consultant OCG-JV. Additionally, all waterproofing materials are properly checked by the QA/QC Team of CP101 Contractor SFTE-JV and then submitted to DOTr’s Consultant OCG-JV for approval. • CP 103 N/A. Tunnel works have yet to start. However, proper water-proofing methods will be implemented. • CP 104 N/A. CP104 is still in the pre-construction stage. • CP101 Complied. A certain number of piezometers have been determined by the Contractor’s Geotechnical and Instrumentation Team for installation and monitoring under the same Team: <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #d3d3d3;"> <th style="padding: 5px;">Site</th> <th style="padding: 5px;">Target</th> <th style="padding: 5px;">Installed</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">NAS</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">3</td> </tr> <tr> <td style="padding: 5px;">TSS</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">0 (For Installation)</td> </tr> <tr> <td style="padding: 5px;">QHS</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">0 (For Installation)</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • CP103 Complied. Currently installed two (2) piezometers to monitor groundwater level. • CP 104 N/A. CP104 is still in the pre-construction stage. • CP101 Complied. CP101 Contractor SFTE-JV through its Survey Team led by professional Geodetic Engineers has been strictly conducting regular leveling surveys and deformational studies. Settlement Points are installed or will be installed as follows: 	Site	Target	Installed	NAS	3	3	TSS	2	0 (For Installation)	QHS	2	0 (For Installation)
Site	Target	Installed												
NAS	3	3												
TSS	2	0 (For Installation)												
QHS	2	0 (For Installation)												

		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">SETTLEMENT POINT(SP) MARKERS</th> </tr> <tr> <th>SITE</th> <th>TARGET</th> <th>INSTALLE D</th> <th>ACTIVE SP MARKER S AND ACCESSI BLE</th> <th>ACTIVE SP MARKER S BUT NOT ACCESSI BLE</th> <th>REMOVED/ DEMOLIS HED SP MARKERS</th> </tr> </thead> <tbody> <tr> <td>NAS</td> <td style="text-align: center;">60</td> <td style="text-align: center;">60</td> <td style="text-align: center;">39</td> <td style="text-align: center;">6</td> <td style="text-align: center;">15</td> </tr> <tr> <td>Depot - LS1</td> <td style="text-align: center;">22</td> <td style="text-align: center;">22</td> <td style="text-align: center;">5</td> <td style="text-align: center;">7</td> <td style="text-align: center;">10</td> </tr> </tbody> </table>	SETTLEMENT POINT(SP) MARKERS						SITE	TARGET	INSTALLE D	ACTIVE SP MARKER S AND ACCESSI BLE	ACTIVE SP MARKER S BUT NOT ACCESSI BLE	REMOVED/ DEMOLIS HED SP MARKERS	NAS	60	60	39	6	15	Depot - LS1	22	22	5	7	10
SETTLEMENT POINT(SP) MARKERS																										
SITE	TARGET	INSTALLE D	ACTIVE SP MARKER S AND ACCESSI BLE	ACTIVE SP MARKER S BUT NOT ACCESSI BLE	REMOVED/ DEMOLIS HED SP MARKERS																					
NAS	60	60	39	6	15																					
Depot - LS1	22	22	5	7	10																					
<ul style="list-style-type: none"> Groundwater ingress 	<ul style="list-style-type: none"> Install piezometers to monitor groundwater pressure around the tunnel. 	<ul style="list-style-type: none"> CP103 Complied. CP103 Survey Team conducts regular level surveys. CP104 Complied. This condition has been thoroughly performed by the experts in TTM-JV. CP101 Complied. A certain number of piezometers have been determined by the Contractor’s Geotechnical and Instrumentation Team for installation installed and monitoring under the same Team: <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th>Site</th> <th>Target</th> <th>Installed</th> </tr> </thead> <tbody> <tr> <td>NAS</td> <td style="text-align: center;">3</td> <td style="text-align: center;">3</td> </tr> <tr> <td>TSS</td> <td style="text-align: center;">2</td> <td style="text-align: center;">0 (For Installation)</td> </tr> <tr> <td>QHS</td> <td style="text-align: center;">2</td> <td style="text-align: center;">0(For Installation)</td> </tr> </tbody> </table> CP103 Complied. Currently installed two (2) piezometers to monitor groundwater level. CP 104 N/A. CP104 is still in the pre-construction stage. CP101 Complied. Kingpost and Diaphragm Walls have been installed in NAS Station Box and with Strutt and Waler and with Thrust Frame in the Launching Shaft. Future station boxes will have the same support structures. Proper waterproofing will be followed as 	Site	Target	Installed	NAS	3	3	TSS	2	0 (For Installation)	QHS	2	0(For Installation)												
Site	Target	Installed																								
NAS	3	3																								
TSS	2	0 (For Installation)																								
QHS	2	0(For Installation)																								
	<ul style="list-style-type: none"> Ensure that the tunnel is sufficiently supported and lined up to prevent failure and ingress 																									

	<p>of groundwater.</p> <ul style="list-style-type: none"> • Install dewatering pumps and secure necessary discharge permits. 	<p>per the approved Method Statement.</p> <ul style="list-style-type: none"> • CP 103 Complied. Tunnel works have yet to commence. Appropriate support methods are in place such as installation of Kingposts and Diaphragm Walls. • CP 104 N/A. CP104 is still in the pre-construction stage. • CP101 Complied. The CP101 Contractor SFTE-JV has already applied for permits for dewatering in the form of water permits in advance since June 2022 and as follows: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Sites</th> <th>No. of Permits</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>NAS</td> <td>12</td> <td>Applied & Paid</td> </tr> <tr> <td>TSS</td> <td>0</td> <td>For Application</td> </tr> <tr> <td>QHS</td> <td>4</td> <td>Applied & Paid</td> </tr> <tr> <td>Depot</td> <td>1</td> <td>Applied & Paid</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • CP 103 Complied. Standby dewatering pumps in case of water ponding are in place. Several coordination with NWRB was made for the observatory wells, and a Permit to Drill has been granted. • CP 104 N/A. CP104 is still in the pre-construction stage. • CP101 Complied. Drainage and site canals have been provided for active sites with trenchworks. • CP 103 Complied. An appropriate drainage system is in place on-site. • CP 104 N/A. CP104 is still in the pre-construction stage. 	Sites	No. of Permits	Status	NAS	12	Applied & Paid	TSS	0	For Application	QHS	4	Applied & Paid	Depot	1	Applied & Paid
Sites	No. of Permits	Status															
NAS	12	Applied & Paid															
TSS	0	For Application															
QHS	4	Applied & Paid															
Depot	1	Applied & Paid															

	<ul style="list-style-type: none"> • Provide necessary drainage in trenchworks. 													
<ul style="list-style-type: none"> • Inducement of Subsidence 	<ul style="list-style-type: none"> • Perform tunnel deformation analysis to determine how the hollowing of ground will affect underground stress regimes. • Install piezometers to monitor groundwater pressure around the tunnel. 	<ul style="list-style-type: none"> • CP101 Complied. For Tunnel Deformation Analysis, equivalent studies have been conducted and submitted by the Contractor to DOTr’s Consultant OCG-JV as follows: <ul style="list-style-type: none"> - <i>Technical Design Report for TBM Tunnels</i> - <i>Ground Movement Analysis Report</i> • CP 103 Complied. Technical Design Report and Ground Movement Analysis Report were conducted by the proponent and its Consultant. • CP 104 N/A. CP104 is still in the pre-construction stage. • CP101 Complied. A certain number of piezometers have been determined by the Contractor’s Geotechnical and Instrumentation Team for installation and monitoring under the same Team: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Site</th> <th>Target</th> <th>Installed</th> </tr> </thead> <tbody> <tr> <td>NAS</td> <td>3</td> <td>3</td> </tr> <tr> <td>TSS</td> <td>2</td> <td>0 (For Installation)</td> </tr> <tr> <td>QHS</td> <td>2</td> <td>0 (For Installation)</td> </tr> </tbody> </table> • CP103 Complied. Currently installed two (2) piezometers to monitor groundwater level. • CP 104 N/A. CP104 is still in the pre-construction stage. 	Site	Target	Installed	NAS	3	3	TSS	2	0 (For Installation)	QHS	2	0 (For Installation)
Site	Target	Installed												
NAS	3	3												
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QHS	2	0 (For Installation)												

	<ul style="list-style-type: none"> • Regular visual monitoring and level survey to detect sinking of ground. 	<ul style="list-style-type: none"> • CP101 Complied. Apart from Settlement Point monitoring conducted by the Survey Team, regular daily visual monitoring has been conducted for active construction sites where level survey is deemed needed. • CP 103 Complied. CP103 Survey Team conducts regular level surveys. • CP 104 N/A. CP104 is still in the pre-construction stage.
<ul style="list-style-type: none"> • Threat to local existence of endemic and/or threatened plant species. 	<ul style="list-style-type: none"> • Secure earth balling permits from DENR. • Perform transplanting and earth-balling activities with a horticulturist/agriculturist. • Maintenance activities will be conducted to ensure high survival rates of earth-balled tree species. 	<ul style="list-style-type: none"> • CP101 Complied. The DOTr’s Consultant OCG- JV has already determined the total number of affected trees in CP101 as it is the pre-requisite in the application for tree cutting and earth-balling permit (TCEBP). • CP 103 N/A. No tree earth-balling transpired for the covered months. • CP 104 Complied. Trees to be cut / earth-balled are coordinated thoroughly and permits are secured from the authorized governing body. • CP101 Complied. The CP101 Contractor SFTE-JV has been subcontracting Forest Hills Garden, a subcontractor with proven experience in earth balling or transplanting. • CP 103 N/A. No tree earth-balling transpired for the covered months. • CP 104 Complied. Trees are being replaced by the subcontractor. • CP101 Complied. The maintenance of the various earth-balled trees is done both by the Subcontractor Forest Hills Garden and the concerned LGUs. Additionally, DENR will be visiting the transplanted sites every six (6) months.

		<ul style="list-style-type: none"> • CP 103 N/A. No tree earth-balling transpired for the covered months. • CP 104 Complied. After 6 months upon earth balling, the transplanted trees were inspected by DENR-NCR-CDD.
<ul style="list-style-type: none"> • Unnecessary engine, motor, or muffler noise. 	<ul style="list-style-type: none"> • Proper maintenance of construction vehicles, and machinery. 	<ul style="list-style-type: none"> • CP101 Complied. The CP101 Contractor SFTE-JV and its Subcontractor have established a preventive maintenance system on all equipment. Whenever abnormal noise is observed, the equipment will be subjected to checking by the Common Machinery Equipment Team of the CP101 Contractor. • CP 103 Complied. Daily inspection of construction vehicles is being conducted. Preventive maintenance of these vehicles is conducted as needed. • CP 104 Complied. Equipment is checked daily.
<ul style="list-style-type: none"> • Lighting effects to wildlife. 	<ul style="list-style-type: none"> • Use of light source with directional lighting and screens. 	<ul style="list-style-type: none"> • CP101 Complied. The CP101 Contractor SFTE-JV has been using portable tower lights and other light sources equipped with directional lighting and with glass cover. • CP 103 Complied. Illumination is in place, located in strategic areas within the Site. • CP 104 Complied. Lights used on overtime work are floodlights that are sourced through solar energy.
II. AIR		
<ul style="list-style-type: none"> • GHG Emission 	<ul style="list-style-type: none"> • Regular maintenance of construction vehicles and heavy equipment 	<ul style="list-style-type: none"> • CP101 Complied. The CP101 Contractor SFTE-JV and its Subcontractor have established a preventive maintenance system on all equipment. Whenever abnormal noise is observed, the equipment will be subjected to checking by the Common Machinery Equipment Team of the CP101 Contractor. • CP 103 Complied. Daily inspection of construction vehicles is being conducted. Preventive maintenance of these vehicles is conducted as needed.

	<ul style="list-style-type: none"> • Close monitoring of equipment dispatches • Compensate, if necessary, the release of GHG during construction and operation by means of implementing carbon dioxide capture and sequestration through progressive rehabilitation. 	<ul style="list-style-type: none"> • CP 104 Complied. Equipment and Vehicles are checked daily. • CP101 Complied. The CP101 Contractor SFTE-JV has been conducting regular monitoring of equipment dispatches through its Common Machinery Equipment Team and Transportation Team. Likewise, the Subcontractors have been requested by CP101 Contractor SFTE-JV to do the same as they have been complying as well. • CP 103 Complied. A monitoring sheet for equipment dispatches is in place. • CP 104 Complied. Vehicle dispatches are monitored by the Admin. • CP101 Complied. Among the measures or alternatives availed by the CP101 Contractor SFTE-JV for CO₂ capture are monitoring the survival of earth-balled trees and to fully comply with the seedling replacement ratio. • CP 103 Complied. GHG computation estimates are conducted in CP103. Monitoring of the survival of earth-balled trees is also implemented. Greening activities are also in place as an additional measure. • CP 104 Complied. GHG monitoring is implemented on-site.
<ul style="list-style-type: none"> • Degradation of Air Quality 	<ul style="list-style-type: none"> • Implementation of speed limit and water suppression methods to unpaved roads and stockpiles 	<ul style="list-style-type: none"> • CP101 Complied. CP101 Contractor SFTE-JV has established a 10 KPH limit in all active construction sites and at least twice-a-day watering is conducted. • CP 103 Complied. Speed limit signages and dust suppression activities are in place on Site. • CP104 Complied. Implementation of speed limit and

	<ul style="list-style-type: none"> • Delivery trucks will be covered. • Regular ambient air quality monitoring 	<p>water suppression methods.</p> <ul style="list-style-type: none"> • CP101 Complied. All delivery and hauling trucks are properly covered to minimize fugitive emissions or release during transit. • CP 103 Complied. Trucks are covered during ingress/egress. • CP104 Complied. Delivery trucks are covered. • CP101 Complied. The CP101 Contractor SFTE-JV has been compliant to the ambient quarterly air quality monitoring. The schedules of monitoring conducted to all stations of CP101 are as follows: <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Sites</th> <th style="padding: 5px;">Quarter/ Date Conducted</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">NAS</td> <td style="padding: 5px;">3RD / August 7-8, 2023</td> </tr> <tr> <td style="padding: 5px;"></td> <td style="padding: 5px;">4TH / November 6-7, 2023</td> </tr> <tr> <td style="padding: 5px;">TSS</td> <td style="padding: 5px;">3RD / August 8-9, 2023</td> </tr> <tr> <td style="padding: 5px;"></td> <td style="padding: 5px;">4TH / November 7-8, 2023</td> </tr> <tr> <td style="padding: 5px;">QHS</td> <td style="padding: 5px;">3RD / August 9-10, 2023</td> </tr> <tr> <td style="padding: 5px;"></td> <td style="padding: 5px;">4TH / November 8-9, 2023</td> </tr> <tr> <td style="padding: 5px;">Depot</td> <td style="padding: 5px;">3RD / August 10-11, 2023</td> </tr> <tr> <td style="padding: 5px;"></td> <td style="padding: 5px;">4TH / November 9-10, 2023</td> </tr> </tbody> </table> • CP 103 Complied. Quarterly ambient air quality monitoring is conducted regularly at Brgy. Blue Ridge A for Camp Aguinaldo Station (CAS). The schedules of monitoring conducted are as follows: <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Sites</th> <th style="padding: 5px;">Quarter/ Date Conducted</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">CAS</td> <td style="padding: 5px;">3RD / August 30-31, 2023</td> </tr> <tr> <td style="padding: 5px;"></td> <td style="padding: 5px;">4TH / November 28-29, 2023</td> </tr> </tbody> </table> 	Sites	Quarter/ Date Conducted	NAS	3 RD / August 7-8, 2023		4 TH / November 6-7, 2023	TSS	3 RD / August 8-9, 2023		4 TH / November 7-8, 2023	QHS	3 RD / August 9-10, 2023		4 TH / November 8-9, 2023	Depot	3 RD / August 10-11, 2023		4 TH / November 9-10, 2023	Sites	Quarter/ Date Conducted	CAS	3 RD / August 30-31, 2023		4 TH / November 28-29, 2023
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		<ul style="list-style-type: none"> • CP104 Complied. Quarterly monitoring for noise has been conducted within the Shaw Boulevard Station (SBS) and Ortigas Avenue Station (OAS). The schedules of monitoring conducted are as follows: <table border="1"> <thead> <tr> <th>Sites</th> <th>Quarter/ Date Conducted</th> </tr> </thead> <tbody> <tr> <td>SBS</td> <td>3RD / September 6-7, 2023</td> </tr> <tr> <td></td> <td>4TH / December 6-7, 2023</td> </tr> <tr> <td>OAS</td> <td>3RD / N/A</td> </tr> <tr> <td></td> <td>4TH / December 28-29, 2023</td> </tr> </tbody> </table> 	Sites	Quarter/ Date Conducted	SBS	3 RD / September 6-7, 2023		4 TH / December 6-7, 2023	OAS	3 RD / N/A		4 TH / December 28-29, 2023
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<ul style="list-style-type: none"> • Particulates and gaseous emissions 	<ul style="list-style-type: none"> • Subcontractors' vehicles to undergo emission testing prior to contract award. • Fuel-burning equipment will be managed through the utilization of low sulfur fuel, where possible. • Traffic management guidelines will be included in the induction 	<ul style="list-style-type: none"> • CP101 Complied. CP101 Contractors and Subcontractors have valid OR-CR for newly purchased vehicles and equipment and emission testing certificates. • CP 103 Complied. All vehicles used for the Site underwent emission testing. • CP104 Complied. Vehicles have updated documents. • CP101 Complied. CP101 Contractor SFTE-JV and Subcontractors has been encouraging its end- user Teams to utilize local fuels with low sulfur content amounting to < 10 mg/kg or < 50 mg/kg. • CP 103 Complied. Fuels used for the Site are purchased from reliable suppliers. • CP104 Complied. Fuel efficiency is maximized through scheduling of vehicles and equipment. • CP101 Complied. Traffic Management Guidelines have been included already in the seminar for newly hired workers or employees who are discussed by Safety-Training and Campaign. 										

	<p>seminar for workers.</p> <ul style="list-style-type: none"> • Fuel efficiency will be maximized through scheduling of vehicles and equipment. • Equipment and vehicle loading will be optimized through accurate monitoring and calculation of fuel requirements. • Vehicles and construction equipment will be regularly maintained. 	<ul style="list-style-type: none"> • CP 103 Complied. Inductions and re-induction are regularly conducted on site. This includes updates on traffic management schemes. • CP104 Complied. Traffic management guidelines were included in the Induction Seminar of workers. • CP101 Complied. The CP101 Contractor SFTE-JV personnel have already relocated most of its workers to the new staff house near to its VGC Office where utilization of transport vehicles has been minimized. Personnel and workers in the same assigned construction sites are clustered for one ferrying. • CP 103 Complied. Proper scheduling of the use of vehicles and equipment is in place. Dispatch monitoring has also been implemented. • CP101 Complied. Daily to monthly fuel consumption of equipment and vehicles is regularly monitored by the Common Machinery and Equipment Team. • CP 103 Complied. Proper scheduling of the use of vehicles and equipment is in place. Dispatch monitoring has also been implemented. • CP104 Complied. Equipment and vehicle loadings were optimized through accurate monitoring and calculation of fuel requirements. • CP101 Complied. The CP101 Contractor SFTE-JV and its Subcontractor have established a preventive maintenance system on all equipment. Whenever abnormal noise is observed, the equipment will be subjected to checking by the Common Machinery and Equipment Team of the CP101 Contractor.
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	<ul style="list-style-type: none"> • Equipment dispatch will be monitored closely in order to eliminate unnecessary use. • Standard occupational health and safety practices will be implemented pursuant to BWC-DOLE Occupational Safety and Health Standards (Department of Labor and Employment, 1989); and 	<ul style="list-style-type: none"> • CP 103 Complied. Daily inspection of construction vehicles is being conducted. Preventive maintenance of these vehicles is conducted as needed. • CP104 Complied. Vehicles and construction equipment are regularly maintained. • CP101 Complied. The CP101 Contractor SFTE-JV has been conducting regular monitoring of equipment dispatches through its Common Machinery and Equipment Team and Transportation Team. Likewise, the Subcontractors have been requested by CP101 Contractor SFTE-JV to do the same as they have been complying as well. • CP 103 Complied. Proper scheduling of the use of vehicles and equipment is in place. Dispatch monitoring has also been implemented. • CP104 Complied. Equipment dispatches are monitored closely to eliminate unnecessary use. • CP101 Complied. A dedicated Health and Safety Team is responsible for ensuring compliance with BWC-DOLE Occupational Safety and Health Standards. A Construction Health and Safety Program has been submitted to BWC-DOLE. • CP 103 Complied. The Competent Safety Team and Human Resources Team have been assembled to implement and monitor OSH and DOLE standards. • CP104 Complied. Standard occupational health and safety practices are implemented pursuant to BWC-DOLE Occupational Safety and Health Standards (Department of Labor and Employment, 1989)
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	<ul style="list-style-type: none"> Regular ambient air quality monitoring will be conducted. 	<ul style="list-style-type: none"> CP101 Complied. The CP101 Contractor SFTE-JV has been compliant with the ambient quarterly air quality monitoring. The schedules of monitoring conducted to all stations of CP101 are as follows: <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 15%;">Sites</th> <th style="width: 85%;">Quarter/ Date Conducted</th> </tr> </thead> <tbody> <tr> <td rowspan="2">NAS</td> <td>3RD / August 7-8, 2023</td> </tr> <tr> <td>4TH / November 6-7, 2023</td> </tr> <tr> <td rowspan="2">TSS</td> <td>3RD / August 8-9, 2023</td> </tr> <tr> <td>4TH / November 7-8, 2023</td> </tr> <tr> <td rowspan="2">QHS</td> <td>3RD / August 9-10, 2023</td> </tr> <tr> <td>4TH / November 8-9, 2023</td> </tr> <tr> <td rowspan="2">Depot</td> <td>3RD / August 10-11, 2023</td> </tr> <tr> <td>4TH / November 9-10, 2023</td> </tr> </tbody> </table> CP 103 Complied. Quarterly ambient air quality monitoring is conducted regularly at Brgy. Blue Ridge A for Camp Aguinaldo Station (CAS). The schedules of monitoring conducted are as follows: <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 15%;">Sites</th> <th style="width: 85%;">Quarter/ Date Conducted</th> </tr> </thead> <tbody> <tr> <td rowspan="2">CAS</td> <td>3RD / August 30-31, 2023</td> </tr> <tr> <td>4TH / November 28-29, 2023</td> </tr> </tbody> </table> CP104 Complied. Quarterly monitoring for noise has been conducted within the Shaw Boulevard Station (SBS) and Ortigas Avenue Station (OAS). The schedules of monitoring conducted are as follows: <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 15%;">Sites</th> <th style="width: 85%;">Quarter/ Date Conducted</th> </tr> </thead> <tbody> </tbody> </table> 	Sites	Quarter/ Date Conducted	NAS	3 RD / August 7-8, 2023	4 TH / November 6-7, 2023	TSS	3 RD / August 8-9, 2023	4 TH / November 7-8, 2023	QHS	3 RD / August 9-10, 2023	4 TH / November 8-9, 2023	Depot	3 RD / August 10-11, 2023	4 TH / November 9-10, 2023	Sites	Quarter/ Date Conducted	CAS	3 RD / August 30-31, 2023	4 TH / November 28-29, 2023	Sites	Quarter/ Date Conducted
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<ul style="list-style-type: none"> • Increase in noise level and ground vibration 	<ul style="list-style-type: none"> • Using equipment or machines that produce less noise, or considerations in using mufflers to minimize noise. • Strategic scheduling of activities per period within a day • Equipment or machinery will be maintained regularly. 	<ul style="list-style-type: none"> • CP101 Complied. CP101 Contractor SFTE-JV has been utilizing several silent- type generators with sound pressure level ranging 61 to 74 dB[A]. On the other hand, for other equipment, mufflers are installed. • CP 103 Complied. Perimeter fences have been installed as well as the provision of exhaust mufflers. • CP104 Complied. Conduct of noise monitoring for equipment to identify measures to minimize the noise. • CP101 Complied. Most construction activities that are perceived to generate loud noise are performed or scheduled during daytime only. • CP 103 Complied. Careful scheduling of activities is in place. Daily meetings are also conducted to inform the whole team of the activities. • CP104 Complied. Strategic scheduling of activities per period within a day. • CP101 Complied. The CP101 Contractor SFTE-JV and its Subcontractor have established a preventive maintenance system on all equipment. Whenever abnormal noise is observed or detected, the equipment will be subjected to checking by the Common Machinery and Equipment Team of the CP101 Contractor. 								

	<ul style="list-style-type: none"> • Conduct a construction noise and predicted noise study. • Construction of wall enclosures on areas that produce a lot of noise to minimize disturbance within the immediate area. 	<ul style="list-style-type: none"> • CP 103 Complied. Daily inspection of construction vehicles is being conducted. Preventive maintenance of these vehicles is conducted as needed. • CP104 Complied. A daily monitoring checklist for equipment is provided on-site. • CP101 Complied. Conducted construction noise and predicted noise study. • CP 103 Complied. Noise monitoring on-site is being conducted regularly to determine the appropriate mitigating measures. • CP104 Complied. Conducted construction noise and predicted noise study. Weekly conduct of ambient noise level at the impact area is being performed. • CP101 Complied. Some equipment such as generator sets are placed inside dedicated shelters. Also, the construction sites have soundproof panels that have been used as perimeter fence to minimize noise impact. • CP103 Complied. Construction of perimeter fences has been implemented. • CP104 Complied. Enclosure of the site with the use fence with stationed guards to reduce, minimize, and prevent disturbance in the area.
<ul style="list-style-type: none"> • Increase in ground vibration 	<ul style="list-style-type: none"> • Conduct predicted vibration level study. 	<ul style="list-style-type: none"> • CP101 Complied. Such a study was conducted and is also available. • CP103 Complied. A baseline vibration study has been conducted. As for the installation of vibration control measures, this will be implemented once railing works have commenced. • CP104 Complied. A baseline vibration study has been conducted.

	<ul style="list-style-type: none"> • Strategic scheduling of vibration-induced works. • Installation of vibration control measures: <ul style="list-style-type: none"> - vibration insulating sleeper - sleeper with elastic layer directly fastened track - secondary lining 	<ul style="list-style-type: none"> • CP101 Complied. Most construction activities that are perceived to generate either loud noise or high vibration are normally performed during the daytime. • CP 103 N/A in the meantime. • CP104 N/A in the meantime. • CP101 Complied. Depot- Launching Shat Area has installed vibration-insulating sleepers. • CP 103 N/A in the meantime. • CP 104 N/A in the meantime.
III.WATER		
<ul style="list-style-type: none"> • Change in drainage morphology. 	<ul style="list-style-type: none"> • All trench and foundation will be backfilled and ground-restored to its original condition. 	<ul style="list-style-type: none"> • CP101 Complied. Installation of new drainage canals and rerouting of some drainage paths have been undertaken in all sites. • CP103 Complied. Surplus soil is being used as backfill materials. • CP104 Complied. All trenches and foundations were backfilled and ground-restored to their original condition.
<ul style="list-style-type: none"> • Inducement of flooding/reduction in stream volumetric flow. 	<ul style="list-style-type: none"> • Temporary drainage and detention cum siltation ponds can be constructed to mitigate localized flooding. 	<ul style="list-style-type: none"> • CP101 Complied. The CP101 Contractor SFTE-JV installed temporary drainage and adequately sized siltation pits and ponds in each construction site to intercept large sediments and other suspended solids. • CP103 Complied. Temporary drainage, a four-chamber siltation pond, and sedimentation tanks have been provided on-site. • CP104 Complied. Temporary drainage and detention cum siltation ponds were constructed to mitigate

	<ul style="list-style-type: none"> • Stations will be provided with permanent bund walls. • The Depot will be provided with a drainage system. • Construction Waste Management Plan will be implemented. 	<p>localized flooding.</p> <ul style="list-style-type: none"> • CP101 N/A in the meantime. • CP103 N/A for the covered months. • CP104 N/A for the covered months. • CP101 N/A in the meantime. Only a temporary drainage system was constructed. • CP103 N/A. CP103 does not have a Depot. • CP104 N/A. CP103 does not have a Depot. • CP101 Complied. The CP101 Contractor SFTE-JV has been properly implementing Solid Waste Management, Hazardous Wastes Management, and Wastewater Management. Specific to Solid Waste Management, the CP101 Contractor SFTE-JV has adequate segregation bins and MRFs and that solid wastes are retained in interceptor boxes. • CP 103 Complied. Provision of a dedicated area within the Site as Materials Recovery Facility (MRF) and Hazardous Waste Storage Area. Several trash bins are strategically located within the Site. • CP104 Complied. Construction Waste Management Plan is being implemented.
<ul style="list-style-type: none"> • Change in stream depth. 	<ul style="list-style-type: none"> • Construction activities along the waterway will be conducted during the drier months of the year or during low flows whenever practicable. 	<ul style="list-style-type: none"> • CP101 Complied. The Construction of temporary slope protection along Tullahan River had already started in the first quarter of the year 2023, in preparation for the construction of MSE (Mechanically Stabilized Earth) wall. • CP103 - N/A. CP103 has no waterways. • CP104 - N/A. CP103 has no waterways.

	<ul style="list-style-type: none"> • Diversion channels will be installed, if appropriate 	<ul style="list-style-type: none"> • CP101 Complied. Tandang Sora Station Team has started the construction of diversion channel for the affected creek in the first quarter of 2023. • CP104 - Complied. On-going drainage relocation. 									
<ul style="list-style-type: none"> • Depletion of water resources and water competition 	<ul style="list-style-type: none"> • Potable water will be sourced from local water utility providers if necessary. 	<ul style="list-style-type: none"> • CP101 Complied. The CP101 Contractor SFTE-JV has been sourcing their potable water supply from Maynilad. • CP103 Complied. Potable water of CP103 is supplied by Manila Water. CP103 also has a potable refilling station intended for the MMSP. • CP104 Complied. Potable water is being outsourced from a local water utility provider. 									
<ul style="list-style-type: none"> • Ground water drawdown. 	<ul style="list-style-type: none"> • Conduct detailed hydrogeological/ groundwater study in the detailed design stage. • Installation of monitoring wells for observation along the subway tunnel and monitor change of the surrounding ground water levels. 	<ul style="list-style-type: none"> • CP101 Complied. • CP103 Complied. Groundwater Study has been conducted. • CP104 - N/A. • CP101 Complied. CP101 Contractor SFTE-JV has already installed observation or monitoring wells and is monitored by the Contractor's Geotechnical and Instrumentation Team. The number of active observation wells is as follows: <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Site</th> <th>No. of Observation Wells</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>NAS</td> <td>5</td> <td>Active w/ PTD</td> </tr> <tr> <td>Depot</td> <td>1</td> <td>Active w/ PTD</td> </tr> </tbody> </table> • CP103 Complied. Two (2) observatory wells have been installed on-site to monitor the groundwater level. • CP104 - N/A. 	Site	No. of Observation Wells	Status	NAS	5	Active w/ PTD	Depot	1	Active w/ PTD
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NAS	5	Active w/ PTD									
Depot	1	Active w/ PTD									

	<ul style="list-style-type: none"> • If the water supply of people relying on groundwater along the alignment decreases, DOTr shall make arrangements to supply affected people with water. • DOTr will coordinate with NWRB regarding tunneling activities along the alignment and its potential effects on the water table. <ul style="list-style-type: none"> • A Dewatering Permit may have to be secured from NWRB prior to tunneling activities. 	<ul style="list-style-type: none"> • N/A. • CP101 Partially Complied. CP101 Contractor SFTE-JV, by virtue of the authorization, already made an initial inquiry to NWRB in the form of applying in advance for the Permit to Drill for Observation Wells and Water Permit for Dewatering works. DOTr will soon coordinate with NWRB with regards to the tunneling activities that may have effects on the water table. • CP103 Complied. Several coordination with NWRB has been made for the monitoring wells and projected dewatering works. • CP104 - N/A. • CP101 Complied. The CP101 Contractor SFTE-JV has already applied for permits for dewatering in the form of water permits in advance since June 2022 and as follows: <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #d3d3d3;"> <th>Sites</th> <th>No. of Permits</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>NAS</td> <td>12</td> <td>Applied &paid</td> </tr> <tr> <td>TSS</td> <td>0</td> <td>For Application</td> </tr> <tr> <td>QHS</td> <td>4</td> <td>Applied &paid</td> </tr> <tr> <td>Depot</td> <td>1</td> <td>Applied &paid</td> </tr> </tbody> </table> • CP103 N/A as of the moment. Tunneling works have 	Sites	No. of Permits	Status	NAS	12	Applied &paid	TSS	0	For Application	QHS	4	Applied &paid	Depot	1	Applied &paid
Sites	No. of Permits	Status															
NAS	12	Applied &paid															
TSS	0	For Application															
QHS	4	Applied &paid															
Depot	1	Applied &paid															

		<p>yet to start for the covered months.</p> <ul style="list-style-type: none"> • CP104 - N/A.
<ul style="list-style-type: none"> • Wastewater generation during earth moving and site preparation. 	<ul style="list-style-type: none"> • Maintain adequate temporary toilet facilities. • Strictly require the contractor & workers to observe proper waste disposal and sanitation 	<ul style="list-style-type: none"> • CP101 Complied. An adequate number of portalets has been provided on each site, where applicable. Additionally, the CP101 Contractor SFTE-JV has secured two (2) Discharge Permits from EMB- NCR for its two (2) Septic Tanks in Depot. • CP 103 Complied. Compliant. Several portable toilets were in place prior to the construction and operation of the toilet facilities. • CP104 Complied. Provision of five (5) portalets on-site. • CP101 Complied. Adequate number of segregation bins and Material Recovery Facility (MRF) has been strategically installed on each site by CP101 Contractor. • CP 103 Complied. Provision of a dedicated area within the Site as Materials Recovery Facility (MRF). Several trash bins are strategically located within the Site. • CP104 Complied. Trash bins with labels are observed on-site. Proper waste disposal and sanitation is stringently implemented.
<ul style="list-style-type: none"> • Sediment influx in waterways. 	<ul style="list-style-type: none"> • Designation of buffer zones approximately 5 m from each bank. • Ensure that the potential delivery of sediments and other particulate matter into the stream channel will be carefully 	<ul style="list-style-type: none"> • CP101 Complied. The MMSP Depot along Tullahan River has approximately five (5) m buffer zones from the bank. This also complies with the minimum 3- meter easement in the city. • CP 103 N/A. No waterways affected by CP103. • CP101 Complied. The CP101 Contractor SFTE-JV installed temporary drainage, interceptor box, and adequately sized siltation pits and ponds equipped with oil- retention feature in each construction site to intercept large sediments, suspended solids, and other

	<p>handled and kept at minimum.</p>	<p>particulate matter.</p> <ul style="list-style-type: none"> • CP 103 Complied. Siltation ponds and sedimentation tanks are in place to minimize sediments going through the city drainage. • CP 104 Complied. Sediment traps and tanks are provided on site.
<ul style="list-style-type: none"> • Hazardous waste generation/ disposal during site preparation. 	<ul style="list-style-type: none"> • Everyday monitoring in the site if there were leakages. • Temporary installation of adequate hazardous waste facilities. 	<ul style="list-style-type: none"> • CP101 Complied. The CP101 Contractor SFTE-JV has been conducting daily observation or monitoring for possible leakages of hazardous wastes. • CP 103 Complied. Daily inspection of Site is conducted to monitor possible leaks. • CP 104 Complied. Daily monitoring of leakages on-site. • CP101 Complied. The CP101 Contractor SFTE-JV has installed MRF in each site with hazardous wastes compartment. Additionally, in the Depot Area, a Centralized Hazardous Wastes Storage Facility was constructed. • CP 103 Complied. Provision of a dedicated area within the Site as Materials Recovery Facility (MRF) and Hazardous Waste Storage Area. Several trash bins are strategically located within the Site. • CP 104 Complied. A temporary Hazardous Waste Storage facility was installed on-site.
IV. PEOPLE		
<ul style="list-style-type: none"> • Degradation of air quality 	<ul style="list-style-type: none"> • Provision of PPE to workers 	<ul style="list-style-type: none"> • CP101 Complied. All CP101 Contractor SFTE-JV and Subcontractors' workers are provided with appropriate PPE before deploying or working to the site. • CP 103 Complied. All CP103 personnel are provided with appropriate PPE. • CP 104 Complied. Provision of PPE to workers.
<ul style="list-style-type: none"> • May cause 	<ul style="list-style-type: none"> • Implementation of PPE, such as 	<ul style="list-style-type: none"> • CP101 Complied. All CP101 Contractor SFTE-JV and

<p>hearing problems to workers who operate nearby machineries or equipment that produce extremely loud noise.</p>	<p> earmuffs and ear plugs, during work hours for the safety of the workers.</p> <ul style="list-style-type: none"> • Taking note of equipment/machines that produce extremely loud noises (beyond tolerable levels - 85 decibels (Fink, 2017)) and keeping these areas off limits from workers for their safety. • Implement permissible noise levels for construction workers as suggested by DOLE. 	<p>Subcontractors' workers are provided with appropriate PPE before deploying or working to the site. The use of earmuffs and ear plugs are used on an as-needed basis or depending on the nature of works.</p> <ul style="list-style-type: none"> • CP 103 Complied. All CP103 personnel are provided with appropriate PPE. • CP104 Complied. Implementation of PPE (earmuffs, ear plugs) during work hours. • CP101 Complied. A safe distance or buffer zone for workers has been established whenever they are working, involving heavy equipment or machinery which generates loud noise. • CP 103 Complied. Noise monitoring on-site is being conducted regularly to determine the appropriate mitigating measures. • CP104 Complied. Provision of appropriate PPE for workers working in a loud environment. • CP101 Complied. A safe distance or buffer zone for workers has been established whenever they are working, involving heavy equipment or machinery which generates loud noise. Also, a non- PPE Zone is designated whereby workers can freely and safely remove their PPE and that the noise levels in the said non- PPE zone has a conducive noise level. Also, Noise Level Monitoring is regularly conducted on a quarterly basis inside the Construction Site to determine the extent of noise levels. • CP 103 Complied. Noise monitoring on-site is being conducted regularly to determine the appropriate PPE for noise suppression.
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<ul style="list-style-type: none"> • May cause hearing problems to nearby residents who are a part of the vulnerable groups, and the public. 	<ul style="list-style-type: none"> • Active response of LGU through necessary health programs for vulnerable groups, and massive public information for those areas that can produce noise levels beyond tolerable limits of human ears. 	<ul style="list-style-type: none"> • CP104 Complied. Implementation of permissible noise levels as suggested by DOLE. • CP101 Complied. The CP101 Contractor SFTE-JV has been regularly monitoring the possible discomfort due to noise generated from MMSP CP101 Construction Sites. Also, CP101 Contractor has been visiting and interviewing the concerned LGUs on this regard if there have been any complaints from the public or stakeholders due to noise generated from MMSP CP101 Construction Sites. Lastly, DOTr has already established a Grievance Redress Mechanism (GRM) to address any complaints and an Information, Education, and Communication (IEC) drive which will be further intensified for massive public information. • CP 103 Complied. Coordination with LGU and stakeholders is conducted regularly. • CP104 Complied. Monthly noise survey of stakeholders and pedestrians.
<ul style="list-style-type: none"> • Hazardous Waste Generation 	<ul style="list-style-type: none"> • Registration of the proponent as a hazardous waste generator • Collection of hazardous wastes in proper receptacle 	<ul style="list-style-type: none"> • CP101 Complied. Both DOTr and CP101 Contractor SFTE-JV have registration as Hazardous Waste Generator. • CP 103 Complied. CP103 has an on-going application for Hazardous Waste Generator Registration. • CP104 Complied. Hazardous waste ID already acquired (ID-OL-GR-NCR-74-048115). • CP101 Complied. Hazardous waste generated is properly stored in compatible storage containers based on its compatibility and stored in site's designated hazardous wastes recovery facility. • CP 103 Complied. CP103 has a dedicated area used as a

	<ul style="list-style-type: none"> • Storage of fuel and chemicals in appropriate storage area provided with secondary containment in case of spills. • Collection of hazardous waste by a DENR-accredited hauler 	<p>temporary Hazardous Waste Storage Area.</p> <ul style="list-style-type: none"> • CP104 Complied. A temporary hazardous waste storage facility has already been constructed. • CP101 Complied. Hazardous waste stored in the site’s respective recovery facilities are all provided with appropriate secondary containments (spill pans/bund walls). • CP 103 Complied. A dedicated storage area for fuel chemicals is in place. • CP104 Complied. Spill kits are provided on site. • CP101 Complied. The Contractor has been strictly abiding by the regulatory requirements on the proper handling, storage, transport, treatment, and disposal of its generated hazardous wastes. Last 06 June 2023, the Contractor has contracted a DENR EMB accredited TSD Facility, Adcan Petroleum Products Inc. to transport and treat its generated 2.56 metric tons of used oil with an issued Certificate of Treatment with Reference No. COT-NCR-2023-06-251105. • CP 103 N/A as of the moment. CP103 will tap the services of DENR-accredited hazardous waste haulers and TSD facilities for the hazardous wastes to be collected onsite. • CP104 N/A as of the moment. CP104 will source for DENR-accredited hazardous waste hauler and TSD facilities for the hazardous wastes to be collected onsite. • CP101 Complied. All fuels and chemicals have been stored in appropriate storage tanks with adequate spill pans and bund walls.
	<ul style="list-style-type: none"> • Treatment of hazardous waste by 	

	a DENR-accredited treater	
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- iii. Twelve (12) CMRs have been duly submitted by the Accredited Pollution Control Officer (PCO) of the MMSP and shall continue until the project's completion. Withal, listed in Table 63 is the list of accomplished CMRs that cover the pre-construction and construction phase of the Project from CY 2018 to CY 2023.

Table 63. List of Accomplished Compliance Monitoring Reports.

ECC-CO-1708-0017			
No.	Monitoring Period	Phase	Month of Submission
1	1 st Semester 2018	Pre-Construction	July 2018
2	2 nd Semester 2018	Pre-Construction	January 2019
3	1 st Semester 2019	Pre-Construction	July 2019
4	2 nd Semester 2019	Pre-Construction	January 2020
5	1 st Semester 2020	Pre-Construction	July 2020
6	2 nd Semester 2020	Pre-Construction	January 2021
7	1 st Semester 2021	Pre-Construction	August 2021
8	2 nd Semester 2021	Pre-Construction	February 2022
9	1 st Semester 2022	Construction	July 2022
10	2 nd Semester 2022	Construction	January 2023
11	1 st Semester 2023	Construction	July 2023
12	2 nd Semester 2023	Construction	February 2024

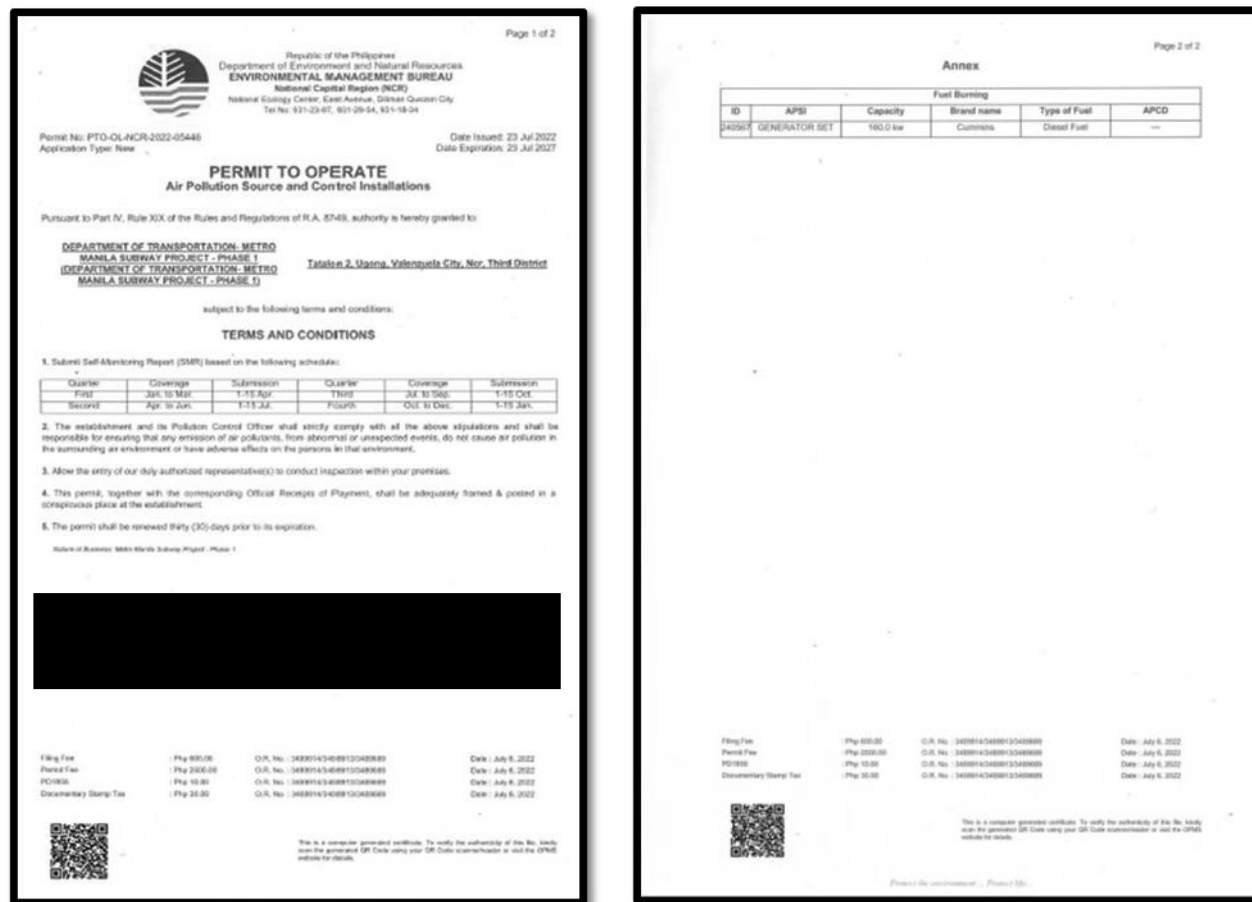
5.2. Self-Monitoring Report (SMR)

- i. In cognizant, SMR is a quarterly monitoring report outlining the project's conformity to environmental standards and laws as required by the DENR through its Administrative Order 2003-27 (DAO 2003-27). It is composed of separate Modules for Project information, Toxic Substances, Hazardous and Nuclear Wastes Control Act (RA 6969), Revised Pollution Control Law (PD 984), Clean Air Act of 1999 (RA 8749), and Environmental Impact Statement System Law (PD 1586), among others.
- ii. Under the components of the SMR, modules for RA 8749 and RA 6969 have been accomplished due to the installation of a Generator Set in the Depot and detection of Asbestos Containing Materials (ACMs) in Quirino Highway Station (QHS), respectively.

A. Module for Clean Air Act of 1999 (RA 8749)

A.1 MMSP-EU applied for the operation of the Generator Set in the Depot Gallery on 06 June 2022. It was then approved and a Permit to Operate (PTO) was issued through the Online Permitting and Monitoring System of the DENR-EMB on 23 July 2022. Shown in Figure 5 the PTO for the Genset.

Figure 5. Permit to Operate the Generator Set in Depot.



- A.2 The Generator Set was installed on 12 June 2022 to supply adequate electricity in the Depot Gallery. Its operations range from 8 to 12 hours per day for 5 to 7 days a week with allotted two (2) shifting schemes. The Philippine Railway Institute (PRI) alongside SFTE-JV, the main contractor of Contract Package 101 (CP101), performs regular monitoring to ensure proper management and reporting of its optimized operations.
- A.3 In compliance with DAO 2003-27, the CY 2023 July to September 2023 (Q3) and October to December 2023 (Q3) SMR of the MMSP was prepared and submitted by its Accredited Pollution Control Officer (PCO) to EMB-NCR in October 2023 and January 2024.
- B. Module for Toxic Substances, Hazardous and Nuclear Wastes Control Act (RA 6969)
 - B.1 Acquired buildings and structures for Quirino Highway Station (QHS) were subjected to environmental due diligence accounting for the suspected asbestos contamination in the Gypsum Boards found in HBC Corporate Office Main Building, Warehouse, and Power Station.
 - B.2 Random samples were obtained on-site by a third-party specialist on 14 July 2022. The result of analysis was released on the following day confirming the presence of ACMs in HBC Main Building yielding a 15% Chrysotile and Non-Friable result. Further, a Notice to Proceed (NTP) was issued by EMB-NCR on 14 September 2022 allowing the dismantling and disposal of the contaminated Gypsum Boards.
 - B.3 Following the release of NTP, removal and decontamination works of the ACMs transpired on 16 September 2022. A subcontractor specializing in such undertaking performed the handling of asbestos until 08 October 2022.
 - B.4 In parallel, the Hazardous Waste ID for QHS was issued on 07 October 2022 followed by the release of Permit to Transport (PTT) on 24 October 2022. Shown in Figure 6 the HazWaste ID for QHS issued by the EMB-NCR.
 - B.5 The hauling of sealed ACMs on a Treatment, Storage, and Disposal (TSD) Facility located in Capas, Tarlac occurred from 26 October 2022 to 03 November 2022 with a total of 57.5 MT of Asbestos Wastes (M502). A Comprehensive Report for the management of ACMs in QHS was transmitted to the EMB-NCR in December 2022 for compliance.
 - B.6 Request to terminate the HazWaste ID for QHS issued by the EMB-NCR was transmitted to DENR-EMB-NCR in May 2023 due to the completion of handling, treatment and disposal of ACMs. Follow-up of the request resulted to the advice of the DENR-NCR-CPD case handler to undergo delisting process instead due to the other potential hazardous materials listed in the HazWaste ID along with the Asbestos.

B.7 However, other potential hazardous materials listed in the HazWaste ID of DOTr was also reflected on SFTE-JV's own HazWaste ID for QHS. With this, another request letter for the termination of HazWaste ID under DOTr was transmitted to the DENR with enclosure of the HazWaste ID of SFTE-JV which serves as proof of record that hazardous materials in QHS shall be properly handled by SFTE-JV.

Figure 6. Hazardous Waste ID for QHS

Republic of the Philippines
 Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
 National Capital Region
 National Science Center, East Avenue, Diliman Quezon City
 Telephone Nos: 931-23-97, 931-29-56, 931-18-36
 Website: <http://nrcr.emb.gov.ph>

HAZARDOUS WASTE GENERATOR REGISTRATION CERTIFICATE

Pursuant to Chapter 3 of DENR Administrative Order (DAO) No. 2013-22, the Implementing Rules and Regulations of Republic Act (RA) 6969, this Certificate is issued to:

Name of Establishment: **DEPARTMENT OF TRANSPORTATION- METRO MANILA SUBWAY PROJECT - PHASE 1 - - MNSP QUEJIDO HIGHWAY STATION**

Facility Address: **MINDANAO AVENUE COR QUEJIDO HIGHWAY, TALIPAPA, QUEJIDO CITY, NCR, SECOND DISTRICT**

You are hereby assigned with the new on-line registration no:

OL-GR-NCR-74-034857

This certifies that the above-named Hazardous Waste Generator generates the following types of wastes:

Waste Class	Waste Number
Asbestos wastes	MS02
Pathological or infectious wastes	MS01
Waste electrical and electronic equipment (WEEE)	MS06
Containers previously containing toxic chemical substances	J201
Used industrial oil including sludge	I201
Oil-contaminated Materials	I204
Solvent based	F601
Mercury and mercury compounds	D407
Selenium and its compounds	D401
Arsenic and its compounds	D402
Cadmium and its compounds	D404
Lead compounds	D406
Other wastes with inorganic chemicals	D499
Fluoride and its compounds	D408
Lime slurries	C305
Other alkali wastes	C399
Sulfuric acid	B201
Other acid wastes	B299
Caustic soda	C301

- The above-named HW Generator shall comply with all the requirements of R.A. 6969 and its Implementing Rules and Regulations particularly DAO 2013-22: Revised Procedures and Standards for the Management of Hazardous Wastes (Revising DAO 2004-36).
- Submission of the online Self Monitoring Report (SMR) shall be made within fifteen (15) days after the end of every reporting period.
- Please refer to this assigned registration number for every transaction related to the online Hazardous Waste Management System.
- Non-compliance to the above stipulations shall be subjected to the penalty provisions as provided under Section 41 of DAO 1992-29 and Chapter 11 of DAO 2013-22.

5.3. Accredited Pollution Control Officer (PCO)

- i. Per DENR Administrative Order 2014-02 (DAO 2014-02), public and private entities that discharge solid, liquid, and hazardous wastes, as well as emit gaseous substances, or whose activities or services serve as a potential source of pollution shall designate its PCO.
- ii. The PCO accreditation caters to the duly compliance of the MMSP to the PD 1586, RA 6969, RA 8749, RA 9003, and RA 9275, and their respective IRRs. One (1) Environment Officer from the DOTr-Environmental Unit (DOTr-EU) underwent a 40-hour Basic Training Course for Pollution Control Officers in October 2021.

5.2. Third-Party Audit

- i. In lieu of the creation of a Multi-Partite Monitoring Team (MMT) indicated in Paragraph 8 of Annex A of the ECC that shall serve as the Project's External Environmental Monitoring Body as per ECC, a decision to acquire auxiliary services from a Third-Party institution was agreed on 14 February 2020 in compliance with the project's EPRMP. The provision of an independent environmental consulting service shall cover the Environmental and Social Components of the MMSP.
- ii. Furthermore, monitoring, validation, and evaluation of the processes and conditions in the ECC, relevant environmental reports satisfying the mandated deliverables under the EIS system, assessment of results of the conducted information campaigns for PAPs, and sustainability of the implemented Resettlement Action Plan (RAP) are the critical scope of work of the third-party auditor apart from the project's Environmental and Social Components.
- iii. The Environmental Component audit aims to ensure the conformity of all implemented environmental and civil works to the conditions indicated in the ECC as well as to verify the efficient delivery of correspondences in line with the Japan International Cooperation Agency (JICA) 2010 guidelines. Whereas, the Social Component of the MMSP is to guarantee proper implementation of the RAP in accordance with the JICA Resettlement Policy and RA 1075, among relevant other domestic guidelines.
- iv. AECOM, the third-party auditor, received the Notice to Proceed on October 2021, thus AECOM started their 1st quarter audit for November to December of 2021, and January of 2022. The monitoring periods are as follows: Q1 (Nov, Dec 2021, and Jan 2022), Q2 (Feb, Mar, and Apr 2022), Q3 (May, Jun, and Jul 2022), Q4 part 1 (Aug, Sept, and Oct 2022), and Q4 part 2 (Nov and Dec 2022).
- v. The third-party audit commenced on 22 October 2021 and shall continue until project completion. Subsequent Request for Information (RFI) from the auditor and the eventual conduct of an on-site assessment with representatives from the proponent, general contractors, and sub-contractors were performed.

- vi. The 3rd Quarter 2023 TPA was conducted on 26-27 September 2023 while the 4th Quarter 2023 TPA was accomplished on 18-20 December 2023. The 4th Quarter TPA findings shall be reflected in the next semi-annual report upon completion of virtual conferences this January-February 2024. Table 64 shows the Summary of TPA findings for the 3rd Quarter of 2023.

Table 64. 3rd Quarter CY 2023 TPA Summary of Findings for CP 101

Item	Requirement	Project Component	Audit Findings and Onsite Observations	Compliance	Responsible Group	Action Items
A	ECC-CO-1708-0017 Annex A: Conditions and Restrictions					
A.1.1	Conduct an effective and continuing Information, Education and Communication (IEC) Program through the use of most effective media to inform and educate all stakeholders, especially the contractors, workers, LGUs, businesses, and local residents about the following: (a) Project impacts and mitigating measures embodied in its EIS; (b) Conditions stipulated in this Certificate; (c) Environmental and	General (NAS, Depot, QHS, TSS)	Not applicable this audit period.	N/A		
A.1.2		General		N/A		

	human safety features of the project, and (d) Health consciousness alerts for any project-induced discomfort (from dust, smell, noise, vibration) as the project progresses throughout the whole route.					
A.2.1	Preparation of a comprehensive Social Development Program (SDP)	General	Not applicable this audit period.	N/A		
A.2.2	Implementation of a comprehensive Social Development Program (SDP)	General	Not applicable this audit period.	N/A		
A.2.3	Submit a separate SDP report together with the CMR to EMB-CO on a semi-annual basis	General	Not applicable this audit period.	N/A		
A.3.1	Submit a detailed waste management program for proper handling, collection, and disposal of solid, hazardous, and liquid waste within 6 months prior to project construction	General	[ONE-TIME COMPLIANCE] WMP for CP-101 was submitted to EMB last 14 July 2020.	Compliant	DOTr	

A.3.2	<p>Proof of implementation of detailed waste management program shall be submitted together with the CMR</p> <p>Note: No required CMR submission this Q3 2023</p>	General	<p>Daily observation reports and photo documentation of solid waste management practices provided. QHS has new HazWaste ID (OL-GR-NCR-74-049093).</p>	N/A	DOTr	
A.4	<p>Ensure that all existing waterways affected by the proposed project construction are maintained and not obstructed</p>	General	<p>Provided ocular inspection reports containing monthly photo documentation of mitigating measures (e.g., temporary soil erosion control, waterway outfall, MSE wall w/ stormwater runoff outfall, etc.) implemented in each affected waterway (Tullahan River, QHS Creek, TSS Creek, and San Juan River).</p> <p>Additionally, SFTE-JV started on their Adopt-an-estero program</p>	Compliant	SFTE-JV	
A.5.1	<p>Submit a detailed demobilization plan for the construction yards within 6 months prior to project construction</p> <p><i>Note: Post-construction site plans</i></p>	General	<p>Demobilization plan (future plans) for CP-101 was received by DENR-EMB on 14 July 2020.</p> <p>For improvement: Update the plan and include at least an outline or</p>	Compliant	DOTr & OCG	

			framework of how the construction demobilization will proceed.			
A.5.2	<p>Submit a detailed demobilization plan for the construction yards within 6 months prior to project construction</p> <p><i>Note: Detailed construction demobilization plan of contractor</i></p>	General	<p>However, this did not cover the actual construction demobilization procedure of the contractor.</p> <p>AI: Contractor's construction demobilization plan.</p>	Non-compliant	SFTE-JV	<p>SFTE-JV to try to comply with the requirement prior to official transmittal of the RFI.</p> <p>SFTE-JV Envi team will coordinate with their Engineering team for the contractor's demobilization plan. OCG to provide format/outline to SFTE-JV.</p>
A.6	Submit a detailed plan for earth balling and replanting of mature native/endemic trees within 6 months prior to project construction	General	<p>[ONE-TIME COMPLIANCE]</p> <p>Detailed earthballing plan already provided during the previous audit periods. With proof of submission to DENR-</p>	Compliant	OCG	

			EMB.			
A.7	Submission of an approved Resettlement Action Plan (RAP) of the affected communities within 6 months prior to project construction	General	<p>RAP was already submitted on previous 2022 CMRs.</p> <p>CP101 includes East Valenzuela Station (EVS), Depot, Quirino Highway Station (QHS), Tandang Sora Station (TSS) and North Avenue Station (NAS).</p> <p>DENR EMB acknowledged the submission on 17 January 2023.</p>	Compliant	DOTr	
A.8.1	The proponent shall set up a readily available and replenishable Environmental Guarantee Fund (EGF)	General	<p>3rd revision previously provided (23 January 2023). DOTr to confirm if there is already a final MOA.</p> <p>AI: Updated draft MOA, based on recent agreements w/ DENR-EMB as of 25 July 2023.</p>	Observation	DOTr	Inquired directly to DENR-EMB, for the operation phase. O&M is requesting to go back to include again the operational phase in the MOA. DOTr already done initial discussion on

						<p>the trust fund. Ongoing finalization of the EGF MOA with the operational phase. Est. amount of ~35M. To provide draft MOA.</p> <p>Latest meeting w/ DENR-EMB on 25 July 2023.</p> <p>Update: restructuring of the MOA to not include the operation phase (only construction phase.)</p>
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A.8.2	The proponent shall establish a Multi-partite Monitoring Team (MMT)	General	<p>EMB-CO approved the engagement of a TPA in lieu of forming a MMT (dated 14 February 2022)</p> <p>Note: For this current audit period, the proponent should submit the TPA report from the previous audit period for compliance.</p>	Observation	DOTr	<p>No submission yet. Ongoing review of the format of the TPA report.</p> <p>Per checking of DOTr, all finalized reports will be submitted directly to DENR-EMB for the SA2 2023 submission.</p>
A.8.3	The proponent shall establish a replenishable Environmental Monitoring Fund (EMF) to cover all costs attendant to the operation of the MMT	General	N/A. EMB-CO approved the engagement of a TPA in lieu of forming an MMT. <i>Refer to Item A.8.2.</i>	N/A		
A.9	Establish an Environmental Unit (EU) within 60 days from receipt of the ECC that shall competently handle the environment-related aspects of the project	General	The updated EU organizational structure of MMSP was provided (v9, 19 January 2023)	Compliant	DOTr	
		General	Updated EU organization structure of OCG (provided 10 May 2023)		OCG	

			Provided an updated EU organizational chart of SFTE-JV effective September 29, 2023.		SFTE-JV	
A.10	The proponent shall ensure that contractors and sub-contractors are provided with copies of the ECC and that they will strictly comply with the relevant conditions	General	Updated summary table of contractors for the entire MMSF (provided 10 May 2023). Contractors for CP-105, CP-108, CP-109, and AWP3 --TBA. Proof of provision of ECC to SFTE-JV previously presented.	Compliant	OCG	
		General	Updated summary table of sub-contractors detailing their assigned scope of work (type of work, specific area/facility, etc.), and date of engagement	Compliant	SFTE-JV	
		General	[ONE-TIME COMPLIANCE] CEMMP for CP-101 already provided with proof of submission to DENR-EMB	Compliant	OCG	
		General	SFTE-JV has a copy of the ECC (attached in the contract). For CP-101 subcontractors, ECC was also provided in the contract via email, w/an	Compliant	OCG, SFTE-JV	

			acknowledgment receipt.			
A.11	No activities shall be undertaken until and unless disposal sites of excavated materials have been identified, duly covered by agreements, and have been permitted in accordance with the law. Proof of compliance shall be filed with the Regional Office with jurisdiction over the disposal area	General	<p>ECC of Calymi and HyperJ presented. Two disposal sites are being used, both located in Bulacan.</p> <p>Monthly photo documentation of surplus soil haul-out and dumping in disposal sites provided during document review.</p> <p>In addition to the two disposal sites, another disposal site is now being used for CP-101 with approval from OCG and DOTr. Disposal site is located in Brgy. Patubig, Marilao, Bulacan. Necessary documents and permits have been provided as part of the contracting process.</p>	Compliant	SFTE-JV	
A.12	No activities shall be undertaken other than what was stipulated in the final EIS. Any expansion/ modification of the project beyond the project description or change in	General		Compliant	DOTr, OCG	

	alignment/ route that will cause significant impacts to the environment will be subject to a new EIA					
A.13	In case of transfer of ownership of this project, the same conditions and restrictions shall apply to the transferee or grantee who shall secure in writing the corresponding amendment of the ECC	General	N/A. As of Q3 2023, there has been no transfer of ownership.	N/A		
B	ECC-CO-1708-0017 Annex B: Project Assessment Planning Tool					
B.1	Compliance with the Revised National Structural Code of the Philippines	NAS & Depot QHS & TSS	N/A. No design plans are presented as no actual construction of structures is ongoing.	Compliant	SFTE-JV	
B.2	Compliance with the Sanitation Code of the Philippines	General		Compliant	SFTE-JV	
B.3	Compliance with the Labor Code of the Philippines	General	OSH-mandated policies should be posted in prominent locations w/in all project sites. AI: Photo documentation of materials on mandatory OSH programs in prominent places (eg., lobby, pantry, etc.)	Compliant	SFTE-JV	
B.4	Compliance with the	NAS &		Compliant	SFTE-JV	

	Building Code of the Philippines	Depot QHS & TSS	N/A. No design plans are presented as no actual construction of structures is ongoing.			
B.5	Compliance with the Ecological Solid Waste Management Act	General	Daily observation reports on solid waste management implementation are provided, supported by monthly photo documentation. A newly acquired HazWaste ID for QHS also presented.	Compliant	SFTE-JV	
B.6	Priority employment shall be given to qualified local residents. Opportunities for qualified PWDs, women, senior citizens, where possible, shall be considered. Adequate public information for jobs available to local residents in the affected areas will be provided.	General	Not applicable this audit period.	N/A	DOTr, SFTE-JV	
B.7	Conduct a detailed Traffic Impact Assessment (TIA) in coordination with the MMDA and concerned LGU	General	Final TIA report with coordination with LGUs previously provided during Q1 2023. Covers the entire alignment.	Compliant	OCCG	

B.8	An inclined drilling program should be designed and carried out for the segment(s) of the subway along the West Valley Fault (e.g. Cayetano Station). The design of the drilling program and interpretation of results should be done in consultation with PHIVOLCS. Based on the DED, the proponent may consider realignment of subway from the fault while maintaining Cayetano Station.	N/A	N/A. The condition is no longer applicable since Cayetano Station has been removed from the project design. This realignment is covered by the EPRMP and 2019 Amendment of ECC-CO-1708-0017.	N/A		
C	2019 and 2021 Amendments of ECC-CO-1708-0017					
C.1	The modified alignment and construction of additional stations and facilities shall strictly conform with the modified design submitted for the purposes of amending the ECC	General	[As-needed basis] Provided document basis for the minor ECC amendment in 2021.	Compliant	DOTr	
C.2	The areas designated for relocation of affected settlers shall be made available to include fair and just compensation of	General	Not applicable this audit period.	N/A	DOTr	

	damages/disturbances as determined by the concerned authorities prior to project construction					
D	Compliance with the EMP and EMoP					
ENVIRONMENTAL COMPONENT						
D.0	Regular reporting of environmental monitoring activities to DENR-EMB (Submission of CMR and SMR)	General	N/A. CMR submission is not required during this audit period.	N/A	DOTr	
		General	AI: Proof of submission of DOTr's SMRs for Q3 2023.	Observation	DOTr	DOTr is still reporting to DENR-EMB. For coordination again with DENR-EMB to terminate DOTr's HazWaste generator's registration in CP-101.
		General	Provided status documentation of submitted Q3 2023 SMRs for Depot, NAS, QHS, and Warehouse. As of 17 October 2023, document evaluation is pending.	Compliant	SFTE-JV	
D.1	<i>Waste and Spoil Management</i>					

D.1.1	Daily visual observation of solid waste management and disposal in the construction site	General	Provided daily observation logs of solid waste management and disposal for NAS, Depot, QHS, and TSS for Q3 2023. Monthly photo documentation provided as additional evidence.	Compliant	SFTE-JV	
D.1.2	Monthly reporting of solid waste management and disposal method (as attachment in the CMR)	General	Monthly photo documentation of solid waste management and disposal practices from July to September 2023 provided.	N/A	DOTr	
D.1.3	Daily visual observation of hazardous waste management and disposal in the construction site	General	Provided daily observation logs of hazardous waste management and disposal for NAS, Depot, QHS, and TSS for Q3 2023. Monthly photo documentation of implemented practices also provide as additional evidence.	Compliant	SFTE-JV	
D.1.4	Monthly reporting of hazardous waste management and disposal in the construction site (as attachment in the CMR)	General	Monthly documentation of hazardous waste management and disposal implementation from July to September 2023 provided.	N/A	DOTr	
D.1.5	Daily visual observation of the condition of oil and fuel storage, and chemical	General	Included in daily observation logs of hazardous waste	Compliant	SFTE-JV	

	injection method in the construction site		management. Refer to D.1.3.			
D.1.6	Daily visual monitoring for any spill/leakage of hazardous materials	General	Included in daily observation logs of hazardous waste management. Refer to D.1.3.	Compliant	SFTE-JV	
D.1.7	Installation of adequate hazardous waste facilities with proper containment	General	Provided monthly photo documentation of HazWaste storage facilities in NAS, Depot, QHS, and TSS for Q3 2023.	Compliant	SFTE-JV	
D.1.8	Registration of the proponent as a hazardous waste generator	General	HazWaste generator's ID acquired for Depot and NAS. Ongoing application for TSS. For QHS, HWID has recently issued during Q3 2023.	Compliant	SFTE-JV	
D.1.9	Storage of fuel and chemicals in appropriate storage area provided with secondary containment in case of spills	General	Photo documentation of fuel and chemical storage areas included in documentation of HazWaste management facilities. Refer to D.1.7.	Compliant	SFTE-JV	
D.1.10	Collection of hazardous wastes in proper receptacle and by a DENR-accredited hauler	General	Manifest forms and COTs of hauled out hazardous wastes from NAS, Depot, and QHS within the Q3 2023 provided during document review.	Compliant	SFTE-JV	

			HazWaste from QHS and TSS were previously clustered with other stations. Ongoing acquisition of separate HazWaste generator ID for QHS and TSS. Status documentation was provided during document review.			
D.1.11	Treatment of hazardous wastes by a DENR-accredited hauler	NAS & Depot	COTs of all hauled-out HazWastes during Q3 2023 were presented during the document audit.	Compliant	SFTE-JV	
D.1.12	Use of strong, durable, and non-reactive materials for buried components	NAS & Depot	Material specifications were detailed in related MSs. As proof of implementation, material approvals from OCG for waterproofing membranes, G.I. pipes, and pipe sleeves were presented during previous document audits. For this quarter, this was not checked as there is no new materials purchases made during Q3 2023.	Compliant	SFTE-JV	

			Photo documentation of waterproofing works in QHS during Q3 2023 was also provided.			
D.1.13	Daily visual observation of proper waste management and disposal of surplus soil in the construction site and disposal site	General	Daily observation reports on the management and disposal of excess soils in NAS, Depot, QHS, and TSS during Q3 2023 were presented during the document audit. Documents were supported with relevant photo documentation.	Compliant	SFTE-JV	
D.1.14	Monthly reporting of proper waste management and disposal of surplus soil in the construction site and disposal site (as attached in the CMR)	General	Photo documentation of surplus soil management and disposal was provided. Daily records are also available as additional proof of compliance.	N/A	DOTr	
D.1.15	Toxicity Characteristic Leaching Procedure (TCLP) monitoring of heavy metal levels (Cd, Cr (VI), Hg, Se, Pb, As, F, and B) in surplus soil at the construction site and disposal site	Depot	TCLP monitoring report for the 1st km (each for NB and SB) shows that heavy metal concentrations were below MDL. As proof of compliance, laboratory certificates from the analyzing laboratory and photo documentation of the actual sampling were provided.	Compliant	SFTE-JV	Pending finalization of the PDR in relation to the advanced TCLP sampling (proposal stage). DOTr is currently complying with the default EMoP

						methodology (only conducted during tunnelling). Will provide update once the advanced TCLP sampling has been approved.
D.1.16	Regular hauling of excavated materials	General	Monthly photo documentation of excavation works including haul-out of surplus soils during Q3 2023 for NAS, Depot, and QHS were provided during the document review. No excavation works in TSS during this audit period.	Compliant	SFTE-JV	
D.1.17	Storage of surplus soil stockpiles on pads with appropriate soil protection facilities or management systems	NAS, Depot, & QHS	Photo documentation of stockpile management in NAS, Depot, and QHS included monthly photo documentation provided for D.1.16.	Compliant	SFTE-JV	
D.1.18	Repurpose surplus soils for use in other parts of	NAS, Depot, & QHS	Repurpose of hauled-out excess soil c/o of Calymi,	Compliant	SFTE-JV	

	the project		HyperJ, and Amariyah for other land development projects.			
D.1.19	Prepare a traffic plan to manage the ingress and egress of soil/rock-hauling machines	General	TMP was already provided during previous audit periods. With documentation of the implementation of traffic management measures with the LGUs and MMDA.	Compliant	SFTE-JV, OCG	
D.2	<i>Geology and Geomorphology</i>					
D.2.1	Daily visual observation of changes in ground level in and around the construction site	General	Daily visual observation logs for ground leveling in NAS, Depot, QHS, and TSS for Q3 2023 were provided during the document audit.	Compliant	SFTE-JV	
D.2.2.1	Weekly or as needed* measurement of changes in ground level in and around the construction site	NAS, Depot & QHS	Provided daily ground-level instrumentation monitoring logs for NAS, Depot, and QHS covering Q3 2023 during document audit.	Compliant	SFTE-JV	
		TSS	N/A. No ground-level monitoring as of Q3 2023			
D.2.2.2	Conduct of deformational studies as needed	NAS, Depot & QHS	Baseline studies were conducted during the preparation of the tunnel technical design report. For monitoring purposes, daily inclination monitoring is conducted	Compliant	SFTE-JV	

			via instrumentation in NAS, Depot, and QHS.			
D.2.3	Minimize ground disturbance through avoidance of unnecessary excavations	NAS, Depot & QHS	Monthly photo documentation of haul-out and soil dumping of excess soils from NAS, Depot, and QHS during Q3 2023 were provided during the document review.	Compliant	SFTE-JV	
		TSS	N/A. No excavation works for TSS which require haul-out during Q3 2023.			
D.2.4	Ensure that roads repaired after surface works would follow the same slope conditions prior to construction	General	N/A for Q3 2023.	N/A	SFTE-JV	
D.2.5	Installation of piezometers to monitor groundwater pressure	NAS & Depot	Status quo. No additional piezometers installed during Q3 2023 across the CP-101 segment.	Compliant	SFTE-JV	
D.2.6	Perform tunnel deformation analysis and update as necessary	General	[ONE-TIME COMPLIANCE] Included in Ground Movement Analysis provided by OCG. Covers the entire CP-101 segment.	Compliant	SFTE-JV	
D.2.7	Design and construct facilities according to the geomechanical properties	General	Material specifications are included in the Technical Design Report and MSs	Compliant	SFTE-JV	

	of the rock		for CP-101. Material approvals from OCG for acquired materials (i.e., for specific cement mixes and rebar strengths) were presented during previous audit periods. For Q3 2023, no additional purchases have been made.			
D.2.8.1	Properly line tunnel wall with waterproof material	NAS & Depot	Material specifications included in MS for tunnel wall waterproofing.	Compliant	SFTE-JV	
	(Preparation of Method Statement on waterproofing)	QHS	Photo documentation of actual waterproofing activities in QHS during Q3 2023 was provided.			
		TSS	N/A. No existing tunnel wall and D-wall during Q3 2023.			
D.2.8.2	Properly line tunnel wall with waterproof material (Proof of implementation)	NAS & Depot	No additional purchases have been made for Q3 2023. To note, MS for steel ring segment erection and segment sealing have been updated due to addendums for safe work procedure.	Compliant	SFTE-JV	
		QHS	Photo documentation of actual waterproofing activities in QHS during Q3 2023 was provided.			

		TSS	N/A. No existing tunnel wall and D-wall during Q3 2023.			
D.2.9	Ensure that tunnel is sufficiently supported and lined to prevent failure and ingress of groundwater	General	Refer to D.2.8.	Compliant	SFTE-JV	
D.3	<i>Terrestrial Ecology</i>					
D.3.1	Semi-annual ocular inspection of transplanted tree individuals in the off-site area for transplant of earth-balled species and/or reforestation site for replanting appropriate seedlings (1:100 exchange ration); Monitoring of survival rate and mortality rate	General	A.I.: Field activity reports / communication with DENR re: survival rate and mortality rate, and seedling replacements (April to September 2023)		OCG	Confirmed activities for CP-101 tree-cutting, inspection w/ DENR for transplanting trees, and delivery of seedlings (all between July-September 2023). To be submitted as part of the AIs.
D.3.2	Secure earth-balling permits	General	AI: Updated summary of TCBCPs from OCG (July to September 2023) New permit for Depot was also presented during the document audit with SFTE-JV approved on 21	Compliant	OCG	To provide a summary of the additional RFIs.

			September 2023.			
D.3.3	Perform transplanting and earth-balling with a horticulturist/agriculturist	General	Included in the Method Statement for CP-101 Photo documentation of Tree-cutting and earth-balling activity showing members of the team presented during the document audit.	Compliant	OCG	
D.3.4	Conduct maintenance activities to ensure high survival rates of earth-balled species	General	AI: Photo documentation of maintenance activities conducted from July 2023 to September 2023.		OCG	Confirmed activities for CP-101 tree-cutting, inspection with DENR for transplanting trees, and delivery of seedlings (all within July-September 2023). To be submitted as part of the AIs.
D.3.5	Use of light source with directional lighting and screens to concentrate light on operations	NAS, Depot & QHS	Photo documentation of directional lighting for Depot, QHS, and NAS for the months of July, August, and September presented during the	Compliant	SFTE-JV	

			document audit. Photos had time and date stamps.			
		TSS	N/A. No nighttime works, operations only until 1600H			
D.4	<i>Groundwater and Drainage</i>					
D.4.1	Conduct of detailed hydrogeological/ groundwater study in the detailed design stage	General	[ONE-TIME SUBMISSION] Final report containing the hydrogeological study was provided during the Q3 2022 audit. All CP-101 stations were covered.	Compliant	OCG	
D.4.2	Installation of monitoring wells for observation along the subway tunnel and monitor changes of the surrounding groundwater levels	NAS & Depot	Status quo. Condition validated based on on-site observation and yield daily measurements.	Compliant	SFTE-JV	
		QHS & TSS	Completed advanced permitting works. Pending installation of monitoring wells.			
D.4.3	Daily visual observation of the groundwater level and water pressure in and aboveground construction site of the subway tunnel	NAS & Depot	Daily measurements were taken from 4 monitoring wells with monthly monitoring reports (July 2023 to September 2023). Switched from third-party to in-house monitoring. PTD monitoring was conducted (chemical and bacteriological	Compliant	SFTE-JV	

			parameters).			
		QHS & TSS	N/A. Refer to D.4.2, applicable once monitoring wells have been installed.			
D.4.4	Daily visual observation of water leakage in and around the construction site	General	Conducted daily by SFTE-JV as evidenced by log sheet signed by site environmental officer and lead environmental officer (covering July 2023 to September 2023).	Compliant	SFTE-JV	
D.4.5	All trenches and foundation will be backfilled and ground-restored to their original condition	NAS	N/A. Completed backfilling activities.	Compliant	SFTE-JV	
		Depot	Soil backfilling records in Depot from July 2023 to September 2023 were provided during the document audit.			
		QHS	N/A. No backfilling activities during Q3 2023.			
		TSS	N/A. No backfilling activities are ongoing.			
D.4.6	Temporary drainage and detention cum siltation ponds can be constructed to mitigate localized flooding	NAS	SFTE-JV photo documentation of control measures on-site -- drainages and siltation pits (w/ oil-water separator). Maintenance of drainages and siltation pits conducted regularly and/or as needed.	Compliant	SFTE-JV	

		Depot	SFTE-JV photo documentation of control measures on-site such as: 1) drainages (including new storm water drainage), 2) siltation pond (w/ oil-water separator), and 3) sedimentation boxes. Maintenance of drainages, siltation ponds and sedimentation boxes conducted regularly and/or as needed.			
		QHS	Photo documentation of completed sedimentation basin in QHS. Subject to connection to QHS Creek. Perimeter drainage within site completed and regularly maintained.			
		TSS	N/A. As of Q3 2023, TSS is only being used as staging / holding area. Actual TSS site will be located in the middle of Mindanao Ave.			
D.4.7	Stations will be provided with permanent bund walls	NAS	Ventilation system has slab foundation does not require bunding based on existing layout.	Compliant	SFTE-JV	
		Depot	Duct ports have been provided. Slab foundation to be provided.			

		QHS & TSS	N/A. No sub-surface works as of Q3 2023.			
D.4.8	Depot will be provided with a drainage system	Depot	SFTE-JV photo documentation of drainage system connected to the siltation pond. Maintenance of drainages and siltation ponds are conducted regularly and/or as needed.	Compliant	SFTE-JV	
D.4.9	Construction activities along the waterway(s) will be conducted during the drier months of the year or low flows whenever practicable	NAS	N/A. No waterway works for NAS.	Compliant	SFTE-JV	
		Depot, QHS & TSS	<i>Refer to D.4.10.</i>			
D.4.10	Installation of diversion channels, if appropriate	NAS	N/A. No diversion works for NAS.	Compliant	SFTE-JV, DOTr	
		Depot	Method statement for Tullahan River diversion presented by SFTE-JV during previous audit periods. DOTr previously provided CNO from DPWH re: Tullahan River channel diversion. No ongoing diversion works as of Q3 2023.			

		QHS	<p>Method statement for Quirino Creek diversion presented by SFTE-JV during previous audit periods.</p> <p>DOTr previously provided CNO from DPWH re: QHS Creek channel diversion.</p> <p>SFTE-JV provided photo documentation of creek diversion progress from July 2023 to September 2023 during document audit.</p>			
		TSS	<p>Method statement for TSS Creek diversion presented by SFTE-JV during previous audit periods.</p> <p>DOTr previously provided CNO from DPWH re: Tandang Sora Creek channel diversion.</p> <p>SFTE-JV provided photo documentation of creek diversion progress from July 2023 to September 2023 during document audit.</p>			

D.4.11	Potable water will be sourced from local water utility providers	General	Official receipts from the local water utility provider for all stations covering July 2023 to September 2023 were presented.	Compliant	SFTE-JV	
D.4.12	If water supply of people relying on groundwater along the alignment decreases, DOTr shall make arrangements to supply affected people with water	NAS	N/A. No tunneling activities for the NAS-TSS segment during Q3 2023.	Compliant	DOTr, SFTE-JV	
		Depot & QHS	No water-related complaints have been raised regarding TBM operation during Q3 2023 based on the grievance registry.			
		TSS	N/A. No tunneling activities for QHS-TSS-NAS segment during Q3 2023.			
D.4.13	DOTr will coordinate with NWRB regarding tunneling activities along the alignment and its potential effects on the water table	NAS	Acquired PTDs for NAS and along NAS-TSS segment were presented during the previous audit periods.	Compliant	SFTE-JV	
		Depot	Acquired PTDs for Depot and along Depot-QHS segment were presented during the previous audit periods.			

		QHS	Acquired PTDs, in advance, for QHS, and along connecting segments were presented during the previous audit periods. Communication to NWRB re: minor relocation of monitoring wells in QHS was also presented (for QHS, TB1, and CCT)			
		TSS	Acquired PTDs, in advance, for TSS, and along connecting segments were presented during the previous audit periods.			
D.4.14	Secure dewatering permits prior to tunneling activities	NAS & Depot	<i>Refer to Item D.4.13.</i>	Compliant	SFTE-JV	
		QHS	Submitted letter of intent to NWRB for new dewatering/pump wells in QHS (3 water permits to be applied)			
		TSS	<i>Refer to Item D.4.13.</i>			
D.4.15	Secure discharge permits prior to tunneling activities	General	As of Q3 2023, the discharge permit for the WWTF (currently located in Depot for treatment of extracted water from tunneling operations) is undergoing the	Observation	SFTE-JV	Still an ongoing application for the ECM. To resubmit requirements for the DP.

			acquisition process.			Target -- end of Q4 2023 or 1st part of Q1 2024.
D.4.16	Installation of dewatering pumps	NAS	Photo documented by SFTE-JV. Dewatering in cut and cover is done using mobile motorized pumps then drained to the drainage canals. Ground validated.	Compliant	SFTE-JV	
		Depot	Photo documented by SFTE-JV. The dewatering pump in the launching shaft is connected to the siltation pond. Ground validated.			
		QHS	Photo documented by SFTE-JV. The dewatering pump is connected to the temporary site drainage and siltation pond. Ground validated.			
		TSS	Photo documentation of installed dewatering pumps in TSS for trench works and creek realignment was provided.			
D.5	<i>Water Quality</i>					

D.5.1	Weekly* measurement of DO, TSS, and pH of surface water, and visual observation of water turbidity in Tullahan River, San Juan River, and creek near Tandang Sora Avenue	NAS, Depot & TSS	Weekly monitoring reports for San Juan River, Tullahan Rive, and Tandang Sora Creek from July 2023 to September 2023 were presented.	Compliant	SFTE-JV (monitoring activities), DOTr (CMR)	
		QHS	N/A. No established monitoring station. Monitoring of Quirino Creek is not part of the EMoP of the 2019 EPRMP.			
D.5.2	Quarterly [waste]water sampling (BOD, COD, color, TSS, Oil & Grease, Fecal/Total Coliform, pH) of discharge point(s)	NAS, QHS, & TSS	N/A. To be conducted as needed (e.g., there will be domestic discharges directly to the receiving waterway), or as required by EMB NCR.	Compliant	SFTE-JV	

	<i>NOTE: While not indicated in the EMoP, specific parameters to monitor will be aligned with the parameters indicated in the issued discharge permit/s for a particular construction site.</i>	Depot	<p>DP-NCR-22-04022 (LRS), DP-NCR-22-07537 (LS). To follow parameters indicated in the discharge permit. COD NOT included.</p> <p>During Q3 2023, no discharges from the open septic tanks as effluents were siphoned. All effluents will be siphoned moving forward and will be reported to EMB. In lieu of effluent monitoring results, SFTE-JV submitted relevant COTs to DENR-EMB as proof of compliance.</p>			
D.5.3	Designation of buffer zones approximately 5 meters from each bank	NAS	N/A. No ongoing works near or along natural waterways. NAS construction site is about 0.8 km from San Juan River.	Compliant	SFTE-JV	

		Depot	Photo documentation provided for Q3 2023. Retaining walls are installed to maintain buffer between the Tullahan River and Depot construction site. Area adjacent to Tullahan River is used as storage area for construction materials. Inspections are regularly conducted by OCG and SFTE-JV to ensure compliance (refer to A.4).			
		QHS	Retaining walls have been established in portions of QHS as part of the ongoing temporary realignment.			
		TSS	Ongoing steel decking and sheet piling in TSS to avoid excessive bank erosion.			
D.5.4	Ensure that the potential delivery of sediments and other particulate matter into the stream channel will be carefully handled and kept at minimum.	NAS	SFTE-JV photo documentation of control measures on-site such as 1) drainages, 2) siltation pits (w/ oil-water separator), 3) dust suppression, and 4) wheel-washing at designated areas. Maintenance of drainages and siltation pits	Compliant	SFTE-JV	

			conducted regularly and/or as needed.			
		Depot	SFTE-JV photo documentation of control measures on-site such as 1) drainages (including ongoing construction of new stormwater drainage outfall), 2) siltation pond (w/ oil-water separator), 3) sedimentation boxes, 4) dust suppression, and 5) wheel-washing at designated areas. Maintenance of drainages, siltation ponds and sedimentation boxes conducted regularly and/or as needed.			
		QHS	<i>Refer to D.4.6.</i> Implementation of dust suppression, wheel washing, and implementation of speed limits were also documented.			
		TSS	Creek bank management along channels of the creek being diverted.			
D.5.5	Maintain adequate temporary toilet facilities	General	SFTE-JV photo documentation of portalets and temporary CRs and siphoning	Compliant	SFTE-JV	

			manifest forms/COT from July 2023 to September 2023 for all CP-101 sites.			
D.5.6	Strictly require contractor and workers to observe proper waste disposal and sanitation	General	<p>SFTE-JV photo documentation of the implementation of the solid and hazardous waste management plans from July 2023 to September 2023 for all CP-101 stations.</p> <p>SFTE-JV photo documentation of health and sanitation (WW management, DPs, etc.) measures implemented for all CP-101 stations from January to March 2023.</p>	Compliant	SFTE-JV	
D.6	<i>Air Quality</i>					
D.6.1	Quarterly* ambient air quality monitoring (TSP, PM2.5, PM10, NO2, SO2) at the 16 monitoring stations	General	<p>Quarterly monitoring reports for ambient air covering the period from July 2023 to September 2023 were presented during the document audit.</p> <p>Parameters: TSP, PM10, NO2, and SO2 were monitored for 1-hr, while PM2.5 was monitored for</p>	Compliant	SFTE-JV (monitoring activities), DOTr (SMR)	

			<p>24-hr</p> <p>Date of Sampling: NAS- August 7 to 8, 2023 DEPOT- August 10 to 11, 2023 QHS- August 9 to 10, 2023 TSS- August 8 to 9, 2023</p>			
D.6.2	Proper and regular maintenance of construction vehicles and heavy equipment	General	<p>SFTE-JV has submitted photo documentation of the following records for <u>all existing sites</u>, in accordance with its compliance obligations:</p> <p>a.) Updated maintenance records for construction vehicles and heavy equipment from EEL, Bauer, GCSI, and SFTE-JV for Q3 2023.</p>	Compliant	SFTE-JV	
D.6.3	Daily visual observation of dust level supplemented with monthly* interviews regarding dust level in and around the construction site.	General	<p>SFTE-JV has provided photo documentation of the following records for <u>all existing sites</u>, in accordance with its compliance obligations:</p> <p>a.) Daily dust observation report for Q3 2023. b.) Daily log of complaints of dust discomfort from stakeholders for Q3 2023. c.) Monthly interview</p>	Compliant	SFTE-JV	

			reports for Q3 2023.			
D.6.4	Implementation of speed limit and water dust suppression methods to unpaved roads and stockpiles	General	<p>Provided photo documentation of the different control measures that have been implemented in all active sites are listed below:</p> <p>a.) 10 kilometers per hour speed limit signs were</p>	Compliant	SFTE-JV	

			<p>installed at all existing sites, as per the on-site inspection.</p> <p>b.) NAS, Depot, and QHS- provided photo documentation of regular water sprinkling that occurred on the site for the period of Q3 2023.</p> <p>Note: The TSS area is not subject to the regular water sprinkling measure because it is only a temporary staging or holding area. The actual TSS site will be located in the center of Mindanao Ave.</p>			
D.6.5	Regular water sprinkling to control dust generation	NAS, Depot & QHS	<p>Provided photo documentation of control measures on-site such as:</p> <p>a.) dust suppression, and b.) wheel-washing at designated areas conducted regularly and/or as needed.</p>	Compliant	SFTE-JV	

		TSS	N/A. Existing TSS site only serves as staging / holding area. Actual TSS site will be located in the middle of Mindanao Ave.			
D.6.6	Provision of covers for loaded trucks	NAS, Depot & QHS	<p>Provided photo documentation of the following:</p> <p>a.) Truck compartments are covered with tarpaulin to comply with best practices for containing materials during transportation.</p>	Compliant	SFTE-JV	
		TSS	N/A. Existing TSS site only serves as staging / holding area. Actual TSS site will be located in the middle of Mindanao Ave.			
D.6.7	Standard occupational health and safety practices will be implemented pursuant to BWC-DOLE OSH Standards	General	<p>Daily PPE monitoring checklist from SPCI, GCSI, EEI, and Bauer for Q3 2023 provided during documentation audit.</p> <p>For improvement, the following are recommended:</p> <p>a.) Creation of a PPE policy for measures to be more work and site-</p>	Compliant w/ recommendations	SFTE-JV	Safety team will be invited during the next audit periods.

			specific; and b.) Streamline safety to all subcontractors, set strict standards, and ensure proper implementation			
D.6.8	Traffic management guidelines will be included in the induction seminar of workers	General	SFTE-JV has provided photo documentation of the following: a.) Presentation of EHS Training (copies of slides, particularly for the Traffic Management guidelines on pp.79) b.) Safety Induction and Training Attendance for Q2 2023 c.) HSE Minutes of Meeting for Q2 2023	Compliant	SFTE-JV	
D.7	Noise and Vibration					
D.7.1	Conduct of a construction noise and predicted noise study; Approved construction noise assessment (FHWA prediction method) before construction phase	General	[ONE-TIME SUBMISSION] Same documentation submitted by SFTE-JV last Q1 2022 audit applies (photo dated 04 April 2022).	Compliant	OCG, DOTr	
D.7.2	Conduct predicted vibration level study	General	[ONE-TIME SUBMISSION] Same documentation	Compliant	OCG, DOTr	

			submitted by SFTE-JV last Q1 2022 audit applies (photo dated 04 April 2022).			
D.7.3	Quarterly ambient noise level (decibel) monitoring in the monitoring stations co-located with air quality monitoring; Approved method of ambient noise level measurement inside construction sites	General	Quarterly monitoring reports for ambient noise covering the period from July 2023 to September 2023 were presented during the document audit. Date of Sampling: NAS- August 7 to 8, 2023 DEPOT- August 10 to 11, 2023 QHS- August 9 to 10, 2023 TSS- August 8 to 9, 2023	Compliant	SFTE-JV (monitoring activities), DOTr (CMR)	
D.7.4	Construction of wall enclosures on areas that produce a lot of noise	General	Provided photo documentation of control measures installed on-site, such as wall enclosures/acoustic barriers, has been provided.	Compliant	SFTE-JV	
D.7.5	Daily inspection and strict enforcement and maintenance of PPE during workhours; Use of earmuffs and ear plugs for activities with high noise levels	General	Daily PPE monitoring checklist from SPCI, GCSI, EEL, and Bauer for Q3 2023 provided during documentation audit. Also refer to D.6.7.	Compliant	SFTE-JV	

D.7.6	Keep areas with equipment/machines that produce extremely loud noises (>85 decibels) off limits from workers for their safety; Implement permissible noise levels for construction workers as suggested by DOLE	General	<p>Photo documentation of the following records has been provided:</p> <p>a.) Compilation of PTO (Permit to Operate) records.</p> <p>b.) Monitoring Masterlist of Gensets, offering a detailed inventory and status report of all generator sets on-site, facilitating efficient monitoring and maintenance.</p> <p>c.) PTOs for portable air compressors, verifying that the necessary permits have been obtained to operate this specific equipment.</p>	Compliant	SFTE-JV	
D.7.7	Use of equipment or machines that produce lesser noise, or considerations in using mufflers to minimize noise	NAS, Depot & QHS	<p>Photo documentation has been provided for the following records at NAS, Depot, and QHS:</p> <p>a.) Equipment and heavy machinery with mufflers</p> <p>b.) Hearing protection practices on site</p>	Compliant	SFTE-JV	

		TSS	N/A. Existing TSS site only serves as staging / holding area. Actual TSS site will be located in the middle of Mindanao Ave.			
D.7.8	Strategic scheduling of noise and vibration-inducing activities per period within a day	General	<p>The same documentation provided by SFTE-JV for the Q1 2022 audit, with photos dated 04 April 2022, remains applicable for the current audit in Q3 2023. However, additional documents have been provided for this quarter, which include:</p> <p>All existing sites - GCSI, SPCI, and SFTE-JV - have provided updated schedules of activities.</p> <p>AI: Bauer and EEI noise and vibration activities schedule (The schedule of activities for the project has not been provided yet. SFTE-JV is actively working on obtaining these documents and will submit them as soon as they become available.)</p>	Compliant w/ observation	SFTE-JV	Bauer and EEI schedule of activities to be provided.

D.7.9	Installation of vibration control measures: vibration insulating sleeper, sleeper with elastic layer directly fastened track, secondary lining	NAS	N/A. No tunneling activities for NAS-TSS segment during Q2 2023.	Compliant	SFTE-JV	
		Depot	Depot-QHS segment drilling commenced last February 2023. As of Q1 2023 document audit, activity is postponed.			
		QHS	N/A. No tunneling activities for NAS-TSS segment during Q2 2023.			
		TSS	N/A. No tunneling activities for NAS-TSS segment during Q2 2023.			
D.7.10	Inform public about areas that can produce noise level beyond tolerable limits of human ears; Coordinate with LGU regarding health programs for vulnerable groups and the public	General	The same documentation that SFTE-JV submitted for the Q1 2022 audit (with photos dated April 4, 2022) is still applicable.	Compliant	DOTr	
D.7.11	Survey of nearby residential areas regarding public perception and complaints about noise levels (once prior to construction); Daily observation of noise-related complaints	General	<p>Provided comprehensive documentation of the following records for Q3 2023:</p> <p>a.) Daily observation report of noise discomfort b.) Monthly survey of noise related concerns</p>	Compliant	SFTE-JV	

D.7.12	Monthly* interview of local residents and pedestrians regarding noise-related health problems at critical areas affected by construction noise; Weekly or as needed noise meter measurement	NAS	<p>Provided comprehensive photo documentation of the following records for Q3 2023:</p> <p>a.) Monthly Interview Report b.) Weekly Noise Monitoring Report c.) Calibration Certificate of in-house Noise Meter</p>	Compliant	SFTE-JV	
D.8	<i>Climate Change and GHG emissions</i>					
D.8.1	Establishment of comprehensive management systems for climate adaptation; Include climate risk and opportunities in the risk-identification process; Integration of climate-related risks and mitigation measures; Ensure robust engineering design and construction	General	<p>Provided photo documentation of the following records for Q3 2023:</p> <p>NAS, DEPOT, and QHS: Photo documentation of the implementation of Solar Panels</p> <p>Provision of Sedimentation Tank</p>	Compliant	SFTE-JV	

	standards for facilities		<p>Layout Plans for Siltation Ponds, outlining the strategic layout of these tanks to effectively manage and control silt and sediment runoff, preventing water pollution.</p> <p>DEPOT: Photo documentation of Rainwater Collector, indicating the installation of rainwater collection systems for efficient water management and conservation on-site.</p> <p>Flood Control Plan, presenting a comprehensive strategy to mitigate the risk of flooding on-site</p> <p>Provision of Sedimentation Tank Layout Plans for Siltation Ponds, highlighting the design and construction of sedimentation tanks to prevent soil erosion and maintain water quality.</p>			
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D.8.2	Compensate the release of GHG during construction using implementing carbon dioxide capture and sequestration through progressive rehabilitation	General	Greenhouse gas (GHG) inventories for Q3 2023 from EEI, GCSI, SPCI, Bauer, and SFTE-JV have not yet been provided. AI: Complete GHG inventory for Q3 2023	Observation	SFTE-JV	GHG inventory is already done. Pending official transmittal.
D.8.3	Subcontractors are to undergo emission testing before contract award	General	Provided photo documentation of the following records: a.) In-house vehicle emission testing for SFTE-JV and subcontractor-owned vehicles was conducted on November 25, 2022, and December 2, 2022 b.) Provision of construction vehicles' official receipt and certificate of registration (OR-CR) utilized by Bauer	Compliant	SFTE-JV	
D.8.4	Fuel-burning equipment will be managed through the utilization of low-sulfur fuel where possible	General	Same documentation submitted by SFTE-JV for Q1 2022 audit applies (photo dated 04 April 2022).	Compliant	SFTE-JV	
D.8.5	Scheduling use of vehicles and equipment to maximize fuel efficiency; Equipment dispatch will be monitored closely in	General	Provision of Monitoring Masterlist of Monthly Vehicle Dispatch of EEI, Bauer, GCSI, and SPCI for Q3 2023	Compliant	SFTE-JV	

	order to eliminate unnecessary use					
D.8.6	Equipment and vehicle loadings will be optimized through accurate monitoring and calculation of fuel requirements.	General	Provided photo documentation of the fuel consumption for Q3 2023 from SFTE-V, Bauer, EEL, GCSI, and SPCI	Compliant	SFTE-JV	

Table 65. 3rd Quarter CY 2023 TPA Summary of Findings for CP 103.

Item	Requirement	Project Component	Audit Findings and Onsite Observations	Compliance	Responsible Group	Action Items
A	ECC-CO-1708-0017 Annex A: Conditions and Restrictions					
A.1.1	Conduct an effective and continuing Information, Education, and Communication (IEC) Program through the use of most effective media to inform and educate all stakeholders, especially the contractors, workers, LGUs, businesses, and	CAS		N/A		
A.1.2		CAS		N/A		

	local residents about the following: (a) Project impacts and mitigating measures embodied in its EIS; (b) Conditions stipulated in this Certificate; (c) Environmental and human safety features of the project, and (d) Health consciousness alerts for any project-induced discomfort (from dust, smell, noise, vibration) as the project progresses throughout the whole route.					
A.2.1	Preparation of a comprehensive Social Development Program (SDP)	CAS		N/A		
A.2.2	Implementation of a comprehensive Social Development Program (SDP)	CAS		N/A		
A.2.3	Submit a separate SDP report together with the CMR to EMB-CO on a semi-annual basis	CAS		N/A		
A.3.1	Submit a detailed waste management program for proper handling, collection, and disposal of solid, hazardous, and liquid waste within 6 months prior to project construction	CAS	As of Q3 2023, ongoing review and approval of WMP as a component of the CEMMP.	Observation	SMCC, OCG	Revisions (Rev4) made for the CEMMP. Endorsed to document review team. To be submitted to OCG and DOTr.
A.3.2	Proof of implementation of a detailed waste management program shall be submitted	CAS	Provided COTs of hauled-out waste from CAS.	N/A	DOTr	

	together with the CMR Note: No required CMR submission this Q3 2023		Hauling is done on an as-needed basis based on the volume of solid wastes.			
A.4	Ensure that all existing waterways affected by the proposed project construction are maintained and not obstructed	CAS	N/A. No natural waterways traversing the construction area of CAS.	N/A	SMCC	
A.5.1	Submit a detailed demobilization plan for the construction yards within 6 months prior to project construction <i>Note: Post-construction site plans</i>	CAS	Demobilization (future plans / post-construction site plans) for CP-103 has not yet been provided. AI: Future site development plans annexed in the revised CEMMP	Non-Compliant	DOTr & OCG	As of October 2023, the demobilization plan for CP-103 is being revised. Future plans are annexed in the revised CEMMP. To be provided. For station plaza -- ongoing re-design. Initial design to be provided.
A.5.2	Submit a detailed demobilization plan for the construction yards within 6 months prior to project construction <i>Note: Detailed construction demobilization plan of contractor</i>	CAS	Construction demobilization plan provided during document audit.	Compliant	SMCC	

A.6	Submit a detailed plan for earth balling and replanting of mature native/endemic trees within 6 months prior to project construction	CAS	<p>[ONE-TIME COMPLIANCE]</p> <p>Provided Method Statement for Tree-cutting and Earth balling (draft; 22 March 2023). Ongoing review by DENR of the draft method statement.</p> <p>AI: Updated copy of the MS for tree-cutting and earth-balling</p>	Observation	OCG	Latest revision (Rev4) dated 08 August 2023. Ongoing finalization of the MS by SMCC.
A.7	Submission of an approved Resettlement Action Plan (RAP) of the affected communities within 6 months prior to project construction	CAS		N/A		
A.8.1	The proponent shall set up a readily available and replenishable Environmental Guarantee Fund (EGF)	CAS	3rd revision previously provided (23 January 2023). DOTr to confirm if there is already a final MOA.	Observation	DOTr	Inquired directly to DENR-EMB, for the operation phase. O&M is requesting to go back to include again the operational phase in the MOA. DOTr already

						<p>done initial discussion on the trust fund. Ongoing finalization of the EGF MOA with the operational phase. Est. amount of ~35M. To provide draft MOA.</p> <p>Latest meeting w/ DENR-EMB on 25 July 2023.</p> <p>Update: restructuring of the MOA to not include the operation phase (only construction phase.)</p>
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A.8.2	The proponent shall establish a Multi-partite Monitoring Team (MMT)	CAS	"EMB-CO approved the engagement of a TPA in lieu of forming a MMT (dated 14 February 2022) Note: For this current audit period, the proponent should submit the TPA report from the previous audit period for compliance."	Observation	DOTr	No submission yet. Ongoing review of the format of the TPA report. Per checking of DOTr, all finalized reports will be submitted directly to DENR-EMB for the SA2 2023 submission.
A.8.3	The proponent shall establish a replenishable Environmental Monitoring Fund (EMF) to cover all costs attendant to the operation of the MMT	CAS	N/A. EMB-CO approved the engagement of a TPA in lieu of forming an MMT. Refer to Item A.8.2.	N/A		

A.9	Establish an Environmental Unit (EU) within 60 days from receipt of the ECC that shall competently handle the environment-related aspects of the project	CAS	SMCC to formalize organizational chart of their EU and submit to OCG & DOTr for acknowledgment A.I.: Acknowledgement from OCG & DOTr on org chart changes within SMCC EU	Observation	SMCC	EU is included in the CEMMP, acknowledgment to be given together.
A.10	The proponent shall ensure that contractors and sub-contractors are provided with copies of the ECC and that they will strictly comply with the relevant conditions	CAS	[ONE-TIME SUBMISSION] Updated summary table of contractors for the entire MMSP (provided 10 May 2023) provided. Contractors for CP-105, CP-108, CP-109, and AWP3 -- TBA.	Compliant	OCG	
		CAS	Provide an updated summary table of sub-contractors	Compliant	SMCC	

			detailing their assigned scope of work (type of work, specific area/facility, etc.), and date of engagement.			
		CAS	[ONE-TIME SUBMISSION] Draft CEMMP for CP-103 provided. Waiting for final and approved copy.	Observation	SMCC. DOTr	CEMMP ongoing revision (Rev4), to be submitted to OCG and DOTr.
		CAS	SMCC to formally provide subcontractors with copies of ECC & EMMoP, and proof of transmittal and receipt.	Compliant	SMCC. DOTr	
A.11	No activities shall be undertaken until and unless disposal sites of excavated materials have been identified, duly covered by agreements, and have been permitted in accordance with the law. Proof of compliance shall be filed with the Regional Office with jurisdiction over the disposal area	CAS	Calymi (sub-contractor of Bauer, which is a sub-contractor of SMCC) will be commissioned for transport and disposal of excess soils. Proposed	Compliant	SMCC. DOTr	Obando, Bulacan site to check access for visit. Also recommending including AFP spoils disposal site (to be verified w/ AFP if possible).

			<p>disposal site is located in Brgy. Panghulo, Obando, Bulacan. Disposal site already has an ECC (ECC-OL-R03-2022-0451).</p> <p>As of 04 July 2023, Calymi has passed pre-qualification requirements. Initial site walkthrough of the disposal site was done on 15 September 2023 with OCG and DOTr. All hauling and dumping of surplus soils are photo-documented.</p>			Letter sent to AFP to inquire on another disposal site under AFP management.
A.12	No activities shall be undertaken other than what was stipulated in the final EIS. Any expansion/ modification of the project beyond the project description or change in alignment/ route that will cause significant impacts to	CAS		Compliant	DOTr, OCG	

	the environment will be subject to a new EIA					
A.13	In case of transfer of ownership of this project, the same conditions and restrictions shall apply to the transferee or grantee who shall secure in writing the corresponding amendment of the ECC	CAS	N/A. No transfer of ownership as of Q3 2023.	N/A		
B	ECC-CO-1708-0017 Annex B: Project Assessment Planning Tool					
B.1	Compliance with the Revised National Structural Code of the Philippines	CAS	Started application for building permit. No approved documents and inspection report available during the audit.	Observation	SMCC	Ongoing application.
B.2	Compliance with the Sanitation Code of the Philippines	CAS	Waiting for the approval of building permit	Observation	SMCC	Ongoing application.
B.3	Compliance with the Labor Code of the Philippines	CAS	AI: (1) policy/program on discrimination and gender equality, (2) Proof of training for the mandatory 8hrs OSH training, and (3) monthly WAIR	Observation	SMCC	SMCC to provide the AI in the Gdrive folder.

B.4	Compliance with the Building Code of the Philippines	CAS	Same as Item B.1 (RFI 26).	Observation	SMCC	Ongoing application.
B.5	Compliance with the Ecological Solid Waste Management Act	CAS	<p>Compilations of manifest forms were presented during document review. Covers all hauling out of solid waste during Q3 2023.</p> <p>For HazWaste generator's ID, ongoing application. Subject to addressing of additional comments from DENR-EMB.</p>	Compliant	SMCC	
B.6	Priority employment shall be given to qualified local residents. Opportunities for qualified PWDs, women, senior citizens, where possible, shall be considered. Adequate public information for jobs available to local residents in the affected areas will be provided.	CAS		N/A		
B.7	Conduct a detailed Traffic Impact Assessment (TIA) in coordination with the MMDA and concerned	CAS	Final TIA report with coordination	Compliant	OCC, DOTr	

	LGU		with LGUs previously provided during Q1 2023. Covers the entire alignment.			
B.8	An inclined drilling program should be designed and carried out for the segment(s) of the subway along the West Valley Fault (e.g. Cayetano Station). The design of the drilling program and interpretation of results should be done in consultation with PHIVOLCS. Based on the DED, the proponent may consider realignment of subway from the fault while maintaining Cayetano Station.	CAS		N/A		
C	2019 and 2021 Amendments of ECC-CO-1708-0017					
C.1	The modified alignment and construction of additional stations and facilities shall strictly conform with the modified design submitted for the purposes of amending the ECC	CAS	[As-needed basis] Provided document basis for the minor ECC amendment in 2021.	Compliant	DOTr	
C.2	The areas designated for relocation of affected settlers shall be made available to include fair and just compensation of damages/disturbances as	CAS		N/A		

	determined by the concerned authorities prior to project construction					
D	Compliance with the EMP and EMoP					
ENVIRONMENTAL COMPONENT						
D.0	Regular reporting of environmental monitoring activities to DENR-EMB (Submission of CMR and SMR)	CAS	N/A. CMR submission is not applicable during this audit period.	N/A	DOTr	
		CAS	N/A. Submission is not required as there are no permits under DOTr in CP-103.	N/A	DOTr	
		CAS	SMCC submitted their Q3 2023 SMR last 14 October 2023 based on the status documentation provided. Ongoing evaluation by EMB, subject to acceptance.	Compliant	SMCC	
D.1	<i>Waste and Spoil Management</i>					
D.1.1	Daily visual observation of solid waste management and disposal in the construction site	CAS	Provided waste segregation monitoring checklist for Q3 2023. Proof of	Compliant	SMCC	

			compliance is supported by available photo documentation (started August 2023) and COTs.			
D.1.2	Monthly reporting of solid waste management and disposal method (as attachment in the CMR)	CAS	Photo documentation were presented during the document audit.	N/A	DOTr	
D.1.3	Daily visual observation of hazardous waste management and disposal in the construction site	CAS	Provided waste segregation monitoring checklist and hazardous waste leakage monitoring checklist for Q3 2023. Proof of compliance is supported by available photo documentation (started August 2023).	Compliant	SMCC	
D.1.4	Monthly reporting of hazardous waste management and disposal in the construction site (as attachment in the CMR)	CAS	Photo documentation were presented during the document audit.	N/A	DOTr	
D.1.5	Daily visual observation of the condition of oil and fuel storage,	CAS	N/A. As of Q3 2023, SMCC is	N/A	SMCC	

	and chemical injection method in the construction site		purchasing daily fuel amount needs directly from the nearest gas station. No oil and fuel storage area with CAS as of this audit period, subject to finalization of facility location.			
D.1.6	Daily visual monitoring for any spill/leakage of hazardous materials	CAS	Daily leakage inspection checklist for Q3 2023 provided.	Compliant	SMCC	
D.1.7	Installation of adequate hazardous waste facilities with proper containment	CAS	Temporary hazardous waste storage area available on-site. For HazWaste Storage Area, awaiting approval of the WMP prior to development. Design and write-up for the facility already available. AI: Provide documentation	Observation	SMCC	Improvements were made for the temporary storage area. Documentation was attached to the site observation registry.

			of improvements made on the temporary HazWaste storage facility			
D.1.8	Registration of the proponent as a hazardous waste generator	CAS	Ongoing application with EMB based on status documentation from 03 October 2023. SMCC to address additional comments on their application for issuance of their HazWaste generator's ID.	Observation	SMCC	Additional information requested by EMB were submitted during September 2023.
D.1.9	Storage of fuel and chemicals in appropriate storage area provided with secondary containment in case of spills	CAS	As of Q3 2023, no permanent fuel and chemical storage area. For daily fuel needs, SMCC is purchasing from the nearest gas station.	Observation	SMCC	Fuel storage area -- will depend on the progress of hand-over of properties to SMCC. Ongoing construction for chemical storage area.

D.1.10	Collection of hazardous wastes in proper receptacle and by a DENR-accredited hauler	CAS	<p>Temporary hazardous waste storage area available on-site.</p> <p>For HazWaste Storage Area, awaiting approval of the WMP prior to development. Design and write-up for the facility already available.</p> <p>AI: Provide documentation of improvements made on the temporary HazWaste storage facility</p>	Observation	SMCC	Improvements were made for the temporary storage area. Documentation was attached to the site observation registry.
D.1.11	Treatment of hazardous wastes by a DENR-accredited hauler	CAS	No HazWaste Generator's ID yet, hence, cannot contract TSD service provider. However, based on status documentation provided during the document	N/A	SMCC	

			review, SMCC is currently addressing additional comments on their application for HazWaste generator's ID.			
D.1.12	Use of strong, durable, and non-reactive materials for buried components	CAS	Material specifications included in the MS for removal of existing drainage (Rev2, as of 09 May 2023). Materials request form for PVC pipes from July 2023 were also presented during the document review.	Compliant	SMCC	
D.1.13	Daily visual observation of proper waste management and disposal of surplus soil in the construction site and disposal site	CAS	Excavation records for Q3 2023 were provided. Photo documentation of surplus soil haul out and dumping was also presented.	Compliant	SMCC	

D.1.14	Monthly reporting of proper waste management and disposal of surplus soil in the construction site and disposal site (as attachment in the CMR)	CAS	Photo documentation of surplus soil handling was provided during the document review.	N/A	DOTr	
D.1.15	Toxicity Characteristic Leaching Procedure (TCLP) monitoring of heavy metal levels (Cd, Cr (VI), Hg, Se, Pb, As, F and B) in surplus soil at the construction site and disposal site	CAS	N/A. Not yet applicable at this stage of the project. However, in preparation: SMCC to coordinate with OCG and DOTr on required sampling method.	N/A	SMCC, OCG, DOTr	
D.1.16	Regular hauling of excavated materials	CAS	Provided excavation and haul-out schedule, and photo documentation of haul-out of excavated materials during document review.	Compliant	SMCC	
D.1.17	Storage of surplus soil stockpiles on pads with appropriate soil protection facilities or	CAS	No stockpiles present during the on-site audit.	Compliant	SMCC	

	management systems		Surplus soils are regularly hauled out by the third-party hauler (Calymi).			
D.1.18	Repurpose surplus soils for use in other parts of the project	CAS	Agreement between SMCC and Bauer (w/ Calymi) regarding the re-use of surplus soils from CAS construction site to Obando disposal site.	Compliant	SMCC, DOTr	
D.1.19	Prepare traffic plan to manage the ingress and egress of soil/rock hauling machines	CAS	With detailed traffic control plan (TCP Rev 1 dated 01 Jul 23, no signature from the approvers) is included in the CEMMP. TCP is outdated, and needs to be revised. Also provided traffic flow plan, dated 30 Sep 23. MoMs and photo documentation were provided as proof.	Compliant	SMCC, OCG	

D.2	<i>Geology and Geomorphology</i>					
D.2.1	Daily visual observation of changes in ground level in and around the construction site	CAS	Provided daily activity reports on ground level survey during document review. Currently with 7 survey points based on provided activity report.	Compliant	SMCC	
D.2.2.1	Weekly or as needed* measurement of changes in ground level in and around the construction site	CAS	Provided daily activity reports on ground level survey during document review. Currently with 7 survey points based on provided activity report.	Compliant	SMCC	
D.2.2.2	Conduct of deformational studies as needed	CAS	Methodology for deformational studies Included in method statement for monitoring plan for excavation for Top-down Method at CAS. Monitoring plan	Observation	SMCC, OCG	

			<p>covers: 1) deformation of retaining walls, 2) GW level, 3) structural displacement, 4) differential settlement of inclination of structure, 5) settlement of ground surface.</p> <p>Recommendation: Execute deformational studies in preparation for full-blown construction activities.</p>			
D.2.3	Minimize ground disturbance through avoidance of unnecessary excavations	CAS	Provided excavation schedule for Q3 2023. As additional proof of compliance, excavation records were provided.	Compliant	SMCC	
D.2.4	Ensure that roads repaired after surface works would follow the same slope conditions prior to construction	CAS	N/A. No ongoing public road repairs as of Q3 2023.	N/A	SMCC	

D.2.5	Installation of piezometers to monitor groundwater pressure	CAS	Two (2) monitoring wells (piezometers) are currently installed in CAS. Ongoing daily checking of water level.	Compliant	SMCC	
D.2.6	Perform tunnel deformation analysis and update as necessary	CAS	Tunnel deformation analysis was conducted by JICA during the DED study phase based on the TBM Design Calculation for CP-103.	Compliant	SMCC, OCG	
D.2.7	Design and construct facilities according to geomechanical properties of the rock	CAS	MS and design report on construction of permanent facilities to be prepared by SMCC Design Team and then submitted to OCG for review and approval.	Observation	SMCC	
D.2.8.1	Properly line tunnel wall with waterproof material (Preparation of Method Statement on waterproofing)	CAS	MS for tunnel wall waterproofing c/o of SMCC Design Team	Observation	SMCC, OCG	

			and then submitted to OCG for review and approval.			
D.2.8.2	Properly line tunnel wall with waterproof material (Proof of implementation)	CAS	Actual waterproofing of tunnel wall to be checked once tunnel wall and D-wall construction commence.	N/A	SMCC, OCG	
D.2.9	Ensure that tunnel is sufficiently supported and lined to prevent failure and ingress of groundwater	CAS	<i>Refer to Item D.2.8.</i>	N/A	SMCC, OCG	
D.3	<i>Terrestrial Ecology</i>					
D.3.1	Semi-annual ocular inspection of transplanted tree individuals in the off-site area for transplant of earth-balled species and/or reforestation site for replanting appropriate seedlings (1:100 exchange ration); Monitoring of survival rate and mortality rate	CAS	Photo documentation of inspection transplanted tree was provided during document audit Note: Only one (1) tree was transplanted for Camp Aguinaldo Station. The tree was transplanted last April 2023	Compliant	OCG, SMCC	

			near the Firing Range within the Camp Aguinaldo Compound. 100% survival rate.			
D.3.2	Secure earth-balling permits	CAS	Included in Summary of TCPBs (from OCG) Note: No tree cutting or earth-balling activities during the 2nd Quarter, yet to apply for trees for unacquired lots AI: Updated summary of TCPBs from OCG (July to September 2023)		OCG	To be provided by OCG.
D.3.3	Perform transplanting and earth-balling with a horticulturist/agriculturist	CAS	Included in Method Statement for CP-103 AI: Status of method statement	Compliant	OCG	

D.3.4	Conduct of maintenance activities to ensure high survival rates of earth-balled species	CAS	Photo documentation of maintenance activities presented during document audit.	Compliant	OCC, SMCC	
D.3.5	Use of light source with directional lighting and screens to concentrate light on operations	CAS	Photo documentation of directional lighting during night works for the months of July, August, and September 2023 provided during the document audit.	Compliant	SMCC	
D.4	<i>Groundwater and Drainage</i>					
D.4.1	Conduct of detailed hydrogeological/ groundwater study in the detailed design stage	CAS	[ONE TIME COMPLIANCE] Submitted during Q1 2023 audit period.	Compliant	OCC	
D.4.2	Installation of monitoring wells for observation along the subway tunnel and monitoring change of the surrounding groundwater levels	CAS CAS	Two (2) monitoring wells (piezometers) are currently installed in CAS. Ongoing daily checking of groundwater level.	Compliant	SMCC	

D.4.3	Daily visual observation of the groundwater level and water pressure in and aboveground construction site of the subway tunnel	CAS CAS	Ongoing daily measurement of groundwater level based on Q3 2023 reports provided.	Compliant	SMCC	
D.4.4	Daily visual observation of water leakage in and around the construction site	CAS	Provided daily site water leakage inspection records for Q3 2023. Prepared by safety aide, with signoff from PCO.	Compliant	SMCC	
D.4.5	All trench and foundation will be backfilled and ground-restored to its original condition	CAS	Site progress report includes photo documentation of backfilling works for Q3 2023 (July (for Kingpost), August (for Kingpost), and September (for Kingpost))	Compliant	SMCC	
D.4.6	Temporary drainage and detention cum siltation ponds can be constructed to mitigate localized flooding	CAS	Full completion of ECP and maintenance works are documented in the site progress report.	Compliant	SMCC	

D.4.7	Stations will be provided with permanent bund walls	CAS	N/A at this stage of the project.	N/A	SMCC	
D.4.8	Depot will be provided with a drainage system	CAS	N/A. For CP-101 ONLY.	N/A	N/A	
D.4.9	Construction activities along waterway(s) will be conducted during the drier months of the year or during low flows whenever practicable	CAS	N/A. No waterway situated immediately within the existing project construction sites. Nearest waterways: Diliman Creek and Corinthian Garden Creek.	N/A	N/A	
D.4.10	Installation of diversion channels, if appropriate	CAS	N/A. Based on document audit, no channel diversion works applicable to CP-103.	N/A	N/A	
D.4.11	Potable water will be sourced from local water utility providers	CAS	Potable water in construction site and site office are from SMCC refilling station. W/ laboratory certificate. Monthly official receipts from	Compliant	SMCC	

			local water utility providers within Q3 2023 were provided.			
D.4.12	If water supply of people relying on groundwater along the alignment decreases, DOTr shall make arrangements to supply affected people with water	CAS	N/A. To apply once tunneling activities in CP-103 commence.	N/A	DOTr	
D.4.13	DOTr will coordinate with NWRB regarding tunneling activities along the alignment and its potential effects on the water table	CAS	Inquiry on technical permits submitted October 16, 2023. Requirements for PTD submitted on September 06, 2023, for new monitoring well (near Bauer Office). For existing monitoring wells (w/ receiving copy of submitted requirements for PTD applications)	Compliant	SMCC	
D.4.14	Secure dewatering permits prior to tunneling activities	CAS	Inquiry on technical permits submitted October 16, 2023.	Observation	SMCC	PTDs for monitoring wells -- status quo. No permits have

			<p>Requirements for PTD submitted on September 06, 2023, for new monitoring well (near Bauer Office).</p> <p>For existing monitoring wells (w/ receiving copy of submitted requirements for PTD applications)</p>			<p>been issued by NWRB. Documents have been prepared by pending signature of the NWRB director.</p> <p>For the existing wells, the letter submitted was considered as sufficient.</p>
D.4.15	Secure discharge permits prior to tunneling activities	CAS	N/A. Discharge permit related to discharge of extracted groundwater not yet required based on ongoing construction activities in CAS as of Q3 2023.	N/A	SMCC	
D.4.16	Installation of dewatering pumps	CAS	N/A. No dewatering pumps installed as of Q3 2023 as ongoing construction	N/A	SMCC	

			works are limited to surface works.			
D.5	Water Quality					
D.5.1	Weekly* measurement of DO, TSS and pH of surface water, and visual observation of water turbidity in Tullahan River, San Juan River, and creek near Tandang Sora Avenue	CAS	<p>N/A. Weekly monitoring of Diliman Creek and Corinthian Creek are not part of the EMoP, but part of baselining activities prior to commencement of construction activities.</p> <p>For proponent to consider adjusting monitoring requirements for Diliman Creek and Corinthian Creek due to the distance of the two waterways from the project construction site. Subject to negotiation with DENR-EMB.</p>	N/A	SMCC, DOTr	

D.5.2	<p>Quarterly [waste]water sampling (BOD, COD, color, TSS, Oil & Grease, Fecal/Total Coliform, pH) of discharge point(s)</p> <p><i>NOTE: While not indicated in the EMoP, specific parameters to monitor will be aligned with the parameters indicated in the issued discharge permit/s for a particular construction site.</i></p>	CAS	<p>N/A. No existing domestic WWTF which generate effluents.</p> <p>Baseline sampling (ambient WQ) conducted in Diliman and Corinthian Garden creeks last March 2023. Covers the following parameters: BOD, color, DO, O&G, temperature, fecal coliform, and pH.</p>	N/A	SMCC	
D.5.3	Designation of buffer zones approximately 5 meters from each bank	CAS	<p>N/A. No waterway situated immediately within the existing project construction sites. Nearest waterways: Diliman Creek and Corinthian Garden Creek.</p>	N/A	N/A	

D.5.4	Ensure that the potential delivery of sediments and other particulate matter into the stream channel will be carefully handled and kept at minimum	CAS	ECP in CAS completed. Additionally, sedimentation chambers were installed at a point prior to connection to the public sewer system. Dust suppression and wheel-washing activities were also observed. Surplus soils are immediately hauled out of site.	Compliant	SMCC	
D.5.5	Maintain adequate temporary toilet facilities	CAS	Photo documentation of portalets available on-site provided during document review. Manifest forms and COTs for Q3 2023 as proof. Portalets were already transported to Baliuag temporary yard	Compliant	SMCC	

			since permanent CR was already built, connected to a closed septic tank.			
D.5.6	Strictly require contractor and workers to observe proper waste disposal and sanitation	CAS	Photo documentation of solid waste hauling (by third-party hauler w/ certificate of recycling) for Q3 2023, toolbox meeting record on housekeeping practices (w/ photo documentation), and manifest forms and COTs as proof of siphoning of portalets were all presented during the document audit.	Compliant	SMCC	
D.6	<i>Air Quality</i>					
D.6.1	Quarterly* ambient air quality monitoring (TSP, PM2.5, PM10, NO2, SO2) at the 16 monitoring stations	CAS	Quarterly Monitoring Reports for Ambient Air Quality for Q3	Compliant	SMCC, DOTr	

			<p>period were presented during the document audit.</p> <p>Parameters: TSP, PM10, NO2, and SO2 were monitored for 1-hr, while PM2.5 was monitored for 24-hr</p> <p>Station: Blueridge A. Multipurpose Hall and inside CA</p> <p>Date of Sampling: August 30-31, 2023.</p>			
D.6.2	Proper and regular maintenance of construction vehicles and heavy equipment	CAS	<p>Provided photo documentation of the following records for the Q3 2023 audit period:</p> <p>a.) Updated maintenance records of</p>	Compliant	SMCC	

			<p>construction vehicles and heavy equipment, showcasing diligent monitoring and maintenance practices to ensure operational efficiency and compliance with regulatory requirements.</p>			
D.6.3	<p>Daily visual observation of dust level supplemented with monthly* interview regarding dust level in and around the construction site</p>	CAS	<p>Provided photo documentation of the following records for the Q3 2023 audit period:</p> <ul style="list-style-type: none"> a.) Monthly Climate Report b.) Photo documentation of daily visual observation c.) Monthly interview survey 	Compliant	SMCC	

D.6.4	Implementation of speed limit and water dust suppression methods to unpaved roads and stockpiles	CAS	<p>Provided photo documentation of the following records for the Q3 2023 audit period:</p> <p>a.) 10 kilometers per hour speed limit signs were installed at all existing sites, as per the on-site inspection.</p> <p>b.) Provided photo documentation of regular water sprinkling that occurred on the site for the period of Q3 2023.</p>	Compliant	SMCC	
D.6.5	Regular water sprinkling to control dust generation	CAS	<p>Provided photo documentation of the on-site implementation of various control measures, which includes:</p> <p>a.) dust</p>	Compliant	SMCC	

			suppression, and b.) wheel- washing at designated areas conducted regularly and/or as needed.			
D.6.6	Provision of covers for loaded trucks	CAS	Provided photo documentation of the following: a.) Truck compartments are covered with tarpaulin to comply with best practices for containing materials during transportation.	Compliant	SMCC	
D.6.7	Standard occupational health and safety practices will be implemented pursuant to BWC-DOLE OSH Standards	CAS	Provided PPE policy dated 25 May 2023. Use of proper PPEs were also discussed during toolbox meetings and photo documentations were provided	Compliant	SMCC	

D.6.8	Traffic management guidelines will be included in the induction seminar of workers	CAS	Provided copy of presentation used for induction seminars, attendance sheet, and photo documentation.	Compliant	SMCC	
D.7	<i>Noise and Vibration</i>					
D.7.1	Conduct of a construction noise and predicted noise study; Approved construction noise assessment (FHWA prediction method) before construction phase	CAS	[ONE-TIME SUBMISSION] Same documentation submitted by OCG and DOTr last Q1 2022 audit applies (photo dated 04 April 2022).	Compliant	SMCC; OCG; DOTr	
D.7.2	Conduct predicted vibration level study	CAS	[ONE-TIME SUBMISSION] Same documentation submitted by OCG and DOTr last Q1 2022 audit applies (photo dated 04 April 2022).	Compliant	SMCC; OCG; DOTr	
D.7.3	Quarterly ambient noise level (decibel) monitoring in the	CAS	Quarterly monitoring	Compliant	SMCC; OCG; DOTr	

	monitoring stations co-located with air quality monitoring; Approved method of ambient noise level measurement inside construction sites		reports for ambient noise levels for Q3 period were presented during the document audit. Parameters: for 24-hr monitoring Station: Blueridge A. Multipurpose Hall and inside CA Date of Sampling: August 30-31, 2023			
D.7.4	Construction of wall enclosures on areas that produce a lot of noise	CAS	Provided photo documentation of control measures installed on-site, such as wall enclosures/acoustic barriers, has been provided.	Compliant	SMCC	
D.7.5	Daily inspection and strict enforcement and maintenance of PPE during work hours; Use of earmuffs and ear plugs for	CAS	PPE monitoring includes a list of issuances of PPEs. Daily	Compliant	SMCC	

	activities with high noise levels		toolbox meetings to include inspection of PPEs. Also issuing notice of violations to those workers not wearing proper PPEs.			
D.7.6	Keep areas with equipment/machines that produce extremely loud noises (>85 decibels) off limits from workers for their safety; Implement permissible noise levels for construction workers as suggested by DOLE	CAS	Photo documentation has been provided of the following on-site control measures: a.) Proof of on-going application of PTO (Permit to Operate) b.) Installation of hearing protection signage within the site c.) Equipment/machines that produce extremely loud noise	Compliant	SMCC	

D.7.7	Use of equipment or machines that produce lesser noise, or considerations in using mufflers to minimize noise	CAS	<p>Photo documentation has been provided of the following on-site control measures:</p> <p>a.) Equipment Manuals & Brochures: The documentation includes equipment manuals and brochures, specifying the specific noise emissions of particular equipment and vehicles.</p> <p>b.) Equipment and heavy machinery with mufflers</p> <p>c.) Hearing protection practices on site</p>	Compliant	SMCC	
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D.7.8	Strategic scheduling of noise and vibration-inducing activities per period within a day	CAS	Updated schedules of activities have been provided, indicating which activities will produce noise and vibration.	Compliant	SMCC	
D.7.9	Installation of vibration control measures: vibration insulating sleeper, sleeper with elastic layer directly fastened track, secondary lining	CAS	N/A. To apply once tunneling activities in CP-103 commence.	N/A	SMCC	
D.7.10	Inform public about areas that can produce noise level beyond tolerable limits of human ears; Coordinate with LGU regarding health programs for vulnerable groups and the public	CAS	Refer to Item A.1.1	Compliant	DOTr	
D.7.11	Survey of nearby residential areas regarding public perception and complaints about noise levels (once prior to construction); Daily observation of noise-related complaints	CAS	Provided comprehensive documentation of the following records for Q3 2023: a.) Daily observation report of noise discomfort	Compliant	SMCC	
D.7.12	Monthly* interview of local residents and pedestrians	CAS	Provided monthly	Compliant	SMCC	

	regarding noise-related health problems at critical areas affected by construction noise; Weekly or as needed noise meter measurement		interview survey regarding noise			
D.8	<i>Climate Change and GHG emissions</i>					
D.8.1	Establishment of comprehensive management systems for climate adaptation; Include climate risk and opportunities in the risk-identification process; Integration of climate-related risks and mitigation measures; Ensure robust engineering design and construction standards for facilities	CAS	Photo documentation of the following on-site control measures: a.) Implementation of solar panels on-site, weather station installed on-site This station aids in monitoring weather conditions, enabling SMCC to make informed decisions and prepare for potential weather-related challenges.	Compliant	SMCC, OCG	

D.8.2	Compensate the release of GHG during construction by means of implementing carbon dioxide capture and sequestration through progressive rehabilitation	CAS	Photo documentation of the following on-site control measures: a.) Implementation of solar panels on-site, weather station installed on-site This station aids in monitoring weather conditions, enabling SMCC to make informed decisions and prepare for potential weather-related challenges.	Compliant	SMCC, OCG	
D.8.3	Subcontractors to undergo emission testing prior to contract award	CAS	Photo documentation of the greenhouse gas (GHG) inventories for Q3 2023	Compliant	SMCC	
D.8.4	Fuel burning equipment will be managed through the utilization	CAS	Photo documentation	Compliant	SMCC	

	of low sulfur fuel where possible		of active construction vehicles' official receipts and certificates of registration (OR-CRs) has been provided.			
D.8.5	Scheduling use of vehicles and equipment to maximize fuel efficiency; Equipment dispatch will be monitored closely in order to eliminate unnecessary use	CAS	Photo documentation of safety data sheets (SDSs) for fuel in diesel-engine automotive has been provided.	Compliant	SMCC	
D.8.6	Equipment and vehicle loadings will be optimized through accurate monitoring and calculation of fuel requirements	CAS	Photo documentation of logbooks indicating vehicle dispatches and schedules has been provided for equipment and vehicle dispatch records/reports.	Compliant	SMCC	

Table 66. 3rd Quarter CY 2023 TPA Summary of Findings for CP 104

A	ECC-CO-1708-0017 Annex A: Conditions and Restrictions					
A.1.1	Conduct an effective and continuing Information, Education and Communication (IEC) Program through the use of most effective media to inform and educate all stakeholders, especially the contractors, workers, LGUs, businesses and residents about the following: a. Project impacts and mitigating measures embodied in its EIS;	Shaw Blvd		N/A		
		Ortigas				
A.1.2	b. Conditions stipulated in this Certificate; c. Environmental and human safety features of the project, and d. Health consciousness alerts for any project-induced discomfort (from dust, smell, noise, vibration) as the project progresses throughout the whole route.	Shaw Blvd		N/A		
		Ortigas				
A.2.1	Preparation of a comprehensive Social Development Program (SDP)	Shaw Blvd		N/A		
		Ortigas				
A.2.2	Implement a comprehensive Social Development Program (SDP)	Shaw Blvd		N/A		
		Ortigas				

A.2.3	Submit a separate SDP report together with the CMR to EMB-CO on a semi-annual basis	Shaw Blvd Ortigas		N/A		
A.3.1	Submit a detailed waste management program for proper handling, collection, and disposal of solid, hazardous, and liquid waste within 6 months prior to project construction	Shaw Blvd Ortigas	[ONE-TIME COMPLIANCE] WMP for CP-104 approved by OCG (RevD, as of 05 June 2023).	Compliant	TTM-JV	
A.3.2	Proof of implementation of a detailed waste management program shall be submitted together with the CMR	Shaw Blvd Ortigas	Provided daily monitoring checklist for solid waste management. Waste collected together with Unimart.	N/A	DOTr	
A.4	Ensure that all existing waterways affected by the proposed project construction are maintained and not obstructed	Shaw Blvd Ortigas	No waterway is located immediately adjacent to or within the SBS construction site. Implementation of some sediment control measures was observed, and photo-documented by TTM-JV. Monthly creek inspection reports provided for Q3 2023. N/A. Project construction work is yet to commence.	Compliant	DOTr, OCG, TTM-JV	
A.5.1	Submit a detailed demobilization plan for the construction yards within 6 months prior to project construction	Shaw Blvd	Final draft provided during Q2 2023. Submitted to DENR-EMB last August 2023.	Observation	DOTr, OCG	Final draft provided during Q2 2023. Submitted to DENR-EMB last

	<i>Note: Post-construction site plans</i>	Ortigas				August 2023. https://drive.google.com/file/d/1LWUzXyhfuIJ9povMBiQII00BZMv27u5Y/view?usp=drive_link
A.5.2	Submit a detailed demobilization plan for the construction yards within 6 months prior to project construction <i>Note: Detailed construction demobilization plan of contractor</i>	Shaw Blvd Ortigas	TTM-JV has a demobilization plan (process for construction demobilization) for TTM-JV sites only (MMSP104-HSE-PLN-005-Rev1, also included in CEMMP - MMSP104-HSA-PLN-003-RevD.).	Compliant	TTM-JV	
A.6	Submit a detailed plan for earth balling and replanting of mature native/endemic trees within 6 months prior to project construction	Shaw Blvd Ortigas	[ONE TIME COMPLIANCE] Method statement for Tree-cutting and Earthballing for CP-104 AI: The latest version of the MS for tree-cutting and earthballing submitted to DENR	Observation	OCCG, DOTr	Pending submission of the latest copy of the MS to DENR. To include proof of submission, and acknowledgment receipt from DENR. AECOM to review the submission of a detailed plan for earthballing and replanting.
A.7	Submission of an approved Resettlement Action Plan (RAP) of	Shaw Blvd	RAP was already submitted on previous 2022 CMRs.	Compliant	DOTr	

	the affected communities within 6 months prior to project construction	Ortigas (General)	CP104 includes Ortigas Station (ORS) and Shaw Boulevard Station (SBS). DENR EMB acknowledged receipt of submission on 17 January 2023.			
A.8.1	The proponent shall set-up a readily available and replenishable Environmental Guarantee Fund (EGF)	(General)	3rd revision previously provided (23 January 2023). DOTr to confirm if there is already a final MOA.	Observation	DOTr	Inquired directly to DENR-EMB, for the operation phase. O&M is requesting to go back to include again the operational phase in the MOA. DOTr has already done an initial discussion on the trust fund. Ongoing finalization of the EGF MOA with the operational phase. Est. amount of ~35M. To provide a draft MOA Latest meeting w/ DENR-EMB on 25 July 2023.

						<p>DOTr to provide meetings of the meeting.</p> <p>Update: restructuring of the MOA to not include the operation phase (only construction phase.)</p>
A.8.2	The proponent shall establish a Multi-partite Monitoring Team (MMT)	(General)	<p>EMB-CO approved the engagement of a TPA in lieu of forming an MMT (dated 14 February 2022)</p> <p>Note: For this current audit period, the proponent should submit the TPA report from the previous audit period for compliance.</p>	Observation	DOTr	<p>No submission yet. Ongoing review of the format of the TPA report. Per checking of DOTr, all finalized reports will be submitted directly to DENR-EMB for the SA2 2023 submission.</p>
A.8.3	The proponent shall establish a replenishable Environmental Monitoring Fund (EMF) to cover all costs attendant to the operation of the MMT	(General)	<p>N/A. EMB-CO approved the engagement of a TPA in lieu of forming an MMT. <i>Refer to Item A.8.2.</i></p>	N/A	DOTr	

A.9	Establish an Environmental Unit (EU) within 60 days from receipt of the ECC that shall competently handle the environment-related aspects of the project	Shaw Blvd	<p>Provided updated EU organizational chart and staff credentials.</p> <p>Provided AI to RFI#23 indicating No Objection of OCG (dated 19 May 2023) on submission of TTM-JV of EU details to AECOM.</p>	Compliant	TTM-JV	
		Ortigas				
A.10	The proponent shall ensure that contractors and sub-contractors are provided with copies of the ECC and that they will strictly comply with the relevant conditions	(General)	<p>Updated summary table of contractors for the entire MMSP (provided 10 May 2023) provided. Contractors for CP-105, CP-108, CP-109, and AWP3 -- TBA.</p> <p>Proof of provision of ECC to TTM-JV through contract.</p>	Compliant	OCG	
		Shaw Blvd	<p>For CP-104, provide an updated summary table of sub-contractors detailing their assigned scope of work (type of work, specific area/facility, etc.), and date of engagement</p> <p>An updated summary table has been provided, which includes a list of subcontractors. Documentary proof of transmittal for the Environmental Compliance Certificate (ECC) to the subcontractors has been given.</p>			
		Ortigas				

		Shaw Blvd	CEMMP was approved by OCG last 02 June 2023.	Compliant	TTM-JV, DOTr	
		Ortigas				
		Shaw Blvd	TTM-JV to provide documentation of transmittal and acknowledgment receipts of ECC copies sent to sub-contractors.	Compliant	TTM-JV	
		Ortigas				
A.11	No activities shall be undertaken until and unless disposal sites of excavated materials have been identified, duly covered by agreements, and have been permitted in accordance with the law. Proof of compliance shall be filed with the Regional Office with jurisdiction over the disposal area	Shaw Blvd	Maharlika Land (sub-contractor of VCMC, which is a sub-contractor of TTM-JV) to provide a disposal site of excess soils. Site is located in Cainta, Rizal. Maharlika Land is covered by an ECC (ECC-OL-R4A-2023-0218). Engagement of Maharlika Land already been approved by OCG.	Compliant	TTM-JV	
		Ortigas	Haul-out of excess soils commenced during Q3 2023. Soil hauling, dumping, and mitigating measures implemented are photo documented.			

A.12	No activities shall be undertaken other than what was stipulated in the final EIS. Any expansion/modification of the project beyond the project description or change in alignment/ route that will cause significant impacts on the environment will be subject to a new EIA	(General)		Compliant	DOTr, OCG	
A.13	In case of transfer of ownership of this project, the same conditions and restrictions shall apply to the transferee or grantee who shall secure in writing the corresponding amendment of the ECC	Shaw Blvd Ortigas	N/A. No transfer of ownership as of Q3 2023.	N/A	DOTr	
B	ECC-CO-1708-0017 Annex B: Project Assessment Planning Tool					
B.1	Compliance with the Revised National Structural Code of the Philippines	Shaw Blvd Ortigas	Architectural and engineering designs already inspected by Pasig LGU and signed by Engr. Francis Jerome P. Ronquillo. Awaiting release of building permits AI: Building permits, once available. N/A. Project construction work is yet to commence.	Observation	DOTr, TTM-JV	Permits to be uploaded by TTM-JV once available.
B.2	Compliance with the Sanitation Code of the Philippines	Shaw Blvd	Sanitary and plumbing plan already inspected by Pasig LGU. Same status as above. AI: Sanitary permits, once	Observation	DOTr, TTM-JV	Permits to be uploaded by TTM-JV once available.

			available.			
		Ortigas	N/A. Project construction work is yet to commence.			
B.3	Compliance with the Labor Code of the Philippines	Shaw Blvd	CHSP sent to DOLE for approval on 16 Oct 2023. Waiting feedback from DOLE	Compliant	DOTr, TTM-JV	
		Ortigas	N/A. Project construction work is yet to commence.			
B.4	Compliance with the Building Code of the Philippines	Shaw Blvd	<i>Refer to B.1.</i> AI: Building permits, once available.	Observation	DOTr, TTM-JV	Permits to be uploaded by TTM-JV once available.
		Ortigas	N/A. Project construction work is yet to commence.			
B.5	Compliance with the Ecological Solid Waste Management Act	Shaw Blvd	Weekly photo documentation as of implemented waste management practices attached in the weekly progress reports submitted to OCG. Ongoing daily monitoring of implementation of waste management practices (via checklist).	Compliant		
		Ortigas	N/A. Project construction work is yet to commence.			

B.6	Priority employment shall be given to qualified local residents. Opportunities for qualified PWDs, women, senior citizens, where possible, shall be considered. Adequate public information for jobs available to local residents in the affected areas will be provided.	Shaw Blvd	No proof of priority employment was provided.	N/A		
		Ortigas	As compliance, provide employment records/database showing gender, nature of work, locality, and employed PWDs. Additionally, provide adequate public information for jobs available to local residents in affected areas including PWDs, women, and senior citizens. Create a monitoring mechanism for checking if qualified local residents are given priority in hiring.			
B.7	Conduct a detailed Traffic Impact Assessment (TIA) in coordination with the MMDA and concerned LGU	Shaw Blvd	Final TIA report with coordination with LGUs previously provided during Q1 2023. Covers the entire alignment.	Compliant	OCG, DOTr	
		Ortigas				
C	2019 and 2021 Amendments of ECC-CO-1708-0017					
C.1	The modified alignment and construction of additional stations and facilities shall strictly conform with the modified design submitted for the purposes of amending the ECC	(General)	[As-needed basis] Provided document basis for the minor ECC amendment in 2021.	Compliant	DOTr	

C.2	The areas designated for relocation of affected settlers shall be made available to include fair and just compensation of damages/disturbances as determined by the concerned authorities prior to project construction	Shaw Blvd	RAP was already submitted on previous 2022 CMRs. CP104 includes that includes Ortigas Station (ORS) and Shaw Boulevard Station (SBS). DENR EMB acknowledged the submission on 17 January 2023.	N/A		
		Ortigas	RAP monitoring reports for Q1 and Q2 were submitted. Ongoing confirmation/validation of PAPs. Pending payment to PAPs. To be discussed with the RAP Team.			
D	Compliance to the EMP and EMoP					
ENVIRONMENTAL COMPONENT						
D.0	Regular reporting of environmental monitoring activities to DENR-EMB (Submission of CMR and SMR)	Shaw Blvd	N/A. CMR submission is not required during this audit period.	N/A	DOTr	
		Ortigas				
		Shaw Blvd	N/A. Submission is not required as there are no permits under DOTr in CP-104.	N/A	DOTr	
		Ortigas				

		Shaw Blvd	Status documentation of Q3 2023 SMR provided during document audit. Ongoing evaluation by DENR-EMB.	Compliant	TTM-JV	
		Ortigas				
D.1	<i>Waste and Spoil Management</i>					
D.1.1	Daily visual observation of solid waste management and disposal in the construction site	Shaw Blvd	Daily monitoring checklist for solid waste management and disposal for Q3 2023 in SBS provided during document review.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.1.2	Monthly reporting of solid waste management and disposal method (as attachment in the CMR)	Shaw Blvd	Photo documentation of solid waste management practices is included as additional proof of compliance.	N/A	DOTr	
		Ortigas	N/A. Project works have yet to commence.			
D.1.3	Daily visual observation of hazardous waste management and disposal in the construction site	Shaw Blvd	Daily leakage inspection logs of hazardous waste management for Q3 2023 in SBS were provided during document review.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.1.4	Monthly reporting of hazardous waste management and disposal in the construction site (as attachment in the CMR)	Shaw Blvd	Existing HazWaste facility documented.	N/A	DOTr	
		Ortigas	N/A. Project works have yet to commence.			

D.1.5	Daily visual observation of the condition of oil and fuel storage, and chemical injection method in the construction site	Shaw Blvd	Within scope of daily visual inspection logs of hazardous waste management. Refer to D.1.3.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.1.6	Daily visual monitoring for any spill/leakage of hazardous materials	Shaw Blvd	Daily visual monitoring logs for hazardous substance spill/leakage for Q3 2023 were provided during the document audit.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.1.7	Installation of adequate hazardous waste facilities with proper containment	Shaw Blvd	HazWaste storage facility is already available on site. Minute HazWaste is stored. AI: Photo documentation of improvements made on the accessibility of the HazWaste storage facility.	Observation	TTM-JV	Already complied, to upload documentation in Gdrive.
		Ortigas	N/A. Project works have yet to commence.			
D.1.8	Registration of the proponent as a hazardous waste generator	Shaw Blvd	HazWaste generator's ID for SBS issued 30 August 2023 (OL-GR-NCR-74-048115)	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.1.9	Storage of fuel and chemicals in appropriate storage area provided with secondary containment in case of spills	Shaw Blvd	Photo documentation of temporary fuel storage area in SBS provided during document review.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.1.10	Collection of hazardous wastes in proper receptacle and by a DENR-accredited hauler	Shaw Blvd	MRF / HazWaste storage facility already available on-site. AI: Photo documentation of improvements made on the accessibility of the HazWaste storage facility.	Observation	TTM-JV	Already complied, to upload documentation in Gdrive.
		Ortigas	N/A. Project works have yet to commence.			
D.1.11	Treatment of hazardous wastes by a DENR-accredited hauler	Shaw Blvd	As of Q3 2023, no haul-out of HazWastes has been conducted as amount of HazWastes stored are still minute.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.1.12	Use of strong, durable, and non-reactive materials for buried components	Shaw Blvd	Specifications of the materials to be used are detailed in the MS for drainage relocation in SBS. Proofs of implementation are Materials Recovery Inspection (MRI) and Request for Inspection which are	Compliant	TTM-JV	

			<p>approved by both TTM-JV and OCG quality control which were presented during the document review.</p> <p>Additionally, monthly quality progress reports were provided.</p>			
		Ortigas	N/A. Project works have yet to commence.			
		Shaw Blvd	Refer to discussion above.			
		Ortigas	N/A. Project works have yet to commence.			
D.1.13	Daily visual observation of proper waste management and disposal of surplus soil in the construction site and disposal site	Shaw Blvd	Daily visual inspection logs for stockpile management for Q3 2023 provided during document audit.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.1.14	Monthly reporting of proper waste management and disposal of surplus soil in the construction site and disposal site (as attachment in the CMR)	Shaw Blvd	Photo documentation of hauling and disposal of surplus soils were provided during the document review.	N/A	DOTr	
		Ortigas	N/A. Project works have yet to commence.			

D.1.15	Toxicity Characteristic Leaching Procedure (TCLP) monitoring of heavy metal levels (Cd, Cr (VI), Hg, Se, Pb, As, F and B) in surplus soil at the construction site and disposal site (5 samples per km of the tunnel excavation)	Shaw Blvd	N/A. To be checked once tunneling works commence.	N/A	TTM-JV, DOTr, OCG	
		Ortigas	TTM-JV to coordinate with OCG/DOTr on methods of sampling to be used.			
D.1.16	Regular hauling of excavated materials	Shaw Blvd	Hauling and disposal by VCMC-Maharlika for Q3 2023 were photo documented.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.1.17	Storage of surplus soil stockpiles on pads with appropriate soil protection facilities or management systems	Shaw Blvd	Stockpiles from trenchworks were either hauled-out or already used as backfill.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.1.18	Repurpose surplus soils for use in other parts of the project	Shaw Blvd	To be repurposed for land development project (c/o Maharlika Land) based on the ECC.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.1.19	Prepare traffic plan to manage the ingress and egress of soil/rock hauling machines	Shaw Blvd	Available - MMSP104-SRR-000015RevE.TMP (approved). Provided AIs to RFI#38 containing Minutes of Meetings with stakeholders, photo documentation of TMP implementation.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.2	<i>Geology and Geomorphology</i>					
D.2.1	Daily visual observation of changes in ground level in and around the construction site	Shaw Blvd	N/A. No ongoing visual ground level observation as there are currently no sub-surface works.	N/A	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.2.2.1	Weekly or as needed* measurement of changes in ground level in and around the construction site and conduct of deformational studies as needed	Shaw Blvd	N/A. No ongoing visual ground level monitoring as there are currently no sub-surface works.	N/A	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.2.2.2	Conduct of deformational studies as needed	Shaw Blvd	No deformational study conducted as of Q3 2023. Deformational study c/o TTM-JV then submitted to OCG for review and approval. AI: Final method statement for deformational studies, upon availability	N/A	TTM-JV, OCG	Final method statement for additional geotech investigation and soil investigation to be shared once available.
		Ortigas	N/A. Project works have yet to commence.			
D.2.3	Minimize ground disturbance through avoidance of unnecessary excavations	Shaw Blvd	Provided Weekly Construction Progress Report (July 2023 to September 2023) being submitted to OCG. Included balance of volume of soils excavated and backfilled.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.2.4	Ensure that roads repaired after surface works would follow the same slope conditions prior to construction	Shaw Blvd	N/A. To be implemented during construction demobilization.	N/A	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.2.5	Installation of piezometers to monitor groundwater pressure	Shaw Blvd	N/A as of Q3 2023. No ongoing advanced permitting works.	N/A	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.2.6	Perform tunnel deformation analysis and update as necessary	Shaw Blvd	Tunnel deformation analysis was conducted by JICA during the DED study phase based on the TBM Design Calculation for CP-104.	Compliant	TTM-JV, OCG	
		Ortigas				
D.2.7	Design and construct facilities according to geomechanical properties of the rock	Shaw Blvd	Provided MS for additional Geotechnical Investigation (Rev.B, 21 September 2023). Scope of work: 1) boring/drilling according to project alignment, 2) standard penetration test, 3) collection of soil samples and relevant lab analysis, 4) GW level at 24 hrs post-drilling, 6) various geotechnical tests, and 7) detailed report	Observation	TTM-JV, OCG	
		Ortigas				
D.2.8.1	Properly line tunnel wall with waterproof material (Preparation of Method Statement on waterproofing)	Shaw Blvd	Ongoing drafting of MS for waterproofing as of Q3 2023. Subject to review and approval of OCG.	N/A	TTM-JV, OCG	
		Ortigas				
D.2.8.2	Properly line tunnel wall with waterproof material (Proof of implementation)	Shaw Blvd	N/A. No ongoing tunnel-related works that would require waterproofing as of this audit period.	N/A	TTM-JV, OCG	
		Ortigas				
D.2.9	Ensure that tunnel is sufficiently supported and lined to prevent failure and ingress of groundwater	Shaw Blvd	Refer to Item D.2.8.	N/A	TTM-JV, OCG	
		Ortigas				

D.3	<i>Terrestrial Ecology</i>					
D.3.1	Semi-annual ocular inspection of transplanted tree individuals in the off-site area for transplant of earth-balled species and/or reforestation site for replanting appropriate seedlings (1:100 exchange ratio); Monitoring of survival rate and mortality rate	Shaw Blvd	OCG conducted inspection and monitoring with DENR, as seen in photo documentation. Still waiting for official communications with DENR.	Observation	OCG	Inspection of transplanted trees in Pasig City was conducted. OCG to provide FARs.
		Ortigas	AI: Field activity reports of conducted ocular inspections, monitoring of survival and mortality rates			
D.3.2	Secure earth-balling permits	Shaw Blvd	No tree-cutting or earth-balling activities in 2nd Quarter. No TCPB yet for unacquired plots.	N/A	OCG	No new permits in Q3 2023.
		Ortigas	AI: Updated summary of TCPBs.			
D.3.3	Perform transplanting and earth-balling with a horticulturist/agriculturist	Shaw Blvd	Included in Method Statement for CP-104 (final). Awaiting a clean copy (w/ no comments) from DENR.	Compliant	OCG	
		Ortigas				
D.3.4	Conduct of maintenance activities to ensure high survival rates of earth-balled species	Shaw Blvd	<p>Provided in Field Activity Report; photo documentation also provided</p> <p>AI: Field activity reports / photo documentation of</p>	Observation	TTM-JV	Maintenance activities last conducted in July 2023. TTM-JV is to be uploaded to Gdrive

		Ortigas	maintenance activities			
D.3.5	Use of light source with directional lighting and screens to concentrate light on operations	Shaw Blvd Ortigas	N/A. No night works, operations only until 1700H	N/A	TTM-JV	
D.4	<i>Groundwater and Drainage</i>					
D.4.1	Conduct of detailed hydrogeological/ groundwater study in the detailed design stage	Shaw Blvd Ortigas	[ONE TIME COMPLIANCE] Submitted during Q1 2023 audit period.	Compliant	OCG	
D.4.2	Installation of monitoring wells for observation along the subway tunnel and monitoring changes of the surrounding groundwater levels	Shaw Blvd Ortigas	PTD already applied for drilling activities in November 2023. 3 PTD applications. Order of payment as proof of compliance. Draft MS (for internal review) for instrumentation and monitoring on retaining wall and water level provided. N/A. Project works have yet to commence.	Observation	TTM-JV	
D.4.3	Daily visual observation of the groundwater level and water pressure in and aboveground construction site of the subway tunnel	Shaw Blvd Ortigas	Refer to Item D.4.2. N/A. Project works have yet to commence.	N/A	TTM-JV	

D.4.4	Daily visual observation of water leakage in and around the construction site	Shaw Blvd	Provided water leakage monitoring logs from July 2023 to September 2023 (included water meter readings, leakages in faucets, pipes, and meter reader).	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.4.5	All trenches and foundations will be backfilled and ground-restored to their original condition	Shaw Blvd	Provided backfilling records, supported by monthly progress reports.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.4.6	Temporary drainage and detention cum siltation ponds can be constructed to mitigate localized flooding	Shaw Blvd	Provision of submersible pumps and sedimentation box for dewatering activities.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.4.7	Stations will be provided with permanent bund walls	Shaw Blvd	N/A at this stage of the project.	N/A	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.4.8	Depot will be provided with a drainage system	Depot	N/A. Outside of the scope of CP-104.	N/A	N/A	

D.4.9	Construction activities along waterway(s) will be conducted during the drier months of the year or low flows whenever practicable	Shaw Blvd	N/A. Based on the general layout of the CP-104 segment, there will be the project to be constructed along waterways. There are no existing waterways as well within the current project construction area.	N/A	N/A	
		Ortigas	N/A. Project works have yet to commence.			
D.4.10	Installation of diversion channels, if appropriate	Shaw Blvd	N/A. No channel diversion works for SBS.	N/A	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.4.11	Potable water will be sourced from local water utility providers	Shaw Blvd	Billing and official receipts from the LWU provider (from July 2023 to September 2023) were presented during the document audit.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.4.12	If water supply of people relying on groundwater along the alignment decreases, DOTr shall make arrangements to supply affected people with water	Shaw Blvd	N/A. To be checked once tunneling works commence.	N/A	DOTr, TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.4.13	DOTr will coordinate with NWRB regarding tunneling activities along the alignment and its potential effects on the water table	Shaw Blvd	PTD already applied for drilling activities in November 2023. 3 PTD applications. Order of payment as proof of	Compliant	TTM-JV	

			compliance.			
		Ortigas	N/A. Project works have yet to commence.			
D.4.14	Secure water/drilling permits before tunneling activities	Shaw Blvd	Refer to Item D.4.13.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.4.15	Secure discharge permits prior to tunneling activities	Shaw Blvd	N/A. Discharge permit related to discharge of extracted groundwater is not yet required based on ongoing construction activities in SBS as of Q3 2023.	N/A	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.4.16	Installation of dewatering pumps	Shaw Blvd	Weekly environmental monitoring report provided which shows the presence of a sediment tank onsite for dewatering operations. Dewatering is done using a submersible pump.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.5	<i>Water Quality</i>					
D.5.1	Weekly* measurement of DO, TSS, and pH of surface water, and visual observation of water	Shaw Blvd	N/A. Based on the EMoP and bid documents (as per TTM-JV) there is no required	N/A	DOTr	

	turbidity in Tullahan River, San Juan River, and creek near Tandang Sora Avenue	Ortigas	weekly water quality monitoring for CP-104.			
D.5.2	Quarterly water sampling (BOD, COD, color, TSS, Oil & Grease, Fecal/Total Coliform, pH) of discharge point(s) <i>NOTE: While not indicated in the EMoP, specific parameters to monitor will be aligned with the parameters indicated in the issued discharge permit/s for a particular construction site.</i>	Shaw Blvd	N/A. No effluent discharges coming from SBS construction site.	N/A	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.5.3	Designation of buffer zones approximately 5 meters from each bank	Shaw Blvd	N/A. No waterway is found adjacent or directly traversing the SBS construction site.	N/A	N/A	
		Ortigas	N/A. Project works have yet to commence.			
D.5.4	Ensure that the potential delivery of sediments and other particulate matter into the stream channel will be carefully handled and kept at the minimum.	Shaw Blvd	Documentation of existing sediment control measures provided during document audit (i.e., mesh drain traps, and sedimentation box).	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.5.5	Maintain adequate temporary toilet facilities	Shaw Blvd	Portalets were observed on-site and photo documented (included in weekly progress reports of TTM-JV). COT of portalet wastes were presented as proof of safe disposal of wastewater.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.5.6	Strictly require contractor and workers to observe proper waste disposal and sanitation	Shaw Blvd	For waste management: 1) waste storage areas; 2) waste segregation bins; 3) waste hauling in coordination with Unimart Capitol Commons Construction of MRF completed, which will also have a compartment for HazWastes.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.6	Air Quality					
D.6.1	Quarterly* ambient air quality monitoring (TSP, PM2.5, PM10, NO2, SO2) at the 16 monitoring stations	Shaw Blvd	Quarterly Monitoring Reports for Ambient Air Quality for Q3 period were presented during the document audit. Parameters: TSP, PM10, NO2, and SO2 were monitored for 1-hr, while PM2.5 was monitored for 24-hr	Compliant	TTM-JV (monitoring activities); OCG; DOTr (CMR)	

			Date of Sampling: September 06 to 07, 2023			
		Ortigas	N/A. Project works have yet to commence.			
D.6.2	Proper and regular maintenance of construction vehicles and heavy equipment	Shaw Blvd	TTM-JV has provided photo documentation of the following records for the Q2 2023 audit period: a.) Updated maintenance records of construction vehicles and heavy equipment, showcasing diligent monitoring and maintenance practices to ensure operational efficiency and compliance with regulatory requirements.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.6.3	Daily visual observation of dust level supplemented with monthly* interviews regarding dust level in and around the construction site	Shaw Blvd	SMCC has provided photo documentation of Records/reports of: a.) Monthly Interview reports Q2 2023 b.) Daily visual observation of dust for Q2 2023	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.6.4	Implementation of speed limit and water suppression methods to unpaved roads and stockpiles	Shaw Blvd	<p>TTM-JV has provided photo documentation of the on-site implementation of various control measures, which includes:</p> <p>Shaw Blvd- On-site installation of 10kph speed limit signs, an essential measure to ensure strict adherence to safety regulations and promote a safer working environment across all locations.</p> <p>Shaw Blvd- Regular water sprinkling, as needed, demonstrating an effective and proactive approach to dust suppression. This measure is meticulously applied to minimize particulate matters and uphold the required air quality standards on these specific sites.</p>	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.6.5	Regular water sprinkling to control dust generation	Shaw Blvd	<p>Provided photo documentation of the on-site implementation of various control measures, which includes:</p> <p>a.) dust suppression, and b.) wheel-washing at designated areas conducted regularly and/or as needed.</p>	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.6.6	Provision of covers for loaded trucks	Shaw Blvd	<p>Provided photo documentation of the following:</p> <p>a.) Truck compartments are covered with tarpaulin to comply with best practices for containing materials during transportation.</p>	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.6.7	Standard occupational health and safety practices will be implemented pursuant to BWC-DOLE OSH Standards	Shaw Blvd	<p>Copies of PPE monitoring checklist (logbooks) were provided during document audit. Verification and validation are conducted by safety officers on-site.</p>	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.6.8	Traffic management guidelines will be included in the induction seminar of workers	Shaw Blvd	Provided presentation used for EHS Training (copies of slides, particularly for the Traffic Management guidelines), and photo documentation of Safety Induction and Training Attendance for Q3 2023	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.7	Noise and Vibration					
D.7.1	Conduct of a construction noise and predicted noise study; Approved construction noise assessment (FHWA prediction method) before construction phase	Shaw Blvd	[ONE-TIME SUBMISSION] Same documentation submitted by OCG and DOTr last Q1 2022 audit applies (photo dated 04 April 2022).	Compliant	TTM-JV; OCG; DOTr	
		Ortigas				
D.7.2	Conduct a predicted vibration level study	Shaw Blvd	[ONE-TIME SUBMISSION] Same documentation submitted by OCG and DOTr last Q1 2022 audit applies (photo dated 04 April 2022).	Compliant	TTM-JV; OCG; DOTr	
		Ortigas				

D.7.3	Quarterly ambient noise level (decibel) monitoring in the monitoring stations co-located with air quality monitoring; Approved method of ambient noise level measurement inside construction sites	Shaw Blvd	Quarterly monitoring reports for ambient noise levels for Q3 period were presented during the document audit. Frequency: 24-hr monitoring Date of Sampling: September 06 to 07, 2023	Compliant	TTM-JV (monitoring activities); OCG; DOTr (SMR)	
		Ortigas	N/A. Project works have yet to commence.			
D.7.4	Construction of wall enclosures on areas that produce a lot of noise	Shaw Blvd	Provided photo documentation of control measures installed on-site, such as wall enclosures/acoustic barriers, has been provided.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.7.5	Daily inspection and strict enforcement and maintenance of PPE during work hours; Use of earmuffs and ear plugs for activities with high noise levels	Shaw Blvd	Copies of PPE monitoring checklists (logbooks) were provided during document audit. Verification and validation are conducted by safety officers on-site.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.7.6	Keep areas with equipment/machines that produce extremely loud noises (>85 decibels) off limits from workers for their safety; Implement permissible noise levels for construction workers as suggested by DOLE	Shaw Blvd	<p>Provided photo documentation of the following on-site control measures:</p> <p>a.) Installation of Hearing Protection Signage within the Site</p> <p>b.) List of equipment emitting excessive noise levels and random noise sampling results</p>	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.7.7	Use of equipment or machines that produce lesser noise, or considerations in using mufflers to minimize noise	Shaw Blvd	<p>Provided photo documentation of the following records/reports:</p> <p>a.) Equipment Manuals & Brochures</p> <p>b.) Installed mufflers on all heavy machinery.</p>	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.7.8	Strategic scheduling of noise and vibration-inducing activities per period within a day	Shaw Blvd	Provided photo documentation of the following records/reports: a.) Site/daily meeting report, detailed work and machinery/equipment information, and safety instructions	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.7.9	Installation of vibration control measures: vibration insulating sleeper, sleeper with elastic layer directly fastened track, secondary lining	Shaw Blvd	N/A. To apply once tunneling activities in CP-104 commence.	N/A	TTM-JV	
		Ortigas				
D.7.10	Inform public about areas that can produce noise level beyond tolerable limits of human ears; Coordinate with LGU regarding health programs for vulnerable groups and the public	Shaw Blvd	<i>Refer to Item A.1.1</i>	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.7.11	Survey of nearby residential areas regarding public perception and complaints about noise levels (once prior to construction); Daily observation of noise-related complaints	Shaw Blvd	Photo documentation of the following records/reports: a.) Daily observation of noise-related complaints for Q3 2023	Compliant	TTM-JV	

		Ortigas	N/A. Project works have yet to commence.			
D.7.12	Monthly* interview of local residents and pedestrians regarding noise-related health problems in critical areas affected by construction noise; Weekly or as-needed noise meter measurement	Shaw Blvd	Photo documentation of the following records/reports: a.) Monthly interview report for Q3 2023 b.) Weekly noise monitoring report for Q3 2023	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.8	<i>Climate Change and GHG emissions</i>					
D.8.1	Establishment of comprehensive management systems for climate adaptation; Include climate risk and opportunities in the risk-identification process; Integration of climate-related risks and mitigation measures; Ensure robust engineering design and construction standards for facilities	Shaw Blvd	Photo documentation of the following records/reports: a.) Installed solar panels and rain collectors	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.8.2	Compensate the release of GHG during construction by means of implementing carbon dioxide capture and sequestration through progressive rehabilitation	Shaw Blvd	Photo documentation of the greenhouse gas (GHG) inventories for Q3 2023	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			

D.8.3	Subcontractors to undergo emission testing prior to the contract award	Shaw Blvd	Photo documentation of subcontractors' vehicles being emissions tested before contract award and on-road condition reports (ORCRs) of the vehicles.	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.8.4	Fuel-burning equipment will be managed through the utilization of low-sulfur fuel where possible	Shaw Blvd	Photo documentation of the following records: a.) SDS safety data sheets (fuel in diesel-engine automotive)	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.8.5	Scheduling use of vehicles and equipment to maximize fuel efficiency; Equipment dispatch will be monitored closely in order to eliminate unnecessary use	Shaw Blvd	Photo documentation of the following records: a.) Equipment and vehicle dispatch and schedule (photo documentation of logbooks indicating the vehicle dispatches)	Compliant	TTM-JV	
		Ortigas	N/A. Project works have yet to commence.			
D.8.6	Equipment and vehicle loadings will be optimized through accurate	Shaw Blvd	Photo documentation of the following record/s:	Compliant	TTM-JV	

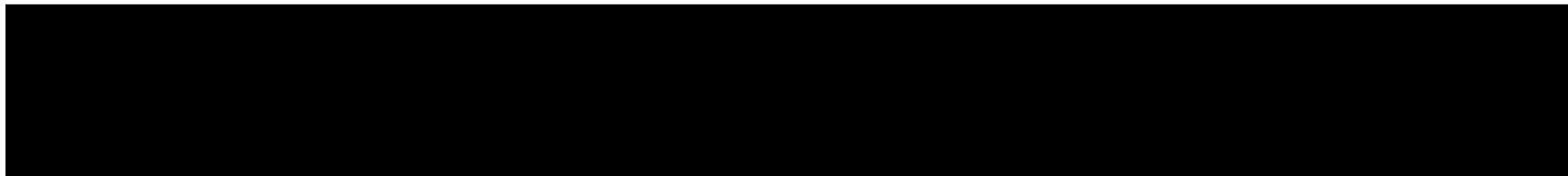
	monitoring and calculation of fuel requirements		a.) Monitoring of Fuel Inventory of vehicles for Q3 2023.			
		Ortigas	N/A. Project works have yet to commence.			

vii. In conclusion, the implementation of a Third-Party Audit stands as a pivotal measure in ensuring the adherence to environmental and social mandates outlined in the project's Environmental Compliance Certificate (ECC) and its associated Environmental and Social Components. With AECOM at the helm as the appointed third-party auditor, rigorous assessments have been conducted in alignment with international guidelines such as those set forth by the Japan International Cooperation Agency (JICA). From its initiation in October 2021 through subsequent quarterly audits, the third-party audit process has been instrumental in monitoring, validating, and evaluating project activities. Moreover, ongoing collaboration between auditors and project stakeholders reflects a commitment to transparency and accountability, crucial elements in safeguarding both environmental integrity and social welfare throughout the project's lifecycle.

Prepared by:

Noted by:

Endorsed by:



RAP Implementation Monitoring Form For Metro Manila Subway Project (MMSP)

1. General Information

- a. RAP Implementation Monitoring Results: Progress Status Report (PSR) of July-December 2023
- b. Date of Preparing This form: 31 May 2024
- c. Person Preparing This form: Name: Shienna S. Sadia
Position: Deputy Project Manager for Right-of-Way and Site Acquisition and Environment (ROWSAE)
Department/Organizations: Department of Transportation - Railways Sector

2. Scale of Land Acquisition and Resettlement

2.1 Project-Affected Properties (PAPties) and Project-Affected Persons (PAPs) of the Project

Table 1. Summary of Project-Affected Properties, Informal Settler Families, and Income Replacement/Livelihood Restoration

Cities/Towns	Formal Settlers			Informal Settlers		Livelihood	
	Affected Lots ¹	Affected Structures ²	Affected Machinery ³	ISFs	Renters	Business Operators	Employees
Depot and Stations							
Caloocan	5	5	0	0	0	2 ⁴	65
Valenzuela	383	908 ⁵	6 ⁶	188 ⁷	470 ⁸	202	645 ⁹

¹ Affected Lots for Acquisition (Excluding Gov't Lots & Lots under ROWUA).

² Number of Structure Tags Used.

³ Number of Affected Businesses with Machinery.

⁴ Caloocan affected businesses are reflected in the Master List of Validated PAPs of CP101.

⁵ Increase is due to the inclusion of previously untagged Auxiliary Structures.

⁶ Increase is due to the inclusion of lots for expropriation.

⁷ Increase is due to approved census claimants by the LIAC.

⁸ Increase is due to approved census claimants through GRM.

⁹ Increase is due to recently cooperative business owners that declared their Affected Employees.

Resettlement Action Plan (RAP) Implementation Monitoring
Progress Status Report (PSR) as of 31 December 2023

Quezon ¹⁰	214 ¹¹	489 ¹²	9 ¹³	57 ¹⁴	67 ¹⁵	225 ¹⁶	670 ¹⁷
Pasig ¹⁸	12 ¹⁹	87 ²⁰	1	6	1	0 ²¹	0
Taguig*	34 ²²	331	0	0	0	0	0
Paranaque*	0	0	0	0	0	0	0
Pasay*	3	207	0	0	0	0	0
TOTAL	651	2,027	16	251	538	429	1,380
Subterranean Sections²³							
Valenzuela	8	0	0	0	0	0	0
Quezon ²⁴	634	0	0	0	0	0	0
Pasig**	153	0	0	0	0	0	0
Makati**	0	0	0	0	0	0	0
Taguig**	179	0	0	0	0	0	0
Paranaque**	0	0	0	0	0	0	0
Pasay**	226	0	0	0	0	0	0
TOTAL	1,200	0	0	0	0	0	0

Note: *Figures are based on the initial survey.

**Figures are subject to change due to ongoing validation.

¹⁰ Quirino Highway Station (QHS) & Tandang Sora Station (TSS) for Contract Package (CP) 101, Quezon Avenue Station (QAS) and East Avenue Station (EAS) for CP102, Anonas Station (ANS) and Camp Aguinaldo Station (CAS) for CP103 and Ortigas Avenue Station (OAS) and Shaw Blvd. Station (SBS) for CP104

¹¹ NHA Property for Quezon Avenue Station if included in the list.

¹² Increase is due to the inclusion of Affected Structures/Improvements in QAS and CAS.

¹³ Increase is due to the inclusion of newly affected Unioil in EAS.

¹⁴ Updated number was determined after the LIAC's review of the Affected PAPs (EAS-12, ANS-45).

¹⁵ Increase in number is due to inclusion of Renters from EAS and ANS. The number was determined after the LIAC's review of the Affected PAPs (QHS-4, EAS-36, ANS-27).

¹⁶ QHS-12 (6 microbusinesses), TSS-107 (42 microbusinesses), EAS-66 (TBD no. of microbusinesses), ANS-40 (TBD no. of microbusinesses), Depot-207 (106 microbusinesses).

¹⁷ Possible Increase in number due to some businesses in EAS and ANS have not declared their number of Employees yet. (QHS-22, TSS-181, NAS-355, EAS-80, ANS-32).

¹⁸ Ortigas Avenue Station (OAS) & Shaw Boulevard Station (SBS) for CP104.

¹⁹ Increase is due to the inclusion of lots under regular acquisition mode in SBS.

²⁰ Increase is due to the inclusion of the affected footbridge in SBS.

²¹ Acquisition of property is in the form of ROWUA. The number of Affected Businesses and Employees was not censused and validated.

²² Decrease is due to the exclusion of government lots.

²³ No data on Affected Structures and Machinery, Informal Settlers, and Livelihood due to the acquisition of Subterranean portions only.

²⁴ Data on Subterranean Section from Depot to EAS are validated. Data on the Subterranean Section from EAS to ORS is subject to change due to ongoing validation.

3. Monitoring Results

3.1 Progress of Land Acquisition, Resettlement, and Income Replacement/Livelihood Restoration as of 31 December 2023.

Table 2. Summary of Land Acquisition, Resettlement, and Income Replacement/Livelihood Restoration Monitoring

As of 31 December 2023	No. of PAPties Issued Compensation / Subsidy for Loss of Land	No. of PAPties Issued Compensation / Subsidy for Loss of Structure	No. of PAPties Issued Compensation / Subsidy for Loss of Machinery	No. of PAPties Issued Compensation / Subsidy for Loss of Crop/Tree/ Perennial	No. of ISFs Relocated to Resettlement Site (HH)	No. of PAPs Received Inconvenience Allowance (HH)	No. of Renters Received Rental Subsidy (HH)	No. of PAPs Received Compensation / Subsidy for Loss of Income (HH)		Land Area Acquired (m2)
								Loss of Business (Business Operators)	Loss of Job (Employees of Affected Businesses)	
CP101 Depot and Stations										
Number	374	948	6	176	188	187 ²⁵	447 ²⁶	130 ²⁷	427 ²⁸	316,301.61
In percentage ²⁹	80.95%	89.69%	75%	93.62% ³⁰	100%	99.47%	94.30%	62.50%	33.68%	88.93%
CP102 Stations										
Number	15	0	0	2	0	0	0	0	0	32,611.38
In percentage ³¹	26.31%	11.76%	0%	12.50%	0%	0%	0%	0%	0%	76.64%
CP103 Stations										
Number	15	30	0	3	0	0	0	0	0	26,031.90
In percentage ³²	22.39%	20%	0%	30%	0%	0%	0%	0%	0%	66.02%

²⁵ One relocatee was not qualified for Inconvenience Allowance, per criteria of Vulnerable PAPs stated in the CP101 Entitlement Matrix.

²⁶ Disbursed Rental subsidy (447/474).

²⁷ Paid Microbusinesses: Depot- 102/160, QHS and TSS-28/48; 130/208.

²⁸ Paid Employees: Depot-224/710, QHS and TSS-203/203, NAS-0/355; (427/1,268).

²⁹ Percentage is computed based on the total figure of Depot and Stations (Excluding Subterranean Section).

³⁰ Percentage is computed based on the number of properties with Crops and Trees in CP101 (Excluding Subterranean Section).

³¹ Percentage is computed based on the total figure of QAS and EAS (Excluding Subterranean Section).

³² Percentage is computed based on the total figure of ANS and CAS (Excluding Subterranean Section).

CP104 Stations										
Number	4	8	0	2	0	0	0	0	0	11,039.00
In percentage ³³	33.33%	11.94%	0%	66.67%	0%	0%	0%	0%	0%	32.00%
CP101 Subterranean Sections³⁴										
Number	5	0	0	0	N/A	N/A	N/A	N/A	N/A	14,498.70
In percentage	3.067%	0%	0%	0%	N/A	N/A	N/A	N/A	N/A	37%

3.1.1 Land Acquisition through Negotiated Voluntary Sale (NVS) Monitoring Report³⁵ of CP101 to CP104 Stations and CP101 Subterranean Section as of 31 December 2023.

Table 3. Summary of Land Acquisition through Negotiated Voluntary Sale (NVS) and Expropriation Monitoring³⁶

As of 31 December 2023	Total No. of Remaining PAPties for Acquisition	No. of PAPties for Appraisal/OtB	No. of PAPties for Legal Pass	No. of PAPties for Payment Processing	No. of PAPties for Expropriation
CP101 Depot and Stations					
Number	86	3	2	3	78
In percentage	18.70%	3.48%	2.33%	3.48%	90.69%
CP102 Stations					
Number	38	7	20	8	3
In percentage	71.70%	18.42%	52.63%	21.0%	7.89%
CP103 Stations					
Number	68	26	21	19	2
In percentage	81.93%	38.24%	30.88%	27.94%	2.94%

³³ Percentage is computed based on the total figure of ORS and SBS (Excluding Subterranean Sections).

³⁴ Data from CP101 Subterranean Section only. Ongoing research and validation of affected lots of CP102 to CP109 Subterranean Sections. Only includes data on land due to acquisition of subterranean portion only.

³⁵ Data from CP101 to CP104 Stations and CP101 Subterranean Section only. (Excluding CP105 to CP109 Stations and CP102 to CP109 Subterranean Section)

³⁶ Data includes lots, structures, machinery and crops, and trees for Stations. Data includes lot only for CP101 Subterranean Section.

CP104 Stations					
Number	8	6	0	0	2
In percentage	66.67%	75%	0%	0%	25%
CP101 Subterranean Sections					
Number	158	40	45	53	20
In percentage	96.93%	25.32%	28.48%	33.54%	12.66%

3.1.2 Land Acquisition through Expropriation Monitoring Report as of 31 December 2023.

Table 4. Summary of Land Acquisition through Expropriation Monitoring³⁷

As of 31 December 2023	No. of PAPTies Endorsed for Expropriation	No. of Filed Expropriation Cases with Issued Writ of Possession (WOP) and Certificate of Turnover (COT)	No. of Filed Expropriation Cases with Issued Writ of Possession (WOP) Only	No. of Filed Expropriation Cases (W/out WOP and COT)	No. of Unfiled Expropriation Cases
CP101 Depot and Stations					
Number	78	44	18	16	0
In percentage	100%	56.41%	23.07%	20.51%	--
CP102 Stations					
Number	3	0	0	0	3
In percentage	100%	0	0	0	100%
CP103 Stations					
Number	6	0	0	0	6
In percentage	100%	0	0	0	100%
CP104 Stations					
Number	2	0	0	0	2
In percentage	100%	0	0	0	100%

³⁷ Data from CP101 to CP104 Stations and CP101 Subterranean Section only. (Excluding CP105 to CP109 Stations and CP102 to CP109 Subterranean Section)

CP101 Subterranean Sections					
Number	20	0	0	9	11
In percentage	100%	0%	0%	45%	55%

3.1.3 Acquisition of Crops, Trees, and Perennial Plants Monitoring Report as of 31 December 2023.

Table 5. Summary of Project-Affected Properties with Crops and Trees³⁸

As of 31 December 2023	Total No. of PAPties	Total No. of PAPties for Compensation			Total No. of PAPties for Donation		Total No. of PAPties for Expropriation			ROWUA/ Public Property	No Status Yet
		Paid	For Legal Pass	For Payment Processing	For Quitclaim	Signed Quitclaim	for Filing	Paid thru Court	NVS		
CP101 Depot & Stations											
Number	259	176	5	7	0	34	19	10	6	2	0
In percentage		94%	2%	4%	0%	100%	54%	29%	17%	0.7%	0%
CP102 Stations											
Number	28	2	5	9	0	1	0	0	0	9	2
In percentage		13%	31%	56%	0%	100%	0%	0%	0%	32%	7%
CP103 Stations											
Number	22	3	4	3	0	0	1	0	0	3	8
In percentage		30%	40%	30%	0%	0%	50%	0%	50%	17%	36%
CP104 Stations											
Number	12	2	0	1	0	1	2	0	0	7	0
In percentage		67%	0%	33%	0%	100%	0%	0%	0%	58%	0%

³⁸ Data does not include Subterranean Section.

CP105 Stations											
Number	2	0	0	0	0	0	0	0	0	2	0
In percentage		0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
CP108 Stations											
Number	15	0	0	0	0	0	0	0	0	13	2
In percentage		0%	0%	0%	0%	0%	0%	0%	0%	0%	86.67%
CP109 Station											
Number	3	0	0	0	0	0	0	0	0	3	0
In percentage		0%	0%	0%	0%	0%	0%	0%	0%	0%	100%

- i. Table 5 shows the summary of the project-affected properties with crops and trees in the MMSP's whole alignment. The corresponding number of affected crops/trees and their acquisition status are shown per contract package.
- ii. CP101 has the most number of PAPs with affected crops/trees which covers EVS and Depot, TSS, QHS, and NAS. Out of 259 identified properties, 188 property owners in CP101 accepted DOTr's offer to compensate their crops and trees where 176 PAPs, or 94% are already issued with checks. The remaining 12 PAPs (6%) tagged for compensation are still for legal pass and payment processing.
- iii. All 34 PAPs in CP 101 who have donated their crops/trees to the DOTr have voluntarily signed a quitclaim form allowing the DOTr to clear their vegetation that were affected by the project. Of the 35 PAPs that were endorsed for expropriation due to refusal to accept OtC, nineteen (19) PAPs, or 54% are still for filing in court while ten (10), or 29% of expropriated properties were filed in court with initial deposits including the crops/trees. At least six (6) PAPs (17%) under expropriation accepted DOTr's negotiated amount (NVS) for crops/ trees.
- iv. A total of sixteen (16) property owners accepted their OtC in CP102 (EAS and QAS) with only two (2) PAPs (13%) already paid. The remaining fourteen (14) PAPs or 87% are still pending legal review and payment issuance. At least one (1) PAP donated their crops/trees, two (2) PAPs still waiting for OtC response, and nine (9) properties are owned by the government and/or under the ROW agreement.
- v. From the twenty (20) PAPs with affected crops/trees in CP103, at least 10 owners accepted DOTr's offer

compensation where three (3) PAPs were already paid and seven (7) PAPs still waiting for payment release. A total of eight (8) are still in pending status, three (3) PAPs under ROWUA, and at least one (1) PAP endorsed for expropriation.

- vi. Out of the 12 PAPs with crops/trees in CP104, only three (3) or 67% PAPs are willing to be compensated with two (2) owners already issued with checks and one (1) PAP still for payment process. Most of the affected crops/trees in CP104 Pasig are under ROWUA, with a total of seven (7) properties; of which five (5) are private properties (58%) and two (2) properties under the jurisdiction City of Pasig. Two (2) properties in OAS are requested for expropriation due to conflict in ownership.
- vii. For the remaining contract packages, CP 105 and 108 situated in Taguig City with two (2) stations each, and CP109 - Terminal 3 NAIA Station in Pasay City, all affected crops and trees are under government properties with a total of twenty (20) properties under ROWUA.
- viii. All affected CTs in CPs 105, 108 and 109 are initially inventoried which covers Taguig and Pasay City with more than 90% of affected properties in these areas are under ROWUA. A total of 20,159 crops/trees are affected in Taguig with 18,378 to undergo ROWUA while 3, 138 terrestrial plants in Pasay under DPWH's property and Pasay LGU's jurisdiction will be under ROW agreement with the DOTr. Masterlist for the affected and compensable crops and trees for these three (3) contract packages are targeted to be finalized by the 3rd Quarter of 2023

Table 6. Summary Status of Affected Crops and Trees³⁹

As of 31 December 2023	No. of Crops, Trees, Coconut Trees, and other Species						
	Total No. of PAPties	No. of Crops/Trees	No. of Crops/Trees for Compensation	No. of Crops/Trees for Donation	No. of Crops/Trees for Expropriation	No. of Crops/Trees for ROWUA	No Status Yet
CP101 Depot and Stations							
Number	259	7,568	3,853	179	1,618	1,918	0
In percentage			50.91%	2.36%	21.38%	25.34%	0%

³⁹ Data does not include Subterranean Section.

CP102 Stations							
Number	28	4,674	4,275	3	0	348	48
In percentage			91.47%	0.06%	0%	7.44%	1.03%
CP103 Stations							
Number	21	715	105	0	7	570	33
In percentage			14.69%	0%	0.98%	79.72%	4.61%
CP104 Stations							
Number	12	6,139	43	16	0	5,014	29
In percentage			0.70%	0.26%	0%	81.67%	0.47%
CP105 Stations							
Number	2	11,364	0	0	0	11,364	0
In percentage			0%	0%	0%	100%	0%
CP108 Stations							
Number	15	8,795	0	0	0	7,014	1,781
In percentage			0%	0%	0%	79.75%	20.25%
CP109 Stations							
Number	3	3,138	0	0	0	3,138	0
In percentage			0%	0%	0%	100%	0%

- i. A total of 42,393 affected crops/trees (CTs) are identified and documented to be affected by the project which comprises mostly ornamentals, shrubs, cash crops, and seedlings. CP 105 which covers BGC and KAS shows the most number of affected plant species with 11,364 crops/trees followed by CP 108 (LAS and SDS) with 8,795 and CP 101 covering three (3) stations and a depot located in Valenzuela City and Quezon City with total of 7,568 crops/trees. The area with the least affected CTs are situated in CP 102 and 109 with 4,674 and 3,138 terrestrial plants, correspondingly.
- ii. At least 3,853 crops/trees or 50.91% in CP 101 are for compensation, while around 179 crops/trees were donated by property owners to the DOTr. For the 34 expropriated properties, at most 1,918 crops/trees, or 25.34% are yet to be cleared due to ongoing court proceedings.
- iii. More than 90% of affected crops and trees in CP 102 will be compensated with a total of 4,275 plant species

(91.47%) while 348 CTs (7.44%) are under ROW agreement with the DOTr. For CP 103 and 104, affected vegetations are covered by ROWUA with 570 CTs, or 79.72% identified in ANS/CAS; and 5,014 (81.67%) plant species surveyed in CP 104 – OAS and SBS.

- iv. All affected CTs in CPs 105, 108 and 109 are initially inventoried which covers Taguig and Pasay City. Almost 90% of affected crops/trees in these areas are under ROWUA owned by the Bases Conversion and Development Authority (BCDA) which has a mandate to administer the conversion of the military base lands in Metro Manila including the Armed Forces of the Philippines and Philippine Navy. Other affected government properties that cover a wide area of terrestrial vegetation are DENR -NAMRIA (CP108 -Lawton Station), DepED (CP108- SDS), and DPWH (CP 109-Terminal 3). At least 8,795 and 3,138 CTs which are mostly ornamental plants are affected in CP 108 and 109, respectively.
- v. For CP105 (KAS and BGC), two (2) affected private properties Megaworld and Ayala Land Corporation with lots owned by BCDA are also in ROWUA with the DOTr. A total of 11,364 crops/trees are affected in these station areas.

Table 7. Summary of Issued Permits and Status of Crops, Trees, Coconut for Cutting and Earth-Balling⁴⁰

As of 31 December 2023	No. of Issued Permits						No. of Crops, Trees, Coconut, and Other Species for Cutting and Earth-Balling and No. of Coconuts for Cutting							
	DENR TCEBPs (Trees)			PCA PTC (Coconuts)			With DENR TCEBPs (Trees)			For TCEP Application	PCA PTC (Coconuts)			For TCEP Application
	Issued	Completed	Remaining	Issued	Completed	Remaining	For Cutting and Earth-balling	Cut/ Earth-balled Crops/Trees	Remaining		Approved for Cutting	Cut Coconut Trees	Remaining for Cutting	
CP101 Depot and Stations														
Number	14	13	1	3	3	0	3,718	2,875	843	299	44	44	0	0
In percentage	14	93%	7%	3	100%	0%	3,718	77%	23%	299	44	100%	0%	0

⁴⁰ Data do not include Subterranean Section.

CP102 Stations														
Number	2	1	1	0	0	0	436	393	43	393	0	0	0	19
In percentage		50%	50%		0%	0%		90%	10%			0%	0%	
CP103 Stations														
Number	1	1	0	0	0	0	53	53	0	266	0	0	0	14
In percentage		100%	0%		0%	0%		100%	0%			0%	0%	
CP104 Stations														
Number	2	2	0	0	0	0	283	220	63	51	1	1	6	3
In percentage		100%	0%		0%	0%		78%	22%			0%	0%	
CP105 Stations														
Number	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	339	N/A	N/A	N/A	0
In percentage		N/A	N/A		N/A	N/A		N/A	N/A			N/A	N/A	
CP108 Stations														
Number	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,826	N/A	N/A	N/A	18
In percentage		N/A	N/A		N/A	N/A		N/A	N/A			N/A	N/A	
CP109 Stations														
Number	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	329	N/A	N/A	N/A	0
In percentage		N/A	N/A		N/A	N/A		N/A	N/A			N/A	N/A	

- i. Additional three (3) Tree Cutting and Earth-Balling Permits (TCEBPs) for the MMSP were applied to the DENR-NCR from June to December 2023; one permit each in CP101- Depot, CP102 - QAS and CP104 - OAS.
- ii. The previous TCEBP issued for CP102 - QAS with 436 trees has expired and was re-issued in October 2023 under Permit 18 - LPDD CBP Permit No. 2023-10-510 (TCBP-532). No tree-cutting and earth-balling operation was conducted due to the initial clearing of obstructions and structures in QAS resulting in the re-issuance of its permit.
- iii. CP104-OAS was also issued a TCEBP for the 166 trees situated in Metrowalk, Ortigas, Pasig under Permit 19 - LPDD C/B/P Permit No. 2023-11-522 (TCBP-541). Tree cutting and earth-balling are still ongoing in OAS with night schedule operations due to the location of full-grown trees that are situated along Ortigas Road and sidewalks. For ease of clearing operations and to avoid accidents and heavy traffic in OAS, these affected trees

were scheduled in nighttime. Last March 2, 2024, the permit's validity has already expired with 57 trees remaining on site. Said permit will be requested for extension with the DENR-NCR.

- iv. Another permit was acquired in CP101 - Depot Valenzuela with a total of 262 trees located along the Tullahan River including lots under expropriation. This permit is completed with an ongoing terminal report for preparation and submission to the DENR-NCR.
- v. Currently, a total of nineteen (19) tree-cutting and earth-balling permits are issued to the MMSp, with ten (10) permits already completed. There are five (5) permits that have expired and already requested for new permit application to close the existing permit as advised by the Enforcement Division (ED) of the DENR-NCR. At least two (2) permits have expired that will be requested for re-issuance (new application) to the DENR-NCR while one (1) permit is still active with ongoing tree clearing operation.
- vi. Out of the 4,490 trees approved for cutting/earth-balling, 3,545 or 79% of trees affected by the project were recommended for tree cutting, and 945 trees (21%) are for earth-balling. A total of 3,494 (78%) trees were already cleared with 2,840 trees cut and 654 trees earthballed and transferred to designated transplanting areas located in Valenzuela City, Quezon City and Pasig City. There are at least 983 remaining trees subject to permit re-issuance, mostly situated in the CP101 Depot area while thirteen (13) trees were retained on site specifically in the Veterans Memorial Medical Center (VMMC) and Brgy. Project 6 in Quezon City.
- vii. As per the Condition stated in every permit issued by the DENR, a terminal report must be submitted upon completion of the TCEBPs. The MMSp has submitted a total of eleven (11) Terminal Reports with nine (9) completed reports from CP 101 - four (4) in Depot, three (3) in NAS two (2) in TSS/QHS; and one (1) each for CP103 - CAS and CP104 - SBS permits. Preparation of five (5) terminal reports for completed permits in CP101 and one (1) permit in CP104 is ongoing while the permit in CP 102 - QAS is still active at this time.
- viii. MMSp targets to apply for four (4) additional permits in the 1st half of 2024, one each for CP 101 to CP 104. This includes the remaining trees in lots under expropriation in Depot; remaining trees in QAS including trees in EAS (V. Luna Hospital); affected trees in Stages 3 and 4 in CAS; and trees in acquired and paid lots in SBS. For the remaining sections - CPs 105, 108, and 109, a total of 2,494 affected trees will be applied once the project is awarded to their respective contractors.
- ix. All affected coconuts in CP 101 have been cleared with an approved permit to cut (PTC) from the Philippine Coconut Authority (PCA). The three (3) PTCs issued by the PCA are already completed. These comprise total of 44 coconut trees in CP 101 situated in Depot with 21 coconuts, 17 in NAS, and six (6) in TSS.
- x. Last October 2023, one (1) PTC covering seven (7) affected coconut trees was issued by the PCA in SBS (Annex 9). As of this time, only one (1) coconut was cut, the remaining six (6) are subject to approval of the property owner since payment is still pending for release.

- xi. A Total of 51 affected coconut trees are for application in PCA and are targeted for clearing in the Year 2024 to 2025. No coconut trees were surveyed in CP 105 - BGC and KAS and CP 109 - Terminal 3 Station

Table 8. Summary of Resettlement and Livelihood Monitoring⁴¹

As of 31 December 2023	No. of Remaining ISFs to be Relocated to Resettlement Site (HH)	No. of Remaining PAHs Receiving All Inconvenience Allowance (HH)	No. of Remaining Renters Receiving Rental Subsidy (HH)	No. of remaining PAHs Receiving All Compensation/ Subsidy for Loss of Income (HH)	
				Loss of Business (Business Operators)	Loss of Job (Employees of Affected Businesses)
CP101 Depot and Stations					
Number	0	0	0 ⁴²	78 ⁴³	841 ⁴⁴
In percentage	0%	0%	0%	37.50%	66.32%
CP102 Stations					
Number	12	12	36	66	80
In percentage	100%	100%	100%	100%	100%
CP103 Stations					
Number	45	45	27	40	32
In percentage	100%	100%	100%	100%	100%
CP104 Stations					
Number	6	6	1	0	0
In percentage	100%	100%	100%	0%	0%

⁴¹ Data do not include Subterranean Section and CP105-109 Stations.

⁴² Please refer to section 3.1.4 (iii)

⁴³ Unpaid Microbusinesses in Depot, QHS, and TSS: 208-130=78

⁴⁴ Employees in Depot (710 including EVS), QHS (22), TSS (181), NAS (355): 1268-427 (paid) = 841

3.1.4 Resettlement and Income Loss Replacement and Livelihood Restoration Monitoring Report as of 30 June 2023.

- i. **CP101 Monitoring of Relocatees;** On July 13, 2023, the Valenzuela City Local Inter-Agency Committee held a pre-exit conference that presented the accomplishments and assessed the gaps and areas for improvement of the resettlement's implementation, as well as discussed major issues of the relocatees in terms of estate management and policies in DV II - Bignay. The objective of the pre-exit conference was to determine if the LIAC can already disengage in the monitoring of the PAPs and turn over the responsibilities of monitoring and further interventions to the Valenzuela City government. Based on the status and issues raised, the LIAC agreed that further engagement of the LIAC is still necessary, and the exit conference is not yet applicable.

On July 25-26, 2023, the Valenzuela City LIAC conducted an Occupancy Verification activity in DV II - Bignay to know the status of the relocatees, especially their residency in the units. of the 188 relocatees, it was found that five (5) were not residing in their units, as reported by their neighbors and the building leaders. Four (4) out of the five (5) PAPs though not residing in the unit have updated payment records therefore the NHA and Valenzuela City Housing and Resettlement Office took no action. The one non-residing PAP was found to have arrears in the rental payment for three years and therefore was issued with an eviction notice. The PAP sought DOTr's help to ask for consideration from NHA to accept the impartial payment of the arrears. The PAP could pay half of the amount due, and the eviction notice was recalled.

- ii. **CP101 Entitlements Disbursement for Businesses and Employees.** For this reporting period, 56 project-affected microbusinesses received Income Loss Compensation, and 98 project-affected employees received Salary Loss Compensation. Lastly, one (1) project-affected business formerly located in Tandang Sora station that re-established itself received the reimbursement of the Transactional and Rental Subsidy costs. The total disbursed amount of entitlements disbursed during this period is PhP7,389,073.67
- iii. **CP102 and CP103 Relocation.** As of 31 December 2023, the following are the activities and milestones on the resettlement of PAPs.

- 1. Relocation, Resettlement Action Plan;** On September 6-8, 2023, the QC LIAC for resettlement of MMSP PAPs held a workshop planning to create the Relocation, Resettlement Action Plan (RRAP) (**Annex 1**) for the resettlement of PAPs in the East Avenue station and Anonas station. The RRAP contains the detailed activities, timeline, resources, budgetary requirements, and agencies/offices-in-charge of the activities starting from pre-relocation, actual relocation, and post-relocation of the PAPs. The consolidated RRAP workshop output is attached as Annex: Quezon City LIAC RRAP.
- 2. Subcommittee meetings;** After the RRAP workshop, the different QC LIAC subcommittees actively went to work with their assigned activities and tasks, identified in the RRAP. On 11 September 2023, the Social Preparation subcommittee met to prepare for the 1st community consultation. 05 October 2023, the Community Development subcommittee met to cascade the community development and livelihood components of the RRAP to all members of the subcommittee who were not present during the workshop. On 11 October 2023, the Beneficiaries Selection, Awards, and Arbitration (BSAAC) subcommittee and the SocPrep subcommittee held a joint meeting to agree on the final number of PAPs being considered for relocation per housing guidelines of the LGU, and the scheduling of immediate activities. On 11 November 2023, the Resettlement Planning and Implementation (RPIS) subcommittee met to discuss the issues of the target relocation site and identify ways forward. On 14 November 2023, a joint subcommittee meeting between the SocPrep, BSAAC, and RPIS met to get updates on the prequalification of the potential PAPs, the status of the repairs of the relocation site, and the status of fund transfer from DOTr to the LGU for the relocation expenses and entitlements of PAPs.
- 3. Community Consultations;** On 29 September 2023, the QC LIAC Social Preparation subcommittee held the 1st Community Assembly for the potential PAPs for relocation. The consultation discussed the project overview, the entitlements matrix, and the announcement of upcoming activities that the PAPs have to prepare for. On 17 November 2023, the 2nd community consultation for the PAPs was held. The topics discussed were the applicable entitlements for qualified PAPs and the corresponding requirements that need to be prepared and submitted to the Quezon City - Housing, Community Development, and Resettlement Department (QC-HCDRD). In addition, the DHSUD discussed the process of relocation and the legal backgrounds of the processes. The target resettlement site was also presented in a general overview for the PAPs to be informed of the location and the housing tenure arrangement.

4. **MOA for the Transfer of Funds;** As of 18 December 2023, the Certificate of Availability of Funds was issued by the DOTr Central Office Finance, as an allocation of the budget for transfer to the QC government for the relocation, resettlement, and disbursement of entitlements to QC PAPs. As of 31 December 2023, the funds have not been transferred yet due to the slow review and approval of the fund transfer documents by the DOTr Central Office Finance and the change in signatories.
- iv. **CP104 Relocation.** As of 31 December 2023, the following are the activities and milestones on the resettlement of PAPs.
1. **Relocation, Resettlement Action Plan;** On August 16-18, 2023, the Pasig City LIAC for resettlement of MMSP PAPs held a workshop planning to create the Relocation, Resettlement Action Plan (RRAP) (**Annex 2**) for the resettlement of PAPs in the Shaw Boulevard station. The consolidated RRAP workshop output is attached as Annex: Pasig City LIAC RRAP.
 2. **Subcommittee activities;** After the RRAP workshop, the different Pasig City LIAC subcommittees conducted the remaining pre-relocation activities identified in the RRAP. On 03 September 2023, the Pasig City Social Preparation subcommittee held the 3rd community consultation with the potential PAPs for relocation to get their final decision on whether they will opt for assisted resettlement or self-relocation and finalize the subcommittee resolution regarding the choices of the PAPs. On 13 December 2023, the Pasig Urban Settlement Office, the DOTr, and the Project contractor held an inspection in the target relocation units in the Pasig BLISS 3 project for the Joint Venture to assess and decide whether they can advance the payment and/or repairs of the units while the Pasig City government is waiting for the transfer of funds by DOTr.
 3. **MOA for the Transfer of Funds;** As of 24 November 2023, the Certificate of Availability of Funds was issued by the DOTr Central Office Finance, as an allocation of the budget for transfer to the Pasig City government for the relocation, resettlement, and disbursement of entitlements to Pasig City PAPs. As of 31 December 2023, the funds have not been transferred yet due to the slow review and approval of the fund transfer documents by the DOTr Central Office Finance and the change in signatories.

3.1.5 Assistance to PAPs through execution of Memorandum of Agreement (**MoA**) with PAPs as of 31 December 2023.

Table 9. Summary of Land Acquisition through Execution of MoA, EJSE, and Other Assistance to PAH⁴⁵

As of 31 December 2023	No. of PAHs Assisted in the Cancellation of Mortgage	No. of PAHs Assisted in the EJSE Process	No. of PAHs Compensated through EJSE	No. of PAHs assisted in Drafting the EJSE	No. of PAHs assisted processing Transfer of Title	No. of PAHs assisted in securing Tax Declaration	No. of PAHs assisted in the Reconstitution of Titles
Number	9	66	5	50	45	61	6

3.1.6 List of Acquired Properties for Transfer to the Republic of the Philippines (RoP) as of 31 December 2023.

Table 10. Summary of Cancelled and Exempted Tax Declarations and Transferred Titles to ROP⁴⁶

LGU	No. of Cancelled Tax Declaration of Structures	No. of Tax Declaration of Structures Pending Cancellation	No. of Tax Declaration of Lots Approved for Tax Exemption	No. of Tax Declaration of Lots Pending Tax Exemption	No. of Acquired Titles transferred to ROP	No. of Acquired Titles Pending transfer to ROP
Valenzuela City	40	224	291	2	127	43
Quezon City	38	15	57	0	18	4

⁴⁵ Data includes CP101 to CP104 Stations and CP101 Subterranean Section only.

⁴⁶ Data includes CP101 Depot and Stations only.

3.2 Livelihood Restoration Programs

3.2.1 The DOTr Livelihood Restoration and Improvement Program Implementation Mechanism:

The approved LRIP mechanism for the disbursement of funds downloaded to Valenzuela City is patterned after the practice and implementation process of the Department of Social Welfare and Development's Sustainable Livelihood Program. Each entitled PAP has the option to choose which track to engage with to utilize the PhP15,000.00 LRIP fund. The tracks are as follows:

- i. For PAPs who exhibit potential and willingness for entrepreneurship, they may opt to proceed with the Microenterprise Development (**MD**) track through a Capital Assistance Entitlement (**CAE**).
- ii. For PAPs who are qualified and ready for available employment opportunities, they may opt to proceed with the Employment Facilitation (**EF**) track through the provision of an Employment Assistance Entitlement (**EAE**).
- iii. PAPs who do not have either the: (a) Capacity to engage and/or operate an enterprise; (b) Capacity to work or get employed (e.g., Senior Citizens, Disabled PAPs), or (c) PAPs who are already employed but earn only the minimum income and has no spare time to engage with another employment or establish microenterprise can proceed with the Savings/Investment (S/I) track to avail of the entitlement.

3.2.2 Of the 188 relocatees to Disiplina Village II -Bignay, 172 PAPs participated and received entitlements under the LRIP- Microenterprise Development track while five (5) PAPs availed of the Savings and Investment track. From July 25 - August 17, 2023, a quarterly monitoring activity was conducted to document the current status of the livelihood projects established by the relocated PAPs using the P15,000 LRIP fund granted to them. Quarterly LRIP Monitoring Results are attached (**Annex 3**).

3.2.3 For this reporting period, there were no livelihood restoration programs and activities conducted and implemented since the DOTr LRIP funds were already disbursed, and the MMSP focused on the quarterly monitoring of the LRIP funds utilization and set-up of the relocatees livelihood projects and microenterprises. Meanwhile, the LRIP funds downloaded to NHA for implementation of skills training and other livelihood interventions have not yet been fully utilized due to the delays in the approval by NHA management of the proposed activities. As of 31 December 2023, the remaining funds are P2,058,541.00.

3.3 Grievance Redress Mechanism

Table 11 Grievance Monitoring Report for July to December 2023

No	Date Grievance Raised (d/m/y)	Location Where Person/ Entity Raising Grievance Lives	Name of LGUs (LIAC) Corresponding to Grievance	Grievance Raised	Redress Action Taken and Result
1	27/04/2023	Brgy. Tandang Sora, Quezon City	MMSP-PMO	<p>██████████ a dentist and the owner of a dental clinic located inside the GSIS building in Tandang Sora along Mindanao Avenue, claimed that she was excluded from any coordination, information, and entitlements of the DOTr MMSP. The concern was received by the Envi Team and endorsed to the ISFR Team.</p>	<p>Redress Actions: 27/04/2023 - The PMO immediately called ██████████ to get details such as the start of operations and transfer date to a new location of her dental clinic business, as well the arrangement with the landlord, to assess whether the said establishment is affected and entitled for compensation. It was found after due diligence and a visit to the area that the dental clinic was located in the part of the GSIS building that was not to be acquired by the DOTr.</p> <p>14/07/2023 - First consultation with the RRE to raise the concern and whether the indirectly affected business can be compensated. The RRE advised the PMO to gather further information: -When did fencing start -If the access to the dental clinic was also closed -When did the owner vacate the area</p>

No	Date Grievance Raised (d/m/y)	Location Where Person/ Entity Raising Grievance Lives	Name of LGUs (LIAC) Corresponding to Grievance	Grievance Raised	Redress Action Taken and Result
					<p>Result: On Nov. 8, 2023, during the final consultation with RRE, the final decision on the case of the dental clinic was not to be compensated since the location was not directly affected and the access was not closed. ██████████ also vacated the rental unit voluntarily and was not ordered by DOTr. This result was communicated to ██████████ on the same day.</p>
2	20/10/2023	Brgy. Ugong, Valenzuela City	MMSP-PMO	<p>██████████ The PAP claimed to be the owner of the business in the Depot area her claims are regarding reimbursement of her expenses on the business permit and claims for other business entitlements.</p>	<p>Redress Actions: October 20, 2023 – The PMO, upon receipt of the concern, immediately checked the Database and Master list to validate if there is an existing business or PAP under her name.</p> <p>October 23, 2023 - As checked by the MMSP PMO, the disputed claims of ██████████ are the entitlement of ██████████ and it was already claimed by the latter and all documents presented are under his name and validated by the Team. After the Team’s review, the PMO requested ██████████ to submit through email, her</p>

No	Date Grievance Raised (d/m/y)	Location Where Person/ Entity Raising Grievance Lives	Name of LGUs (LIAC) Corresponding to Grievance	Grievance Raised	Redress Action Taken and Result
					<p>documentary requirements as proof of business.</p> <p>November 8, PMO resent the email with the same content, but the PAP had no response.</p>
3	6/27/2023	Carreon Compound, Depot area, CP101, Brgy. Ugong, Valenzuela City	MMSP-PMO	<p>██████████</p> <p>His claim is regarding his household appliances which he alleged were damaged during the clearing of his structure and hence requested the replacement of damaged appliances.</p>	<p>Redress Actions:</p> <p>July 26, 2023 - The PMO endorsed the concern of ██████████ to GC and SFTE-JV and recommended the following appropriate actions and considerations:</p> <ol style="list-style-type: none"> 1. Consult with the SFTE-JV Team that handled the removal of household belongings and appliances for the inventory and photos of the items stacked on the ground and covered by the tent. 2. To have a professional inspect the appliance and assess whether the damage is repairable or not: and 3. Provide a solution and response to ██████████ <p>██████████ letter coursed through the MMSP PMO.</p> <p>Nov. 30, 2023 The GC-Social Team led by ██████████ ██████████ initiated a meeting and called SFTE-JV staff who handled the removal of</p>

No	Date Grievance Raised (d/m/y)	Location Where Person/ Entity Raising Grievance Lives	Name of LGUs (LIAC) Corresponding to Grievance	Grievance Raised	Redress Action Taken and Result
					<p>██████████ appliance and belongings.</p> <p>The SFTE-JV staff denied any handling or touching of belongings of ██████████ appliance and belongings, and they mentioned that the son of ██████████ told them that the appliances were not working and not in good condition. They also admitted that they don't have a listing and inventory of the appliances and belongings of ██████████</p> <p>December 11, 2023 OCG sent a letter to DOTr, reiterating the result of the November 30, 2023, meeting of GC-social, SFTE-JV, and DOTr, denying the handling of ██████████ appliances and belongings and claiming no responsibility for the damage of the appliances of ██████████ and recommended to DOTr to request STFE-JV to replace it as part of their CSR.</p> <p>Jan. 8, 2024 The ISFR Team communicated with ██████████ through text about the decision and denial of STFE-JV on the responsibility for the damage to his</p>

No	Date Grievance Raised (d/m/y)	Location Where Person/ Entity Raising Grievance Lives	Name of LGUs (LIAC) Corresponding to Grievance	Grievance Raised	Redress Action Taken and Result
					appliances. He answered me and reiterated to me again the old issues on his structures that DOTr did not pay and told me that they no longer are interested in his claim for the damages of his appliances.
4	12/27/2023	Brgy. Bagumbuhay , Quezon City	MMSP-PMO	██████████ emailed Usec. Chavez to follow up and requested to fast-track the payment processing on his affected property in Anonas Station.	<p>Redress Action: The case handler immediately provided Usec. Chavez the summary of all transactions relative to ██████████ property. She also emailed ██████████ and explained the cause of the delay in the payment.</p> <p>Result: On 22 February 2024, ██████████ received the check as payment on his affected lot and structure.</p>
5	12/29/2023	Greenhills, San Juan City	MMSP-PMO	CGW Law Office, legal counsel of ██████████ ██████████ the authorized representative of ██████████ claimants of CN4102 sent a cease-and-desist letter to TTM-JV (the CP104 Contractor) to stop ongoing pre-construction works in the Ortigas Avenue Station.	<p>Redress Action: MMSP-PMO advised the Contractor to formally endorse the letter to MMSP-PMO. The latter also sought legal guidance from the Office of the Undersecretary for Legal Affairs regarding the cease-and-desist letter however they were advised to ignore the letter since there were no established valid claims on the said property.</p>

No	Date Grievance Raised (d/m/y)	Location Where Person/ Entity Raising Grievance Lives	Name of LGUs (LIAC) Corresponding to Grievance	Grievance Raised	Redress Action Taken and Result
					Result: MMSP-PMO followed the [REDACTED] advice and advised the Contractor to continue their work on the area.

Prepared by:

Noted by:

Endorsed by:

