REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
CENTRAL OFFICE
Bonifacio Drive, Port Area, Manila

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

(ESMP)

H. Bautista Elementary School
J. P. Rizal St., Concepcion Uno, Marikina City

CONSULTING SERVICES FOR THE ASSESSMENT AND DESIGN OF FUNCTIONAL ELEMENTS OF PUBLIC-SCHOOL BUILDINGS SELECTED FOR RETROFITTING AND STRENGHTHENING/UPGRADING IN PREPARATION FOR "THE BIG ONE" UNDER IBRD LOAN 9251-PH: PHILIPPINES SEISMIC RISK REDUCTION AND RESILIENCE PROJECT (PSRRRP) - FIRM 2

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ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

H. Bautista Elementary School

May 2025

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ACRONYMS

BLGUs	Barangay Local Government Units
CSHP	Construction Safety and Health Plan
DASB	Directly Affected School Buildings
DPWH	Department of Public Works and Highways
EIS	Environmental Impact Statement
EMoP	Environmental Monitoring Pla
EMP	Environmental Management Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMMP	Environmental and Social Management and Monitoring Plan
ESMP	Environmental and Social Management Plan
ESSs	Environmental and Social Standards
FGDs	Focus Group Discussions
GMMA	Greater Metro Manila Area
GRM	Grievance Redress Mechanism
IEC	Information, Education, and Communication
IEE	Initial Environmental Examination
IMP	Impact Management Plan
IPF	Investment Project Financing
IRR	Implementing Rules and Regulation
KIIs	Key Informant Interviews
LMP	Labour Management Plan
LGCRRP	Labor, Gender, Child, and Resettlement Rights Protection
NCCA	National Commission for Culture and the Arts
NPCC	National Pollution Control Commission
PSRRRP	Philippines Seismic Risk Reduction and Resilience Project
PIU	Project Implementing Unit
PWD	Persons with Disabilities
SEMS	Sustainable Environmental Management System
SEP	Stakeholder Engagement Plan
SPED	Special Education
VAWC	Violence Against Women and Children

1 INTRODUCTION

DPWH is implementing the World Bank-financed 'Philippines Seismic Risk Reduction and Resilience Project (PSRRRP) to enhance: (i) the safety and seismic resilience of selected public school buildings and health facilities in Metro Manila through assessment, repair, and retrofit of public facilities for earthquake resistance; and (ii) the capacity of the DPWH to prepare for and respond to emergencies by improving its emergency response operations and purchasing additional emergency response equipment. The Unified Project Management Office manages the Project - Buildings and Special Projects Management Cluster (BSPMC), the Project Implementation Unit under DPWH. The DPWH, as an implementing agency, will take material measures and actions so that the Project is implemented following the World Bank Environmental and Social Standards (ESS).

In line with ESS1 (ESS1: Assessment and Management of Environmental and Social Risks and Impacts), this Environmental and Social Management Plan (ESMP) has been developed to identify and manage potential environmental and social impacts of the project. The site-specific impacts arising from the pre-construction and construction phases will be reflected and integrated into this ESMP.

The primary objective of the ESMP is to guide project proponents and contractors in decision-making to ensure that the design, construction, and upgrading of educational and health infrastructure are environmentally sustainable, socially inclusive, and compliant with the World Bank's ESS. This includes measures to protect workers, minimize construction-related disruptions, and ensure meaningful stakeholder engagement throughout the project lifecycle.

The purpose of the ESMP are the following:

- Assess the most likely potential environmental and social impacts of the project activities, whether positive or negative and propose corresponding mitigation measures;
- Inform the project management team and school concerned of the potential impacts of the related construction activities and relevant mitigation measures; and
- Identify applicable environmental policies and legal and institutional frameworks on the project.

2 PROJECT BACKGROUND

2.1 PROJECT DESCRIPTION

H. Bautista Elementary School is a public institution situated at the intersection of H. Bautista and J. P. Rizal Streets in Concepcion Uno, within the municipality of Marikina, located in the National Capital Region's Second District.

The school was founded on January 1, 1949, and is named in honor of the late Hermogenes Bautista, a notable patriot and advocate for women's rights. Born in Marikina in 1866, Bautista was also a revolutionary general who passed away on October 17, 1917. He played a significant role in organizing the Marikina chapter of the KKK (Kataas-taasan, Kagalang-galangang Katipunan ng mga Anak ng Bayan), an organization established by Supremo Andres Bonifacio to seek Philippine independence from Spanish rule. Hermogenes was later elevated to the rank of General within the Katipunan, and during the Philippine Revolution in 1896, his forces assisted Bonifacio in seizing control of San Mateo from Spanish authorities, as noted in an article from the National Commission for Culture and the Arts website.[1]

[1] https://sites.google.com/depedmarikina.ph/elibroproject/about-us/history/history_hbes

H. Bautista School is surrounded by roads frequented by both private and public transportation, such as tricycles and jeepneys. At the corners of the school, there are intersections without traffic lights, leading to occasional traffic build-up.

The area around the school is predominantly residential. The neighborhood consists of small businesses and micro-enterprises like sari-sari stores and bakeries, which are vital to the local economy and provide convenient services to residents. The close proximity of these commercial activities to the school increases street activity during certain times of the day, adding to traffic congestion and complicating traffic flow.

2.2 CONSTRUCTION DESCRIPTION

As part of the retrofitting, the table below outlines the Type of Retrofitting of the affected buildings.

Table 1. Project Scope

Retrofitting Method								
School	**Building**	**Retrofitting Method**	**Affected Structural Elements**					**Estimated Time of Completion**
			Beams	**Columns**	**Footings**	**Slabs**	**Trusses**	
H. Bautista Elementary School	DPWH Building	Steel Jacketing / Concrete Jacketing	✓	✓	✓			9 months

The retrofitting works for the school is expected to take approximately 9 months. The project involves the use of both steel jacketing and concrete jacketing, depending on the structural elements being reinforced. Steel jacketing entails encasing structural components such as beams and columns with steel plates, significantly improving the structure's resistance to seismic forces and additional loads. While steel jacketing traditionally generates substantial noise during the cutting and welding processes, advancements in construction technology have helped reduce noise levels, making the procedure more manageable in environments like schools. Concrete jacketing, by contrast, involves adding an extra layer of concrete around structural members to increase their load-bearing capacity. Although this method typically generates less noise, moderate levels may still occur during concrete mixing and formwork removal. In response to concerns raised during public consultation, it was agreed with stakeholders that these noisy activities will be scheduled outside of school hours.

To ensure the safety and smooth operation of the school during the retrofitting period, it is essential to establish separate entry and exit routes specifically for the workers (refer to Annex B: Traffic Management Plan for further details). This will help prevent disruptions to school activities and minimize any safety risks to students and staff. As retrofitting progresses, adjustments to these routes may be required, particularly during heavier tasks such as steel jacketing. Any changes will be subject to the coordination and approval of the School Administration and the Local Government Unit (LGU).

An estimated 50 workers, including a safety officer and a project engineer, will be present on-site at any given time. The workers will be accommodated in a nearby designated resting area (refer to Annex B: Traffic Management Plan for further details), ensuring easy access to the school. This area will be used solely for worker rest breaks, with only one personnel permitted to stay overnight to watch over equipment, as agreed during the public consultation. Other workers will need to find accommodation off-site or in nearby apartments.

The resting place must be equipped with at least one portalet to meet basic sanitation needs, and regular sanitation checks should be conducted to maintain cleanliness and hygiene throughout the construction period.

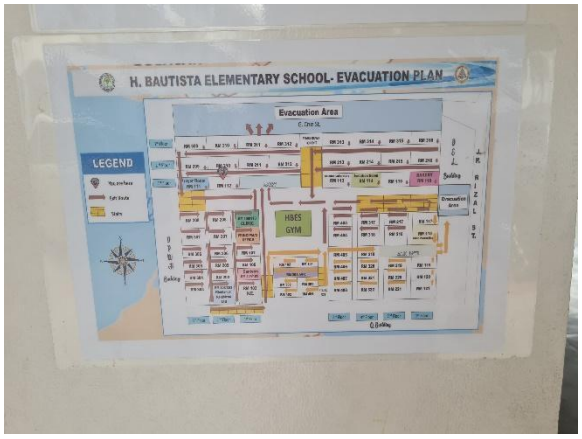
As discussed, and requested by the principal during the Focus Group Discussion, a submeter will be installed to monitor the electrical and water utilities consumption related to the project. A separate submeter for both electrical and water utilities must be installed to accurately monitor consumption and prevent additional costs to the school. The contractor should coordinate with the school administration to establish clear billing and payment arrangements for these utilities.

Figure 1. Project Vicinity Map

Figure 2. H. Bautista Elementary School

Main entrance

Solid Waste Management



School evacuation plan

covered court

2.3 DEMOGRAPHICS

2.3.1 School

Learner Enrollment and Shifts

The school has a total enrollment of 4,635 learners, composed of 2,229 girls and 2,406 boys, ranging in age from 12 to 16 years old. The learners are enrolled in Kindergarten and Grades 7 to 10, with an Alternative Learning System (ALS) program also in place. The school operates under a double shift system.

Teaching and Administrative Staff

The school is staffed by a total of 140 teachers and school personnel, with a significant majority being women (111 female staff members and 38 male staff members).

2.3.2 Building-Specific Details

The following data represents the learner distribution in the eligible school building:

Figure 3. DPWH Building

Building Information		Type of rooms directly affected by retrofitting	Existing facilities to be affected by retrofitting
Seismic Vulnerability Rating (SVR):	72.00	Offices: • Guidance • Service center • Library and ICT • Principal's office, • registrar office Rooms: • Classrooms Others: • Canteen and feeding center • Clinic	WASH Facilities • Toilet • Urinal • Handwashing/Lavatory Other structural elements: • Windows
No. of Floors:	3		
Estimated Floor Area:	1,716sqm		
Year Constructed:	1995		
Occupants of the Eligible Building			
Total number enrolled in Learners	500		
Grade Level	Grades 1,2,4		
Age Range	7-10 y/o		
Total Number of Shifts	2		

Table 2. Building Information – DPWH Building

2.4 HAZARD ASSESSMENT

Table 3. Hazard Assessment, H. Bautista Elementary School

Hazard	Description
SEISMIC HAZARD ASSESSMENT	
Nearest Active Fault	Approximately 1.2 km east of the Valley Fault System: West Valley Fault
Ground Rupture	Safe
Ground Shaking	Prone; Intensity VIII
Earthquake-Induced Landslide	Safe
Liquefaction	High Potential
Tsunami	Safe
VOLCANIC HAZARD ASSESSMENT	
Nearest Active Volcano	Approximately 72.5 km north of Taal
Nearest Potentially Active Volcano	Approximately 64.7 km northeast of Corregidor; No immediate volcanic hazard threat
Permanent Danger Zone	Outside
Ballistic Projectiles	Safe
Base Surge	Safe
Volcanic Tsunami	Safe
Ashfall	Prone
Nearest Inactive Volcano	Approximately 38.5 km northwest of Talim (part of laguna caldera); No immediate volcanic hazard threat
HYDRO-METEOROLOGICAL HAZARD ASSESSMENT	
Flood (MGB)	High Susceptibility; 1 to 2 meters flood height and/or more than 3 days flooding
Storm Surge (PAGASA)	Safe
Severe Wind (PAGASA)	117.1 - 220 kph (20-year return period); 117.1 - 220 kph (500-year return period)

Source: HazardHunterPh

Figure 4. Distance of School to the Valley Fault System

Figure 5. Nearest Body of Water

3 POTENTIAL ENVIRONMENTAL AND SOCIAL RISK AND MITIGATION

3.1 PROJECT TYPOLOGY

All work will be carried out within existing facilities, with no new buildings being constructed. In some facilities, retrofitting may involve significant work on foundations, columns, and beams, including roof strengthening. In other areas, only concrete or epoxy injections, and the replacement and repair of walls, windows, and other accessories will be necessary. These retrofitting activities will be confined to specific floors or sections of a building and do not require a formal environmental assessment under the Philippine Environmental Impact Statement System (PEISS). However, there may be concerns about inconveniences or nuisances to surrounding areas during construction, which will necessitate careful planning and management. These considerations will be integrated into the Environmental and Social Management Plan (ESMP) for each building.

3.2 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

3.2.1 Temporary relocation of school classrooms and other building equipment

One of the buildings of H. Bautista Elementary School will undergo rehabilitation, and the temporary relocation of students from the affected classrooms during the retrofitting project is expected to have several significant impacts. During the public consultation held on October 30, 2024, the principal expressed concerns about the potential learning gap for students, as they are strongly opposed to online classes. The school is also facing challenges in identifying suitable options for relocating students, as the school is already operating on a double shift schedule.

Given this situation, the potential social impacts should be carefully considered. The disruption to students' education, particularly through forced online learning, could lead to an increase in disengagement and a widening of the learning gap. The school's capacity to accommodate all students in the limited available spaces may also affect the quality of learning. The noise from construction could further disrupt the learning environment, leading to increased stress and frustration among both students and staff. Additionally, relocating students in a school with a double-shift schedule may result in overcrowding in temporary classrooms, impacting students' social dynamics and their overall well-being. The social cohesion of the school community might also be affected, as students may feel disconnected from their usual routines and peers during this period of adjustment.

3.2.2 Construction Impacts

The civil works involved in building retrofitting activities and functional improvements can generate a variety of impacts and risks to workers, building occupants, and the community. These impacts range from low to moderate in severity and can include:

1. Environmental Disturbance
    a. Air Quality: Construction activities can release dust and emissions, affecting air quality. The storage of loose materials on-site, such as sand and cement, can contribute to airborne dust, especially during dry and windy conditions. Additionally, vehicle movement, including the transportation of materials and equipment, can generate exhaust emissions and resuspend dust particles, further impacting air quality. Proper dust control measures, such as covering materials and implementing vehicle wash stations, should be enforced to mitigate these effects.

b. Noise Pollution: The use of heavy machinery and construction equipment will generate significant noise, especially during tasks such as steel jacketing and demolition.
c. Water Pollution: Construction runoff containing sediments, chemicals, and debris can contaminate nearby water bodies, leading to potential health hazards and ecological damage. Improper disposal of construction materials and hazardous substances can further degrade water quality.

2. Waste Management
   a. Construction Debris: Retrofitting activities will generate considerable amounts of construction waste, including debris, packaging materials, and leftover construction supplies. Poorly managed waste could pose environmental and public health risks.
   b. Hazardous Waste: Improper disposal of hazardous waste could lead to soil and water contamination, posing long-term risks to the community.
3. Labor Influx Impact
   a. Community Relations: The influx of construction workers may strain local resources such as water, electricity, and housing, potentially leading to tensions within the community. Additionally, increased interaction between workers and local residents could disrupt existing social dynamics.
   b. Health and Safety: The presence of an external labor force may raise concerns over health and safety, particularly in relation to the spread of communicable diseases, risks associated with Sexual Exploitation, Abuse, and Harassment (SEA/SH), and accidents occurring off-site.
4. Safety Risks
   a. Worker Safety: Construction sites present multiple hazards, including falls, exposure to harmful substances, and machinery-related accidents. Inadequate safety measures could result in injuries or fatalities.
   b. Occupant Safety: While the school remains operational during the construction period, the risk of accidents for students, staff, and nearby residents increases. Falling debris, machinery operations, and the movement of construction vehicles pose significant threats.
5. Limited School Access
   a. Disruption of Educational Activities: Ongoing construction may block access to school facilities, limiting the ability of students and staff to attend classes or use essential resources like libraries and laboratories. This could result in a reduction of instructional time and a general sense of disorganization.
   b. Congestion and Safety Concerns: The narrow access road to the school, which is already prone to congestion, will be further strained by construction-related traffic, potentially exacerbating safety risks and reducing the efficiency of emergency response during incidents.
6. Business Relocation
   a. Displacement of Local Businesses: Businesses situated near or within the construction zone may need to temporarily relocate, causing financial losses and disrupting local economies. In some cases, business owners may be forced to close operations entirely during the construction period.
7. Traffic Disruption
   a. Traffic congestion: Construction activities are likely to cause traffic congestion, affecting the flow of traffic and increasing commute times for students, staff, and community members. This could result in public dissatisfaction and reduced access to essential services.
   b. Public Transport Disruption: The construction zone may interfere with local public transportation routes, making it more difficult for students and staff who rely on public transit to access the school.

8. Utility Disruption
    a. Service Interruptions: Construction work may disrupt essential utilities such as water, electricity, and internet services. Even short-term interruptions can have severe impacts on the school's operations, impeding both educational and administrative activities.
    b. Impact on Local Residents: Utility disruptions could extend beyond the school, affecting nearby homes and businesses and leading to dissatisfaction within the community.

4 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

The implementation of the project poses potential environmental and social impacts that are expected to be temporary, and/or reversible, and are low in magnitude. These impacts are related to the following construction activities:

- dust nuisance emissions
- noise and ground vibrations
- generation of wastes - liquid and solid and small amounts of hazardous waste
- potential pollution of soil and water resources due to accidental spillage of oil, lubricants, fuel, and wastewater
- disruption of current traffic flow and access to school
- traffic safety
- occupational health and safety (OHS)
- construction of access roads and/or damage to access roads.

Objectives of the ESMP

The main objective of the study is to identify the environmental and social impacts related to the proposed construction/retrofitting activities of public schools in Marikina City and to design an appropriate Environmental and Social Management Plan (ESMP) for the project.

The provided ESMP checklist is compatible with WB ESF. During the construction phase of the project the mitigation/enhancement measures prescribed in the ESMP Checklists will be implemented by the winning Contractor. The project engineer or the supervisor ensures the environmental and social compliance of the activities.

Table 4. Environmental and Social Management Plan

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
A. Pre-Construction Phase						
Failure to comply with National Laws and Regulations	LOW	• Acquisition of permits, clearances, no objection certificate (CNC, building permit, electrical permit, sanitary permit, occupancy permit, PCAB license for Contractors, etc.). All must be obtained/ approved prior to commencement of related works. • Include in detailed design drawings and documents all conditions and provisions if necessary	Copies of approved permits	Included in construction cost	Contractor	PIU Construction Supervision consultants
Disruption of operation of facility due to temporary relocation of affected school classrooms or	HIGH	• Prior consultation with the school building administrators and other stakeholders to	-Minutes of meetings -Site layout	300,000	Contractor School building representative/end-user	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
relocation of other building utilities		plan the temporary relocation site of affected classrooms and other structures • Coordinate the schedule of activities/program of works with the administration of the school • Coordination with City LGU and/or barangay for the Traffic management • Preparation and implementation of temporary Learning Continuity Plan with the approval of the DepEd Schools Division Office. (Refer to ANNEX C for the Learning Continuity Plan.) • Establishment of the grievance redress mechanism (identify contact persons in case of complaints)	-Temporary relocation plan -Program of works/schedule -Updated site- specific ESMP -Project billboard		Stakeholders (canteen owner, adjacent residential houses, barangay, etc.)	DEPED

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		• Post billboard containing project information and contact information of complaint focal person				
Arrangement of Pedestrian flow and traffic	HIGH	• Coordination with Barangay and concerned department in the LGU • Proposed traffic measures in place such as the provision of signs, markers and lighting for pedestrian and students • Preparation and implementation of Traffic Management Plan (Refer to ANNEX B for the Traffic Management Plan)	-Installed traffic markers, signage, and other measures -Record/logbook of traffic management	Included in Project Cost	Contractor	PIU Construction Supervision consultants
Arrangement of workers camp	LOW	• Proposed barracks is reflected in ANNEX B. This is for workers resting place only	-Staging area is fenced and with appropriate signage	Included in Project Cost	Contractor	PIU

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		during work time. Only one personnel is allowed to stay overnight to watch over equipment. Other workers will need to find accommodation off-site. • Location for stockyards/staging area for construction materials will be identified as coordinated with the school principal. There is a portion of the school ground where Contractor may use as a temporary staging area (Refer to Annex B). This should be fenced and away from the entry/exit of the students.				Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
Designation of Environmental Health and Safety Officer of Contractor	LOW	• The Contractor has to appoint one Environmental, Social and Safety Officer who is capable in implementation of Environmental and social safeguards throughout the project cycle. - Must be a Safety Officer certified by the Department of Labor and Employment (DOLE), at least SO3 (Safety Officer 3) level based on DOLE Occupational Safety and Health (OSH) Standards. - Minimum 2–3 years of experience in environmental management, health, and safety within the construction industry.	NA	Included in Project Cost	Contractor	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		- Experience in implementing and monitoring Construction Safety and Health Programs (CSHP) in compliance with DOLE regulations. - Familiarity with Environmental Impact Assessments (EIA) and relevant DENR and DPWH environmental guidelines.				
Construction ESMP	LOW	• Contractor will be required to submit the Construction ESMP prior to the commencement works at the site.	NA	NA	Contractor	PIU Construction Supervision consultants
Increase chances of theft of school materials and vandalism, unauthorized access, harm to students	LOW	• Inventory and security of school materials • Assign a security personnel 24/7 to ensure no loss school	- Inventory Logs, Incident Reporting Records	Included in Project cost	Contractor	School Admin PIU

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		materials and unauthorize access to classrooms and offices • Contractor to provide a list of materials to be pulled out of school and to provide the school admin of the list for their approval. • Designate a single controlled entry point to ensure the safety of students and staff. Workers will have a separate entry to the construction site with proper identification to avoid unauthorized access. This process not only allows security personnel to keep track of who enters the premises but also reinforces a sense of safety among students and faculty. (Refer to				

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		Annex B. Traffic Management Plan)				
Generation of local employment	Low	• Adhere to RA 6685 Sec 1 - "All private contractors, including subcontractors to whom awards are made for the undertaking of projects must hire at least 50% of the unskilled and 30% of the skilled labor requirements for the unemployed Bonafide and actual residents in the city and municipality…"	Logbook/record of employment	NA	Contractor	PIU Construction Supervision consultants
Community Safety and Awareness	LOW	• Conduct a training and awareness program prior to construction for schools and local communities on CESMP, LEARNING CONTINUITY PLAN, Traffic Management	- Number of participants trained. - Attendance records. - Community feedback	20,000.00	Contractor	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		Plan, and Health & Safety measures.				
B. Construction Phase						
Excavation, backfilling, hauling/stockpiling of excavated and construction materials May cause soil run off that may clog canals and existing drainage *Excavation volume: DPWH Building-265.50 cu.m.*	LOW	• Install safety warning signs (i.e., diamond grade reflective aluminum or magnetic vinyl) and sturdy fence (i.e., GI Sheet) • Maintain no more than 2m height of stockpiles of sand and gravel, secured and located away from the drains and at least 100m away from water source to reduce transport of sediments during heavy rains and should be hauled regularly from the work site • Cover exposed stockpiles of excavated and	Visual observation of canals and drainage and implementation of mitigating measures	Included in Project Cost	Contractor	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		construction materials with tarpaulins or similar material • Install silt fences and sediment traps, covering exposed earth, especially before heavy rains are expected, and use of sediment basin (if space is available). These barriers effectively trap particles and sediments to avoid contamination of nearby water bodies.				
Water pooling, flooding of construction and school area (Drainage Plan)	LOW	• Regular clearing of drain inlets • Ensure drainage flow remains unobstructed • Implementing solutions like retention ponds and temporary drainage channel for directing rainwater and runoff away from areas at	- Drain inspections (especially after rain) - Functionality of diversion measures	Included in Project Cost	Contractor	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		risk of flooding or erosion. This system is designed to manage and mitigate the impact of stormwater, safeguarding infrastructure and preserving hydrological balance				
Physical Cultural Heritage Sites/Chance found archeological property	LOW	• There are no areas of archaeological or historical value identified during field inspection. During excavation work, if any items of historical or archaeological significance are discovered, they must be reported to the project proponent and relevant authorities, such as the National Museum in Manila and the local museum in Marikina City, in	Record of inventory	NA	Local Marikina museum	School admin

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		accordance with protocol.				
Generation of waste through improper handling and disposal of excavated soil, leftover concrete by excavation	MEDIUM	• Strictly implement solid waste management plan and proper disposal by contractor in accordance with RA 9003, hazardous waste disposal in accordance with RA 6969. • Conduct Information, Education and Communication (EIC) campaign on waste management to the communities • Contractor will commission a 3rd party hauler accredited by DENR with valid permits and licenses	Monitoring record of solid and hazardous wastes hauled/disposed	400,000	Contractor	PIU Construction Supervision consultants School Administrator
Generation of waste through improper handling and disposal of construction waste /	MEDIUM	• Collect recyclable materials such as used rebars, glass,	Regular monitoring implementation of hazardous waste	200,000	Contractor	PIU

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
domestic and hazardous wastes (light bulbs, lead-based paints, used oils, used electrical cables,		wires, plastic bottles, and other materials possible for reuse or for recycling to be hauled by the third-party waste hauler accredited by DENR with valid permits and licenses. • Disposal and treatment will be done in TSD facility. • Proper inspection and maintenance of machines and equipment. • Strictly implement solid waste management plan and proper disposal by contractor in accordance with RA 9003, hazardous waste disposal in accordance with RA 6969. • Provide segregate bins/receptacles for the different types of	management measures Certificate of Treatment (COT) from the DENR-recognized waste treater.			Construction Supervision consultants School Administrator

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		hazardous wastes and put labels on the bins with translation in Tagalog • No burning of waste. All generated waste will be hauled by an accredited contractor. • Observe good housekeeping • Stacking/ staging areas for construction material (sand, gravel, cement, etc.) shall also be covered appropriately with tarpaulin or other suitable cover.				
Construction waste water from washing vehicles and equipment which contains cement, sand, lubricants, oils, mud, suspended solids , etc.	MEDIUM	• Wastewater generated will not be discharged in open areas and directly into drainage. • Contractor to install a wash bay area where wastewater will go directly into a holding	-No discharge of wastewater in open areas -Ensure method statement of Contractor in disposal of wastewater is followed	500,000	Contractor	PIU Construction Supervision consultants School Administrator

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		tank to be hauled and treated by accredited TSD (treatment storage and disposal) facility • Wastewater shall be recycled for watering and dust reduction or vehicle cleaning or toilet use • Prohibit washing of cement mixers and other construction vehicles at the site. • No repair and maintenance of vehicles (except sudden break down) should be at the school premises.				
Wastewater generation from domestic sewage (from construction workers)	LOW	• Domestic sewage wastewater from construction workers shall go into septic tanks if the Contractor will be using portalets. This	-Certificate of Treatment (COT) from the DENR-recognized treater. -Check if wastewater results are within the	500,000	Contractor	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		shall be hauled and treated by accredited waste hauler. • Implement health and sanitation rules to keep the school and vicinity clean	prescribed standards of DENR			School Administrator
Smoke emission from the operation of construction machinery, equipment and construction vehicles	LOW	• Conduct proper inspection and preventive maintenance of heavy equipment, machineries and service vehicles to meet the DENR Emission Standard • Use electric or fuel efficient equipment, machineries and vehicles and maximize its operation if possible • Ensure proper maintenance of construction equipment	Record/logbook of maintenance and inspection checklist	200,000	Contractor	PIU Construction Supervision consultants School Administrator

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
Increase in dust emission	HIGH	• When transporting waste/materials and construction materials, the vehicles must be covered with canvas in order to avoid the dust emission • Conduct water spraying once a day to suppress dust and minimize discomfort to nearby residents and occupants in the compound. • Install dust-control curtain (e.g. plastic, tarpaulin) in areas where demolition of walls will be done • The school will be equipped with portable air pollution meter. This will be used periodically to monitor air pollution levels dust (PM10 and PM2.5) at the school	Daily inspection of the dust control measures such as trucks are covered No complaints from the public Air pollution monitoring sheet: The 24-hour acceptable threshold standard for PM10 is 150 µg/m³, while the annual guideline value is 60 µg/m³. The annual guideline value for PM2.5 is set at 25 µg/m³, while the 24-hour guideline value is 35 µg/m³	400,000	Contractor	PIU Construction Supervision consultants School Administrator

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		where students are frequented. • Air monitoring shall be done once before construction starts and once every month during construction. The contractor should install a 'windsock (a light, flexible cylinder or cone mounted on a mast) to show the direction and strength of the wind, so that dust producing activities can be stopped during high wind periods.				
Noise generation from construction equipment (mechanical noise) such as welding, drillers, jackhammer Disturbance to students and nearby the residents)	LOW	• Ensure noise levels from equipment and machinery conform to NPCC standards • Proper maintenance of machinery to minimize noise. Install low-noise	Check secure barriers Check work schedule implementation -Check if workers' have ear plugs -Maintain records of complaints received	600,000	Contractor	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
Vibration from construction activities such as loading/unloading of materials, disassembling/assembling		equipment and technology such as silencers and mufflers during construction/retrofitting phase • Keep the noise at a level of no more than 55dB for Class A-AA for school and residential areas • Strictly prohibit heavy noise generating activities beyond 7:00PM, school is near residential areas and sensitive receptors. • Incidents, complaints and non-compliances related to noise and vibration shall be reported in accordance with the GRM in place • Noise emissions are minimized during school hours. Only activities that will not	Noise Monitoring Sheet: Maximum Allowable Noise (dBA) by time periods (Category AA) • Daytime (9:00AM to 6:00PM) - 50 dBA • (5:00AM to 9:00AM/6:00PM to 10:00PM - 45 dBA • Nighttime (10:00PM to 5:00 AM) - 40 dBA			School Administrator

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		generate too much noise and vibration are allowed. • The Contractors' Environmental Officer, the PIU's Environmental Specialist, and the School Principal (or a designated teacher) should be equipped with portable, lightweight, handheld noise meters. These meters should be used periodically to monitor noise levels at critical locations such as classrooms facing the construction area, school entrances, and along roads frequented by the Contractors' transport vehicles. Monitoring should occur several times daily				

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		throughout the construction period. • Inform the nearby residential area for the noisy works that will be done during night time				
Impacts from vibration due to demolition of walls, drilling, pounding, and other retrofitting works that may harm the Mechatronics Room, holding sensitive machine, computer, and electronic items	Low	• -Install extra protection of the items to ensure they are not affected by the vibrations due to retrofitting works • -Coordination with faculty regarding proper handling of the mechatronic items	• -Regular inspection of the items • -Record of the inventory of materials	150,000	Contractor	PIU Construction Supervision consultants School Administrator
Occupational Health and Safety	HIGH	• Contractor to submit CSHP approved by DOLE • Ensure site premises are provided with appropriate fencing and adequate lighting and hazard notices to	• -Strict implementation of DOLE-OSHA regulations • -Items are installed • -PPE are used on-site by workers	600,000	Contractor	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		prevent access of unauthorized person • Ensure workers are provided with Personal Protective Equipment (PPE). Provide first aid supplies on site and designate first aider. • Provide facilities for sanitation and hygiene such as portalets, potable water, and hand wash station. • Implement good housekeeping on site • Ensure that the workers' site area is accessible only to authorize employees • All workers must be given site induction before start of work • Daily toolbox meeting				
Community Health and Safety (Workers, students and the general	HIGH	• Conduct orientation of Safety and Health Policies, School	• Record/Logbook of safety measures installed	Included in the project cost	Contractor	PIU

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
public will be exposed to unsafe and hazardous condition) Increase risk of construction related accidents/injury for students, faculty, and school staff		regulations to workers • The Construction Safety and Health Plan submitted and approved by DOLE shall be implemented and followed during the project phase. • Contractor shall comply with DOLE's OSH/CSH standards and requirements • Install safety warning signs (i.e., diamond grade reflective aluminum or magnetic vinyl) and sturdy fence (i.e., GI Sheet) at the areas where there is potential risk or danger and need blocking protection. • Contractor to assign a safety officer in the construction area throughout the construction activities	• Daily monitoring of hazards/risks in the construction area • GRM in place			Construction Supervision consultants School Administrator

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		• Construction workers submit medical certificates to prove they are fit to work.				
Emergency Response (Fire, earthquake, on-site accidents during work)	HIGH	• Include Emergency Response Plan in the DOLE Approved Safety Plan • Provide fire extinguishers, first-aid kits • Conduct drills and orientation • Mark emergency exits	• Drill records • Accessibility of emergency gear • Worker/staff awareness	Included in total project cost	Contractor	PIU Construction Supervision consultants
Health and hygiene	HIGH	• Provide bins for food waste. Workers are advised to not dispose food waste openly as that will attract rats, cockroaches and other insects, and stray dogs. • Connect with the nearest hospital for the workers in case of accident or injury.	• No littering of food waste • Implementation of good practices regarding hygiene and sanitation	Included in total project cost	Contractor	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		• Conduct awareness to all construction workers in basic sanitation and health care issues and safety matters, and HIV awareness				
Labor Rights	LOW	• Ensure minimum legal labor standards as per DOLE regulations • Ensure that the workers are aware and have access to the Grievance redress Mechanism (GRM).	• Strict implementation of CSHP • Grievance Redress Mechanism in place	Included in total project cost	Contractor	PIU Construction Supervision consultants
Fire Prevention	MEDIUM	• Provide necessary fire prevention equipment on site in line with applicable local regulations	• No accidents or injury • Fire prevention equipment in place	500,000	Contractor	PIU Construction Supervision consultants School Administrator
Traffic disruption and pedestrian safety.	HIGH	• Ensure pedestrian safety and safety of school children going	• No accidents or injury	500,000	Contractor	PIU

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		to and from school. The entry and exit gateway shall not be blocked with construction materials. • Install road sign at the main gate of the school which will bemused for ingress/egress of the Contractor • Ensure continued access to public transportation routes and services is important for minimizing inconvenience • Coordination with local authorities about the implementation of traffic management • Provision of clear and visible signages, barriers such as cones along pedestrian lanes	• No complaints from community and stakeholders • No conflicts between pedestrian and vehicular traffic flow within the vicinity of the project site • Record of Traffic Management Plan			Construction Supervision consultants School Administrator

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		• Assign a traffic marshall at the high-volume traffic areas within the project site especially during transport of construction materials and heavy equipment • Speed limit up to 10 kph of contractor's service delivery and all moving vehicles within the project site				
Gender Issues	LOW	• Development of comprehensive anti-GBV strategy • Educated/sensitized on legislation and regulations pertaining to GBV, exploitation and abuse	• No discrimination • Community acceptance on gender equality	NA	Contractor	PIU Construction Supervision consultants
Impacts on livelihood	LOW	• Consult with the local community about the potential disturbance during the project phase	• GRM Record	NA	Contractor	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		• No displacement anticipated, disturbance is temporary and can be mitigated				
Local employment	HIGH	• Local residents are preferred for the supply of services and goods, where appropriate • Hire local residents who do not need accommodation as there's no space for the temporary camp of the workers. • Creation of micro-business around the area	• Local employment and procurement record	NA	Contractor	PIU Construction Supervision consultants
Complaints related to Sexual Exploitation, Abuse, and Harassment (SEA/SH).	MEDIUM	• Ensure project and worker Grievance Redress Mechanisms (GRMs) are equipped to handle SEA/SH complaints with sensitivity and confidentiality.	• Number of SEA/SH-related complaints handled and referred. Presence of confidentiality and referral protocols in GRMs.	NA	Contractor	PIU Construction Supervision consultants

POTENTIAL RISKS AND IMPACTS	RISK CATEGORY	MITIGATION MEASURES	MONITORING PARAMETERS	COST OF MITIGATION/ MONITORING	INSTITUTIONAL ARRANGEMENT (IMPLEMENTOR)	INSTITUTIONAL ARRANGEMENT (MONITORING)
		Include mechanisms to refer cases to appropriate GBV service providers.				
SEA/SH risks and other health and safety risks due to workers' presence at school premises during school sessions.	MEDIUM	• Adopt and enforce Worker Codes of Conduct (CoCs) to prevent and mitigate SEA/SH risks and other safety concerns. Provide training on CoCs and awareness of appropriate behavior.	• Number of workers trained on CoCs. Compliance with CoCs through regular monitoring and reporting mechanisms.	NA	Contractor	PIU Construction Supervision consultants
Unregulated Utility Consumption	LOW	• Installation of Sub-Meters	• Meter Readings	NA	Contractor	School Admin PIU Construction Supervision consultants

5 ESMP IMPLEMENTATION

5.1 INSTITUTIONAL PLAN

The project will be implemented by the DPWH, with the involvement of various government agencies playing key roles throughout the different project phases, particularly in retrofitting efforts. The Local Government Unit (LGU), and the Department of Education (DepEd) will be directly involved as the owners of the public-school buildings targeted for retrofitting.

These agencies will participate in ESMP implementation activities at various stages and as needed by the primary stakeholders. The ESMP will be incorporated into the project's implementation arrangements to ensure consistent engagement from project preparation through to implementation.

The DPWH Central Office UPMO-BSPMC will act as the implementing offices, carrying out engagement activities at both the project and community levels.

To ensure effective implementation throughout the project's lifecycle, a dedicated Safeguards Monitoring Section (SMS) will be established under the PIU. The SMS will consist of DPWH Safeguards Specialists as internal evaluators and specialists from partner agencies (DepEd) as external evaluators. This section will be responsible for monitoring and enforcing the proper and rigorous execution of the ESMP.

The Contractor is responsible for the implementation of the Environmental and Social Management Plan (ESMP), in compliance with World Bank (WB) standards, as stipulated in the contract agreement between the Department of Public Works and Highways (DPWH) and the construction contractors. The Supervision Engineer monitors the implementation of the ESMP and other related plans. DPWH, as the Client, is represented by the BSPMC-UPMO, which provides overall project oversight to ensure alignment with the WB Loan Covenant.

5.2 MONITORING AND REPORTING

Contractor Monitoring and Reporting
The contractor is responsible for the day-to-day monitoring of construction activities and ensuring compliance with project specifications, safety standards, and quality control measures. This includes maintaining a daily log of activities, materials used, and any deviations or issues encountered on-site. The contractor must conduct regular inspections to verify that all retrofitting works align with the approved plans and adhere to the safety and quality guidelines set by the project. Monthly reports should be submitted to the Project Implementing Unit (PIU), detailing progress, completed milestones, safety compliance, challenges, and mitigation measures. Additionally, the contractor must immediately report any incidents or significant risks, such as structural issues or safety breaches, to the PIU.

Project Implementing Unit (PIU) Monitoring and Reporting
The Project Implementing Unit (PIU) plays a key oversight role in the retrofitting project. It is responsible for conducting regular site visits, audits, and evaluations to assess the contractor's adherence to project requirements and timelines. The PIU reviews the contractor's monthly reports, verifies progress against established benchmarks, and ensures that the project remains within the budget and schedule. To enhance accountability, the PIU consolidates all monitoring data into comprehensive quarterly reports for stakeholders, highlighting the progress, safety compliance, financial updates, and any corrective actions taken. Additionally, the PIU coordinates with local authorities and stakeholders to address community concerns and document key findings or changes in the project's implementation plan.

5.3 STAKEHOLDER ENGAGEMENT PLAN

The proposed strategy for the project includes social preparation and an Information Education Campaign (IEC) to identify and address the social and economic issues affecting key stakeholders and impacted communities. A crucial part of this approach is stakeholder consultation, which aims to inform the community about the project, gather feedback, prepare them for upcoming activities, and maintain ongoing engagement to address social safeguards. Consultations will involve project-affected groups, key stakeholders, school associations, and relevant agencies like DepEd to define roles, review progress, and resolve any arising issues. Special attention will be given to vulnerable groups, such as women, children, persons with disabilities (PWDs), and the elderly, to ensure their concerns are heard and addressed.

The engagement process will follow principles of cultural respect, human rights, and sensitivity to stakeholders' views. Consultations will be transparent, inclusive, and responsive, with a commitment to keeping stakeholders informed about the project, its benefits, risks, and available grievance mechanisms. Additionally, the Department of Public Works and Highways (DPWH) earthquake resilience programs will emphasize seismic retrofitting and public awareness on earthquake safety, especially focusing on preparedness for "The Big One" in Metro Manila.

For stakeholder identification and analysis, the project defines stakeholders broadly as anyone affected by or influential to the project. This includes affected persons and communities, such as students, faculty, parents, and residents near the project site, as well as interested parties like national agencies, local officials, and civil society groups. The Stakeholder Engagement Plan (SEP) will be regularly updated to include any newly identified stakeholders as the project progresses.

The project will be executed by the Department of Public Works and Highways (DPWH). However, various other government agencies will play significant roles in implementing the projects, particularly in retrofitting works.

Table 5. Stakeholder identification and analysis

Project Affected Stakeholders		Issues of Interest/ Concern	District/ Locality/ School	Relationship	Project Stage
Public school occupants	School heads, facility maintenance, teachers Learners PWD Learners	Disruption of classes, Limited space or facilities to accommodate displaced learners during project implementation, exposure to hazards around the construction sites, noise, dust, possible disruption of utilities, possible GBV and SEA/SH access to project benefits such as inclusion of	Marikina Public Schools	Beneficiaries directly affected	Preconstruction & during construction

Project Affected Stakeholders		Issues of Interest/ Concern	District/ Locality/ School	Relationship	Project Stage
		universal accessibility and design in the school infrastructures			
Parents	Parents of learners; Parent-Teacher Association officers (PTA) and members	Disruption of classes, safety of their children, possible accidents and GBV and SEA/SH risks, quality and standards of the construction of school buildings			construction
Business owners (onsite)	Canteens, side vendors/store, school supplies	Possible relocation of business such as canteens, side vendors/store & school supplies, possible disruption of utilities, noise, dust			Preconstruction & during construction
Barangay Local Government Unit (BLGU)	Barangay officials i.e. Committee for the Protection of Children (BCPC) and Education Committee, traffic enforcers, Gender and development	Road and Traffic safety, coordination with security, peace and order, waste management			Preconstruction & during construction
Immediate community surrounding the schools	public) health facilities, markets (private) Religious structures Neighboring Residents	Noise, dust, traffic, possible disruption of utilities, labor influx/ labor camps			Preconstruction & during construction

Project Affected Stakeholders		Issues of Interest/ Concern	District/ Locality/ School	Relationship	Project Stage
Disadvantaged and Vulnerable Groups	Persons/Students with Disabilities (PWD)/ learners with special educational needs Sexual and Gender Pupils Pregnant women	Accessibility may disproportionately suffer from adverse project impacts (wide variety of hazards) and be constrained from participating in the project and availing of project benefits			Preconstruction
Utility Service Providers	Water, Electric and Telecommunication Providers	Disruption of services and potential relocation of their equipment			construction

5.4 DISCLOSURE AND CONSULTATION

Disclosure and consultation are essential steps in project planning to ensure transparency, stakeholder engagement, and community support. Disclosure involves providing stakeholders with clear, relevant, and timely information about the project, including its objectives, potential impacts, benefits, and risks. This helps build trust and enables stakeholders to make informed decisions.

Consultation, on the other hand, is a two-way dialogue where stakeholders are given the opportunity to express their concerns, expectations, and suggestions. It involves actively listening to and addressing the interests of affected individuals, community members, and key partners. This process not only helps identify and mitigate risks but also enhances project design by incorporating local insights and feedback. Meaningful consultations require the proactive involvement of all stakeholder groups, especially those who are directly impacted by the project, such as residents, schools, and local authorities.

To kickstart, an initial ocular inspection was conducted at H. Bautista Elementary School on March 12, 2024 with the technical design team and environmental and social safeguards specialists, in coordination with the PIU. Consultations with the school administration identified site-specific issues, such as building service disruptions, relocation areas, sensitive receptors, and economic impacts.

The screening guided the design team in implementing necessary mitigation measures. The Environmental and Social Safeguard Screening Checklist (Annex A) was used to classify impacts as low, medium, or high and determine if projects fell under prohibited activities.

As part of the Disclosure and Consultation process, a public consultation was held on October 23, 2024, at H. Bautista Elementary School to address the initial concerns of the school community. This consultation marked the beginning of a series of ongoing engagements designed to ensure that the community's concerns are continuously addressed and that the project is implemented effectively.

In addition, a focus group discussion took place on January 8, 2025, at Malanday National High School. This session aimed to review the consultants' initial proposals, gather additional insights, and solicit recommendations to further refine the project plans.

The ESMP and CESMP will be disclosed at DPWH web site and will also be available with DepEd, at the school with the head/ principal at all times during construction.

5.5 LABOR MANAGEMENT PLAN

1. Employment
- Types of Workers:
  - Skilled workers (engineers, foremen, electricians, welders, etc.)
  - Semi-skilled and unskilled laborers (masons, carpenters, helpers)
- Workforce Size:
  - Based on project scope and phasing to minimize school disruption
- Local Hiring:
  - Preference for local workers to support the community and reduce labor influx

2. Age of Employment
- Minimum Age Requirement:
  - Workers must be 18 years old and above, following the Philippine Labor Code and ILO standards
- Prohibited Employment:
  - No child labor or forced labor
  - Special consideration for young workers (18-21) regarding hazardous work restrictions

3. Terms and Conditions of Employment
- Employment Contracts:
  - Formal contracts aligned with national labor laws
  - Includes job description, wages, working hours, benefits, and termination policies
- Wages and Benefits:
  - Compliance with minimum wage laws and mandated benefits (SSS, PhilHealth, Pag-IBIG)
  - Overtime pay and holiday pay as per labor regulations
- Work Hours and Rest Periods:
  - Maximum 8-hour workdays, 6-day workweeks
  - Regular breaks (lunch and short breaks) to prevent fatigue
- Worker Code of Conduct:
  - Professional behavior within school premises
  - Noise control and restricted interactions with students
- Grievance Redress Mechanism:
  - Workers can report concerns (wages, safety, harassment) through a designated complaints process
- Health and Safety Compliance:
  - Provision of Personal Protective Equipment (PPE)
  - Mandatory safety training and toolbox meetings
  - First aid and emergency response plan on-site

5.6 WASTE MANAGEMENT PLAN

- Waste Generation and Classification
  - Construction Debris: Concrete, wood, metal scraps, old roofing materials
  - Hazardous Waste: Paint, adhesives, solvents, used oil from machinery
  - General Waste: Packaging materials, food waste from workers

- Waste Handling and Storage
- Segregation of Waste:
    - Designated bins for recyclables, hazardous, and general waste
- Temporary Storage:
    - Construction waste stored in a designated area away from school activities
- Waste Disposal and Recycling
- Recycling and Reuse:
    - Reuse of materials (e.g., wood, metal) where possible
    - Coordination with junk shops or recyclers for scrap materials
- Proper Disposal:
    - Disposal of hazardous waste following DENR regulations
    - Disposal of non-recyclable waste through LGU-accredited haulers
- Waste Reduction Strategies
    - Just-in-Time Delivery: Minimize excess materials and packaging
    - Controlled Demolition: Reduce unnecessary debris
    - Worker Training: Educate workers on proper waste disposal and site cleanliness

5.7 GRIEVANCE REDRESS MECHANISM

For the Workers

At the time of recruitment, workers will be informed of the grievance mechanism and the measures put in place to protect them against any reprisal for its use. The grievance mechanism shall be made easily accessible to all project workers. Regular meetings with the project workers to discuss any work-related issues and concerns will be conducted. Every grievance raised by a worker will be documented with the actions undertaken by the office to address such grievance. The aggrieved worker may raise any issue anonymously through a letter which shall be submitted to his/her immediate supervisor's office. All non-anonymous grievances relative to adequate working conditions, standard occupational safety and health and other concerns from the workers shall be addressed following the procedures outlined below:

The grievance shall be filed by the workers to the Contractor who shall follow the DOLE procedures in handling the complaints. The Contractor shall act within 15 days upon receipt thereof;

If no understanding or amicable solution can be reached, or if the complainant does not receive a response from the Contractor within 15 days of registry of the complaint, he/she can appeal to the PIU, which should act on the complaint/grievance within 15 days from the day of its filing. If the PIU does not see itself fit to address the complaint it will immediately bring the matter to the concerned DOLE office.

If the complainant is not satisfied with the resolution offered by the PIU, he/she can appeal to the concerned DOLE office, which should act on the complaint/grievance within 15 days from the day of its filing.

For the Stakeholders

The project's grievance redress mechanism will address stakeholders' concerns and complaints promptly, using a transparent process that is responsive, culturally appropriate, and readily accessible to all segments of the affected communities at no cost and without retribution. The mechanism should not impede access to the country's judicial or administrative remedies. The redress mechanism will be communicated to the nearby communities and stakeholders of the project and subprojects. A separate grievance redress mechanism for the workers is established to address their complaints and is described in the Labor Management Procedures.

A Memorandum of Agreement (MOA) will be forged between the project proponent and the asset owners on the procedures in the proper handling of grievances and also the need to create a Grievance Redress Committee

(GRC) composed of representatives from the asset owner, the implementing office and the contractor. GRC will receive, evaluate and facilitate the resolution of concerns, complaints and grievances of all stakeholders.

A. Procedure for filing the formal Complaint/Grievance:

1. Any key stakeholder of the project may file a complaint.
2. Complaint should be made to Grievance Redress Committee (GRC). It may be oral, by email citizens_feedback@dpwh.gov.ph or in writing. If the complaint is oral, it will be converted into a written form by the GRC member who received the complaint and authenticated by the complainant under his / her signature as soon as possible.
3. If the complainant would not like to reveal his/her name for any grievance, they can drop the grievance(s) in the drop box specific for the project.
4. All complaints received by any member of the committee shall be forwarded to citizens_feedback@dpwh.gov.ph for proper documentation.

B. Process for addressing the Grievance:

1. Upon receipt of complaint, the GRC should send a response to the complainant acknowledging the receipt of grievance within 48 hours.
2. Based on the nature of the complaint and severity of its possible impact, the GRC may take one of the two options to proceed on addressing the concerns:

a. **Option 1** which can be exercised on matters that could be more routine operation:

i. The asset owner representative may issue a direct instruction to the implementing office and contractor regarding the complaints in the construction.

ii. It is important that the complainant is well-informed of the actions taken or the work-in-progress within 15 days upon acknowledging receipt of grievance.

iii. Once the matter has been resolved the GRC should send a final update to the complainant on the matter.

b. **Option 2** which can be exercised in matters of very serious concern:

i. The GRC must convene for a meeting immediately after the complaint has been filed.

ii. The Committee, as required, may also call for a deposition by the complainant and the person/s involved in the complaint.

iii. Final decision of the GRC has to be communicated to the complainant within 15 days of the receipt of the complaint.

3. If no understanding or amicable solution can be reached, or if the complainant does not receive or is dissatisfied with the response from the GRC within 15 days of registry of the complaint, he/she can appeal to the PSRRRP Project Implementing Unit (PIU), which should act on the complaint/grievance within 15 days from the day of its filing. Representative from the PSRRRP Project Implementing Unit (PIU) may be contacted in the following means: email address: citizens_feedback@dpwh.gov.ph; office address: DPWH Central Office Bonifacio Drive, Port Area, Manila; Telephone No.: 165-02; CP no. 09616847084)

   If the PAP/PAC is not satisfied with the decision of the PSRRRP PIU, he/she, as a last resort, can submit the complaint to any court of law.

Aside from the PIU, there is a need to identify focal person at the School and the Contractor to receive, screen, and handle grievance cases.

6 CAPACITY DEVELOPMENT AND TRAINING

For effective and efficient implementation of the needed environmental and social risks/impacts management measures, capacity building framework is prepared involving concerned staff, faculty, students, concerned parents, and barangay focal officers shall undergo appropriate and sufficient capacity building. Table 1 shows the proposed capacity building activity.

Table 6. Proposed Capacity Building and Training Approach

Proposed Level	Responsible Agency	NCR-Participants	ESMP Activity / Application
National level	DPWH & DepEd	National staff responsible for the overall implementation of ESMP	• Identification and assessment of Environmental and Social risks • Selection and application of relevant risk management measures/instruments • Monitoring and reporting • Incident and accident reporting • Including Code of Conduct, incident reporting, mitigation • Application of SEP and the grievance and feedback mechanism
Regional level	DPWH BSPMC - UPMO & DepEd	Regional staff Contractors	ESMF and approach: • Identification and assessment of Environmental and Social risks • Selection and application of relevant Environmental and Social risk management measures • Monitoring and reporting • Incident and accident reporting including Code of Conduct, incident reporting, mitigation • Application of SEP and the grievance mechanism
School Building Officials	DPWH BSPMC - UPMO & DepEd Regional and District Officer/staff	Local staff Local contractors	Application of SEP and the grievance mechanism including Code of Conduct, incident reporting, mitigation
Community, local, or barangay level	NCR-School officials, Parents and Teachers	Community members Community Workers, if relevant	• Basic Occupational Health and Safety measures and Personal Protective Equipment • Community health and safety issues • Worker Code of Conduct

Proposed Level	Responsible Agency	NCR-Participants	ESMP Activity / Application
			• Issues, prevention, measures, Grievance redress • Teachers, Workers, and Students Grievance redress mechanism
Implementation and Monitoring	DPWH BSPMC - UPMO & DepEd-municipal or City officials	Education Facilities Division – Project Management Unit Regional Engineers Division Engineers School Heads Civil Society Organizations (CSOs), brgy. officials	• Training and capacity building of building engineers, school heads, Parents and Teachers, and other community partners in monitoring school building projects. • Hiring of Firms for the management and supervision of the project
Parents and Teachers	DPWH BSPMC - UPMO & DepEd-municipal or City officials	Faculty, staff, Officers of Parents and Teachers, Student Council, barangay officials	• First aid training • Conduct of regular earthquake and or disaster drills, • Disaster Risk, Reduction Management (DRRM) education integrated with the curriculum
Project Orientation and Risk Awareness (Project Stakeholders)	Project Implementing Unit (PIU)	LGUs, Barangay Officials, School Admins, Parent-Teacher Associations (PTAs), Community Leaders	• Overview of project scope, risks, mitigation measures, and community engagement strategies.
Risk Awareness Orientation (Project Workers)	Project Implementing Unit (PIU)	Contractors, Engineers, Construction Workers	• Site-specific hazards, occupational health and safety measures, and emergency response protocols.
GBV and SEA Orientation	Project Implementing Unit (PIU) / Contractors / Social Safeguards Team	Project Workers, Contractors, Project Implementers	• Prevention of Gender-Based Violence (GBV) and Sexual Exploitation and Abuse (SEA), reporting mechanisms, and compliance with safeguard policies.

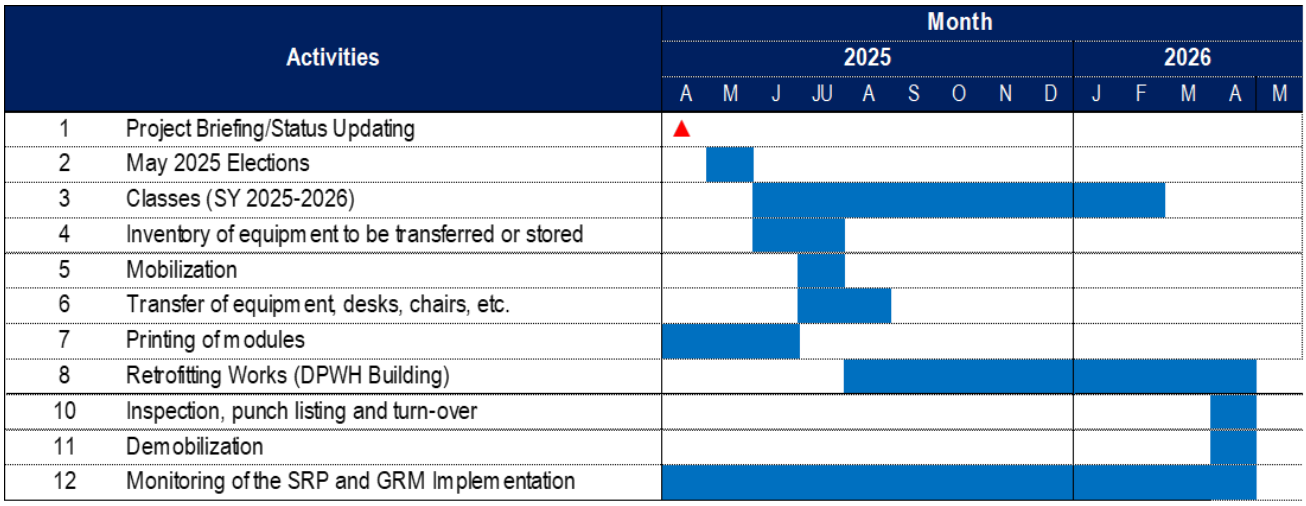
7 TIMELINE AND COST

7.1 INDICATIVE SCHEDULE

The duration for retrofitting is shown in the table below.

Table 7. Indicative Schedule

School	Building	Retrofitting Method	Estimated Time of Completion
H. Bautista Elementary School	DPWH Building	Steel Jacketing/ Concrete Jacketing	9 months



7.2 INDICATIVE BUDGET FOR ESMP IMPLEMENTATION

The Table below shows the projected costs for the Contractor's labor force, mitigation measures, preventative actions, and monitoring.

Table 8. Indicative ESMP Implementation Budget

COMPONENT/S	UNIT/LOT	UNIT COST (PHP)	DURATION	TOTAL COST (PHP)
Permits	1 lot			Included in Project Cost
Solid Waste Management • Provision of waste bins, • Waste hauling fee, • Hazardous waste generator ID	1 lot	600,000 1. Waste Bins – General (60L & 120L plastic bins with lids) and Hazardous (with secure lids, chemical resistant For paints, solvents,) = 50,000 2. Waste Hauling Fee – Regular Waste = 250,000 3. Waste Hauling Fee – Hazardous Waste = 200,000 5. Contingency Fund for Additional Waste Management Needs = 100,000	9 months	600,000
Wastewater Management • Portalets, • Treatment of wastewater generated by workers, • Treatment of wastewater generated form washing concrete and heavy equipment, • Hauling of wastewater by 3rd party	1 lot	1,000,000 1. Portable Toilets (Standard units with service & maintenance) = 300,000 2. Septic Tanks / Holding Tanks Setup (Temporary onsite) = 100,000 3. Wastewater Hauling and Disposal by 3rd Party Contractor = 360,000 4. Mobile Treatment System for Concrete & Equipment Washwater = 200,000 5. Signages & Training on Wastewater Handling & Safety / Contingency = 40,000	9 months	1,000,000
Dust-control curtains / Dust Suppression • Provision of dust curtains or plastic sheeting and tarps to cover matetrials being transported,	1 lot	600,000 1. Dust Curtains (Fire-retardant PVC or mesh) = 400sqm x 500/sqm = 200,000	9 months	600,000

COMPONENT/S	UNIT/LOT	UNIT COST (PHP)	DURATION	TOTAL COST (PHP)
• Provision of air vacuum pumps, Water spraying on dusty areas to supress airborne particles		2. High-Pressure Water Sprayer (Electric) = 3 units x 25,000 = 75,000 3. Portable Industrial Vacuum with HEPA Filter (for indoor) = 3 units x 30,000 = 90,000 4. PPE for Dust (i.e. masks) = 20,000 5. Contingency / Consumables (Refills and maintenance allowance) = 115,000		
Noise and Vibration Mitigation • Procurement of noise meter • Equip workers with noise-cancelling earplugs to protect their hearing • Enclosures for machinery to contain noise	1 lot	750,000 1. Noise Meters: Php26,000/pc x estimated 3 units = Php78,000 2. Noise-Cancelling Earplugs: Php1,000/each x 50 approx workers = Php50,000 3. some manufacturers offer acoustic enclosures starting at approximately PHP 500,000, depending on specifications 4. Anti-Vibration Pads and Mounts and Protective Shock-Absorbing Cabinets = Php 70,000 5. Temporary Barrier Installation = Php 30,000 6. Vibration Monitoring Device = Php 22,000	9 months	750,000
Drainage Management				Included in Project Cost
Traffic Management • Assign a traffic personnel/signal men	2 personnel	15,000/month	9 months	270,000

COMPONENT/S	UNIT/LOT	UNIT COST (PHP)	DURATION	TOTAL COST (PHP)
• procurement of traffic signages, board-ups/fences and early warning devices	1 lot	500,000 1. Reflective Metal Traffic Signages = 60,000 2. Signage Posts with Concrete Base = 30,000 3. Board-ups / Temporary Site Fence Panels / Barricades / Road Barriers = 180,000 4. Early Warning Devices (Blinking Lights/Reflective Triangles) = 80,000 5. Traffic Cones with Reflective Bands=40,000 6. Flagmen Safety Gear Package = 50,000 7. Directional Sign Boards = 10,000 8. Contingency & Maintenance = 50,000		500,000
Occupational Health and Safety • Provision of PPE (Personal Protective Equipment) • Equip workers with first aid kits, fire extinguisher	1 lot	600,000 1. Hard Hats (Safety Helmets) = Php400/each x 50 approx workers = 20,000 2. Safety Vests (Reflective, Class 2) = Php300/each x 50 approx workers = 15,000 3. Safety Shoes (Steel Toe) = Php2,000/each x 50 approx workers = 100,000 4. Safety Gloves = Php150/each x 50 approx workers = 7,500 5. Safety Goggles = Php200/each x 50 approx workers = 10,000 6. Full Body Safety Harness = Php2,000/each x 20 sets = 40,000 7. First Aid Kits (Industrial Grade) = Php5,000/each x 10 sets = 50,000	9 months	600,000

COMPONENT/S	UNIT/LOT	UNIT COST (PHP)	DURATION	TOTAL COST (PHP)
		8. Temporary Safety Office (Table, Chairs) = 30,000 9. Safety Signages & Labels ("PPE Required", "First Aid", "Danger", etc.) = 20,000 10. Tool Box Talks & Safety Orientation Posters = 15,000 11. Emergency Stretcher / Wheelchair (Basic) = 70,000 12. Administrative Costs & Safety Monitoring Tools (Logs, thermometers, clipboards, checklists) = 22,500 13. Replacement PPE / Contingency Fund = 200,000		
EHS Officer • Assign one safety officer with valid training certificate	Man/month		9 months	Included in Project Cost
Student and Facilities Relocation Plan • Implementation of relocation plan	1 lot	300,000		300,000
Relocation of other building utilities • Provision of manpower to transfer laboratory equipment, school materials and other school furnitures to a temporary location	2 personnel	15,000/person/month	3 months	90,000
Stakeholder Engagement Plan (SEP) • Coordination with all stakehoders including LGUs, HOA, affected business owners, students, and school staff	1 lot	100,000	4 months	100,000

COMPONENT/S	UNIT/LOT	UNIT COST (PHP)	DURATION	TOTAL COST (PHP)
Establishment of the Grievance Redress Mechanism • Meetings • Workshop • Design of communication plan	1 lot	100,000	2 months	100,000
Gender-based Violence Action Plan (GBVAP) Training • Development of strategies and communication plan	1 lot	Included in GRM cost	2 months	Included in GRM cost
Arrangement of camp workers	1 lot		1 month	Included in Project Cost
Fire Prevention • Provision of fire protection equipment • Training and awareness	1 lot	500,000 1. Fire Extinguishers (10 lbs, ABC Dry Chemical) = 20 units x 5,000 = Php100,000 2. Fire Blankets (1.8m x 1.2m, fiberglass) = 10 pcs x 2,500 = 25,000 3. Fire Safety Posters & Visual Aids = 10,000 4. Fire Drill and Simulation (with Certificate) = 1 session = 50,000 5. Fire Safety Training (DOLE-Accredited Provider) = 150,000 6. Contingency / Reserve (For refilling extinguishers, battery replacements, etc.) = 165,000	9 months	500,000
			TOTAL	**Php 5,440,000.00**

ANNEX A

PROJECT SCREENING FORM

DATE: _____

PART 1: BASIC PROJECT INFORMATION			
1.A. Name of Building: **DPWH Building**	**1.C. School Identification Number:** **136682**		
1.B. Name of School: H. Bautista Elementary School			
2. Project Location/ Coordinates	Complete address: *Street/Sitio/Barangay:* **J. P. Rizal St., Concepcion Uno, Marikina City** *City/Municipality:* **Marikina City** Coordinates: **14°39'28"N 121°6'15"E**		Zone/Classification: **Residential** (R1, R2, C1, C2, C3) *R1 - Low Intensity Residential* *R2 - Medium Intensity Residential* *R3 - High Intensity Residential* *C1 - Low Intensity Commercial* *C2 - Medium Intensity Commercial* *C3 - High Intensity Commercial*
3. Contact Person at School	Name of coordinator/focal person: **Hilda F. Tardecilla** Landline No: **(02) 8696-4075** Mobile No./ Viber No./ any available mobile platform:		Designation: **Principal** Fax No: Email Address: **hbes.marikina@deped.gov.ph**
4. Building Condition	SVR: 72.00 No. of floors: **3**	Total Estimated Floor Area: **1,716sqm** Year Constructed: **1995**	
5.A. Demographics of the concerned Public School			
Total number of Learners (in the whole school): **3,615**	Girls: **1,746** Boys: **1,869**	Age Range: **5-12 years old** Grade Levels: **Kinder and Grades 1-6**	Total no. of class shifts: Shift 1 (Time): Shift 2 (Time): Shift 3 (Time):
Total number of Learners enrolled in Special Education (SPED)	Girls: Boys:	Age Range: Grade Levels:	Total no. of class shifts:
Total Number of Teachers and School Personnel: 131 Women: Men:	**Total Number of persons with disabilities:** Teachers/School Personnel: Women: Men: Learners: Girls: Boys:		
5.B. Occupants of the Eligible Building			
Number of class shifts:			
Total number of Learners (Shift 1): 411	Girls: **212** Boys: **199**	Age Range: Grade Levels:	

Total number of Learners (Shift 2):	Girls: Boys:	Age Range: Grade Levels:	
Total number of Learners (Shift 3):	Girls: Boys:	Age Range: Grade Levels:	
Total number of Learners enrolled in Special Education (SPED)	Girls: Boys:	Age Range: Grade Levels:	Total no. of class shifts:
Total Number of Teachers and School Personnel: Women: Men:	**Total Number of persons with disabilities:** Teachers/School Personnel: Women: Men: Learners: Girls: _____ Boys: _____		
PART 2: RETROFITTING (BUILDING SPECIFIC)			
6. Type of retrofitting:	☐Steel Plate Bonding ☐Concrete Jacketing ☒Steel Jacketing ☐Fiber Reinforced Polymer (FRP) Systems ☐Steel Bracing Systems		
7. Type of rooms directly affected by retrofitting	**Offices:** ☒ Principal ☐ Administration ~~office~~ ☐ Guidance ☐ Faculty ☐ Maintenance **Rooms:** ☒ Classrooms ☐ Science Laboratory ~~class~~ ☐ Speech Laboratory ☐ Computer Laboratory ☐ Conference ☐ Industrial/Workshop **Others:** ☒ Canteen ☐ Feeding Center ☐ Clinic ☐ Library ☐ Storage rooms ☐ Lodging ☐ Pantry		Remarks (Quantity) To be verified
8. Existing facilities to be affected by retrofitting	**WASH Facilities** ☒ Toilet ☒ Urinal ☒ Handwashing/Lavatory ☐ Water tank/ Water supply		Remarks (Quantity) To be verified

	☐ Septic Tank **Other structural elements:** ☐ PWD Ramps ☐ Ingress and egress ☐ Fire-safety (Fire extinguisher cabinet, sprinklers, fire exits) ☐ Drainage improvement system ☐ Fastening of Ceilings, wall partition ☒ Windows ☐ Stairs	
Other Comments/Observations during the field visit:		

PART 3: DESCRIPTION OF PROJECT SITE AND SURROUNDING COMMUNITIES (BASELINE)		
QUESTION	**YES/NO**	**REMARKS DURING FIELD VALIDATION/ DESCRIBE PHYSICAL APPEARANCE**
9. Project Description		
Is there a proposed/ ongoing project for the rehabilitation/ reconstruction of school buildings?	**No**	☐ Repair ☐ Rehabilitation ☐ Retrofit ☐ Demolition ☐ Total reconstruction
Is the school facility fenced?	**Yes**	**Steel fence**
Are there any Entry/ Exit Points in the school?	**Yes**	Indicate number: **one 4.5m-wide steel gates as main entry and exit points; 1 smaller gate for human entry/exit**
Are there asbestos roofing and other asbestos materials to be removed from the site?	**No**	
General Vicinity		
Is the project located next to a residential house? (indicate if the houses are adjacent or if nearby only)	**Yes**	**It is adjacent, with residents just outside the school premises.**
Are there hospitals and health clinics with lying-in services near the school building?	**Yes**	**Nearest Government Health Facility is Concepcion Uno Health Center (893m); Nearest Private Health Facility is St. Vincent Hospital (847m)**
Are there culturally/historically important buildings or areas near the school?	**No**	
Are there other institutions, public offices/ public places (wet market, parks, etc.) near the school?	**No**	**Within the immediate vicinity, there are none. However, the school is surrounded by a residential area with talipapa and small businesses.**
Are there religious places (churches, mosques, etc.) near the school?	**Yes**	**The nearest church (INC) is located around 100 meters away from the school.**
Is the project close to a commercial area?	**Yes**	**Small and micro-businesses**
Is there an economic enterprise/s (i.e., canteen) within or outside the project compound that may be affected during construction?	**No**	
Land		
Are there trees to be removed/affected by the construction?	**No**	

Are there available local solid waste management services provided to the school? (i.e., Material Recovery Facilities, Color Coded Trash Bins)	**Yes**	**Color Coded Trash Bins**
Are there available hazardous waste transport and treatment services in the locality? (batteries, busted lamps, used oils, welding rods, paint buckets etc.)	**Yes**	**Hazardous Wastes are collected by the municipality**
Water		
Have you experienced flooding in the past years? -If yes, how frequent in a year? Describe extent of flooding (height) -Indicate duration of flooding due to typhoon or heavy rain	**No**	**There has been no occurrence of high flooding in the school.**
Is the project located next to a waterway, i.e. canal, creek, river?	**Yes**	**Nearest is Marikina River which is less than 850m away**
Is there drainage system at the area? (indicate if the drainage system is within/outside the school area) - If yes, indicate drainage system condition (working, clogged, not working, etc.)	**Yes**	**Drainage is within the school area which is working at the time of visit.**
Air		
Is there a back-up generator set in the school?	**No**	
Is there a presence of backyard burning in the area?	**No**	
People		
Is the school building being used as an evacuation center?	**Yes**	
Construction		
Is there enough open area within the school compound for storage of construction materials and for parking of construction vehicles?	**Yes**	**The school has a court that may be utilized but this will restrict movement.**
Is the road going to the site wide enough to accommodate construction vehicles?	**Yes**	**It is along J.P. Rizal Street**
Is there an available space for the construction debris and other waste?	**Yes**	**While the school have a court, storing all construction materials and equipment may restrict movement and pose safety risks to students and school personnel.**
Is there an available space for the barracks for workers staying overnight?	**Yes**	
Is there an available space for stay out workers to rest/ eat? (all of these are temporary, look for big spaces at school premises)	**Yes**	
Are there available toilet facilities for the workers? -Indicate number of toilet facilities	**No**	**All toilets are being utilized by students, teachers and school personnel.**
Does the construction work for this project trigger relocation of students and school staff? -If this is the case, how many students and school staff will be relocated as of (date).	**Yes**	
In case of potential relocation of students, is there enough space within the school compound to relocate students? -Describe in remarks the type of space available e.g., outdoor space for temporary classrooms or existing facility	**Yes**	**Utilize other offices or lab rooms;**

PART 4: HAZARD ASSESSMENT (From HazardHunterPH)

HAZARD	INDICATE LEVEL OF EXPOSURE			REMARKS
	High	Medium	Low	
SEISMIC HAZARDS				
Ground Rupture	Prone	-	Safe	
Ground Shaking	Intensity Scale VIII-X	Intensity Scale V-VII	Intensity Scale I-IV	Approximately 1.2km southeast of the Valley Fault System: West Valley Fault
Liquefaction	High Susceptibility	Moderate Susceptibility	Low Susceptibility	

Earthquake-Induced Landslide	High Susceptibility	Moderate Susceptibility	Low Susceptibility	
Tsunami	Prone	-	Safe	
VOLCANIC HAZARDS				
Nearest Active Volcano	Within danger zone	-	Outside danger zone	Approximately 72.5 km north of Taal
Ashfall	Prone	-	Safe	
HYDRO-METEOROLOGICAL				
Flood	High to Very High/Critical	Moderate Susceptibility	Low Susceptibility	High Susceptibility; 1 to 2 meters flood height and/or more than 3 days flooding
Storm Surge	Prone	-	Safe	

Nearest Critical Facilities (from HazardHunterPH)
(i.e., institutions, health facilities, road network)

Facility Name	Type	Distance from the Project
Concepcion Integrated School	Public Secondary School	892m
Concepcion Uno Health Center	Government Health Facility	887m
St. Vincent Hospital	Private Health Facility	848m
C-5 Road; Quezon City (third District)	Primary Road Network	3.3km
C-5 Road; Quezon City (third District)	Secondary Road Network	3km

PART 5: ENVIRONMENTAL AND SOCIAL IMPACTS

IMPACTS	High	Medium	Low	REMARKS
A. ENVIRONMENTAL IMPACTS				
● **Land**				
Waste Generation during Retrofitting				
Domestic sewage from workers	No available sanitation facilities for workers	Use of dedicated sanitation facilities within the school premises	Use of sanitation facilities for workers within the building	
Solid wastes and construction debris/spoils	No space/area available adjacent to the school building	Area available within the school premises	Area available within the school building	
Hazardous waste and asbestos materials	Will require removal of asbestos and other hazardous waste	Will require removal of other hazardous waste	Will not require removal of asbestos nor hazardous waste	
Soil Erosion from excavated materials	No space/area available adjacent to the school building	Area available within the school premises	Area available within the school building	

Cutting of Trees	Will involve cutting of trees	Will involve tree trimming only	Will not involve cutting of trees	
● Water				
Change in drainage flow	Permanent diversion of drainage flow	Temporary diversion of drainage flow	Will not require diversion of drainage flow	
Inducement of flooding	Will involve earthworks	-	Will not involve earthworks	
Clogging of canals (existing drainage system)	Will involve earthworks	-	Will not involve earthworks	
Sedimentation of creeks, rivers	Direct discharge to nearby creeks/rivers	Direct discharge to city drainage system	No creeks/rivers adjacent	
● Air Quality/ Noise/ Vibration				
Air Pollution from retrofitting activities	Construction activities will involve use air pollution sources (i.e., gensets, heavy equipment)	-	Construction activities will not involve use air pollution sources (i.e., gensets, heavy equipment)	
Dust from retrofitting activities	Construction site is directly adjacent to the sensitive receptor	Construction site is within 30 meters[2] from the sensitive receptor	Construction site is more than 30 meters from the sensitive receptor	
Ground Vibration	Construction activities will involve groundworks		Construction activities will not involve groundworks	
B. SOCIAL IMPACTS				
● Relocation				
Relocation of students due to class disruption	> 50% of building occupants (students)	>10% but <50% of the building occupants (students)	<10% of the building occupants (students)	

[2] Source: National Pollution Control Commission (NPCC)

Relocation of affected small businesses (i.e., Canteen) within the project compound	> 50% of small businesses	>10% but <50% of small businesses	<10% of small businesses	
Relocation of school staff	> 50% of school staff	>10% but <50% of school staff	<10% of school staff	
● Site Security				
Presence of workers posing risks to peace and order	Allow stay in workers without the presence of school security	Allow stay in workers with the presence of school security	Workers will have construction camp outside the school premises and with the presence of school security	
Access to site	Only one entry/exit point within the school building without school security	Only one entry/exit point within the school building with school security	School building with multiple entry/exit points	
● Access to Utilities				
Project will result to temporary disruption of water supply	Water disruption for the whole construction duration	Water disruption for more than 1 month	Water disruption for less than one month	
Project result to temporary disruption of electricity	Electricity disruption for the whole construction duration	Electricity disruption for more than 1 month	Electricity disruption for less than one month	
Impact on existing sanitation and sewerage facilities	> 50% of existing sanitation and sewerage	>10% but <50% of existing sanitation and sewerage	<10% of existing sanitation and sewerage	
● Labor and Working Conditions/Community Health and Safety/ GBV and SHA				
Impact on Community Health and Safety	Construction site is directly adjacent to the nearby community	Construction site is within 30 meters[3] from the nearby community	Construction site is more than 30 meters from the nearby community	

[3] Source: National Pollution Control Commission (NPCC)

Effect on Gender Based Violence (GBV) and Sexual Harassment and Sexual Exploitation and Abuse	Allow stay in workers without the presence of school security	Allow stay in workers with the presence of school security	Workers will have construction camp outside the school premises and with the presence of school security	
Effect on workers for Occupational health and safety	Construction activities will involve use of heavy equipment **and** hazardous chemicals.	Construction activities will involve use of heavy equipment **or** hazardous chemicals.	Construction activities will not involve use of heavy equipment **nor** hazardous chemicals.	
Spread of Communicable Diseases, (i.e. COVID-19, HIV-AIDS, TB, etc.)	Allow stay in workers without the presence of school security	Allow stay in workers with the presence of school security	Workers will have construction camp outside the school premises and with the presence of school security	
● **Traffic**				
Traffic Congestion/ blocked roadways during delivery of construction materials	One-lane Road	Two-lane Road	Four-lane Road	
Available open space for traffic/parking	No space/area available adjacent to the school building	Area available within the school premises	Area available adjacent to the school building	The school has a court that may be utilized but this will restrict movement.

List of Identified Sensitive Receptors/Stakeholders (during site visit)

Name of Facility	Type	Distance from the Project
Iglesia Ni Cristo - Lokal ng Bayan-bayanan	Parsi temple	100m
Lightfield Church	Church	150m

(Church, HOA, Health Facility, Cultural Heritage)

Based on the above screening, the applicable safeguard measures to be developed for the subproject are:

☒Environmental Code of Practice (ECOP) – applicable to activities generating low (minimal) impacts
- ☒ECOP 1: Temporary Relocation of School Classrooms and other Building Utilities
- ☒ECOP 2: General Construction Site Management
- ☒ECOP 3: Workers' Health and Safety
- ☒ECOP 4: Community Health and Safety
- □ECOP 5: Cultural Properties

☒Environmental and Social Management Plan (ESMP) – applicable to activities generating medium (manageable) to high (major) impacts ☒Grievance Redress Mechanism ☒Stakeholder Engagement Plan (SEP) ☒Waste Management Plan ☒Construction Safety and Health Program (CSHP) Checklist ☐Gender-Based Violence Action Plan □Consultant-Contractor's Contract ☐Learning Continuity Plan ☒Labor Management Plan (LMP) ☒Chance Find Procedure Note that the applicable safeguards measures are to be included in the bid and contract documents of the contractor.
Recommendations for Safety and Functional Improvement :

Note: KoboToolbox was utilized in the preparation of this screening form. KoboToolbox is a suite of open-source tools for field data collection.

Table A- 1. PSRRRP Accomplished Checklist – DPWH Building

ANNEX B.

TRAFFIC MANAGEMENT PLAN

Traffic Management Plan or TMP is a plan established to clearly direct and control traffic disruptions within the area covered by the PSRRRP. TMP is essential for ensuring the safe and efficient movement of construction vehicles and pedestrians.

This plan includes operations strategies for managing traffic flow within the local area impacted by the construction/retrofitting activities including the techniques to facilitate site access, parking, signage, warning devices, and pedestrian access.

EXISTING SITE CONDITIONS

Issues and Concerns

1. **Access Roads**

a. Width and Capacity. The main roads leading to the school are approximately 7 meters wide, supporting two-way traffic. However, while this width might be adequate for standard traffic, it becomes challenging with the addition of large construction vehicles needed for the retrofitting project. The width barely accommodates the simultaneous movement of both public and private vehicles, especially in the presence of on-street parking or pedestrian activity. Large delivery trucks may need to occupy the full width of one lane, potentially causing temporary roadblocks and slowing down traffic flow significantly during the delivery of materials.

b. Traffic Flow. The area surrounding the school is frequently used by public transportation vehicles, such as jeepneys and tricycles. These vehicles operate continuously throughout the day and often make frequent stops for passengers, which can lead to bottlenecks on the already limited road space. This congestion is intensified during peak hours.

Figure B- 1. E. Santos Street
Source: Google maps

2. School Vicinity

The school has multiple gates, with the main gate located on J.P. Rizal Street. This is the only gate through which vehicles can enter, while the other gates are for pedestrian access only. However, this main gate has a limitation because it is located at the base of one of the school buildings, which restricts the space available for vehicle entry and movement (Figure 2).

Figure B- 2. School Access from J.P. Rizal Street
Source: Google maps

Figure B- 3. Other school gates
Source: Google maps

Proposed Delivery Routes

The school is accessible to vehicles only via J.P. Rizal Street, located directly in front of the school. While these roads are generally spacious, it is essential for the contractor to verify their suitability for construction vehicles, especially larger ones like 10-wheeler trucks, which may encounter challenges due to road width and potential turning constraints. Additionally, the limitations of the school's gate itself must also be considered.

Given these factors, a thorough site verification by the contractor is crucial. This will allow for any necessary adjustments to the proposed route based on real-time road conditions, traffic patterns, and any additional restrictions. Coordinating delivery schedules with both the school administration and barangay officials is also essential to minimize disruptions. Such coordination can help manage traffic impacts, ensure safe transport of materials, and reduce inconvenience to the school and nearby residents during construction.

Routes Inside the School

Deliveries will take place strictly after classes or on weekends only. This is to ensure that no vehicle movements or material handling occur while students and staff are present. All deliveries will be coordinated in advance with the school administration and/or barangay to ensure smooth logistics and allow the school to prepare accordingly.

The proposed location for the staging area is at the gym in the middle of the school. A portion of it will be designated as the contractor's staging area. The space to be occupied will be minimal, as much as possible, and the contractor will need to implement a just-in-time scheme for material delivery. This seems to be the only available space, as the school's existing space is already tight and limited, considering that foot traffic for students should not be overly affected. The building being retrofitted may also be used as a resting area for workers during lunch and snack breaks, provided that it is deemed safe and suitable for occupancy.

It was also mentioned that the proposed staging areas can extend up to end of court as long as there will be a construction fence or barriers (preferably G.I Sheets). The school principal has granted permission for this arrangement with the condition that the workers' presence is strictly limited to the designated areas, ensuring no interaction occurs between workers and students or staff. This restriction is crucial for maintaining a safe and focused environment for the school community. Importantly, the designated space is intended solely for short breaks during the day; workers will not be staying on school premises overnight.

For worker access, they can utilize the gate beside the DPWH building along Bantayog Street.

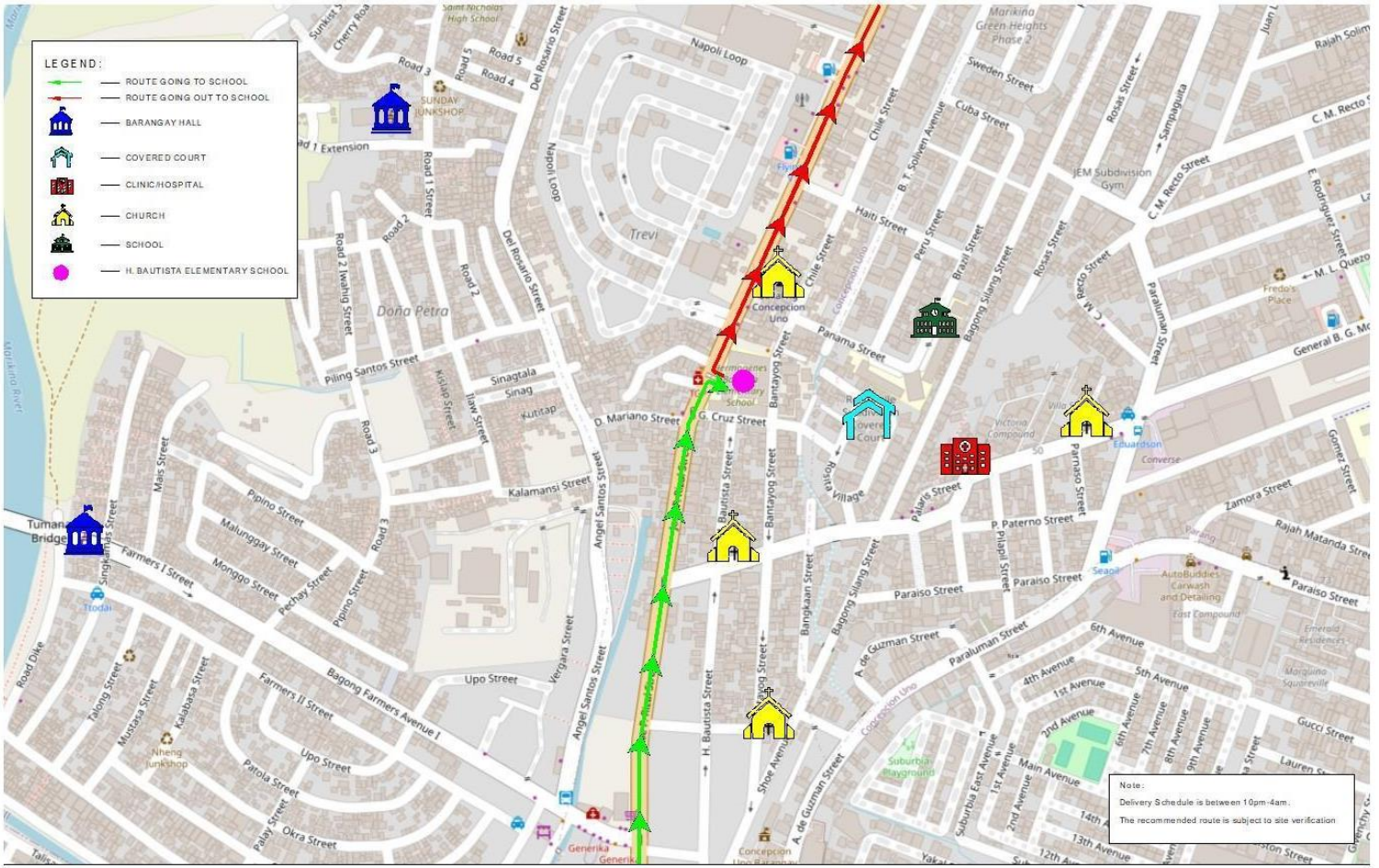


Figure B- 4. Delivery Route

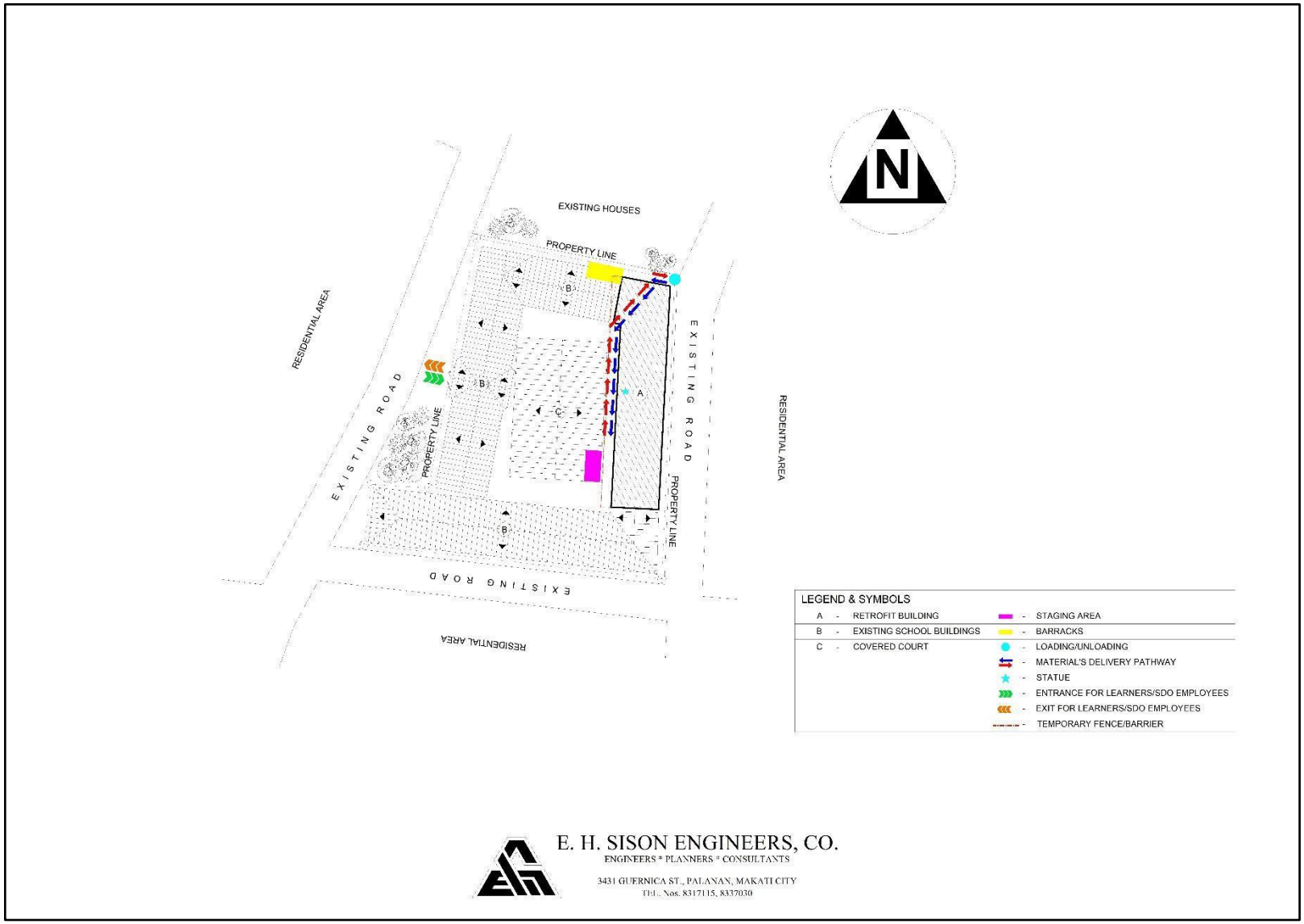


Figure B- 5. Route inside the School Premises

Recommended Delivery Vehicles

The following is a list of recommended vehicles that suit the narrow road conditions around the school;

1. Light-Duty Trucks (Elf Trucks)

- Example Models: Isuzu Elf NKR77, Mitsubishi Canter FE71
- Width: Around 2 meters
- Capacity: 1–3 tons
- Description: These trucks are compact and agile, ideal for tight urban spaces. The Isuzu Elf NKR77 and Mitsubishi Canter FE71 are well-suited for transporting smaller construction loads such as bags of cement, tools, or smaller equipment.


2. Mini Dump Trucks

- Example Models: Mitsubishi Canter Dump, Hino Dutro Dump
- Width: Approximately 2.1 meters
- Capacity: 2–3 cubic meters of material
- Description: Mini dump trucks like the Mitsubishi Canter Dump and Hino Dutro Dump are optimal for transporting loose materials (sand, gravel) on narrow roads. They are compact enough to navigate restricted spaces and can deliver frequent, smaller loads to prevent congestion.


3. Small Flatbed Trucks

- Example Models: Hyundai HD36L, Foton Tornado 2.4C Mini Flatbed
- Width: Approximately 2–2.2 meters
- Capacity: 2–4 tons

- Description: The Hyundai HD36L and Foton Tornado 2.4C are small flatbed trucks that can handle bulkier construction items like steel, lumber, or prefabricated components. Their compact design makes them practical for road conditions with tight clearance, while still carrying sizeable loads.

4. Hi-Lux Pickup Trucks

- Example Models: Toyota Hi-Lux, Mitsubishi Strada
- Width: Approximately 1.8 meters
- Capacity: Around 1 ton
- Description: For smaller or urgent deliveries, the Toyota Hi-Lux and Mitsubishi Strada provide excellent maneuverability. These pickups can quickly transport tools, urgent materials, or smaller construction items to the site, especially when larger trucks face delays due to traffic.

5. Closed Van (Light-Duty)

- Example Models: Isuzu NHR Van, Hyundai H100
- Width: Approximately 2–2.1 meters
- Capacity: Typically 1–3 tons
- Description: Closed vans such as the Isuzu NHR and Hyundai H100 are well-suited for transporting sensitive materials, such as electrical components or moisture-sensitive items. Their enclosed structure protects contents from weather exposure, and their compact size is advantageous on narrow urban streets.

TRAFFIC RISK MANAGEMENT

Traffic management commences with an identification of the hazards and an assessment of the risks that are common to all project sites, so that effective control measures can be implemented.

1. Traffic Control Devices

Traffic Control devices are markers, signs and signal devices placed upon, over or adjacent to a road leading to the project site, to regulate, warn or guide stakeholders.

Traffic Signs

a. Regulatory Signs
   1. Stop Signs
   2. Speed Limits Signs (e.g. 10 kph Speed Limit along the street where project site is located)
   3. No Parking Signs
   4. Direction signs or signages such as arrows, directional lines etc. shall be place in conspicuous and strategic locations. There will be one entrance to the project site to minimize disruption of access to classrooms and establishments nearby.
   5. Signage must be used for speed limits, exclusion zone, pedestrian crossing, vehicle crossing, blind corners, steep gradients and other hazards that might cause traffic congestion.

All traffic regulatory signs recommended and must be approved and coordinated with the local police and LGU concerned traffic authorities.

Traffic Equipment

a. Traffic Cones made of plastic or rubber, 500 mm, 750 mm and 1000 mm high and to 500 mm in diameter or in shape at base, normally have retro-reflectorized red and white bands.
b. Drums Reflectorized drums may be used to delineate a merging taper or a shoulder taper or to maintain a lane closure. The Contractor shall provide ballast to prevent movement of the drums by the wind. These drums about 800 mm to 1000 mm high and 300 mm in diameter shall be highly visible and positioned in strategic areas.
c. Barricades shall consist of one or more similar barricade assemblies placed end to end. This shall be erected to protect the road users from danger due to construction equipment and other temporary structures and to prevent the area from the road accidents due to vehicular movement.

This shall be noticeably seen by the road users in the dark/night time so that no vehicle hits the barricade. A minimum of one red light or blinker red light shall be attached at the top of the barricade.

2. Pedestrian Routes

Contractors shall minimize interaction between pedestrian traffic and site hazards such as vehicle movements, falling objects, warehouse shelving etc. Pedestrian routes that represent paths people would naturally follow which will encourage pedestrians to stay on designated safe routes. The signage and line markings separating pedestrian routes from construction vehicles shall be visible to the public. The Contractor will be responsible in setting-up signage to display restricted areas by student, parents and school personnel at the construction site due to site hazards.

3. Construction Vehicle Movement Routes

The goal is to prevent vehicle movement from obstructing the path of pedestrians and prevent human collisions caused by vehicle contact, and environmental damage.

- Ensure that vehicle movement area have visible sign-posted to indicate restricted parking, visitor parking, speed limits, and other route hazards
- Ensure that vehicle routes are maintained from obstructions, grease/ oil spills, damage
- Minimizing the amount of moving construction-related vehicles working at one time.
- Install control and warning systems at all entrances and exits to and from project site areas by construction vehicles and equipment via public roads to protect and warn the public in the vicinity.
- Assign a spotter for large vehicle movement where visibility is compromised

3. **Safe Crossing**

- Ensure that the control measure to minimize vehicle and pedestrian interaction shall be properly implemented through the following:
- Each crossing for the students, parents, and school personnel shall have physical barriers such as fence, or temporary barricades
- Areas where vehicles and pedestrians interact should be clear of blind spots and
- obstructions
- Speed Limits are installed on roads leading to the project site and where vehicles and pedestrians interact, ie 10kph.
- Light signals or visible ground markings are installed on pedestrian crossings

4. **Safe Parking**

If space is available, the Contractor's site parking lot must be segregated from the loading and unloading area. In schools where space is limited, parking of construction vehicles may not be allowed. Parking should be clearly marked, adequately lit, and unobstructed. Ensure that site parking areas will not obstruct the access and egress to site/ emergency exits. Provision of parking shall be provided including for school staff and visitor parking to prevent blockage.

5. **Loading and Unloading Operation**

Loading and unloading area of construction materials shall be located where vehicles can easily and safely maneuver. Areas shall be clearly marked and fenced to prevent unauthorize access during the loading and unloading process, particularly in areas where there is a risk of falling objects.

Assign a spotter especially if the driver cannot be seen or must enter a restricted area. If not, the process should be stopped. The driver must be clearly visible to the forklift/crane operator. The role of the spotter is to observe the loading and unloading process using equipment and machinery.

6. **Deployment of traffic Marshall**

Traffic Marshall and the corresponding safety signage shall be deployed at all road intersections of the transportation route where the equipment requires to turn left or right. The typical Traffic Marshall and

signage arrangement at all road intersections along the transportation routes within the vicinity of project sites shall be coordinated with concerned LGU and respective schools.

The Traffic Control Marshall must:

- be competent
- not do any other work while directing traffic.
- be in a position that places them at the lowest risk from the traffic.
- equipped with proper PPE to protect one from identified hazard: hard hat, safety shoes, hand gloves and reflectorized vest
- have a general knowledge of vehicle operations, rules of the road, and an understanding of driver expectations.
- shall attended mandatory Safety and health orientation and Traffic direction & control orientation upon hiring, conducted by the Contractor before deployment at the construction site.

Traffic Marshall Control Devices are provided with the following:

- Stop & Go paddle board
- Reflective Gloves
- LED Traffic Baton
- Whistle

ANNEX C.

LEARNING CONTINUITY PLAN

The Learning Continuity Plan (LCP) is essential for managing the temporary relocation of a school population during building retrofitting, ensuring compliance with World Bank standards. The LCP's primary goal is to minimize the social and educational impacts of displacement by maintaining or enhancing pre-project conditions.

The LCP adopts a comprehensive approach starting with the collection of baseline data to understand the demographics and existing conditions of the affected population. It outlines a relocation strategy, identifying alternative facilities and logistical arrangements to accommodate displaced students and staff.

The plan details an implementation schedule, assigns responsibilities, communication strategy to keep all stakeholders informed, monitoring and evaluation mechanisms to assess the effectiveness of the relocation and address any issues promptly, and risk management strategies to address potential challenges.

The LCP ensures that the relocation process minimizes disruption, maintains educational continuity, and provides a safe and supportive environment for the temporarily displaced school community.

The following are the specific objectives of the Learning Continuity Plan (LCP):

1. Ensure Continuity of Education: The primary goal is to maintain uninterrupted educational activities despite disruptions by efficiently utilizing available space and adopting flexible learning modalities.
2. Ensure Safety and Comfort: Prioritizing the safety and comfort of learners and personnel by minimizing overcrowding and ensuring that all facilities are adequate and conducive to learning.
3. Flexible Adaptation: The plan must be adaptable to unforeseen circumstances, such as increased enrollment or further disruptions, allowing for adjustments as needed.

1. **Temporary Student Relocation Strategy**

Based on stakeholder consultations, three primary relocation strategies have been suggested to address the challenges encountered by schools. Here's a detailed overview of each mode:

1. **Provide Additional Shifts:** Implementing additional shifts to maximize the use of available space when physical accommodations are limited. By introducing multiple shifts during the day, schools can effectively manage the number of students on campus at any given time. This approach involves staggering start and end times to reduce peak loads and avoid overcrowding.

   For instance, a school might run a morning shift and an afternoon shift, each accommodating a different group of students. This method helps in optimizing space usage and maintaining a manageable student-to-space ratio. For schools that currently operate with only one shift, this approach is often preferred as an alternative mode of learning, offering a practical solution to space constraints. However, it requires careful scheduling and coordination to ensure that the changes do not adversely affect students' learning experiences or disrupt extracurricular activities. Additionally, adjustments may be needed to accommodate transportation schedules and staff availability.

2. **Transfer to Other Rooms:** It involves temporarily moving students and staff to available rooms or buildings within the same school. This approach is suitable when parts of the building are temporarily unusable due to maintenance or structural issues. For example, if a classroom block is under repair, students and teachers can be relocated to other vacant classrooms within the school. This method minimizes disruption by keeping students and staff within their familiar school environment, ensuring continuity in the educational process. The effectiveness of this solution relies on the availability of

suitable alternative spaces within the school and ensuring these spaces are adequately equipped and maintained to support the educational needs of students and staff.

3. **Adopt Other Learning Modalities:** When physical space is inadequate, alternative learning methods can be implemented as a flexible solution including online classes, blended learning, and modular learning:

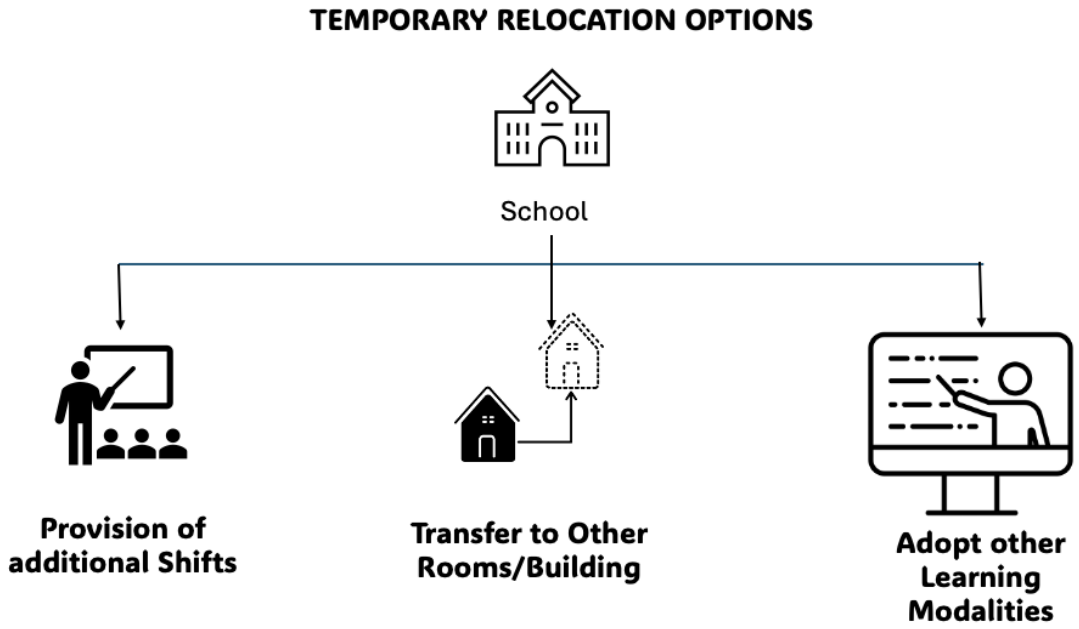
    - **Online Classes:** Enable students to learn remotely, reducing the need for physical classroom space. However, consultations with schools indicate that student performance showed decreased or limited progress during lockdown periods when online classes were heavily utilized. Internet accessibility and the availability of technology alone are insufficient for effective remote learning. Although EdTech played a crucial role in continuing education during periods of remote or online learning or lockdowns during the Covid-19 Pandemic, challenges such as inadequate home support and less conducive learning environments remained significant barriers.

    - **Blended Learning:** Combines in-person and online instruction approaches, offering flexibility to adapt to space constraints. It leverages both physical and digital resources to support learning needs. The consultation **r**evealed that transitioning to blended learning models is often preferred, as teachers can still assess students' performance and mediate during the learning process, unlike in fully online classes where physical engagement or interaction with teachers and classmates is significantly limited.

    - **Modular Learning:** Provision of educational materials for home study and conducting periodic assessments to track progress, which reduces the need for physical space and offers flexibility in learning. The success of this method relies on ongoing support for both students and teachers, emphasizing the need for effective pre-service and continuous professional development for educators to navigate both remote and in-person settings successfully.

    In addition, this method requires the parents' critical role in supporting their children's learning. Working parents or those who are not present at home, however, may struggle to stay involved which can lead to issues such as incomplete assignments or underperformance of the student.

    To address this, schools could focus on developing the capacity of parents with training sessions and resources to help them better support their children's learning goals. This could include providing tools and strategies for managing study time, setting clear expectations for parental involvement, with online resources that can be accessed at their convenience. Regular check-ins and communication between teachers and parents can also help ensure that students remain engaged and that parents can effectively support their children's education, regardless of their availability.



Each mode of relocation has its advantages and considerations, and the choice of approach should be based on the specific needs and constraints of the school. Implementing these strategies in combination may also be necessary to effectively address the varying demands of different schools and situations.

B. H. Bautista Elementary School Learning Continuity Plan by Building

1. DPWH Building

Learners/Faculty: 500 learners

Shifts: 2 shifts; AM Shift Grade 1, PM Shift Grd 2 & 4

Facilities: Classrooms in all floors, 1st flr: service centers, the canteen, feeding center, HE room, in the 2nd flr: the Guidance room, Registrar, Library, and ICT; and 3rd flr principal's office.

Based on the January 2025 Marikina public consultation, The H. Bautista Elementary School has 2 shifts, classrooms in the three floors, and 500 learners.

The retrofitting of DPWH Building will affect the 1st flr: service centers, the canteen, feeding center, HE room, in the 2nd flr: the Guidance room, Registrar, Library, and ICT; and 3rd flr principal's office.

Proposed Strategy:

1. Learning Model

- ***Option 1: Blended Learning***

  Kinder to Grd 3 Face to Face, and,
  Sample:
  Kinder 7 – 10am, 10 – 1pm; Grd 3 1 – 4:30pm
  Grd 4 – Grd 6, 3 days Asynchronous Learning/ Modular, 2 days F2F
  Grd 4 – 5: 11pm – 5:20pm
  Grd 6: 6am – 12:10pm

- ***Option 2: Blended Learning***

  Everyday alternate

- ***Option 3.: Additional Shift***

  3 hours per day contact time

  6 – 9am; 9 – 12pm; 12 – 3pm

2. **Transfer of School Facilities and Materials:**
   - ***ICT, service center, Guidance, Records***
     - **Option 1:** Relocate to Q Building, AVR room
     - **Option 2**: Relocate to DEL Bldg 2nd flr.
   - ***Canteen, Feeding center***

     Relocate to Del Building, Beside Bakery & Science lab

   - ***Statue of Hermogenes***

     Relocate to Q building

3. **Additional Concerns:**
   - Construction Period – 5:30pm to 5:00 am After School
   - Any number of stay in workers beside Del Building
   - TMP: 10pm to 4am
   - School activities to be considered:
     - Clinic Consultations
     - Flag Ceremony
     - Feeding Program
     - Canteen Operations
     - On going Khan Academy Implementation
   - Temporary barriers or fence (Preferably G.I Sheets) with set backs
   - Hermogenes Statue will be relocated and preserved for the whole duration of retrofitting. Then, statue should be returned after the retrofitting is completed
   - List of names of workers should be provided to barangay and school principal for proper monitoring
   - Temporary fences/barriers to separate students from the workers (VAWC Concerns)
   - That, construction workforce are not allowed at all times to mingle with the students, teachers and school personnel.

Building	Affected People		Time of Shifts	Description	Options for Temporary Relocation of Students/School Staff by Stakeholders
	Learners	School Teachers / Personnel			
DPWH Building	12 classrooms; 500 learners	15 staff	• Shfit 1: 6:30 – 12 pm Grade 1 • Shift 2: 12:15 – 5:30 pm Grade 2 & 4	The H. Bautista Elementary School has 2 shifts, classrooms in the three floors, and 500 learners. The retrofitting of DPWH Building will affect the 1st flr: service centers, the canteen, feeding center, HE room, in the 2nd flr: the Guidance room, Registrar, Library, and ICT; and 3rd flr principal's office.	**Option 1: Blended Learning** Kinder to Grd 3 Face to Face, and, *Sample:* Kinder 7 – 10am, 10 – 1pm; Grd 3 1 – 4:30pm Grd 4 – Grd 6, 3 days Asynchronous Learning/ Modular, 2 days F2F Grd 4 – 5: 11pm – 5:20pm Grd 6: 6am – 12:10pm **Option 2**: **Blended Learning** Everyday alternate **Option 3.**: **Additional Shift** 3 hours per day contact time 6 – 9am; 9 – 12pm; 12 – 3pm **Transfer of School Facilities and Materials:** *ICT, service center, Guidance, Records* Option 1: Relocate to Q Building, AVR room Option 2: Relocate to DEL Bldg 2nd flr. *Canteen, Feeding center* Relocate to Del Building, Beside Bakery & Science lab *Statue of Hermogenes* Relocate to Q building

Table C- 1. H. Bautista Elementary School Learning Continuity Plan by Building

C. Learning Continuity Plan Proposed Schedule

The school may initiate the relocation of the project-affected building following the national elections in May 2025.

Below is the proposed timing for the temporary relocation of students and staff during retrofitting, in close coordination and assistance of the PSRRRP Project Implementing Unit (PIU), focusing on three key strategies: transferring to other rooms, providing additional shifts, and adopting other learning modalities.

Table C- 2. Phase 1: Planning and Preparation

Week	Activity	Details	Responsibility
1-2	Assessment and Room Identification	Identify and assess available rooms within the school for relocation. Ensure they meet educational needs and are appropriately equipped.	Academic Committee and Technical Committee
3-4	Develop a Continuity Plan and Scheduling Plan	Plan the transfer of students and staff to available rooms and develop schedules for additional shifts and alternative learning modalities.	
5-6	Communicate Plan	Consultations with the key stakeholders of parents, LGU, teachers, and DEPED about the alternative learning mode proposals of additional shifts, blended learning, or online classes.	Stakeholder Committee
7-10	Prepare Resources	Organize and prepare necessary resources and materials for the temporary rooms and new learning modalities such as *Class Programs* and *Teacher Workload Adjustments*.	Academic Committee

Table C- 3. Phase 2: Transition

Week	Activity	Details	Responsibility
1-4	Implement Additional Shifts	Start new shift schedules (e.g., morning and afternoon shifts). Coordinate timings to avoid overlap and manage peak loads.	Academic Committee
5-8	Adopt Other Learning Modalities	Implement online classes, blended learning, modular learning, and/or setup makeshift classrooms / offices as needed, whilst ensuring that all students and teachers have access to necessary educational materials and support.	

Table C- 4. Phase 3: Monitoring and Adjustment

Week	Activity	Details	Responsibility
1-4	Monitor Transition and Address Issues	Observe the transition process, and address any immediate issues or concerns related to room assignments, shifts, or new learning modalities. Ensure effectiveness of alternative mode and develop feedback sessions.	Academic Committee
5-6	Provide Support and Training	Offer additional support and training for students and staff on new learning modalities and adjusted schedules.	

7-10	Review and Collect Feedback	Gather feedback from students, staff, and parents regarding the relocation and new arrangements.	

Table C- 5. Phase 4: Evaluation and Final Adjustments

Week	Activity	Details	Responsibility
1-2	Evaluate Setup	Assess the effectiveness of temporary rooms, additional shifts, and learning modalities. Identify any issues that need to be addressed.	Monitoring and Evaluation Committee
3-4	Implement Adjustments	Make necessary adjustments based on feedback and evaluation to improve the temporary setup.	
5-8	Confirm Stability and Prepare for Return	Ensure that all adjustments are in place and confirm that the temporary setup is stable. Prepare plans for returning to the original setup post-retrofit.	

Of the Timing of Relocation:

Phase 1: Planning and Preparation (Months 1-3)

This involves identifying and preparing alternative rooms, developing a detailed relocation and scheduling plan, communicating the plan to all stakeholders, and preparing resources for both physical relocation and new learning modalities.

Phase 2: Transition (Months 4-5)

Start of implementation of selected learning model either Additional Shifts, Transfer to Other Rooms, or Blended Learning.

Phase 3: Monitoring and Adjustment (Months 6-9)

Dedicated to monitoring the transition, addressing any immediate issues, and providing support and training for new systems. Gathering feedback helps to identify any problems early and ensures that the new arrangements are functioning as intended.

Phase 4: Evaluation and Final Adjustments (Months 10-12)

Focuses on evaluating the effectiveness of the temporary setup and making any necessary adjustments. This final phase ensures that the transition is stable and effective and prepare for the eventual return to the original setup once retrofitting is complete.

By following this schedule, the goal is to minimize disruption to educational activities and ensure a smooth and efficient transition during the retrofitting period.

Responsibility:

The responsibility of the implementation is through the principal, the school head, the teacher in charge, or an appointed in-charge for this relocation plan or learner continuity plan, with the school teaching and non teaching staff, in close cooperation and supervision of the DepED and LGU, in the creation of an Ad Hoc Committee as needed that will oversee the planning, coordination, and monitoring of all relocation activities, ensuring that the transition is carried out with minimal disruption to students, teachers, and school operations, that could be patterned from during Covid educational transitions from physical to asynchronous and blended mode of learning.

Whereby formally, the composition of the Ad Hoc Committee shall be:

1. **Overall Chairperson:**

   - **School Principal / School Head**
   - Provides leadership and decision-making authority for all relocation activities.
   - Coordinates with DepEd, the LGU, and other relevant agencies.
   - Ensures compliance with educational and safety standards.

2. **Vice-Chairperson:**

   - **Teacher-in-Charge (if applicable) or Assistant School Head**
   - Assists the Chairperson in all duties and assumes leadership when necessary.

3. **Technical Committee:**

   - **Property Custodian, Maintenance Team, and Non-Teaching Staff**
   - Conducts an assessment of available classrooms or temporary learning spaces.
   - Ensures the functionality of essential utilities (electricity, water, ventilation, etc.).
   - Recommends necessary repairs or improvements.

4. **Academic Committee:**

   - **Department Heads / Senior Faculty Members**
   - Assesses the impact of relocation on instructional delivery.
   - Proposes adjustments to the academic schedule and classroom assignments.
   - Ensures that learning materials and teaching aids are accessible in new locations.

5. **Logistics Committee:**

   - **Custodian, School Utility Staff, and Assigned Teachers**
   - Oversees the physical transfer of furniture, teaching materials, and essential documents.
   - Ensures that relocation is conducted in an orderly and efficient manner.

6. **Health and Safety Committee:**

   - **School DRRM Coordinator, Barangay LGU Officials, and Safety Officers**
   - Implements safety measures, including temporary barriers/fences to protect students.
   - Ensures that construction workers do not interact with students or school personnel.
   - Coordinates with LGU for additional security support if necessary.

7. **Stakeholder Committee:**

   - **School Principal, PTA Representatives, Barangay LGU Representatives, DepED Representatives**
   - Conducts consultations and dialogues with parents, students, and the community.
   - Addresses grievances and ensures clear communication between stakeholders.
   - Provides updates on relocation progress and contingency plans.

8. **Monitoring and Evaluation Committee:**

   - **DepEd Representatives, School Administrators, and Barangay LGU Officials**
   - Oversees the implementation of the relocation plan.

- Evaluates the effectiveness of the plan and recommends improvements.
- Ensures adherence to DepEd policies and local government guidelines.

D. MONITORING AND IMPLEMENTATION

Monitoring and evaluation are critical components of the temporary relocation process, including the post-construction phase of returning the school to its original setup, and will be conducted continuously. The Department of Works and Highways will regularly review any reports or complaints related to the project, particularly those from affected students and faculty, and will discuss the outcomes in its technical meetings.

The monitoring and evaluation process aims to assess:

1. Whether the temporary relocation and associated project activities are progressing as planned.
2. If grievances and complaints are being accurately recorded and addressed.
3. Whether corrective actions, including any necessary adjustments to the implementation strategy, are required and what form they should take.

Responsibility for Monitoring

The PSRRRP Project Implementing Unit (PIU) holds overall responsibility for executing the project. The PIU will also oversee the completion of work before the school reoccupies the building, providing weekly status reports and evaluations of the progress.

Monitoring Process

Monitoring will focus on two main areas:

1. **Performance Monitoring**: This will track the physical progress of the required actions. Key performance indicators include:
    - Documentation of consultation meetings and preparation of meeting notes.
    - Completion of tasks, such as setting up the temporary relocation site and relocating the school pre- and post-construction.
    - Publication of relevant notices in the Government Gazette and other media.
    - Resolution of grievances, complaints, and concerns.

2. **Impact Monitoring**: This will evaluate how effectively the temporary relocation plan meets the needs of those affected. The impact monitoring methodology will involve:
    - Reviewing the number and types of complaints received and assessing the effectiveness of the grievance redress mechanisms.
    - Examining the appeals process and the timeframe for resolving appeals.

Table C- 6. Monitoring Plan

Monitoring Activities	Objectives	Means of Verification	Responsibility for Data Collection, Analysis and Reporting
Performance Monitoring	To assess the progress in the implementation of the temporary relocation plan. The focus will be on the execution of actions relative to the proposed schedule and budget	Consultation with PAPs; Project Progress Reports; letters	DPWH, PSRRRP Project Implementing Unit (PIU)

Monitoring Activities	Objectives	Means of Verification	Responsibility for Data Collection, Analysis and Reporting
Impact Monitoring	Assessment of the effectiveness of the temporary relocation plan and its implementation in addressing the needs of the PAPs	Consultation (public and PAPs); Project Implementation reports	DPWH, PSRRRP Project Implementing Unit (PIU)

Table C- 7. Implementation Schedule

No.	Activity	2024												2025												2026			
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A
1	Project Site Survey																												
2	Public Consultation/Focus Group Discussion																												
3	Complete Draft SRP																												
4	Approval of Draft SRP																												
5	Information Education and Communication																												
6	Planning and Preparation																												
7	Construction (DPWH Bldg.)																												
8	GRM and SRP Implementation																												
9	Monitoring																												

Summer Break
S.Y. 2025-2026 Opening of Classes

E. PROPOSED BUDGET FOR THE IMPLEMENTATION, MONITORING AND EVALUATION

It is proposed that this Plan be overseen by the District Head of DepEd, with a dedicated Deputy Officer assigned to each school in Marikina to ensure effective execution at the local level. The project is expected to require a minimum budget of ₱300,000 per school. The budget is also allocated to cover all necessary expenses including its program monitoring and evaluation. This plan is designed to encompass every major activity involved in the temporary relocation process, starting from the initial preparation phase, moving through detailed implementation, and culminating in the successful completion of the project. The objective is to ensure a smooth and well-organized transition for all students, minimizing disruptions and addressing all logistical and operational challenges.

Table C- 8. Proposed Budget For The Implementation, Monitoring And Evaluation

Category	Breakdown	Amount (PHP)
1. Public Consultation	Venue rental	15,000
	Food and refreshments	20,000
	Materials (handouts, flyers, etc.)	10,000
Subtotal		**45,000**
2. Monitoring and Evaluation	Evaluation team honorarium	20,000
	Travel expenses	10,000
	Data processing & report preparation	10,000
Subtotal		**40,000**
4. Training and Workshops for Evaluation Team	Trainer/Resource person fees	20,000
	Venue rental	10,000
	Training materials & supplies	10,000
	Meals & transportation	10,000
Subtotal		**50,000**
6. Manpower and Vehicle for Equipment & Material Relocation	Manpower (labor fees)	15,000
	Vehicle rental/fuel	20,000
Subtotal		**35,000**
7. Textbooks, Development of Teaching Aids, Digital Learning Tools, Learning Materials	Textbooks and printed materials	25,000
	Development of digital learning tools	20,000
	Stationery and supplies	10,000
Subtotal		**55,000**
8. Computers and Internet Connectivity for Classrooms	Desktop/laptop purchases	30,000
	Internet setup & initial connectivity fees	15,000
Subtotal		**45,000**
9. Contingency (10%)		**30,000**
Grand Total		**300,000**

ANNEX D.

ENVIRONMENTAL AND SOCIAL CODES OF PRACTICE (ESCOP)

1.0 INTRODUCTION

The Philippine Seismic Risk Reduction and Resiliency Project aims to enhance the safety and seismic resilience of selected public buildings and facilities in Metro Manila through the structural strengthening and functional upgrade of public buildings which are selected and prioritized based on a transparent, well-designed, and cost-effective approach to retrofitting. The project aims to contribute to an overall reduction of the impacts of earthquakes (particularly "The Big One" scenario) on the portfolio of critical public facilities.

The retrofitting of buildings will be for existing public schools. The improvements are expected to bring in substantial benefits to the structural stability of buildings and to the safety of its occupants. However, the construction activities may also lead to adverse social and environmental impacts such as disturbance or nuisances to the building occupants and surrounding communities, triggering the need to develop the Environmental and Social Codes of Practice (ESCOP).

2.0 PURPOSE OF THE ESCOP

The ESCOP aims to provide guidance to the planning and implementation of the mitigation measures to be carried out by the Project Implementing Unit (PIU) contractors during civil works activities. It sets out the standard practices and procedures for managing the potential negative impacts on local environment and communities of all civil works to be carried out through measures to prevent adverse environmental impacts including monitoring and institutional arrangements on safeguards. The responsible parties are expected to follow these procedures and keep records and documentation of implementation of mitigation measures for periodic audits. The ECOP will be included as a separate annex in all bidding documents.

The ECOP is applicable to most construction and retrofitting activities. If significant impacts are identified based on the environment and social screening in Annex A, the ECOP is supplemented by the Environmental and Social Management Plan (ESMP) to address the site-specific impacts that have been identified. The ECOP contains the following sub-plans:

1. ESCOP 1: Temporary Relocation of School Classrooms and other Building Utilities
2. ESCOP 2: General Construction Site Management
3. ESCOP 3: Worker's Health and Safety
4. ESCOP 4: Community Health and Safety
5. ESCOP 5: Cultural Properties

3.0 RESPONSIBILITIES

The contractors at the site level are the key entities responsible for the implementation of the ESCOP. The PIU, particularly the Environmental and Social Safeguards Unit and their focal persons, are responsible for supervision and monitoring of implementation of ESCOPs.

ESCOP 1: TEMPORARY RELOCATION OF SCHOOL CLASSROOMS AND OTHER BUILDING UTILITIES

All the school buildings targeted under the project have social significance and therefore construction activities will have the potential to disrupt education and healthcare services and temporarily interfere with youth development or provision of care needs. The construction activities will occur within a period of 9 months, hence, the location of temporary classrooms should be well-planned to ensure continuous operation of the building services.

CONSULTATIONS

The PIU and the design team should consult with the building administrators and other stakeholders such as faculty, medical staff, engineering staff, including students, patients and parents to hear their issues and concerns and preferences during programming of the project. This will be done during the detailed engineering design and prior to the start of any construction activities. Barangay and neighboring communities will also be consulted to inform them about the proposed project and to get their comments on proposed measures to management impacts and nuisance. Collaboration with representatives from the community in planning the temporary relocation site should be maximized to identify safe sites. The local government leaders may help provide suggestions on temporary relocation sites for school classrooms if there are no available areas within the existing school compound.

There may also be economic enterprises inside the school that may be temporarily affected during the retrofitting of the building. The canteen operators must also be consulted during the planning of the project.

The site survey and consultations aim to identify ways to minimize disruption of operation of the building and to develop an acceptable program of activities and the temporary relocation areas for classrooms, and other affected utilities.

GUIDANCE ON SELECTING AREAS FOR TEMPORARY CLASSROOMS

The project will keep in mind the health and safety of the surrounding areas to ensure that the temporary school site is conducive to learning of students.

- The site shall preferably be set up within the school compound in available rooms and areas of the school building that are not subject to retrofitting such as library, gymnasium, and quadrangle.
- Discuss with the school administration and stakeholders the implementation of flexible class schedules such as class shifts, weekend classes, and extension of classes during school breaks.
- Avoid locating the temporary classrooms near the main entrance where vehicles and materials delivery and other construction services may take place.
- Select a site with roofing or shade to protect teachers and students from exposure to sun or rain.
- Examine safety of the site and check against any hazardous areas such as noisy areas, falling debris, diggings, open electrical wires, and dusty surroundings.
- Provide temporary barricade for the classroom.
- Ensure that the temporary classroom has access to toilet facility.
- Ensure that the temporary area is provided with adequate lighting and ventilation.
- Ensure that there is provision for mobility of handicapped/disabled persons at the temporary site.

GUIDANCE ON SELECTION OF AREAS FOR TEMPORARY SCHOOL CANTEEN

There may be instances where the canteen and other food concessionaires of the school may be affected by the building retrofitting activities. These economic enterprises or businesses are expected to be temporarily relocated within the same compound for continued operations and to avoid livelihood impacts. Consultation with the canteen operator /concessionaire should be conducted during the planning process to ensure that income of the operator and its staff are not adversely impacted. The following are considerations in the planning of the temporary site for the canteen:

- The temporary site must have safe and sanitary area for food preparation.
- The area must have access to electricity, water, and toilet.
- The temporary site must have safe and comfortable ventilation, lighting, flooring, and walls/barricade.
- There must be sufficient floor space for food preparation, food service, and passageways of people.
- There must be provision for waste bins.

ESCOP 2: GENERAL CONSTRUCTION SITE MANAGEMENT

The ESCOP on construction site management provides the overarching guidelines with regards to construction and civil works to implement the building retrofitting activities and functional improvements, including removal of obstructions, installation of scaffoldings and falseworks, chipping of concrete and stripping down of targeted structures (walls, ceilings, columns, beams), welding and steelworks, concreting, application of epoxy, and finishing and restoration works. This ESCOP on site management sets out the measures to be applied to mitigate the potential impact of site activities to the building occupants, local residents, roads, and communities in the immediate vicinity of the project site. The code refers to the requirements of the World Bank General Environment, Health and Safety (EHS) Guidelines and national laws and regulations.

The requirements of the ESCOP on construction site management shall be carried out by the contractor under the supervision of the PIU. Further, specific measures for each site may be identified through the preparation of the site-specific ESMP by the consultant.

GENERAL REQUIREMENTS PRIOR TO CONSTRUCTION

Prior to site mobilization, the contractor together with the PIU will conduct the joint site inspection and consultation with the building owner or end-user of school (administrator, engineering staff, and other personnel) as well as affected stakeholders (e.g. canteen, adjacent residential houses, barangay) to discuss and identify areas of concern such as: area for storage of stockpile of materials, disposal area for construction debris, planned camp site and yard areas, temporary relocation of any utility, classroom, health and environmental issues, potential hazards, vehicle and security management, programming of work schedule, and project organization and staff assignment. During the site inspection, the Environment, Safety and Health (EHS) Officer of the contractor in coordination with the Environmental and Social Safeguards Unit and assigned EHS Focal Person at the PIU will identify and discuss with the stakeholders the site readiness requirements and the measures to be implemented to manage impacts and disturbance. Mitigation measures will be designed to include details of the controls with regard to general site layout and operations, working hours, drainage, site lighting, security, emergency planning and response, and worker access and safety. Whenever feasible, the program of the retrofitting works must be planned in a section-by-section basis to minimize disturbance.

The contractor will prepare the site-specific ESMP/ECOP and site general layout reflecting the area covered by the project site and the corresponding locations of camp site, temporary facilities for materials stock area and waste/debris collection area, barricades/fences, and area for mobility of equipment at site.

PROHIBITIONS DURING CONSTRUCTION

The following activities are prohibited on or near the project site:

1. Cutting of trees for any reason outside the approved construction area;
2. Use of unapproved toxic materials, including lead-based paints, asbestos, etc.;
3. Deposition of chemicals, sanitary wastewater, spoil, waste oil, and concrete agitator washings in watercourses;
4. Disturbance to anything with archaeological or historical value;
5. Use of alcohol and prohibited drugs by workers at the workplace;
6. Employment of workers under the age of 18;
7. Discrimination regarding recruitment, wages and compensation.

REQUIREMENTS DURING CONSTRUCTION

1. MATERIALS MANAGEMENT

Materials that will be utilized for the retrofitting of buildings and construction of functional improvements include cement, epoxy, aggregates, sand, steel braces/jackets, and reinforcing steel. The bulky materials (cement bags, aggregates, sand, steel braces/jackets and reinforcing steel) will require some space within the site, hence, a materials management plan is necessary to avoid disturbance and ensure safety in the construction site. During delivery of the materials at the site, spill of materials while in transit may cause also road accidents. The following materials management measures are proposed:

- Where possible, avoid stockpiles by only ordering the supplies needed.
- Stockpiles of aggregates and sand should be placed at least 10 meters away from any canal or surface water.
- Stockpiles of aggregates should be provided with sediment control measures such as silt traps.
- Cement bags should be covered with tarpaulin.
- Coordinate the schedule of delivery of materials with the school administration.
- Ensure that materials stockpiles are placed in safe and secure area within the facility that is approved by the school administration.
- Schedule delivery of materials on a weekly basis to limit movement of delivery vehicles to the site.
- Provide barricade on stockpile of materials
- Provide spill kit on site for oils.

2. WASTE MANAGEMENT

Wastes that will be generated during the construction activities will include debris such as excavated soil for foundation works, concrete debris from chipping and stripping down of structural parts, pieces of rebars, wires, nails, broken glass, wood, pipes, empty containers of paint, solvents, strippers, epoxy resins, adhesives, degreasers, oily rags, used oil, spent welding electrode sticks/rods, busted lamps, among others. The excavation of substructure and foundation may also result to cut soil. There may also be food wastes generated by workers and other ordinary solid wastes (bits of paper, plastics, and packaging materials). Except for the

empty containers of paints, solvents, epoxy resins, adhesives, degreasers, oil rags, and busted lamps which are classified as hazardous wastes, most of the wastes are considered as inert and non-hazardous wastes.

Before construction, a solid waste management procedure (storage, provision of bins, site clean-up schedule, bin clean-out schedule, etc.) must be prepared by the contractor. Arrangements with a solid waste transporter licensed by the local government must be obtained. Likewise, a temporary site for the waste area that is recommended/approved by the school must be identified beforehand where waste segregation containers will be provided by the contractor. Waste containers shall be provided with cover to avoid tipping by animals.
After a day's work, workers are required to clean the work area. All materials and tools are stowed accordingly in preparation for the next day's work. This will also enhance efficiency and assist in maintaining a safe environment when workers return to work the next day. Wastes are properly sorted and disposed of in different waste bins or garbage containers.

Discussed in the succeeding sections are the measures to manage the different types of wastes during the retrofitting activities.

Non-Hazardous Waste. The non-hazardous waste should be placed in waste segregation bins such as for biodegradable waste (food wastes), recyclable waste (wires, pipes, rebars, and other pieces of metal), and hazardous waste. Excavated soil will be used as filling materials while other recyclable materials such as wooden planks may be used for formworks and scaffolding. The recyclable materials will be collected and separated onsite from other waste sources for reuse or for sale.

Burning of garbage and construction wastes shall be strictly prohibited at the site. Likewise, access by unauthorized personnel at the worksite should be controlled. Materials which are clearly a danger to building occupants e.g. exposed nails, broken glass, steel beams etc. should be properly collected to avoid accidents. Work areas will be maintained clear of waste materials and obstructions. Stockpiles of waste materials will not be allowed, instead, the wastes will be compacted and kept out of the way in accordance with the Occupational Safety and Health Program per DWPH D.O. 13 series 1998.

Hazardous Waste. Hazardous waste should always be segregated from the non-hazardous wastes. Designate an area for the temporary storage of empty containers (paints, solvents, epoxy resins, adhesives, degreasers), oily rags, and busted lamps. Proper labels should be affixed on these types of hazardous wastes. As a hazardous waste generator, the contractor is required to secure a Hazardous Waste Generator Registration with the DENR and to commission the services of a DENR-registered hazardous waste transporter and treater for the collection and disposal of hazardous wastes. A Hazardous Waste Manifest must be completed to document the amount of hazardous waste generated and collected/disposed for offsite treatment. The DENR-recognized treater should issue a Certificate of Treatment (COT) ascertaining the safe treatment and disposal of the hazardous waste. The COT records shall be kept for proper documentation.

Asbestos Containing Materials. There may be situations wherein the affected building section may contain asbestos materials as high-density products in roofing and flat sheets/walls of existing building. The use of amosite (brown) and crocidolite (blue) asbestos fibers and of products containing these fibers is strictly prohibited and that no spraying of all forms of asbestos in buildings is allowed. The contractor must undertake specific precautions if materials containing asbestos are present or encountered during works in order to ensure the protection of workers and occupants of the building. Asbestos fibers may be carried to the lungs. Prolonged and cumulative exposure is harmful and may cause asbestos-related diseases.

The procedure for handling asbestos materials must comply with the DENR Chemical Control Order on asbestos and the DOLE Order No. 154, series of 2016 on the management of asbestos in the workplace. In case asbestos materials is encountered at the work site, the following procedures should be followed:

- Notify the DENR of the proposed removal work and coordinate the activities with the DOLE with regards to the methods to be employed, inspections, decontamination, control monitoring and clearance inspections.
- The removal work must be assigned to a suitably qualified asbestos removal specialist.
- Isolate the site and provide barriers
- Restrict access from the general public to the site
- Erect appropriate signs and keep all access points locked at all times
- Following removal works, all surfaces are to be thoroughly cleaned using HEPA filtered vacuum and wet pipe techniques.
- On completion, the site must be carefully checked for visible asbestos containing materials.
- Any asbestos materials must be placed into asbestos plastic bags and then removed from the site by DENR-licensed waste transporter and treater.
- A hazardous waste manifest shall be completed for the transport, treatment and disposal of asbestos wastes offsite.

3. AIR QUALITY

Dust and Emissions. The retrofitting and construction activities may generate dust and fine materials from chipping and drilling of concrete which can cause degradation of ambient air quality and indoor air quality. Air quality issues may also arise from stockpile of excavated soil and aggregate and sand materials where during dry and windy conditions may be carried by wind. Dust is an environmental issue and a health and safety issue. The movement of hauling vehicles to the site during delivery of materials may also cause emissions.

Odor from Epoxy and Paint/Solvent Fumes. Odor from the application of epoxy resin, paint and solvent may also be generated. Workers may be exposed to fumes that can cause irritation of the nose, throat, and lungs. Workers applying epoxy resin and paint should be provided with respiratory mask. The area should be well-ventilated.

Welding Fumes and Gases. Air quality may also be affected during the welding of steel plates and cutting of steel. Workers are the ones directly exposed to this hazard. Overexposure to welding fumes and gases can cause health problems like respiratory illnesses.

To manage and mitigate these impacts and risks, the following measures will be implemented:

- For indoor concrete chipping and drilling, enclose the construction area with impermeable dust barriers and use industrial air vacuum pumps and ventilation exhaust fans to minimize spread and spillover of dust.
- For chipping/drilling activities on the exterior surface of the building, install nets/sheeting and temporary screens.
- Require workers to wear particle mask.
- Keep stockpile of aggregate and sand materials covered with well-fixed plastic sheeting, tarpaulins or other geotextiles to avoid suspension or dispersal of fine soil particles during dry and windy days.
- Equip concrete mixing equipment with dust shrouds.
- Periodically clean debris.
- Maintenance of hauling vehicles to ensure compliance with the motor vehicle emissions standards.

- Prohibit idling of construction vehicles while unloading materials at the site.
- Provide welders with PPE appropriate for welding activities and provide adequate ventilation and local exhaust to keep fumes and gases from the breathing zone and the general area.

4. NOISE

Noise during construction may occur during operation of equipment and movement of delivery vehicles at the site. Noise caused by operation of machinery coupled by haulage vehicles can cause nuisance. It could disrupt ongoing classes or cause nuisance to patients. Workers are also directly exposed to noise. In order to avoid the risks and impacts of noise, the following measures are recommended:

- Coordinate with the administration of the school on the schedule of construction activities that will minimize disruption of facility operation
- Provide temporary anti-noise barriers to barricade the construction area and shield sensitive receptors
- Strictly prohibit concrete chipping and drilling activities beyond 9:00PM particularly in areas near sensitive receptors and residential areas
- Deliver fabricated steel plates and cut/bend reinforcing steel to desired size to minimize cutting activities onsite.
- Require workers to wear ear plugs
- Ensure that operation of the equipment complies with the noise standards for Class AA (schools).

5. DRAINAGE

Not all construction activities may necessarily require retrofitting of footings but all design activities start with the investigation of the symptoms of structural problems and failures in the foundation. This is performed through digging of sample or selected footings to determine indicators of structural concern and determine where repair is necessary.

During the excavation for the retrofitting of foundations, the excavated soil may cause soil erosion during rainfall events. Storm water runoff may carry soil into canals and reduce the water-carrying capacity of the canal that could contribute to flooding during heavy rains. Excessive soil runoff may also lead to sedimentation of creeks and rivers. Another potential risk of soil runoff is from the residues from cement mixers and washing of equipment which could likewise clog canals.

In order to avoid impacts on drainage, the following measures must be implemented:

- Avoid earthworks during rainy months.
- Stockpile excavated soil (including aggregates and sand) away from drainage canals and water courses.
- Stockpiles of excavated soil and aggregates/sand should be provided with sediment control measures such as silt traps, barriers and trenches.
- Prohibit washing of cement mixers and other construction vehicles at the site
- Conduct daily cleaning and sweeping of the construction site and periodically remove soils, stones and wastes from gutters, drainage canals and ditches.
- During rain events, check the drainage system to see if these are blocked. Remove materials and wastes that have been swept away by stormwater.

6. WATER POLLUTION

Domestic sewage will be generated during construction due to presence of workers at the site. If there are no proper toilets at the site, improper disposal of sewage may cause unsanitary conditions in the premises. Therefore, appropriate wastewater management measures will be necessary such as provision of temporary toilet facilities or portable toilets ("portalets"). These facilities will be kept clean and sanitary at all times.

The portalets should be located more than 30 meters of an existing water supply well or surface water body and should be located in a place where its odor cannot reach busy areas of the compound. The portalets should have available water and hand washing facilities.

7. SITE SECURITY

The presence of workers in the school compound may pose risks to peace and order and security of the area. In order to avoid any untoward incidents, the contractor will be required to undertake the following:

- Security workers will be assigned to protect the construction sites, project workers and other stakeholders.
- Submit names of workers to the school and the Barangay.
- All workers will secure IDs or construction work pass from the school and from the Barangay.
- Restrict entry of unauthorized persons inside the construction site.

ESCOP 3: WORKER HEALTH AND SAFETY

Hazards of construction activities may cause adverse effects to health and safety of construction workers. Occupational hazards include ergonomic hazards from carrying/lifting heavy materials and equipment, exposure to excessive and continuous noise, exposure to hazardous materials, hot works (i.e. welding), working in height and use of scaffoldings, and spread of communicable diseases such as COVID-19. The contractor will be required to undertake the following:

- Implement a Construction Safety and Management Plan in compliance with the DOLE OSH guidelines
- Designate an onsite Safety Officer duly accredited by DOLE
- Assign a contact person onsite to receive/respond to complaints from the barangay/community; provide the name/contact number of the responsible person to the Barangay.
- Require workers to wear safety gadgets/PPEs such as hard hats, gloves, safety belts, rubber boots, and goggles, appropriate to the task.
- Post safety signs/reminders in strategic areas within the construction area
- Provide sufficient lighting at night.
- Provide barricades / safety barriers particularly at excavations and stockpiles of aggregates.
- Provide first-aid station within the construction site to ensure immediate medical attention in case of accidents.
- Comply with the COVID-19 health and safety protocols in compliance with DPWH DO No. 38, series of 2020.

Working at Heights. Workers' safety may be at risk if scaffolding platform and height do not conform with the standards for safety. The scaffolds must be installed following the requirements of the National Building Code. For scaffolds with a platform height of under 2 m, the contractor is required to provide external strengthening. If the platform is 2 m in height or over, the ratio must of 3:1 wherein the width of the base of

the scaffold must be at least ½ or 1/3 the height of the platform. When working in height, the workers will be required to wear harness as support and protection.

COVID-19. The workers are required to follow the basic hygiene procedures at all times to prevent the transmission of COVID-19. The detailed measures are outlined in Annex H. In general, the contractor should present follow the guidelines of the Inter-Agency Task Force on COVID-19 and the DOH. Workers to be deployed at the worksite should be undergo COVID-19 tests. Number of personnel at the site will be limited. Disinfection and temperature monitoring will be undertaken on a daily basis.

DPWH Engineers assigned at the site shall ensure strict compliance to DOLE D.O. 13, series of 1998, and implementation of wearing of PPE such as face masks, safety glasses/goggles, face shields, and long sleeve T-shirts, to contain the spread of COVID-19 in the workplace.

ESCOP 4: COMMUNITY HEALTH AND SAFETY

The potential risks to health and safety of community associated with the project activities include nuisance from noise, airborne dust, falling debris, and congestion of roads adjacent to the sites during delivery of materials. Some of the schools are in community areas which can be accessed through narrow roads. The movement of large delivery truck to these areas may block roads. In order to manage community and health issues, the following mitigation measures will be implemented:

- Conduct consultations with neighboring communities and Barangay about the project and the schedule of works.
- When working on the exterior of the building, provide safety nets/screens for protection of adjacent properties and passersby.
- Install canopy if the building is next to a road or building that may be affected by falling debris.

ESCOP 5: CULTURAL HERITAGE

Contracts for civil works involving excavations will incorporate procedures for dealing with situations in which buried Physical Cultural Resources (PCR) are unexpectedly encountered. The final form of these procedures will depend upon the local regulatory environment, including any chance find procedures already incorporated in legislation dealing with antiquities or archeology. Resource persons from the Cultural Properties Division of the National Museum are the designated officials in-charge of these matters.

PCR is defined as Movable or immovable objects, sites, structures or groups of structures having archeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. The following are also specifically defined under the new Act

a) **"Built Heritage"** shall refer to architectural and engineering structures, such as but not limited to bridges, government buildings, houses of ancestry, traditional dwellings, quartels, train stations, lighthouses, small ports, educational technological and industrial complexes, and their settings, and landscapes with notable historical and cultural significance;
b) **"Cultural Heritage"** shall refer to the totality of cultural property preserved and developed through time and passed on to posterity;
c) **"Cultural Property"** shall refer to all products of human creativity by which a people and a nation reveal their identity, including churches, mosques and other places of religious worship, schools and natural history specimens and sites, whether public or privately-owned, movable or immovable, and tangible or intangible;

d) **"Important Cultural Property (ICP)"** shall refer to a cultural property having exceptional cultural, artistic, and historical significance to the Philippines, as shall be determined by the National Museum and/or National Historical Institute.
e) **"Tangible cultural property"** shall refer to a cultural property with historical, archival, anthropological, archaeological, artistic and architectural value, and with exceptional or traditional production, whether of Philippine origin or not, including antiques and natural history specimens with significant value.
f) **Indigenous properties** - The appropriate cultural agency in consultation with the National Commission on Indigenous Peoples shall establish a program and promulgate regulations to assist indigenous people in preserving their particular cultural and historical properties.

The chance find procedure is used in case of accidental discovery of an artifact or fossil of possible cultural or historical significance. This procedure describes a physical cultural resources management plan that includes measures to avoid or mitigate any adverse impacts on physical cultural resources; measures needed for managing any chance find; and the reporting system to authorities.

In compliance with the requirements of the National Cultural Heritage Act of 2009 (Republic Act 10066), National Museum Act of 1998 (Republic Act 8492) and Cultural Properties Preservation and Protection Act (Presidential Decree 374), cultural treasures and properties that will be accidentally found at the site will be surrendered to the National Museum through the Cultural Properties Regulation Division.

The chance find procedure will be implemented and disseminated to contractors and its workers. Contractors will be made aware of cultural properties to look out for that may have heritage, cultural, social and spiritual significance such as pottery, ceramics, wrought iron, gold, bronze, silver, wood or other heraldic items, metals, coins, medals, badges, insignias, coat of arms, crests, flags, arms and armor, furniture, carvings, paintings, sculptures, jewelry, and other objects classified as antiques. The chance find procedure will include the following:

a) Immediately stop work if a suspected find is discovered at the site and contact the National Museum to report the chance find. Simultaneously, coordinate the matter with Marikina City LGU.
b) Record details in the incident report and take photos of the find.
c) Secure the area to prevent any damage or loss of removable objects. In cases of removable antiques or sensitive and delicate artifacts and relics, a night guard will be assigned to secure the area until the representative from the National Museum takes over to assess the artifact and the site.
d) The decision to remove the artifact or relic will be taken by the authorities from the National Museum.
e) Construction activities will resume only after permission is granted from the National Museum.

The suspension of excavation activities shall be lifted only upon the written authority of the National Museum or the National Historical Institute and only after the systematic recovery of the archaeological materials.