Environmental and Social Review Summary (ESRS)
Rehabilitation of the Western Pan-American Highway – Panama

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1 General Project Information and Scope of the IDB Invest Environmental and Social Review

This transaction consists of financing provided to Vías del Istmo, S.A.[1] ("VDI" or the "Concessionaire") to carry out the rehabilitation, improvement, and maintenance—in accordance with performance standards[2]—of 192 kilometers (km) of the Western Pan-American Highway ("CPO"), located between the community of Loma Campana in the province of West Panama and the city of Santiago in the province of Veraguas, in the Republic of Panama (the "Project")[3].

The Project seeks to achieve, among others, the following development outcomes: (i) improve the reliability and safety of public and private transportation through infrastructure improvements (e.g., safety barriers, signage, bus stops, video surveillance, bridges, and drainage systems), while reducing accident rates; (ii) improve connectivity by linking rural and suburban communities with urban centers and markets, which could promote trade and tourism development; (iii) contribute to economic growth by facilitating the flow of goods and people, reducing logistics costs, and boosting trade between the provinces of Coclé, Herrera, and Santiago and the rest of Panama; (iv) contribute to the reduction of pollutant emissions; (v) create direct and indirect job opportunities for local suppliers and small businesses; and (vi) contribute to greater territorial cohesion and national integration.

The Environmental and Social Due Diligence ("ESDD") process included, among other aspects, the following: (i) a virtual tour of the Project sites; (ii) interviews and meetings with executives from the Concessionaire's key areas (environmental and social management, labor, and occupational safety and health) and with worker representatives; (iii) a review of environmental permits and authorizations; (iv) an analysis of the Concessionaire's management systems, including related plans and procedures; (v) an assessment of the environmental and social ("E&S"), labor, and occupational safety and health ("OSH") baseline information related to the Project; (vi) an analysis of issues associated with the management of climate change risks and impacts; (vii) a review of plans and procedures for preparedness and response to man-made emergencies and natural hazards; (viii) an assessment of the consultation and participation process involving key stakeholders; and (ix) an assessment of the efficient use of resources (primarily water, energy, and construction materials).

To ensure the Project's commitment to respecting and protecting human rights ("HR"), its zero-tolerance policy toward retaliation, and its commitment to providing and ensuring a safe environment for stakeholders

[1] A special-purpose entity incorporated under the laws of Panama by the Sponsors: Promotora y Desarrolladora Mexicana de Infraestructura, S.A. de C.V. (Grupo Prodemex), Ingeniería Estrella, S.A., and Calzada Construcciones S.A. de C.V. (CALCO, a partner company of Grupo HYCSA); established exclusively for the development of the Project.

[2] This Project incorporates performance-based obligations, under which the Concessionaire must comply with 15 internationally recognized quality parameters (the "Performance Indicators") covering the condition of the highway, safety, and operational standards (service levels).

[3] The Project was awarded to the Sponsors by Panama's Ministry of Public Works ("MOP") following an international public bidding process, identified as No. 2025-0-09-0-99-AP-009191 under the Public-Private Partnership ("PPP") framework, which grants a 20-year concession for the Project.

to express their concerns without fear of any retaliation, the ESDD process also included a review of, among other documents, VDI's Code of Ethics and Conduct and its Human Rights Policy, as well as the Concessionaire's social and labor procedures and regulations.

2 Environmental and Social Classification and Justification

In accordance with IDB Invest's Environmental and Social Sustainability Policy, the Project has been classified as Category B, as it may generate, among others, the following impacts: (i) removal or pruning of vegetation (primarily within the right-of-way); (ii) dust generation from scarification, excavation, earthmoving, and vehicle traffic; (iii) emission of air pollutants due to the use of vehicles, equipment, and construction machinery; (iv) increased noise levels; (v) changes in terrain (relief) morphology; (vi) mitigation and reduction of erosion processes; (vii) generation of domestic and industrial wastewater; (viii) potential soil contamination from spills of fuels, oils, or solvents; (ix) generation of domestic and industrial solid waste (excavated material, pruning waste, and debris from right-of-way and drainage cleaning, demolition debris, and packaging materials such as paper, wood, and metal scraps, etc.) and hazardous waste (generated by the maintenance of construction machinery and equipment, etc.); (x) increased risks to workers' health and safety; (xi) use of resources, primarily water, fuels, and energy; and (xii) creation of expectations regarding employment opportunities that activities associated primarily with the Project's construction phase may provide. It is estimated that during the rehabilitation and improvement phase (construction phase), most impacts and risks will be of moderate to low significance; whereas during the operation and maintenance ("O&M") phase, they will be of low significance.

The Performance Standards ("PS") triggered by the Project are: PS1: Assessment and management of environmental and social risks and impacts; PS2: Labor and working conditions; PS3: Resource efficiency and pollution prevention; and PS4: Community health and safety.

3 Environmental and Social Context

3.1 General Characteristics of the Project Site

The Concessionaire is a special purpose entity ("SPE" or "SPV") created to implement the Project, including its financing, the conduct of studies (social and environmental, etc.) and final designs, as well as staffing and the supervision of its execution and management during construction (rehabilitation and improvement) and commissioning (operation).

The Project, managed by the Ministry of Public Works of Panama ("MOP") under the framework of Panama's new Public-Private Partnership ("PPP") Law (the "PPP Contract")[4], will be developed on an approximately 192-km stretch of the Pan-American Highway[5], between the Loma Campana sector (Km 49+840) in the province of West Panama and the city of Santiago (Km 241+400) in the province of Veraguas[6]. The highway corridor passes through the districts of Capira, Chame, and San Carlos in the province of West Panama; Antón,

[4] Public-Private Partnership Contract No. APP-001-2026 and its Technical Appendices, in particular the environmental and social instruments provided for in Technical Appendix 6.

[5] It connects the border with Costa Rica to the province of Darién, bordering Colombia.

[6] Operationally, the Project is divided into two sections: (i) Loma Campana–Penonomé, approximately 91 km; and (ii) Penonomé–Santiago, approximately 101 km.

Penonomé, Natá, and Aguadulce in the province of Coclé; Santa María in the province of Herrera; and Santiago and Atalaya in the province of Veraguas[7].

The Project's construction process is contractually based on the following stages: (i) Pre-construction, with an estimated duration of twelve months, which includes: (a) acceptance of the road and other infrastructure that form part of the Project, (b) the completion of all studies necessary for its development, (c) the obtaining of the licenses and permits required for the execution of the works, (d) the performance of pre-operational maintenance activities (maintenance of green spaces, pothole repair, etc.) and (e) the launch of the User Service System ("USS"); (ii) Construction, with an estimated duration of thirty-six months, comprising (a) the execution of the works corresponding to the scope of the contract, (b) the rehabilitation of the roadway and existing infrastructure (toll booths, pedestrian bridges, rest areas, etc.), (c) the maintenance of vehicular bridges, and (d) the improvement of road infrastructure, including the construction of new complementary works such as fifteen new U-turns and one overpass, two new Operations Control Centers ("OCC"), a new Weighing and Dimensions Station ("WDS") in both directions, the rehabilitation of the existing station in both directions, and the rehabilitation of ninety-one existing vehicular bridges ("Complementary Works"); (iii) O&M, which will have an estimated duration of one hundred eighty months, during which: (a) preventive and corrective maintenance will be performed on the rehabilitated infrastructure, ensuring that the road remains in optimal condition and meets appropriate safety and traffic flow standards at all times, and (b) the USS, the OCC, and the WDS will be operated; and (iv) Transition, which will begin the day after the completion of the O&M phase (or the declaration of early termination of the PPP Contract) and will have an estimated duration of ten months, during which the processes for the reversion[8] of the Project to the state will be carried out.

The Project will benefit more than 282,000 people by reducing travel times and promoting greater connectivity between regions. In addition, it is expected to generate approximately 1,500 jobs during the construction phase, thereby strengthening the regional economy. In environmental terms, due to the nature of the Project, its areas of direct influence are already largely disturbed and devoid of vegetation, with the exception of areas near the vehicular bridges (gallery forests along existing rivers and streams) and the locations of some of the new Complementary Works (disturbed secondary vegetation).

Since these are rehabilitation, construction, and maintenance activities carried out along the current route alignment and, in general, within the right-of-way of an existing and operational highway, the anticipated impacts will be manageable through standard procedures. In this regard, the Project, in accordance with the provisions of Executive Decree No. 111 of August 25, 2016[9] and Resolution DM-0472 of September 8, 2017[10], has adopted the Guide to Good Environmental Practices ("GBPA") for Highway Improvement, Rehabilitation, and Maintenance. The Complementary Works have a Category II Environmental Impact Assessment ("EIA"), which is currently being evaluated by the Ministry of the Environment. In addition, in accordance with

[7] These communities differ in terms of population concentration and distribution, degree of urbanization, economic activities, availability of basic services, infrastructure, housing conditions, and access to social amenities.

[8] The reversion will include the transfer to the MOP of the assets related to the Project, including the construction works and certain assets used for its operation, such as computer equipment, systems, vehicles, and software licenses.

[9] Whereby the Regulations Governing the Process for the Development and Adoption of the Guidelines for Good Environmental Practices are approved, as provided for in Article 23-A of Chapter II, Title IV of Law 41 of July 1, 1998, the General Environmental Law of the Republic of Panama.

[10] Whereby the Guide to Good Environmental Practices ("GBPA") for the Improvement, Rehabilitation, and Maintenance of Highways, including Bridges, as well as the Construction and Maintenance of Bicycle Lanes, Vehicular and Pedestrian Overpasses, located within established and regulated right-of-way, is approved, and other provisions are enacted.

Panama's environmental legislation[11], the Concessionaire will process the pending environmental management instruments ("EMI") necessary to obtain specific authorizations related to the use and management of natural resources, ecological compensation measures[12], and any required supplementary environmental management plans.

In accordance with the PPP Contract, the Concessionaire will develop: (i) a USS; (ii) an Integrated Management System ("IMS") at the start of the pre-construction phase; and (iii) prior to the start of the construction phase, (a) a Quality Management System based on ISO 9001 certification and (b) an Environmental and Social Management System ("ESMS") based on ISO 14001 certification.

3.2 Contextual Risks

According to the World Bank's "Natural Disaster Hotspots" study, Panama ranks fourteenth among the countries most exposed to multiple hydrometeorological and geophysical hazards[13], with 15% of its territory at risk and 12.5% of its population vulnerable (which also happens to be the poorest segment of the population living in the most precarious conditions).

According to Panama's National Strategic Plan for Comprehensive Disaster Risk Management (2022-2030), more than 90% of the hydrometeorological disasters (floods, windstorms, and landslides) recorded between 1990 and 2013 have occurred in the provinces of Panama, Chiriquí, Coclé, and Colón. The risk posed by these threats has been exacerbated not only by the rapid urban expansion of recent decades, the loss of forest cover, and the conditions of poverty and socioeconomic inequality that limit communities' ability to cope with these disasters, but also by the lack of effective land-use planning and disaster risk management mechanisms.

In general, in Panama, deficiencies in the road systems are primarily due to a combination of insufficient maintenance—exacerbated by cumulative deterioration, heavy traffic pressure, and the dependence on strategic corridors with limited redundancy. From a road resilience perspective, this means that deterioration or operational restrictions on a strategic corridor such as the CPO can lead to disproportionate economic consequences (road maintenance models that are unsustainable in the long term) and even create conditions that may increase the risk of accidents.

Contextual risks in the Project areas include natural risks (earthquakes, floods, storms, and landslides), occupational risks, social risks (theft, vandalism, poverty, protests, and workplace accidents), and legal risks (permits, licenses, corruption, and regulatory changes). These risks are considered moderate to low, and since the Project involves the rehabilitation and maintenance of an existing road, it is not expected to increase the area's vulnerability.

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[11] Primarily Law No. 8 of March 25, 2015, which establishes the Ministry of the Environment as the State's governing body for the protection, conservation, preservation, and restoration of the environment and the sustainable use of natural resources to ensure compliance with and enforcement of laws, regulations, and the National Environmental Policy; and Executive Decree No. 123 of August 14, 2009, as amended by Executive Decree No. 155 of August 5, 2011, regarding the environmental impact assessment process.

[12] Panamanian legislation on ecological compensation requires those responsible for environmental damage to restore the affected area or pay compensation, as governed primarily by Law No. 8 of 2015 (in accordance with Law 41 of 1998—the General Environmental Law) and Resolution AG-0235-2003, which establishes specific rates per hectare based on the type of vegetation cover destroyed.

[13] Panama is located within the Intertropical Convergence Zone (ITCZ), which exposes it to extreme and climate-related weather phenomena, such as floods, storms, landslides, droughts, waterspouts, and El Niño-La Niña events. Furthermore, it is situated on the Panama Block or Microplate, one of the most seismically active regions on Earth—the Circum-Pacific Belt (also known as the "Pacific Ring of Fire")—exposing it to geological and volcanological hazards.

4 Environmental Risks and Impacts, and Proposed Mitigation and Compensation Measures

4.1 Assessment and Management of Environmental and Social Risks and Impacts

4.1.a Environmental and Social Management System

The Concessionaire has an ESMS designed to ensure results in all its production processes through teamwork, respect for the environment, technical excellence, consistency in execution, and innovation. This system focuses on: (i) sustainability, with an emphasis on identifying and assessing E&S impacts and risks at each stage of the Project; (ii) continuous improvement and the adoption of a hierarchy of mitigation measures to anticipate, prevent, and minimize residual impacts; (iii) the promotion of values such as social responsibility, health and safety, and respect for people; and (iv) the appropriate management of complaints submitted by affected communities and other social stakeholders.

The ESMS is complemented by the environmental and social procedures required by the resolutions that approved the Project's GBPA and EIA, allowing for its adaptation to local regulatory contexts.

4.1.b Policies

As part of the ESMS, the Project has an Environmental, Social, and Health and Safety Policy, which: (i) establishes guidelines and objectives based on the needs and requirements necessary to meet its standards for quality, environmental management, and occupational health and safety; (ii) defines the principles of Corporate Social Responsibility ("CSR"); (iii) declares, as a principle, compliance with current environmental regulations and international standards; and (iv) constitutes a commitment to the needs and expectations of stakeholders, responsibility toward communities, and care for the environment by identifying, managing, and reducing risks associated with climate change, as well as preventing and avoiding workplace accidents and illnesses, through continuous improvement.

4.1.c Identification of Risks and Impacts

4.1.c.i Direct and Indirect Impacts and Risks

The Project is in the process of obtaining the environmental authorizations and permits required by local law for its implementation and future operation. However, the GBPA and the EIA include an assessment matrix that, based on the regulations and standards applicable to the processes and activities of each phase of the Project, identifies the significant environmental and social risks and impacts, based on which it determines the operational controls, corrective actions, best construction practices, as well as the measurement and monitoring mechanisms required to manage each risk.

Separately, the Concessionaire, as part of its environmental and social commitments under the ESMS, will update and verify the terms and conditions established in the GBPA and the EIA to monitor actions for the prevention and control of the most significant environmental, social, and OSH risks and impacts, as well as those related to the protection of infrastructure or equipment. In addition, it will continue to submit periodic reports on compliance with applicable environmental regulations.

4.1.c.ii Analysis of Alternatives

Since the Project will generally be developed within the existing and previously delineated right-of-way ("ROW"), no alternatives other than the evaluation of various technological options based on their cost-effectiveness and efficiency (in terms of equipment and machinery, operational efficiencies, and resource accessibility) were considered. However, regarding the location of the new Complementary Works, the Project analyzed factors such as: (i) space, dimensions, and alignment of the existing right-of-way; (ii) potential impacts on residences and businesses; (iii) the presence of sensitive or vulnerable ecosystems; and (iv) the feasibility of negotiating the legal and voluntary acquisition of the necessary land.

4.1.c.iii Cumulative Impacts

Given the Project's characteristics, its impact—when combined with the cumulative impact generated by past, present, and future projects—is considered marginal. Accordingly, a cumulative impact mitigation plan is not required.

4.1.c.iv Gender Risks

Although Panama has laws[14] and institutions[15] that ensure the protection of women against violence and harassment, according to statistics from the Public Prosecutor's Office[16] for the year 2025, regarding the province of West Panama, there were 8 cases of femicide, 6 cases of attempted femicide, and 1 case of violent death[17]; in the province of Coclé, 1 case of femicide and 3 cases of attempted femicide were reported during the same period; in Herrera, only 2 cases of violent death; and in the province of Veraguas, only 1 case of femicide. Similarly, regarding gender-based violence and sexual offenses, for the same period in 2025, there were 795 cases in the province of West Panama, 402 cases in Coclé, 96 cases in Herrera, and 372 cases in Veraguas.

However, due to the nature of the rehabilitation and improvement activities, as well as localized construction works, the gender risk is considered low and can be mitigated through the application of the principles contained in the Code of Ethics and Conduct, the Human Rights Policy, the Gender Equality Policy, and the Protocol for the Prevention and Handling of Harassment, Intimidation, and Violence; as well as the internal guidelines on prevention and investigation, and the Concessionaire's Internal Work Regulations ("IWR").

4.1.c.v Gender Programs

The Project will not generate significant differentiated impacts between men and women, nor will it promote gender-based violence or illegal activities. The Concessionaire, through its Gender Equality Policy and the Protocol for the Prevention and Handling of Harassment, Intimidation, and Violence, has

[14] Law No. 82 of October 24, 2013, which adopts preventive measures against violence against women and amends the Penal Code by criminalizing femicide and penalizing violence against women; Law No. 71 of December 23, 2008, which establishes the National Institute for Women; Law No. 38 of July 10, 2001, which amends and adds articles to the Criminal and Judicial Codes regarding domestic violence and the abuse of children and adolescents; and Law No. 73 of December 18, 2015, which amends articles of Law No. 38 of 2001 regarding domestic violence proceedings; among others.

[15] The National Institute for Women ("INAMU"); the National Council for Women ("CONAMU"); the National Committee Against Violence Against Women ("CONVIMU"); the Panamanian Observatory Against Gender-Based Violence ("OPVG"); among others.

[16] Source: Statistics Center of the Public Prosecutor's Office of the Republic of Panama (https://ministeriopublico.gob.pa/estadisticas-judiciales/).

[17] "Violent death" refers to all homicides of women that were not classified as femicides based on the assessment of the prosecutor handling the case and the application of Law 82.

implemented measures to ensure appropriate treatment of women at its facilities by: (i) providing gender-specific personal protective equipment and gender-segregated changing rooms; (ii) maintaining appropriate work environments; (iii) a zero-tolerance policy toward any behavior that could be classified as gender-based violence; and (iv) compliance with local and international legislation on equal opportunity. Conduct contrary to these guidelines is investigated and, if necessary, sanctioned by the Ethics Committee or the appropriate body (depending on the type of offense).

4.1.c.vi Exposure to Climate Change

According to a global climate model, the Project's infrastructure may be exposed to changes in precipitation patterns and heat waves[18], the latter under a high-emissions scenario[19] (RCP 8.5[20]).

Once operational, the Project will also be exposed to extreme hydrometeorological events, such as heavy rainfall, which can cause flooding on the roadway, affecting the continuity of its operation. Rising ambient temperatures could lead to increased pavement degradation.

Notwithstanding the above, the risk of exposure to climate change is addressed through measures incorporated into the Project's design and the Emergency Preparedness and Response Plan ("EPRP"), which is continuously reviewed; as well as through the environmental risk prevention and natural disaster contingency plans outlined in the EIA.

4.1.d Management Programs

The control programs contained in the GBPA and the Environmental Management Plans ("EMP") of the EIA include the necessary measures to prevent, minimize, mitigate, and compensate for each of the unintended impacts and risks associated with every activity and phase of the Project. These include: (i) preventive measures, aimed at eliminating or reducing the frequency or severity of negative impacts or risks, which are supported by programs for (a) air quality, noise, and vibration control; (b) water and soil protection; (c) protection of fauna and flora; (d) socioeconomic and historical-cultural protection; (e) transportation sector management, (f) waste management, (g) preventive and predictive maintenance of equipment and machinery, and (h) ongoing employee training and drill programs; and (ii) technical and operational recommendations, which are based on compliance with national regulations regarding E&S and OSH matters.

The Concessionaire prioritizes the commitments made in the GBPA and the EIA and their approval resolutions, as well as those provisions issued by the competent sectoral authorities (MOP, Fire Department, SINAPROC[21], etc.).

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[18] The Project is exposed to the effects of the El Niño-Southern Oscillation (ENSO) phenomenon, which is associated with periods of drought, whereas during La Niña years, heavy rainfall is recorded in Panama's central and Pacific coastal provinces.

[19] Under the Shared Socioeconomic Pathway-3 7.0 (SSP-3 7.0) scenario for the period 2035-2064, Panama's central and eastern Pacific coastal provinces will be nearly twice as likely to experience extreme precipitation events compared to historical 100-year return periods.

[20] A Representative Concentration Pathway (RCP) is a greenhouse gas concentration pathway (not emissions) adopted by the IPCC. These pathways describe different climate futures, all of which are considered possible depending on the volume of greenhouse gases (GHGs) emitted in the coming years. The RCPs—originally RCP 2.6, RCP 4.5, RCP 6, and RCP 8.5—are labeled based on a possible range of radiative forcing values in the year 2100 (2.6, 4.5, 6, and 8.5 W/m², respectively).

[21] Panama's National Civil Protection System.

4.1.e Organizational Capacity and Competence

The Concessionaire has a defined organizational structure that clearly establishes lines of authority and responsibilities for each of the projects it undertakes. In this regard, for the execution of the Project, it has a dedicated environmental management team consisting of an E&S Manager, an E&S Specialist, a Field Environmental Inspector, and an E&S Assistant, who—with the support of the Technical, Corporate Affairs and Communications, and General Management departments—are responsible for: (i) implementing the ESMS; (ii) monitoring compliance with environmental regulations; (iii) promoting a sustainable and environmentally responsible business model; (iv) identifying opportunities to improve E&S performance; (v) preventing pollution and monitoring its emission sources; and (vi) managing the financial and personnel resources necessary for the implementation of E&S procedures and for preparedness and response to environmental emergencies.

In addition, the Concessionaire has: (i) a social management unit, composed of a communications specialist and local community liaisons, which oversees all aspects of relations with social stakeholders and addresses inquiries; and (ii) an OSH department, comprising an OSH and emergency specialist, who is responsible for implementing health, protection, and safety procedures for all employees and external personnel (contractors and subcontractors, suppliers, visitors, etc.), as well as for spill response, traffic safety, the training of emergency response teams, and the implementation of the EPRP.

Pursuant to the requirements of current labor and OSH[22] regulations, the Concessionaire, upon commencing rehabilitation and construction activities, shall have a designated physician and a professional team of certified paramedics and rescue workers present within the Project's area of influence.

4.1.f Emergency Preparedness and Response

The Project's EPRP, in addition to complying with current Panamanian regulations[23], defines specific actions for different emergency scenarios, assigns responsibilities to emergency response teams, and includes key contact numbers. This plan is tailored to the criticality of the activity and the equipment, operational hazards, the specific exposure of the location to natural hazards or anthropogenic (human-induced) risks, and the availability of the nearest emergency services.

Additionally, to support the EPRP, the Concessionaire has a Contingency Plan, which: (i) establishes the Emergency Management Committee ("EMC"); (ii) contains a risk analysis (hazards, threats, and vulnerabilities), including those associated with climate change; (iii) establishes preventive, mitigation, and relief measures to safeguard the physical well-being of employees, suppliers, and customers located within those sites; (iv) describes the management measures to address emergencies that may threaten the integrity of the infrastructure and continuous operations; (v) contains a map of external support institutions[24] that can be contacted if the emergency warrants it; and (vi) includes maintenance plans for the fire protection system and for electrical equipment and facilities.

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[22] These services comply with the provisions of Executive Decree No. 2 of February 15, 2008, which regulates Occupational Safety and Health in the construction industry, and Cabinet Decree No. 68 of 1970, which establishes the obligation to provide first aid in the construction industry.

[23] Executive Decree No. 177 of April 30, 2008, which regulates Law No. 7 of February 11, 2005, reorganizing the National Civil Protection System.

[24] Entities with technical, legal, and statutory standing, such as: the National Civil Protection System ("SINAPROC"), the Red Cross, hospitals, fire departments, the Ministry of the Environment, the National Police, etc.

The Concessionaire prepares a report and a schedule of drills, which are updated at the end of each year; as well as a training program that includes, among others, courses on: (i) first aid; (ii) detection and response to leaks and spills of hazardous materials; (iii) fire prevention and suppression; and (iv) search and rescue.

4.1.g Monitoring and Evaluation

As part of the ESMS, the Concessionaire has a monitoring program, the objective of which is to oversee measures to prevent, control, and mitigate the environmental impacts generated by the Project's activities and to verify regulatory compliance, as applicable. To ensure compliance with the GBPA programs and specific processes outlined in the EIA's EMP, inspections are conducted in accordance with the supervision and monitoring procedure, using checklists for this purpose. In addition, the Concessionaire reports semiannually to the Environmental Authorities on the progress of implementing prevention and mitigation measures, describing the activities carried out (construction progress), assessing environmental and safety impacts and risks, and the results of compliance with applicable regulations, and providing any relevant comments.

In addition, the Concessionaire shall prepare[25] a consolidated annual report on compliance with all E&S and OSH policies and measures applicable to the Project, using key performance indicators ("KPIs"). Based on the results of these assessments, it shall define specific measures to reduce impacts and improve efficiency.

4.1.h Stakeholder Engagement

The Concessionaire has a protocol for engaging with stakeholders that seeks to foster a culture of continuous, sustained, and long-term dialogue with these groups, ensuring their participation in the decision-making process. In this regard, as part of the ESMS, it has a Stakeholder Participation Plan ("SPP"), which establishes guidelines for: (i) monitoring the social management of the GBPA programs and the EIA's EMP; (ii) managing community expectations; (iii) notification of fieldwork; (iv) management of vulnerable groups; (v) media coverage of construction activities and detours; (vi) monitoring public perception; (vii) promoting the Project and holding internal and external coordination meetings; and (viii) daily communication with other Project entities (public utilities, traffic authorities, subcontractors) and with potentially affected communities.

4.1.i External Communication and Complaint Mechanism

4.1.i.i External Communications

The Concessionaire, as part of the ESMS, has a Stakeholder Communication Plan ("SCP")[26] that ensures the timely and comprehensive dissemination of Project information to the community, using mass media (newspapers, radio, television, and social media) to keep the community informed about situations that could directly affect it (road closures, lane closures, and alternative routes[27]).

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[25] Either internally (internal audit) or through an independent external E&S expert (external audit).

[26] Unlike the SPP, which focuses on two-way participation and consultation, the SCP manages the flow of information to and from all stakeholders, including road users, communities, authorities, workers, the media, the financial sector, and the general public.

[27] These activities are carried out in conjunction with the relevant local authorities (for example, the Land Transit and Transportation Authority—ATTT).

In addition, as part of the PPP Contract, the Concessionaire implemented a USS that serves as the Project's central platform for two-way communication. This system includes: (i) a toll-free telephone number for emergencies and for receiving user complaints and suggestions (call centers[28]); (ii) an email address[29]; (iii) a website[30]; (iv) a presence on social media; and (v) drop boxes for receiving written complaints (including anonymous ones).

4.1.i.ii Grievance Mechanism for Affected Communities

To ensure transparency in its operations, maintain an open and honest relationship, and foster a culture of prevention and immediate response to potential concerns or incidents, the Concessionaire, as part of the SCP, has a Grievance Mechanism ("GM"), which allows the public (employees, suppliers, customers, contractors, communities, external entities, and other partners) to submit, through predefined contact channels, their complaints or suggestions related to the Project. In addition, the SCP has procedures for public participation and the management of complaints and claims, which include objectives, responsibilities, and scope; principles; types of complaints and related procedures; mechanisms for identifying and receiving complaints; a process for registering and resolving complaints; and the dissemination of information regarding them. The management of complaints and claims will be based on the principles of accessibility, respect, timeliness, confidentiality (where appropriate), non-discrimination and non-retaliation, traceability, objectivity, and effective response.

The operation of the mechanism (management, registration, response, and follow-up on complaints and suggestions) has been entrusted to various departments, including: (i) User Service, which leads the reception and tracking of cases; (ii) Social Management, which supports territorial and community analysis; (iii) Communications, which ensures the clarity and consistency of responses; and (iv) Environment, Construction, Operations, Maintenance, Road Safety, Legal, or Management, which are involved in investigating and resolving the complaint, depending on the nature of the case.

4.1.j Reports to Affected Communities

The Concessionaire, through its social media channels[31] and its website[32], provides information about its operations and the Project's Environmental and Social (E&S) performance.

4.2 Employment and Working Conditions

4.2.a Working Conditions and Labor Relations Management

For the pre-construction phase, the Project has a workforce of 30 direct employees and 232 workers employed through contractors or third parties (6.5% women). Labor requirements during the construction phase are expected to reach a maximum of 1,500 workers, depending on the construction schedule, labor availability, and weather and technical conditions. In addition, through the Local Hiring Strategy, it is expected that, during all phases of the Project, both the Concessionaire and its contractors and subcontractors will give priority to those living within the Project's direct area of influence.

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28 Toll-free number 800-8427.

29 consultas@ivistmo.com.

30 https://www.ivistmo.com/#sau.

31 https://www.instagram.com/viasdelistmo.pty/

32 https://www.ivistmo.com/#inicio

4.2.a.i Human Resources Policies and Procedures

The Concessionaire has a series of tools to manage its human resources: (i) a Code of Ethics and Conduct, which sets forth the standards of conduct and compliance for the performance of all planned activities; and (ii) IWR, approved by the Ministry of Labor[33], which contain provisions applicable to all workers[34] to properly manage (a) relations with its employees, (b) the transparent and objective selection of its personnel; and (c) the promotion of career plans and training programs, among other measures; and (iii) a Human Rights Policy, which establishes the principles and guidelines for the Concessionaire, contractors, subcontractors, suppliers, and other business partners to respect human rights in the conduct of their activities, labor relations, hiring practices, supply chain, property management, and engagement with communities and other stakeholders.

To support these instruments, the following are also in place: (i) a Gender Equality Policy; (ii) a Protocol for the Prevention and Handling of Harassment, Intimidation, and Violence; (iii) a Local Hiring Strategy; and (iv) a Supplier Code of Conduct.

All matters related to work and working conditions are managed by the human resources department, which is responsible for ensuring that its contractors and other business partners adhere to similar standards of conduct.

4.2.a.ii Working Conditions and Terms of Employment

The Code of Ethics and Conduct and the Concessionaire's IWR, which are mandatory for all workers without exception, contain provisions that comply with both Panama's labor laws[35] and international best practices in the construction industry, as well as the conventions of the International Labor Organization ("ILO"). These provisions govern the manner and conditions for the selection and hiring of personnel; working days and hours; rest days; vacations; leaves of absence; flexible work arrangements to promote collaboration and productivity; wages and benefits; the rights and obligations of employees and employers; conduct and disciplinary measures; asset security; risk prevention; and the hiring and treatment of workers with disabilities, among other matters. To reinforce awareness of these working conditions, the Concessionaire requires that every employee undergo training on the Code of Ethics and Conduct and the IWR as part of their onboarding process.

Additionally, through its Human Rights and Gender Equality policies, the Concessionaire is committed to providing equal opportunities and maintaining a diverse and inclusive work environment free from harassment, regardless of race, caste, religion, color, ancestry, marital status, gender, sexual orientation, age, nationality, ethnic origin, or disability. In this regard, the recruitment, selection, and hiring processes for talent are conducted through transparent, objective, confidential, and rigorous procedures that ensure respect for the principles of equality and non-discrimination, based on the candidates' competencies, abilities, professional experience, and the extent to which they align with the Concessionaire's values.

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[33] Currently in the final evaluation stage.

[34] Rules and conditions for the selection and hiring of personnel; regulations regarding workdays, work schedules, and breaks; vacations, leave, and time off; compensation and benefits; specific provisions applicable to workers (workdays and schedules, obligations); workers' rights and obligations; requirements for orientation, education, and training; health protection measures (epidemics, pandemics) and measures against sexual harassment; and misconduct and disciplinary procedures; among other aspects.

[35] Cabinet Decree No. 252 of 1971, Labor Code of Panama (amended by Law No. 44 of August 12, 1995).

4.2.a.iii Labor Organizations

In accordance with the provisions of the Constitution of Panama[36], the Labor Code of the Republic of Panama, and the ratified international conventions and treaties of the ILO[37], the Concessionaire, through the Code of Ethics and Conduct and the IWR guarantee the free exercise of its workers' collective rights, including the right to form unions, negotiate collective bargaining agreements, and exercise the right to strike.

4.2.a.iv Non-Discrimination and Equal Opportunity

Panama is a signatory to several ILO international conventions and treaties related to workers' rights, including Convention No. 100 on Equal Remuneration and Convention No. 111 on Discrimination (Employment and Occupation). In addition to complying with these provisions[38], the Concessionaire: (i) rejects any form of discrimination; (ii) has adopted a zero-tolerance approach toward any form of harassment, abuse, or bullying (including sexual and workplace harassment); and (iii) is committed to respecting human dignity, equality, and diversity in the workplace.

4.2.a.v Workforce Reduction

The Concessionaire has no plans to reduce its workforce in the future. However, should this occur, the terminations would not be on a mass scale, and in all cases, the Concessionaire would comply with the provisions of the Panamanian Labor Code and the regulations contained in its IWR, which address the suspension and termination of employment relationships, whether individual or collective.

4.2.a.vi Complaint Handling Mechanism

The channel for filing reports or complaints regarding any inappropriate conduct, ethically questionable behavior, or any violation of the Code of Ethics and Conduct is through the "Ethics Hotline," which can receive and process formal or anonymous reports via digital channels (email, online form, telephone, and website). The Code of Ethics and Conduct guarantees the confidentiality of all reports and prohibits any form of retaliation against those who report suspected violations or cooperate in the investigation of any suspicious act.

4.2.b Protection of the Workforce

Panama, in addition to being a signatory to several ILO international conventions and treaties related to workers' rights[39], has comprehensive labor legislation that regulates, among other aspects, the length of the workday, work schedules, overtime, paid days off, minimum wage, family allowances, statutory bonuses, and minimum occupational safety and health standards. In this regard, the Concessionaire respects the rights and obligations of its employees, promoting equality and equity in human, civil, political, economic, social, and cultural rights between men and women. Similarly, its Code of Ethics and

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[36] The Constitution of Panama provides for the protection of fundamental rights and freedoms, including freedom of association.

[37] Convention No. 87 concerning Freedom of Association and Protection of the Right to Organize, and Convention No. 98 concerning the Right to Organize and Collective Bargaining.

[38] In its Code of Ethics and Conduct, the IWR, the Human Rights Policy, the Gender Equality Policy, and the Protocol for the Prevention and Handling of Harassment, Intimidation, and Violence.

[39] Convention No. 138 on the Minimum Age, Convention No. 182 on the Worst Forms of Child Labor, Convention No. 29 on Forced Labor, and Convention No. 105 on the Abolition of Forced Labor.

Conduct and the IWR establish the obligation of all employees, the Concessionaire's directors and executives, as well as contractors and suppliers, to comply with all applicable laws and regulations in Panama.

4.2.c Occupational Health and Safety

The Concessionaire, committed to the health and safety of its workers, directs its actions toward promoting a culture of safety and health protection, as well as toward preventing workplace accidents and occupational diseases caused by working conditions and occupational hazards in various economic activities. In this regard, in compliance with Panama's legislation on worker safety, health, and hygiene[40], it has a Hygiene Study and a Safety, Health, and Hygiene Plan ("SHHP") specific to the Project, the objectives of which are: (i) to ensure the well-being of each worker and any visitor or client entering the construction site; and (ii) to control hazardous situations that endanger the physical safety of such individuals.

The SHHP is supported by a Management System, which, among other things, includes: (i) an OSH policy and guidelines; (ii) an organizational structure and a description of responsibilities; (iii) a communication and training procedure; (iv) risk assessment and management through Hazard Identification and Risk Assessment ("HIRA") records; (v) operational safety controls, including safe work analysis ("SWA") and hazard signage; (vi) a medical organization; (vii) general safety conditions and guidelines for the use of personal protective equipment ("PPE"); (viii) records of accidents, incidents, and work-related illnesses; (ix) protocols for the prevention of occupational health risks; and (x) periodic assessment and review of the SHHP.

The Concessionaire has protocols in place stipulating that, in the event of an accident, the patient must be assessed and stabilized by medical personnel and, if necessary, properly evacuated until arriving at a hospital or health center where treatment and care will continue. In addition, the Concessionaire maintains an induction, training, and education program on occupational safety and health and emergency plans, which includes specific OSH training to meet the competencies required by current regulations and certifications for emergency response team members.

4.2.d Provisions for People with Disabilities

The Concessionaire's Code of Ethics and Conduct, Human Rights Policy, and Internal Work Regulations (IWR) prohibit any form of discrimination based on disability and comply with regulations regarding the inclusion of people with disabilities[41].

4.2.e Workers Hired by Third Parties

The Concessionaire, in accordance with the provisions of its Code of Ethics and Conduct and Human Rights Policy, safeguards the well-being of workers hired by third parties who work at its facilities, ensuring that (a) there is no child labor or forced labor, (b) equal opportunities are provided, (c) respect for the freedom

[40] Executive Decree No. 2—Regulations on Health, Hygiene, and Safety in the Construction Industry (dated February 15, 2008); Resolution No. 45-588–2011–J.D. Social Security Fund—General Regulations on the Prevention of Occupational Hazards and Occupational Safety and Hygiene (February 21, 2011); Law No. 66—Health Code, Chapter II—Industrial Hygiene; Decree No. 68—Occupational Hazards.

[41] Law No. 42 of 1999, establishing Equal Opportunities for Persons with Disabilities; Law No. 15 of 2016, amending Law No. 42.

of association is promoted, (d) safe and healthy working conditions are provided, and (e) work environments free from harassment are maintained.

Any company providing services to the Concessionaire (contractors, subcontractors, and service providers of any kind) must comply with environmental protection and OSH requirements and standards in order to enter and carry out its activities within the Project's operational areas.

4.2.f Supply Chain

The Supplier Code of Conduct stipulates that all suppliers must comply with the Concessionaire's standards[4242]. To this end, the Concessionaire has a selection and qualification procedure that allows it to review the certifications of contractors, subcontractors, and suppliers in its value chain to ensure that they operate in accordance with the standards set forth in the applicable legal framework and contractually adhere to this Code (signing of acceptance). In this regard, it selects only those suppliers whose business practices: (i) respect the key principles and behaviors of teamwork, integrity, a culture of service, social responsibility, and occupational safety and health; (ii) do not violate the law; and (iii) do not jeopardize its reputation. In addition, it monitors environmental and social risks in its supply chain through periodic assessments and by reviewing and verifying compliance with internal requirements (policies and procedures).

4.3 Resource Efficiency and Pollution Prevention

4.3.a Resource Efficiency

The Project's ESMS and EIA programs detail measures to improve efficiency in the consumption of energy, water, and other resources, such as construction materials (wood, steel, concrete, stone, etc.).

4.3.a.i Greenhouse Gases

The implementation of the Project does not have a significant impact on greenhouse gas ("GHG") emissions. The greatest energy consumption is associated with the operation of construction machinery and the transportation of materials and equipment from their points of origin (port of entry, precast plant, or quarries) to storage yards and from there to the construction sites. During the Project's Operation and Maintenance (O&M) phase, these emissions will be reduced even further: only a few non-material emissions associated with the operation of equipment and machinery that use some type of fossil fuel will be generated.

The Concessionaire will conduct an initial GHG Emissions Inventory with a preliminary estimate of direct emissions from fuel consumption (Scope 1) and indirect emissions from electricity consumption (Scope 2). However, this inventory will be updated throughout the Project's lifespan to include, in addition to Scope 1 and 2 emissions, those generated by transportation services contracted from third parties (for example, the transportation of equipment, personnel, materials, or goods procured from its supply chain), the production of raw materials, and waste management (Scope 3), using the methodology developed by

[42] The Concessionaire promotes the hiring of suppliers that demonstrate good business practices in environmental, social, and occupational safety and health (OSH) matters, and fosters business relationships based on ethics, transparency, and legal compliance.

the Greenhouse Gas Protocol Initiative[43] ("GHG PI"). Likewise, during the construction phase and the Operation and Maintenance (O&M) phase, it will report annually on changes in results relative to the base year[44] and explain the associated causes.

Although its carbon footprint is relatively low, the Concessionaire seeks to reduce its GHG emissions through: (i) optimizing electricity consumption in its operations; (ii) performing preventive maintenance on its equipment to maintain engine efficiency; (iii) transportation improvements (optimizing the number of trips and routes) to reduce fuel consumption in its vehicle fleet; and (iv) optimizing waste management.

4.3.a.ii Alignment with the Paris Agreement

Based on the analysis conducted using the IDB Group's Implementation Approach for Alignment with the Paris Agreement, the Project is considered to be aligned with the Paris Agreement.

4.3.a.iii Water Consumption

The Project's water consumption (including activities related to rehabilitation and construction, as well as water used by workers and resident staff for personal consumption) is estimated to be low. Water for industrial use (for rehabilitation, construction, irrigation, compaction, etc.) will be supplied from surface water intake points previously authorized by the competent authority.

Regardless, the Concessionaire constantly seeks to optimize the use of resources for its operations and will avoid water waste by implementing measures during the Project's rehabilitation and construction phases, such as: (i) implementing leak detection programs; and (ii) conducting water use awareness campaigns.

4.3.a.iv Energy

The energy required for the Project's implementation will be supplied through the public grid, under a service contract with the authorized distributor, or by an autonomous backup system in the event of grid failures or at remote sites. The Project's energy consumption —specifically for the operation of the OCC and WDS— will increase slightly during its O&M phase and will be monitored and quantified in the Annual GHG Emissions Inventory.

However, as part of its environmental commitment to reduce electricity consumption without compromising performance standards, the Concessionaire will implement the following measures: (i) the gradual installation of LED lighting[45]; (ii) the installation and replacement of electrical equipment with energy-efficient models; (iii) turning off unused equipment; (iv) preventive maintenance of equipment to improve its performance; (v) automatic shutoff of lighting in warehouses and workshops; (vi) use of natural light in as many areas as possible; and (vii) training employees on energy conservation.

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[43] The Greenhouse Gas Protocol Initiative ("GHG PI," https://ghgprotocol.org/) is a multi-stakeholder partnership of companies, nongovernmental organizations ("NGOs"), governments, and other entities, convened by the World Resources Institute (WRI), a U.S.-based NGO, and the World Business Council for Sustainable Development (WBCSD), headquartered in Geneva, Switzerland.

[44] In the case of the Project's construction works, the base year for construction will be 2024, and for the O&M phase, it will be the first full year of operation under normal operating conditions.

[45] LED (*Light Emitting Diode*) refers to a light-emitting diode or luminous diode.

4.3.b Pollution Prevention

4.3.b.i Emissions and Air Quality

The Project's rehabilitation and construction activities will generate noise, vibrations, pollutant emissions, and particulate matter (PM_{10} and $PM_{2.5}$) due to the use and operation of equipment, vehicles, and machinery. These impacts are being managed through the mitigation measures outlined in the EMP (programs for controlling and monitoring noise and emissions of dust, particulates, and pollutants into the atmosphere), which are monitored monthly to verify compliance with applicable regulations and to establish, if necessary, additional management measures in accordance with the characteristics of each activity.

Once the Project is operational, there will be a drastic reduction in air pollutant emissions.

4.3.b.ii Effluents

The Project's implementation does not generate industrial wastewater. During the rehabilitation and construction phase, each work site will have a mobile restroom service, provided and operated by an authorized contractor. Additionally, during the Project's O&M phase, all liquid effluents from the OCC and the WDS will be directed to the public sanitary sewer system of each municipality or to septic tanks for subsequent treatment.

4.3.b.iii Solid Waste

As part of the ESMS, the Project has a Solid and Hazardous Waste Management Program (which includes the separation, sorting, and temporary storage of these materials) that utilizes an authorized external contractor for the collection, transportation, and final disposal of non-hazardous waste, either for subsequent recovery (through recycling operators) or for disposal at an authorized landfill. This program is reinforced through: (i) educational campaigns addressing waste reduction, reuse, and recycling, as well as initiatives to sort and record (by weight or volume) solid waste into hazardous and non-hazardous categories, involving personnel from the Concessionaire and its main contractors, subcontractors, and suppliers; and (ii) awareness campaigns for all staff on issues related to the use of single-use waste and comprehensive waste management.

For the implementation of the Project, the Concessionaire will verify that its Engineering, Procurement, and Construction ("EPC") Contractor and each subcontractor characterize their waste, define the conditions for its reuse (internal reuse or recycling), separate it, and temporarily store it according to its nature (hazardous and non-hazardous), and dispose of it properly. Household solid waste will be collected by an environmental management company duly authorized by the Ministry of the Environment ("MiAmbiente") or by the municipality's collection service, and transported to an authorized landfill, in compliance with current regulations[46].

In accordance with national regulations, during the Project's Operation and Maintenance Phase, the waste generated will be collected, temporarily stored, and transported to a sanitary landfill by an authorized waste management operator.

[46] Decree No. 275 of 2004 establishes the health standards for high-capacity non-hazardous waste landfills.

4.3.b.iv Hazardous Materials Management

The Project will not generate large volumes of hazardous waste. However, as established in the ESMS (Hazardous Materials Management Plan) and the EIA, any such waste that is produced (contaminated materials or empty containers of paint, solvents, used oils, etc.) will be characterized, managed, temporarily stored, and removed for final disposal (through an authorized waste management operator).

The Concessionaire has mechanisms and protocols in place for managing hazardous substances or materials, which include guidelines for: (i) the collection and management of chemicals, including provisions for (a) their proper storage in designated facilities with appropriate containment and ventilation systems, and (b) the use of Safety Data Sheets ("SDS") for all hazardous substances used on site; and (ii) training of workers to ensure that (a) they understand the hazards and risks associated with these materials, (b) they use the appropriate PPE when handling them, and (c) they clearly understand emergency response procedures.

The handling of fuels has been entrusted to authorized transportation companies that are supervised by the Panamanian government. In this regard, in compliance with applicable regulations, fuel is stored in properly protected steel tanks located within spill containment pits.

In compliance with current regulations[47], all hazardous waste generated is temporarily stored in areas technically designed for that purpose, to be subsequently transported for treatment and final disposal[48] by authorized environmental management companies. The Concessionaire, each EPC, and the subcontractors shall maintain records of the manifests, ensuring the chain of custody from the Project to the point of disposal, reprocessing, or recycling of this waste, and shall report annually to the competent environmental authority on the quantity of hazardous waste generated by type and activity.

4.3.b.v Handling and Use of Pesticides

The Project does not call for the use of herbicides or pesticides.

4.4 Community Health and Safety

4.4.a Community Health and Safety

The Project works will be designed and implemented by competent and recognized contractors with experience in the construction and operation of this type of works and infrastructure, using international best practices for this purpose and complying with applicable national and international construction and safety guidelines, standards, and codes[49]. Similarly, the Construction and O&M subcontracts require the respective subcontractors to be liable for damages attributable to them, arising from accidents or events caused by them, their personnel, or their subcontractors—including those caused to the MOP, third parties, and their property—as well as for third-party claims related to such damages. Furthermore,

[47] MINSA Resolution No. 1029 of November 8, 2011, which establishes the requirements and procedures for obtaining a Sanitary Operating Permit for any business entity that engages in or intends to engage in activities related to the sorting, packaging, collection, transportation, temporary storage, treatment, shredding, neutralization, recycling, encapsulation, recovery, reuse, and final disposal of hazardous waste.

[48] Executive Decree No. 156 of May 28, 2004, approving the regulations for secure landfills.

[49] Some of the specifications for highway structures are based on standards from the American Association of State Highway and Transportation Officials ("AASHTO"), the American Society for Testing and Materials ("ASTM"), the American Concrete Institute ("ACI"), ACI 117, the American Institute of Steel Construction ("AISC"), the American Welding Society (AWS), and the Central American Manuals on Pavements, Geometric Design, and Road Safety, among others.

subcontractors must maintain civil liability insurance and cover compensable damages that exceed such coverage limits. Additionally, the O&M subcontract provides for contingency and emergency management, as well as the handling of road incidents through the Road Service, during the pre-construction, construction, and operation and maintenance phases.

The community's health and safety needs are addressed through risk management strategies, technical planning, and processes involving stakeholder participation and social compensation. In this regard, to reduce the risk to communities, the Concessionaire has established communication plans and adopted measures that emphasize signage in construction zones and areas with heavy traffic. Furthermore, in collaboration with the relevant authorities (the Land Traffic and Transportation Authority—"ATTT" and the National Police) and in accordance with international best practices[50], it has carried out a traffic flow planning process to implement additional safety measures.

4.4.a.i Infrastructure and Equipment Design and Safety

The Concessionaire, within its existing offices and Project facilities, has equipment for containing leaks and spills, fire alarm and suppression systems, and emergency communication mechanisms in compliance with Resolution No. 725[51], which adopts the international standards of the National Fire Protection Association ("NFPA") and the Fire Safety and Prevention requirements of the International Finance Corporation's ("IFC") General Guidelines on Environment, Health, and Safety.

However, in accordance with the fire department's requirements, the Concessionaire, prior to the occupancy or operation of the new Complementary Works of the Project (specifically the OCC and the WDS), shall hire qualified professionals in Fire Protection and Life Safety Systems ("FPLS") to certify: (i) that all facilities were constructed in accordance with approved FPLS designs; (ii) that all equipment was installed according to the FPLS design; and (iii) that all FPLS equipment was tested in accordance with international requirements.

4.4.a.ii Hazardous Materials Management and Safety

The risk of spills and leaks of hazardous materials (primarily fuels and chemicals used for road marking and maintenance) and their potential impact on neighboring communities and the natural environment has been minimized through the use of authorized companies specializing in the transport and handling of these products, the use of appropriate storage facilities, and compliance with local regulations. In addition, hazardous materials management includes community protection measures such as: (i) implementing isolation measures to ensure that direct contact with hazardous chemicals used in construction and O&M activities is avoided; and (ii) establishing physical barriers and access controls to prevent unauthorized entry into hazardous materials storage areas.

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[50] Good Practice Note: Road Safety; World Bank https://thedocs.worldbank.org/en/doc/648681570135612401-0290022019/original/GoodPracticeNoteRoadSafety.pdf

[51] Resolution No. 725 of July 12, 2006, adopting by reference the standards of the *National Fire Protection Association*, NFPA 101, 2003 edition in Spanish, as regulations for life safety; NFPA 13, 2002 edition in Spanish, as regulations for fire sprinkler systems; NFPA 20, 1992 edition in Spanish, as regulations for stationary fire pump systems; and additional functions are assigned to the permanent advisory committee for the study, adaptation, and application of NFPA 101—Life Safety Code.

4.4.a.iii Emergency Preparedness and Response

The Project's EPRP outlines ways to protect neighboring communities and facilities and includes provisions to: (i) make the plan accessible to neighboring communities so that they are prepared before, during, and after any emergency; (ii) include communication procedures in the event of any incident or accident; (iii) coordinate the deployment of specialized personnel in emergency response teams (firefighting, rescue, and evacuation teams); and (iv) establish specific provisions for coordination with the competent authorities[52] when the response to an emergency (leaks, spills, or fires) exceeds the Concessionaire's response capabilities.

4.4.b Security Personnel

For the protection and safeguarding of its facilities (camps, warehouses, machinery yards, etc.), access control, and protection against theft, the Concessionaire shall, if necessary, employ a private security service provided by companies duly authorized and licensed by the Ministry of Public Security ("MSP") of Panama. Private security guards shall not be armed and, prior to commencing their security duties, shall undergo a comprehensive training program approved by the MSP and receive training in the progressive use of force.

Contracts with these security companies will allow the Concessionaire to: (i) conduct reasonable background checks to ensure that security personnel have no criminal records and have not been previously involved in cases of abuse; (ii) verify that such personnel have been trained in the progressive use of force and in responding to security incidents; (iii) verify the restrictions and training requirements for personnel in cases where the use of firearms is required; and (iv) verify the details of environmental and social awareness training, including human rights issues.

4.5 Land Acquisition and Involuntary Resettlement

In general, the Project will be carried out within the existing right-of-way and does not entail any type of involuntary physical or economic displacement. However, there are some minor "irregular encroachments" within the right-of-way (billboards, makeshift bus stops, aluminum canopies, advertising banners, and chain-link fencing), which, in accordance with the PPP Contract, must be reported by the Concessionaire to the local authorities[53] and must be demolished, removed, or relocated in accordance with the guidelines described in Chapter 3 of the MOP's Technical Specifications, once the order to proceed has been issued.

For the land required to carry out the Complementary Works and those of a temporary nature (camps, sites for material placement, or temporary storage), in accordance with the PPP Contract[54], its acquisition or temporary or permanent lease must be carried out through lease agreements, in line with market conditions and freely agreed upon with the owners.

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[52] Entities with technical, legal, and statutory standing, such as: the National Civil Protection System ("SINAPROC"), the Red Cross, the Fire Department, the Ministry of the Environment, etc.

[53] These authorities include: the MOP, the PPP Directorate, the municipalities, the National Land Authority ("ANATI"), and state security agencies.

[54] The PPP Contract stipulates that any acquisition of land must comply, at a minimum, with the provisions of applicable legislation in the Republic of Panama (Articles 48, 50, and 118 of the Constitution of the Republic of Panama; Articles 338 and 513 through 518 of the Civil Code; and Articles 5 and 7 of Law No. 6 on Urban Development) and IFC Performance Standard 5.

4.6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

4.6.a General Requirements

Most of the area to be affected by the Project is dominated by the existing highway right-of-way and secondary roadside vegetation (on both sides), generally consisting of grasses or pastures, hedgerows, and scattered trees. Although its direct area of influence shows high levels of disturbance from human activities, habitats with medium and low ecological sensitivity are present in areas near or adjacent (between 170 and 650 m) to the existing road right-of-way.

4.6.b Biodiversity Protection and Conservation

Although the Project's area of influence has been extensively altered, the biological baseline contained in the EIA[55] shows moderate biodiversity, with birds as the most representative species (71.4%), followed by mammals (11.9%), reptiles (11.1%), and amphibians (5.5%). Thus, of the total species found, 16 are considered vulnerable[56] (VU) according to Resolution No. DM-0657-2016; 2 are listed in Appendix I, 14 in Appendix II, and 1 in Appendix III of the Convention on International Trade in Endangered Species of Wild Fauna and Flora ("CITES").

In this regard, prior to tree felling, clearing, and grubbing activities within the ROW, and prior to the execution of construction work in the areas directly affected by the Complementary Works (especially those with riparian vegetation or gallery forest), the Concessionaire shall implement the Flora and Fauna Rescue and Relocation Plan set forth in the EIA with the objective of providing a special protection[57] for those individuals that are vulnerable, protected, or of significant ecological importance.

4.6.b.i Modified, Natural, and Critical Habitats

The Project will not modify or alter any natural or critical habitats.

4.6.b.ii Legally Protected and Internationally Recognized Areas

The Project does not overlap with or impact any of the protected areas included in the National System of Protected Areas ("SNAP") or their buffer zones.

4.6.c Supply Chain

The Concessionaire shall verify that all inputs or materials required for the planned construction and maintenance activities[58] (aggregates, quarry materials, timber, etc.) have been extracted or manufactured in accordance with applicable Panamanian legislation on biodiversity protection and ecosystem conservation.

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55 The Project's EIA includes a detailed analysis of the most representative biodiversity within its areas of direct influence ("ADI"). The field data (baseline) took into account seasonal variation and the habitats designated in the study as vegetation units.

56 All are classified as "Least Concern" ("LC") according to the Red List of the International Union for Conservation of Nature ("IUCN").

57 This consists of the capture, veterinary medical evaluation of physical condition, temporary custody (if required), transport, and release in areas approved by the Environmental Authority, provided that these locations are ecologically similar to the individuals' area of origin, so as not to cause them physiological or behavioral stress that could threaten their lives.

58 The selection of material sources will be contingent upon the availability, quality, and supply capacity of the materials, as well as their location relative to the work sites.

4.7 Indigenous Peoples

The Project will be implemented outside areas inhabited by Indigenous communities and will not have any material impacts on them, nor will it disrupt their natural resources or cultural practices[59].

4.8 Cultural Heritage

The Project's area of influence has low archaeological potential[60]. However, based on the survey of the areas required for the execution of the Complementary Works[61], the Concessionaire will develop an Archaeological Management Plan ("AMP") in compliance with regulations for the protection of historical heritage[62]; should any chance find be verified, the plan mandates halting activities at the site and immediately notifying the National Directorate of Historical Heritage of the Ministry of Culture to await instructions on how to proceed.

5 Local Access to Project Documentation

More information about the Project can be found at: https://www.ivistmo.com/#inicio and http://www.mop.gob.pa/index.php/oficinas-espec/asociaciones-pub-priv?csrt=10705677899231961231

[59] Certificate issued by the Vice Ministry of Indigenous Affairs of the Ministry of Government.

[60] The Project does not overlap or intersect with any site designated by the Ministry of Culture.

[61] During the EIA process, three archaeological sites were identified in the vicinity of the Coclé River or Zaratí River (known as "Rancho Sancho"), where bridge construction work will take place.

[62] Law No. 14 of 1982 on the Nation's Historical Heritage; Law No. 58 of 2003, which partially amends Law No. 14; and Resolution No. 067-08 DNPH of 2008, on the Evaluation of Archaeological Survey, Excavation, and Rescue Reports.