Tarlac-Pangasinan-La Union Expressway (TPLEX) Extension Project

Project Information Memorandum

Department of Public Works and Highways

DECEMBER 2023

Acronyms, Abbreviations and Defined Terms

BOT Law and its Revised 2022 IRR	Philippines Build-Operate-Transfer Law [Republic Act No. 6957, as amended by Republic Act No. 7718] and its Revised Implementing Rule and Regulations [October 2022].
Certificate of Final Completion	A document issued by the DPWH certifying the full completion and acceptance of the Works of the Concessionaire for the TPLEX Extension Project, as specified under the Concession Agreement.
Comparative Proponent	A person who submits a Comparative Proposal to the DPWH.
Comparative Proposal	A proposal for the design, finance, construction, operation and maintenance of the TPLEX Extension submitted by a Comparative Proponent in response to the Invitation for Comparative Proposals.
Concessionaire	The proponent to whom the DPWH awards the TPLEX Extension Project contract.
Concession Period	Refers to the period of thirty four (34) years commencing from the effectivity of the Concession Agreement.
CPI	Consumer Price Index.
DED	Detailed Engineering Design.
DOF	Department of Finance.
DPWH	Department of Public Works and Highways.
Government	Government of the Republic of the Philippines.
ICP	Instructions to Comparative Proponents.
Initial Opening Toll Rate	The Initial Opening Toll Rate for the Project, to be collected upon the issuance of a Toll Operation Permit shall be collected based on the values indicated in the Initial Opening Toll Rates referred to in the Concession Agreement is based on 2027 Target Opening Year, exclusive of VAT and with income tax holiday, and shall be adjusted through the application of the formula set forth below should the Toll Operation Permit issued one (1) year or more from the Target Opening Year: $$TR_n = TR_x \, x \, (\frac{CPI_n}{CPI_x})$$
IRR	Internal Rate of Return.
MAGA	Material Adverse Government Action.
MPSS	Minimum Performance Standards and Specifications.
NEDA	National Economic and Development Authority.

NOA	Notice of Award.
Notice to Commence Construction	The notice issued by DPWH to the Concessionaire for the whole Project or by Segment upon issuance of a certification from the Independent Consultant of the availability of the Right-of-Way and upon approval of the Detailed Engineering Design.
O&M	Operations and Maintenance.
Original Proponent	San Miguel Holdings Corporation.
PhP	Philippines Pesos.
PPP	Public-Private Partnership.
PPP Center	Public-Private Partnership Center of the Philippines.
Project	Refers to all the aspects and activities in relation to the financing, design, construction, supply, completion, testing, commissioning, and operation and maintenance of a 59.4 Kilometer Toll Road, four (4) lane Tarlac-Pangasinan-La Union Expressway (TPLEX) Extension Project from Rosario, La Union to San Juan, La Union.
ROW	Right-of-Way.
PBAC	Prequalification, Bids and Awards Committee for PPP Projects.
SMHC	San Miguel Holdings Corporation.
Toll Operation Certificate	The certificate issued by the TRB, with the recommendation and concurrence of the Grantor immediately after issuance of the Certificate of Final Completion for the Project, to the Concessionaire or, as applicable, to the entity designated by the Concessionaire as the Facility Operator, authorizing the operation of the Project, including the collection of Toll.
Toll Operation Permit	The permit issued by the TRB, with the recommendation and concurrence of the Grantor immediately after the issuance of the Certificate of Substantial Completion for a Segment or a portion of a Segment, to the Concessionaire, or as applicable, to the entity designated by the Concessionaire as the Facility Operator, authorizing the operation of a Segment or a portion of a Segment, including the collection of Toll.
TRB	Toll Regulatory Board.
USD	United States Dollars.
USP	Unsolicited Proposal for PPP project.

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Important Notice

This Information Memorandum and its accompanying documents [together, the"Information Memorandum"] are provided to the recipient solely for use in preparing and submitting proposals in connection with the Tarlac-Pangasinan-La Union Expressway Extension Project [the "TPLEX Extension Project"]. The Information Memorandum has been prepared by the Department of Public Works and Highways ["DPWH"].

Neither the DPWH nor any of its representatives or DOF, PPP Center make any representations [expressed or implied] or warranties as to the accuracy or completeness of the information contained in this Information Memorandum or any other document madeavailable to anyone in connection with the TPLEX Extension Project and shall have no liability for any representations, omissions or errors contained herein or for any other written or oral communication transmitted to the recipient in the course of the recipient's evaluation of the TPLEX Extension Project.

In addition, the DPWH, DOF and PPP Center, its representatives will not be liable for any loss or damage including without limitation, indirector consequential loss or damage whatsoever arising from or in connection with this Information Memorandum or any other document made available to anyone inconnection with the TPLEX Extension Project. These entities and persons will not be liable toreimburse or compensate the recipient for any costs or expenses incurred by the recipient in evaluating or acting upon this Information Memorandum or otherwise in connection with the TPLEX Extension Project as contemplated herein.

This Information Memorandum does not constitute an offer to accept any proposal butis merely a solicitation of interest with respect to the TPLEX Extension Project.

The information contained in this Information Memorandum is based on present circumstances. Moreover, the financial information in this Information Memorandum should be treated as indicative only. This information may be affected by changes in economic and other circumstances, which cannot be foreseen, and it must berecognized that the reliance to be placed on any information in this Information Memorandum is a matter of commercial judgment for the recipient. Nothing in this Information Memorandum should be construed as legal, financial or tax advice.

No person has been authorized to give any information or to make any representation not contained in this Information Memorandum and, if given or made, any such information or representation may not be relied upon as having been authorized by the DPWH, DOF and PPP Center, its representatives.

1. Overview

The Tarlac-Pangasinan-La Union Expressway Extension Project [TPLEX Extension Project] is a Public-Private Partnership project to design, construct, finance, operate and maintain a 59.4 Kilometer Toll Road from Rosario, La Union to San Juan, La Union.

Table 1. Segments of TPLEX Extension

Segment	Description	Length, km
1	Rosario to Tubao	18.5
2	Tubao to Naguilian	23.1
3	Naguilian to San Juan	17.8
	Total	**59.4**

The TPLEX Extension Project will extend the existing TPLEX Project with an alignment approximately parallel to the Manila North Road (MNR), also known as MacArthur Highway which is part of the Pan Philippine Highway (PPH). It will traverse the municipalities/city of Rosario, Sto. Tomas, Tubao, Aringay, Caba, Naguilian, Bauang, San Fernando City, and San Juan. Interchanges with toll plazas will be located in Rosario, Tubao, Naguilian, Bauang, and San Juan.

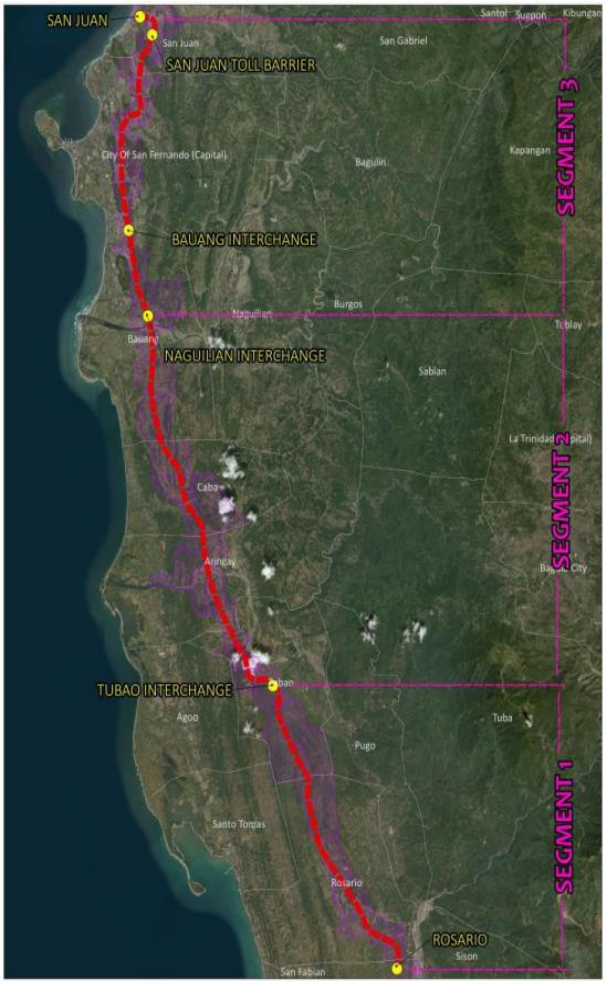

Figure 1. TPLEX Extension Project Alignment (Rosario to San Juan, La Union)

San Miguel Holdings Corporation **[SMHC]** initiated the TPLEX Extension Project by submitting an unsolicited proposal **[USP]** to the Department of Public Works and Highways [DPWH] on 14 February 2018 which initially involves the following Phases.

Table 2. Initial Phases of TPLEX Extension Project

Phase	Length, km	Distance
I	59.4	Rosario, La Union to San Juan, La Union
II	63.1	San Juan, La Union to Candon City, Ilocos Sur
III	52.0	Candon City, Ilocos Sur to Vigan City, Ilocos Sur
IV	70.7	Vigan City, Ilocos Sur to Laoag City, Ilocos Norte

The DPWH acknowledged the submitted USP last 05 March 2018 and determined the completeness of the submitted USP pursuant to Section 10.5 of the 2012 BOT Law IRR through letter dated 06 June 2018 considering Phase I only.

After review and careful consideration of the USP including all available documents submitted by the SMHC, the DPWH issued to SMHC the Original Proponent Status for the

TPLEX Extension Project on 03 December 2018.

The grant of OPS is only for the finance, design, construction, operation, and maintenance of a 59.4 km four (4)-lane TPLEX Extension Project from Rosario to San Juan, La Union **[the "Project"]**.

The Original Proponent, SMHC, will thereafter have the right to match the best offer,if any.

Key elements of the transaction are summarized in Table 1 below:

Table 3: TPLEX Extension Project Transaction Summary

Feature	Terms
Project Scope	Finance, design, construction, supply, completion, testing, commissioning, and operation and maintenance of the TPLEX Extension Project from Rosario, La Union to San Juan, La Union.
Implementing Agency	Department of Public Works and Highways
Procurement Mode and PPP Structure	Unsolicited proposal under the Build-Operate-Transfer (BOT) Law and its Revised 2022 Implementing Rule and Regulations (IRR).
Concession Period	34 years, including ROWA and Construction.
Revenue Source	All operating income derived from the TPLEX Extension Project which includes Toll Revenue and Commercial Revenues (revenues generated, collected and retained by the Concessionaire in the exercise of rights over Commercial Assets).
Initial Base Toll Rate [2022 prices]	The toll rate will be fixed under three vehicle classes: • Class 1 : Vehicles with 2 axles and up to 7 feet in height (e.g cars, jeepneys, vans, auv, suv) • Class 2 : Vehicles with 2 axles and more than 7 feet in height (passenger bus, delivery vans) Vehicles with 3 or more axles and less than 7 feet in height (delivery vans, small trucks, class 1 vehicle with a trailers) • Class 3 : Vehicles with 3 or more axles and a height of more than 7 feet in height (e.g. container/trailer trucks, cement mixers, and other large trucks) The Concessionaire shall be entitled to the first Toll Rate Adjustment on 1 January of the year immediately succeeding the second anniversary of the date of issuance of the Toll Operation Permit subject to the approval of the TRB. The initial opening toll

<table>
<tr><th>Feature</th><th>Terms</th></tr>
<tr><td></td><td>rate which will be adjusted every two years based on the below formula:

$$TR_n = TR_x \, x \, (\frac{CPI_n}{CPI_x})$$

TR_n : new Base Toll for the nth periodic adjustment

TR_x : Base Toll, $TR_x = TR_{n-1}$

TR_{n-1} : the base toll as of the last ((n-1)th) periodic adjustment, except for the first periodic adjustment which will be the Authorized Opening Toll Rate.

CPI_n : Consumer Price Index, issued by the Philippine Statistics Authority, for the month prior of the new periodic adjustment application.

CPI_x : Consumer Price Index, issued by the Philippine Statistics Authority, for the month corresponding to the month when the most recent extraordinary Toll adjustment was implemented; provided that if no extraordinary Toll adjustment was granted,

$$CPI_x = CPI_{n-1}$$

CPI_{n-1} : Consumer Price Index, issued by the Philippine Statistics Authority, for the month of the last ((n - 1)th) periodic adjustment, except for the first periodic adjustment which will be the month corresponding to when the Authorized Opening Toll Rate was applied or the January 2027 CPI if the first Toll Operation Permit is issued on or before 2027.</td></tr>
<tr><td>Anticipated Traffic Forecasts per Day</td><td>Travel Time from Rosario to San Juan La Union will be reduced from 1 ½ hour to around 40 minutes or a time savings of around 50 minutes. Below is a summary of the estimated traffic demand of the TPLEX Extension Project.

<table>
<tr><th>Class</th><th>2027</th><th>2028</th><th>2035</th><th>2040</th><th>2045</th><th>2050</th><th>2056</th></tr>
<tr><td>1</td><td>11,450</td><td>13,540</td><td>69,130</td><td>78,920</td><td>90,060</td><td>101,210</td><td>114,590</td></tr>
<tr><td>2</td><td>840</td><td>1,070</td><td>6,500</td><td>7,690</td><td>9,040</td><td>10,410</td><td>12,050</td></tr>
<tr><td>3</td><td>570</td><td>680</td><td>3,470</td><td>3,950</td><td>4,510</td><td>5,060</td><td>5,730</td></tr>
<tr><td>TOTAL</td><td>12,860</td><td>15,290</td><td>79,100</td><td>90,560</td><td>103,610</td><td>116,680</td><td>132,370</td></tr>
</table></td></tr>
<tr><td>Delivery of Project Site</td><td>The delivery of Site is borne solely by the Concessionaire and may only ask for assistance from the Grantor when the Concessionaire exhausts its options and fails to have possession of site on its own.</td></tr>
</table>

Feature	Terms
Minimum Equity Requirement	Must always own directly or indirectly, a beneficial and controlling ownership interest in the common and voting shares during the Lock-In Period, without limitation, the definition of Equity Requirement.
Construction Approach	Must meet the set of minimum performance or functional standards and specifications in undertaking the Design, Works, and Operation and Maintenance.
DPWH Responsibilities	• Guarantees the Concessionaire's continuous, peaceful, exclusive and uninterrupted use and Clean Possession of the portions of the Site which the Grantor expropriated under Applicable Law during the term of the Concession Agreement up to Transfer Date and shall defend the Concessionaire's rights thereto against any and all third-party claims. • Issue and/or assist in obtaining all Consents from, and enter into all necessary agreements with, Government Authority and any and all parties whether governmental or private, now or which may hereafter become necessary for the continued operation of the Project, including but not limited to the following: i. Consents necessary for the acquisition of the Site. ii. Consents necessary for the completion of the Works; iii. Consents necessary to continue the operation of the Project as proposed by the Concessionaire; iv. Compliance with relevant requirements necessary to operate the Project; and v. Approval of fees to be charged by the Concessionaire and any adjustments thereof necessary for the Project as proposed by the Concessionaire. • Assist the Concessionaire in obtaining or relocating the Utilities at the Site such as, without limitation, water, power and communication facilities; provided, however, that if the Project is delayed by reason of the non-availability of any necessary Utility without fault or negligence on the part of the Concessionaire, then the Concessionaire shall not be in default, the Works Performance Security shall not be callable, and the Timetable and/or the Concession Period shall be extended by an appropriate period not being less than the period of the delay. • Provide assistance in relation to the Concessionaire's registration, application and qualification for tax exemptions and other investment incentives allowed by the BOT Law and the Omnibus Investments Code.

Feature	Terms
	• Assistance to the Concessionaire to enable the latter to fully and timely avail of all tax incentives available under Applicable Law, and shall assist the Concessionaire in availing of fiscal and other investment incentives under the Omnibus Investment Code and under other existing laws and regulations.

1.1 Procurement Timetable

The procurement process is expected to take approximately seven months from the date of issue of bid documents. Key dates are outlined in Table 2 below.

Table 4. Procurement Plan

Comparative Proposal preparation	
Issue of bid documents to prospective comparative proponents.	December 6 to 20, 2023
Pre-bid Conference.	February 2, 2024
Submission of Comparative Proposals.	March 15, 2024
Bid Evaluation and Awarding of Contract	
Evaluation of Comparative Proposals.	March 16, 2024 – April 11, 2024
Right to Match price proposal of winning comparative proponent by Original Proponent [if required].	April 15, 2024 – May 27, 2024
Issuance of Award Notice.	May 31, 2024 – June 4, 2024
Signing of Concession Agreement.	June 29, 2024 – July 3, 2024
Financial Close.	Not later than eighteen (18) months from the issuance of the first Notice to Commence Construction

The Philippines: Business Environment Overview

With major supply-side sectors like agriculture, industry, and services rising at rates of 0.2%, 2.1%, and 6.0%, respectively, GDP increased by 4.3% in the second quarter of 2023. On the demand side, there was an increase in household spending of 5.5%, gross fixed capital formation of 3.9%, and net exports of 3.7%. The quarter's economic growth was driven by commercial investments and spending tied to tourism.

Table 5. Philippines' Credit Ratings as of 7 August 2023

Date Rated	Credit Agency	Rating
May 2023	Fitch	BBB/Stable
March 2023	JCR	A-/Stable
November 2022	S&P	BBB+/Stable
September 2022	Moody's	Baa2/Stable
August 2023	R&I	BBB+/Positive

Source: https://www.bsp.gov.ph

The optimistic forecast from R&I indicates a potential rating upgrade in the near future.

1.2 The Philippines Infrastructure Flagship Projects

There are presently fifteen (15) PPP toll road projects at varying stages in the Infrastructure Flagship Projects (IFP) of the Philippines under the DPWH and TRB: of these, eight (8) are at the implementation stage, five (5) are under project preparation, one (1) is for government approval and one (1) is approved for implementation.

In addition to the above IFP Projects, there are several PPP toll road/expressway projects implemented to date by the DPWH. A summary of these projects and their current status is provided in Table 4.

Table 6. Implemented Toll-Road/Expressway Projects

	Project Name	Status
1.	Daang Hari-SLEx Link Road (Muntinlupa-Cavite Expressway)	Completed and operational.
2.	Cavite-Laguna Expressway	Partially completed and operational.
3.	NAIA Expressway Project, Phase II	Completed and operational.
4.	NLEX- SLEX Connector Road Project	Partially completed and operational.
5.	TPLEX Project	Completed and operational.

Recently Approved PPP Projects

To date, NEDA Board have approved six (6) PPP projects from all sectors (Physical Connectivity, Health, etc.) for implementation with an overall investment cost of PhP 217.708 Billion. Of these four (6), one (1) is a toll-road project which is the TPLEX Extension Project. The Project is also among the 197 Infrastructure Flagship Projects (IFPs) of the Marcos Administration.

1.3 The TPLEX Extension Project as an Unsolicited Proposal

The DPWH acknowledged the submitted USP last 05 March 2018 and determined the completeness of the submitted proposal pursuant to Section 10.5 of the 2012 BOT Law IRR through letter dated 06 June 2018 considering Phase I only. The USP has proposed to use and employ the geocell (3D Cellular Confinement System for Road Base Reinforcement) on selected areas to be determined during the conduct of the Detailed Engineering Design for the Project.

The NEDA Board approved and validated the negotiated parameters, terms, and conditions (PTCs) on June 02, 2023 and November 09, 2023, respectively.

After review and careful consideration of the USP and all available documents submitted by SMHC, the DPWH issued to SMHC the Original Proponent Status for the Project on 03 December 2018.

Comparative Proponents now have the opportunity to challenge the USP. The winning bid will be based on the Lowest Initial Opening Toll Fee/Rate proposed by Comparative Proponents.

The SMHC, Original Proponent, will have the opportunity to match the price/bid proposal of the Winning Comparative Proponent pursuant to Section 10.1 of the Revised 2022 BOT Law IRR and, if it does, they will be awarded the contract. If the Original Proponent is unable to match, however, the TPLEX Extension Project will be awarded to the winning bid from amongst the Comparative Proponents.

Comparative Proponents may offer an alternative new technology for the construction of the Project for as long as sufficient detail is provided to check compliance with the Minimum Performance Standards and Specifications [MPSS]. Comparative Proponents are also free to adopt the Conceptual Engineering Design **[CED]** proposed by the Original Proponent, but will need to demonstrate their ability to implement that CED.

The provided CED, which includes the Plan and Profile, Cross-section Plan and other project drawings prepared by the Original Proponent shall only serve as reference for Prospective Bidders in determining their own respective Conceptual Plans and/or Financial Proposals.

The Prospective Bidder is obliged to verify the correctness, completeness, accuracy and reliability of the information contained in the Background Information Documents. The DPWH or any other associated party does not provide any warranty or assurance of the correctness, completeness, accuracy or reliability of the information contained in the Background Information Documents. The DPWH or any other associated party shall not be liable to any Prospective Bidders, the Winning Comparative Proponent or any other person for damages caused by that party's reliance on the Background Information Documents regardless of any erroneous, absent, incomplete, inaccurate or unreliable information or documentation provided by the DPWH, even if attended by gross negligence, nor shall such be a ground for the refusal to enter into or rescission of the Concession Agreement by the Winning Comparative Proponent.

2. Project Description

2.1 Background

Roads provide a crucial contribution to the nation's economic growth and development. The Philippine Highway Network has a total length of 33,213 km comprising national primary, secondary, and tertiary roads. While the road transport infrastructure in the Country is continuously being developed, its quantity and the quality has still not been sufficient, with the Philippines reported to have the worst traffic in Southeast Asia, and the twelfth worst on a global scale. Complementing these national roads is the Philippine expressway network, which was constructed to provide high speed mobility and improve the level of traffic services in the Country. Spanning 626 km, the Government plans to increase the High Standard Highway Network to 995 km by 2030 to support the socioeconomic development of the Philippines.

SMHC submitted to the DPWH a USP, a 59.4 km four (4)-lane TPLEX Extension Project from Rosario to San Juan, La Union, which will facilitate the development of regions in Northern Luzon and provide an alternative, high-speed interconnectivity with Central Luzon and Metro Manila.

Figure below shows the Project location and alignment.

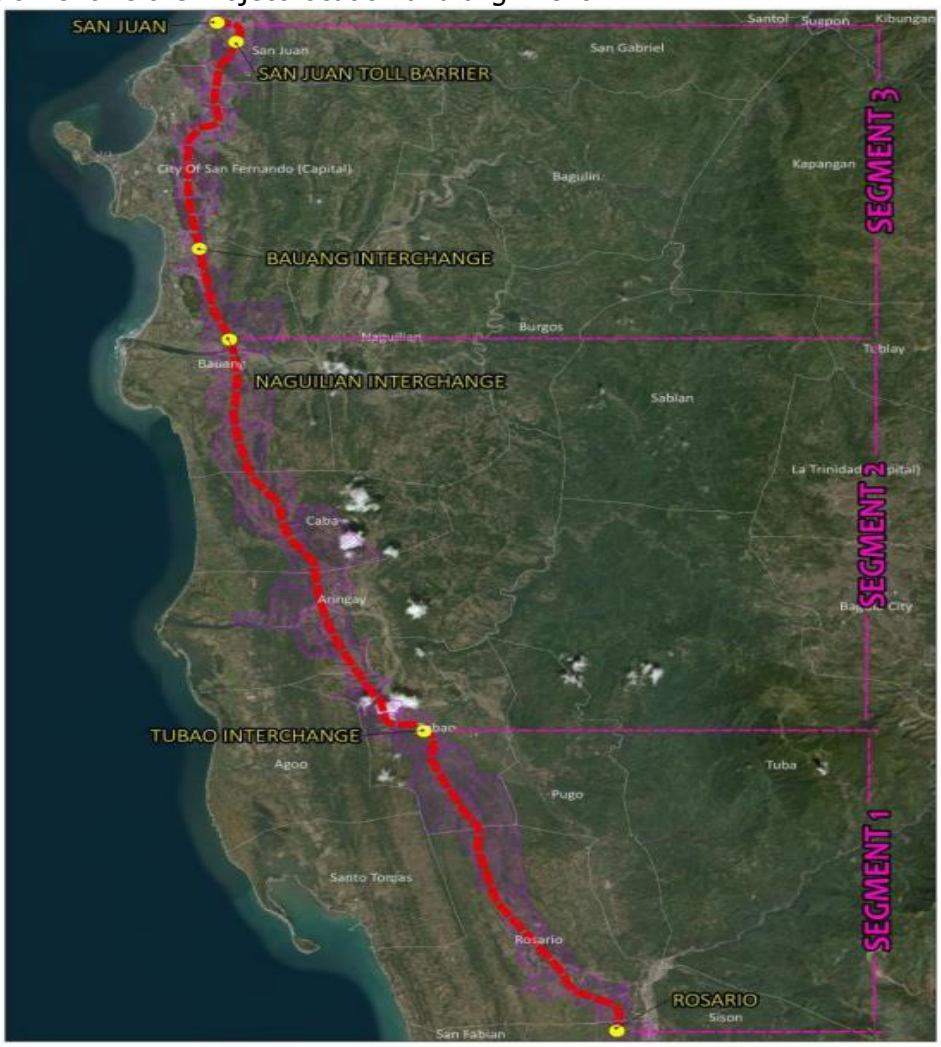

Figure 2. TPLEX Extension Project Alignment

2.2 Project Overview

The Project has the following objectives/benefits:

- Provide new high-quality roadway infrastructure between the Ilocos and Cordillera Regions, Central Luzon, and Metro Manila.
- Accelerate the development of, or encourage the establishment of, new growth hubs in Region I and nearby regions.
- Encourage economic growth along the expressway corridor.
- Without the project, MacArthur Highway is projected to have a 0.91 Volume Capacity Ratio (VCR) and Level of Service (LOS) E by 2055, which is considered to be a high traffic level. The proposed project aims to reduce the Volume Capacity Ratio (VCR) to 0.62 by 2055 and raise the Level of Service (LOS) C of MacArthur Highway (Manila North Road).
- Travel Time from Rosario to San Juan La Union will be reduced from 1 ½ hour to around 40 minutes or a time savings of around 50 minutes.

2.3 Project Specifications

A 59.4 km four (4)-lane toll road which will start from TPLEX in Rosario, La Union and will terminate at San Juan, La Union.

Segment	Coverage	Kilometers
Segment 1	Rosario to Tubao	18.5
Segment 2	Tubao to Naguilian	23.1
Segment 3	Naguilian to San Juan	17.8

There shall be five (5) interchanges located at:

- Rosario, La Union (TPLEX Junction)
- Tubao, La Union (Access to Agoo and Baguio via Marcos Highway)
- Naguilian, La Union (Access to Baguio via Naguilian)
- Bauang, La Union (Access to Poro Point, and San Fernando City)
- San Juan, La Union (Access to San Juan and Alternate By-pass of San Fernando)

The scope of the Project includes:

a. Financing the Project Cost;
b. Designing, constructing, supplying, and completing the Project;
c. Providing land, Facilities and equipment to be stated in inventory of the Assets of the Project, and maintaining or upgrading said facilities and equipment as may, from time to time, be required in the operation of the Project;
d. Testing, pre-commissioning and commissioning of the Project and all its facilities, and inspecting the Works;
e. Operation and maintenance of the Project and all its facilities; and
f. Transfer/turnover of the Project to the Grantor or its Designee at the end of the Concession Period, free from any and all liens and encumbrances of whatever kind and nature.

The Project is estimated to be composed of 3 viaducts, 4 bridges and 60 underpasses.

2.4 Design Standards and Requirements

The following Design Standards and Requirements is consistent with the latest DPWH standards and specifications and other applicable international standards for expressway.

2.4.1 Design Life Standards

All structures should be functional with the provision for periodic maintenance. Given the proper and specified maintenance program, all structures as enumerated below should not suffer any major defect during the design life. The minimum design life target for the expressway shall be:

Table 7. Minimum Design Life of Structures

Structures	Design Life
Viaduct / Bridge Structures	50 years
Road Pavement:	
Rigid Pavement: For Toll Road For Service Road	30 years 20 years
Flexible Pavement: For Toll Road For Service Road	20 years 20 years (Total Extended Life) = 10 years (Initial Period) + 10 years (Overlay)
Mechanical and Electrical Works	30 years
Wearing Surface / Overlay	10 years
Buildings	40 years

2.4.2 Pavement Design Standard

The following table shows the minimum thickness of the pavement layers. The layers and their corresponding thickness material properties shall be finalized during the detailed design.

Table 8. Indicative Pavement Structural Layers

Type	Pavement Layer	Thickness (mm)*
Carriageway	Wearing Course	50
	Binder	80
	Aggregate Base Course	230
	Granular Subbase	300
	Embankment Material with California Bearing ratio (CBR), 9%	650
Shoulder	Wearing Course	60
	Aggregate Base Course	300
	Granular Subbase	300
	Embankment Material with CBR, 9%	650

* *For illustration purposes, subject to DED*

2.4.3 Hydrology and Drainage

The minimum Design Rainfall Frequency shall be as follows. A more stringent standard can be followed during the conduct of DED subject to the concurrence of Grantor:

Table 9. Minimum Design Rainfall Frequency

Structure	Design Rainfall Frequency
Bridge	50 years
Embankment	25 years
Box Culvert	25 years
Pipe Culvert	25 years

A provision of ten percent (10%) increase in rainfall intensity in the design shall be incorporated in consideration with the Climate Change Adaptation pursuant to Section 9.2.4.1 of the DGCS Volume 3.

Vertical Minimum Free Board Clearance shall be 0.60 meter above maximum flood levels reckoned from the bottom of subbase.

2.4.4 Geometric Design

The following geometric design criteria are applicable for the project:

Table 10. Geometric Design Criteria for Main Alignment

Item	**Design Criteria**	
	Flat	**Rolling/Mountainous**
Design Parameters		
Design Speed, max (kph)	100	70
Superelevation (%)	6	6
Radius, min (m)	437	252
Grade, max (%)	6	
Vertical Curvature, Crest (k), min	52	17
Vertical Curvature, Sag (k), min	45	23
Vertical Clearance (m), min	5.03 for railway/flyover bridge; 5.33 for pedestrian bridge; 5.33 for welcome arch / boundary marker; 5.5 for crossing overhead utilities and power lines	
RROW (m)	60m	
Carriageway		
Number of Lanes	2 lanes in one direction	
Lane Width (m)	3.65	
Cross Slope (%)	2	
Paved Shoulder		
Width (m)	3	
Cross slope (%)	3	

Median Island with Double Face New Jersey Concrete Barrier Curb	
Width (m)	3
Cross Slope (%)	Same as carriageway

Table 11. Geometric Design Criteria for Ramps

Item	**Design Criteria**
Design Parameters	
Design Speed, min (kph)	30
Superelevation (%)	6
Radius, min (m)	21
Grade, max (%)	7
Vertical Curvature, Crest (k), min	2
Vertical Curvature, Sag (k), min	6
Carriageway	
Number of Lanes	1 or 2 lanes in one direction
Lane Width (m)	4.00 (1-lane), 3.50 (2-lanes)
Cross Slope (%)	Super-elevated
Paved Shoulder	
Width (m)	2
Cross slope (%)	Super-elevated

2.4.5 Toll Collection System

The payment of the toll fee shall be based on the Toll Regulatory Board (TRB) approved tolling policy to be defined by the Concession Agreement and required safety protocols to prevent the spread of COVID-19. The mode of payment shall be primarily electronic through electronic toll collections system via Radio Frequency Identification (RFID), in Philippine currency. Payment maybe be made in cash only on select few toll lanes to cater for travelers who are yet to have their RFID installed.

The toll rates to be charged will be determined by the following vehicle classification:

Class 1: Cars, pick-up, van, utility vehicles, light trucks with no more than 2 axles, vehicles not exceeding 2.15m or 7ft; and
Class 2: Buses and trucks exceeding 7 ft. in height
Class 3: Buses and trucks exceeding 7 ft. in height and with three (3) or more axles

The Toll System shall have an Automatic Vehicle Classifier (AVC), comprised of an Optical Barrier, which is a vehicle separator that detects when a vehicle moves through the lane as it passes through the beams; and a Treadle that counts the number of axles of vehicles that crosses them.

The Toll Fee shall be proposed to the TRB and adjusted accordingly for each vehicle classes and increased on the basis of a parametric formula that will be part of the Concession Agreement. A Toll receipt shall be issued to motorists after payment of the appropriate fee indicating basic information such as; Vehicle Class, Toll Fee, Toll Booth No., Lane No., Teller,

and date/time of transaction.

The collection of tolls shall be 24 hours a day, 7 days a week for the duration of the Concession. All toll collection operations shall be computerized and shall be composed of the following: Lane Computer with Receipt Printer; Motorist Fare Display; Vehicle Class Display (toll supervisor's monitor); Loop Detector (vehicle sensor); CCTV Camera; Toll Plaza Server and Central Toll Collection System (CTCS) including Software; Uninterruptible Power Supply, Automatic Voltage Regulator, & Back-up Generator; Automatic Gate Barriers; and Telecommunication System.

Lane Computers shall be located at every toll booth of each toll plaza. The vehicle class is entered by the teller on the computer and the fee is automatically computed and displayed on the Motorist Fare Display while a receipt is printed. The entire toll transaction is recorded on the lane computer and sent to the Toll Plaza Server and CTCS for storage and processed for the generation of toll collection reports.

An Uninterruptible Power Supply (UPS), with Automatic Voltage Regulator and Back-Up Generator, powers the lane computers during power interruptions. The Vehicle Class Display is used to display, in real time, the vehicle class entered by the teller on the lane computer of the vehicle being serviced by the different lanes. The toll rate charged and the remaining load should be displayed near the traffic barrier that is clearly visible to the driver.

This is for the toll plaza supervisor's monitoring of transaction entries as compared with the actual class of vehicles being serviced by a given teller. A Loop Detector is embedded on the toll lane and is used to detect the presence as well as the number of vehicles passing over the lane. This feature compares the actual vehicle count against the number of transactions entered by the teller on a given lane. It is also used in conjunction with the Automatic Gate Barrier. An Automatic Gate Barrier is installed at each lane to control the passage of vehicles in the lane. The gate closes when a vehicle passes thru the loop detector and opens when the teller processes the transaction.

A CCTV camera is installed a few meters away from the toll plaza to get a clear view of the lanes and the vehicles being served. Its primary purpose is for toll audit as well as security surveillance. The Toll Plaza Server will be installed at the CTCS will be installed at the Toll Operations Center and will be used to gather toll transaction data, summary, as well as data storage.

2.4.6 Design to be undertaken by the Concessionaire

The design of the following is required:

a) Geometric alignment of the Project, engineering design of waterways structures such as bridges, drainage structures, viaducts, interchanges, crossings/underpasses, overpasses and other component necessary for the project

b) A plan indicating the location of all toll facilities on the toll expressway including the following:

- A layout plan indicating the position of all the elements of the toll plazas including the carriageway tapers, platform, inspection walkways, control building and parking areas. A longitudinal section on the corner line of the plaza must also be included,
- Toll platform indicating the layout of the lane area in the initial (opening year) configuration and all subsequent expansions
- Toll islands indicating the toll booths and any protection structures
- The canopy showing the minimum clearance, shape, form, material and signs
- A plan view of the control building indicating the layout with approximate areas of each room and elevations of at least two sides

c) The Operations and Maintenance Center showing the position, layout and relative sizes of the following:

- Office and administrative building
- Workshop building
- Warehouse
- Staff parking
- Plant and equipment room
- Public areas
- Other ancillary facilities as may be required under Applicable Law

This includes a preliminary design of the Site Development of the Operation and Maintenance Center relative to the tollway alignment as well as access to the Center from the tollway.

d) Maintenance Center- located at strategic location/s of the tollway; and

e) The preliminary design submitted will serve as the basis for initiating the final detailed engineering design. This design must be undertaken in accordance with the terms of the Concession Agreement.

3. Traffic Potential

Forecasting Assumptions

The proposed toll road's demand will primarily consist of the vehicular traffic that will pass through it, which shall be derived from the existing traffic on adjacent zones to the project area that will be diverted to the proposed toll road.

The study's Demand Forecast had utilized the Four-Step Travel Demand Modelling for Traffic Generation, Trip Distribution, Modal Split, and Trip Assignment. The study had utilized the CUBE software in its traffic analysis and primarily used the following sources for its traffic data:

- MMUTIS Update and Enhancement Project (MUCEP) Study of the Japan International Cooperation Agency (JICA) conducted on 2015;
- SMHC Traffic Study for the Manila North Toll Road Project on 2017; and
- Actual TPLEX Traffic Data for 2020.

The results of the models show that the Annual Average Daily traffic (AADT) of the selected links were determined starting from year 2027. The Origin-Destination (OD) matrices for the years 2027, 2028, 2035, 2045, and 2056 were also run in the model.

Traffic forecasts provided in the table below were accepted by DPWH during the Original Proponent's negotiations with DPWH. DPWH expects volumes to be about 12,860 vehicles per day at start of operations increasing to 132,370 vehicles per day after 30 years.

Table 12. Forecasted Annual Average Daily Traffic (AADT)

Class	2027	2028	2035	2040	2045	2050	2056
Segment 1: Rosario to Tubao							
Class 1	11,450	13,540	15,740	17,610	19,760	21,910	24,490
Class 2	840	1,070	1,400	1,670	1,980	2,300	2,680
Class 3	570	680	790	880	990	1,100	1,220
Subtotal	12,860	15,290	17,930	20,160	22,730	25,310	28,390
Segment 2: Tubao to Naguilian							
Class 1			20,920	24,030	27,560	31,100	35,340
Class 2			1,880	2,220	2,600	2,990	3,450
Class 3			1,050	1,200	1,380	1,550	1,770
Subtotal			23,850	27,450	31,540	35,640	40,560
Segment 3: Naguilian to Bauang							
Class 1			19,310	22,170	25,420	28,680	32,590
Class 2			1,780	2,100	2,460	2,820	3,260
Class 3			970	1,110	1,270	1,430	1,630
Subtotal			22,060	25,380	29,150	32,930	37,480
Segment 3: Bauang to San Juan							
Class 1			13,160	15,110	17,320	19,520	22,170
Class 2			1,440	1,700	2,000	2,300	2,660
Class 3			660	760	870	980	1,110
Subtotal			15,260	17,570	20,190	22,800	25,940
TOTAL	**12,860**	**15,290**	**79,100**	**90,560**	**103,610**	**116,680**	**132,370**

It is expected that the VC ratio of MacArthur Highway will improve by an average of 30% due to the Project. By 2027, it is expected that there will be a 26.81% VC ratio reduction (from 0.46 to 0.34) due to traffic diversion. By 2028, the traffic diversion will result in a 29.84% VC ratio reduction. By 2035, the Project is expected to reduce the VC ratio of MacArthur Highway from 0.57 to 0.39 which also improves the Level of Service from C to B. By 2045, the traffic diversion is expected to be around 32.25% (from 0.72 to 0.49) which improves the Level of Service from D to B. By 2055, MacArthur Highway is expected to be at 0.91 VC ratio and LOS E which corresponds to heavy traffic. With the TPLEX Extension, VC ratio will be at 0.62 and LOS C which corresponds to moderate traffic.

Table 13. Volume Capacity Ratio and Level of Service (With and Without the Project)

Scenario		2027	2028	2035	2045	2055
MacArthur Highway without the Project	VC	0.46	0.47	0.57	0.72	0.91
	LOS	B	B	C	D	E
MacArthur Highway with the Project	VC	0.34	0.33	0.39	0.49	0.62
	LOS	B	B	B	B	C

In summary, the Project is expected to produce positive traffic impact by reducing overall travel time of MacArthur Highway.

Comparative Proponent is anticipated to conduct its own due diligence when it comes to the traffic forecasting, and is encouraged to not be dependent on the provided data and information.

4. Proposed PPP Structure

4.1 Overall PPP Structure

The contractual arrangement for the Project is Build-Operate-and-Transfer (BOT) with contract duration of thirty-four (34) years starting from the contract effectivity.

The Concessionaire shall be responsible for the finance, design construction, operating, maintenance and revenue risks and will receive compensation in the form of toll fees levied on road users, as well as the option to extract commercial revenues along the right-of-way.

Additionally, the Concessionaire shall have the obligation to acquire and procure the ROW requirements of the project from the basic ROW and other affected land owners and may only ask for assistance from the Grantor when the Concessionaire exhausts its options and fails to do the acquisition on its own. Securing the interconnection points is also included in the risk of the Concessionaire.

DPWH will bear the risk for securing the right-of-way upon request of the Concessionaire.

A schematic of the PPP structure is provided in table below:

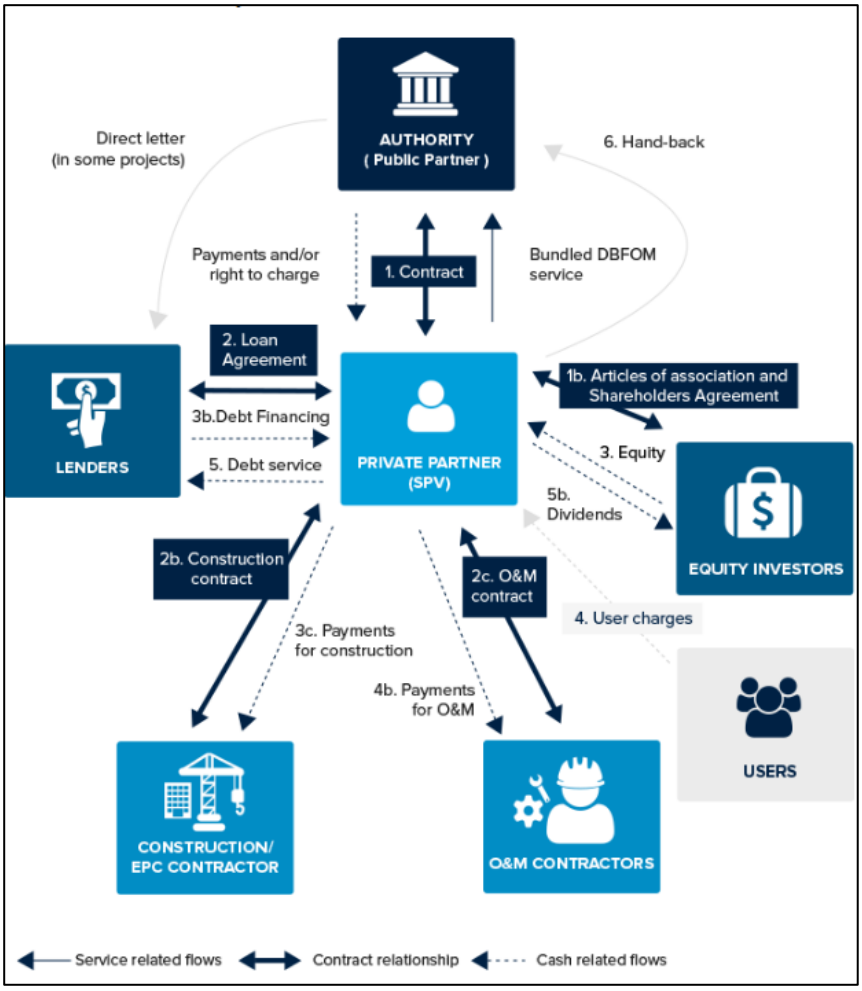

Figure 3. PPP Project Structure

NOTE:
DBFOM=Design-Build-Finance-Operate-Maintain;
EPC=Engineering, Procurement, Construction;
O&M= operation and maintenance; SPV= special purpose vehicle.

SOURCE: APMG International

4.2 Key Project Terms

The Concession Agreement between the Government [acting through DPWH] and the Concessionaire sets out the terms and conditions on which the parties will complete the TPELX Extension Project. The key terms of the Concession Agreement are summarize in the table shown below.

Table 14. Key Features of the Concession Agreement

Feature	Terms
Grantor	DPWH
Concession Period	• 34 years commencing from the effectivity of the Concession Agreement. • Construction period is subject to extensions of time allowed in the Agreement, the Project shall be completed within a period of five (5) years from the Construction Commencement Date in accordance with the Timetable.
Financial Close	The date on which the Financing Agreements have been signed for the funding of the Project Cost; provided that Financial Close shall occur not later than eighteen (18) months from the issuance of the first Notice to Commence Construction. Such period may be extended by the mutual agreement between the Grantor and the Concessionaire or as allowed under the Concession Agreement.
Bid Parameter	The bid parameter is the lowest proposed initial toll rate per kilometer with Value Added Tax ("VAT").
Right-of-Way	• The Concessionaire shall ensure the availability of, unrestricted access to and quiet enjoyment of the Site in accordance with the Right-of-Way and Project Site Delivery Schedule. In doing so, the Concessionaire may, in determining the Appropriate Price Offer, engage the services of a Government Financial Institution ("GFI") with adequate experience in property appraisal, or an Independent Property Appraiser ("IPA") accredited by the Bangko Sentral ng Pilipinas ("BSP") or a professional association of appraisers recognized by the BSP to be procured. The Concessionaire may utilize the relevant provisions of Republic Act No. 9184 in engaging the latter entities; • The Concessionaire shall be responsible for the removal or appropriate abatement of all liens, encumbrances, and Hazardous Substances, and Items of Archeological Interest in the Site
Utility Relocation	• The Concessionaire shall provide and ensure that the appropriate public utilities like water, electricity, lampposts, streetlights, telephone, telex, fax, and other utilities necessary for the

Feature	Terms
	construction, testing and commissioning of the Project are available at the Site or have been duly relocated to provide the Right-Of-Way for the Project. • The Concessionaire shall bear all costs, expenses, and funding incurred in relation to the acquisition of the Project Site including any costs or compensation required to be paid for the acquisition thereof including, but are not limited to, removal or clearing of the site of any Utilities and other obstructions, whether man-made or otherwise, which may include any form of severe pollution or other extreme environmental hazard, fossils.
Toll Rates	The toll rate will be fixed under three vehicle classes: • Class 1 : Vehicles with 2 axles and up to 7 feet in height (e.g cars, jeepneys, vans, auv, suv) • Class 2 : Vehicles with 2 axles and more than 7 feet in height (passenger bus, delivery vans) Vehicles with 3 or more axles and less than 7 feet in height (delivery vans, small trucks, class 1 vehicle with a trailers) • Class 3 : Vehicles with 3 or more axles and a height of more than 7 feet in height (e.g. container/trailer trucks, cement mixers, and other large trucks) The Concessionaire shall be entitled to the first Toll Rate Adjustment on 1 January of the year immediately succeeding the second anniversary of the date of issuance of the Toll Operation Permit. The initial opening toll rate which will be adjusted every two years based on the below formula: $$\boldsymbol{TR_n = TR_x\, x\, (\frac{CPI_n}{CPI_x})}$$ $\boldsymbol{TR_n}$: new Base Toll for the nth periodic adjustment $\boldsymbol{TR_x}$: Base Toll, $TR_x = TR_{n-1}$ $\boldsymbol{TR_{n-1}}$: the base toll as of the last ((n-1)th) periodic adjustment, except for the first periodic adjustment which will be the Authorized Opening Toll Rate. $\boldsymbol{CPI_n}$: Consumer Price Index, issued by the Philippine Statistics Authority, for the month prior of the new periodic adjustment application.

Feature	Terms
	CPI_x : Consumer Price Index, issued by the Philippine Statistics Authority, for the month corresponding to the month when the most recent extraordinary Toll adjustment was implemented; provided that if no extraordinary Toll adjustment was granted, $$CPI_x = CPI_{n-1}$$ CPI_{n-1} : Consumer Price Index, issued by the Philippine Statistics Authority, for the month of the last ((n - 1)th) periodic adjustment, except for the first periodic adjustment which will be the month corresponding to when the Authorized Opening Toll Rate was applied or the January 2027 CPI if the first Toll Operation Permit is issued on or before 2027.
Commercial Revenues	• Revenues generated, collected and retained by the Concessionaire in the exercise of rights over Commercial Assets. Fifty per cent (50%) of gross revenue from commercial revenue shall be the share of the ROP through the Grantor. • The Grantor hereby grants the Concessionaire and acknowledges the Concessionaire's exclusive and irrevocable rights to develop Commercial Assets, including the right to lease or sublease or assign interests in, and to collect and receive any and all income from, but not limited to, advertising, car, installation of cables, telephone lines, fiber optics or water mains, water lines and other business or commercial ventures or activities over all areas and aspects of the Project with commercial development potentials, including, but not limited to, the following areas/activities: a. Advertising in, on, and around the Site; b. Lease of space inside the Site; c. Toll and non-toll related Facilities; and d. Other income realized from the Project by the Concessionaire itself or other business ventures of the Concessionaire.
Construction	
DPWH Key Responsibilities	• Guarantees the Concessionaire's continuous, peaceful, exclusive and uninterrupted use and Clean Possession of the portions of the Site which the Grantor expropriated under Applicable Law during the term of the Concession Agreement up to Transfer Date and shall defend the Concessionaire's rights thereto against any and all third-party claims. • Issue and/or assist in obtaining all Consents from, and enter into all necessary agreements with, Government Authority and any and all parties whether governmental or private, now or which may hereafter become necessary for the continued operation of the Project, including but not limited to the following:

Feature	Terms
	i. Consents necessary for the acquisition of the Site. ii. Consents necessary for the completion of the Works; iii. Consents necessary to continue the operation of the Project as proposed by the Concessionaire; iv. Compliance with relevant requirements necessary to operate the Project; and v. Approval of fees to be charged by the Concessionaire and any adjustments thereof necessary for the Project as proposed by the Concessionaire. • Assist the Concessionaire in obtaining or relocating the Utilities at the Site such as, without limitation, water, power and communication facilities; provided, however, that if the Project is delayed by reason of the non-availability of any necessary Utility without fault or negligence on the part of the Concessionaire, then the Concessionaire shall not be in default, the Works Performance Security shall not be callable, and the Timetable and/or the Concession Period shall be extended by an appropriate period not being less than the period of the delay. • Provide assistance in relation to the Concessionaire's registration, application and qualification for tax exemptions and other investment incentives allowed by the BOT Law and the Omnibus Investments Code. • Assistance to the Concessionaire to enable the latter to fully and timely avail of all tax incentives available under Applicable Law, and shall assist the Concessionaire in availing of fiscal and other investment incentives under the Omnibus Investment Code and under other existing laws and regulations.
Concessionaire's Key Responsibilities	• Apply, secure and pay for all the permits and licenses necessary for the Project as required herein; • Obtain Financial Close within the periods indicated in this Agreement or eighteen (18) months from the Notice to Commence Construction; • Ensure that the Works shall conform with the MPSS; • Pay all the necessary Taxes on the Project including applicable real property tax until the end of the Concession Period or until the end of any approved extension. • Coordinate with the relevant local government unit/s in arranging traffic rerouting and other traffic management measures in accordance with the Timetable as may be necessary for the unimpeded construction at the Site as provided in the

Feature	Terms
	Specifications, and in connection therewith, coordinate and make necessary arrangements with the Competent Authorities to ensure that Works are done in accordance with the Timetable. • As a general rule, there shall be no change in control during the Lock-In Period. Any transfers of controlling interest made after the Lock-In Period shall comply to constitutional and statutory requirements on ownership. • The Concessionaire's equity structure shall comply with the Equity Requirements; • During the Lock-In Period, the Concessionaire shall not register nor otherwise permit any major transfer or change in its Equity structure; • The Concessionaire shall submit a report listing all entities which own, directly or indirectly, regardless of the number of layers of holding companies, corporate vehicles, trusts, or other such entities, at least five percent (5%) of the outstanding common shares of stock and/or other shares of stock entitled to vote of the Concessionaire on or before the date of each anniversary of the Signing Date during the term of the Concession Agreement. • No restrictions shall be imposed from the expiry of the Lock-In Period onwards, provided that the Concessionaire shall notify the Grantor on any changes in equity or any rights in relation to such equity. • Utilize geocells, as necessary, on selected areas to be determined during the conduct of the Detailed Engineering Design.
Non-compliance	• Project Operations and Maintenance – The Concessionaire/Facility Operator shall comply with the minimum Key Performance Indicators (KPIs) for the Operation and Maintenance of the Project and shall be subjected to the liquidated damages, expressed in Toll Equivalent Units (TEUs) to be imposed by the Grantor in cases of non-compliance as indicated in the MPSS. • Should the Concessionaire fail to make any repairs which it is liable to perform, or fail to commence work thereon or continue said works diligently after a reasonable period of time as specified in the approved Operation and Maintenance Manual and the Minimum Performance Standards and Specifications for Operation and Maintenance, the Grantor shall serve written notice to the Concessionaire of its failure to make the repairs and shall be subject to the corresponding payment obligations (O&M Liquidated Damages) prescribed in the MPSS to be imposed by DPWH for non-compliance therewith.

Feature	Terms
	• Should the Grantor discover any deviation from, or non-compliance with this Concession Agreement, including the Minimum Performance Standards and Specifications, and the Certified DED, as validated by the Independent Certification Engineer, the Grantor shall require the Concessionaire to remedy any defects, deviations or lapses identified within a reasonable period. • A pattern of continuing or repeated non-compliances, willful violation, or non-performance of other terms and conditions in the Concession Agreement, is hereby deemed a material breach of the Concession Agreement if the operation or maintenance of the Facilities has been materially and adversely affected.
Operations	
O&M – Concessionaire Responsibilities	• To guarantee the faithful performance by the Concessionaire/Facility Operator of its obligations in respect to the operation and maintenance of the Project, the Concessionaire shall post and maintain during the entire Operation Period in favor of the Grantor not later than thirty (30) days from the issuance of the first Certificate of Substantial Completion, an Operation and Maintenance Performance Security in the form of cash, manager's check, cashier's check, bank draft or guarantee confirmed by a local bank (in case it is issued by a foreign bank), letter of credit issued by a reputable bank, surety bond, or a combination of any of the foregoing, in the amount of One Hundred Million Pesos (P 100,000,000.00) Indexed every three (3) years, which must have a validity of at least one (1) year, and shall be renewed or replaced every year prior to its expiration until the end of the Concession Period. The Operation and Maintenance Performance Security must be valid until ninety (90) calendar days after the turnover of the Facilities or issuance of the Warranty Security, whichever is earlier. • Yearly payment of the O&M Performance Security is for strict compliance of the Winning Bidder or Original Proponent in order to warrant the validity of the corresponding security. • The O&M Manual shall be prepared by the Concessionaire, and submit not later than three (3) months prior to intended date of operations. The same shall be reviewed and certified by the Independent Consultant and approved by the Grantor.
O&M – DPWH Responsibilities	• The Grantor and/or TRB shall have the right to inspect any part of the Project including the Toll Collection System and Facilities, taking into account at all times the traffic flow and level of service in order to determine the Concessionaire's compliance with all the obligations specified under this Agreement. • The Grantor shall have the right to install and maintain necessary facilities/equipment to ensure the efficient and proper monitoring of the Project with concurrence of the Concessionaire as to the technical aspect, which shall not be unreasonably withheld. All costs related to the exercise of this right shall be charged against

Feature	Terms
	Project Overhead Expenses, provided that anything in excess shall be at Grantor's own cost.
Transfer of Ownership	• At the end of the Concession Period, the Concessionaire shall transfer the ownership of the Project including all facilities, structures and improvements, and shall execute such documents, i.e., deeds of transfer, among others, as may reasonably be necessary to effect such transfer to the Grantor or its Designee, free from any lien or encumbrance created by the Concessionaire for all its rights, title to, and interest in the Project. Any and all cost related to the turn-over or transfer of ownership shall be borne by the Concessionaire without cost to the Government, without prejudice to the Contract. • No later than two (2) years prior to the Transfer Date, the Parties shall have established the procedures and protocol for the transfer and handover of the Project to the Grantor or its Designee (the "Handover Protocol"). The Handover Protocol shall also provide for, among others, the required condition of the assets comprising the Project on the Transfer Date and the warranties for such assets. • The Grantor shall issue an audit observation within sixty (60) days from the joint inspection indicating whether the Toll Road and its Facilities comply with the MPSS. • Concessionaire shall remedy and address the audit observation within ninety (90) to one hundred twenty (120) days, extendible subject to the mutual agreement of the Parties, from receipt of the audit observation. The Grantor shall confirm within thirty (30) days from receipt of Concessionaire's report, whether the Concessionaire was able to comply with the MPSS. • Prior to the Transfer Date, the Concessionaire shall arrange for the transfer of knowledge, manuals, and documents and the training of certain key personnel of the Grantor on matters related to the operation of the Project. The Grantor or its Designee shall accept the transfer of the Project at the Transfer Date. The Concessionaire shall also deliver to the Grantor or its Designee on such date such manuals, software, data and files, operation plans, Asset Register, As-Built and other information as may reasonably be required by the Grantor or its Designee to enable it to take over the operation of the Project. • Inventories. One hundred eighty (180) days prior to the end of the Concession Period, the Grantor and the Concessionaire shall conduct an inventory of the assets of the Project and agree on the mechanics of transfer and turnover including the security arrangements; provided, however, that the Concessionaire shall be liable for any discrepancies between the inventory made and the actual inventory transferred to the Grantor or its Designee; provided, further, that the Concessionaire shall continue to exercise

Feature	Terms
	the same care regarding the Project until actual transfer thereof to the Grantor or its Designee. • Turnover/Transfer. Only the premises, properties, equipment and things enumerated in in the inventory made as part of the Project shall be turned over/transferred to the Grantor or its Designee free from any lien or encumbrance. Any and all cost related to the turnover or transfer of ownership shall be borne by the Concessionaire without cost to the Government. A third party appraiser shall be commissioned to assess the residual value of the facility upon transfer or turnover of the facility to the Grantor. • Transfer Security. One year prior to the Transfer Date, the Concessionaire shall deliver a Transfer Security to the Grantor, in the amount of One Hundred Million Pesos (P 100,000,000.00) Indexed from Signing Date, in the form of cash, letter/s of credit, or bank draft/guarantee issued by a reputable local/foreign bank, or a surety bond issued by the GSIS or an entity duly registered and recognized by the Office of the Insurance Commissioner or a combination of all which shall be valid until the Grantor determines that the Concessionaire has complied with his obligations under Sections 18.1, 18.2 and 18.3 above and issues an acceptance certificate. • Warranties. On the Transfer Date, the Concessionaire shall deliver the Warranty Security, in the amount of One Hundred Million Pesos (P 100,000,000.00) Indexed from Signing Date, in the form of cash, letter/s of credit, or bank draft/guarantee issued by a reputable local/foreign bank, or a surety bond issued by the GSIS or an entity duly registered and recognized by the Office of the Insurance Commissioner or a combination of all which shall be valid for a period of one (1) year from the turnover of the Facilities. The Concessionaire shall be under no liability whatsoever to the Grantor or its Designee in respect of any obligation of the Grantor, or any person designated by the Grantor. The Grantor shall likewise fully indemnify and keep fully indemnified at all times the Concessionaire against any liability to any person arising from the use or operation of the Project after the Transfer Date.

Source: Negotiated Concession Agreement

4.3 Interconnection Agreement

As stated in the Negotiated Concession Agreement, within three (3) months prior to the estimated issuance by the TRB of the first Toll Operation Permit, the Concessionaire shall enter into an interconnection and interoperability agreement with SMC TPLEX Corporation or the TPLEX concessionaire and operator for the interconnection of the Project with TPLEX to provide a seamless integration of these expressway systems, including (but not limited to) the following:

a. coordination and procedure for the distribution of the respective portions of the toll collected from the users of the TPLEX and Project; and
b. enable vehicles to pay a combined toll for both expressways at the toll booth at which it exits.

All costs incurred by the Concessionaire in relation to the interoperability such be for the account of the Concessionaire, however may be shared with or passed on to SMC TPLEX Corporation, or the TPLEX concessionaire, as may be mutually agreed upon by the parties.

The Grantor shall require the Concessionaire to enter into an interoperability agreement with other toll road operators or concessionaires for the same purpose as indicated in the first paragraph of Section 4.3 Interconnection Agreement. The interoperability applies to the expressway system and to future projects.

The existing Memorandum of Agreement for Toll Collection Interoperability and all subsequent agreements entered into pursuant to the aforesaid MOA are intended to cover and be binding on all Covered Expressways (including those that currently have no designated expressway operators) and for future toll expressways. Each of the DOTr, TRB and DPWH, undertakes that it will cause new concessionaires and operators to adhere to this MOA and other Agreements, as applicable, and to sign a corresponding Accession Agreement thereto.

The Toll Collection Interoperability MOA and any other documents and/or understanding that may be contemplated in the said MOA shall contain the entire agreement among the Parties with respect to the subject matter hereof. It shall supersede and cancel all prior agreements whether oral or written, letters of intent, term sheets, memoranda of understanding or otherwise with respect thereto. In case of inconsistencies with any other agreements or contracts, the provisions of this MOA shall prevail.

4.4 Key Project Milestones

The key project milestones and expected completion date for the Project is summarized in the below figure.

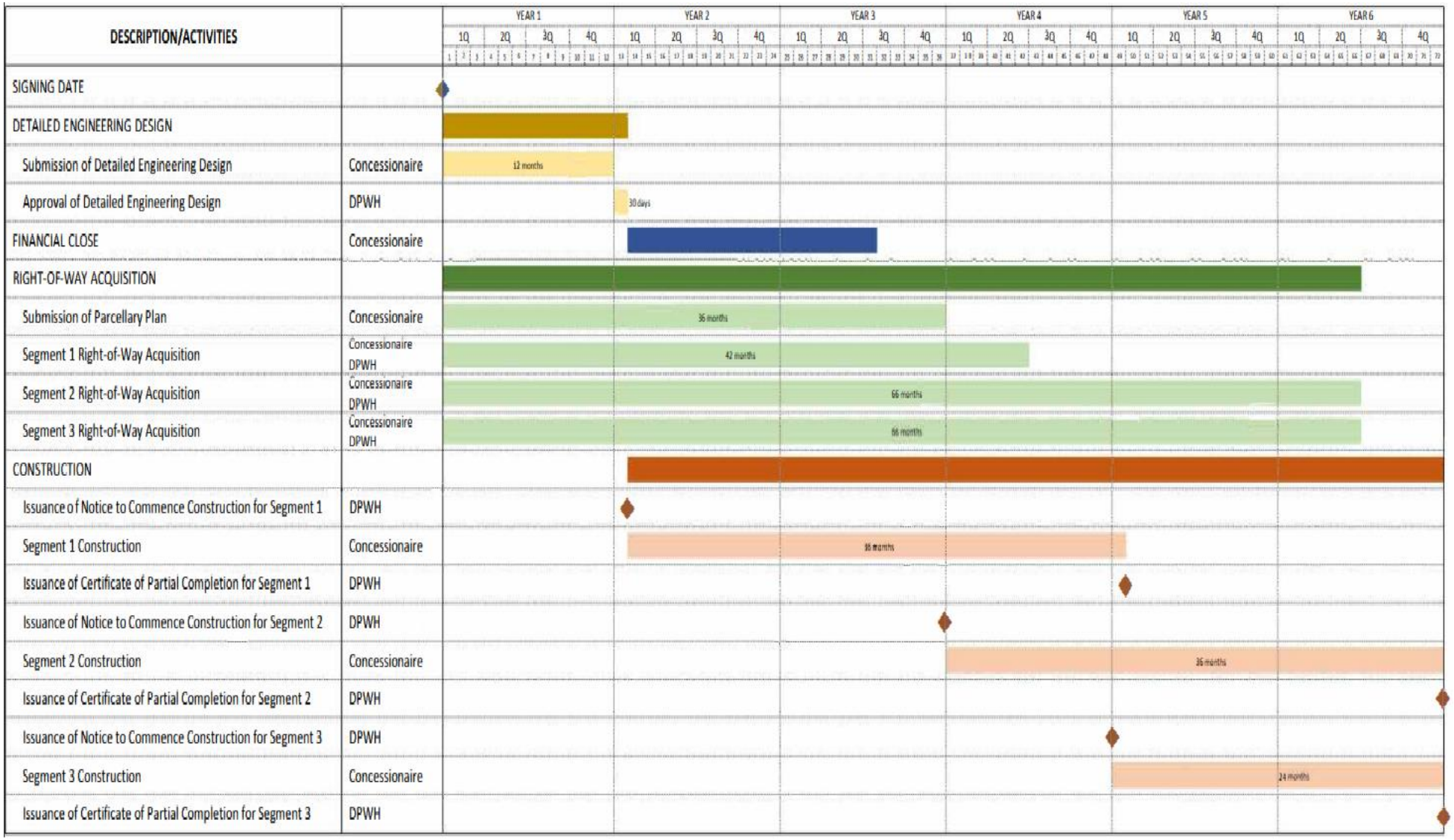

Figure 4. Project Milestone

4.4.1 Issuance of TRB Certificate for Initial Authorized Toll Rate

The Concessionaire shall prepare all application requirements for the issuance of Toll Operation Permit [TOP] for Segment 1 of the Project once the Certificate of Substantial Completion for the segment was issued. Thereafter, the DPWH will submit to TRB the said requirements to commence the processing and issuance of the TOP for Segment 1 of the Project, if found in order.

The said approved toll rates will be provided to the Concessionaire once obtained by the DPWH.

4.4.2 Issuance of Notice to Commence Construction

The Grantor shall issue a Notice to Commence Construction for the whole Project or by Segment upon issuance of a certification from the Independent Consultant of the availability of the Right-of-Way (95% available and workable) and upon approval of the Detailed Engineering Design.

5. Points of Contact

The Government of the Philippines represented by the Department of Public Works and Highways can be contacted as shown below:

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