

# Negotiated Contract Agreement

**Country: Bhutan**

**Project Name: Bhutan Green Transport Project**

**Grant No. TF0B2189**

***Title of Consulting Services: Technical and Safeguards Preparation (International) – for development of priority bus service infrastructure, pedestrianization of downtown Thimphu City, and Low or Zero Emission bus fleet, low emission transport master plan.***

**March, 2022**

**Thimphu Thromde**

*[Handwritten signatures]*

## Preface

1. The standard Contract form consists of four parts: the Form of Contract to be signed by the Client and the Consultant, the General Conditions of Contract (GCC), including Attachment 1 - Fraud and Corruption; the Special Conditions of Contract (SCC); and the Appendices.
2. The General Conditions of Contract, including Attachment 1, shall not be modified. The Special Conditions of Contract that contain clauses specific to each Contract intend to supplement, but not over-write or otherwise contradict, the General Conditions.

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## CONTRACT FOR CONSULTANT'S SERVICES

**Lump-Sum**

**Project Name:** Bhutan Green Transport

**Grant No.** TF0B2189

**Contract No.** BT-TT-149565-CS-QCBS

Assignment Title: Consultancy for Technical and Safeguards Preparation (International) – for development of priority bus service infrastructure, pedestrianization of downtown Thimphu City, and Low or Zero Emission bus fleet, low emission transport master plan.

**between**

Thimphu Thromde,  
NPPF Building No.08  
Gongzin Lam,  
Thimphu 11001, BHUTAN

**and**

SUNJIN Engineering & Architecture Co., Ltd.  
126 Beolmal-ro, Dongan-gu  
Anyang, Gyeonggi 14057 KOREA  
Email: [sunjinpj@sunjin.co.kr](mailto:sunjinpj@sunjin.co.kr)  
[www.sunjin.co.kr](http://www.sunjin.co.kr)

Dated: 21/3/22



## I. Form of Contract

### LUMP-SUM

This CONTRACT (hereinafter called the "Contract") is made the 14<sup>th</sup> day of the month of March 2022, between, on the one hand, *Thimphu Thromde, Royal Government of Bhutan* (hereinafter called the "Client") and, on the other hand, *SUNJIN Engineering & Architecture Co., Ltd* (hereinafter called the "Consultant").

#### WHEREAS

- (a) the Client has requested the Consultant to provide certain consulting services as defined in this Contract (hereinafter called the "Services");
- (b) the Consultant, having represented to the Client that it has the required professional skills, expertise and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract;
- (c) the Client has received a grant from the Ministry of Economy and Finance of the Republic of Korea, which are administered by the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA) toward the cost of the Services and intends to apply a portion of the proceeds of this grant to eligible payments under this Contract, it being understood that (i) payments by the Bank will be made only at the request of the Client and upon approval by the Bank; (ii) such payments will be subject, in all respects, to the terms and conditions of the grant agreement, including prohibitions of withdrawal from the grant account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by the decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations; and (iii) no party other than the Client shall derive any rights from the grant agreement or have any claim to the grant proceeds;



NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:
  - (a) The General Conditions of Contract (including Attachment I "Fraud and Corruption");
  - (b) The Special Conditions of Contract;
  - (c) Appendices:

Appendix A: Terms of Reference

Appendix B: Key Experts

Appendix C: Breakdown of Contract Price

Appendix D: Form of Advance Payments Guarantee ( this is not applicable in this contract)

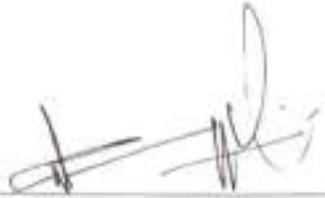
In the event of any inconsistency between the documents, the following order of precedence shall prevail: the Special Conditions of Contract; the General Conditions of Contract, including Attachment I; Appendix A; Appendix B; Appendix C; Appendix D. Any reference to this Contract shall include, where the context permits, a reference to its Appendices.

2. The mutual rights and obligations of the Client and the Consultant shall be as set forth in the Contract, in particular:
  - (a) the Consultant shall carry out the Services in accordance with the provisions of the Contract; and
  - (b) the Client shall make payments to the Consultant in accordance with the provisions of the Contract.



IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of the *Thimphu Thromde, Royal Government of Bhutan*

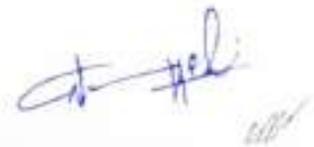


*Karma Namgyel,  
Executive Secretary.*

For and on behalf of the *SUNJIN Engineering & Architecture Co., Ltd.*



*Bae, Sung Jin  
President/CEO.*



## II. General Conditions of Contract

### A. GENERAL PROVISIONS

#### 1. Definitions

- 1.1 Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:
- (a) "Applicable Law" means the laws and any other instruments having the force of law in the Client's country, or in such other country as may be specified in the **Special Conditions of Contract (SCC)**, as they may be issued and in force from time to time.
  - (b) "Bank" means the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).
  - (c) "Borrower" means the Government, Government agency or other entity that signs the financing agreement with the Bank.
  - (d) "Client" means the implementing agency that signs the Contract for the Services with the Selected Consultant.
  - (e) "Consultant" means a legally-established professional consulting firm or entity selected by the Client to provide the Services under the signed Contract.
  - (f) "Contract" means the legally binding written agreement signed between the Client and the Consultant and which includes all the attached documents listed in its paragraph 1 of the Form of Contract (the General Conditions (GCC), the Special Conditions (SCC), and the Appendices).
  - (g) "Day" means a working day unless indicated otherwise.
  - (h) "Effective Date" means the date on which this Contract comes into force and effect pursuant to Clause GCC 11.
  - (i) "Experts" means, collectively, Key Experts, Non-Key Experts, or any other personnel of the Consultant, Sub-consultant or JV member(s) assigned by the Consultant to perform the Services or any part thereof under the Contract.
  - (j) "Foreign Currency" means any currency other than the currency of the Client's country.
  - (k) "GCC" means these General Conditions of Contract.
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- (l) "Government" means the government of the Client's country.
- (m) "Joint Venture (JV)" means an association with or without a legal personality distinct from that of its members, of more than one entity where one member has the authority to conduct all businesses for and on behalf of any and all the members of the JV, and where the members of the JV are jointly and severally liable to the Client for the performance of the Contract.
- (n) "Key Expert(s)" means an individual professional whose skills, qualifications, knowledge and experience are critical to the performance of the Services under the Contract and whose Curricula Vitae (CV) was taken into account in the technical evaluation of the Consultant's proposal.
- (o) "Local Currency" means the currency of the Client's country.
- (p) "Non-Key Expert(s)" means an individual professional provided by the Consultant or its Sub-consultant to perform the Services or any part thereof under the Contract.
- (q) "Party" means the Client or the Consultant, as the case may be, and "Parties" means both of them.
- (r) "SCC" means the Special Conditions of Contract by which the GCC may be amended or supplemented but not over-written.
- (s) "Services" means the work to be performed by the Consultant pursuant to this Contract, as described in Appendix A hereto.
- (t) "Sub-consultants" means an entity to whom/which the Consultant subcontracts any part of the Services while remaining solely liable for the execution of the Contract.
- (u) "Third Party" means any person or entity other than the Government, the Client, the Consultant or a Sub-consultant.

- 2. Relationship between the Parties** 2.1. Nothing contained herein shall be construed as establishing a relationship of master and servant or of principal and agent as between the Client and the Consultant. The Consultant, subject to this Contract, has complete charge of the Experts and Sub-consultants, if any, performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.
- 3. Law Governing Contract** 3.1. This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.
- 4. Language** 4.1. This Contract has been executed in the language specified in the SCC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.
- 5. Headings** 5.1. The headings shall not limit, alter or affect the meaning of this Contract.
- 6. Communications** 6.1. Any communication required or permitted to be given or made pursuant to this Contract shall be in writing in the language specified in Clause GCC 4. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified in the SCC.
- 6.2. A Party may change its address for notice hereunder by giving the other Party any communication of such change to the address specified in the SCC.
- 7. Location** 7.1. The Services shall be performed at such locations as are specified in **Appendix A** hereto and, where the location of a particular task is not so specified, at such locations, whether in the Government's country or elsewhere, as the Client may approve.
- 8. Authority of Member in Charge** 8.1. In case the Consultant is a Joint Venture, the members hereby authorize the member specified in the SCC to act on their behalf in exercising all the Consultant's rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.
- 9. Authorized Representatives** 9.1. Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Client or the Consultant may be taken or executed by the officials specified in the SCC.
- 10. Fraud and** 10.1 The Bank requires compliance with the Bank's Anti-Corruption
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- Corruption** Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Attachment 1 to the GCC.
- a. **Commissions and Fees** 10.2 The Client requires the Consultant to disclose any commissions, gratuities or fees that may have been paid or are to be paid to agents or any other party with respect to the selection process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee. Failure to disclose such commissions, gratuities or fees may result in termination of the Contract and/or sanctions by the Bank.

## **B. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF CONTRACT**

- 11. Effectiveness of Contract** 11.1. This Contract shall come into force and effect on the date (the "Effective Date") of the Client's notice to the Consultant instructing the Consultant to begin carrying out the Services. This notice shall confirm that the effectiveness conditions, if any, listed in the SCC have been met.
- 12. Termination of Contract for Failure to Become Effective** 12.1. If this Contract has not become effective within such time period after the date of Contract signature as specified in the SCC, either Party may, by not less than twenty two (22) days written notice to the other Party, declare this Contract to be null and void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party with respect hereto.
- 13. Commencement of Services** 13.1. The Consultant shall confirm availability of Key Experts and begin carrying out the Services not later than the number of days after the Effective Date specified in the SCC.
- 14. Expiration of Contract** 14.1. Unless terminated earlier pursuant to Clause GCC 19 hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SCC.
- 15. Entire Agreement** 15.1. This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.
- 16. Modifications or Variations** 16.1. Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party.
- 16.2. In cases of substantial modifications or variations, the prior written consent of the Bank is required.
- 17. Force Majeure**
- a. Definition** 17.1. For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible under the circumstances, and subject to those requirements, includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse

weather conditions, strikes, lockouts or other industrial action confiscation or any other action by Government agencies.

17.2. Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party's Experts, Sub-consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to both take into account at the time of the conclusion of this Contract, and avoid or overcome in the carrying out of its obligations hereunder.

17.3. Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

**b. No Breach of Contract** 17.4. The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.

**c. Measures to be Taken** 17.5. A Party affected by an event of Force Majeure shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

17.6. A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any case not later than fourteen (14) calendar days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give written notice of the restoration of normal conditions as soon as possible.

17.7. Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

17.8. During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant, upon instructions by the Client, shall either:

- (a) demobilize, in which case the Consultant shall be reimbursed for additional costs they reasonably and necessarily incurred, and, if required by the Client, in reactivating the Services; or
- (b) continue with the Services to the extent reasonably possible, in which case the Consultant shall continue to be paid under the terms of this Contract and be reimbursed for additional costs reasonably and necessarily incurred.

17.9. In the case of disagreement between the Parties as to the existence or extent of Force Majeure, the matter shall be settled according to Clauses GCC 44 & 45.

## 18. Suspension

18.1. The Client may, by written notice of suspension to the Consultant, suspend part or all payments to the Consultant hereunder if the Consultant fails to perform any of its obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultant to remedy such failure within a period not exceeding thirty (30) calendar days after receipt by the Consultant of such notice of suspension.

## 19. Termination

19.1. This Contract may be terminated by either Party as per provisions set up below:

### a. By the Client

19.1.1. The Client may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (f) of this Clause. In such an occurrence the Client shall give at least thirty (30) calendar days' written notice of termination to the Consultant in case of the events referred to in (a) through (d); at least sixty (60) calendar days' written notice in case of the event referred to in (e); and at least five (5) calendar days' written notice in case of the event referred to in (f):

- (a) If the Consultant fails to remedy a failure in the performance of its obligations hereunder, as specified in a notice of suspension pursuant to Clause GCC 18;
- (b) If the Consultant becomes (or, if the Consultant consists of more than one entity, if any of its members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or

receivership whether compulsory or voluntary;

- (c) If the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause GCC 45.1;
- (d) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days;
- (e) If the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract;
- (f) If the Consultant fails to confirm availability of Key Experts as required in Clause GCC 13.

19.1.2. Furthermore, if the Client determines that the Consultant has engaged in Fraud and Corruption in competing for or in executing the Contract, then the Client may, after giving fourteen (14) calendar days written notice to the Consultant, terminate the Consultant's employment under the Contract.

**b. By the Consultant**

19.1.3. The Consultant may terminate this Contract, by not less than thirty (30) calendar days' written notice to the Client, in case of the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause.

- (a) If the Client fails to pay any money due to the Consultant pursuant to this Contract and not subject to dispute pursuant to Clause GCC 45.1 within forty-five (45) calendar days after receiving written notice from the Consultant that such payment is overdue.
- (b) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days.
- (c) If the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause GCC 45.1.
- (d) If the Client is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Consultant may have subsequently approved in writing)

following the receipt by the Client of the Consultant's notice specifying such breach.

- c. **Cessation of Rights and Obligations** 19.1.4. Upon termination of this Contract pursuant to Clauses GCC 12 or GCC 19 hereof, or upon expiration of this Contract pursuant to Clause GCC 14, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause GCC 22, (iii) the Consultant's obligation to permit inspection, copying and auditing of their accounts and records set forth in Clause GCC 25 and to cooperate and assist in any inspection or investigation, and (iv) any right which a Party may have under the Applicable Law.
- d. **Cessation of Services** 19.1.5. Upon termination of this Contract by notice of either Party to the other pursuant to Clauses GCC 19a or GCC 19b, the Consultant shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultant and equipment and materials furnished by the Client, the Consultant shall proceed as provided, respectively, by Clauses GCC 27 or GCC 28.
- e. **Payment upon Termination** 19.1.6. Upon termination of this Contract, the Client shall make the following payments to the Consultant:
- (a) payment for Services satisfactorily performed prior to the effective date of termination; and
  - (b) in the case of termination pursuant to paragraphs (d) and (e) of Clause GCC 19.1.1, reimbursement of any reasonable cost incidental to the prompt and orderly termination of this Contract, including the cost of the return travel of the Experts.

### C. OBLIGATIONS OF THE CONSULTANT

#### 20. General

- a. **Standard of Performance** 20.1 The Consultant shall perform the Services and carry out the Services with all due diligence, efficiency and economy, in

accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as a faithful adviser to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with the third parties.

20.2. The Consultant shall employ and provide such qualified and experienced Experts and Sub-consultants as are required to carry out the Services.

20.3. The Consultant may subcontract part of the Services to an extent and with such Key Experts and Sub-consultants as may be approved in advance by the Client. Notwithstanding such approval, the Consultant shall retain full responsibility for the Services.

**b. Law  
Applicable to  
Services**

20.4. The Consultant shall perform the Services in accordance with the Contract and the Applicable Law and shall take all practicable steps to ensure that any of its Experts and Sub-consultants, comply with the Applicable Law.

20.5. Throughout the execution of the Contract, the Consultant shall comply with the import of goods and services prohibitions in the Client's country when

- (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country; or
- (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that country or any payments to any country, person, or entity in that country.

20.6. The Client shall notify the Consultant in writing of relevant local customs, and the Consultant shall, after such notification, respect such customs.

**21. Conflict of Interest**

21.1. The Consultant shall hold the Client's interests paramount, without any consideration for future work, and strictly avoid conflict with other assignments or their own corporate interests.

**a. Consultant  
Not to Benefit**

21.1.1 The payment of the Consultant pursuant to GCC F (Clauses GCC 38 through 42) shall constitute the Consultant's

- from Commissions, Discounts, etc.**
- only payment in connection with this Contract and, subject to Clause GCC 21.1.3, the Consultant shall not accept for its own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or in the discharge of its obligations hereunder, and the Consultant shall use its best efforts to ensure that any Sub-consultants, as well as the Experts and agents of either of them, similarly shall not receive any such additional payment.
- 21.1.2 Furthermore, if the Consultant, as part of the Services, has the responsibility of advising the Client on the procurement of goods, works or services, the Consultant shall comply with the Bank's Applicable Regulations, and shall at all times exercise such responsibility in the best interest of the Client. Any discounts or commissions obtained by the Consultant in the exercise of such procurement responsibility shall be for the account of the Client.
- b. Consultant and Affiliates Not to Engage in Certain Activities**
- 21.1.3 The Consultant agrees that, during the term of this Contract and after its termination, the Consultant and any entity affiliated with the Consultant, as well as any Sub-consultants and any entity affiliated with such Sub-consultants, shall be disqualified from providing goods, works or non-consulting services resulting from or directly related to the Consultant's Services for the preparation or implementation of the project.
- c. Prohibition of Conflicting Activities**
- 21.1.4 The Consultant shall not engage, and shall cause its Experts as well as its Sub-consultants not to engage, either directly or indirectly, in any business or professional activities that would conflict with the activities assigned to them under this Contract.
- d. Strict Duty to Disclose Conflicting Activities**
- 21.1.5 The Consultant has an obligation and shall ensure that its Experts and Sub-consultants shall have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultant or the termination of its Contract.
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- 22. Confidentiality** 22.1 Except with the prior written consent of the Client, the Consultant and the Experts shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Consultant and the Experts make public the recommendations formulated in the course of, or as a result of, the Services.
- 23. Liability of the Consultant** 23.1 Subject to additional provisions, if any, set forth in the SCC, the Consultant's liability under this Contract shall be provided by the Applicable Law.
- 24. Insurance to be taken out by the Consultant** 24.1 The Consultant (i) shall take out and maintain, and shall cause any Sub-consultants to take out and maintain, at its (or the Sub-consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverage specified in the SCC, and (ii) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums therefore have been paid. The Consultant shall ensure that such insurance is in place prior to commencing the Services as stated in Clause GCC 13.
- 25. Accounting, Inspection and Auditing** 25.1 The Consultant shall keep, and shall make all reasonable efforts to cause its Sub-consultants to keep, accurate and systematic accounts and records in respect of the Services and in such form and detail as will clearly identify relevant time changes and costs.
- 25.2 Pursuant to paragraph 2.2 e. of Appendix to the General Conditions the Consultant shall permit and shall cause its subcontractors and sub-consultants to permit, the Bank and/or persons appointed by the Bank to inspect the Site and/or the accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Consultant's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 10.1 which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).
- 26. Reporting Obligations** 26.1 The Consultant shall submit to the Client the reports and documents specified in **Appendix A**, in the form, in the numbers and within the time periods set forth in the said Appendix.

**27. Proprietary Rights  
of the Client in  
Reports and  
Records**

27.1 Unless otherwise indicated in the SCC, all reports and relevant data and information such as maps, diagrams, plans, databases, other documents and software, supporting records or material compiled or prepared by the Consultant for the Client in the course of the Services shall be confidential and become and remain the absolute property of the Client. The Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof. The Consultant may retain a copy of such documents, data and/or software but shall not use the same for purposes unrelated to this Contract without prior written approval of the Client.

27.2 If license agreements are necessary or appropriate between the Consultant and third parties for purposes of development of the plans, drawings, specifications, designs, databases, other documents and software, the Consultant shall obtain the Client's prior written approval to such agreements, and the Client shall be entitled at its discretion to require recovering the expenses related to the development of the program(s) concerned. Other restrictions about the future use of these documents and software, if any, shall be specified in the SCC.

**28. Equipment,  
Vehicles and  
Materials**

28.1 Equipment, vehicles and materials made available to the Consultant by the Client, or purchased by the Consultant wholly or partly with funds provided by the Client, shall be the property of the Client and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultant shall make available to the Client an inventory of such equipment, vehicles and materials and shall dispose of such equipment, vehicles and materials in accordance with the Client's instructions. While in possession of such equipment, vehicles and materials, the Consultant, unless otherwise instructed by the Client in writing, shall insure them at the expense of the Client in an amount equal to their full replacement value.

28.2 Any equipment or materials brought by the Consultant or its Experts into the Client's country for the use either for the project or personal use shall remain the property of the Consultant or the Experts concerned, as applicable.

#### **D. CONSULTANT'S EXPERTS AND SUB-CONSULTANTS**

- 29. Description of Key Experts** 29.1 The title, agreed job description, minimum qualification and estimated period of engagement to carry out the Services of each of the Consultant's Key Experts are described in **Appendix B**.
- 30. Replacement of Key Experts** 30.1 Except as the Client may otherwise agree in writing, no changes shall be made in the Key Experts.
- 30.2 Notwithstanding the above, the substitution of Key Experts during Contract execution may be considered only based on the Consultant's written request and due to circumstances outside the reasonable control of the Consultant, including but not limited to death or medical incapacity. In such case, the Consultant shall forthwith provide as a replacement, a person of equivalent or better qualifications and experience, and at the same rate of remuneration.
- 31. Removal of Experts or Sub-consultants** 31.1 If the Client finds that any of the Experts or Sub-consultant has committed serious misconduct or has been charged with having committed a criminal action, or if the Client determines that a Consultant's Expert or Sub-consultant has engaged in Fraud and Corruption while performing the Services, the Consultant shall, at the Client's written request, provide a replacement.
- 31.2 In the event that any of Key Experts, Non-Key Experts or Sub-consultants is found by the Client to be incompetent or incapable in discharging assigned duties, the Client, specifying the grounds therefore, may request the Consultant to provide a replacement.
- 31.3 Any replacement of the removed Experts or Sub-consultants shall possess better qualifications and experience and shall be acceptable to the Client.
- 31.4 The Consultant shall bear all costs arising out of or incidental to any removal and/or replacement of such Experts.

#### **E. OBLIGATIONS OF THE CLIENT**

- 32. Assistance and Exemptions** 32.1 Unless otherwise specified in the SCC, the Client shall use its best efforts to:
- (a) Assist the Consultant with obtaining work permits and such other documents as shall be necessary to enable the Consultant to perform the Services.

- (b) Assist the Consultant with promptly obtaining, for the Experts and, if appropriate, their eligible dependents, all necessary entry and exit visas, residence permits, exchange permits and any other documents required for their stay in the Client's country while carrying out the Services under the Contract.
- (c) Facilitate prompt clearance through customs of any property required for the Services and of the personal effects of the Experts and their eligible dependents.
- (c) Issue to officials, agents and representatives of the Government all such instructions and information as may be necessary or appropriate for the prompt and effective implementation of the Services.
- (d) Assist the Consultant and the Experts and any Sub-consultants employed by the Consultant for the Services with obtaining exemption from any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity in the Client's country according to the applicable law in the Client's country.
- (e) Assist the Consultant, any Sub-consultants and the Experts of either of them with obtaining the privilege, pursuant to the applicable law in the Client's country, of bringing into the Client's country reasonable amounts of foreign currency for the purposes of the Services or for the personal use of the Experts and of withdrawing any such amounts as may be earned therein by the Experts in the execution of the Services.
- (f) Provide to the Consultant any such other assistance as may be specified in the SCC.

- 33. Access to Project Site**
- 33.1 The Client warrants that the Consultant shall have, free of charge, unimpeded access to the project site in respect of which access is required for the performance of the Services. The Client will be responsible for any damage to the project site or any property thereon resulting from such access and will indemnify the Consultant and each of the experts in respect of liability for any such damage, unless such damage is caused by the willful default or negligence of the Consultant or any Sub-consultants or the Experts of either of them.
- 34. Change in the Applicable Law Related to Taxes and Duties**
- 34.1 If, after the date of this Contract, there is any change in the applicable law in the Client's country with respect to taxes and duties which increases or decreases the cost incurred by the Consultant in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the Contract price amount specified in Clause GCC 38.1
- 35. Services, Facilities and Property of the Client**
- 35.1 The Client shall make available to the Consultant and the Experts, for the purposes of the Services and free of any charge, the services, facilities and property described in the Terms of Reference (**Appendix A**) at the times and in the manner specified in said **Appendix A**.
- 36. Counterpart Personnel**
- 36.1 The Client shall make available to the Consultant free of charge such professional and support counterpart personnel, to be nominated by the Client with the Consultant's advice, if specified in **Appendix A**.
- 36.2 Professional and support counterpart personnel, excluding Client's liaison personnel, shall work under the exclusive direction of the Consultant. If any member of the counterpart personnel fails to perform adequately any work assigned to such member by the Consultant that is consistent with the position occupied by such member, the Consultant may request the replacement of such member, and the Client shall not unreasonably refuse to act upon such request.
- 37. Payment Obligation**
- 37.1 In consideration of the Services performed by the Consultant under this Contract, the Client shall make such payments to the Consultant for the deliverables specified in **Appendix A** and in such manner as is provided by GCC F below.

## F. PAYMENTS TO THE CONSULTANT

- 38. Contract Price**
- 38.1 The Contract price is fixed and is set forth in the SCC. The Contract price breakdown is provided in **Appendix C**.
- 38.2 Any change to the Contract price specified in Clause GCC 38.1 can be made only if the Parties have agreed to the revised scope of Services pursuant to Clause GCC 16 and have amended in writing the Terms of Reference in **Appendix A**.
- 39. Taxes and Duties**
- 39.1 The Consultant, Sub-consultants and Experts are responsible for meeting any and all tax liabilities arising out of the Contract unless it is stated otherwise in the SCC.
- 39.2 As an exception to the above and as stated in the SCC, all local identifiable indirect taxes (itemized and finalized at Contract negotiations) are reimbursed to the Consultant or are paid by the Client on behalf of the Consultant.
- 40. Currency of Payment**
- 40.1 Any payment under this Contract shall be made in the currency (ies) of the Contract.
- 41. Mode of Billing and Payment**
- 41.1 The total payments under this Contract shall not exceed the Contract price set forth in Clause GCC 38.1.
- 41.2 The payments under this Contract shall be made in lump-sum installments against deliverables specified in **Appendix A**. The payments will be made according to the payment schedule stated in the SCC.
- 41.2.1 *Advance payment:* Unless otherwise indicated in the SCC, an advance payment shall be made against an advance payment bank guarantee acceptable to the Client in an amount (or amounts) and in a currency (or currencies) specified in the SCC. Such guarantee (i) is to remain effective until the advance payment has been fully set off, and (ii) is to be in the form set forth in **Appendix D**, or in such other form as the Client shall have approved in writing. The advance payments will be set off by the Client in equal portions against the lump-sum installments specified in the SCC until said advance payments have been fully set off.
- 41.2.2 *The Lump-Sum Installment Payments.* The Client shall pay the Consultant within sixty (60) days after the receipt by the Client of the deliverable(s) and the cover invoice for the

related lump-sum installment payment. The payment can be withheld if the Client does not approve the submitted deliverable(s) as satisfactory in which case the Client shall provide comments to the Consultant within the same sixty (60) days period. The Consultant shall thereupon promptly make any necessary corrections, and thereafter the foregoing process shall be repeated.

41.2.3 *The Final Payment* .The final payment under this Clause shall be made only after the final report have been submitted by the Consultant and approved as satisfactory by the Client. The Services shall then be deemed completed and finally accepted by the Client. The last lump-sum installment shall be deemed approved for payment by the Client within ninety (90) calendar days after receipt of the final report by the Client unless the Client, within such ninety (90) calendar day period, gives written notice to the Consultant specifying in detail deficiencies in the Services, the final report. The Consultant shall thereupon promptly make any necessary corrections, and thereafter the foregoing process shall be repeated. 41.2.4 All payments under this Contract shall be made to the accounts of the Consultant specified in the SCC.

41.2.4 With the exception of the final payment under 41.2.3 above, payments do not constitute acceptance of the whole Services nor relieve the Consultant of any obligations hereunder.

**42. Interest on Delayed Payments**

42.1 If the Client had delayed payments beyond fifteen (15) days after the due date stated in Clause GCC 41.2.2 , interest shall be paid to the Consultant on any amount due by, not paid on, such due date for each day of delay at the annual rate stated in the SCC.

**G. FAIRNESS AND GOOD FAITH**

**43. Good Faith**

43.1 The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.

**H. SETTLEMENT OF DISPUTES**

**44. Amicable**

44.1 The Parties shall seek to resolve any dispute amicably by mutual consultation.

**Settlement**

44.2 If either Party objects to any action or inaction of the other Party, the objecting Party may file a written Notice of Dispute to the other Party providing in detail the basis of the dispute. The Party receiving the Notice of Dispute will consider it and respond in writing within fourteen (14) days after receipt. If that Party fails to respond within fourteen (14) days, or the dispute cannot be amicably settled within fourteen (14) days following the response of that Party, Clause GCC 45.1 shall apply.

**45. Dispute Resolution**

45.1 Any dispute between the Parties arising under or related to this Contract that cannot be settled amicably may be referred to by either Party to the adjudication/arbitration in accordance with the provisions specified in the SCC.

## **II. General Conditions**

### **Attachment 1**

### **Fraud and Corruption**

#### **1. Purpose**

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

#### **2. Requirements**

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

a. Defines, for the purposes of this provision, the terms set forth below as follows:

- i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
- iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- iv. "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- v. "obstructive practice" is:
  - (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

- (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
  - c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring mis-procurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
  - d. Pursuant to the Bank's Anti- Corruption Guidelines and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;<sup>1</sup> (ii) to be a nominated<sup>2</sup> sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
  - e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents personnel, permit the Bank to inspect<sup>3</sup> all accounts, records and other documents relating to the procurement process,

<sup>1</sup> For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

<sup>2</sup> A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

<sup>3</sup> Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

selection and/or contract execution,, and to have them audited by auditors appointed by the Bank.

### III. Special Conditions of Contract

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
1.1(a)	The Contract shall be construed in accordance with the law of Kingdom of Bhutan.
4.1	The language is English.
6.1 and 6.2	<p>The addresses are:</p> <p>Client : <b>Thimphu Thromde, Gongzin Lam,</b> NPPF Building no.08, Thimphu 11001, Bhutan</p> <p>Attention : <b>Karma Namgyel, Executive Secretary</b></p> <p>E-mail : <a href="mailto:knamgyel@thimphucity.gov.bt">knamgyel@thimphucity.gov.bt</a></p> <p>Consultant : SUNJIN Engineering &amp; Architecture Co., Ltd. 126 Beolmal-ro, Dongan-gu Anyang, Gyeonggi 14057 KOREA T.82.2.6333.3263</p> <p>Attention : <b>Bae, Sung Jin, President / Chief Executive Officer</b></p> <p>Facsimile : +82.6333.3380</p> <p>E-mail : <a href="mailto:sunjinpj@sunjin.co.kr">sunjinpj@sunjin.co.kr</a></p>
8.1	<i>Not Applicable since there is no Joint Venture.</i>
9.1	<p>The Authorized Representatives are:</p> <p><b>For the Client:</b> <i>Karma Namgyel, Executive Secretary</i></p> <p><b>For the Consultant:</b> <i>Bae, Sung Jin, President / CEO</i></p>

11.1	<p><b>The effectiveness conditions are the following:</b>  Proof of professional liability and other insurance are needed.</p>
12.1	<p><b>Termination of Contract for Failure to Become Effective:</b>  <b>The time period shall be two months.</b></p>
13.1	<p><b>Commencement of Services:</b>  <b>The number of days shall be ten(10)</b>  Confirmation Statement by the Consultant already submitted.</p>
14.1	<p><b>Expiration of Contract:</b>  <b>The time period shall be twelve months.</b></p>
21 b.	<p><b>The Client reserves the right to determine on a case-by-case basis whether the Consultant should be disqualified from providing goods, works or non-consulting services due to a conflict of a nature described in Clause GCC 21.1.3</b></p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>

<p><b>23.1</b></p>	<p>The following limitation of the Consultant's Liability towards the Client can be subject to the Contract's negotiations:</p> <p>"Limitation of the Consultant's Liability towards the Client:</p> <p>(a) Except in the case of gross negligence or willful misconduct on the part of the Consultant or on the part of any person or a firm acting on behalf of the Consultant in carrying out the Services, the Consultant, with respect to damage caused by the Consultant to the Client's property, shall not be liable to the Client:</p> <ul style="list-style-type: none"> <li>(i) for any indirect or consequential loss or damage; and</li> <li>(ii) for any direct loss or damage that exceeds [insert a multiplier, e.g.: one, <del>two</del>, <del>three</del>] times the total value of the Contract;</li> </ul> <p>(b) This limitation of liability shall not</p> <ul style="list-style-type: none"> <li>(i) affect the Consultant's liability, if any, for damage to Third Parties caused by the Consultant or any person or firm acting on behalf of the Consultant in carrying out the Services;</li> <li>(ii) be construed as providing the Consultant with any limitation or exclusion from liability which is prohibited by the applicable law in the Client's country.</li> </ul>
<p><b>24.1</b></p>	<p><b>The insurance coverage against the risks shall be as follows:</b></p> <p>(a) <b>Professional liability insurance, with a minimum coverage of full contract value</b></p> <p>(b) Third Party motor vehicle liability insurance in respect of motor vehicles operated in the Client's country by the Consultant or its Experts or Sub-consultants, with a minimum coverage in accordance with the applicable law in the Client's country;</p> <p>(c) Third Party liability insurance, with a minimum coverage in accordance with the applicable law in the Client's country;</p> <p>(d) employer's liability and workers' compensation insurance in respect of the experts and Sub-consultants in accordance with the relevant provisions of the applicable law in the Client's country, as well as, with respect to such Experts, any such life, health, accident, travel or other insurance as may be appropriate; and</p> <p>(e) insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this Contract, (ii) the Consultant's property used in the performance of the Services, and (iii) any documents prepared by the Consultant in the</p>

	performance of the Services.
27.1	<i>no exceptions</i>
27.2	<b>The Consultant shall not use <i>the related documents and software</i> for purposes unrelated to this Contract without the prior written approval of the Client.</b>
32.1 (a) through (e)	<p>Below are modified versions of clause GCC 32.1 (a) to (e)</p> <p>(a) Assist the Consultant with obtaining work permits and such other documents as shall be necessary to enable the Consultant to perform the Services.</p> <p>(b) Assist the Consultant with promptly obtaining, for the Experts all necessary entry and exit visas, residence permits, exchange permits and any other documents required for their stay in the Client's country while carrying out the Services under the Contract.</p> <p>(c) Facilitate prompt clearance through customs of any property required for the Services and of the personal effects of the Experts and their eligible dependents.</p> <p>(c) Issue to officials, agents and representatives of the Government all such instructions and information as may be necessary or appropriate for the prompt and effective implementation of the Services.</p> <p>(d) Deleted.</p> <p>(e) Assist the Consultant, any Sub-consultants and the Experts of either of them with obtaining the privilege, pursuant to the applicable law in the Client's country, of bringing into the Client's country reasonable amounts of foreign currency for the purposes of the Services or for the personal use of the Experts and of withdrawing any such amounts as may be earned therein by the Experts in the execution of the Services.</p>
32.1(f)	<i>(f) Provide to the Consultant any such other assistance as may be specified in the SCC: NIL.</i>
38.1	<p><b>The contract price inclusive of local indirect taxes is:</b></p> <ol style="list-style-type: none"> <li>1. USD 748,202/-</li> <li>2. BTN 6,507,441/-</li> </ol>

	<p>Any indirect local taxes chargeable in respect of this Contract for the Services provided by the Consultant shall be deducted at source and be paid by the Client "for"the Consultant.</p> <p>The amount of such taxes is ( 3% Payable as TDS)</p> <ol style="list-style-type: none"> <li>1. USD 21,792/-</li> <li>2. BTN 189,537/-</li> </ol>
39.1 and 39.2	<p>The Client warrants that</p> <p>"the Client shall deduct at source and pay on behalf of the Consultant, the Sub-consultants and the Experts,"</p> <p>any indirect taxes, duties, fees, levies and other impositions imposed, under the applicable law in the Client's country, on the Consultant, the Sub-consultants and the Experts in respect of:</p> <ol style="list-style-type: none"> <li>(a) any payments whatsoever made to the Consultant, Sub-consultants and the Experts (other than nationals or permanent residents of the Client's country), in connection with the carrying out of the Services;</li> <li>(b) any equipment, materials and supplies brought into the Client's country by the Consultant or Sub-consultants for the purpose of carrying out the Services and which, after having been brought into such territories, will be subsequently withdrawn by them;</li> <li>(c) any equipment imported for the purpose of carrying out the Services and paid for out of funds provided by the Client and which is treated as property of the Client;</li> <li>(d) any property brought into the Client's country by the Consultant, any Sub-consultants or the Experts (other than nationals or permanent residents of the Client's country), or the eligible dependents of such experts for their personal use and which will subsequently be withdrawn by them upon their respective departure from the Client's country, provided that: <ol style="list-style-type: none"> <li>(i) the Consultant, Sub-consultants and experts shall follow the usual customs procedures of the Client's country in importing property into the Client's country; and</li> <li>(ii) if the Consultant, Sub-consultants or Experts do not withdraw but dispose of any property in the Client's country upon which customs duties and taxes have been exempted, the Consultant, Sub-consultants or Experts,</li> </ol> </li> </ol>

	<p>as the case may be, (a) shall bear such customs duties and taxes in conformity with the regulations of the Client's country, or (b) shall reimburse them to the Client if they were paid by the Client at the time the property in question was brought into the Client's country.</p>
41.2	<b>The payment schedule is as per Terms of Reference.</b>
41.2.1	<u>No advance payments</u>
41.2.4	<p><b>The accounts are:</b></p> <p>for foreign currency: Bank Name: KEB Hana Bank Bank Address: 072-19 543, Gukcho-dae-ro, Yeongdeungpo-gu, Seoul Swift code: KOEXKRSE or KOEXKRSEXX Branch Name: Dongsan-dong</p> <p>for local currency: Account Name: SUNJIN Engineering &amp; Architecture Account Number: 179-910003-53132</p>
42.1	<b>The interest rate is 5% per annum.</b>
45.1	<p><b>Disputes shall be settled by arbitration in accordance with the following provisions:</b></p> <p>1. <u>Selection of Arbitrators.</u> Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three (3) arbitrators, in accordance with the following provisions:</p> <p>(a) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to <i>Bhutan Alternative Dispute Resolution Centre</i> for a list of not fewer than five (5) nominees and, on receipt of such list, the Parties shall alternately strike names there from, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, <i>Bhutan Alternative Dispute Resolution Centre</i> shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.</p> <p>(b) Where the Parties do not agree that the dispute concerns a technical matter, the Client and the Consultant shall each</p>

	<p>appoint one (1) arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two (2) arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by <i>Bhutan Alternative Dispute Resolution Centre</i>.</p> <p>(c) If, in a dispute subject to paragraph (b) above, one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to the <i>Bhutan Alternative Dispute Resolution Centre</i> to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute.</p>
	<p>2. <u>Rules of Procedure</u>. Except as otherwise stated herein, arbitration proceedings shall be conducted in accordance with the rules of procedure for arbitration of the United Nations Commission on International Trade Law (UNCITRAL) as in force on the date of this Contract.</p> <p>3. <u>Substitute Arbitrators</u>. If for any reason an arbitrator is unable to perform his/her function, a substitute shall be appointed in the same manner as the original arbitrator.</p> <p>4. <u>Nationality and Qualifications of Arbitrators</u>. The sole arbitrator or the third arbitrator appointed pursuant to paragraphs 1(a) through 1(c) above shall be an internationally recognized legal or technical expert with extensive experience in relation to the matter in dispute and shall not be a national of the Consultant's home country.</p> <p>For the purposes of this Clause, "home country" means any of:</p> <ul style="list-style-type: none"> <li>(a) the country of incorporation of the Consultant or</li> <li>(b) the country in which the Consultant's principal place of business is located; or</li> <li>(c) the country of nationality of a majority of the Consultant's shareholders; or</li> <li>(d) the country of nationality of the Sub-consultants concerned, where the dispute involves a subcontract.</li> </ul>

	<p>5. <u>Miscellaneous</u>. In any arbitration proceeding hereunder:</p> <ul style="list-style-type: none"><li>(a) proceedings shall, unless otherwise agreed by the Parties, be held in <i>Bangladesh</i>;</li><li>(b) the <i>English</i> language shall be the official language for all purposes; and</li><li>(c) the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.</li></ul>
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## Appendix A: Terms of Reference

### BACKGROUND

1. Bhutan's urban areas are experiencing rapid growth in population, as well as in vehicle ownership. Between 1990 and 2010, the number of Bhutanese living in urban areas nearly tripled and this growth has continued. The capital city, Thimphu, with 127,864 population is the largest urban center in Bhutan and accounts for 17 percent of Bhutan's overall population or 41 percent of Bhutan's total urban population.

2. At the same, the number of vehicles has been increasing at roughly 9-10 percent per annum, over the last decade. There are over 96,307 registered vehicles in Bhutan as of June 2018. Taxis and personalized vehicles are currently meeting most of the travel needs for Bhutan's population. For lower income households with fewer travel options, the absence of quality alternatives to private transport constrains their access to economic opportunity and social services. In addition, the rapid growth in private vehicle ownership is placing a strain on Bhutan's commitment to remain carbon neutral under the United Nations Framework Convention on Climate Change.

3. The Royal Government of Bhutan (RGoB) has set out its policy for urban transport in a guiding document known as "Bhutan Transport 2040 Integrated Strategic Vision". This policy aims to create vibrant, functional, and livable "green" cities. It focuses on providing attractive public transport services and facilities for pedestrians, with a view that public transport and walking may become the dominant mode in the central area of cities and for short trips.

4. The RGoB has already acted to implement with this policy (to try and stem rising dependence on private conventional vehicles and fossil fuel). This began with the development in 1999 of a City Bus Service within the structure of the Bhutan Postal Corporation. Services have expanded and now include a fleet of 46 buses that carry about 8,000 passengers per day, but it is insufficient to meet the travel demand and the services are losing productivity and quality as traffic worsens. In January 2020, it was decided to transfer the City Bus Service to Thimphu Thromde (Thimphu Municipality, or TT), together with commitment of the RGoB to finance an additional 24 buses to be procured during 2020.

5. Walking and taxis are the principal modes of urban transport, while personal car mode share is increasing. This exacerbates the traffic situation and worsens the conditions for public transport and erodes its attractiveness for users. As Thimphu continues to grow, it is imperative that an efficient, safe and reliable public transport options be provided to the residents, and active mobility be promoted. Gradual adjustments to the current system will not meet this need.

6. The RGoB, through the implementing agency TT, now wishes to introduce a high-quality bus priority service on a key corridor in Thimphu City and pedestrianize part of a main boulevard in the center of the city. The objective is to improve access to opportunities for the residents of Thimphu City, and provide reliable, safe, and green urban mobility options to them along the North-South Axis of Thimphu City, as well as the City Center. The proposed interventions are also intended to mitigate the problems of increasing congestion, noise and air pollution, improve safety, and encourage modal shift.

7. More specifically, the proposed project interventions are expected to encompass the following:

- Component 1—Priority bus service infrastructure, fleet, and systems. This component will finance the development of the 16 km priority bus service corridor along Thimphu's north-south axis (Babesa to Dechencholing). The characteristics of the service (grade separated, priority lane, supporting traffic management measures, etc.) will be determined during project preparation. Provisionally, the interventions are expected to include road infrastructure (including cycling and pedestrian pathways), vehicles, and an Intelligent Transport Systems (ITS). For the vehicle fleet,

different bus technologies will be assessed to select an environmentally friendly technology suitable for the context of Thimphu. The ITS is expected to include, Automatic Vehicle Location System, Passenger Information System, and Automated Fare Collection;

- Component 2—Pedestrianization of Norzin Lam, for which the Urban Design is already prepared. This component will finance the pedestrianization of Phase 2 and Phase 3 of Thimphu's main 1.3 km boulevard known as Norzin Lam (Phase 1 will be implemented by RGOB during 2020 using own funds). This will allow priority for pedestrian access along Thimphu's main business district and is expected to decongest the city center. Norzin Lam is envisaged as exclusively for pedestrian and non-motorized traffic during peak hours with vehicle traffic to support businesses allowed only during defined morning or late evening hours (with exceptions made for emergency vehicles, disability access, public service vehicles, and possibly buses). There are two parking garages close to Norzin Lam, an assessment of whether these would suffice as an alternative parking option for Norzin Lam will be evaluated during project preparation and suitable additional alternative parking options identified as needed; and
- Component 3—Capacity Development. This component will finance goods purchase, consultancies, and trainings for institutional strengthening for the operation of the Priority Bus Service. The technical assistance provided through this component may include administrative and financial management aspects of the Priority Bus Service, study of alternative enforcement measures, training to operators and drivers, and better user information systems. This component will also finance a communication campaign to promote the Priority Bus Service and modern public transport in Thimphu.

8. The RoGB has received project preparation funding from the Green Climate Fund (GCF) and Korea-World Bank Group Partnership Facility (KWPF), administered by the World Bank, to fund the preparatory activities detailed in this Terms of Reference for consultancy services. One of the conditions of the provision of the PPG by the GCF is that a full application for grant financing for the implementation stage, be submitted to GCF by the end of January 2021. This necessitates that the necessary preparatory activities are substantially complete by that time.

## **THE OBJECTIVE OF THE ASSIGNMENT**

9. The primary objective of the assignment is to assess the technical, economic, financial, environmental and social viability of the introduction of a high-quality bus priority service (low carbon transport concept) along the main north-south corridor (Babesa to Dechencholing), and the pedestrianization of Norzin Lam, in Thimphu.

## **THE SCOPE OF THE ASSIGNMENT**

10. The assignment will consist of the following seven (7) activities, the scope of each and the individual tasks envisaged necessary to complete each, are described in detail in the following paragraphs:

- Activity 1: Development of a reference framework for low-emission transport in Thimphu
- Activity 2: Technical Design for Bus Priority Infrastructure and Services;
- Activity 3: Technical Design for the pedestrianisation of Norzin Lam;
- Activity 4: Technical preparations for low or zero-emission public transport mobility;
- Activity 5: Economic and Financial Analysis and Opportunities for private sector involvement;
- Activity 6: Gender and persons with special needs analysis and action plan;
- Activity 7: Environmental and social assessments and plans for the technical designs developed under Activities 2, 3 and 4.

## ACTIVITY 1: DEVELOPMENT OF A REFERENCE FRAMEWORK FOR LOW-EMISSION TRANSPORT IN THIMPHU:

11. This activity will focus on framing an integrated set of interventions that can bring positive changes of travel behaviors in Thimphu and other urban center, including: (i) travel demand management; (ii) policy and pricing interventions in the market for transport services; (iii) Transit Oriented Development planning; (iv) Non-motorized Transport and low carbon mobility planning; (v) development of different policy regimes relating to transport for different zones of Thimphu, and (vi) land use planning. The framework will be consistent with the vision laid out by Royal Government of Bhutan (RGoB) in “*Bhutan Transport 2040 Integrated Strategic Vision*”. It will consider both the internal movement within Thimphu and the connectivity between Thimphu and the rest of the country.

12. This activity will be achieved through available information and some supplementary data (including data collected in Activities 2, 3, 4 and 5), along with expert opinion and stakeholder discussions. It is not expected to develop an academic/research kind of transportation model or the like. The outputs should be practical that will provide a guiding framework to stakeholders, including the project team for the current assignment. It will specifically provide the guiding framework and inputs for Activities 2, 3, 4 and 5. It will take account of issues and requirements arising in Activity 6 (Gender and Disability analysis). Note that other activities do not have to wait for the final completion of Activity 1 or approval of its main outputs, they can proceed in parallel with the guidance framework being developed and finalized in an iterative manner.

13. The envisaged tasks under Activity 1 include, *inter alia*, the following:

- Review all relevant strategic and planning documents, in particular the “*Thimphu Structure Plan 2002-2027*” and the “*Bhutan Integrated Transport 2040 Vision*”. The review will include plans for Thimphu’s connectivity to the rest of the country and internationally, including to Paro International Airport.
- Through consultation with identified stakeholders, identify goals and objectives for the urban mobility development of Thimphu, plus, any other related key issues identified by the stakeholders;
- Identify a set of international good practice cases of cities that have used packages of urban planning, transportation planning, mobility services and persuasive measures to achieve desired urban and mobility outcomes; identify the measures used and combinations for each case, and the outcomes achieved;
- Arrange a workshop in Thimphu for key stakeholders and invited experts to share the case study experience and the principles and methods underpinning each of the measure types; highlight the role of public transport and the importance of managing mode share. The target stakeholders will be agreed with PIU;
- From the workshop, develop for Thimphu a minimum of three packages at high-level that can be used to explore what might work best in the Thimphu context, how it might be implemented and what might be the outcomes. Through brain-storming and consensus-forming, select the package that is deemed to have the most relevance and best potential for Thimphu;
- Within this package, develop in more detail the required role of the bus system and how the other package elements would support or interact with the bus system; this would include how pricing and other persuasive measures could be used to encourage some car/taxi users to switch to bus;
- Design, implement and analyse a set of surveys, focus group discussion and structured interviews to gain insights into Thimphu residents’ attitudes toward mobility and means of transport, preferences and priorities, willingness and ability to pay, likely response to various pricing and

other stimuli and incentives, and emerging lifestyle trends and how they are impacting on mobility and travel choices;

- Taking into consideration the survey findings above, develop a working note that explores and provides a context for the benefits of introducing bus priority for low carbon transport. It should also provide a high-level concept design for the bus priority project along Thimphu's north-south axis (Babesa to Dechencholing corridor);
- Arrange a second stakeholder and expert workshop to review the concept and package of measures selected for Thimphu; and, as needed, to revise the preferred package(s) in light of the survey findings and further reflection by the stakeholders;
- Prepare finalised working notes with perspectives and recommendations to inform both the Bus Priority Project design and the mid-term review of the Thimphu Structure Plan 2002-2027. In consultation with PIU, this may be prepared as a separate working note with appropriate content and formats;

14. *Outputs of this task* will include: (i) working notes on high-level and detailed options for low-emission transport packages for Thimphu, leading to a recommended reference framework to be used in the Project; (ii) two stakeholder workshops and minutes from the workshops; (iii) work note on bus priority; and (iv) a submission to the mid-term review of the Thimphu Structure Plan 2002-2027;

## **ACTIVITY 2: TECHNICAL DESIGN OF PRIORITY BUS INFRASTRUCTURE AND SERVICES:**

15. This activity encompasses all necessary technical preparations for a Bus Priority Service along Thimphu's north-south axis. This activity should be done in close consultation with the Task Force referred to in the section relating to "The Management of the Assignment": The envisaged tasks include, *inter alia*, the following:

### Task 1: Collation of existing information and baseline definition

16. : The Consultant will compile and synthesize all earlier planning work undertaken with a view to introduce low-carbon transport in Thimphu including bus priority measures and complementary infrastructure investments (see list included below and refer the ITC Ref. no. 2.4, under the Data Sheet of Section 2: Instruction to Consultants).

17. The Consultant's financial proposal should include a notional budget line of US\$50,000 for funding additional data collection and survey work. Needs in excess of this amount will be negotiated on a case-by-case basis and added to the contractual amount. The Consultant's data collection plan, after the agreement of the Client and the World Bank, will be executed in Task 2.

18. Where necessary the Consultant will identify needs for additional data collection or analysis along with methodologies for collecting additional information which will form part of a data collection plan for use in Task 2. The types of data that the consultant is expected to use (and collect themselves if it is not available are as follows):

### Public transport data

- Total daily passenger trips;
- Passenger boarding and alighting by stop or route segment (counted at stop or on board), by time of day (weekday daily total, am peak period, pm peak period, Saturday peak period);
- On-board passenger counts at key intersections by time of day;
- O/D survey for routes significantly impacted by the proposed new service;
- Taxi and Bus operating and maintenance costs, wage rates;
- Approximate value of time for different customer segments; and

- Current taxi and bus depots, parking, other operating and maintenance arrangements.

#### Operating information for buses

Use GPS to track the movement of buses over their respective routes. If practical, any existing GPS tracking system will be utilized. Otherwise, the Consultant will adapt GPS-enabled cell phones to be provided to bus drivers / conductors.<sup>3</sup>

#### Travel times

Analyze bus travel speed data collected under operating information for buses to identify overall journey speed/time, sectional speed and delay points. Identify the variance in speeds/delays by time of day, type of day and direction. Travel speeds and delays should be based on continuous GPS data (see below), over minimum four weeks, that allow analysis by section or at micro-level. Combining with CCTV images from the Traffic Police and on-site observations, map out the delay zones by time of day, and the potential journey time savings. For every segment (intersection to intersection) over the public transport route alignment(s), by times (peak, off-peak), identify the time spent:

- Moving;
- Stopped because of pedestrians;
- Stopped because of traffic; and
- Dwell time/Stopped to pick-up/discharge passengers.

#### General Traffic (vehicles, bicycle and pedestrian)

- Traffic over critical segments – daily and by time of day (am peak period, pm peak period) – classified by auto/truck/bus/bicycle;
- Turning movements at critical intersections; and
- Pedestrian volumes along key corridors in central Thimphu.

*In either case, this should be accompanied by an application to aggregate and disseminate data once collected. The Consultant will use open-source technology for this purpose and will include the cost of all hardware as a notional budget line of US\$10,000 item in the Financial Proposal Needs in excess of this amount will be negotiated on a case-by-case basis and added to the contractual amount. All software and hardware used in the execution of this task will be handed over to the City Bus Service upon completion of the Consultant's assignment.*

#### Corridor Physical characteristics

- Mapping and photos/videos of the main corridor, the side roads for necessary distance beyond their junction with the corridor and the potential roads of interest for tributary services;
- Mapping of existing utilities and drainage along the corridor, bus stopping points, pedestrian crossing points, etc.;
- Study all roundabouts, including the new Lungtenzampa bridge junctions; and
- Compile Thimphu Thromde's plot-level maps of the corridor and verify.

19. The Consultant's analysis should consider both upfront costs and the full economic cost of subsequent maintenance and operations (incl. avoided fuel expenditures, economic cost of emissions, and likely maintenance costs). All analysis should include broad sensitivity testing of key

assumptions. The Consultant will present results of analysis along with any proposals to modify the system specified in Bhutan Urban Transport System February 2012 to RGoB stakeholders for an initial round of feedback. After incorporating feedback, the Consultant will make revisions and present, in concert with representatives of the client, the updated low-carbon transport concept during initial public consultations with stakeholders throughout Thimphu. The Consultant should prepare to conduct not less than 2 consultation events at different times of day / days of the week in order to accommodate a broad range of attendance from target participants with different schedules.

20. *Outputs of this task* will include: (i) databases and working models for input to analytical work; (ii) a data collection plan for any incremental information required (to be executed under Task 2); (iii) a report on analysis of alternatives (10-15 pages) with an updated recommendation for distribution to RGoB's Task Force and the general public via the Project website;

#### Task 2: Travel demand model and projections

21. The Consultant will develop a travel demand model for projecting out modal shift achievable under the Program. This will include consideration for private transport, taxis, public transport, and non-motorized transport elements of the multi-modal system. The model should reflect consideration for current and projected changes in land use / density and travel demand management measures that can be used in conjunction with infrastructure investments to encourage modal shifts away from private transport. The software to be used for this exercise should be agreed with the Client and the World Bank, all input and outputs files should be made available in a format that ensures that they can be used under the [World Bank's Open Data Initiative](#).

22. Data and assumptions used in modeling will be drawn from existing studies (e.g., the World Bank's 1,000 household survey, Thimphu's structural plan, Thimphu's transport plan, Road Safety and Transport Authority (RSTA) vehicle registration data). In addition, the Consultant will execute the data collection plan developed under Task 1 to address any updates or information gaps.

23. The Consultant will use the travel demand model to test different scenarios, agreed with the Client and the World Bank, such as service delivery alternatives, different travel demand management measures, land use modifications, and pricing regimes. The Consultant will compile outcomes from this analysis in a technical report and will produce an accompanying policy note (5-7 pages) and a high level Power Point Presentation that can be presented to RGoB's Task Force and other senior policy makers.

24. *Outputs of this task will include:* (i) supplemental data sets collected according to the Consultant's data collection plan as developed under Task 1; (ii) a final travel demand model; (iii) a written technical report on scenarios and potential targets on model shift; and (iv) a presentation (approximately 30 minutes) and accompanying policy note for delivery to RGoB's Task Force.

#### Task 3: Technical preparations for Bus Priority and complementary infrastructure

25. The Consultant will reference prior work to introduce a high-quality public transport service in Thimphu (a proposed BRT) and undertake work to further prepare the proposed high-quality bus priority service and its complementary elements. This will include:

- Prepare preliminary designs and cost estimates (and social and environmental impact assessment) for different busway options including: (i) a dual lane busway for the entire 16 km corridor; (ii) a single lane dual direction busway for the 16km corridor that would use "block signalling" or other technology solutions to control for directional conflicts; (iii) a mixture of dual and single lane busways for the 16 km corridor based on projected demand for different segments; (iv) a mixture of single and dual and single lane busways and mixed traffic busways for the 16 km corridor based on projected demand, technical feasibility, and cost considerations. Within these options, "busway" can consider both 'heavy infrastructure' fully segregated lanes for buses, and 'light/no infrastructure' bus priority lanes.

- Perform multi-criteria analysis (that incorporates traffic demand, technical, social, and environmental considerations) of different busway options and other bus infrastructure to select the preferred option in consultation with RGoB's Task Force. The Consultant's implementation schedule should account for approximately 1 month of interaction with RGoB, review, and revision to ensure that all RGoB concerns have been considered and addressed.
- Based on the RGoB Task Force decision from the above, prepare detailed designs for busways and bus infrastructure along the full corridor, inclusive of the running lanes, pavements, drainage, utilities, pedestrian crossing points, signage and street lighting;
- Develop detailed designs for all bus stop along the corridor based on the conceptual stop designs that have been developed for the City Bus Access Project;
- Develop detailed designs for all bridge modifications required to implement the busway solution identified for the high-quality bus priority service. This should include any required modification to the Barbessa flyover structure near central Thimphu.
- Develop detailed designs for all earthworks and retaining structures required for lane expansions along the high-quality bus priority service corridor;
- Develop detailed designs for all modifications to the existing road infrastructure along the high-quality bus priority service corridor as required to provide for private vehicles, pedestrian access and safety, and managing exclusive rights of way for bus services;
- Develop a proposed service schedule for high-quality bus priority service based on envisaged demand, the projected bus fleet, and operational / maintenance requirements as needed to provide for system sustainability. Forecast boarding/alighting volumes and transferring volumes. Develop reliable estimates for service levels at 5- and 10-year horizons to ensure the bus priority design is sufficiently dimensioned;
- Develop detailed specifications for the signalling system required to manage busway operations (if needed based on the final scope of busways);
- Carry out detailed performance assessment of the proposed solution both for buses and for general traffic. Consult with key stakeholders including the Thromde, Traffic Police, RSTA and the City Bus Service. As required, revise the network/service plan, operational method and technical design for optimal bus performance and delay to other traffic.
- When the solution has been finalised, prepare detailed engineering drawings of the corridor and related junctions and side road, to include works, lane demarcation, signage, etc. plus the stopping places, stations and bus bays, if utilised.
- Identify any environmental and social impacts (for example, required land acquisition, involuntary resettlement, disturbance of business, tree-felling, etc.) in line with Activity 7 and, to the extent necessary and possible, seek mitigation through design.
- Undertake secondary consultations using detailed designs and the proposed schedules for services. This should include not less than 3 events at different times of day in order to accommodate a broad range of attendance from target participants with different schedules;
- Make final revisions to detailed designs and the proposed construction schedule to reflect results of consultations, final feedback from RGoB, and findings the Environmental Impact Assessment and Social Impact Assessment; and
- Develop tender documentation and specifications for works that will form the basis for contract terms. The Consultant will ensure that provisions from environmental and social instruments are accurately included in tender documents and contract specifications (e.g. the Environment Management Plan and Resettlement Action Plan that follow from the Environmental Impact Assessment and Social Impact Assessment). For details see Activity 7.
- In consultation with RSTA, Traffic Police, Thimphu Thromde Ministry of Information & Communication and Ministry of Works & Human Settlement, review the RSTA Act 1999 and

associated regulations to determine whether the proposed bus priority solution can be effectively implemented under the provisions of the Act. If not, prepare an Amendment to the Regulation drawing on international good practice and in language consistent with other provisions of the Act, taking account of the advice of RSTA and Traffic Police. If acceptable to RGoB, support RSTA for adoption and effectiveness of the Amendment.

26. **The outputs of this work will include:**(i) a written report with updated and / or validated alternatives analysis of infrastructure solutions and vehicle options; (ii) design packages for all infrastructure investments identified above; (iii) detailed bills of quantity and cost estimates for all works; (iv) recommended technical specifications for all work; (v) the critical path schedule for works; and (vi) a summary presentation to brief policy makers on the scope of works and envisaged implementation plan for Thimphu's high-quality bus priority service.

#### Task 4: Preparations for bus terminals and an upgraded city bus depot

27. The Consultant will undertake technical preparations for: (i) upgrading or developing new bus terminal(s); and (ii) upgrading or developing a new city bus depot to support critical maintenance functions. This scope of work will include:

- Identify options for upgrading the existing central city bus terminal and city bus depot *or* developing these at new sites that the Consultant identifies in consultation with the relevant stakeholders. It should be noted that Thimphu Thromde have a preference to relocate the central terminal and have already identified potential sites at either end of the corridor.
- In close consultation with RGoB, the Consultant will structure and perform a multi-criteria analysis of options for new or upgraded terminal and depot facilities based on concepts developed. This should include financial, environmental, social, and technical dimensions of consideration for different options. The design capacity for the bus depot should be taken as 120 buses, allowing that night parking and washing can also be done at the terminals. The Consultant will present findings to RGoB's Task Force for an initial round of feedback and guidance. After incorporating feedback, the Consultant will modify concepts accordingly and will present them during 3 initial public consultations with business, residents, and other stakeholders.
- Select preferred options for the bus terminals and the bus depot based on feedback from public consultations, results of multi-criteria analysis, and final guidance from RGoB's Task Force.
- Develop preliminary designs to support request for expressions of interest for construction works and environmental and social due diligence that will be undertaken in a parallel Environmental Impact Assessment and Social Impact Assessment activities. The Consultant's Preliminary Designs should incorporate comments received through consultations. The Consultant should not finalize this task until the Environmental Assessment and Social Assessment activities validate the Consultant's preliminary design and / or identify the changes that should be included under detailed design activities.

28. **The outputs of this work will include:**(i) design packages for the bus terminal and the bus depot as noted above; (ii) detailed bills of quantity and cost estimates for all works; (iii) recommended technical specifications for all work; and (iv) a summary presentation to brief policy makers on the scope of works and envisaged implementation plan developing terminal and depot infrastructure.

#### Task 5: GHG emission forecasting

29. The GHG reduction potential of Thimphu's proposed high-quality bus priority service and complementary investments in infrastructure and service delivery are central to the philosophy of the Project investments. The Consultant will accordingly forecast GHG emissions for different operating scenarios as well as a "do nothing" scenario. This will include both "top down" and "bottom up analysis". Top down analysis will consider current and projected fuel consumption as well as emissions factors for specific fuel types. Bottom-up analysis will deploy an Activity modal Share Intensity Fuel (ASIF) analysis approach that considers transport demand, modal split, vehicle performance characteristics, and fuel characteristics that are appropriate for Bhutan.

30. The Consultant will develop a minimum of three scenarios for different bus service levels and resultant mode share, taking account of transfer from car/taxi to bus<sup>4</sup>For each scenario, calculate the operational benefits for the bus services in terms of reducing the quantum and the variance of journey times, increased productivity and changes to the cost structure. Calculate the disbenefits for general traffic users, taking account of the traffic volumes after mode shift. In consultation with the stakeholders, assess the likely accessibility. This information will be used as a key input in Activity 5 (financial modelling). For each scenario, and taking account of the selected vehicle energy source, calculate the change in fuel consumption and GHG emissions (benchmarked to current traffic conditions, mode share and bus types). Attribute clearly the benefits arising from improved bus travel speeds, mode shift, vehicle energy source, other benefit sources, offset by any disbenefits related to increased delays for general traffic.

31. All analysis should segment GHG emissions by type and source. The Consultant's analysis should also consider indirect "well-to-tank" emissions. The Consultant will compile findings from this task into a technical report (20-30 pages) that describes methodologies, assumptions, and results. In addition, the Consultant will develop a summary presentation of GHG analysis, results and recommended actions (approximately 30 minutes in length) that will be delivered to RGoB's Task Force.

32. *Outputs from this task will include:* (i) models for GHG analysis; (ii) the technical report described above; and (iii) a summary presentation to RGoB's Task Force.

#### Task 6: Traffic management and road safety plan for construction periods

33. The proposed high-quality bus priority service and its complementary investments in non-motorized transport infrastructure, bus terminals, and the City Bus Depot will likely involve construction of works along busy corridors. Resulting traffic diversions may cause significant disruption and / or compromise road safety. It is therefore necessary to develop plans for managing disruptions and ensuring that road safety risks are appropriately mitigated. The Consultant will accordingly execute the following activities:

- Develop the Implementation plan, including phasing and management of works;
- Assess likely traffic impacts of proposed works along with appropriate mitigations to manage those impacts;
- Identify the likely road safety impacts / risks of works at specific sites where works are envisaged to impact on the flow of vehicles and pedestrians;
- In close consultation with Thimphu Thromde and other core stakeholders, develop a preliminary traffic management and road safety plan for affected sites that can be included in works contracts as a means for avoiding or mitigating impacts;
- Following approval of the approach by the core stakeholders, undertake 2 public consultation events on the proposed traffic management and road safety plan. These should take place at different times of day / days of the week in order to accommodate a broad range of attendance from target participants with different schedules;
- Update and finalize the traffic management and road safety plan based on feedback received; and
- Develop specifications relating to specific project sites for inclusion in subsequent works contracts.

34. *Outputs of this task will include:* (i) a final traffic management and road safety plan; and (ii) contract specifications for sites where the traffic management and road safety plan will be executed.

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<sup>4</sup>This can be done using a spreadsheet-based approach or another suitable approach.

#### Task 7: Operations, maintenance, and management plan

35. The Consultant will review the service delivery and operating plan for the high-quality bus priority service and other city bus services as projected in Bhutan Urban Transport System 2012 Report and will revise these according to updated current and future demand projections and final scope of the system. The Consultants work will include:

- Develop a service schedule for the high-quality bus priority service system and adjoining bus services that accounts for peak hour demand, schedule recovery, fleet maintenance needs, and flexibility to accommodate demand growth;
- Develop objective operating performance targets and performance measures to complement the proposed Public Service Agreement;
- Develop service quality metrics to periodically capture subjective customer perceptions of operations along with a reporting template that the City Bus Service can use to disclose results;
- Develop an organizational structure for management of city bus and general traffic management in the city. The option of a dedicated traffic and transport department within Thimphu Thromde will be explored. In any case, the organizational structure will provide the functionality and capacity for operations and management of high-quality bus priority service system elements and adjoining city bus services;
- Propose a staffing plan for operating high-quality bus priority service services and adjoining bus services;
- Prepare working concepts for application of ITS/MIS including for bus operations management (control centre), incident management, fare payment, passenger information, post-event planning and scheduling, bus maintenance and stores management, business analysis, etc. Develop the functional specifications in consultation with CBS and prepare tender documents. Develop the ITS deployment plan and phase-wise strategy;
- Develop a methodology for condition assessment and asset management of high-quality bus priority service system elements. This should include methods for planning maintenance, renewals, and enhancements;
- Develop the traffic management, operations control and enforcement measures suited to the recommended bus priority solution. Identify responsibilities and any change required to procedures, staffing, capacity, etc.;
- Develop training curriculum (power points for a two day curriculum) on high-quality bus priority service/ITS operations, maintenance, renewals, and enhancements of assets;
- Propose a program of technical training on high-quality bus priority service/ITS operations to capacitate City Bus Service staff;
- Prepare schematics and storyboards suited for awareness-raising and consultation, both with the public and with the operational staff of CBS, Traffic Police, Thimphu Thromde and RSTA; and
- Present a draft Operations and Management Plan to TT/City Bus Service for review and comments. After receiving comments on this draft plan, the Consultant will present it to RGoB's full task force for final comments / endorsement.

36. **Outputs of this task** will include: (i) an operations and management plan for the proposed high-quality bus priority service, including the elements described above; (ii) training curriculum and training program as noted above; and (iii) a summary presentation for RGoB's Task Force (approximately 45 minutes) on the final operations and management plan.

#### Task 8: Operating and maintenance budget

37. The Consultant will project out an operating and maintenance budget for the high-quality bus priority service and adjoining bus services using the outputs of prior tasks. This will include a 15

year projection with additional details applicable during an initial 5 year budget planning period. The Consultant's activities will include:

- Examine the policy and practice of tariff setting for urban buses in Thimphu. Carry out an elasticity analysis. Track the real value of fares over a 15-year period. Identify whether the bus services have become under-priced, both in real terms and relative to their true costs and the cost of alternatives.
- Conduct ability-to-pay analysis and willingness-to-pay surveys to determine whether there is both market and societal scope to increase bus fares if the supply, quality and speed are improved, taking account of what people pay for their current modes of transport.
- Prepare a working note for Government on tariff-setting for urban buses in Thimphu, which may contain recommendations for improved financial stability and for improved sustainability of the urban bus system. Propose options for a fare adjustment formula in close consultation with the Road Safety and Transport Authority and Bhutan Post (Bus Operator). Options should subsequently be presented to the RGoB's Task Force for identification of a preferred model and stakeholder feedback taken into account. The Consultant will subsequently use this through the duration of this task (Note: achieving acceptance or implementation of the recommendations is beyond the scope of this assignment);
- Project out all current revenues and costs for operating the high-quality bus priority service and adjoining bus services. Costs are to include bus service full lifecycle costs including both capital/debt servicing and operating costs, traffic management and enforcement costs, customer interface including promotion and marketing and payment system operation; plus, other costs identified by the Consultant. Incomes are to include all sources of income including fares paid by the users, explicit compensation for discounted-fare passengers, non-revenue income (advertising, other fees) and any other income sources. The basis for allocation of shared costs between the bus priority project and non-project bus services must be explicitly stated;
- Project out capital investments required to renew, and enhance services over a 15-year time horizon;
- Project out financial statements for the City Bus Service reflecting an accruals-based accounting approach;
- Estimate annual operating and capital subsidies that the high-quality bus priority service and adjoining bus services are likely to require. Subsidy may be included as income if it is provided on this basis by Government, but if so it must be clearly separated. If Government financial support is merely deficit-financing, it must be shown as such;
- Develop a "base case" scenario along with test scenarios to assess the potential impact of changes in key assumptions such as demand, fares, labour costs, fuel prices, macroeconomic variables, etc.; and
- Develop a summary note (10-15 pages) on scenarios and findings from the above analysis for presentation to RGoB's Task Force.

38. *Outputs of this task* will include: (i) a financial model containing the above analysis and projected financial statements; (ii) the summary note referred to above; and (iii) a final presentation to RGoB's Task Force.

### **ACTIVITY 3: TECHNICAL DESIGN TO PROMOTE NON-MOTORISED TRANSPORTATION (PEDESTRIANISATION OF NORZIN LAM)**

39. The Royal Government of Bhutan (RGoB) is seeking to pedestrianize Thimphu's main 1.3 km boulevard known as "Norzin Lam." This concept was first introduced in the Thimphu Structure Plan (2002-2027) as part of the broader approach to urban design in the Core Area of Thimphu. Norzin Lam is a well-developed, active street with attractive ambience and interesting vistas. It can broadly be characterized in three zones ("Phases"), the lower zone being predominantly public realm,

entertainment, hotels and F&B; the middle zone being predominantly retain with some F&B; the upper zone being predominantly office, commercial and cultural usage. An Urban Design study for Norzin Lam was done for Thimphu Thromde in 2018, which produced concepts, detailed design and Bills of Quantity (BOQs). The urban design reinforces the current zonal usages, upgrades the streetscape and reallocates most of the street space to public realm and pedestrian use. Current traffic on Norzin Lam will be deflected to the other streets in the Core Area, while the improved public transport services will be promoted as the preferred means to access the central area. In the lower and middle zones ("Phase 1" and "Phase 2"), on-street parking is to be removed, a single northbound traffic lane is to be retained and provision is made for buses to continue to have access. In the wider upper zone ("Phase 3"), one lane in each direction is to be retained. The Urban Design proposes that two new multi-storey car parks would be developed, in addition to the two existing facilities, ensuring that off-street parking is available within easy reach of all parts of Norzin Lam. The many alleys from adjacent streets to/from Norzin Lam will be upgraded, ensuring good permeability.

40. RGoB and Thimphu Thromde are proceeding immediately with implementation of the works on "Phase 1" (lower zone). It can be expected that the works will be under way by the time the Consultant is mobilised. Thus, the Phase 1 works will be taken as "given" for the purposes of this Activity, although the operational aspects remain to be finalized.

41. This Activity will focus on the movement and circulation aspects associated with the Norzin Lam Urban Design, including Norzin Lam itself, the circulation in the Core Area, and the connectivity between the Core Area streets and Norzin Lam with particular attention to the Multi-Storey Car Parks. It will prepare for non-motorized transport services, including pedestrians, bicycles and e-bicycles. The aim of this initiative is to give priority for non-motorized transport along Thimphu's main business district in line with the Program's overall goals of reducing dependency on private conventional vehicles and fossil fuel. This Task will be performed in close cooperation with the Urban Planning Department of Thimphu Thromde, who have already carried out preliminary planning for Norzin Lam and who would be the primary stakeholder and mandated agency with responsibility for implementation.

42. The scope of this activity is to:

- Take the Norzin Lam Urban Design as the reference, develop a circulation plan for the Core Area of Thimphu, both to ensure good access to Norzin Lam and to handle the current traffic deflected from Norzin Lam and to ensure good access;
- Develop an operational strategy for authorised traffic on Norzin Lam, including public transport, deliveries and loading, services and maintenance, event and emergency management, etc.;
- Review the Urban Design to propose solutions and/or adaptations that will improve flow for pedestrians and non-motorized traffic and will improve disability access along Norzin Lam;
- Develop a comprehensive parking strategy for the Core Area, including the multi-storey car parks and on-street parking, with regard to supply, pricing and ease of access to all parts of Norzin Lam;
- Identify and plan the traffic interventions needed to provide vehicular access to residences and businesses along Norzin Lam via alternative streets and alleyways;
- Propose a regime for managing access to Norzin Lam for different modes during both peak hour periods and during early morning / late evening periods; and
- Ensure that feedback and needs of key stakeholders and members of the general public are included in the design and development process for all proposed measures along Norzin Lam.

43. The tasks envisaged as necessary to undertake this activity include the following:

#### Task 1: Traffic Management and Circulation Plan for Norzin Lam and the Core Area

44. The Consultant will develop a Traffic Management and Circulation Plan for the Core Area. The Plan must ensure that the Core Area functions effectively during and following the pedestrianization of Norzin Lam. At all times it must be assured that Norzin Lam can function effectively as the primary commercial and public space of the city, and retains its status as a very attractive urban street for both residents and visitors:

- Review the concepts and circulation plans developed in the Norzin Lam Urban Design study, 2018. Become familiar with Norzin Lam and surrounding area. Meet key stakeholders. Assemble existing data and maps, etc.
- Identify and gather any supplementary data required to develop the Traffic Management and Circulation Plan. Design the program to survey existing flows (traffic, pedestrians, deliveries, events/emergencies), parking patterns (location, duration, occupancy rates, trip purpose) and any other information required to supplement available existing data.
- Identify what flows/volumes to retain within the Core Area and what new flows/volumes may arise. Develop concepts for the various flows in new schema. Develop circulation plans and traffic management solutions that will achieve the concepts in a manner that is clear to users, enforceable and resilient, while ensuring adequate provision for deliveries and daily street maintenance. Clearly define space exclusively for pedestrians, for pedestrians crossing in shared space, and for parking/storage facilities for NMT.
- Develop the Traffic Management and Circulation Plan for the Core Area, which must cover, among other things: (i) deflection of through traffic away from the Core Area; (ii) minimization of motorized traffic on Norzin Lam to allow street space to be reallocated to public realm and pedestrian ways; (iii) management and calming of traffic that enters the Core Area; (iv) management of potential conflicts between motorized traffic and non-motorised traffic, in particular with pedestrians; (v) continued access to premises and business within the Core Area, in particular to Norzin Lam; (vi) permeability and ease of access to Norzin Lam from adjacent streets; (vii) parking strategy, including access from multi-storey car parks to Norzin Lam; (viii) deliveries and loading strategies; (ix) Public transport access to Norzin Lam and promotion of public transport as the most convenient means of travel to the central area; (x) arrangements for festivals and events; and (xi) operations and enforcement, including access control to Norzin Lam.
- The Parking Strategy will consider the entire Core Area. It will consider the supply of off-street (multi-storey) and on-street parking, the permitted duration of parking in different areas and pricing as a parking management tool. It will pay attention to the connectivity between parking locations and Norzin Lam, to ensure that all parts of Norzin Lam can be easily accessed from a parking location.
- Assist Thimphu Thromde to develop the business case and the optimal operating model for the proposed two additional multi-storey car parks;
- For Norzin Lam itself, develop the Conceptual layouts and mobility feasibility for each Zone, testing for and resolving conflicts. Carry out consultation with key stakeholders and conduct an impact assessment;
- ***The outputs of this work will include:***(i) a Traffic Management and Circulation Plan for the Core Area, with specific focus on Norzin Lam; (ii) a Parking Strategy for the Core Area.

#### Task 2: Pedestrian and Non-Motorised Traffic on Norzin Lam

45. The Norzin Lam Urban Design provides for extensive pedestrianization of Norzin Lam, in which on-street parking is removed entirely from Phase 1 and Phase 2 areas and much of the right-of-way is repurposed to wider footpaths, 'spill over' areas and public realm improvements. A significant effort is also made to resolve current problems of uneven and steep steps and high kerbs and to remove obstructions. Alleys connecting Norzin Lam to adjacent streets will be improved in terms of slope, amenity and lighting. There are no specific measures proposed for cycling. This Task will

review the designs from the perspective of flow, convenience and ease of access for pedestrians, NMT and people with any type of disability. The purpose is to identify practical improvements that can be incorporated into the designs. This will include the following activities:

- Review the Norzin Lam Urban Design for all three Phases, at both the conceptual level and the detailed design drawings;
- Assess the effectiveness, convenience and safety of the design from the perspectives of pedestrians, cyclists and people with all forms of disability. The assessment will take into account the different ways in which pedestrians move within the street space, whether walking, accessing premises, browsing, at leisure, etc.; and whether individually or with others. The assessment will also take into account the points of interface and potential conflict with the carriageway and with designated delivery/loading areas and with bus stops;
- Identify practical improvements that can be made for pedestrians and non-motorised traffic and can be incorporated within the design for Phases 2 and 3, and retrospectively for Phase 1. Provide drawings, method statements and cost estimates for each;
- The Consultant's work should include considerations for enhancing accessibility for disabled persons (e.g. wheel chair users, persons with sight impairments, persons with impaired ambulatory capabilities). Wherever practicable, this should include a limited use of stairs, high curbs, and other physical barriers to access. Particular attention must be paid to the connectivity between Norzin Lam and adjacent streets, including to the car parks, since some of the building alleys as currently designed will not be usable by people with disabilities.
- Noting that the current Urban Design does not provide for cycle lanes, assess whether the traffic-calmed carriageway provides a sufficient and safe facility for cyclists. Assess each of the three Phases separately, recognising their different characteristics and layouts. Make recommendations to Thimphu Thromde for any adaptations to the original designs.
- Identify requirements for facilities for cyclists such as secure parking and make proposals for how these can be incorporated into the designs for Phases 2 and 3, and retrospectively for Phase 1.
- Review the signage and wayfinding plans in the Urban Design and as-built for Phase 1, both on Norzin Lam itself and to Norzin Lam from the adjacent streets in the central area. Propose any required improvement and provide detailed drawings and locations;
- **The outputs of this work will include:**(i) specific proposals for improvements for pedestrians and NMT that can be incorporated in the Urban Design; and (ii) drawings, method statements and cost estimates for the proposed improvements.

#### Task 3: Consultation

46. The Consultant will prepare a program of consultation for both the Traffic Management and Circulation Plan and for the Pedestrian and NMT improvements. This will include the following:

- At all stages, maintain ongoing consultation with RGoB's Task Force on the assessment of the Urban Design, concepts for the Plan and Pedestrian/NMT improvements, layouts, cost estimates, etc. Ensure that the measures remain in line with the urban design principles and desired outcomes. Proactively seek guidance on feasibility the traffic management and enforcement aspects.
- Engage with businesses, residents and other stakeholders in relation to the Core Area traffic management and circulation measures, and the Norzin Lam stakeholders in relation to requirements for pedestrian and NMT improvements. Engage with organisations representing people with disabilities to ensure their needs are fully understood and incorporated in the design as much as possible (this can be done in conjunction with Activity 6).
- After incorporating Task Force feedback and the initial views of stakeholders, the Consultant will modify measures and detailed designs accordingly. Updated versions will be used with business, residents, and other stakeholders in the Core Area and Norzin Lam, and with visitors to the area

(motorists, shoppers, diners, tourists, ...) who are representative of the target groups for the measures. This should include not less than 3 events at different times of day / days of the week in order to accommodate a broad range of attendance from target participants with different schedules;

47. *The outputs of this work will include:*(i) summary presentation to brief policy makers and the public on the proposed measures for traffic management and circulation plan; (ii) summary presentation to brief policy makers and the public on the proposed measures for pedestrians and NMT on Norzin Lam; and (iii) documented completion of consultation events including compiled comments and responses.

#### **ACTIVITY 4: TECHNICAL PREPARATIONS FOR LOW OR ZERO-EMISSION PUBLIC TRANSPORT MOBILITY**

48. Bhutan faces several transport challenges that come with economic development. Economic growth and rapid urbanization steadily increase demand for urban transport and imported fuels, further worsening the already large and growing trade and fuel deficit as well as raising concern over climate change. The Royal Government of Bhutan (RGoB) has launched an ambitious initiative to promote the use of Electric Vehicles (EVs) to address both the environmental and fossil fuel dependency issues. Introducing EVs in Bhutan is a policy agenda that calls for an innovative and balanced approach achieve RGoB's overall objective while also using sound technical planning in order to manage the complexities of deploying new and emerging technologies in the context of Bhutan where supply chains, technical capabilities, and infrastructure networks are still developing.

49. This activity will explore policies and infrastructure needed to create a favorable and enabling environment for zero-emission buses including: (i) technical preparations and surveys for specification of zero-emission vehicles in public transport and public sector fleets; (ii) assessment of infrastructure and operation and maintenance; and (iii) institutional development plan for the Bhutanese zero-emission bus sector. Extensive public consultation will accompany tasks under this activity.

50. While it is desirable to implement zero-emission buses immediately, it might emerge that it is not the most practical or feasible option right now in Thimphu. This Activity will assess and propose the cleanest solution that can be implemented now, taking account of current relevant practical considerations. If the assessment is that zero-emission buses would not be implemented immediately, the Consultant will provide the roadmap for adoption of zero-emission buses and gradual achievement of 100% zero-emission fleet. The Activity will thus consist of two parts: (A) Prepare for Zero-Emission Public Transport Mobility, which will be implemented at the earliest opportunity; and (B) Assess current feasibility for implementation of zero-emission buses and propose the cleanest solution that can be implemented in the immediate term. The Consultant is asked to include only part A in the financial proposal for the assignment and indicate separately additional cost of undertaking part B.

51. The scope of this activity encompasses the following:

- Undertake a detailed study of the existing and potential supply chain for electric public transport vehicles and parts in Bhutan to inform alternatives analysis on vehicle options;
- Identify, assess alternatives, and prepare specifications for zero emissions public transport vehicle options that can serve public transport users in Thimphu;
- Identify a potential charging strategy or overhead catenary strategy for electric buses along the primary bus lanes in Thimphu;
- Examine the technological, financial, economic, environmental, and social aspects of proposed solutions for zero emissions transport;
- Prepare infrastructure solutions that will improve electric mobility access along the length of Thimphu's primary transport corridor;

- Ensure that feedback and needs of key stakeholders and members of the general public are included in the design and development process for all proposed works;
- Prepare the electric and zero-emission transport mobility works for tendering and subsequent execution;
- Assess current feasibility for implementation of zero-emission buses and propose the cleanest solution that can be implemented in the immediate term; and
- If zero-emission buses are assessed to not be practical for immediate implementation, provide the roadmap for their implementation at the earliest feasible opportunity.

52. The tasks envisaged as necessary to undertake this activity include the following:

#### **Part A: Prepare for Zero-Emission Public Transport Mobility**

##### *Task 1: Supply chain analysis of vehicle options*

53. Bhutan's unique geographical context results in atypical supply chains for transport vehicles and components. In the past, this has required the City Bus Service to fly-in spare parts for buses due to unavailability of compatible parts in the South Asia Region. The push in India towards electric buses means that demand currently far outstrips the production capacity, which could make it difficult for Bhutan to obtain such vehicles within normal timelines. Such issues will need careful consideration alongside any options analysis of zero and low emissions vehicle options. The Consultant will accordingly investigate regional supply chains and explore key barriers for the uptake of low and zero emissions vehicles in Bhutan, noting which barriers may ease over time. The Consultant's activities will include:

- Undertake a detailed study of the existing supply chain for low and zero emissions vehicles including: (i) initial vehicles; (ii) spare parts; (iii) maintenance services; and (iv) required fuel (if applicable). This should include analysis of domestic industries in Bhutan as well as broader producer / supplier networks located in the South Asia Region; and
- Conduct industry interviews to ascertain the relative availability of key inputs to low or zero emissions bus operations and what impacts those may have on the range of credible options for rolling stock and their total cost of ownership / use in Bhutan's context.

54. *The outputs of this work will include:* (i) a supply chain and industry interview report; and (ii) a summary presentation for RGoB's Task Force.

##### *Task 2: Technical preparations for zero or low emissions buses*

55. Based on results from Task 1, the Consultant will undertake technical preparations for applying zero or low emissions buses to Thimphu's public transport fleet and will execute the following activities:

- Assessment of the applicability of zero or low emissions vehicles (electric, hybrid, plug-in hybrid, hydrogen) in Thimphu's public transport bus fleet and its operational plans;
- Financial and economic analysis (linked with Activity 5) of different zero or low emissions public transport options, including both total lifecycle costs as well as the resulting cost impact on operating schedules / fleet plans that are needed to accommodate differences in vehicle technologies (with particular attention to operating range in Thimphu conditions);
- Forecasting GHG emissions for applying different zero or low emissions options as well as a "do nothing" scenario;

56. *The outputs of this work will include:*(i) a report with prioritized recommendations for deploying zero or low emissions buses in Thimphu's fleet; (ii) a briefing presentation for RGoB's Task Force.

Task 3: Technical preparations for charging / power strategy

57. The Consultant will undertake technical preparations for an electric mobility charging / power supply solution that will traverse the length of Thimphu's primary north-south transport corridor. Activities will include:

- Conduct a baseline analysis in Thimphu's power infrastructure regarding: (i) grid capacity and configuration relative to transport routes; (ii) current charging services and standards used in Thimphu; (iii) future detailed technical requirements for enabling charging services to be developed along Thimphu's main north-south axis;
- Conduct visual surveys and utilities investigation using available data to identify the current and potential future location of charging facilities for bus depot overnight charging and in-service "opportunity" charging facilities along or near key public transport routes (or substations for overhead catenary power supply). The Consultant's activities should be documented within an open-source GIS map for sharing with other Consultants / RGoBinstitutions;
- Conduct an alternatives analysis (technical, financial / economic, and environmental) for different charging or power supply strategies for public transport along Thimphu's main north-south axis. The Consultant's analysis should consider upfront and lifecycle costs of infrastructure and vehicle fleets as well as operating costs and environmental impacts. At a minimum, alternatives analysis should consider BEV charging solutions, inductive charging, and overhead catenary systems for public transport vehicles. This analysis should present advantages and disadvantages for RGoB's consideration in choosing a preferred strategy;
- Prepare a preliminary budget, program of works, and overall schedule for the development of a preferred charging or power supply strategy to serve Thimphu's main north-south axis. The Consultant will present this to RGoB's Task Force for feedback and endorsement. After incorporating Task Force feedback, the Consultant will modify proposed plans accordingly and use updated versions during initial public consultations with business, residents, and other stakeholders along the length of Thimphu's primary north-south transport corridor. This should include not less than 3 consultation events at different times of day in order to accommodate a broad range of attendance from target participants with different schedules. At least one consultation should focus on bus drivers and local businesses that operate along the current alignment; and
- Develop preliminary engineering designs and specifications for works to develop a preferred charging or power supply solution for Thimphu's main north-south transport corridor. This should include sufficient detail to enable a subsequent Environmental and Social Impact Assessment.

58. *The outputs of this work will include:*(i) a GIS map documenting the Consultant's site survey and utilities investigation work; (ii) an alternatives analysis report; (iii) preliminary budget, program of works, and overall schedule for implementing a preferred charging or power supply strategy; and (iv) preliminary engineering designs and specifications for works to develop a preferred charging or power supply solution for Thimphu's main north-south transport corridor.

**Part B: Assess current feasibility for implementation of electric buses and propose the cleanest solution that can be implemented in the immediate term**

59. Conduct a market scan of clean diesel bus options that would be suited to the Thimphu context. Conduct an assessment of availability of diesel fuel suitable for BSIV, BSVI vehicles (Indian equivalent of Euro 4, Euro 6), taking account that BSIV-suited fuel will start to be available from early-2020, and BSVI-suited fuel may become available as it becomes more commonplace in India

(note that all diesel fuel in Bhutan comes through Indian suppliers and is thus dependent on what is available in their marketplace).

60. Conduct a comparative assessment of the best zero-emission and clean diesel alternatives that are currently feasible, taking account of market availability, feasibility, emissions benefit, operational range, costs, and other factors. The recommended approach for the Project will be proposed based on this assessment. If the recommendation is not for zero-emission buses at this time, prepare a decision framework for choices in subsequent bus purchases. Submit the recommendation to PIU for approval.

61. Following approval of the selected bus type, prepare vehicle specifications for procurement of the needed fleet. The vehicle specification will take account any relevant functional and operational requirements arising from Activity 2 and will incorporate to the extent possible the recommendations arising in Activity 6 (Gender and Disability analysis).

62. For the selected bus and energy type, assess and specify the maintenance and charging/fueling process and requirements. Specify equipment required for effective maintenance of the vehicles, with particular regard to maintaining optimal energy/fuel consumption. Assess spare parts requirements and procurement processes to ensure optimal fleet availability. Note that in case the decision is for cleaner-diesel buses, a 'business-as-usual' approach with existing maintenance equipment and practices will not suffice. Attention must be given to transitioning to a maintenance regime that can achieve and sustain the full potential fuel efficiency and emissions of which the buses are capable.

63. For the selected bus and energy type, define the driver training requirements to ensure optimal operation and energy/fuel consumption.

64. *The outputs of this work will include:* (i) a comparative assessment of the best zero-emission and clean diesel alternatives, with a recommendation on the approach to take for the Project ; (ii) specifications for procurement of the vehicles and supporting systems, and of the driver training program suited to that vehicle type; and (iii) roadmap for deployment of zero-emission vehicles, whether in the immediate term or at a later phase.

#### **ACTIVITY 5: ECONOMIC/FINANCIAL ANALYSIS AND PRIVATE SECTOR INVOLVEMENT**

65. The Consultant will be expected to:

- Perform the economic and financial analysis for the Project's Component 1 (Priority bus service infrastructure/BRT, fleet, and systems) and Component 2 (Pedestrianization of Norzin Lam);
- Develop most likely "base case" scenarios for the Projects overall financial and economic characteristics.
- Assess options for the private sector in the financing, building and operation of the proposed high-quality priority bus service.

66. The tasks envisaged as necessary to undertake this activity include the following:

67. The Consultant will develop two detailed models under this activity: The first is the economic model that will assess the economic costs and benefits of the proposed interventions, from the perspective of society. The economic analysis will be undertaken with a 6 percent discount rate. The second will be the financial model that seeks to understand the financial viability of the proposed intervention, from the perspective of the implementing agency/operator. The financial analysis will be undertaken with a discount rate that reflects the cost of capital.

68. The Consultant's financial model should be in nominal terms and should be capable of modeling inflation scenarios. In contrast, the Consultant's economic model should be in real terms.

All models should be clear, concise, auditable, and free of "macro" functions. The Consultant will use World Bank and International Monetary Fund Data / forecasts or inputs from the National Statistics Board of Bhutan.

69. Basic requirements for each model will be as follows:

Both models:

- The models for the economic and financial viability of the high-quality bus priority system should use the background/baseline data and traffic demand model developed in Activity 2.
- An approach for the economic and financial analysis for the investments under Activity 3 (pedestrianization of Norzin Lam) need to be proposed by the consultant and requisite data collection needs to be undertaken.
- For the financial analysis, the consultant will be expected to model the terms of each source of funding and financing including variables such as: (i) disbursement conditions; (ii) interest rates; (iii) principle grace periods; (iv) different repayment schedules (v) designated uses (i.e. component wise expenditure commitments) by source; and (vi) drawdown profiles;
- Perform sensitivity analysis to test input assumptions and advise RGoB on the impact of different exogenous factors such as: (i) benchmark interest rates; (ii) foreign exchange fluctuation; (iii) fuel price volatility; (iv) costs / benefits of different technology options; and (v) implementation schedule variations; (vi) implications of different operating scenarios and levels of service for bus services; (vii) different maintenance cost scenarios; and (viii) changes to staff salary regimes;
- In consultation with RGoB and development partners, define assumptions relating to "base case" scenarios that will form a central point for all analysis;
- Provide an outputs summary page showing graphs and convenient information about scenario results. This should include standard ratios used in financial / economic analysis as well as graphs to provide visual summary of results; and
- Develop "user manuals" that can guide future users through model structure, input controls, performing scenario analysis, and general model use.

Financial model only:

- Model inputs that align with the draft Public Service Agreement for the City Bus Service. This should include consideration for the operating subsidy payable from RGoB as well as the factors that drive cost of service and compensation to the City Bus Service;
- Model standard financial statements for the City Bus Service that reflect project interventions and long-term expenses such as operation, maintenance, asset renewals, and enhancements; and
- Model different scenarios for RGoB's upfront and long term fiscal contributions to both capital and operating expenses under the Program.
- Assessment of the role that the private sector can play in the building and operation of the proposed high-quality bus priority service.
- Assess the legal and institutional environment for PPP in Bhutan, including: (i) existence of a well-developed PPP law; (ii) responsible and supporting institutions; (iii) the experience to date with PPPs and whether they have/will complete their expected term and whether they required major restructuring; (iv) whether the projects to date are comparable to the bus priority project; and (v) the extent of continued appetite by Government for PPP;

Economic assessment only:

- Assess the economic feasibility and justification of the proposed design of the project roads, adopting the consumer surplus method that estimates the direct benefits of a project, which are the reduction on vehicle operating costs, travel time costs, road safety costs, and social cost of CO2.

- The Consultant shall undertake evaluation of the economic feasibility of the project roads considering an evaluation period no shorter than twenty years. For this, the economic costs of construction of the design standard being evaluated and the future maintenance costs shall be compared with the relevant level of economic user benefits arising from implementation of the project.
- For this purpose, economic costs, net of taxes and subsidies, should be computed based on the financial costs.

70. *The outputs of this work will include:*(i) completed financial and economic models in MS Excel format; (ii) user manuals for each model; (iii) a brief written report (<20 pages) on the Program's financial characteristics; (iv) a brief written report (<20 pages) on the Program's economic costs and benefits; and (v) a briefing presentation (approximately 45 minutes) that the Consultant will deliver to RGoB's Task Force on findings from the assignment.

#### ACTIVITY 6: GENDER AND PERSONS WITH SPECIAL NEEDS ANALYSIS AND ACTION PLAN

71. The RGOB believes in gender equality and approaching to reduce the rights gap between men and women, boys and girls. There is no overt gender discrimination in Bhutan and women enjoy more social freedom and equality compared with women in the region. The Constitution guarantees equal rights to women and men. The electoral laws also provide equal rights for women in politics. There is commitment in Bhutan to fulfil the Sustainable Development Goal 5 to "Achieve gender equality and empower all girls and women." The organizations advocating women and children's rights within RGOB and civil societies include the National Women's Association of Bhutan, National Commission for Women and Children and Bhutan Network for Empowering Women. However, there are areas to reduce the gap and enable gender inclusive environment in the country, specifically at workplaces. The World Bank research into the travel behaviors of Thimphu's population have identified differences across genders. Over 90% of licensed motor vehicle drivers are male. Household surveys have also suggested reduced trip making amongst women. Roughly 62% of male heads-of-household reported making two or more trips per day. In contrast, only 17% of female heads of household reported making two trips per day. Previously focus groups to discuss the transportation needs of persons with special needs have also been conducted. The Consultant will build on prior analytical work and will develop proposals aimed at enhancing the Program's benefits for women and persons with special needs.

72. The requirements under this activity are to:

- Capture and analyse information regarding the transportation needs of women and persons with special needs throughout Thimphu (through the lens of the proposed Project's investments);
- Ensure that the needs of women and persons with special needs are properly identified and reflected in the design of Project; and
- Capture and analyse information regarding social and cultural environment in Thimphu relevant to public transport management and labour management practices in civil works in the city focusing safety and security for women; and
- Develop a Gender and Special Needs Action Plan to guide the Project's implementation toward serving the transport needs of women and persons with special needs including a suggestive action plan for ensuring safe workplace environment and community health and safety during construction.

73. The consultant will collect and review available literature, laws and policy guidelines, consult relevant stakeholders, the women and persons with special needs for analysis of the baseline status and prepare action plan for improving the social environment for women, girls and persons with special needs related to public transport operation. The tasks envisaged under this activity are:

74. The tasks envisaged under this activity are:

- Collect and analysis existing legal and policy framework in Bhutan on gender and the World Bank guidelines on gender and disability inclusion.
- Analyse existing data sources such as results from the World Bank's household survey, Bhutan Living Standard Surveys, RSTA vehicle licensing data, and other sources to compile existing evidence of women's travel behaviour and transport preferences. Review relevant policies and reports relating to gender and disability in Bhutan.
- Identify and map key stakeholders, national level rights based and advocacy organizations, and associations of the women and persons with special needs in Thimphu to engage with them for social impact assessment and gender and disability analysis.
- Conduct approximately 8-10 focus group interviews with women, including bus customers, licensed drivers, non-motorized transport primary users, and taxi users; and 8-10 focus group interviews with persons with special needs. Additional groups may be added as/if identified through the stakeholder consultations. Focus groups should represent diverse cross sections of the population and should include individuals of different income levels, residential locations, and education levels. The Consultant will draft a focus group sampling plan and will provide this to the World Bank and RGoB's Task Force for review and approval prior to conducting the focus groups;
- Conduct on board "intercept" interviews with women and many persons with special needs who are using the City Bus Service to identify perceptions of existing service and demand for future improvements;
- Undertake stakeholder consultations with RGoB institutions, non-governmental organizations, professional associations, and private enterprises to gather feedback on the transportation needs of women and persons with special needs; and
- Based on the surveys, focus groups and other consultation, identify any aspects of the public transport network, service levels, hours of operation, etc. that impact negatively on women and girls due to travel needs related to their family or societal role. Prepare recommendations for network and service planners to incorporate in the service design.
- Based on the surveys, focus groups and other consultation, identify whether there is, and if so the nature and extent of, any forms of harassment experienced by women and girls in using public transport. As required, propose mitigation measures including staff training, public campaigns and liaison with police;
- Identify and collate international good practice and available guidelines on end-to-end physical accessibility in public transport systems, including wayfinding and information, internal vehicle layout and features for people of reduced mobility and/or of reduced visual, aural or cognitive ability. Discuss with stakeholders and with a set of users to check whether there are any further items specific to Bhutan or to Thimphu that need to be taken in account.
- Prepare a set of recommendations to be incorporated in the infrastructure, vehicle and service design for the Project. If there are practical challenges to implement low-floor buses in Thimphu (e.g. high kerb heights), develop practical alternatives to ensure ease of boarding for all users (e.g. raised bus stops and Kassel kerbs for parallel docking). Ensure the designers in Tasks 2, 3 and 4 are aware of and have access to relevant design manuals, guidelines, etc.
- Through consultation, identify the level of interest among women to be workers in the bus sector (as drivers, conductors, maintenance workers, etc.) what barriers they face and the extent to which such barriers can be lessened. In particular, examine the current working hours and shift patterns for bus workers and identify alternatives that could be more suited to balancing work and family commitments;
- Develop a Gender and Special Needs Action Plan with specific interventions to shape Project activities according to the identified transportation needs of women and persons with special needs, respectively; and

- Propose 3- 5 potential indicators to measure the Program's impact on women and persons with special needs, respectively.

75. *The outputs of this work will include:*(i) a brief report (10-15 pages) on analytical findings regarding the transport behavior and needs of women and potential indicators to measure the Program's impact in this regard; (ii) a Gender and Special Needs Action Plan with recommendations; (iii) a final briefing for RGOB's Task Force (approximately 30 minutes) to present findings from all work.

#### ACTIVITY 7: ENVIRONMENTAL AND SOCIAL ASSESSMENTS AND PLANS(FOR THE TECHNICAL DESIGNS DEVELOPED UNDER ACTIVITIES 2, 3& 4)

76. This activity involves the undertaking of the requisite environmental and social studies needed to inform the technical design of the Project (to minimize the risk of social and environmental impacts) and prepare the requisites, assessment and documents needed under the ESF. As such an integrated approach between this activity and activities 2,3, and 4 is required. The assignment should be conducted in a way that meets the requirements set out in the Environmental and Social Framework (ESF) of the World Bank which has been in use since October 2018. In addition, the assessment should meet the requirements of the Constitution of Bhutan 2008 (Article 5 – on Environment), Forest and Nature Conservation Act (1995), Environmental Impact Assessment Act (2000), Biodiversity Act (2003), National Environment Protection Act of 2007 (NEPA), Bhutan National Environmental Strategy (2008), as amended from time to time / RGOB's other relevant acts, guidelines, as applicable.

77. Since October 2018, all World Bank funded Investment Project Financing (IPF) are required to follow the Environmental and Social Framework (ESF) consisting ten (10) Environment and Social Standards (ESS). These ESSs set out their requirement for the borrowers relating to the identification and assessment of environmental and social risks and impacts associated with any project. The ESSs support the borrowers in achieving good international practice relating to environmental and social sustainability, assist them in fulfilling their national and international environmental and social obligations, enhance transparency and accountability and ensure sustainable development outcome through ongoing stakeholder engagement. A copy of the ESF and ESS guideline may be found at: <http://documents.worldbank.org/curated/en/383011492423734099/pdf/114278-WP-REVISED-PUBLIC-Environmental-and-Social-Framework.pdf>

78. Notably the Consultant is expected to undertake the following work:

- Develop scope and methodology for environmental and social impact assessment (ESIA) on review of the project scope, location and the requirements of the national legal framework and the World Bank ESF and the 10 standards.
- Conduct assessment of the environmental and social issues relating to Project's Component 1 (Priority bus service infrastructure, fleet, and systems) and Component 2 (Pedestrianization of Norzin Lam);
- Prepare the ESIA report (including identifying all potential E&S risk and impacts) in line with the World Bank ESF including mitigation measures and recommendations to ensure i) all environmental risks and impacts are duly attended and mitigated ii) all social risks and impacts are appropriately addressed to execute the main work, and associated and ancillary facilities iii) provide achievable alternatives to avoid/minimize potential environmental and social risks and impacts;
- Identify possible positive environmental and social impacts and measures to enhance the same for beneficiaries inclusive of age, gender, persons with special needs and other vulnerabilities;
- Identify various stakeholders and help develop a Stakeholder Engagement Plan (SEP) for the Project and disclosure procedure for engagement and consultation with the same down to the finalization of the ESMP;

- Develop a written Labour Management Procedures (LMP) for the Project which will set out the way in which project workers will be managed, in accordance with the requirements of national law and the World Bank ESS2.
- Perform GHG emissions calculations for all tangible investments that are designed for the project (under activities 2, 3, and 4) in line with the requirements of ESS3 (there is partial overlap with the GHG forecast for activity 2, task 5).
- Provide inputs to prepare the Borrower's Environmental and Social Commitment Plan (ESCP) for the Project;
- Carry out an assessment of Institutional Capacity of Thimphu Thromde, the National Environment Commission (NEC), Department of Labour and relevant other agencies and NGOs to manage environmental and social risks and impacts; and
- Building on reviews and experiences in prior projects, conduct a review of relevant country laws and requirements to address the environmental and social impacts, identify gaps and measures minimizing the gaps with the World Bank ESF, the ESSs and other guidelines.

79. The scope of work will include assessment of all relevant types of environmental and social adverse impacts on physical and/or human environments. This includes, but is not limited to:

- Relocation of population associated with the settlement process;
- Community health, security and safety;
- Changes in pollution;
- Effects on biodiversity including natural habitats;
- Change in land use and land values;
- Soils and terrain;
- Water sources including wetlands, if any;
- Resource use for civil works;
- Vegetation;
- Flora and fauna;
- Physical cultural resources and heritage;
- Population characteristics;
- Community and institutional structures;
- Political and social resources;
- Socio-economic resources including livelihood of people;
- Vulnerable people particularly aged, women and children (with a special focus on gender-based violence);
- Cultural heritage; and
- Indigenous people, if applicable.

#### **Task 1: Baseline data collection and initial research**

80. The Consultant will reference prior analytical work / studies and will liaise closely with other Consultants who are executing technical assignments relating to the preparation of Project works and other interventions to ascertain the broad scope of Project activities. Based on this information, the Consultant's will make estimates for plausible boundaries for impact assessment and baseline data collection. The Consultant's activities under this Task will include the following:

### Social baseline

81. To support with identifying community needs, potential social impacts and the nature of affected parties, the Consultant will carry out a baseline social survey of the communities and affected persons including census of all those likely to be affected (including public entities and private persons, and employees of establishments) based on concept designs. This will categorize citizens and Project Affected Persons (PAPs) into different groups according to their interest, socioeconomic status and vulnerability, type of impact and, if relevant, type of structure affected (residence, business, titled, non-titled, etc.). The indicative list of information to be gathered will include but is not limited to:

- Social status of the beneficiary communities and affected entities, and families/persons including gender and physical/mental ability. Note that there is not caste or tribe system in Bhutan and hence related standard requirements are not applicable;
- Economic status of the beneficiary communities and affected families/persons including source of livelihood, monthly incomes; number of "bread earners" in family, types of incomes, land ownership, household assets, indebtedness, etc.;
- For residential families: nature and quantity of likely loss-homestead area, residential structure, types of resettlement and relocation assistance preferred, etc.;
- For commercial units: nature of land and structure affected, title, business type, legal status of business, monthly incomes and turnovers; number of employees, cliental, etc.;
- List of wage laborers, employees working in formal or informal sector who may be adversely affected due to the project losing their income and employment (permanently or temporarily) with data on nature of occupation, education and skill level, social category, age, and income;
- Common properties affected (cultural properties, schools, playgrounds, community centers, dispensaries, etc.);
- List of vulnerable persons/families: (poor, women headed, aged/infirm, physically or mentally challenged) with socio-economic profile;
- List of stakeholders: public entities, civil society organizations, community groups including women and persons with special needs, labour organizations, trade and business associations, transport organizations (operators and workers), associations of tour operators, hotels and restaurants, and relevant others with their stake and level of influence and impacts;
- Inventory of all affected common amenities, facilities and religious structures;
- Review of legal framework and grievance redress systems relevant to social considerations in design and implementation of urban transport and infrastructure projects and the environment and social requirements of the World Bank;
- Any other information considered important in the local context such as: travel time to work place; access to basic services; health status; participation in development schemes of the government; level of mainstream linkage;

82. All the data analysis from the above will be gender disaggregated, wherever relevant. The Consultant will augment and cross check survey data with data from the 2012 Bhutan Living Standards Survey (BLSS) and data from the World Bank's household survey on transport behaviors. The Consultant will be responsible for clearing all survey methodology and instruments with the National Statistics Board of Bhutan in accordance with national regulations.

### Environment baseline

83. The Consultant will also assemble, evaluate and present baseline data on the relevant environmental characteristics of the Project area. This will include information in the following areas:

- Physical environment: geology; topography; soils; water resources;
- Natural drainage (surface drainage and flood risk);
- Climate and air quality, water and noise level pollution;
- Biological environment: flora; fauna; rare or endangered species; sensitive habitats, including parks or preserves, significant natural sites, etc.; species of commercial importance; and species with potential to become nuisances, vectors or dangerous;
- Analysis of interactions likely to occur with all activities in the vicinity including associated facilities and cumulative impacts on the environment; and
- Analysis of land values in areas likely to be affected by the project.

84. The Consultant will document findings in an electronic library and a GIS file that can be shared with other Consultants via the Program Management Consultancy. The Consultant's GIS work should take place in close consultation with the Consultant working on Thimphu's Low Emissions Master Plan – particularly for the sake of documenting land that may require acquisition. For physical works, the Consultant will make site visits to ascertain conditions and site access. Visits will serve to document baseline conditions using photographs and/or videography.

85. *The outputs of this task will include:* (i) a baseline report on social and environmental conditions ex-ante; (ii) data and analysis from the census survey on Project Affected People; (iii) an electronic library and GIS map capturing baseline information and identifying sites of particular sensitivity.

## **Task 2: Environmental and Social Impact Assessment (ESIA)**

86. The Consultant will assess all the relevant environmental and social risks of the Project based on the designs developed in Activities 2, 3 and 4, and the baseline assessment performed in Task 1 of this Activity (Activity 7). This assessment will in turn be used to inform the design of the Project under Activities 1, 2 and 3.

87. The Consultant will undertake this Task in conjunction with the technical designs of the Project (Activities 2, 3, and 4) to ensure that the technical designs that are selected account for the social and environmental risks that they pose (see multi-criterial assessment to be performed in Task 3 of Activity 2).

88. In developing the ESIA the Consultant's work will consider at least the following:

### *ESS2: Labor and Working Conditions:*

- The Consultant will undertake an assessment of labor risks and working conditions. The assessment will include risks from project activities and key labor risks such as hazardous work, child labor and forced labor, migrant or seasonal workers, discrimination against women, vulnerable groups, etc., labor influx, occupational health and safety, possible accidents and emergencies, risks of SEA/SH among others. The ESIA will identify project workers (direct workers, contracted workers, primary supply workers, community workers) and will develop a written Labor Management Procedures (LMP) for Thimphu Thromde which will set out the way in which project workers will be managed, in accordance with the requirements of national law and this ESS. The procedures will address the way in which this ESS will apply to different categories of project workers including direct workers and the way in which the Borrower will require third parties to manage their workers. These procedures will also include a specific SEA/SH Accountability and Response Framework and/or SEA/SH Management Plan to

minimize/mitigate the risks of sexual exploitation and abuse and sexual harassment from external labor influx during the implementation of the project's works (See also ESS 4).<sup>5</sup>

ESS3: Resource Efficiency and Pollution Prevention and Management

- The ESIA will assess project impacts on resource use and efficiency and pollution and how the project could prevent and manage pollution. Specifically, the ESIA will assess energy use, water use and raw material use (e.g. construction material). It will also assess impacts on air quality, generation of hazardous and non-hazardous wastes and propose mitigation measures accordingly. It will also calculate/estimate the greenhouse gas emissions from the construction and operation of the infrastructure in accordance with internationally or nationally accepted methodology for estimating greenhouse gas emissions. The resultant ESMP should provide measures to optimize resource use and management of pollution, including management of liquid and solid wastes relevant to the project both during construction and operation.

ESS4: Community Health and Safety

- The ESIA will assess the risks and impacts of the project on the health and safety of the communities that are exposed to the project activities. It should include assessment of impacts due to labor influx on the communities' health and safety as well as traffic safety to communities and commuters during construction. Based on this in-depth analysis and, a project-specific SEA/SH Management Plan will be prepared which will spell out the specific measures – both preventive and curative – the project management will undertake in managing the risks of SEA/SH that may occur during the project's implementation. The Bank's Good Practice Note on SEA/SH is referred to guide the preparation of the plan.

ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

- The ESIA will assess land acquisition needs and whether there will be any physical and economic displacement of people and any access restrictions resulting from implementing the project. The ESIA will also assess if the proposed components have already acquired land, caused related impacts and the processes followed to mitigate adverse impacts. It should provide information on the number and different types of project-affected people (PAPs), if any, and propose measures to manage impacts following the mitigation hierarchy of avoidance, minimization, mitigation and compensation. The consultant will also identify legal and regulatory framework for land acquisition in Bhutan, institutions involved in land acquisition relevant to this project, their experience and current capacity and identify any gaps to comply with the requirements of the ESS5.

ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

- The ESIA assess whether there are any species of ecological significance in the project area of influence, and whether the project will affect any natural and critical natural habitats, species of ecological and conservation significance and any plantation and reforestation areas. The ESIA should apply the mitigation hierarchy of avoidance, minimization, mitigation and compensation when developing the management plan to address project impacts and risks on biodiversity and living natural resources.

ESS7: Indigenous Peoples

- RGoB advises that there are no indigenous peoples including ethnic minorities residing in the project affected areas. The ESIA will verify this. In line with standard requirements, if IP/EM communities are found and if they are likely to be adversely affected, the 'Free, Prior and

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<sup>5</sup> In assessing risks and impacts and management measures related to ESS2, reference should be made to the World Bank Group General Environmental Health and Safety Guidelines and Industry Sector Guidelines for Construction Material Extraction. Other Bank guidance notes can be referred to as well including the Good Practice Note on Labor Influx Management, Good Practice Note on Addressing GBV in Investment Project Financing involving Major Civil Works, Environment and Social Incident Response Toolkit (formerly SIRT) and integrating ESHS into procurement process as per the Bank's Procurement Framework.

Informed Consent (FPIC)' of these concerned communities on the project will be ensured and a corresponding IP/EM Plan will be prepared.

ESS8: Cultural Heritage

- The ESIA will assess the risks and impacts on cultural heritage. It shall make an inventory of any heritage that will be affected and propose measures to manage risks and impacts, including developing Chance Find Procedures.

ESS10: Stakeholder Engagement and Information Disclosure

- As a part of the ESIA, a separate Stakeholder Engagement Plan (SEP) will need to be prepared. The objectives of the SEP are to establish a systematic approach to stakeholder engagement that will help identify key stakeholders – project affected parties and other interested parties – and build and maintain constructive relationships with them. The SEP will assess the level of stakeholder interest and support for the project; enable stakeholder views to be taken into account in project design and in environmental and social performance; promote and provide means for inclusive engagement throughout the project life-cycle; ensure that appropriate project information is disclosed to stakeholders in a timely, and appropriate manner and format; provide citizens with accessible and inclusive means to raise issues and grievances; and enable the project implementing entity to respond to and manage such grievances.
- The Consultant will prepare a SEP following a four-step approach: (i) Stakeholder mapping and initial consultations: identify key stakeholders, classified into project-affected and other interested parties; and hold initial consultations; (ii) Preparation of a preliminary SEP based on initial consultations: Based on stakeholder feedback from the initial consultations, develop a draft SEP with detailed description of activities, roles and responsibilities, timeframe, and budget.; (iii) Consultations on the preliminary SEP and feedback documentation for key stakeholders and stakeholder groups; and (iv) Preparation of the appraisal-stage SEP; revise and further develop the draft SEP based on stakeholder feedback.

89. The Consultant will present findings from the above assessments to Thimphu Thromde and other stakeholders in a meeting. The aim of this meeting will be to gather additional information on technical constraints and potential mitigations that may help to improve final designs and contract specifications for project works.

90. Following workshop feedback, the Consultant will conduct public consultations on likely impacts of the Project at 3 public consultation events at different times of day / days of the week.

91. *The outputs of this task will include:* (i) an ESIA Report covering social and environmental considerations; (ii) a 2 day workshop; and (iii) a summary presentation (approximately 1 hour) for RGoB's Task Force.

**Task 3: Analysis of alternatives**

92. The Consultant will use results from Task 2 as well as incremental analysis to propose alternatives or enhancements to Project concepts that can be reflected in detailed designs. Proposals will consider alternatives which would achieve the same objectives with reduced or avoided social and environmental impacts, through changes such as, but not limited to: (i) siting; (ii) design modifications / enhancements; (iii) technology selection; (iv) construction techniques and phasing; (v) and operating and maintenance procedures; (vi) concessional fares or social protection mechanisms. Proposals should include estimates for incremental / avoided potential environmental and social impacts, capital and operating costs, sustainability under local conditions, and institutional, training, and monitoring requirements. For the avoidance of doubt, alternatives analysis will include non-physical elements of the Project such as pricing and regulatory regimes associated with Travel Demand Management initiatives.

93. The Consultant's assessment will include consideration for a "without Program" alternative, in order to demonstrate what would reasonably be expected to occur to environmental and social conditions in the foreseeable future, based on existing ongoing development, land use, and regulatory practices and other relevant forces.

94. *The outputs of this task will include:* (i) an alternatives analysis report; and (ii) a summary presentation (approximately 45 minutes) for RGoB's Task Force.

#### **Task 4: Preparation of Environmental Social Management Plan (ESMP)**

95. After the Environmental and Social Impact Assessment is finalized, the Consultant will subsequently develop an ESMP including proposed work programs, responsibilities, budget estimates, schedules, staffing, training requirements, and other necessary support services to implement the mitigating measures identified in earlier tasks. The ESMP would include the following:

- Specific mitigation measures (potentially in a tabular form) to cover anticipated significant adverse impacts. This should include an implementation schedule that highlights the responsibility of people and institutions involved in deploying mitigations. A grievance redress system and methodology should be included in the mitigations that the Consultant develops.
- Detailed descriptions for appropriate impact avoidance / reduction measures and compensatory measures as well as the specification of equipment and operational procedures (considered relevant) to reduce envisaged impacts.
- Details as required to implement modalities identified for mitigating impacts (e.g. contractual clauses, enforcement measures, tender specifications). These should provide the means for the Project to operationalize mitigation measures during implementation;
- Proposed indicators and measurement methodologies that can be tracked, monitored, and evaluated to ascertain Project impacts and the effectiveness of mitigations during implementation. This should include indicators relating to grievances received and the corresponding responses.
- Capacity building/training plan based on the results of capacity assessment of relevant implementing agencies.
- The ESMP should have the following supporting documents (as described in Task 2): SEA/SH Accountability and Response Framework and/or SEA/SH Management Plan, Stakeholder Engagement Plan, Labor Management Plan, and (if needed) Indigenous Peoples Plan.

96. The Consultant will a draft ESIA and ESMP (together) to Bhutan's National Environment Commission and the World Bank for review and feedback. After receiving feedback, the Consultant will update both documents and subsequently undertake not less than 3 rounds of public consultation. Consultations should occur at different times of day to accommodate members of the public with different schedules. The Consultant will revise both the ESIA and ESMP based on comments received during consultation. The ESMP and ESIA will subsequently be disclosed on the Program website and the World Bank's InfoShop after receiving endorsement by RGoB's Task Force and clearance from the World Bank.

97. *The outputs of this task will include:* (i) a final ESIA; and (ii) a final ESMP; SEA/SH Accountability and Response Framework and/or SEA/SH Management Plan, Stakeholder Engagement Plan, Labor Management Plan, and (if needed) Indigenous Peoples Plan.

#### **Task 5: Resettlement Action Plan (RAP)**

98. Based on final detailed designs for works and the ESIA, the Consultant will develop a RAP which will serve to manage land acquisition and resettlement under the Program. This will include the following:

- Identified total area to be acquired under the Program, disaggregated by various categories/use and ownership;
- A final tally for the total number of land plots to be acquired and the number of title holders from whom the land is to be acquired for the project;
- Identified approach and modality for obtaining any land owned and in possession of public agencies for use in the civil works construction for the project;
- Accurate figures for the total number of Project Affected Persons with a breakdown for different categories such as informal residential or commercial occupants, membership in one or more vulnerable groups, extent of impact, and chosen resettlement / compensation option (if applicable);
- Estimate the replacement cost of various categories of land (commercial, residential, industrial and agricultural) along the road length and project impact area, which is expected to be acquired for the project. The Consultant will develop estimates for the fair market value and replacement cost of land. The Consultant should note the Compensation Rates 2017 of RGoB, prepared by the Property Assessment and Valuation Agency, MoF; and the latest Bhutan Schedule of Rates;
- Develop an entitlement matrix to compensate PAPs based on the nature of land or other livelihood loss on account of the Program. This should include options for PAPs to select the nature of compensation / other assistance that they prefer.
- Compile recent data on compensation award by local government in similar acquisition activities in the project area; and
- Gather land prices, if alternative tenured land were to be made available to the informal settlers away from the proposed infrastructure within a distance so as to not adversely affect the livelihood of informal settlers.
- Develop institutional arrangement with task responsibilities and timeline for implementation of land acquisition and the RAP.
- Develop conditions of land taking and mobilization of civil works contractor in the project right of way for advancing civil works.

99. The Consultant will propose a draft RAP to TT (on behalf of RoGB) and the World Bank for review and feedback. After receiving feedback, the Consultant will update both documents and subsequently undertake not less than 3 rounds of public consultation. Consultations should occur at different times of day to accommodate members of the public with different schedules. The Consultant will revise the RAP based on comments received during consultation. The RAP will subsequently be disclosed on the Project website and the World Bank's external portal after receiving endorsement by RGoB's Task Force and clearance from the World Bank.

100. *The output of this task will include:* (i) a final Resettlement Action Plan.

### **The Management of the Assignment**

#### **Supervision and Management**

101. The Consultant will be managed on a day to day basis by the Thimphu Thromde which is the implementing agency for the Project, supported by the Project Management Consultant, and the World Bank. The Consultant will provide the Program Management Consultancy with inputs and access to data, reports, and other information as required to facilitate quality reviews. The Consultant will be expected to provide regular briefings and present interim findings and final results to a Task Force consisting of RGoB officials and representatives empowered by Executive Order C2/172 dated January 5th, 2016. The RoGB has established this multi-sectoral Taskforce to study and come up with immediate measures to ease the traffic situation in Thimphu, under the coordination of the Ministry of Information and Communication.

102. Where tasks entail seeking feedback or endorsement from RGoB's Task Force, Consultants will allow 10 working days in their work programs to accommodate RGoB's review and comments. Beyond this time, the Consultant may seek support from the TT/ the Program Management Consultancy and the World Bank to facilitate RGoB's review. While awaiting feedback beyond 10 working days, the Consultant should endeavor to alter work programs to develop subsequent tasks while awaiting feedback. For the purpose of all assignment tasks "working day" shall mean any day that is not a Saturday or Sunday and is not a holiday for RGoB offices in the Thimphu area.

#### General Guidance for consultations

103. With support from the Program Management Consultancy (which is being procured in parallel) to support TT, the Consultant will be required to hold public consultations regarding all proposed designs. These will entail brief presentations at each consultation event as well as development / distribution of informational materials that are fit for public consumption (e.g. handouts, information posters, electronic media, etc.). All consultations will be documented with agendas, attendance sheets, minutes of discussion, and photos taken during the event. The Program Management Consultancy will provide a means for receiving comments both in physical form (e.g. hand written documents or via post) and via electronic means (e.g. a dedicated e-mail account or web-portal). Under guidance from Thimphu Thromde (and the Program Management Consultancy), the Consultant will compile comments from each consultation event and compile responses for consideration by RGoB stakeholders and development partners. The Consultant will compile, organize, regularly update, and provide access to an electronic library that contains all documentation and comments collected during the assignment.

#### Data ownership

104. The Royal Government of Bhutan shall own all right, title and interest, including all intellectual property rights, in and to any reports, document, or other deliverable (whether in hard-copy, electro-magnetic, or machine readable format) created under this assignment. The Consultant will provide additional soft copies of all data in Microsoft Excel or Access formats. For the avoidance of doubt, this will include all data used in the development of transport models, financial models, economic models, CAD files, or other technical models whether locally collected or drawn from other sources such that all analysis should be replicable after completion of the assignment without requiring any additional data sources.

#### Guidance on joint ventures or sub-contracted services (if applicable)

105. The Consultant will adhere to the following requirements for sub-contract services:

- The principal firm will notify Thimphu Thromde and the Program Management Consultancy not less than 15 calendar days before making changes to subcontracting arrangements that comprise more than 5% of the assignment budget and/or entail changes to a nominated CV. Changes to nominated CVs or subcontracting arrangements after tendering will be subject to review and "no objection" by the procuring authority for each assignment;
- Payment to subcontracted firms or individuals should be "back to back" such that sub-consultants are paid immediately upon payment to the principal firm without delay; and
- Firms or individuals that have been sanctioned by the World Bank will not be eligible for engagement in any joint venture or sub-contacted arrangement under the assignment.

106. All firms or individuals should express commitment in writing to adhere to the relevant provisions of the World Bank's Guidelines on Preventing and Combating Fraud and Corruption in Projects financed by IBRD Loans and IDA Credits and Grants for all activities under their respective assignments.

#### Language of reports and data

107. The Consultant will provide all reports and data sets in well written English. Where necessary, the Consultant will engage editors to ensure that all outputs meet a standard of quality that is fit for

public dissemination. All written materials should be packaged concisely with graphics, figures, and tables as required to facilitate communications. All data files should include annotations in English that will enable RGoB / different development partners to retrace analytical steps and make future use of all data and analysis.

#### DURATION FOR THE ASSIGNMENT

108. The total duration of the assignment is 12 months;

109. The activities under this project are intended to be undertaken by a very experienced and high-quality Consultant firm (or a consortia), familiar with undertaking assessments of this type, both in the region and internationally. The Consultant's team are expected to include qualified personnel in the field of urban transport planning; bus/BRT operations and pedestrianization; economic and financial analysis; gender issues; social and environmental issues.

110. Whilst the Consultant is responsible for proposing a senior and high quality team appropriate for undertaking the assignment as envisaged in the Terms of Reference, to the required standard, it is likely that the team, as a minimum, will include the following key staff/experts, which should ideally be full-time employees of the consulting firm(s):

- **Team Leader (Urban Transport Planning Expert):** The Team Leader would be expected to have an advanced university degree in Economics, Engineering, Urban Planning or any other relevant field. A minimum of 15 years+ demonstrated experience in development of large infrastructure projects in urban areas is expected. Good English communication and writing skills, especially in report writing, are essential and knowledge of the local language is a plus.
- **Bus/BRT operations Expert:** The expert is expected to have an advanced university degree in transportation, transport policy and planning, civil engineering or related fields. A minimum of 15+ years of global experience in issues relating to planning and operations of priority bus services and BRTs, and fleet management is required. Good English communication and writing skills, especially in report writing, are essential.
- **Non-motorized Transport and Pedestrianization Expert:** The expert is expected to have an advanced university degree in transportation, transport policy and planning, civil engineering or related fields. A minimum of 10+ years of global experience in issues relating to planning and operations of priority bus services and BRTs, as well as, pedestrianization of urban areas, and related engineering, planning issues, and fleet management is expected. Good English communication and writing skills, especially in report writing, are essential.
- **Civil Engineer for the roadway improvements/designs:** The expert is expected to have an advanced university degree in civil engineering, transport engineering or related fields. A minimum of 10+ years of global experience in issues relating to designing roadways, and related engineering and planning issues is expected. Good English communication and writing skills, especially in report writing, are essential.
- **Transport Economist:** The expert is expected to be the holder of at least an advanced degree in transport economics or related fields. An experience of 10+ years in issues relating to travel demand forecast modelling (including data collection), traffic engineering, and management, and economic and financial analyses is expected and

relevant qualifications and experience in priority bus or BRT planning (in particular), and transport in general. Good English communication and writing skills, especially in report writing, are essential.

- **Gender Expert:** The expert is expected to have an advanced degree in gender or related fields. A minimum of 10+ years of experience working on gender issues and their implications in development projects; research and work experience relating to gender issues; and knowledge of techniques and their applications in mobilizing community participation in development programs is expected. Good English communication and writing skills, especially in report writing, are essential.
- **Social Expert:** The expert is expected to have an advanced degree in social sciences or related field with 10+ years of experience in performing social impact assessment (including, but not limited to, land acquisition and involuntary resettlement, labour and working conditions, community health and safety, and community engagement) for infrastructure projects. Knowledge in latest social safeguard policies of the international development financing institutions in Bhutan are preferred. Good English communication and writing skills, especially in report writing, are essential.
- **Environmental Expert:** The expert is expected to have an advanced degree in environmental sciences or related field with 10+ years of experience in performing environmental impact assessment (including but not limited to pollution, biodiversity, soil and terrain, resources use, flora and fauna, and community engagement) for infrastructure projects. Knowledge in latest environmental safeguard policies of the international development financing institutions in Bhutan are preferred. Good English communication and writing skills, especially in report writing, are essential.

111. The consultant may propose non-key staff (for example survey and geotechnical crew members, engineering technicians for construction drawings, engineering technicians, etc.) as appropriate and reasonable to complete the work. All key and non-key staff should be included in the fee proposal.

#### FINAL DELIVERABLES:

Below is the list of final deliverables. The details of each deliverable can be found in outputs listed at the end of each activity-task combination in the ToRs.

Activity	Final Deliverables
1: DEVELOPMENT OF A REFERENCE FRAMEWORK FOR LOW-EMISSION TRANSPORT IN THIMPHU	Report comprising of the results of activity 1, including: (i) high-level and detailed options for low-emission transport packages for Thimphu, leading to a recommended reference framework to be used in the Project; (ii) summary of two stakeholder workshops and minutes from the workshops (to be conducted by consultant); (iii) bus priority design options; and (iv) the mid-term review of the Thimphu Structure Plan 2002-2027;
2: TECHNICAL DESIGN OF PRIORITY BUS INFRASTRUCTURE AND SERVICES	Report comprising of the results of activity 2, including: (i) synthesis of existing/collected information and definitions (along soft copy of dataset); (ii) travel demand modeling and projections (along soft copy of dataset); (iii) technical designs of bus priority service and complementary infrastructure; (iv) technical design for bus terminals and an upgraded city bus depot; (v) GHG emissions forecasting (long with model); (vi) traffic management and road safety plan for

	construction periods; and (vi) operating and maintenance budget
3: TECHNICAL DESIGN TO PROMOTE NON-MOTORISED TRANSPORTATION (PEDESTRIANISATION OF NORZIN LAM)	Report comprising of: (i) traffic management and circulation plan for Norzin Lam and the Core Area, (ii) technical design for pedestrian and non-motorised traffic on norzin lam, and (iii) summary of outcome of consultation events (to be hosted by consultant).
4: TECHNICAL PREPARATIONS FOR LOW OR ZERO-EMISSION PUBLIC TRANSPORT MOBILITY	Report comprising of: (i) supply chain analysis of vehicle options, (ii) recommendations for deploying zero or low emissions buses in Thimphu's fleet; (iii) technical designs for charging of buses and power strategy; and (iv) an assessment of current feasibility for implementation of electric buses and proposal the cleanest solution that can be implemented in the immediate term.
5:ECONOMIC/FINANCIAL ANALYSIS AND PRIVATE SECTOR INVOLVEMENT	Report comprising of economic and financial analysis (and companion model and data).
6: GENDER AND PERSONS WITH SPECIAL NEEDS ANALYSIS AND ACTION PLAN	Report comprising of (i) analytical findings of transport behaviour of women and persons with special needs and (ii) Gender and Special Needs Action Plan.
7: ENVIRONMENTAL AND SOCIAL ASSESSMENTS AND PLANS	Report comprising of (i) analysis of baseline social and environmental conditions (ex-ante) along with supporting data and maps; (i) Environmental and Social Impact Assessment (and analysis of alternatives), (ii) Environmental Social Management Plan, (iii) Resettlement Action Plan
FINAL COMBINED REPORT	Final Report combining and harmonizing the outputs of activities 1 to 7.

#### PAYMENT SCHEDULE

Deliverable	Payment (% of Contract amount)
Acceptance of Inception report (outlining approach to all activities and work plan)	10
Acceptance of Report on Reference Framework for Low-Emission Transport in Thimphu	10
Acceptance of Report on Technical Design for Bus Priority Infrastructure and Services	10
Acceptance of Report Technical Design for the pedestrianization of Norzin Lam	10

Acceptance of Report on Technical preparations for low or zero-emission public transport mobility	10
Acceptance of Report on Economic and Financial Analysis and Opportunities for private sector involvement	10
Acceptance of Report Gender and persons with special needs analysis and action plan	5
Acceptance of Report on Environmental and social assessments and plans for the technical designs developed under Activities 2, 3 and 4.	10
Acceptance of a Final Report	25

## ANNEX A - GENERAL PROVISIONS FOR ALL ACTIVITIES

### Definitions and guidance for designs and public consultations

#### Feasibility Study and Design Guidance

113. Throughout Terms of Reference, the following terms will serve to describe the scope of work for feasibility study and design activities:
- *“Conceptual designs”* refers to architectural designs that are approximate in nature and intended to convey a visual concept for public consultation and subsequent refinement. Conceptual designs should entail basic CAD renderings, overall site plans, and / or sketches that account for site specific constraints but may only have limited dimensional information as required to test aesthetic appeal, community perceptions, basic functionality, or to provide approximate cost estimates (+/- 30%).
  - *“Preliminary designs”* refer to engineering designs or architectural plans that are sufficiently detailed to provide an adequate basis for subsequent detailed design at a later stage. These should fully define the spatial envelope for all investments as well as the fully dimensioned concept that finished forms will take. Preliminary designs should be sufficiently detailed as to allow for preliminary bills of quantity that are accurate to within +/- 15% of materials and labour required during eventual construction. For cost estimates, the Consultant should use local reference rates as used by Thimphu Thromde / the Ministry of Works and Human Settlements. Preliminary designs should be fit for use as the basis for framing and evaluating responses to requests for expressions of interest for civil works contracts.
  - *“Detailed designs”* refer to engineering designs or architectural plans that are fully complete and ready for competitive tendering as lump-sum contracts or warranted reference designs under design-build approaches. Detailed designs should be based on thorough site surveys and should include final bills of quantity for labour and materials and estimated costs to be accurate within a target of +/- 10% contingency.
114. Design activities will accommodate the phasing of Social Impact Assessment, Environmental Impact Assessment, and Gender related analysis milestones that may affect design considerations. These assessments will be conducted in parallel to design work as required by World Bank policies.
115. All designs should include sensitivity for the architectural themes of Thimphu which are rooted in Bhutanese tradition. All designs should include robust consideration for public safety and avoiding or mitigating adverse social impact of infrastructure modifications on private residences and businesses.
116. Throughout all tasks, the Consultant should base designs on cost-effective solutions. Like all governments, the RGoB is fiscally constrained and has many competing priorities. While development partners such as the World Bank, GTCK, UNDP, and GCF have and will continue to provide support for infrastructure investments, this support is finite. There is a need to control costs in order to achieve the breadth of RGoB’s urban transport aims. There is also a need for the Consultant to focus on selecting engineering solutions that optimize the tradeoff between upfront costs and lifecycle costs (financial and economic) so that the subsequent operation and maintenance of infrastructure is inclusive, affordable and sustainable in a social and environmental sense.

## Appendix B: Key Experts

No.	Name	Position	Company
1.	Lee Joong Myung	Team Leader (Urban Transport Planning Expert)	SUNJIN
2.	Shin Dong Hyuk	BUS/BRT operations expert	SUNJIN
3.	Choi Youn Hyeok	Non-motorized Transport and Pedestrianization Expert	SUNJIN
4.	Lee Ho Young	Civil Engineer for the roadway improvements/designs	SUNJIN
5.	Cho Keun Hyung	Transport Economist	SUNJIN
6.	Cho Yeon Sook	Gender Expert	GDC
7.	Megay Penjore	Social Expert	GDC
8.	Kamal Dan Chamling	Environmental Expert	GDC

## Appendix C: Breakdown of Contract Price

No.	Name	Position	Person-Month Remuneration Rate	Time Input In Person/Month	Foreign Currency (USD)	Local Currency (BTN)
<b>A. KEY STAFF</b>						
1	Lee Joong Myung	Team Leader	[home] 14,600	9.00	183,900	-
			[Field] 17,500	3.00		
2	Shin Dong Hyuk	BUS/BRT Operations Expert	[home] 12,400	5.00	173,300	-
			[Field] 15,900	7.00		
3	Choi Youn Hyeok	Non-Motorised Transport & Pedestrianization Expert	[home] 12,400	2.50	70,750	-
			[Field] 15,900	2.50		
4	Lee Ho Young	Civil Engineer for the Roadway Designs	[home] 12,400	3.50	67,250	-
			[Field] 15,900	1.50		
5	Cho Keun Hyung	Transport Economist	[home] 12,400	4.50	63,750	-
			[Field] 15,900	0.50		
6	Cho Yeon Sook	Gender Expert	[home] 12,400	0.50	14,150	-
			[Field] 15,900	0.50		
7	Megay Penjore	Social Expert	[home] 444,000	-	-	2,220,000
			[Field] 444,000	5.00		
8	Kamal Dan Chamling	Environmental Expert	[home] 444,000	-	-	2,220,000
			[Field] 444,000	5.00		
<b>TOTAL</b>			[home]	<b>25.00</b>	<b>573,100</b>	<b>4,440,000</b>
			[Field]	<b>25.00</b>		

No.	Type of Reimbursable Expenses	Unit	Currency	Unit Cost	Quantity	Foreign Currency (USD)	Local Currency (BTN)
1	Per diem allowance (For Foreign Staff)	day	USD	130	490	58,500	
2	International Flight	Trip	USD	1,800	18	25,200	
3	Miscellaneous travel expenses	Trip	USD	150	18	2,700	
4	Communication costs between Bhutan & Korea	Month	USD	80	12	960	
5	Reproduction & Delivery of reports	Lump Sum	USD	5,950	1	5,950	
6	Data Collection & Survey	Lump Sum	USD	30,000	1	30,000	
7	GPS Hardware	Lump Sum	USD	10,000	1	10,000	
8	Use of Internet & Phone	Month	BTN	9,477	12		113,724
9	Local transportation costs	Month	BTN	109,350	12		1,312,200
10	Office, maintenance	Month	BTN	14,580	7		102,060
11	Workshop & Public Consultation	Lump Sum	BTN	349,920	1		349,920
<b>TOTAL COSTS</b>						<b>153,310</b>	<b>1,877,904</b>

Item	Cost	
	Foreign Currency (USD)	Local Currency (BTN)
<b>Cost of the Financial Proposal</b>		
Including:		
(1) Remuneration	573,100	4,440,000
(2) Reimbursables	153,310	1,877,904
<b>Total Cost of the Financial Proposal</b>	<b>726,410</b>	<b>6,317,904</b>
<b>Indirect Local Tax Estimates-to be discussed and finalized at the negotiations if the Contract is awarded</b>		
(i) Tax Deducted at Source	21,792	189,537
(ii) Import Tax	-	-
<b>Total Estimate for Indirect Local Tax</b>	<b>21,792</b>	<b>189,537</b>

## Appendix D: Form of Advance Payment Guarantee

This is not applicable as there is no provision for such advance payment for this project.

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