
VOLUME III - CONCESSION AGREEMENT

CONCESSION AGREEMENT

BY AND BETWEEN

GOVERNOR OF SINDH
(THROUGH SECRETARY, TRANSPORT AND MASS TRANSIT DEPARTMENT, GOVERNMENT OF
SINDH)
(AS THE GoS)

AND

SINDH MASS TRANSIT AUTHORITY
(AS SMTA)

AND


(AS THE CONCESSIONAIRE)

IN RESPECT OF

THE CONCESSION TO DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER
THE PEOPLES GREEN TRANSPORT PROJECT

DATED _____, 2026

AT KARACHI, PAKISTAN



[†] Name to be inserted upon incorporation of the Concessionaire.

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CONCESSION AGREEMENT

This **CONCESSION AGREEMENT** (this **Agreement**) is made on [●]² at Karachi, Pakistan by and between:

1. **THE GOVERNOR OF SINDH** (through Secretary, Transport and Mass Transit Department, Government of Sindh) having its office located at [●]³, for and on behalf of the Government of Sindh (the **GoS** which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors and assigns) OF THE FIRST PART;

AND

2. **SINDH MASS TRANSIT AUTHORITY**, a statutory body constituted pursuant to the SMTA Act, with its office located at [●]⁴ (**SMTA** which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors and assigns) OF THE SECOND PART;

AND

3. [●]⁵, a company incorporated under the Laws of Pakistan, with its registered office at [●]⁶ (the **Concessionaire** which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors-in-interest, administrators and permitted assigns) OF THE THIRD PART.

² Date to be inserted upon execution.

³ To be inserted upon execution.

⁴ To be inserted upon execution.

⁵ To be inserted upon execution.

⁶ To be inserted upon execution.

(the GoS, SMTA and the Concessionaire are hereinafter collectively referred to as the **Parties** and each individually as a **Party**).

RECITALS

WHEREAS:

- A. SMTA invited proposals from interested parties to undertake the Project pursuant to a request for proposals issued on December 29, 2025 (as amended, varied or supplemented, the **RFP**);
- B. the Project has, pursuant to the process described in the RFP, been awarded to the Successful Bidder as set out in the Notification of Award issued by SMTA on [REDACTED];
- C. in accordance with the RFP, the Successful Bidder has incorporated the Concessionaire as a special purpose company to implement the Project and perform the obligations and exercise the rights of the Concessionaire, including the obligation to enter into this Agreement;
- D. the GoS is entering into this Agreement to *inter alia* make payment of and secure, in each case, the Capital Cost Recovery Payment, the Termination Payment and any other amounts payable to the Concessionaire under or pursuant to this Agreement;
- E. the Project will consist of Conditions Precedent Activities during the Conditions Precedent Period, the Development Activities during the Development Period and the O&M Activities during the Operations Period, in each case, as more particularly described in **SCHEDULE A (*Technical Specifications*)**;
- F. the Concessionaire acknowledges and confirms that it has, based on the RFP, undertaken a thorough due diligence (including the technical and financial viability and legal due diligence) of the Project and its requirements, and on the basis of its independent satisfaction, is entering into this Agreement for the purpose of accepting the Concession for the implementation of the Project on a DBFOMT basis, in accordance with the terms and conditions of this Agreement;
- G. this Agreement sets out the terms and conditions on which the Concessionaire shall undertake the Project.

NOW THEREFORE, in consideration of the mutual covenants contained herein, the Parties agree as follows:

⁷ Insert the date of the Notification of Award.

1. DEFINITIONS AND INTERPRETATION

1.1 DEFINITIONS

Except when the context requires otherwise, the capitalized terms used in this Agreement (including the Recitals and the Schedules) shall have the following meanings:

Abandonment means:

- (a) in relation to the period from the Effective Date until the COD (Second Segment), other than due to a Permitted Event:
 - (i) failure by the Concessionaire to demonstrate to the GoS Parties its ability to perform its obligations under this Agreement (taking into account its ability to accelerate the Development Activities under the Construction Contracts and/or the Supply Contract) such as to demonstrate that the COD (First Segment) will be achieved on or before the Long Stop Date (First Segment) or the COD (Second Segment) will be achieved on or before the Long Stop Date (Second Segment); or
 - (ii) one or more Construction Contracts and/or the Supply Contract have been terminated and the Concessionaire has either:
 - (A) failed within forty-five (45) Days after the date of that termination to conclude new Construction Contract(s) and/or the Supply Contract approved in accordance with Section 16.3 (*Contractor's Appointment, Project Agreements, Financing Documents and Refinancing*) of this Agreement; or
 - (B) concluded new Construction Contract(s) and/or the Supply Contract approved by the Independent Engineer and the GoS within such forty-five (45) Day period, but a new Construction Contractor and/or the new Supplier failed to commence work at the Project Site within thirty (30) Days of concluding that Construction Contractor's new Construction Contract and/or that Supplier's new Supply Contract;
- (b) in relation to any period during the Concession Period, other than due to a Permitted Event:
 - (i) a failure of the Concessionaire to perform its obligations under this Agreement for a continuous period of thirty (30) Days such as to suggest an intention to repudiate this Agreement; or
 - (ii) a failure by the Concessionaire to resume and continue the performance of all or substantially all of its obligations under this Agreement within thirty (30) Days following the cessation of a Permitted Event, in each case, which prevented, hindered or delayed such performance,

and **Abandons** shall be construed accordingly;

Acceptable Bank means (a) together the Foreign Bank and the Acceptable Pakistani Bank, which is counter-guaranteeing the obligations of the Foreign Bank; or (b) an Acceptable Pakistani Bank (as applicable);

Acceptable Pakistani Bank means a scheduled bank, or a financial institution incorporated or organized in Pakistan having a long-term credit rating of at least AA or higher by PACRA, or AA or higher by VIS, or A3 or higher by Moody's or equivalent rating by Fitch or Standard and Poor, approved by the GoS, such approval not to be unreasonably withheld, conditioned or delayed;

Accounting Principles means the International Financial Reporting Standards, as may be amended from time to time, applicable in Pakistan;

Accounting Year means, in respect of the Concessionaire, the financial year commencing from July 1 of any calendar year and ending on June 30 of the next calendar year;

Adjoining Property means any land and/or property adjoining or adjacent to any part of the Project Site, including all conduits, roads, footpaths, walls, fences, buildings, pipelines, cables, wires and other erections, structures and other apparatus on, under or within such land and/or property;

Adverse Person means:

- (a) any person whose primary residence is in or who is incorporated or organized under the laws of a country:
 - (i) which is subject to sanctions levied by the United Nations (or the Security Council thereof) pursuant to authority derived from Article 41 of Chapter 7 of the United Nations Charter (a **Sanctioned Country**); or
 - (ii) with which the Government of Pakistan does not have commercial or trade relations or otherwise does not maintain official diplomatic relations (an **Unfriendly Country**);
- (b) any national government, or any political subdivision, of any Sanctioned Country or Unfriendly Country;
- (c) any ministry, department, authority, or statutory corporation of, or any corporation or other entity (including a trust), owned or controlled directly or indirectly by the national government, or any political subdivision, of any Sanctioned Country or Unfriendly Country;
- (d) any person who has been blacklisted by any federal or provincial government, governmental body or non-governmental department/agency whether in Pakistan or the government or governmental body of any foreign countries and/or international organizations; or

- (e) a person involved in a dispute with a Government Authority as a defendant, counterparty or otherwise adverse to the Government Authority and a decision, judgement, award or order has been handed down by a court and that person has not complied with or is in breach of such decision, judgement, award or order;

AFC means the automated fare collection system, being part the ITS System, as more particularly described in **SCHEDULE A (*Technical Specifications*)**;

Affected Party has the meaning given to it in Section 19.5.1;

Affiliate means, in relation to a person, another person that directly or indirectly Controls, is Controlled by, or is under common Control with that person;

Agreement means this concession agreement (including the Recitals and Schedules hereto), as amended and supplemented from time to time;

Anti-Corruption Guidelines means the anti-corruption guidelines not having the force of law but being applicable to the Successful Bidder and the Concessionaire as part of participation in the Tender Procedure including the Asian Development Bank's Anticorruption Policy, 1998;

Anti-Corruption Laws means any and all anti-corruption laws of Pakistan including:

- (a) Prevention of Corruption Act, 1947;
- (b) West Pakistan Anti-Corruption Establishment Ordinance, 1961;
- (c) Federal Investigation Agency Act, 1974;
- (d) National Accountability Ordinance, 1999;
- (e) Pakistan Penal Code, 1860;
- (f) Extradition Act, 1972;
- (g) Benami Transactions Act, 2017;
- (h) Measures Against Money Laundering Laws,

in each case, as amended or substituted from time to time;

Applicable Standards mean the standards, requirements and criterion as applicable to the performance by the Concessionaire of its obligations under this Agreement as contained in:

- (a) this Agreement;
- (b) the Legal Requirements;
- (c) the Approvals;

- (d) the Accounting Principles;
- (e) the Approved Detailed E-Bus Design for the Prototype Bus;
- (f) the Approved Final E-Bus Design for the Supplied E-Buses;
- (g) the Detailed Engineering Design for the Construction Works;
- (h) the E&S Requirements;
- (i) the Operating and Maintenance Procedures;
- (j) the Good International Industry Practices,

provided, however, in the event of any discrepancy, conflict or inconsistencies in the standards, requirements and criterion set out above, the most stringent standards, requirements and criterion shall apply;

Approvals means all such permits, licences, consents, authorizations, approvals, registrations, grants, acknowledgements or agreements required under the Laws to be obtained from any Government Authority for the Project Activities (including the E&S Approvals) and **Approval** and other grammatical variations of **Approvals** shall be construed accordingly;

Approved Concept E-Bus Design has the meaning given to it in Section 6.2.2.1;

Approved Detailed E-Bus Design has the meaning given to it in Section 6.3.2.1;

Approved Final E-Bus Design has the meaning given to it in Section 6.5.2.1;

Approved Dispatch Scheduled and Headway Target Document has the meaning given to it in Section 10.8.3;

Approved Training Programme has the meaning given to it in Section 10.14.2.1;

Arbitration has the meaning given to it in Section 27.4.1.1;

Arbitrators has the meaning given to it in Section 27.4.1.1;

Archaeological Delay Event means the discovery of any Archaeological Items found or located on or under the Project Site that results in a delay to the Development Activities;

Archaeological Items means articles of archaeological value, interest or antiquity, historical structures, human remains or other substances, objects or things of archaeological or historic interest;

Assumed Refinancing means a Refinancing to the extent it is specifically taken into account in the Base Case Financial Model and is consistent with the relevant Refinancing Assumptions (including as to timing, tenor, margins, hedging and the gearing and amount

of financial accommodation being no greater than that which is consistent with the amortisation model in the Base Case Financial Model);

Assumed Technological Improvement means a Technological Improvement that, if incorporated in the E-Buses Assets, would result in a net cost benefit for the Concessionaire assessed on a whole of life basis and which also relates to any of the following:

- (a) battery efficiency and energy storage performance;
- (b) Charging Infrastructure efficiency, smart-charging systems, or renewable energy integration;
- (c) vehicle propulsion systems, including drivetrain and regenerative braking improvements;
- (d) fleet management technologies, including digital tracking, predictive maintenance, and route optimization; and
- (e) reduction of lifecycle emissions, waste, or environmental footprint associated with vehicle operation or component replacement;

Availability has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Availability Benchmark means the average Availability, during the immediately preceding two (2) Billing Periods, or if less than two (2) Billing Periods have occurred, such number of Billing Periods as there have been; provided, that if there are none, then it shall be based on the Guaranteed Annual Mileage (subject to Deduction for Downtime) and provided further that any hour in which the Availability was reduced during any such Billing Period as a result of the occurrence of a Permitted Event shall be disregarded;

Award has the meaning given to it in Section 27.4.4;

Backup Power Facilities has the meaning given to it in **SCHEDULE A (*Technical Specifications*)**;

Base Case Financial Model means the financial model in Microsoft Excel electronic format developed by the Concessionaire based on the Bid Sheet as a Condition Precedent and approved by the Independent Experts;

Batch of Goods means the First Batch of Goods and/or the Second Batch of Goods (as applicable);

Bid means the proposal dated ●⁸ delivered by the Successful Bidder to SMTA on the Bid Submission Deadline in response to the RFP and any agreed amendments, variations or supplements thereto;

⁸ Insert date of the Bid.

Bid Sheet has the meaning given to it in the RFP;

Bid Submission Deadline means the date on which the Bid is submitted in accordance with the terms of the RFP;

Billing Period has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Board Resolution means a resolution passed by the board of directors of the Concessionaire;

BSS means the bus scheduling system, being part of the ITS System, as more particularly described in **SCHEDULE A (*Technical Specifications*)**;

Bus means each Supplied E-Bus and **Buses** shall be construed accordingly;

Bus Depots means the secured, non-public operational facility developed, operated and maintained primarily for the parking, stabling, inspection, cleaning, charging, maintenance, repair, testing and overhauling of the Buses, as more particularly described in **SCHEDULE A (*Technical Specifications*)**;

Bus Electric Powertrain and Vehicle Structure means the battery packs and electric motors, to be installed in the Buses and the outer physical structure of the Buses, each as more particularly described in **SCHEDULE A (*Technical Specifications*)**;

Bus Electric Powertrain and Vehicle Structure Warranty Obligations means, during the Bus Electric Powertrain and Vehicle Structure Warranty Period, warranty obligations of the Supplier in relation to the Bus Electric Powertrain and Vehicle Structure, including, remedying of Defect or Deficiencies, in each case, in accordance with the Applicable Standards and the timelines stated in this Agreement;

Bus Electric Powertrain and Vehicle Structure Warranty Period means the period for notifying Defect or Deficiencies in the Bus Electric Powertrain and Vehicle Structure of any of the Buses which period shall commence from the Delivery Completion Date and end on the date that is the earlier of: (a) twelve (12) years after the Delivery Completion Date (First Segment) (subject to any extension under Article 22 (*Warranty*)); or (b) after the relevant Bus has run 1,200,000 KM of service;

Bus Operator means the contractor hired by the Concessionaire that meets the Bus Operator Criteria and includes any substitute approved by Independent Engineer (in consultation with SMTA) pursuant to Article 16 (*Covenants*);

Bus Operator Contract means the agreement between the Concessionaire and the Bus Operator for the management, operation, maintenance and repair of the Buses;

Bus Operator Criteria means the criteria for the evaluation of the Bus Operator set out in Annexure A (*Basic Information Requirements*) of Part 4 (*Annexures*) and Part 1 (*Technical Evaluation Criteria*) of Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (*TENDER PROCEDURE*)**, in each case, of the RFP;

Bus Routes means the defined and approved fixed corridors of operation along designated public roads and rights-of-way, specifying the origin, destination, intermediate stops, alignment, distance and permitted operational characteristics, on which the Buses are authorised to operate scheduled passenger services in accordance with the terms of this Agreement, as more particularly described in **SCHEDULE A (*Technical Specifications*)**;

Bus Stations means the public transport facility developed, operated and maintained for the purpose of facilitating the boarding, alighting, transfer and waiting of Commuters using scheduled bus services, as more particularly described in **SCHEDULE A (*Technical Specifications*)**;

Business Day means any Day that is not declared a public holiday in Karachi, Pakistan, during which banks are generally open for business in Karachi, Pakistan;

Capital Cost Recovery Charge has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Capital Cost Recovery Payment has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Capital Cost Recovery Payment Account (Concessionaire) means the account to be established and maintained by the Concessionaire, in which the Capital Cost Recovery Payment payable by the GoS in terms of this Agreement is paid;

Capital Cost Recovery Payment Account (GoS) means the account established, funded and maintained by the GoS in accordance with Section 12.1 (*Establishment and GoS Funding of Payment Accounts*);

Capital Cost Recovery Payment Account (GoS) Bank means a scheduled bank in Pakistan with a minimum long-term credit rating of AA- as rated by VIS or an equivalent rating by PACRA;

Capital Cost Recovery Payment Account (GoS) Funding Amount means, in relation to:

- (a) the first (1st) Capital Cost Recovery Payment Funding Date in relation to the first (1st) and second (2nd) Capital Cost Recovery Payment Dates, an amount equal to the aggregate of the Capital Cost Recovery Payments due in the first (1st) and second (2nd) Billing Periods and the Capital Cost Recovery Payment (Principal Installment);
- (b) in respect of any other Capital Cost Recovery Payment Funding Date in relation to the following two (2) consecutive Capital Cost Recovery Payment Dates, X,

Where:

X: the Capital Cost Recovery Payment Account (GoS) Funding Amount, being $(A_1 + A_2) - (B - C)$;

- A₁: the Capital Cost Recovery Payment relating to the first (1st) such Capital Cost Recovery Payment Date;
- A₂: the Capital Cost Recovery Payment relating to the Capital Cost Recovery Payment Date immediately succeeding such Capital Cost Recovery Payment Date;
- B: the funds standing to the credit of the Capital Cost Recovery Payment Account (GoS) (other than the Capital Cost Recovery Payment (Principal Installment, except in case of the Capital Cost Recovery Payment through which payment of the final Debt Interest Recovery Charge and Debt Principal Recovery Charge is made, for which purposes such amount shall be considered in this formula) on the Capital Cost Recovery Payment Evaluation Date relating to the Capital Cost Recovery Payment Date falling immediately prior to such Capital Cost Recovery Payment Date;
- C: the Capital Cost Recovery Payment (subject to Deduction for Liquidated Damages (KPIs) determined by the Independent Experts in the Capital Cost Recovery Payment Certificate) relating to the Capital Cost Recovery Payment Date falling immediately prior to such Capital Cost Recovery Payment Date;

Capital Cost Recovery Payment Account (GoS) Letter of Lien has the meaning given to it in Section 12.1.9;

Capital Cost Recovery Payment Account (GoS) Standing Instructions means the standing instructions issued to the Capital Cost Recovery Payment Account (GoS) Bank, in the form attached in part 1 (*Capital Cost Recovery Payment Account (GoS) Standing Instructions*) of **SCHEDULE P (Accounts Standing Instructions)**;

Capital Cost Recovery Payment Certificate has the meaning given to it in Section 13.3.1;

Capital Cost Recovery Payment Certificate Issuance Date has the meaning given to it in Section 13.3.1;

Capital Cost Recovery Payment Date means each such date on which the Capital Cost Recovery Payments shall be paid by the GoS to the Concessionaire, being the dates set out in the Capital Cost Recovery Payment Schedule;

Capital Cost Recovery Payment Evaluation Date means thirty (30) Days immediately prior to the Capital Cost Recovery Payment Date to which such Capital Cost Recovery Payment Evaluation Date relates;

Capital Cost Recovery Payment Evaluation Date (Specific) means the Capital Cost Recovery Payment Evaluation Date in relation to the second (2nd) the Capital Cost Recovery Payment Date and each annual Capital Cost Recovery Payment Evaluation Date thereafter;

Capital Cost Recovery Payment Evaluation Period means:

- (a) in respect of the first (1st) Capital Cost Recovery Payment Date, a period equal to six (6) months prior to such Capital Cost Recovery Payment Date;
- (a) in respect of each other Capital Cost Recovery Payment Date, the period between the two (2) Capital Cost Recovery Payment Evaluation Dates falling immediately prior to such Capital Cost Recovery Payment Date;

Capital Cost Recovery Payment Funding Date means:

- (a) in respect of the first (1st) and second (2nd) Capital Cost Recovery Payment Dates, the date falling three (3) months prior to the projected COD (Second Segment) (as certified by the Independent Engineer); and
- (b) in respect of each following two (2) consecutive Capital Cost Recovery Payment Dates, the date falling ten (10) Days following issuance of a Capital Cost Recovery Payment Certificate relating to the Capital Cost Recovery Payment Date falling immediately prior to the first of such Capital Cost Recovery Payment Dates;

Capital Cost Recovery Payment Invoice means the certificate issued by the Independent Experts in accordance with Section 13.4.2.1;

Capital Cost Recovery Payment Schedule means the schedule setting out, *inter alia*, the Capital Cost Recovery Payment Dates and the Capital Cost Recovery Payments, as set out in **SCHEDULE M (Capital Cost Recovery Payment Calculation)** and as updated on or prior to the Commencement Date;

Carbon Credits has the meaning given to it in Section 16.7.1 (*Generation and Risk Allocation*);

Casualty Proceeds has the meaning given to it in Section 19.10.1;

Certificate of Compliance means the certificate of compliance to be issued respectively for the First Batch of Goods and the Second Batch of Goods following inspection at the Delivery Point in accordance with Section 6.10.2.1;

Certificate of Rejection means the certificate of rejection that may be issued in respect of the First Batch of Goods and/or the Second Batch of Goods following inspection at the Delivery Point in accordance with Section 6.10.2.2;

Change in Law means the occurrence of any of the following events on or after the Final Disclosure Date:

- (a) the introduction, adoption, enactment or promulgation of any new Law by a Government Authority;
- (b) the change or repeal by a Government Authority of any Law;
- (c) a change by a Government Authority and having the force of Law (i) in the manner in which a Law is applied; or (ii) in the interpretation of any Law;

- (d) the introduction, adoption, change or repeal by any Government Authority of any material condition in connection with the issue, renewal or modification of any Approval;
- (e) any change in the rate of a Tax or introduction of a new Tax;

provided, that:

- (i) coming into effect, on or after the Final Disclosure Date, of any provision of a statute which is already gazetted in accordance with the Law prior to the Final Disclosure Date and the date of effectiveness whereof has already been notified;
- (ii) any new Law or any change in the existing Law which is already gazetted in accordance with the Law prior to the Final Disclosure Date and the date of effectiveness whereof has already been notified; or
- (iii) any change in any withholding tax, or other similar taxes, on income or dividends or other distributions distributed by the Concessionaire, the Construction Contractor, the Supplier or the Bus Operator,

shall not constitute a '*CHANGE IN LAW*';

Change in Scope means any alteration in the technical requirements, the scope of the Project, or the designs and drawings applicable to the Project, as instructed by the GoS Parties or proposed by the Concessionaire, in accordance with Section 6.22 (*Change in Scope*);

Change in Scope Order means an order issued by the GoS Parties certifying approval of a proposed Change in Scope and recording the terms and conditions on which the proposed Change in Scope is required to be implemented;

Charging Infrastructure means the complete system of fixed and associated facilities, equipment, and installations developed, installed, operated, and maintained for the purpose of supplying electrical energy for the charging of the Buses, as more particularly described in **SCHEDULE A (*Technical Specifications*)**;

Claim means any suits, actions, legal or administrative proceedings, claims, demands, losses, damages, liabilities, fines, costs and expenses of whatsoever kind or nature (including reasonable attorney's fees and expenses and pre- and post- judgment interest and penalties), whether arising before or after the Final Expiry Date, but excluding any indirect or consequential damages;

COD (First Segment) has the meaning given to it in Section 8.3.1;

COD (First Segment) Certificate means the certificate duly signed and issued by the Independent Engineer to the Parties, certifying that the COD (First Segment) Tests have been successfully completed in terms of this Agreement;

COD (First Segment) Tests has the meaning given to it in **SCHEDULE E (*Testing*)**;

COD (Second Segment) has the meaning given to it in Section 8.3.1;

COD (Second Segment) Certificate means the certificate duly signed and issued by the Independent Engineer to the Parties, certifying that the COD (Second Segment) Tests have been successfully completed in terms of this Agreement;

COD (Second Segment) Tests has the meaning given to it in **SCHEDULE E (Testing)**;

Commencement Certificate means the certificate duly signed and issued by the Independent Experts to the Parties, certifying that each of the Conditions Precedent have been satisfied, deferred or waived in terms of this Agreement;

Commencement Date has the meaning given to it in Section 3.2.1;

Commencement Date Delay Notice has the meaning given to it in Section 3.4.3;

Commercial Parties means the GoS and the Concessionaire, in their respective capacities as a Party to this Agreement and **Commercial Party** means either of them;

Commuters means all natural persons who board, travel on, or alight from the Buses in connection with the passenger transport services provided by the Concessionaire under this Agreement;

Commuters (Committed) means the number of Commuters committed by the Successful Bidder in its Bid for each Month, based on four hundred and thirty (430) Commuters per Bus per Day, for purposes of determination of the Fare Revenue (GoS Share);

Component Authority means any governmental body, agency, department, or regulatory authority empowered under the Laws to grant approvals, permits, licenses, or authorizations required for the Project Activities;

Concept E-Bus Design means the concept design for the Buses submitted by the Concessionaire in accordance with Section 6.2.1;

Concession has the meaning given to it in Section 2.1.1;

Concession Direct Agreement⁹ means the direct agreement that may be entered into between the Concessionaire, the GoS, SMTA, the Financing Parties and IZP (if applicable), if required by the Financing Parties and IZP (if applicable);

Concession Period means the period commencing at 00:00 hours on the Commencement Date and ending at 23:59 hours on the Final Expiry Date;

Concessionaire has the meaning given to it in the Preamble;

⁹ The Concession Direct Agreement will be developed in light of standard project finance/banking industry practices and direct agreements for precedent PPP transactions. Without limitation, the process for declaration of default and termination of the Concession Agreement and the mechanism for calculation of the Financing Due, in each case, as set out in this Agreement, will be subject to the terms of the Concession Direct Agreement.

Concessionaire Cure Period has the meaning given to it in Section 21.7.2;

Concessionaire Event of Default has the meaning given to it in Section 21.5 (*Concessionaire Event of Default*);

Concessionaire Indemnified Parties has the meaning given to it in Section 23.2 (*Indemnification by GoS*);

Concessionaire IPR means all Intellectual Property Rights owned by the Concessionaire (or its relevant licensor) as at the Effective Date including all information provided as part of the Successful Bidder's Proposal;

Concessionaire Notice of Intent to Terminate has the meaning given to it in Section 21.7.1;

Concessionaire's Personnel means the Concessionaire's representative(s), employees, all personnel including staff, labour of the Concessionaire, the Contractors and any other personnel assisting the Concessionaire in the execution of the Project Activities;

Conditional FC Letter has the meaning given to it in **SCHEDULE B (*Conditions Precedent*)**;

Conditions Precedent means the conditions precedent to achievement of the Commencement Date as set out in **SCHEDULE B (*Conditions Precedent*)**;

Conditions Precedent Activities means all works, services and obligations to be performed by the Concessionaire during the Conditions Precedent Period as set out in **SCHEDULE A (*Technical Specifications*)**;

Conditions Precedent Period means the period commencing at 00:00 hours on the Effective Date and ending at 23:59 hours on the Day immediately preceding the Commencement Date;

Confidential Information has the meaning given to it in Section 29.5 (*Definition*);

Construction Contract means the contract to be entered into between the Concessionaire and the Construction Contractor for (as applicable) the design, engineering, procurement, manufacture, factory testing, transportation, construction, erection, installation, completion, testing, commissioning and warranty of the Construction Works;

Construction Contractor means the contractor hired by the Concessionaire pursuant to Article 16 (*Covenants*);

Construction Contractor Criteria means the criteria set out in attachment A (*Construction Contractor Criteria*) of **SCHEDULE B (*Conditions Precedent*)**;

Construction Works means the Development Activities (other than the Supply);

Contract Year means a Development Contract Year or an Operating Contract Year (as applicable);

Contractors means the Construction Contractor, the Supplier and the Bus Operator;

Control means:

- (a) ownership or control (whether directly or otherwise) of more than fifty percent (50%) of the equity share capital, voting capital, or the like, of the controlled person;
- (b) ownership of equity share capital, voting capital, or the like, by contract or otherwise, conferring control of or power to (i) control the composition of, or power to appoint more than fifty percent (50%) of the members of the board of directors, board of management, or other equivalent or analogous body of the controlled person; or (ii) appoint the key managers of such person; or
- (c) power to influence (whether directly or indirectly) any decision of the board of the controlled person through contract, agency or otherwise;

and **Controls**, **Controlling** and **Controlled** shall be construed accordingly;

Cost Overruns mean, at any time, the amount (if any) of the Project Costs (excluding any Relief Costs) that will be payable to achieve the COD (First Segment) and/or the COD (Second Segment) that exceeds or is projected to exceed the Project Cost in the Base Case Financial Model;

Cure Period means the Concessionaire Cure Period or the GoS Cure Period (as applicable);

Day means the period beginning at 00:00 hours and ending at 23:59 hours;

DBFOMT means the design, build, build, finance, operate, maintain and transfer mode, being the public-private partnership mode pursuant to which the Project is undertaken in terms of the Sindh PPP Act;

Debt Interest Recovery Charge has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Debt Principal Recovery Charge has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Decommissioned Project Area has the meaning given to it in Section 14.1.1;

Deduction has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Deemed Commissioning Event has the meaning given to it in Section 8.4.1;

Defaulting Party means the GoS in the case of a GoS Event of Default or the Concessionaire in the case of a Concessionaire Event of Default;

Defects or Deficiencies means any of the Project Activities that fail to conform to the

Applicable Standards in any manner or are not Fit for Purpose;

Defective Goods has the meaning given to in Section 6.10.2.2;

Delivery Completion Certificate (First Segment) means the certificate to be issued to the Concessionaire by the Independent Engineer confirming delivery of the First Batch of Goods to the Delivery Point in accordance with this Agreement;

Delivery Completion Certificate (Second Segment) means the certificate to be issued to the Concessionaire by the Independent Engineer confirming delivery of the Second Batch of Goods to the Delivery Point in accordance with this Agreement;

Delivery Completion Date means the date of issuance of the Delivery Completion Certificate (First Segment) and/or the Delivery Completion Certificate (Second Segment);

Delivery Completion Date (First Segment) means the date of issuance of the Delivery Completion Certificate (First Segment);

Delivery Completion Date (Second Segment) means the date of issuance of the Delivery Completion Certificate (Second Segment);

Delivery Date(s) means, as applicable, the First Delivery Date and/or the Second Delivery Date;

Delivery Point means the point specified by SMTA in **SCHEDULE A (*Technical Specifications*)** for the delivery of the Goods;

Detailed E-Bus Design means the detailed design for the Buses prepared by the Concessionaire in accordance with Section 6.3.1;

Detailed Engineering Design means the detailed engineering design for the Construction Works prepared by the Concessionaire in accordance with **SCHEDULE A (*Technical Specifications*)**;

Development Activities means all works, services and obligations to be performed by the Concessionaire during the Development Period, including, the Supply and design, construction, procurement, installation, testing and commissioning of the Bus Depots, the Transit Bus Shelters, the Electricity Substations, the Charging Infrastructure, the Service Bays, the Parking Facilities and the Backup Power Facilities, as more fully described in **SCHEDULE A (*Technical Specifications*)**;

Development Activities (First Segment) means the Development Activities for the First Segment;

Development Activities (Second Segment) means the Development Activities for the Second Segment;

Development Contract Year means the twelve (12) month period commencing at 00:00 hours on the Commencement Date and ending at 23:59 hours on the Day immediately preceding the anniversary of the Commencement Date;

Development Documents means each of the Detailed Engineering Design, the Approved Detailed E-Bus Design and the Approved Final E-Bus Design approved in accordance with Section 6.1 (*Development Documents*);

Development Period means the period commencing at 00:00 hours on the Commencement Date and ending at 23:59 hours on the Day immediately preceding the COD (Second Segment);

Development Period Performance Security means the irrevocable, unconditional, without recourse and on-demand bank guarantee (and any replacement thereof), in favour of GoS, in an amount equal one percent (1%) of the Estimated Project Cost, issued by an Acceptable Bank in the form set out in part 1 (*Development Period Performance Security*) of **SCHEDULE H (*Performance Securities*)**;

Development Period Performance Security Expiry Date has the meaning given to it in Section 4.1.1;

Dispatch Schedule has the meaning given to it in Section 10.9.1;

Dispatch Schedule and Headway Targets means the schedule setting out the Bus Route and trip schedule for the Buses to be notified in accordance with Section 10.8 (*Dispatch Schedule and Headway Targets*);

Dispatch Schedule and Headway Targets Change has the meaning given to it in Section 10.8.1;

Dispatch Scheduled and Headway Targets Documents has the meaning given to it in Section 10.8.1;

Driver Training Programme means the driver training programme (as approved by the Independent Engineer in accordance with Section 10.14 (*Training Programme*)) to be conducted by the Concessionaire for the Drivers as more specifically described in **SCHEDULE A (*Technical Specifications*)**;

Drivers means individuals hired by the Concessionaire to drive and operate the Buses;

Dispute means a dispute, controversy, difference or claim between the Parties arising out of or in relation to this Agreement or the Parties' performance or non-performance of this Agreement;

Disputed Obligation means any Dispute, by a GoS Party, in respect of the requirement to comply with an obligation expressed to be assumed by such GoS Party in any GoS Project Document on the basis that such obligation is illegal, invalid, void, voidable or unenforceable under the applicable Legal Requirements;

Downtime has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Due and Payable Charges (F) has the meaning given to it in Section 12.3.2.4;

Due and Payable Charges (NF) has the meaning given to it in Section 12.4.4.4;

E-Buses Assets means the Buses, the Bus Depots, the Transit Bus Shelters, the Electricity Substations, the Charging Infrastructure, the Backup Power Facilities, the Service Bays and the Parking Facilities and all associated facilities and infrastructure to be designed, constructed, procured, installed, tested, commissioned, operated and maintained by the Concessionaire at the Project Site as part of the Project Activities;

E&S Approvals means any permits, certificates and other Approvals required under the E&S Laws;

E&S Documents means:

- (a) the E&S Impact Assessment;
- (b) each no objection certificate issued by the Sindh Environmental Protection Agency, Government of Sindh with respect to the Project;
- (c) any other document, plan or programme to be prepared under the E&S Management System and the E&S Impact Assessment; and
- (d) any documents required at any time to be prepared under the E&S Requirements as a result of any unanticipated impacts found during the execution of the Project Activities;

E&S Impact Assessment or **ESIA** means the environmental impact assessment titled “*E&S Impact Assessment*” in relation to the Project including all other supplements, modifications and amendments thereto, to be prepared by the Concessionaire in accordance with the requirements set out in part 1 (*E&S Impact Assessment*) of **SCHEDULE J (Environment, Health and Safety Requirements)**;

E&S Laws means all applicable Laws relating to Environmental Matters, Hazardous Substances, Social Matters, involuntary resettlement, human health or safety, or laws relating to social issues, including minimum labour standards and laws prohibiting forced labour or harmful child labour, and including the conventions of the International Labour Organisation signed and ratified by Pakistan;

E&S Management System or **ESMS** means the part of the overall management system of the Concessionaire developed in compliance with the E&S Standards, that shall include relevant policies, organisational structure, planning activities, responsibilities, practices, procedures and resources for developing, implementing, achieving, reviewing and maintaining compliance with the E&S Requirements and which shall be dedicated to the structural improvement of the E&S performance of the Concessionaire, established and maintained in accordance with the requirements of part 2 (*E&S Management System*) of **SCHEDULE J (Environment, Health and Safety Requirements)**;

E&S Requirements means:

- (a) the E&S Laws;

- (b) the E&S Approvals issued by any Government Authority or otherwise under any E&S Law;
- (c) the E&S Standards; and
- (d) the E&S Documents;

E&S Standards means the Good International Industry Practice standards identified as relevant and specifically referenced within the E&S Documents;

Effective Date means the date of execution of this Agreement;

Electricity means the electrical energy to be delivered by the Electricity Supplier at the Electricity Connection Point;

Electricity Connection Point means the physical connection at which the E-Buses Assets and the electricity transmission and distribution facilities of the Electricity Supplier are connected;

Electricity Price or **EP** has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Electricity Substations has the meaning given to it in **SCHEDULE A (*Technical Specifications*)**;

Electricity Supplier means, as of the Effective Date, K-Electric Limited, Hyderabad Electric Supply Company or such other supplier of electric power to the E-Buses Assets as approved by the GoS Parties;

Electricity Unavailability means Electricity not being available at all or in the necessary quantity or within the standards of voltage, frequency, load and quantity required for the safe and reliable operation of the Buses, but only if and to the extent the same:

- (a) materially adversely affects the ability of the Concessionaire to start up, test, commission or operate the E-Buses Assets in accordance with Good International Industry Practice;
- (b) is not the direct or indirect result of a breach by the Concessionaire (or its Contractors) of its obligations under this Agreement; and
- (c) is not the direct or indirect result of the Concessionaire failing to make any payment due to the Electricity Supplier;

Emergency means a condition or situation that is likely to endanger the security of individuals on or about the Project Site including (without limitation) users thereof or which poses an immediate threat of material damage to all or part of the E-Buses Assets or the Project Site;

Emergency Decommissioning has the meaning given to it in Section 14.1.1;

Encumbrance means any encumbrance on an asset, including (without limitation) mortgage, charge, pledge, lien, hypothecation or any security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include (without limitation) any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the E-Buses Assets, the Project Site or any part or portion thereof and physical encumbrances and encroachments thereon;

Environmental Matters means any of the following:

- (a) any emission, release, entry or introduction into the air of any Hazardous Substance including the air within buildings and other natural or man-made structures above or below ground;
- (b) any discharge, release, entry or introduction into water of any Hazardous Substance including into any river, watercourse, lake or pond (whether natural or artificial, above or below ground) or reservoir, or the surface of the riverbed or of other land supporting such waters, ground waters, sewer or the sea;
- (c) any deposit, release, keeping or disposal in land or on land, whether or not covered by water, of any Hazardous Substance;
- (d) any deposit, disposal, keeping, treatment, importation, production or carrying of any waste, including any substance which constitutes a scrap material or an effluent or other unwanted surplus substance arising from the application of any process or activity (including making it re-usable or reclaiming substances from it) and any substance or article which requires to be disposed of as being broken, worn out, contaminated or otherwise spoiled; and
- (e) nuisance, noise, defective premises, health and safety at work, preservation or protection of the natural environment or of man or any living organisms supported by the environment;

Estimated Project Cost means the estimated cost of the Project of Pakistani Rupees [●]¹⁰ only (PKR [●]¹¹/-), as specified in the Financial Model;

Estimated Remedial Costs has the meaning given to it in Section 21.10.2.2;

Event of Default means a Concessionaire Event of Default or a GoS Event of Default (as applicable);

Event of Loss means an event that causes all or a portion of the E-Buses Assets to be damaged, destroyed or rendered unfit for normal operation in accordance with this Agreement;

Excessive Insurance Premium has the meaning given to it in the definition of Uninsurable;

¹⁰ Insert from the Bid.

¹¹ Insert from the Bid.

Fare means the amount(s) payable by a Commuter for travel on the Buses, as set out in in **SCHEDULE N (Fare Structure)**;

Fare Rate (Notified) means the Fare rate(s) notified from time to time by the GoS in accordance with **SCHEDULE N (Fare Structure)**;

Fare Rate (O&M Costs) means the Fare rate per Commuter, quoted by the Successful Bidder in its Financial Proposal, and calculated in accordance with Part 2 (*Financial Evaluation Criteria*) of Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, as set out in the Bid Sheet (*Bidding Form F2-A*), which shall be subject to adjustment in accordance with the terms of **SCHEDULE N (Fare Structure)**;

Fare Revenue means gross revenue generated from collection of the Fare from the Commuters based on the Fare Structure;

Fare Revenue (Actual) means the actual Fare Revenue collected by the Concessionaire based on the Fare Structure;

Fare Revenue (Concessionaire Share) means, for each Billing Period, the Fare Revenue (Actual) minus the Fare Revenue (GoS Share);

Fare Revenue (GoS Share) means, for each Billing Period:

$$X: A \times (B-C)$$

Where:

X: Fare Revenue (GoS Share)

A: Commuters (Committed)

B: Fare Rate (Notified)

C: Fare Rate (O&M Costs)

Fare Revenue Account means the account to be established and maintained by the Concessionaire, in which the Fare Revenue shall be deposited;

Fare Revenue Account Bank means a scheduled bank in Pakistan with a minimum long-term credit rating of at least AA- as rated by VIS or an equivalent rating by PACRA;

Fare Revenue Account Standing Instructions means the standing instructions issued to the Fare Revenue Account Bank, in the form attached in part 2 (*Fare Revenue Account Standing Instructions*) of **SCHEDULE P (Accounts Standing Instructions)**;

Fare Revenue Share Payment Certificate has the meaning given to it in Section 13.3.3;

Fare Revenue Share Payment Date has the meaning given to it in Section 13.4.3;

Fare Structure means the structure for setting and escalation of Fares, as set out in **SCHEDULE N (*Fare Structure*)**;

Final Disclosure Date means thirty (30) Days prior to the Bid Submission Deadline;

Final E-Bus Design means the Final E-Bus Design for the Buses submitted by the Concessionaire in accordance Section 6.5.1;

Final Expiry Date means the earlier of: (a) the Term Expiry Date; and (b) the Termination Date;

Financial Close means that: (a) Financing Documents covering hundred percent (100%) of the total capital cost of the Project (other than the amounts to be funded by the Sponsors) shall have been signed and are in full force and effect; (b) all funds under the Financing Documents are fully committed; and (c) all conditions to the first drawdown of funds under the Financing Documents have been satisfied, deferred and/or waived by the Financing Parties;

Financial Model means the Base Case Financial Model, as adjusted to the extent expressly permitted or required under this Agreement;

Financing Documents means (other than any documents relating to Sponsor Loans, indebtedness constituting Sponsor Equity or any other indebtedness to Shareholders), any and all loan agreements, notes, bonds, indentures, security agreements, direct agreements, assignments and acknowledgements, registration or disclosure statements, subordination agreements, mortgages, deeds of trust, credit agreements, intercreditor agreements, note or bond purchase agreements, hedging agreements, participation agreements, Islamic financing documents and any other documents entered into by the Concessionaire relating to the financing of the Project, including any modifications, supplements, extensions, renewals and replacements of any such financing or Refinancing, in each case, executed in accordance with Section 16.3 (*Contractor's Appointment, Project Agreements, Financing Documents and Refinancing*);

Financing Due has the meaning given to it in **SCHEDULE R (*Termination Payment*)**;

Financing Party means any person providing hedge, debt, Islamic finance, bond or capital market financing, export credit loan or Refinancing (approved in the accordance with Section 16.3 (*Contractor's Appointment, Project Agreements, Financing Documents and Refinancing*)), under the Financing Documents, and their permitted successors and assigns, but excluding a Shareholder or its Affiliate(s) with respect to any indebtedness constituting Sponsor Equity or indebtedness to Shareholders;

Financing Termination Date means the earlier of (a) ¹² as may be extended due to any delay in achievement of the Commencement Date in terms of Section 3.4.1 or permitted in accordance with Section 3.4.3; and (b) the date on which no part of the Financing is outstanding and all amounts due and payable by the Concessionaire to the

¹² Insert the last repayment date of principal debt set out in the financing term sheet at the time of Financial Close (which shall be based on Bidding Form F2-B (*Letter of Intent*) of the RFP), which shall be no later than ten (10) years from the Scheduled COD (Second Segment).

Financing Parties are paid in accordance with the Financing Documents, as confirmed in writing by the Independent Auditor;

First Batch of Goods means the first shipment of Supply in accordance with the Schedule of Delivery to be delivered on or before the First Scheduled Delivery Date;

First Delivery Date means the date of issuance of the Certificate of Compliance for the First Batch of Goods;

First IA List has the meaning given to it in Section 17.7.1;

First IE List has the meaning given to it in Section 17.1.1;

First Scheduled Delivery Date means the date for completing the shipment of Supply for the First Batch of Goods in accordance with the Schedule of Delivery and Section 7.1 (*Compliance With Implementation Schedule*);

First Segment means the Development Activities in relation to the first phase of the Project, as more particularly described in in **SCHEDULE A (*Technical Specifications*)**;

Fit for Purpose means performance by the Concessionaire of the Project Activities in full compliance with the Applicable Standards;

Force Majeure Event has the meaning given to it in Section 19.1 (*Force Majeure Event*);

Foreign Bank means a scheduled bank or financial institution incorporated or organized outside Pakistan having a long-term credit rating of at least AA or higher by PACRA, or AA or higher by VIS, or A3 or higher by Moody's or equivalent rating by Fitch or Standard and Poor;

Good International Industry Practice or **GIIP** means those practices, skills, diligence, prudence, foresight, methods, equipment, specifications and standards of safety and performance (as may change from time to time) employed by experienced professional international contractors or operators in activities or undertakings of the same or similar circumstances and conditions as the Project Activities, which in the exercise of reasonable judgement in light of the facts known at the time the judgement was made, are considered good, safe and prudent practices commensurate with standards of safety, performance, dependability, efficiency and economy;

Goods means the Buses (including the Bus Electric Powertrain and Vehicle Structure), Spare Parts and one set of tools and diagnostic equipment procured by the Concessionaire, each in accordance with the Applicable Standards;

Goods Warranty Obligations means, during the Goods Warranty Period, warranty obligations of the Concessionaire in relation to the Goods (except the Bus Electric Powertrain and Vehicle Structure), including, remedying of Defect or Deficiencies, in each case, in accordance with the Applicable Standards and the timelines stated in this Agreement;

Goods Warranty Period means a period that will commence on the respective Delivery Completion Date and end on the date that is twenty-four (24) months after the Delivery

Completion Date (Second) (subject to any extension under Section 22.4 (*Extended Warranty*));

GoS has the meaning given to it in the Preamble;

GoS Account One means the GoS account titled “*Government of Sindh Non-Food Account No.1*” maintained with SBP;

GoS Account One Debit Demand has the meaning given to it in Section 12.2.8;

GoS Appointed IA has the meaning given to it in Section 17.11.1;

GoS Appointed IE has the meaning given to it in Section 17.5.1;

GoS Cure Period has the meaning given to it in Section 21.7.1;

GoS Designated Account means the account(s) to be established and maintained by the GoS, in which any amount payable by the Concessionaire to the GoS in terms of this Agreement is paid, which account(s) shall be notified by the GoS to the Concessionaire from time to time;

GoS Event of Default has the meaning given to it in Section 21.6 (*GoS Event of Default*);

GoS Indemnified Parties has the meaning given to it in Section 23.1 (*Indemnities by the Concessionaire*);

GoS Notice of Intent to Terminate has the meaning given to it in Section 21.7.2;

GoS Parties means the GoS and SMTA, in their respective capacities as a Party to this Agreement and **GoS Party** means either of them;

GoS Parties’ Personnel means the staff, labour, contractors, drivers, operators, agents, representatives, consultants and other employees personnel engaged by the GoS Parties (or any of them) for purposes of the Project;

GoS Project Document(s) means:

- (a) this Agreement;
- (b) the Concession Direct Agreement; and
- (c) the License Agreement;

GoS Protected Assets has the meaning given to it in Section 25.4.1.2;

Government Authority means the Government of Pakistan, the GoS, or any ministry, department or political subdivision thereof, any municipality, any court or tribunal or any other governmental entity, instrumentality, agency, authority, committee or commission, under the direct or indirect control of the Government of Pakistan or the GoS, or any department or political subdivision thereof, or any independent regulatory authority

relating thereto, having jurisdiction under the Law over the Concessionaire, SMTA, the Construction Contractor, the Supplier and/or the Bus Operator, in each case, within Pakistan; provided, that for the purposes of this Agreement, neither the GoS nor SMTA in their respective capacities as a party to any of the Project Agreements shall be considered a Government Authority;

Government of Pakistan means the government of the Islamic Republic of Pakistan;

Grievance Redressal Mechanism has the meaning given to it in Section 25.5.1.2;

Guaranteed Annual Mileage has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Handover Certificate means the certificate to be issued by the Independent Experts certifying the satisfaction of the Handover Conditions in terms of Section 21.10;

Handover Conditions means that, as at the Final Expiry Date:

- (a) where the COD (First Segment) is not achieved, the E-Buses Assets will be in a condition that is consistent with the standards required in this Agreement (including as set out in **SCHEDULE A (*Technical Specifications*)**);
- (b) where the COD (First Segment) has been achieved: (i) the actual condition of assets to be transferred to SMTA meets the expected condition based on the design life of such assets; and (ii) the requirements for handover in **SCHEDULE E (*Testing*)** have been met;
- (c) the Concessionaire has completed training of the SMTA employees (or SMTA nominees) to ensure smooth taking over operations of the E-Buses Assets to a standard satisfactory to the Independent Engineer and SMTA;
- (d) the Independent Engineer has confirmed that the Concessionaire is in compliance with the requirements of the Operating and Maintenance Procedures; and
- (e) the Project Site shall be:
 - (i) free and clear from obstructions, impediments placed by the Concessionaire, used consumables and waste, and Hazardous Substances;
 - (ii) neat and tidy; and
 - (iii) made safe and secure in accordance with Good International Industry Practice;

Hazardous Substances means any solid, liquid or gaseous material, substance, constituent, chemical, mixture, raw material, intermediate product or by-product which is defined as hazardous waste, hazardous material, toxic substance or toxic pollutant under, or is otherwise regulated by the E&S Requirements;

HR Policy and Procedure has the meaning given to it in Section 4.7.1;

II Certificate of Compliance means the certificate of compliance to be issued by the Independent Inspector for the First Batch of Goods and the Second Batch of Goods following inspection prior to dispatch of each Batch of Goods from the country of origin in accordance with Section 6.9.2.1;

II Certificate of Rejection means the certificate of rejection that may be issued by the Independent Inspector in respect of the First Batch of Goods and/or the Second Batch of Goods following inspection prior to dispatch of each Batch of Goods from the country of origin in accordance with Section 6.9.2.2;

Implementation Schedule means the implementation schedule set out in **SCHEDULE B (Implementation Schedule)**, as may be revised from time to time, pursuant to this Agreement;

Independent Auditor means the auditor appointed for the Project in accordance with Section 17.7 (*Selection of Independent Auditor*) and in terms of the Independent Auditor Contract meeting the Independent Auditor Criteria and includes any replacement Independent Auditor appointed in terms of this Agreement;

Independent Auditor Authorized Representative(s) has the meaning given to it in Section 17.9.1;

Independent Auditor Contract means the contract to be entered into between the Parties, the Sponsors and the Independent Auditor in accordance with Article 17 (*Independent Experts*) and includes any contract subsequently executed with any replacement Independent Auditor in terms of this Agreement;

Independent Auditor Criteria means the minimum criteria for selection of firms of auditors for the appointment of Independent Auditor, set out in part 1 (*Indicative Independent Auditor Terms of Reference*) of **SCHEDULE F (Independent Experts Terms of Reference)**;

Independent Auditor Initial Term has the meaning given to it in Section 17.8.1;

Independent Auditor Payment Account means the account established and maintained by the Concessionaire pursuant to Section 17.12 (*Independent Auditor Payment Account*);

Independent Auditor Payment Account Bank means the financial institution in Pakistan selected by the Concessionaire, the Sponsors and the GoS where the Independent Auditor Payment Account is held;

Independent Auditor Payment Account Standing Instructions has the meaning given to it in Section 17.12.2;

Independent Auditor Payments has the meaning given to it in Section 17.11.1;

Independent Engineer means the engineer appointed for the Project in accordance with Section 17.1 (*Selection of Independent Engineer*) and in terms of the Independent Engineer Contract meeting the Independent Engineer Criteria and includes any replacement Independent Engineer appointed in terms of this Agreement;

Independent Engineer Authorized Representative(s) has the meaning given to it in Section 17.3.1;

Independent Engineer Contract means the contract to be entered into between the Parties, the Sponsors and the Independent Engineer in accordance with Article 17 (*Independent Experts*) and includes any contract subsequently executed with any replacement Independent Engineer in terms of this Agreement;

Independent Engineer Criteria means the minimum criteria for selection of firms of engineers for the appointment of Independent Engineer, set out in part 2 (*Indicative Independent Engineer Terms of Reference*) of **SCHEDULE F (*Independent Experts Terms of Reference*)**;

Independent Engineer Initial Term has the meaning given to it in Section 17.2.1;

Independent Engineer Payment Account means the account established and maintained by the Concessionaire pursuant to Section 17.6 (*Independent Engineer Payment Account*);

Independent Engineer Payment Account Bank means the financial institution in Pakistan selected by the Concessionaire, the Sponsors and the GoS where the Independent Engineer Payment Account is held;

Independent Engineer Payment Account Standing Instructions has the meaning given to it in Section 17.6.2;

Independent Engineer Payments has the meaning given to it in Section 17.5.1;

Independent Experts means the Independent Auditor and the Independent Engineer;

Independent Inspector or II means the independent third party selected following mutual agreement between the Parties and appointed by the Supplier at its own cost within three (3) months of the Effective Date;

Indicative Independent Auditor Terms of Reference means the indicative duties, functions and the scope of work to be performed by the Independent Auditor, as set out in part 1 (*Indicative Independent Auditor Terms of Reference*) of **SCHEDULE F (*Independent Experts Terms of Reference*)**;

Indicative Independent Engineer Terms of Reference means the indicative duties, functions and the scope of work to be performed by the Independent Engineer, as set out in part 2 (*Indicative Independent Engineer Terms of Reference*) of **SCHEDULE F (*Independent Experts Terms of Reference*)**;

Initial Maintenance Period means the period of thirty-six (36) months, in relation to the First Segment, from the Delivery Completion Date (First Segment) and, in relation to the Second Segment, the Delivery Completion Date (Second Segment), as defined in **SCHEDULE A (*Technical Specifications*)**;

Initial Sponsor(s) means the single entity or Consortium Members (as applicable) forming part of the Bid of the Successful Bidder;

Insurance Policies has the meaning given to it in Section 18.1.1;

Intellectual Property Rights means all patents, rights to inventions, utility models, copyright and related rights, trademarks, service marks, trade, business and domain names, rights in trade dress or get-up, rights in goodwill or to sue for passing off, unfair competition rights, rights in designs, rights in computer software, database rights, topography rights, moral rights, rights in confidential information (including know-how and trade secrets) and any other intellectual property rights, in each case whether registered or unregistered and including all applications for and renewals or extensions of such rights, and all similar or equivalent rights or forms of protection in any part of the world;

International Financial Reporting Standards means any International Financial Reporting Standards promulgated by the International Accounting Standards Board (which includes standards and interpretations approved by the International Accounting Standards Board issued under previous constitutions), together with its pronouncements thereon from time to time;

International Accounting Standards Board means the independent accounting standard-setting body of the International Financial Reporting Standards Foundation (IFRS Foundation);

Intervening Event means the following events or circumstances:

- (a) the occurrence of an Emergency Decommissioning;
- (b) the occurrence of a SMTA Overriding Power Event;
- (c) after the COD (First Segment), an Electricity Unavailability;
- (d) an Uninsurable Force Majeure Event;
- (e) the Intervening Event (Fare Reduction);
- (f) a discharge, release or leaching of any Hazardous Substance on, in, over, under or otherwise affecting the Project Site (including the soil, subsoil, surface water or ground water on or beneath the Project Site and the air above the same) caused by a person other than the Concessionaire or any of the Concessionaire Indemnified Parties;
- (g) prior to the COD (Second Segment), an Archaeological Delay Event, but only if and to the extent that the Concessionaire has made all reasonable efforts to reduce to a minimum and mitigate the effect of such event,

but only if and to the extent that in any such case: (i) in the opinion of the Independent Experts, it materially and adversely impairs the ability of the Concessionaire, the Sponsors, or any Contractor to perform their respective obligations under the Project Agreements; (ii) the Concessionaire is not in breach of its obligation to meet the Guaranteed Annual Mileage; and (iii) such event or circumstance is not the direct or indirect result of a breach

by the Concessionaire (or its Contractors) or the Sponsors of any of their obligations under this Agreement or any other Project Agreement, or any negligent act or omission by the Concessionaire, the Contractors or the Sponsors;

Intervening Event (Fare Reduction) means, if at any time during the Concession Period, the GoS Parties reduce the Fare rates or otherwise not to implement the Fare escalation in the manner set out in **SCHEDULE N (*Fare Structure*)**;

Intervening Event Period means the duration of an Intervening Event (or its effects); provided, that if more than one Intervening Event is ongoing at the same time, for the purposes of determining the Intervening Event Period, such Intervening Events shall be considered as running concurrently;

Invoicing Party has the meaning given to it in Section 13.6.1.1;

ITS System means the intelligent transportation system, which comprises the following:

- (a) the AFC;
- (b) the BSS; and
- (c) the Operations Control Centre,

as more particularly described in **SCHEDULE A (*Technical Specifications*)**;

IZP means Infrazamin Pakistan Limited, a non-banking finance company incorporated and licensed under the Laws of Pakistan, with its registered office at 4A, 4th Floor, Executive Tower, Dolmen Mall, Clifton, Karachi, Pakistan;

IZP Guarantee Demand has the meaning given to it in Section 12.2.1;

IZP Guarantee Instrument means the guarantee instrument, by whatsoever nomenclature referred to, entered into between IZP and the Financing Parties, and if required by the Financing Parties and/or IZP, the Concessionaire, whereby IZP guarantees payment of an amount up to the Termination Payment Amount (Coverage) to the Financing Parties on the Termination Payment Date;

KIBOR has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

KM means Kilometer;

KPIs or Key Performance Indicators means the key performance indicators to be complied with and fulfilled by the Concessionaire during the Operations Period as set out in **SCHEDULE K (*KPIs (SDG)*)** and **SCHEDULE L (*KPIs (Performance)*)**;

KPIs Exemption Period means the period of three (3) months commencing on the COD (First Segment);

Late Payment Rate means the six (6) Month KIBOR plus two percent (2%), compounded semi-annually, calculated for the actual number of Days for which the relevant amount remains unpaid on the basis of three hundred sixty-five (365) Days year;

Law means all federal, provincial and local laws of Pakistan, and all orders, rules, regulations, executive orders, statutory regulatory orders, decrees, judicial decisions, notifications, or other similar directives issued by any a Government Authority pursuant thereto, including the E&S Requirements, as any of them may be amended, substituted, replaced or re-promulgated from time to time;

Lead Developer means ¹³;

Legal Requirements means all Laws and Approvals;

License Agreement means the agreement between SMTA and the Concessionaire, substantially in the form set out in **SCHEDULE O (*License Agreement*)**;

Liquidated Damages means the Liquidated Damages (Abandonment), the Liquidated Damages (Delay) and/or the Liquidates Damages (Delay) (as applicable);

Liquidated Damages (Abandonment) has the meaning given to it in Section 7.4.1.2;

Liquidated Damages (Delay) has the meaning given to it in Section 7.3.1;

Liquidated Damages (KPIs) has the meaning given to it in Section 10.7.1;

Long Stop Date (First Segment) means, in relation to the COD (First Segment), the date that is thirty (30) Days after the Scheduled COD (First Segment);

Long Stop Date (Second Segment) means, in relation to the COD (Second Segment), the date that is thirty (30) Days after the Scheduled COD (Second Segment);

Loss of Revenue means the loss of revenue (as determined and certified by the Independent Experts) from an Intervening Event (other than Electricity Unavailability) or PFME and calculated in accordance with **SCHEDULE Q (*Loss of Revenue*)**;

Main Body means the main body of this Agreement;

Maintain or **Maintenance** means together the Planned Downtime and the Unplanned Downtime of the E-Buses Assets as detailed in **SCHEDULE A (*Technical Specifications*)**;

Maintenance Schedule has the meaning given to it in Section 10.4.1;

Maintenance Supervision means the vehicle maintenance supervision to be provided by the Concessionaire, as more particularly described in **SCHEDULE A (*Technical Specifications*)**;

¹³ To be update based on details of the Successful Bidder.

Maintenance Training Programme means the maintenance training programme (as approved by the Independent Engineer in accordance with Section 10.14 (*Training Programme*)) to be conducted by the Concessionaire, as more particularly described in **SCHEDULE A (*Technical Specifications*)**;

Maximum Liability Amount has the meaning given to it in the Sponsor(s) Undertaking;

Measures Against Money Laundering Laws means any and all money laundering laws of Pakistan including:

- (a) Anti-Terrorism Act, 1997;
- (b) National Counter Terrorism Authority Act, 2013;
- (c) Anti-Money Laundering Act, 2010;
- (d) Anti-Money Laundering Regulations, 2015;
- (e) Federal Board of Revenue Anti Money Laundering and Countering Financing of Terrorism Regulations for DNFBPs, 2020;
- (f) AML/CFT Sanctions Rules, 2020;
- (g) Counter-Measures for High-Risk Jurisdiction Rules, 2020;
- (h) Anti-Money Laundering Combating the Financing of Terrorism & Countering Proliferation Financing Regulations for SBP's Regulated Entities;
- (i) Securities and Exchange Commissions of Pakistan (Anti Money Laundering and Countering Financing of Terrorism) Regulations, 2020,

in each case, as amended or substituted from time to time;

Month means a calendar month beginning at 00:00 on the first Day of the month and ending at 23:59 on the last Day of the month;

National Economic Council means the council established under Article 156 of the Constitution of Pakistan, 1973;

New Sponsor means any transferee to whom any Ordinary Shares have been transferred in accordance with Section 16.4.5;

Non-Compliant Goods has the meaning given to it in Section 6.9.2.2;

Non-Fare Revenue has the meaning given to it in Section 12.4.1.1;

Non-Fare Revenue (Actual) means the actual Non-Fare Revenue collected by the Concessionaire;

Non-Fare Revenue (Concessionaire Share) means, for each Billing Period, seventy-five percent (75%) of the Non-Fare Revenue;

Non-Fare Revenue (GoS Share) means, for each Billing Period, twenty-five percent (25%) of the Non-Fare Revenue;

Non-Fare Revenue Account means the account to be established and maintained by the Concessionaire, in which the Non-Fare Revenue shall be deposited;

Non-Fare Revenue Account Bank means a scheduled bank in Pakistan with a minimum long-term credit rating of at least AA- as rated by VIS or an equivalent rating by PACRA;

Non-Fare Revenue Account Standing Instructions means the standing instructions issued to the Non-Fare Revenue Account Bank, in the form attached in part 3 (*Non-Fare Revenue Account Standing Instructions*) of **SCHEDULE P (Accounts Standing Instructions)**;

Non-Fare Revenue Agreements has the meaning given to it in Section 12.4.2.1;

Non-Fare Revenue Plan has the meaning given to it in Section 12.4.1.1;

Non-Fare Revenue Share Payment Certificate has the meaning given to it in Section 13.3.4;

Non-Fare Revenue Share Payment Date has the meaning given to it in Section 13.4.3;

Notification of Award means the notification of award issued by SMTA to the Successful Bidder in accordance with the RFP;

NPFME has the meaning given to it in Section 19.2 (*NPFME*);

NPFME Period means the duration of a NPFME as determined by the Independent Engineer; provided, that if more than one NPFME is ongoing at the same time, for the purposes of determining the NPFME Period, such NPFMEs shall be considered as running concurrently;

O&M Activities means all works, services and obligations to be performed by the Concessionaire during the Operations Period, including the Services and the operations and maintenance of the E-Buses Assets, as more fully described in **SCHEDULE A (Technical Specifications)**;

O&M Costs means, collectively, the (a) Power Component; (b) Non-Power Component; (c) Insurance Cost; and (d) Operator Margin;

O&M Performance Security means the irrevocable, unconditional, without recourse and on-demand bank guarantee (and any replacement thereof), in favour of GoS, in an amount equal to five percent (5%) of the forecast O&M Costs (as certified by the Independent Experts), for the relevant Operating Contract Year to which it relates, issued by an Acceptable Bank in the form set out in part 2 (*O&M Performance Security*) of **SCHEDULE H (Performance Securities)**;

O&M Performance Security Expiry Date means O&M Performance Security Expiry Date (Annual) and/or O&M Performance Security Expiry Date (Final) (as applicable);

O&M Performance Security Expiry Date (Annual) has the meaning given to it in Section 4.1.2;

O&M Performance Security Expiry Date (Final) has the meaning given to it in Section 4.1.2;

O&M Personnel means those employees (including Drivers and other maintenance staff) of the Concessionaire hired for the performance of the obligations of the Concessionaire, including the O&M Activities, and where applicable trained in accordance with the requirements prescribed under **SCHEDULE A (Technical Specifications)**;

Operating and Maintenance Procedures has the meaning given to it in Section 10.3.1;

Operating Contract Year or **OCY** means the twelve (12) month period commencing at 00:00 hours on the COD (First Segment) and ending at 23:59 hours on the Day immediately preceding the following anniversary of the COD (First Segment) and each subsequent twelve (12) month period during the Operations Period ending at 23:59 hours on the Day falling immediately prior to each subsequent anniversary of the COD (First Segment); provided, that the last Operating Contract Year shall end at 23:59 hours on the last Day of the Concession Period;

Operations Control Centre means the operations control centre component of the ITS System, being central command facility of the Project used for, *inter alia*, the monitoring, coordinating and managing the overall operations of the Project, as more particularly described in **SCHEDULE A (Technical Specifications)**;

Operations Period means the period commencing at 00:00 hours on the COD (First Segment) and ending at 23:59 hours on the Final Expiry Date;

Ordinary Shares means the ordinary share capital issued to the shareholders of the Concessionaire from time to time in accordance with this Agreement;

Other Payment Date has the meaning given to it in Section 13.4.4;

Outstanding Principal Amount has the meaning given to it in **SCHEDULE R (Termination Payment)**;

PACRA means the Pakistan Credit Rating Agency Limited;

Pakistan means the Islamic Republic of Pakistan;

Pakistani Rupees or **PKR** means Pakistani Rupees, the lawful currency of Pakistan;

Parking Facilities has the meaning given to it in **SCHEDULE A (Technical Specifications)**;

Parties means the GoS, SMTA and the Concessionaire and **Party** means any of them;

Performance Securities means the Development Period Performance Security and the O&M Performance Security and **Performance Security** means either of them;

Permitted Event means an Intervening Event and/or a Force Majeure Event;

PFME has the meaning given to it in Section 19.3 (*PFME*);

PFME Period means the duration of a PFME as determined by the Independent Engineer; provided, that if more than one PFME is ongoing at the same time, for the purposes of determining the PFME Period, such PFMEs shall be considered as running concurrently;

Planned Downtime has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Preamble means the preamble to this Agreement;

Project means:

- (a) the Project Activities;
- (b) the use by the Concessionaire, in accordance with the License Agreement, of the Project Site;
- (c) maintaining the Guaranteed Annual Mileage by the Concessionaire;
- (d) the handover of the E-Buses Assets to the SMTA in terms of this Agreement; and
- (e) all activities incidental to any of the foregoing, in accordance with this Agreement;

Project Activities means the Conditions Precedent Activities, the Development Activities and the O&M Activities;

Project Agreements means:

- (a) this Agreement;
- (b) the License Agreement;
- (c) the Construction Contract;
- (d) the Supply Contract; and
- (e) the Bus Operator Contract;

Project Costs means (without double-counting), any costs or expenses relating to the Project as set out in the Financial Model stated in Pakistani Rupees, which costs and expenses may include one or more of the following:

- (a) capital costs;

- (b) costs and expenses in respect of the design, engineering, procurement, manufacture, construction, rehabilitation, commissioning, testing and completion of the E-Buses Assets;
- (c) financing costs;
- (d) costs of Taxes imposed on or payable by the Concessionaire;
- (e) fixed operating costs during the Development Period; and
- (f) all other costs and expenses incurred in connection with the Project during the Development Period in accordance with the Financial Model;

Project IPR means all Intellectual Property Rights developed by or for the Concessionaire in connection with and for the Project after the Effective Date and prior to the Final Expiry Date, but excluding any Concessionaire IPR;

Project Implementation Unit means the project implementation unit established by the GoS for the purpose of overseeing the Day-to-Day implementation of the Project in accordance with the Legal Requirements and for carrying out the functions assigned to it under Section 25.5 (*Project Implementation Unit*);

Project Site means the location of the E-Buses Assets, as more fully described in **SCHEDULE A (*Technical Specifications*)**, which is licensed to the Concessionaire pursuant to the License Agreement for undertaking the Project Activities;

Project Site Information has the meaning given to it in Section 5.6.1;

Prototype Bus means the prototype bus caused to be manufactured by Concessionaire through the Supplier based on the Approved Detailed E-Bus Design in accordance with Section 6.4.1;

Prototype Tests means the tests required to be carried out on the Prototype Bus as more specifically described in **SCHEDULE E (*Testing*)**;

Prototype Tests Acceptance Certificate means the certificate issued by the Independent Engineer certifying successful completion of the Prototype Tests in accordance with Section 6.4.4;

Public Private Partnership Policy Board means the Public Private Partnership Policy Board constituted pursuant to the Sindh PPP Act;

Receiving Party has the meaning given to it in Section 13.6.1;

Recipient has the meaning given to it in Section 29.2.1;

Recitals means the preamble to this Agreement;

Reduced Contracted Availability has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Refinancing means:

- (a) any amendment, variation, novation, supplement or replacement of any Financing Document;
- (b) the exercise of any right, or the grant of any waiver or consent under any Financing Document;
- (c) any restructuring of capital;
- (d) the disposition of any rights or interests in, or the creation of any rights or interests in respect of, the Financing Documents or the creation or granting of any other form of benefit or interest in the Financing Documents or any revenues, contracts or assets of the Concessionaire, whether by way of security or otherwise; or
- (e) any other arrangement put in place by the Concessionaire or another person which has a similar effect to paragraphs (a) to (d) above or which has the effect of limiting the Concessionaire's ability to carry out any of (a) to (d) above,

where such action affects the economic position of the Concessionaire, or the Shareholders including (without limitation) by changing or in any way affecting:

- (i) amounts and/or payment schedules for margins, fees or other financing costs;
- (ii) the maturity or size of the debt or repayment profile or schedule;
- (iii) the timing or amount of any Distributions or any release of any contingent equity commitments;
- (iv) any reserving requirements; and
- (v) any requirement to provide or maintain any guarantee or security;

Refinancing Assumptions means each of the terms, conditions and assumptions concerning a Refinancing set out in the Base Case Financial Model;

Refinancing Gain means any economic benefits arising out of a Refinancing;

Relief Costs means any increased costs or expenses relating to the Project that are incurred or suffered (or are to be incurred or suffered) by the Concessionaire resulting from any circumstance described in Section 20.1 (*Claim for Relief Costs or Savings*), and not otherwise covered by the receipt of insurance proceeds, which costs and expenses may include one or more of:

- (a) capital costs;

- (b) costs and expenses in respect of the design, engineering, procurement, manufacture, construction, rehabilitation, commissioning, testing and completion of the E-Buses Assets;
- (c) financing costs;
- (d) costs of operation and maintenance;
- (e) costs of Taxes imposed on or payable by the Concessionaire; and
- (f) reduction in the revenue received by the Concessionaire;

Remedial Plan has the meaning given to it in Section 21.10.2.2;

Remedial Report has the meaning given to it in Section 21.10.2.2;

Remedial Works has the meaning given to it in Section 21.10.2.2;

Restoration Account has the meaning given to it in Section 19.10.2;

RFP has the meaning given to it in Recital A;

Sanctioned Country has the meaning given to it in the definition of Adverse Person;

Savings means any increase in revenues received by the Concessionaire and/or any savings or reduction of costs or expenses relating to the Project resulting from, or otherwise attributable to, any circumstance described in Section 20.1 (*Claim for Relief Costs, Loss of Revenue or Savings*) that is realised by the Concessionaire, which cost or expenses may include one or more of:

- (a) capital costs;
- (b) financing costs;
- (c) costs of operation and maintenance; and
- (d) costs of Taxes imposed on or payable by the Concessionaire;

SBP means the State Bank of Pakistan;

SBP Debit Authority has the meaning given to it in Section 12.2.8;

Schedule of Delivery means the schedule set out as **SCHEDULE D (*Schedule of Delivery*)** stipulating the timelines for the execution of the Supply Obligations;

Scheduled COD (First Segment) means the date specified in the Implementation Schedule for the achievement of the COD (First Segment) (which is ¹⁴ as at the

¹⁴ Insert date falling twelve (12) Months from the Effective Date.

Effective Date) as such date may from time to time be amended in accordance with this Agreement;

Scheduled COD (Second Segment) means the date specified in the Implementation Schedule for the achievement of the COD (Second Segment) (which is ¹⁵ as at the Effective Date) as such date may from time to time be amended in accordance with this Agreement;

Scheduled Commencement Date means the date specified in the Implementation Schedule for the achievement of the Commencement Date (which is ¹⁶ as at the Effective Date) as such date may from time to time be amended in accordance with this Agreement;

Scheduled Delivery Completion Date means the time for completing the Supply in accordance with the Schedule of Delivery;

Scheduled Delivery Date(s) means (as applicable) the First Scheduled Delivery Date and/or the Second Scheduled Delivery Date;

Second Batch of Goods means the second shipment of Supply in accordance with the Schedule of Delivery to be delivered on or before the Second Scheduled Delivery Date;

Second Delivery Date means the date of issuance of Certificate of Compliance for the Second Batch of Goods;

Second Scheduled Delivery Date means the date for completing the shipment of Supply for the Second Batch of Goods in accordance with the Schedule of Delivery;

Second Segment means the Development Activities in relation to the second phase of the Project, as more particularly described in in **SCHEDULE A (*Technical Specifications*)**;

Serial Defects means a substantially similar defect in the Buses, i.e. a failure showing the similar symptoms occurring in the same part or component of at least five percent (5%) Buses;

Serial Defects Notification Period means in respect of the Buses, the period commencing on the Delivery Completion Date and end twenty-four (24) months after the respective Delivery Completion Date;

Service Bays has the meaning given to it in **SCHEDULE A (*Technical Specifications*)**;

Services means, whenever the context permits or requires, any or all of the services as set out in detail in **SCHEDULE A (*Technical Specifications*)** including the Training Programme, the Vehicle Registration Formalities and the Maintenance Supervision to be

¹⁵ Insert date falling eighteen (18) Months from the Effective Date.

¹⁶ Insert date falling six (6) Months from the Effective Date.

performed in accordance with the Applicable Standards and which are required to ensure that the Project Activities are Fit for Purpose;

Shareholder means a person who is from time to time registered in the Concessionaire's share register as a holder of the Ordinary Shares;

Sindh PPP Act means the Sindh Public Private Partnership Act, 2010;

SMTA has the meaning given to it in the Preamble;

SMTA Act means the Sindh Mass Transit Authority Act, 2014;

SMTA Overriding Power Event has the meaning given to it in Section 14.2 (*Emergency Decommissioning and SMTA Overriding Powers*);

Social Matter means any:

- (a) matter relating to public consultation and disclosure with respect to the Project Activities;
- (b) impacts on a person, of any resettlement or land acquisition activities, undertaken in connection with the Project;
- (c) impacts to livelihood as a result of the changes induced by the Project Activities;
- (d) impacts to community health and safety, infrastructure, or socioeconomics; or
- (e) impacts of the Project Activities on vulnerable groups, including those living below the poverty line, female-headed households, individuals with disabilities, and informal settlers;

Spare Parts means such materials, spare parts, replacement components (including critical and specialist spare parts as well as generic parts and consumables) and other such items required for the operations and maintenance of the Buses (as specified in **SCHEDULE A (Technical Specifications)**) to be supplied by the Concessionaire under this Agreement in accordance with the Schedule of Delivery;

Sponsor Equity means: (a) Sponsor Loans; and (b) any paid-up capital issued by the Concessionaire to a Sponsor, in each case, in cash, to Fund the Sponsor Funding Amount in accordance with this Agreement;

Sponsor Funding Amount means an amount equal to PKR [●]’/-;

Sponsor Loans means Sponsor Equity advanced by any Sponsor in the form of loans to the Concessionaire, in each case:

¹⁷ This amount will be the total equity commitment of the Sponsors (excluding Cost Overruns) set out in the Bid of the Successful Bidder.

- (a) compliant with the Subordination Terms and Legal Requirements; and
- (b) where the Sponsor Loan is funded in United States Dollars, the United States Dollar amounts contributed as Sponsor Loan shall be as set out in the registration of Sponsor Loan issued by the authorized dealer or the State Bank of Pakistan;

Sponsor(s) Undertaking has the meaning given to it in Section 16.4.1.2;

Sponsors means one or more Initial Sponsor(s) or any New Sponsor;

Stakeholders means any person or group who are directly or indirectly affected by the Project, as well as those who may have interests in the Project and/or the ability to influence its outcome, either positively or negatively, and may include their formal and informal representatives, national or local government authorities, politicians, religious leaders, non-governmental organizations, civil society organizations and groups with special interests, the academic community, or other businesses;

Subordination Terms means such subordination terms and conditions for Sponsor Loans as may be specified by the GoS and the Independent Auditor;

Substitute Insurance means insurance which addresses substantially the same risk to an insurance required to be effected under Article 18 (*Insurance*) and the effecting of which the GoS Parties agree to accept as compliance by the Concessionaire with the requirements under Article 18 (*Insurance*) to effect that insurance;

Success Fee has the meaning given to it in the RFP;

Successful Bidder means ¹⁸;

Supplied E-Buses means the buses caused to be manufactured by the Concessionaire through the Supplier in accordance with the Approved Final E-Bus Design and Section 6.7.1;

Supplier means the supplier(s) hired by the Concessionaire for the Supply pursuant to Article 16 (*Covenants*);

Supply means the procurement, supply and delivery of the Batch of Goods to the Delivery Point in terms of this Agreement;

Supply Contract means the agreement between the Concessionaire and the Supplier for the Supply;

Supply Documents means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature supplied by the Concessionaire (through the Supplier) in respect of the Supply Obligations under this Agreement, as described in Section 6.14 (*Supply Documents*);

¹⁸ Insert from the Notification of Award.

Supply Obligations means all obligations of the Concessionaire under this Agreement pertaining to the procurement and supply of the Goods, the Supply Documents, payments of damages and indemnities, the Goods Warranty Obligations and the Bus Electric Powertrain and Vehicle Structure Warranty Obligations, including remedying of Defect or Deficiencies and Serial Defects, in each case, in accordance with the Applicable Standards and the timelines stated in this Agreement;

Taxes means any tax, charge, impost, tariff, duty or fee of any kind charged, imposed or levied, directly or indirectly, by a Government Authority including any zakat, value added tax, sales tax, notarisation fees, stamp duty, import duty, withholding tax (whether on income, dividends, commission payments, fees, equipment, rentals or otherwise), tax on foreign currency loans or foreign exchange transactions, excise tax, property tax, registration fee or licence, water tax or environmental, energy or fuel tax, including any commission, penalties or additions thereon;

Technical Parties means SMTA and the Concessionaire, and **Technical Party** means either of them;

Technological Improvement(s) means advancements in technology (including E-Buses Assets with performance, efficiency or durability characteristics materially better to those required under the GoS Project Documents, or technological improvements which may result in a decreased risk to health or safety) other than those advancements that the Concessionaire is required to implement to meet its obligations under Sections 10.1.2 and 26.1 (*Maintenance of Technology*);

Term Expiry Date means the eleventh (11th) anniversary of the COD (Second Segment), as may be extended from time to time in accordance with this Agreement;

Termination Date means the date specified for termination in the relevant Termination Notice, which shall not be later than sixty (60) from the date of issuance of the Termination Notice;

Termination Notice means a notice of termination issued by the Concessionaire or GoS (as applicable), pursuant to Sections 21.3 (*Termination Due to Non-Occurrence of the Commencement Date*), 21.4 (*Termination for Convenience*), 21.7 (*Termination Due to an Event of Default*) or 21.8.4;

Termination Payment means, as the context requires, the Termination Compensation (Pre-Commencement Date), the Termination Payment Sum (Concessionaire Default), the Termination Payment Sum (GoS Default), the Termination Payment Sum (NPFME) and/or the Termination Payment Sum (PFME);

Termination Payment Account means the bank account established and maintained by the Concessionaire and Notified to the Agency for receiving the Termination Payment in accordance with the terms of this Agreement;

Termination Payment Amount (Coverage) means, at any given time, an amount equal to the forecast Debt Principal Recovery Charge and Debt Interest Recovery Charge for the relevant Operational Year, as certified by the Independent Auditor;

Termination Payment Amount (Residual 1 Financing Due) has the meaning given to it in Section 12.2.11.3;

Termination Payment Amount (Residual 2 Financing Due) has the meaning given to it in Section 12.2.11.4;

Termination Payment Amount (Residual Other Amount) has the meaning given to it in Section 12.2.11.6;

Termination Payment Amount (Secured) has the meaning given to it in Section 12.2.1;

Termination Payment Amount (Unpaid Amounts) Certificate has the meaning given to it in Section 12.2.11;

Termination Payment Amount (Unpaid Financing Due) has the meaning given to it in Section 12.2.11.2;

Termination Payment Amount (Unpaid Other Amount) has the meaning given to it in Section 12.2.11.5;

Termination Payment Amount (Unpaid Total) has the meaning given to it in Section 12.2.11;

Termination Payment Amount Certificate means the certificate to be jointly issued by the Independent Experts pursuant to Section 21.9.2, not later than ten (10) Days from the Termination Date, setting out the relevant Termination Payment;

Termination Payment Date means the date on which the GoS has made payment of the relevant Termination Payment to the Concessionaire, such date being within the period that is sixty (60) Days following the Termination Date, as may be extended pursuant to Sections 21.10.4 and 21.10.5;

Termination Payment Sum (Concessionaire Default) has the meaning given to it in SCHEDULE R (*Termination Payment*);

Termination Payment Sum (GoS Default) has the meaning given to it in SCHEDULE R (*Termination Payment*);

Termination Payment Sum (NPFME) has the meaning given to it in SCHEDULE R (*Termination Payment*);

Termination Payment Sum (PFME) has the meaning given to it in SCHEDULE R (*Termination Payment*);

Termination Payment Sum (Pre-Commencement Date) has the meaning given to it in SCHEDULE R (*Termination Payment*);

Test Location means the location of any testing within or outside of Pakistan, including but not limited to factories in which the Buses, or any part thereof, is being manufactured or tested;

Test Procedures has the meaning given to it in Section 8.1.1;

Third-Party EV Charging has the meaning given to it in Section 16.8.1 (*Third-Party Charging Activities*);

Traffic and Pedestrian Safety Plan has the meaning given to it in Section 5.5.4;

Training Programme means collectively the Driver Training Programme and the Maintenance Training Programme;

Transit Bus Shelters has the meaning given to it in **SCHEDULE A (*Technical Specifications*)**;

Transfer Criteria means:

- (a) the transferee:
 - (i) is not an Adverse Person;
 - (ii) is not a defaulter of any bank or financial institution; and
 - (iii) in the sole opinion of the GoS, complies with the relevant qualification and evaluation criteria for such outgoing Sponsor as set out at the bidding stage of the Project; and
- (b) the transfer of shareholding is in compliance with the applicable Legal Requirements;

Transferring Sponsor has the meaning given to it in Section 16.4.2.1(b);

Unavailability or **Unavailable** has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Unavailability Notice has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Unenforceability Event means circumstances where:

- (a) there is a Disputed Obligation; and
- (b) there is a final and binding determination of an arbitral tribunal or of a Pakistan court that the Disputed Obligation is illegal, invalid, void, voidable or unenforceable under the applicable Legal Requirements; and
- (c) such illegality, invalidity, voidability or unenforceability under the applicable Legal Requirements materially impairs:
 - (i) the rights of the Financing Parties under the Financing Documents; or
 - (ii) the ability of the Concessionaire to perform its obligations under the Project Agreements or the Financing Documents,

provided that the Concessionaire must have used its best efforts to mitigate such consequences (or the event itself). For the purposes of this definition, “*materially*” means a material impairment in the Concessionaire’s rights to receive Capital Cost Recovery Payment in terms of this Agreement; and

- (d) the Concessionaire is not otherwise adequately compensated for the material impairment described in paragraph (c) above by way of remedy or relief pursuant to this Agreement or otherwise;

Uninsurable means, in relation to a risk:

- (a) insurance required under Article 18 (*Insurance*) is not available:
 - (i) in recognized international insurance markets in respect of that risk generally; or
 - (ii) to the Concessionaire due to the capacity of insurers being filled in respect of that risk,on the terms required by this Agreement (including where exclusions materially adversely impact on the insurability of that risk) from insurers having the required rating in terms of Section 18.1.2.2; or
- (b) the insurance premium (the **Excessive Insurance Premium**) payable for insuring that risk with such an insurer is three (3) times of the premium rate of the most recent Insurance Policy, on the PKR or USD amount of the relevant risk (as applicable) or the terms and conditions are such that the risk is not generally being insured against by private sector providers of facilities similar to the E-Buses Assets in the worldwide insurance market,

provided, that to the extent the unavailability of insurance is caused or contributed to by:

- (a) a breach of this Agreement or any Law by the Concessionaire, the Sponsors and/or the Contractors;
- (b) an act or omission of the Concessionaire, the Sponsors and/or the Contractors under the relevant Insurance Policy;
- (c) a negligent act or omission or wilful default of the Concessionaire, the Sponsors and/or the Contractors, whether in relation to the Project or generally,

the risk will not be Uninsurable for purposes of this definition;

Uninsurable Force Majeure Event means the Uninsurable NPFME and/or Uninsurable PFME (as applicable);

Uninsurable NPFME means an NPFME to the extent that insurance against that risk of its occurrence or consequences is Uninsurable;

Uninsurable PFME means a PFME to the extent that insurance against that risk of its occurrence or consequences is Uninsurable;

United States Dollars or **USD** means United States Dollars, the lawful currency of United States of America;

Unplanned Downtime has the meaning given to it in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**;

Unplanned Downtime Maintenance Program has the meaning given to it in Section 10.5.2.2;

Vehicle Registration Formalities means the full vehicle homologation, registration and licensing for each of the Buses as more specifically described in **SCHEDULE A (*Technical Specifications*)**;

VIS means the VIS Credit Rating Company Limited (formerly JCR-VIS Credit Rating Company Limited);

Warranty Obligations means, as applicable, the Bus Electric Powertrain and Vehicle Structure Warranty Obligations and/or the Goods Warranty Obligations; and

Warranty Period means, as applicable, the Bus Electric Powertrain and Vehicle Structure Warranty Period and/or the Goods Warranty Period.

1.2 **INTERPRETATION**

The following rules of construction and interpretation apply to this Agreement:

- 1.2.1 periods of time refer to the Gregorian calendar and reference to a time of Day shall be construed as a reference to the time of Day in Pakistan;
- 1.2.2 a “*person*” includes any individual, company, corporation, firm, partnership, joint venture, association (whether a body corporate or an unincorporated association of persons) or any government institution, department or establishment, and a person shall be construed as including a reference to its successors, permitted assigns and permitted transferees in accordance with their respective interests;
- 1.2.3 words importing the singular number include the plural and vice versa, and words importing a gender include the other gender;
- 1.2.4 the descriptive headings in this Agreement, including the cover page and table of contents, are for convenience of reference only and not for purposes of construction or interpretation of its provisions;
- 1.2.5 unless specifically provided otherwise, the words “*herein*” and “*hereunder*”, and words of similar import, refer to the entirety of this Agreement and not only to the Section in which such use occurs;

- 1.2.6 a reference to a “*Section*”, “*Schedule*” or “*attachment*” is a reference to a Section of this Agreement, a Schedule to this Agreement, or an attachment to a Schedule;
- 1.2.7 this Agreement is to be read and construed as a whole; anything mentioned in any of the documents comprising this Agreement shall be of like effect as if stated or mentioned in all of them. In the event of a conflict between the Sections and the Schedules, the Independent Experts shall endeavour, in the first instance, to resolve the conflict by reading this Agreement as a whole and the provision that is more specific to the subject matter shall govern. If, notwithstanding the Independent Experts’ good faith efforts to resolve the conflict as provided in the preceding sentence, the conflict continues to persist, the provision in the Sections shall govern;
- 1.2.8 where an obligation of a Party to make payment under this Agreement, as a result of the calculation of time, falls on a Day other than a Business Day, such time for performance shall be extended to the next Business Day;
- 1.2.9 “*including*” or “*includes*” shall be deemed to be qualified by a reference to “*without limitation*”;
- 1.2.10 reference to “*this Agreement*” or any other agreement or document shall be construed as a reference to such agreement or document as amended, modified or supplemented and in effect from time to time and shall include a reference to any document which amends, modifies or supplements it, or is entered into, made or given pursuant to or in accordance with its terms;
- 1.2.11 the “*face amount*” of a letter of credit or guarantee, shall be construed as a reference to the remaining amount available for drawing under that letter of credit or guarantee;
- 1.2.12 neither the giving of any approval or consent, the review, knowledge or acknowledgement of the terms of any document by or on behalf of the GoS Parties or the Independent Experts, nor the failure to do so, shall, unless expressly stated in this Agreement, relieve the Concessionaire of any of its obligations under this Agreement or of any duty which it may have under this Agreement to ensure the correctness, accuracy or suitability of the matter or thing which is the subject of the approval, consent, review, knowledge or acknowledgement;
- 1.2.13 the rule of construction, if any, that an agreement should be interpreted against the Party responsible for the drafting and preparation thereof shall not apply to this Agreement; and
- 1.2.14 the Parties acknowledge that liquidated damages for specific defaults prescribed under this Agreement are representative of the actual losses, liabilities, damages, costs, charges, or expenses that shall be suffered by the non-defaulting Party due to failure of the defaulting Party to perform its obligations in accordance with this Agreement and are not in the nature of a penalty.

2. CONCESSION TERM

2.1 GRANT OF CONCESSION

2.1.1 In consideration of the Project Activities contained in this Agreement and relying on the Concessionaire's representations, warranties and covenants contained herein, SMTA, subject to the terms of this Agreement, grants to the Concessionaire the right and authorizes it to:

2.1.1.1 carry out the Conditions Precedent Activities during the Conditions Precedent Period, the Development Activities during the Development Period, and the O&M Activities during the Operations Period, on a DBFOMT basis;

2.1.1.2 exercise and enjoy the rights, powers, benefits, privileges, authorizations and entitlements set forth in this Agreement,

(collectively referred to as the **Concession**).

2.1.2 The Concessionaire agrees and undertakes to implement the Project in accordance with the terms of this Agreement.

2.2 CONCESSION

Unless otherwise stated, this Agreement shall become effective on the Effective Date. The Concession is granted to the Concessionaire and shall be effective in accordance with the terms of this Agreement.

2.3 EXTENSION OF CONCESSION PERIOD

The Concession Period may be extended for an additional period, if:

2.3.1 not less than eighteen (18) months prior to the Term Expiry Date, the GoS Parties (acting jointly) provide a notice to the Concessionaire, or the Concessionaire provides a notice to the GoS Parties, requesting that the Parties enter into good faith negotiations to extend the Concession Period;

2.3.2 subject to the Parties having agreed to enter into good faith negotiations pursuant to Section 2.3.1, not later than twelve (12) months prior to the Term Expiry Date, the Parties agree to the terms of such extension;

2.3.3 not later than six (6) months prior to the Term Expiry Date, the Parties enter into a binding agreement in writing, confirming the agreed terms of the extension (including any adjustments to the Capital Cost Recovery Payment); and

2.3.4 any requisite approval for the extension of the Concession Period (including any adjustments to the Capital Cost Recovery Payment) is obtained from the Competent Authorities in accordance with the Legal Requirements.

3. COMMENCEMENT

3.1 NOT USED

3.2 COMMENCEMENT DATE

3.2.1 The rights and obligations of the Parties to undertake the Development Activities shall be conditional upon the issuance of the Commencement Certificate by the Independent Experts certifying in writing the satisfaction, deferral or waiver by the relevant Party as provided in **SCHEDULE B (*Conditions Precedent*)** of all the Conditions Precedent (the date of such certification being the **Commencement Date**). The Concessionaire shall procure that the Commencement Certificate is issued by the Independent Experts within five (5) Business Days of the occurrence of such satisfaction, deferral or waiver.

3.2.2 Each Party shall use its best endeavours to cause the Commencement Date to occur on or before the Scheduled Commencement Date.

3.3 REPORTS PRIOR TO THE COMMENCEMENT DATE

On a regular (at least weekly) basis from the appointment of the Independent Experts to the Commencement Date, the Concessionaire shall advise the Independent Experts as to the status of the satisfaction of the Conditions Precedent for which the Concessionaire is responsible; provided, that:

3.3.1 no review or approval by the Independent Experts of any Conditions Precedent shall relieve the Concessionaire from any liability that it would otherwise have had in respect of such Conditions Precedent or failure to comply with the applicable Legal Requirements or this Agreement with respect thereto; and

3.3.2 neither the GoS Parties, the Independent Experts nor any of their representatives or any of their advisors shall be liable to the Concessionaire or any other person by reason of their review or approval of any Conditions Precedent.

3.4 DELAY IN ACHIEVING THE COMMENCEMENT DATE

3.4.1 If, the achievement of the Commencement Date has been delayed due to:

3.4.1.1 any delay or failure on the part of a GoS Party in the performance of its obligations under this Agreement, which is not otherwise attributable to the Sponsors, the Concessionaire or any of its Contractors; or

3.4.1.2 the occurrence of a Force Majeure Event,

the Independent Experts shall confer with the Parties with a view to equitably adjusting the Scheduled Commencement Date and the Implementation Schedule, taking into account:

3.4.1.3 the effect which the Concessionaire demonstrates is solely attributable to the GoS Parties' delay or failure and which would not have occurred but for such delay or failure;

- 3.4.1.4 the effect which the Concessionaire demonstrates is solely attributable to the occurrence of a Force Majeure Event and which would not have occurred but for such delay or failure; and
- 3.4.1.5 the ability of the Parties to reschedule their obligations to avoid or minimise the overall resulting delays and ensure that any such adjustment to the Scheduled Commencement Date and the Implementation Schedule is limited to that necessary and is a consequence of the delay or failure.
- 3.4.2 The remedies set out in this Section 3.4 (*Delay in Achieving the Commencement Date*) shall be the Concessionaire's sole and exclusive remedies with respect to any delay in achieving the Commencement Date by the Scheduled Commencement Date due to any matter referred to in Section 3.4.1; provided, that if the Concessionaire fails to achieve the Commencement Date by the Scheduled Commencement Date (as adjusted under Section 3.4.1), then, unless the Scheduled Commencement Date is extended in accordance with Section 3.4.3, either Commercial Party may exercise its right to terminate this Agreement pursuant to Section 21.3.
- 3.4.3 If, for reasons other than those specified under Section 3.4.1, the Concessionaire is unable to achieve the Commencement Date by the Scheduled Commencement Date then, subject to Section 3.4.4, the Scheduled Commencement Date shall be extended for a period not exceeding sixty (60) Days. No later than twenty (20) Days prior to the Scheduled Commencement Date, the Concessionaire shall provide written notice to the Independent Experts of its expected inability to achieve the Commencement Date by the Scheduled Commencement Date (the **Commencement Date Delay Notice**).
- 3.4.4 The extension of the Scheduled Commencement Date pursuant to Section 3.4.3 shall be subject to the Concessionaire providing the Commencement Date Delay Notice.
- 3.4.5 The Concessionaire acknowledges that any adjustment to the Scheduled Commencement Date pursuant to Section 3.4.3 shall not entitle the Concessionaire to any adjustment to the Implementation Schedule or any Capital Cost Recovery Payment.

4. PROJECT IMPLEMENTATION

4.1 CONCESSIONAIRE'S OBLIGATIONS

- 4.1.1 The Concessionaire shall deliver the Development Period Performance Security to the GoS on or before the Effective Date and shall maintain the same in full force and effect until the expiry of a period of six (6) months from the COD (Second Segment) (the **Development Period Performance Security Expiry Date**). The Concessionaire shall notify GoS of the impending expiry of the Development Period Performance Security not more than three (3) months and not less than two (2) months prior to the date when it is due to expire. If the Development Period Performance Security is not extended at least one (1) month prior to the Development Period Performance Security Expiry Date, the Parties acknowledge and agree that the GoS may encash the full amount of the Development Period Performance Security; provided, that on submission of extended Development Period Performance Security by the Concessionaire, as confirmed by the Independent Auditor to the GoS, in compliance with this Section 4.1.1, and subject to receipt of relevant approvals, applicable Legal Requirements and permitted deductions, the GoS shall return the relevant encashed amount of the Development Period Performance Security to the Concessionaire. The Development Period Performance Security shall be returned to the Concessionaire on the Development Period Performance Security Expiry Date; provided, that no claim for payment is outstanding on such date, in which case it will be returned on satisfaction of such claim. The Parties have agreed that the amount of the Development Period Performance Security is reasonable and in accordance with the Legal Requirements.
- 4.1.2 The Concessionaire shall deliver the first (1st) O&M Performance Security to the GoS on or before the Scheduled COD (First Segment). The Concessionaire shall replace the first (1st) O&M Performance Security with the second (2nd) O&M Performance Security and this process shall be followed for each following Operating Contract Year. Each O&M Performance Security shall be kept valid until the date occurring two (2) months after expiry of the Operating Contracting Year to which it relates (the **O&M Performance Security Expiry Date (Annual)**). The final O&M Performance Security shall be kept valid until the later of: (a) expiry of a period of six (6) months from the Final Expiry Date; and (b) the date determined in accordance with Section 21.10.3 (the **O&M Performance Security Expiry Date (Final)**). The Concessionaire shall notify the GoS of the impending expiry of the O&M Performance Security not more than three (3) and not less than two (2) months prior to the O&M Performance Security Expiry Date. If the O&M Performance Security is not replaced with the O&M Performance Security for the following Operating Contract Year at least one (1) month prior to the O&M Performance Security Expiry Date, the Parties acknowledge and agree that GoS may encash the full amount of the O&M Performance Security; provided, that on submission of the replacement O&M Performance Security by the Concessionaire, as confirmed by the Independent Auditor to the GoS, in compliance with this Section 4.1.2, and subject to receipt of relevant approvals, applicable Legal Requirements and permitted deductions, the GoS shall return the relevant encashed amount of the O&M Performance Security to the Concessionaire. The O&M Performance Security shall be returned to the Concessionaire on the O&M Performance Security Expiry Date (Annual) or the O&M Performance Security Expiry Date (Final) (as applicable); provided, that no claim for payment is outstanding on such date, in which case it will be returned on satisfaction of such claim.

The Parties have agreed that the amount of the O&M Performance Security is reasonable and in accordance with the Legal Requirements.

4.1.3 The Performance Securities:

4.1.3.1 shall be issued and maintained without any recourse on the Concessionaire, its assets or properties and all costs, expenses, fees and other charges of any nature associated with the issuance, maintenance and encashment of the Performance Securities shall be borne by the Sponsors;

4.1.3.2 shall not be secured by the property or assets comprising of the E-Buses Assets or the Project Site; and

4.1.3.3 shall be encashed on demand in accordance with the terms of this Agreement.

4.1.4 The Concessionaire undertakes that no Encumbrance of any nature shall be created on the Project Site, or any immovable assets and immovable properties comprising of the E-Buses Assets, unless the same have been constructed and/or procured by the Concessionaire, in which case an Encumbrance may be created on the properties constructed and/or procured by the Concessionaire in accordance with the Financing Documents.

4.1.5 The Concessionaire shall cause and be responsible for:

4.1.5.1 the due and proper application for all Approvals and all renewals thereof required to be obtained in the name of the Concessionaire in connection with the transactions contemplated by this Agreement, other Project Agreements and the Financing Documents, the diligent effort to obtain, the receipt of, and the maintenance of, all such Approvals until the Final Expiry Date;

4.1.5.2 preparation of, and compliance with the requirements of, the E&S Impact Assessment;

4.1.5.3 development, implementation, operation and maintenance of the E&S Management System;

4.1.5.4 procurement and use of any temporary land identified by the E&S Impact Assessment as required by the Concessionaire for the Project Activities, in compliance with the E&S Requirements, and any mitigation measures set out in the E&S Impact Assessment and subsequent E&S Management System;

4.1.5.5 the due and proper application for, the diligent effort to obtain, and the receipt of, any visas, work permits, employment permits, dependents' permits, licences and other permits required for all individuals involved in the Project on behalf of or pursuant to contracts with the Concessionaire;

4.1.5.6 executing all Project Agreements and Financing Documents, in a timely manner;

4.1.5.7 co-operating with SMTA in the identification of the applications to be made by SMTA referred to in Section 4.2.3 and supporting such applications, including providing reasonable assistance in the preparation thereof, so as to expedite the consideration thereof by the appropriate Government Authority; provided, that such applications are in

compliance with all applicable Legal Requirements and the terms and conditions of each Project Agreement in connection with which such application is made;

- 4.1.5.8 delivering to the Independent Experts and the GoS Parties, each of the documents required to be delivered in accordance with **SCHEDULE B (*Conditions Precedent*)** not later than the time for delivery thereof set out therein;
- 4.1.5.9 achieving the Commencement Date on or before the Scheduled Commencement Date;
- 4.1.5.10 designing a Prototype Bus in accordance with the Applicable Standards;
- 4.1.5.11 manufacturing and producing the Prototype Bus in accordance with the Approved Detailed E-Bus Design;
- 4.1.5.12 following issuance of the Prototype Tests Acceptance Certificate, manufacturing and producing the Supplied E-Buses in accordance with the Approved Final E-Bus Design under Section 6.7 (*Manufacture of Buses*);
- 4.1.5.13 supplying the Goods (including any items supplied for remedying of Defect or Deficiencies and Serial Defects) that are brand new, unused and Fit for Purpose, and, in all material respects, in accordance with sound engineering practices and Applicable Standards; and the completed Project Activities shall be capable of meeting the requirements of this Agreement;
- 4.1.5.14 supplying the Buses in accordance with the Schedule of Delivery by the Scheduled Delivery Completion Date;
- 4.1.5.15 supplying the Spare Parts in accordance with Section 10.13 (*Supply of Spare Parts*);
- 4.1.5.16 performing the Services in accordance with the Schedule of Delivery including provision of training as per the Training Programme in accordance with Section 10.14 (*Training Programme*);
- 4.1.5.17 remedying any Defects or Deficiencies or any Serial Defects;
- 4.1.5.18 ensuring that the Project Activities meet the Applicable Standards and are Fit for Purpose;
- 4.1.5.19 complying with all E&S Requirements and applicable to the execution of the Concessionaire's Obligations; and
- 4.1.5.20 achieving the COD (First Segment) on or before the Scheduled COD (First Segment) and the COD (Second Segment) on or before the Scheduled COD (Second Segment).

4.2 **SMTA'S OBLIGATIONS**

SMTA shall cause and be responsible for:

- 4.2.1 making available, or causing to be made available, to the Concessionaire, the Project Site in accordance with Article 5 (*Project Site*);

- 4.2.2 the due and proper application for, the diligent effort to obtain, and the receipt of, all Approvals and all renewals thereof that are required to be obtained in the name of SMTA in connection with the transactions contemplated by this Agreement;
- 4.2.3 executing the GoS Project Documents to which it is a party in a timely manner; and
- 4.2.4 delivering to the Independent Experts and the Concessionaire, each of the documents required to be delivered in accordance with **SCHEDULE B (*Conditions Precedent*)** not later than the time for delivery thereof set out therein.

4.3 **GoS' OBLIGATIONS**

The GoS shall cause and be responsible for:

- 4.3.1 as reasonably requested by the Concessionaire, discussing the Project with and providing publicly available and/or non-confidential information about GoS Parties to financial institutions interested in providing financing for the Project; provided, that the GoS Parties shall not be required to make any representations, warranties or undertakings or otherwise incur any liability in connection with any such discussion or in connection with the Financing Documents;
- 4.3.2 making all payments to the Concessionaire in accordance with the terms of this Agreement (including the Capital Cost Recovery Payment and the Termination Payment);
- 4.3.3 executing the GoS Project Documents to which it is a party in a timely manner; and
- 4.3.4 delivering to the Independent Experts and the Concessionaire, each of the documents required to be delivered in accordance with **SCHEDULE B (*Conditions Precedent*)** not later than the time for delivery thereof set out therein.

4.4 **SUB-CONTRACTORS**

- 4.4.1 The appointment of the Construction Contractor, the Supplier or the Bus Operator or any other contractor or supplier shall not relieve the Concessionaire of any of its obligations under this Agreement.
- 4.4.2 All references in this Agreement to any act, default, omission, breach or negligence of the Concessionaire shall be construed to include any such act, default, omission, breach or negligence of the Contractors or any other contractor or supplier of the Concessionaire or those of the Contractors.
- 4.4.3 The Concessionaire shall ensure that the Construction Contract, the Supply Contract and Bus Operator Contract contain provisions required in terms of **SCHEDULE J (*Environment, Health and Safety Requirements*)** and which further provide for such contracts to be, at the option of the GoS, novated or assigned to the GoS or its nominee without any further consent or approval from the Concessionaire or the Contractor, or entitle the GoS or its nominee to step into such contract, in substitution of the Concessionaire, if this Agreement is terminated prior to the Term Expiry Date; provided, that the step-in rights of the GoS shall be subject to any substitution rights of the Financing Parties and IZP (if applicable) under the Concession Direct Agreement.

- 4.4.4 The Concessionaire shall at all times comply and shall procure that any Contractors, third-party contractors and subcontractors comply with the E&S Requirements, in relation to the performance of the Project Activities.

4.5 **GoS AND SMTA REPRESENTATIVES**

Each of the GoS Parties shall be entitled from time to time to appoint one (1) or more GoS Parties' Personnel to support it or represent it in connection with the implementation of the Project. Each GoS Party shall notify the Concessionaire from time to time of its appointed GoS Party Personnel and their roles and responsibilities. Unless and to the extent specified by a GoS Party in writing to the contrary, no such GoS Party Personnel shall have authority to act on a GoS Party's behalf for the purpose of giving any instruction or notice under this Agreement or otherwise taking any action binding on a GoS Party for any purpose in connection with this Agreement.

4.6 **SMTA PROJECT SITE FACILITIES**

The Concessionaire shall ensure that office(s) and related facilities are provided at the Project Site for the use of SMTA and its representative(s), in accordance with the requirements set out in **SCHEDULE A (*Technical Specifications*)**.

4.7 **HUMAN RESOURCE POLICIES AND RESOURCES**

- 4.7.1 The Concessionaire shall (and shall procure that each Contractor shall) develop and maintain written human resource policy and procedures in accordance with the Legal Requirements, including the E&S Standards (the **HR Policy and Procedure**). The HR Policy and Procedure shall be prepared and submitted to the Independent Engineer as a Condition Precedent.
- 4.7.2 The HR Policy and Procedures shall clearly describe, in relation to the Concessionaire, the working conditions, terms of employment, management of workers' relationship, grievance redress mechanism, and the roles and responsibilities of the Concessionaire and its employees.
- 4.7.3 The HR Policy and Procedures developed in terms of Section 4.7.1 shall be made available to the respective employees of the Concessionaire and each of the Contractors.

4.8 **TEMPORARY LAND**

- 4.8.1 The Concessionaire shall procure and use any temporary land identified by the E&S Impact Assessment as required by the Concessionaire for the Project Activities.
- 4.8.2 The procurement or use of any land in terms of Section 4.8.1 shall be subject to an E&S Impact Assessment conducted for such land and compliance with the E&S Requirements.

5. PROJECT SITE

5.1 ACCESS

If the Concessionaire (or its Contractors) require access to the Project Site prior to execution of the License Agreement, for the purposes of conducting preliminary activities such as investigations of the geotechnical or hydrological conditions of the Project Site, SMTA will support the Concessionaire in granting such access. If agreed, such access will be granted to the Concessionaire (or its Contractors) on the terms and conditions to be agreed and recorded in writing between the Concessionaire and SMTA. If and when such access is granted, the indemnities set out in Article 23 (*Indemnities*) shall become fully effective in respect of the access to and activity on the Project Site.

5.2 LICENSE AGREEMENT

With effect from the Commencement Date, SMTA shall procure that the Project Site is made available to the Concessionaire upon and subject to the terms of the License Agreement.

5.3 ACCESS FOR GoS PARTIES AND THEIR DESIGNEES

The grant of license and right to use the Project Site in respect of performance of the Project Activities, by SMTA to the Concessionaire, shall always be subject to the right of access of the GoS Parties, the GoS Parties' Personnel and the Independent Experts.

5.4 EXERCISE OF ACCESS RIGHTS

In exercising the right of access under Section 5.3 (*Access for GoS Parties and Their Designees*), each GoS Party shall cause the GoS Parties' Personnel to comply with all applicable Legal Requirements and the reasonable directions of the Concessionaire. Each GoS Party shall exercise its access rights for the purposes specified in Section 5.3 (*Access for GoS Parties and Their Designees*) in a manner that does not interfere with, or increase the cost of, the Project Activities on the Project Site and shall adhere to the reasonable safety rules and procedures of the Concessionaire that are consistent with Good International Industry Practices.

5.5 ACCESS ROUTES AND TRANSPORTATION

- 5.5.1 The Concessionaire shall be responsible for the selection and usage of all transportation means, transportation routes, roads, bridges, highways and routes to and from the Project Site in respect of performance of its obligations under this Agreement, and the GoS Parties shall not be responsible for any claims attributable to the Concessionaire in respect of the same.
- 5.5.2 The Concessionaire shall be responsible for obtaining and maintaining all necessary Approvals required for usage of routes and transportation means as contemplated in Section 5.5.1.
- 5.5.3 The Concessionaire shall at all times ensure that the access roads are adequate and suitable for the Project Activities and should be maintained in consultation with the Competent Authorities, each at the cost of the Concessionaire.

5.5.4 The Concessionaire shall develop, implement and maintain, as part of the E&S Management System, a traffic and pedestrian safety plan to ensure the safe, orderly and efficient movement of vehicular traffic, public transport users, pedestrians and other vulnerable road users during the carrying out of the Project, including during the construction, installation, testing, commissioning, operation and maintenance of the Project. The Traffic and Pedestrian Safety Plan shall address, *inter alia*, traffic management and pedestrian safety measures in connection with (a) construction and installation activities relating to the Development Activities, (b) the ingress and egress of Buses, (c) the interface of the Project Activities with existing roads, footpaths and public spaces, and (d) emergency situations and incidents, and shall be prepared in accordance with part 2 (*E&S Management System*) of **SCHEDULE J (*Environment, Health and Safety Requirements*)** (the **Traffic and Pedestrian Safety Plan**).

5.6 **PROJECT SITE RISKS**

5.6.1 SMTA has made available to the Concessionaire the information in SMTA's possession in connection with the Project Site as set out in **SCHEDULE A (*Technical Specifications*)** (the **Project Site Information**).

5.6.2 The Concessionaire shall be deemed to have obtained all necessary information as to the risks, contingencies and other circumstances which may influence or affect the implementation of the Project at the Project Site.

5.6.3 The Concessionaire shall also be deemed to have inspected and examined the Project Site and its surroundings, analysed and verified the accuracy and reliability of the Project Site Information and to have satisfied itself as to all the relevant matters including:

5.6.4 the nature of the Project Site, including the subsurface, hydrological, climatic and general physical conditions of the Project Site;

5.6.4.1 the suitability of the Project Site for undertaking the Project Activities;

5.6.4.2 the extent, nature and availability of labour, material, transport, accommodation, storage facilities and other facilities and resources necessary to undertake the Project;

5.6.4.3 the nature of design, construction work and operations and maintenance services necessary for the performance of its obligations under this Agreement;

5.6.4.4 the Legal Requirements for undertaking the Project;

5.6.4.5 the risk of injury or damage to the Adjoining Property and to the occupiers thereof or any other risk;

5.6.4.6 the suitability and adequacy of any access roads to the Project Site and other utilities and facilities to be provided by the relevant Government Authority; and

5.6.4.7 all other matters that may affect the performance of its obligations under this Agreement.

5.6.5 The Concessionaire acknowledges and agrees that except as otherwise provided in this Agreement, if any error or discrepancy is subsequently discovered in the data, including

the Project Site Information, made available by SMTA or any other person on its behalf, then, such error or discrepancy shall not entitle the Concessionaire to any change in the Implementation Schedule, and/or compensation for Relief Costs, Loss of Revenue or any other costs it may incur. Further, any misinterpretation of the data, studies and reports provided by SMTA or any other person on its behalf shall not relieve the Concessionaire from the performance of its obligations under this Agreement.

5.7 **DISCLAIMER**

- 5.7.1 The Concessionaire acknowledges that it has, after a complete and careful examination, made an independent evaluation of the RFP, the scope of the Project, this Agreement, the Project Site, the Project Site Information, existing structures, local conditions and all information provided by SMTA (or any other person on its behalf) or obtained, procured or gathered otherwise and has determined to its satisfaction the accuracy or otherwise thereof and the nature and extent of difficulties, risks and hazards as are likely to arise or may be faced by it in the course of performance of its obligations hereunder. The GoS Parties make no representations whatsoever, express, implicit or otherwise, regarding the accuracy, adequacy, correctness, reliability and/or completeness of any assessment, assumptions, statement or information provided by either and the Concessionaire confirms that it shall have no claim whatsoever against any GoS Party in this regard.
- 5.7.2 The Concessionaire acknowledges and hereby accepts the risk of any inadequacy, mistake or error in or relating to any of the matters specified in Section 5.7.1 and hereby acknowledges and agrees that the GoS Parties shall not be liable for the same in any manner whatsoever to the Concessionaire or any person claiming through or under any of them.
- 5.7.3 Any mistake or error in or relating to any of the matters specified in Section 5.7.1 shall not vitiate this Agreement or render it voidable.
- 5.7.4 In the event that either Technical Party becomes aware of any mistake or error relating to any of the matters specified in Section 5.7.1, that Technical Party shall immediately notify the other Technical Party, specifying the mistake or error; provided, however, that a failure on part of SMTA to give any notice pursuant to this Section 5.7.4 shall not prejudice the disclaimer contained in Section 5.7.1 and shall not in any manner reallocate to the GoS Parties any risks, obligations or liabilities assumed by the Concessionaire pursuant to this Agreement.
- 5.7.5 Except as otherwise provided in this Agreement, all risks relating to the Project shall be borne by the Concessionaire and the GoS Parties shall not be liable in any manner for such risks or the consequences thereof.

5.8 **PROJECT SITE SECURITY**

- 5.8.1 From the Commencement Date, the Concessionaire shall be responsible for making all necessary arrangements to secure the Project Site, and all persons, and moveable and immoveable properties present at or forming part of the Project Site.

- 5.8.2 The Concessionaire shall ensure that employment of direct or contracted workers to provide security for the Project Site will be undertaken following an assessment of risks posed by its security arrangements to those within and outside the Project Site.
- 5.8.3 All security arrangements shall be guided by the principles of proportionality and Good International Industry Practice.

6. SUPPLY AND CONSTRUCTION WORKS

6.1 DEVELOPMENT DOCUMENTS

- 6.1.1 The Concessionaire shall be responsible for preparing the Development Documents in a manner consistent with the requirements of **SCHEDULE A (*Technical Specifications*)** and other provisions of this Agreement, Good International Industry Practices, the E&S Requirements and in accordance with any other relevant Legal Requirements.
- 6.1.2 The Development Documents shall be prepared in English language.

6.2 CONCEPT E-BUS DESIGN

- 6.2.1 The Concessionaire shall within fifteen (15) Days of the Effective Date submit its concept design for the Buses (prepared in accordance with the Applicable Standards) to the Independent Engineer (with a copy to the GoS Parties) for approval (the **Concept E-Bus Design**).
- 6.2.2 Within ten (10) Days of receipt, the Independent Engineer shall review the Concept E-Bus Design (in consultation with the GoS Parties) and shall either:
- 6.2.2.1 approve the Concept E-Bus Design (the **Approved Concept E-Bus Design**); or
- 6.2.2.2 reject the Concept E-Bus Design and convey its comments/observations (if any) to the Concessionaire.
- 6.2.3 In the event no comments in relation to the Concept E-Bus Design are provided by the GoS Parties in accordance with Section 6.2.2 within the ten (10) Day review period, it shall be deemed that (a) the GoS Parties have no comments in relation to the Concept E-Bus Design, and (b) consultation by the Independent Engineer with the GoS Parties has already been undertaken.
- 6.2.4 The Concessionaire shall promptly (at its own cost and expense) re-submit the revised Concept E-Bus Design, no later than ten (10) Days from receipt of the aforesaid observations under Section 6.2.2.2, and the approval process under this Section 6.2 (*Concept E-Bus Design*) shall be repeated.
- 6.2.5 If any errors, omission, ambiguities, inconsistencies, inadequacies, or other defects are found in the Concept E-Bus Design, such Concept E-Bus Design and any resultant error in the construction of the Buses shall be corrected at the Concessionaire's cost, notwithstanding any consent or approval under this Section 6.2 (*Concept E-Bus Design*).

6.3 DETAILED E-BUS DESIGN

- 6.3.1 The Concessionaire shall within fifteen (15) Days of the Approved Concept E-Bus Design being approved by the Independent Engineer, submit its detailed design for the Bus (prepared in accordance with the Applicable Standards) to the Independent Engineer (with a copy to the GoS Parties) for approval (the **Detailed E-Bus Design**).

6.3.2 Within ten (10) Days of receipt, the Independent Engineer shall review the Detailed E-Bus Design (in consultation with the GoS Parties) and shall either:

6.3.2.1 approve the Detailed E-Bus Design (the **Approved Detailed E-Bus Design**); or

6.3.2.2 reject the Detailed E-Bus Design and convey its comments/observations (if any) to the Concessionaire.

6.3.3 In the event no comments in relation to the Detailed E-Bus Design are provided by the GoS Parties in accordance with Section 6.3.2 within the ten (10) Day review period, it shall be deemed that (a) the GoS Parties have no comments in relation to the Detailed E-Bus Design, and (b) consultation by the Independent Engineer with the GoS Parties has already been undertaken.

6.3.4 The Concessionaire shall promptly (at its own cost and expense) re-submit the revised Detailed E-Bus Design, no later than ten (10) Days from receipt of the aforesaid observations under Section 6.3.2.2, and the approval process under this Section 6.3 (*Detailed E-Bus Design*) shall be repeated.

6.3.5 If any errors, omission, ambiguities, inconsistencies, inadequacies, or other defects are found in the Detailed E-Bus Design, such Detailed E-Bus Design and any resultant error in the construction of the Buses shall be corrected at the Concessionaire's cost, notwithstanding any consent or approval under this Section 6.3 (*Detailed E-Bus Design*).

6.4 **PROTOTYPE TESTS**

6.4.1 Within thirty (30) Days of the Approved Detailed E-Bus Design being approved by the Independent Engineer, the Concessionaire shall: (a) manufacture a prototype bus based on such Approved Detailed E-Bus Design (the **Prototype Bus**); and (b) carry out the Prototype Tests on such Prototype Bus at the Test Location.

6.4.2 The Concessionaire shall provide all documentation and other information necessary for Prototype Tests and such assistance, driving tracks, labor, materials, stores, apparatus and instruments at the Test Location as are necessary to carry out such Prototype Tests efficiently.

6.4.3 The Concessionaire shall give the Independent Engineer and the GoS Parties two (2) weeks' preliminary notice of the time and Test Location for the testing of the Prototype Bus. The Independent Engineer and the GoS Parties shall be entitled to be present at the aforementioned Test Location for testing of the Prototype Bus.

6.4.4 Following successful completion of the Prototype Tests by the Concessionaire and issuance of the Independent Engineer's report on completion of the Prototype Tests, a certificate shall be issued by the Independent Engineer certifying the successful completion of the Prototype Tests (the **Prototype Tests Acceptance Certificate**). It is hereby clarified that the Prototype Tests Acceptance Certificate shall only be considered issued for purposes of this Agreement after being countersigned by the Independent Engineer.

6.4.5 If while testing, the Prototype Bus or part thereof is found to be defective or otherwise not in accordance with this Agreement, the Independent Engineer may reject the Prototype

Bus by giving notice to the Concessionaire, with reasons. The Concessionaire shall then promptly and in any case within two (2) Days (or otherwise agreed with the GoS Parties) make good the defects and ensure that the rejected item complies with this Agreement. Any such defects shall be remedied by the Concessionaire, at its sole cost and risk, without any extension to the timelines set out in the Schedule of Delivery.

- 6.4.6 If the Independent Engineer requires the Prototype Bus to be retested, the tests shall be repeated under the same terms and conditions.
- 6.4.7 The Concessionaire shall bear all fees, costs and expenses incurred (whether inside or outside Pakistan) for the purposes of attendance by GoS Parties' Personnel (not exceeding a team of seven (7) persons) of the Prototype Tests. All living expenses, transport expenses and medical insurance of the GoS Parties' Personnel shall be covered by the Concessionaire including (where Test Location is outside Pakistan) round trip economy air tickets to and from Pakistan. The Concessionaire shall facilitate the procurement of visas of the GoS Parties' Personnel.
- 6.4.8 The Concessionaire shall also forward to the GoS Parties' Personnel duly certified reports of the Prototype Tests and copies of the data upon which the reports were based.
- 6.4.9 During the Prototype Tests, the Independent Engineer's and/or GoS Parties' Personnel's presence, inspection, examination, approval or similar act by the Independent Engineer and/or the GoS Parties' Personnel (including the absence of disapproval) shall not relieve the Concessionaire from any of its duties, responsibilities or obligations under this Agreement.
- 6.4.10 The Prototype Bus shall not form part of the fleet being procured for the Project.

6.5 **FINAL E-BUS DESIGN**

- 6.5.1 The Concessionaire shall within ten (10) Days of issuance of the Prototype Tests Acceptance Certificate, submit its final detailed design for the Buses (prepared in accordance with the Applicable Standards) to the Independent Engineer (with a copy to the GoS Parties) for approval (the **Final E-Bus Design**).
- 6.5.2 Within ten (10) Days of receipt, the Independent Engineer shall review the Final E-Bus Design (in consultation with the GoS Parties) and shall either:
 - 6.5.2.1 approve the Final E-Bus Design (the **Approved Final E-Bus Design**); or
 - 6.5.2.2 reject the Final E-Bus Design and convey its comments/observations (if any) to the Concessionaire.
- 6.5.3 In the event no comments in relation to the Final E-Bus Design are provided by the GoS Parties in accordance with Section 6.5.2 within the ten (10) Day review period, it shall be deemed that (a) the GoS Parties have no comments in relation to the Final E-Bus Design, and (b) consultation by the Independent Engineer with the GoS Parties has already been undertaken.

6.5.4 The Concessionaire shall promptly (at its own cost and expense) re-submit the revised Final E-Bus Design, no later than ten (10) Days from receipt of the aforesaid observations under Section 6.5.2.2, and the approval process under this Section 6.5 (*Final E-Bus Design*) shall be repeated.

6.5.5 If any errors, omission, ambiguities, inconsistencies, inadequacies, or other defects are found in the Final E-Bus Design, such Final E-Bus Design and any resultant error in the construction of the Buses shall be corrected at the Concessionaire's cost, notwithstanding any consent or approval under this Section 6.5 (*Final E-Bus Design*).

6.6 **DETAILED ENGINEERING DESIGN**

6.6.1 Within two (2) months of the Effective Date, the Concessionaire shall prepare, and submit to the Independent Engineer (with a copy to the GoS Parties) for its approval, the proposed Detailed Engineering Design in relation to the Construction Works. Within thirty (30) Days of receipt thereof, the Independent Engineer shall review the Detailed Engineering Design, and (following consultation with the GoS Parties), either approve the Detailed Engineering Design or reject the Detailed Engineering Design and convey comments/observations (if any) relating to the same, to the Concessionaire, provided, that the Independent Engineer may only refuse to approve the Detailed Engineering Design if the same fail to comply with the requirements of Section 6.1.1.

6.6.2 In the event no comments in relation to the Detailed Engineering Design are provided by the GoS Parties in accordance with Section 6.6.1 within the thirty (30) Day review period, it shall be deemed that (a) the GoS Parties have no comments in relation to the Detailed Engineering Design, and (b) consultation by the Independent Engineer with the GoS Parties has already been undertaken.

6.6.3 The Concessionaire shall (at its own cost and expense) re-submit the revised Detailed Engineering Design no later than five (5) Days from receipt of the rejection and/or comments/observations under Section 6.6.1, and the approval process under this Section 6.6 (*Detailed Engineering Design*) shall be repeated until all comments/observations are addressed and the Detailed Engineering Design have been approved.

6.6.4 If any errors, omission, ambiguities, inconsistencies, inadequacies, or other defects are found in the Detailed Engineering Design, such Detailed Engineering Design and any resultant error in the Construction Works shall be corrected at the Concessionaire's cost, notwithstanding any consent or approval under this Section 6.6 (*Detailed Engineering Design*).

6.7 **MANUFACTURE OF BUSES**

6.7.1 Following issuance of the Approved Final E-Bus Design and achievement of the Commencement Date, the Concessionaire shall commence manufacturing of the Supplied E-Buses in accordance with the Approved Final E-Bus Design. The Concessionaire shall ensure that the manufacturing of the Supplied E-Buses in such manner so as to ensure delivery by the respective Scheduled Delivery Dates.

6.7.2 The GoS Parties' Personnel and the Independent Engineer shall at all reasonable times:

- 6.7.2.1 have full access to all places where the Prototype Bus and the Supplied E-Buses are being manufactured; and
- 6.7.2.2 during design, production and manufacture be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of the production and manufacture of the Prototype Bus and the Supplied E-Buses.
- 6.7.3 The Concessionaire shall give the Independent Engineer and the GoS Parties' Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Concessionaire from any obligation or responsibility.

6.8 **OWNERSHIP OF GOODS**

- 6.8.1 All Goods shall be imported in the name of the Concessionaire. Each of the Goods shall, to the extent consistent with the Laws of Pakistan, become the property of the Concessionaire upon the earlier of: (a) receipt of full payment against the same; or (b) issuance of bill of lading for the Goods.
- 6.8.2 The Concessionaire warrants good title to all Goods and all parts thereof and to other tools, equipment, documents, materials and supplies furnished by the Concessionaire, the Supplier or their agents. The Concessionaire further guarantees that such title will be free and clear of any and all liens, claims, charges, security interests, encumbrances and rights of other persons (other than the Financing Parties) arising as a result of any actions or failure to act of the Concessionaire, the Supplier or employees or representatives of either.
- 6.8.3 The Concessionaire shall have care, custody and control of, and shall bear the risk of physical loss and/or damage with respect to the Goods until delivery of the same at the Delivery Point and the issuance of the corresponding Certificate of Compliance in respect of each Batch of Goods.

6.9 **INSPECTION AND ISSUANCE OF II CERTIFICATE OF COMPLIANCE**

- 6.9.1 Prior to dispatch of each Batch of Goods, the Independent Inspector shall inspect such shipment of the Batch of Goods including: (a) Supplied E-Buses, to ensure that each Bus conforms with the Approved Final E-Bus Design; (b) Spare Parts, to ensure that the Spare Parts meet the Applicable Standards; and (c) set of tools and diagnostic equipment, to ensure that the tools and diagnostic equipment meets the Applicable Standards.
- 6.9.2 Following inspection of each Batch of Goods, the Independent Inspector shall either:
 - 6.9.2.1 issue certificate of compliance in respect of the entire Batch of Goods delivered, verifying that each of the Goods is in compliance with the requirements or standards prescribed under this Agreement including as specified under Section 6.9.1 (the **II Certificate of Compliance**); or
 - 6.9.2.2 issue certificate of rejection in respect of the entire Batch of Goods delivered, if the Independent Inspector determines (along with providing the reasons for rejection) that any of the Goods in the relevant Batch of Goods is found to have any Defect or Deficiencies (the **Non-Compliant Goods**) (the **II Certificate of Rejection**).

6.9.3 In the event of issuance of an II Certificate of Rejection, the Concessionaire shall remedy, replace, modify or make good any Defect or Deficiencies in the Non-Compliant Goods within fourteen (14) Days (or such other number of Days agreed between the Parties). Thereafter, the inspection procedure set out in this Section 6.9 (*Inspection and Issuance of II Certificate of Compliance*) shall be repeated for the Non-Compliant Goods and the II Certificate of Compliance shall be issued once all Goods in a Batch of Goods are accepted in accordance with Section 6.9.2.1.

6.9.4 Any Defect or Deficiencies in the Non-Compliant Goods shall be remedied by the Concessionaire, at its sole cost and risk, without any extension for delay in achieving: (a) the Delivery Date on or before the corresponding Scheduled Delivery Date; and (b) the Delivery Completion Date on or before the Scheduled Delivery Completion Date.

6.10 **INSPECTION AND ISSUANCE OF CERTIFICATE OF COMPLIANCE**

6.10.1 Upon delivery of each Batch of Goods at the Delivery Point, the Independent Engineer shall inspect such shipment of the Batch of Goods including: (a) Supplied E-Buses, to ensure that each Supplied E-Bus conforms with the Approved Final E-Bus Design; (b) Spare Parts, to ensure that the Spare Parts meet the Applicable Standards; and (c) set of tools and diagnostic equipment, to ensure that the tools and diagnostic equipment meets the Applicable Standards.

6.10.2 Following inspection of each Batch of Goods, the Independent Engineer shall either:

6.10.2.1 issue certificate of compliance in respect of the entire Batch of Goods delivered, verifying that each of the Goods is in compliance with the requirements or standards prescribed under this Agreement including as specified under Section 6.10.1 (the **Certificate of Compliance**); or

6.10.2.2 issue certificate of rejection in respect of the entire Batch of Goods delivered, if the Independent Engineer determines (along with providing the reasons for rejection) that any of the Goods in the relevant Batch of Goods is found to have any Defect or Deficiencies (the **Defective Goods**) (the **Certificate of Rejection**).

6.10.3 In the event of issuance of a Certificate of Rejection, the Concessionaire shall remedy, replace, modify or make good any Defect or Deficiencies in the Defective Goods within fourteen (14) Days (or such other number of Days as are agreed between the Parties). Thereafter, the inspection procedure set out in this Section 6.10 (*Inspection and Issuance of Certificate of Compliance*) shall be repeated for the Defective Goods and the Certificate of Compliance shall be issued once all Goods in a Batch of Goods are accepted in accordance with Section 6.10.2.1.

6.10.4 Any Defect or Deficiencies in the Defective Goods shall be remedied by the Concessionaire, at its sole cost and risk, without any extension for delay in achieving: (a) the Delivery Date on or before the corresponding Scheduled Delivery Date; and (b) the Delivery Completion Date on or before the Scheduled Delivery Completion Date.

6.11 **TRANSPORT OF THE GOODS**

6.11.1 The Concessionaire shall give the GoS Parties and the Independent Engineer not less than

fourteen (14) Days' notice of the date on which the Goods will be exported to Pakistan.

6.11.2 The Concessionaire shall be responsible for packing, loading and transporting all Goods and other things required to comply with the Supply Obligations.

6.11.3 The Goods shall be delivered by the Concessionaire to the Delivery Point.

6.12 **SCHEDULE OF DELIVERY AND SCHEDULED COMMENCEMENT DATE**

6.12.1 The Concessionaire shall ensure that:

6.12.1.1 the delivery of the Goods is in accordance with the Schedule of Delivery;

6.12.1.2 the First Batch of Goods are delivered on or before the First Scheduled Delivery Date; and

6.12.1.3 the Second Batch of Goods are delivered on or before the Second Scheduled Delivery Date.

6.13 **CARE AND SUPPLY OF SUPPLY DOCUMENTS**

6.13.1 Each of the Supply Documents shall be in the custody and care of the Concessionaire. Unless otherwise stated in this Agreement, the Concessionaire shall supply to the GoS Parties and the Independent Engineer six (6) copies of each of the Supply Documents within five (5) Days of the Approved Final E-Bus Design.

6.13.2 The Concessionaire shall deliver to the GoS Parties and the Independent Engineer a copy of all publications referenced in **SCHEDULE A (Technical Specifications)** and the Supply Documents and shall maintain other communications given under this Agreement.

6.13.3 If a Party becomes aware of an error or defect of a technical nature in a document which was prepared for use under this Agreement, the Party shall promptly give notice to the other Party of such error or defect.

6.14 **SUPPLY DOCUMENTS**

6.14.1 The Supply Documents shall comprise the technical documents specified in **SCHEDULE A (Technical Specifications)**, documents required to satisfy all regulatory Approvals, and Applicable Standards.

6.14.2 The Concessionaire shall prepare the Supply Documents (including any other documents necessary to instruct the Concessionaire's Personnel), in English and in sufficient detail to satisfy the requirements of the Project.

6.14.3 If **SCHEDULE A (Technical Specifications)** describes the Supply Documents which are to be submitted to the GoS Parties and/or the Independent Engineer for review, they shall be submitted accordingly, together with a notice as described below. In the following provisions of this Section: (a) **review period** means the period required by the GoS Parties and/or the Independent Engineer for review; and (b) **Supply Documents** exclude any documents which are specified as not being required to be submitted for review.

6.14.4 Unless otherwise stated in this Agreement or **SCHEDULE A (Technical Specifications)**, each review period shall not exceed twenty (20) Days, calculated from the date on which the GoS Parties and/or the Independent Engineer receives the Supply Documents and the Concessionaire's notice. This notice shall state that the Supply Document is considered ready, both for review in accordance with this Section and for use. The notice shall also state that the Supply Document complies with this Agreement, or the extent to which it does not comply.

6.14.5 The GoS Parties and/or the Independent Engineer may, within the review period, give notice to the Concessionaire that a Supply Document fails (to the extent stated) to comply with this Agreement. If a Supply Document so fails to comply, it shall be rectified, resubmitted in a complete form as per the requirements of the GoS Parties and/or the Independent Engineer (as applicable) and reviewed in accordance with this Section, at the Concessionaire's cost. In case of any resubmission, the review by the GoS Parties and/or the Independent Engineer shall be completed within twenty (20) Days and thereafter all reviews of any subsequent resubmissions shall be completed by the GoS Parties and/or the Independent Engineer within fifteen (15) Days.

6.14.6 For each part of the Supply, and except to the extent that the Parties otherwise agree:

6.14.6.1 execution of such part of the Supply Obligations shall not commence prior to the expiry of the review periods for all the Supply Documents which are relevant to its execution;

6.14.6.2 execution of such part of the Supply Obligations shall be in accordance with these Supply Documents, as submitted for review; and

6.14.6.3 if the Concessionaire wishes to modify any document which has previously been submitted for review, the Concessionaire shall immediately give notice to the GoS Parties and/or the Independent Engineer (as applicable). Thereafter, the Concessionaire shall submit revised documents to the GoS Parties and/or the Independent Engineer (as applicable) in accordance with the above procedure.

6.14.7 Any such agreement (under Section 6.14.6.3 above) or any review (under this Section or otherwise) shall not relieve the Concessionaire from any obligation or responsibility.

6.15 **TECHNICAL STANDARDS AND REGULATIONS**

6.15.1 The Supply Documents, the execution and the completion of the Supply Obligations shall comply with and be in accordance with Applicable Standards, applicable laws from the country of origin of the Goods, the Approvals and other standards specified in **SCHEDULE A (Technical Specifications)**, applicable to the Supply Obligations, or defined by the Laws.

6.16 **ERRORS IN SUPPLY DOCUMENTS**

6.16.1 If errors, omissions, ambiguities, inconsistencies, inadequacies or other defects are found in the Supply Documents, then the Supply Documents and the Supply Obligations shall be corrected at the Concessionaire's cost, notwithstanding any consent or approval previously granted under this Agreement.

6.17 **GoS PARTIES' USE OF SUPPLY DOCUMENTS**

- 6.17.1 As between the Parties, the Concessionaire shall retain the copyright and other intellectual property rights in the Supply Documents made by (or on behalf of) the Concessionaire.
- 6.17.2 The Concessionaire shall ensure that the Supplier grants a non-terminable transferable non-exclusive royalty-free licence in favour of the GoS Parties to use the Supplier's technology and know-how (including the use of the Goods) to copy, use and communicate the Supply Documents, including making and using modifications of them. This licence shall:
- 6.17.2.1 apply throughout the actual or intended working life (whichever is longer) of the Goods and authorize the GoS Parties, as applicable, rights to use relevant patents, licenses and all such other similar rights which are required for operating, completing, maintaining, altering, adjusting, financing and repairing the relevant parts of the Buses;
- 6.17.2.2 entitle any person in proper possession of the Goods to copy, use and communicate the Supply Documents for the purposes of operating, maintaining, altering, adjusting and repairing the Buses;
- 6.17.2.3 in the case of Supply Documents which are in the form of computer programs and other software, permit their use on any computer and other places as envisaged by this Agreement, including replacements of any computers supplied by the Concessionaire; and
- 6.17.2.4 continue to be in full force and effect notwithstanding cancellation or termination of this Agreement for whatever reason; provided, that in case of early termination of this Agreement the subscription fees for the relevant software licenses for remaining useful life of Buses shall be payable by the GoS Parties to the Supplier.

6.18 **CONCESSIONAIRE'S USE OF GoS PARTIES' DOCUMENTS**

- 6.18.1 As between the Parties, the GoS Parties shall retain the copyright and other intellectual property rights in **SCHEDULE A (*Technical Specifications*)** and other documents made by (or on behalf of) the GoS Parties. The Concessionaire may, at its cost, copy, use, and obtain communication of these documents for the purposes of this Agreement.
- 6.18.2 Such documents referred to in the preceding clause shall not, without the GoS Parties' consent, be copied, used or communicated to a third-party by the Concessionaire, except as necessary for the purposes of this Agreement.

6.19 **CONCESSIONAIRE'S CARE OF THE GOODS**

- 6.19.1 The Concessionaire shall take full responsibility for the care of the Goods throughout the Concession Period.
- 6.19.2 If there is any loss or damage to the Goods or the Supplier's Documents during the period when the Concessionaire is responsible for their care, the Concessionaire shall rectify the loss or damage at the Concessionaire's risk and cost, so that the Goods and Supplier Documents conform with the requirements of this Agreement.

6.20 **CONSTRUCTION WORKS**

6.20.1 The Concessionaire shall undertake the Construction Works in accordance with the parameters set out in **SCHEDULE A (*Technical Specifications*)** and **SCHEDULE E (*Testing*)** such that they are:

6.20.1.1 in compliance with the Applicable Standards;

6.20.1.2 free from all defects in design, materials, and workmanship; and

6.20.1.3 safe, reliable and Fit for Purpose.

6.20.2 The Concessionaire shall commence the Development Activities (First Segment) on the Commencement Date and hereby undertakes to perform and complete the same no later than the Scheduled COD (First Segment) and the Development Activities (Second Segment) on the Commencement Date and hereby undertakes to perform and complete the same no later than the Scheduled COD (Second Segment).

6.20.3 The Concessionaire shall rectify any Defects or Deficiencies in the Construction Works, including any Defects or Deficiencies identified by the Independent Engineer or SMTA and shall bear all costs of remedying such Defects or Deficiencies and retesting the relevant part of the Construction Works and shall not be entitled to any extension of time or additional costs for remedying such defects or deficiencies or for retesting the relevant part of the Construction Works.

6.20.4 The Concessionaire shall ensure that an adequate number of suitably skilled and experienced contractors, architects, workmen and other personnel are engaged to undertake the Project. The Concessionaire shall be solely responsible for the work performed by any staff and labour engaged by it to execute the Project and for payment of all applicable labour charges, fees, and cess payable in accordance with the Legal Requirements (including labour welfare legislations). The Concessionaire shall ensure that its Contractors provide all necessary amenities and welfare facilities for the staff and labour engaged by them at the Project Site and comply with all applicable labour Laws. The Concessionaire shall indemnify and hold harmless the GoS Parties from and against all claims, liabilities, expenses, costs and losses suffered or incurred by each of the GoS Parties due to the Concessionaire's or any Contractor's failure to comply with any Legal Requirements (including labour welfare legislations).

6.20.5 The Independent Experts and SMTA (and its representatives) shall have the right, at all times, to attend and be present at the Project Site and to observe the progress of the Construction Works.

6.21 **DRAWINGS, TEST RESULTS, DOCUMENTATION**

6.21.1 The Concessionaire shall obtain and maintain at the Project Site in an orderly manner and in accordance with the Operating and Maintenance Procedures and Good International Industry Practices, complete and up to date copies of all:

- 6.21.1.1 operation and maintenance manuals and other technical documentation (including electronic files) for all items of equipment incorporated into the Construction Works as identified in **SCHEDULE A (*Technical Specifications*)**;
- 6.21.1.2 test results (including electronic files) for tests performed on the Construction Works in accordance with:
 - (a) this Agreement; and
 - (b) the Construction Contract,
- 6.21.1.3 as-built drawings (including electronic files) for the Construction Works, including for the civil and architectural works; and
- 6.21.1.4 detailed technical documents (including electronic files) related to the design, engineering, construction, operation and maintenance of the E-Buses Assets (other than the Buses).

6.22 **CHANGE IN SCOPE**

- 6.22.1 Any Party, following the Effective Date, may propose a Change in Scope; provided, that neither Party shall propose a Change in Scope which would, if implemented:
 - 6.22.1.1 materially and adversely affect the health and safety of any person;
 - 6.22.1.2 infringe any Legal Requirement;
 - 6.22.1.3 be a departure from Good International Industry Practices;
 - 6.22.1.4 cause any Approval to be revoked or become unobtainable;
 - 6.22.1.5 require a new Approval which will not be obtainable by the Concessionaire despite it using all reasonable endeavours; or
 - 6.22.1.6 materially affect the Project Activities in a manner that cannot be compensated for under this Agreement.
- 6.22.2 Within fifteen (15) Days of receipt of a request for Change in Scope from the GoS Parties, the Concessionaire shall submit a proposal to the GoS Parties and the Independent Experts setting out in sufficient detail the implications of the proposed Change in Scope, including any implications on the Implementation Schedule and the Scheduled COD (First Segment) and/or the Scheduled COD (Second Segment), any additional costs, including any increase in the financing under the Financing Documents incurred in undertaking the Change in Scope, or any Savings resulting from the Change in Scope.
- 6.22.3 Based on their review of the proposal submitted by the Concessionaire, the GoS Parties may, at their sole discretion: (a) accept the proposal and the corresponding adjustment to the Implementation Schedule and/or the additional costs or reduction in the costs for undertaking the Change in Scope; (b) provide comments on the proposal seeking amendments and/or justification for the implications put forth by the Concessionaire; or (c) reject the proposal submitted by the Concessionaire and withdraw the proposed Change

in Scope, within fifteen (15) Days from the date of receipt of the Concessionaire's proposal under Section 6.22.2.

- 6.22.4 To the extent the GoS Parties or the Independent Experts seek amendments and/or justification in the proposal submitted by the Concessionaire, the Concessionaire shall incorporate or address, in writing, such comments and submit a revised proposal.
- 6.22.5 On approval of the proposal or the revised proposal (as applicable), by the GoS Parties, the GoS Parties shall issue a Change in Scope Order and the Concessionaire shall proceed with the Change in Scope in accordance with the Change in Scope Order.
- 6.22.6 If the Parties are unable to agree on the implications of a Change in Scope proposed by the GoS Parties, which in the GoS Parties' view is necessary or desirable for the Project, as determined by the Independent Experts, the GoS Parties shall have the right to require the Concessionaire and the Concessionaire shall be under an obligation to carry out the proposed Change in Scope at the cost determined by the Independent Experts. Any Dispute on the terms of the Change in Scope (including the method of payment and funding or application of Savings or reductions) will be resolved in accordance with Article 27 (*Governing Law and Dispute Resolution*).
- 6.22.7 On implementation of a Change in Scope Order, the Concessionaire shall be entitled to the agreed adjustment to the Implementation Schedule and the Scheduled COD (First Segment) and/or the Scheduled COD (Second Segment), payment of additional amounts, and/or any adjustment to the permissible Financing Due, if any, set out in the Change in Scope Order. The economic benefit of any reduction or Savings in the cost arising from a Change in Scope shall be shared by the Commercial Parties in the ratio and manner agreed by the Commercial Parties.
- 6.22.8 The method of payment for and funding of any additional costs that become payable by the GoS or the application of reduction or Savings in the costs, in relation to a Change in Scope Order, shall be agreed by the Commercial Parties and included in the Change in Scope Order.
- 6.22.9 If, after the Effective Date, the Concessionaire wishes to effect any Change in Scope, the Concessionaire shall obtain the prior written approval of the GoS Parties, such approval not to be unreasonably withheld or delayed. On approval by the GoS Parties, the GoS Parties shall issue a Change in Scope Order and the Concessionaire shall proceed with the Change in Scope in accordance with the Change in Scope Order. Any such change will be affected at the Concessionaire's own risk and cost.
- 6.22.10 Notwithstanding anything to the contrary in this Section 6.22 (*Change in Scope*), the Concessionaire shall be bound to implement any Change in Scope that is necessitated by a Change in Law and any consequent adjustment to the Implementation Schedule, and Relief Costs, Loss of Revenue and/or Savings shall be determined in accordance with Article 20 (*Relief Costs, Loss of Revenue or Savings*).
- 6.22.11 No Change in Scope shall invalidate this Agreement.

7. IMPLEMENTATION SCHEDULE AND DELAYS

7.1 COMPLIANCE WITH IMPLEMENTATION SCHEDULE

The Concessionaire shall achieve the timely implementation of the Project in accordance with the Implementation Schedule and the Schedule of Delivery. The Concessionaire shall promptly inform the Independent Experts and each of the GoS Parties of any actual or anticipated material deviations from the dates stipulated in the Implementation Schedule. Without prejudice to the Parties' rights and obligations under Sections 7.2 (*Adjustment of Implementation Schedule*), 7.3 (*Liquidated Damages (Delay)*) or 7.4 (*Liquidated Damages (Abandonment)*) (as applicable), the Concessionaire shall provide the Independent Experts and each GoS Party with a remedial programme setting out the actions to be taken by the Concessionaire to mitigate the adverse effect of any such deviation on its ability to undertake the Project in accordance with the Implementation Schedule.

7.2 ADJUSTMENT OF IMPLEMENTATION SCHEDULE

- 7.2.1 If an Intervening Event causes a delay that has, or is reasonably likely to have, the effect of delaying the achievement of the Commencement Date by the Scheduled Commencement Date, the COD (First Segment) by the Scheduled COD (First Segment) and/or the COD (Second Segment) by the Scheduled COD (Second Segment) (as applicable), then, subject to Section 7.2.2, the Scheduled Commencement Date, the Scheduled COD (First Segment) and/or the Scheduled COD (Second Segment) (as applicable) and the Implementation Schedule shall be adjusted equitably by the Independent Engineer to take into account the ability of the Concessionaire to re-schedule its activities to minimise the delay and the effect of such Intervening Event on the ability of the Concessionaire to achieve the relevant milestone by the respective scheduled date; provided, that such scheduled date shall not be extended to the extent that such delay would have nevertheless been experienced had such Intervening Event not occurred.
- 7.2.2 The Concessionaire must notify the Independent Experts and the GoS Parties in writing promptly (and in any event within fourteen (14) Days) after becoming aware of the occurrence of an Intervening Event, and together with such notice or as soon as possible (and in any event within fourteen (14) Days) following such notice), the Concessionaire shall provide full details of the Intervening Event and its consequences including sufficient details to confirm the existence of an Intervening Event and its impact on the Scheduled Commencement Date or the Scheduled COD (First Segment) and/or the Scheduled COD (Second Segment) (as applicable) and the Implementation Schedule. As soon as practicable (and in any event within fourteen (14) Days after receiving the Concessionaire's detailed information and justification), the Independent Experts shall confirm whether (and to what extent) they agree to adjust the Scheduled Commencement Date or the Scheduled COD (First Segment) and/or the Scheduled COD (Second Segment) (as applicable) and the Implementation Schedule.
- 7.2.3 If the Concessionaire does not deliver the notices as required by Section 7.2.2 in accordance with the terms thereof, the Concessionaire shall not be entitled to invoke the benefits of Section 7.2.1 or deemed commissioning under Section 8.4 (*Deemed COD*) in respect of the relevant Intervening Event.

7.2.4 If a Force Majeure Event causes a delay that has, or is reasonably likely to have, the effect of delaying:

7.2.4.1 the achievement of the Commencement Date, then the provisions of Section 3.4 (*Delay in Achieving the Commencement Date*) shall apply; or

7.2.4.2 the achievement of the COD (First Segment) and/or the COD (Second Segment), then the provisions of Section 19.7 (*Effects of a Force Majeure Event During Development Period*) shall apply.

7.3 **LIQUIDATED DAMAGES (DELAY)**

7.3.1 The Concessionaire acknowledges that the GoS Parties will each suffer actual damages if, for any reason not otherwise excused under this Agreement, the Concessionaire fails to achieve the COD (First Segment) by the Scheduled COD (First Segment) and/or the COD (Second Segment) by the Scheduled COD (Second Segment). In that event, and without prejudice to the GoS Parties' rights under Article 21 (*Termination*), the Concessionaire shall pay liquidated damages to the GoS for each Day (or any part thereof) of delay at a rate of PKR 100¹⁹ per Day (the **Liquidated Damages (Delay)**), commencing from the Scheduled COD (First Segment) and/or Scheduled COD (Second Segment) until the earlier of:

7.3.1.1 the COD (First Segment) and/or the COD (Second Segment); and

7.3.1.2 the Long Stop Date (First Segment) and/or the Long Stop Date (Second Segment).

7.3.2 Any Liquidated Damages (Delay) payable pursuant to this Section 7.3 (*Liquidated Damages (Delay)*) shall be paid by the Concessionaire within thirty (30) Days of the date of the Concessionaire's receipt of an invoice from GoS setting out the amount of Liquidated Damages (Delay) which are then due and payable by the Concessionaire. If the Concessionaire fails to pay such Liquidated Damages (Delay) when due, the GoS shall be entitled to claim such amounts under the Development Period Performance Security, plus commission at the Late Payment Rate, accruing from the due date of such payment until the GoS is actually paid such amounts. To the extent that the Concessionaire's liability for Liquidated Damages (Delay) under Section 7.3.1 exceeds the then current balance of the Development Period Performance Security, the GoS shall be entitled to take steps to recover such amounts (plus any applicable commission) as a debt due from the Concessionaire to GoS (including by way of set-off against any amounts due to the Concessionaire from GoS or SMTA) under any GoS Project Document.

7.3.3 In addition, if the Concessionaire fails to achieve the COD (First Segment) and/or COD (Second Segment) by the Long Stop Date (First Segment) and/or the Long Stop Date (Second Segment), respectively, the GoS shall be entitled to encash the Development Period Performance Security up to the face amount.

7.3.4 The Parties agree that:

¹⁹ This amount shall be calculated as the value of the Development Period Performance Security in PKR divided by one hundred and twenty (120).

- 7.3.4.1 the Liquidated Damages (Delay) payable pursuant to this Section 7.3 (*Liquidated Damages (Delay)*) represent the actual losses, liabilities, damages, costs, charges or expenses that the GoS Parties will suffer as a result of the failure of the Concessionaire to achieve the COD (First Segment) by the Scheduled COD (First Segment) and/or the COD (Second Segment) by the Scheduled COD (Second Segment);
- 7.3.4.2 there is, in any event, a commercial justification and legitimate interest in imposing such Liquidated Damages (Delay) as a payment for the failure of the Concessionaire to achieve the COD (First Segment) by the Scheduled COD (First Segment) and/or the COD (Second Segment) by the Scheduled COD (Second Segment) which would not be satisfied by a right to recover damages on an unliquidated basis for such default; and
- 7.3.4.3 the payment or deduction of Liquidated Damages (Delay) payable pursuant to this Section 7.3 (*Liquidated Damages (Delay)*) shall not relieve the Concessionaire from its obligations to complete the Development Activities, or from any of its other duties, obligations, or responsibilities under this Agreement. The Concessionaire shall use and continue to use its best endeavours to avoid or reduce further delay in completing the Development Activities.

7.4 **LIQUIDATED DAMAGES (ABANDONMENT)**

- 7.4.1 If Abandonment occurs, in addition to any rights or remedies that the GoS may have pursuant to Article 21 (*Termination*), the Concessionaire shall pay to the GoS as liquidated damages the following amount:
 - 7.4.1.1 in case of Abandonment prior to the COD (First Segment), an amount equal to the face amount of the Development Period Performance Security as at the date Abandonment occurs, after any amounts paid or payable under Section 7.3 (*Liquidated Damages for Delay*) have been paid; and
 - 7.4.1.2 in case of Abandonment on or following the COD (First Segment), an amount equal to the face amount of the O&M Performance Security as at the date Abandonment occurs,

(each, the **Liquidated Damages (Abandonment)**).
- 7.4.2 Any liquidated damages payable pursuant to this Section 7.4 (*Liquidated Damages (Abandonment)*) shall be paid by the Concessionaire within thirty (30) Days of the date of the Concessionaire's receipt of an invoice from the GoS setting out the amount of Liquidated Damages (Abandonment) which are then due and payable by the Concessionaire. If the Concessionaire fails to pay such Liquidated Damages (Abandonment) when due, the GoS shall be entitled to claim such amounts under the Performance Securities or to take steps to recover such amounts as a debt due from the Concessionaire to the GoS, plus commission at the Late Payment Rate, accruing from the due date of such payment until the GoS is actually paid such amounts. To the extent that the Concessionaire's liability for Liquidated Damages (Abandonment) under Section 7.4.1 exceeds the face amount of the Performance Securities, at the date of issue of a demand thereunder, the GoS shall be entitled to take steps to recover such amounts (plus any applicable commission) as a debt due from the Concessionaire to GoS (including by way of set-off against any amounts due to the Concessionaire from GoS or SMTA) under any GoS Project Document.

7.4.3 The Parties agree that:

7.4.3.1 the Liquidated Damages (Abandonment) payable pursuant to this Section 7.4 (*Liquidated Damages (Abandonment)*) represent the actual losses, liabilities, damages, costs, charges or expenses that the GoS Parties will suffer as a result of Abandonment by the Concessionaire; and

7.4.3.2 there is in any event a commercial justification and legitimate interest in imposing such Liquidated Damages (Abandonment) as a payment for Abandonment by the Concessionaire which would not be satisfied by a right to recover damages on an unliquidated basis for such default.

7.5 **GENERAL DAMAGES**

7.5.1 If either of Sections 7.3.1 or 7.4.1 is found for any reason to be void, invalid or otherwise inoperative so as to disentitle GoS from claiming liquidated damages under such Section(s), the GoS is entitled to claim against the Concessionaire for general damages at law for the Concessionaire's failure to achieve the Scheduled COD (First Segment) and/or the COD (Second Segment) by the Scheduled COD (Second Segment) or for Abandonment, subject to the limitation that such damages must not exceed the amounts set out in Section 7.3.1 for any Day of delay or Section 7.4.1 for Abandonment (as applicable).

8. COMMERCIAL OPERATIONS

8.1 TEST PROCEDURES

- 8.1.1 The Concessionaire shall be responsible for the development and implementation of detailed testing procedures for each test during the mobilisation, construction, inspection, start-up and commissioning of the E-Buses Assets (including the Supply and the Construction Works) in accordance with **SCHEDULE E (*Testing*)** (the **Test Procedures**) and shall notify the Independent Experts and each GoS Party in advance of all such testing and carry out all Test Procedures in accordance with **SCHEDULE E (*Testing*)**.
- 8.1.2 The Independent Experts and designees of each GoS Party shall be entitled to be present at any such testing as provided in **SCHEDULE E (*Testing*)**.

8.2 NOT USED

8.3 COD TESTS

- 8.3.1 The commercial operations date for (a) the Development Activities (First Segment) (the **COD (First Segment)**), and (b) the Development Activities (Second Segment) (the **COD (Second Segment)**) shall occur on the Day following the date on which the Independent Engineer issues to the Concessionaire the COD (First Segment) Certificate and the COD (Second Segment) Certificate, respectively, in accordance with the procedure set out in **SCHEDULE E (*Testing*)** and subject to fulfilment of the applicable requirements set out under Article 6 (*Supply and Construction Works*).

8.4 DEEMED COD

- 8.4.1 If, due to a Permitted Event (excluding the NPFME) (each a **Deemed Commissioning Event**), the Concessionaire is unable to conduct or conclude the COD (First Segment) Tests and/or the COD (Second Segment) Tests on the date selected therefor in accordance with **SCHEDULE E (*Testing*)**, then provided that the Concessionaire shall have made all reasonable efforts, as determined by the Independent Engineer, to prevent and/or mitigate the effect of such Deemed Commissioning Event, on and from the date on which the Concessionaire would have been able to achieve the COD (First Segment) and/or the COD (Second Segment) (as applicable) but for such event until the date the COD (First Segment) and/or the COD (Second Segment) (as applicable) is actually achieved:
- 8.4.1.1 subject to Section 8.4.2, the COD (First Segment) and/or the COD (Second Segment) (as applicable) shall be deemed to have been achieved; and
- 8.4.1.2 the E-Buses Assets shall be deemed to be providing the Guaranteed Annual Mileage (subject to Deduction for Liquidated Damages (KPIs) determined by the Independent Experts) and GoS shall compensate the Concessionaire for the consideration set out in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)** for such deemed Guaranteed Annual Mileage.
- 8.4.2 If the COD (First Segment) and/or the COD (Second Segment) (as applicable) shall have been deemed to be achieved pursuant to Section 8.4.1, and thereafter:

8.4.2.1 when the Test Procedures are conducted in accordance with **SCHEDULE E (*Testing*)**, the E-Buses Assets does not attain the minimum criteria required under **SCHEDULE E (*Testing*)** for the achievement of the COD (First Segment) and/or the COD (Second Segment) (as applicable), then:

- (a) the E-Buses Assets shall cease to be deemed commissioned and (if the Scheduled COD (First Segment) and/or the Scheduled COD (Second Segment) has passed) the Concessionaire shall be in breach of its obligation to achieve the COD (First Segment) by the Scheduled COD (First Segment) and/or the COD (Second Segment) by the Scheduled COD (Second Segment) (as applicable) and, if the Long Stop Date (First Segment) and/or the Long Stop Date (First Segment) has passed, Section 21.5.1 shall also apply;
- (b) the GoS shall have no further obligation to make payments under Section 8.4.1.2;
- (c) the Concessionaire shall be obliged to repay the GoS the Capital Cost Recovery Payments paid by GoS under Section 8.4.1.2 together with commission accrued thereon at the Late Payment Rate, and the GoS shall have the right to deduct such amounts from future payments to be made pursuant to **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)** in the immediately following Billing Period(s) until the full amount shall have been deducted, or recover such amounts from the Development Period Performance Security or the O&M Performance Security; and
- (d) the GoS shall have the right to pursue any other remedy available to it under this Agreement or under the Law.

8.4.3 The Parties shall undertake all reasonable measures to ensure that any COD (First Segment) Tests and/or COD (Second Segment) Tests that are delayed due to any of the circumstances described in Section 8.4.1 shall be undertaken as soon as possible after the circumstances that resulted in such delay are no longer in effect.

8.4.4 The Concessionaire shall not be entitled to the benefit of Section 8.4.1 where, and to the extent that a Deemed Commissioning Event, results (in whole or in part) from a delay or default by the Concessionaire or the Sponsors or is concurrent with a delay or default by the Concessionaire or the Sponsors of an obligation of the Concessionaire or the Sponsor under any Project Agreement.

9. ELECTRICITY AND OTHER UTILITIES

9.1 UTILITIES

- 9.1.1 The Concessionaire shall be responsible for procuring, at its risk and cost, all electricity and other utilities and any fuel required for (a) the Project Activities, and (b) the reinstatement of the Project Site in accordance with the Handover Conditions following the Final Expiry Date in accordance with Section 21.10 (*Transfer of the Project*).
- 9.1.2 Electricity required for the operation and maintenance of the relevant E-Buses Assets shall be procured from the Electricity Supplier. Electricity shall not be procured or generated from any other source, except in accordance with Section 9.4 (*Alternate Energy Solutions*).
- 9.1.3 During the Concession Period, the Concessionaire shall be responsible for securing all supplies of telecommunication and all waste disposal services required for the Project, either from its own resources or from the applicable authorities at published tariffs and in accordance with the standard terms and conditions of supply and pay for such supplies in accordance with such terms and conditions.
- 9.1.4 SMTA shall ensure relocation of existing utilities under or over the Project Site, which is required to be relocated for implementation of the Project, at its own risk and cost.

9.2 ACTUAL ELECTRICITY CONSUMPTION

- 9.2.1 The Concessionaire shall provide access to the Independent Engineer and SMTA from time to time to inspect the electricity meters installed to measure the supply of Electricity to the E-Buses Assets and to read or attend any reading of such meters. The Concessionaire shall supply details of all readings of such meters within two (2) Business Days after such readings are carried out.
- 9.2.2 The Concessionaire shall procure that the Independent Engineer and SMTA are notified of and invited to attend any reading of the electricity meters.
- 9.2.3 The Concessionaire shall take all reasonable commercial measures to ensure that the Electricity supplied to the E-Buses Assets is accurately measured and shall, if so, required by the Independent Engineer or SMTA, exercise any rights in order to achieve the foregoing.

9.3 ELECTRICITY PRICE

The Concessionaire shall notify the Independent Experts and each GoS Party as soon as possible (and in any event within seven (7) Days) after it becomes aware of any change in the Electricity Price and shall provide the Independent Experts and each GoS Party with full details of the change and the dates when it became or will become effective.

9.4 ALTERNATE ENERGY SOLUTIONS

- 9.4.1 In order to procure a more cost-effective Electricity solution, either Party may propose a change in the Electricity Supplier at any time during the Concession Period. Any proposal

by the Concessionaire to change the Electricity Supplier shall be proposed and approved in accordance with the mechanism set out in Article 26 (*Technological Improvements*), which shall apply *mutatis mutandis* for purposes of this Section 9.4 (*Alternate Energy Solutions*).

- 9.4.2 Any Savings from change in the Electricity Supplier shall be shared between the Commercial Parties in such manner as mutually agreed between the Parties (in consultation with the Independent Experts).

10. OPERATION AND MAINTENANCE

10.1 O&M OBLIGATIONS

The Concessionaire shall:

- 10.1.1 ensure that the E-Buses Assets are, at all times, capable of providing the Guaranteed Annual Mileage;
- 10.1.2 carry out all O&M Activities in a manner consistent with the Applicable Standards;
- 10.1.3 employ in and at the E-Buses Assets all safety devices and safety practices required by the applicable Legal Requirements, the requirements of **SCHEDULE A (*Technical Specifications*)**, all Insurance Policies and Good International Industry Practices;
- 10.1.4 undertake the Project Activities in accordance with the parameters set out in **SCHEDULE A (*Technical Specifications*)** and **SCHEDULE E (*Testing*)** such that the E-Buses Assets is:
 - 10.1.4.1 free from all Defects or Deficiencies in design, materials, and workmanship;
 - 10.1.4.2 safe, reliable and Fit for Purpose; and
 - 10.1.4.3 capable of providing the Guaranteed Annual Mileage;
- 10.1.5 as soon as reasonably practicable, inform the GoS Parties of any instances of fire, explosion or any other like event at the Project Site;
- 10.1.6 to the extent consistent with Good International Industry Practice, keep accurate and up to date records of any accidents or other occurrences at the Project Site that result in injury to persons or damage to property for a minimum period of ten (10) years from the occurrence of such event, and shall provide to the Independent Engineer and SMTA reasonable access to such records, subject to requirements of confidentiality;
- 10.1.7 ensure that the Concessionaire's Personnel are on duty at the E-Buses Assets at all times (twenty-four (24) hours a Day and seven (7) Days a week) during the Concession Period;
- 10.1.8 promptly provide SMTA with accurate Unavailability Notice(s), by 11:00 am on the Day prior to Planned Downtime or Unplanned Downtime, and issue superseding Unavailability Notice(s) as soon as it is known that a previously issued Unavailability Notice(s) must be updated; and
- 10.1.9 ensure that the debt-to-equity ratio of the Concessionaire (as determined on the basis of Accounting Principles and confirmed by the Independent Auditor) shall not exceed 70:30.

10.2 COORDINATION

The Concessionaire shall:

- 10.2.1 promptly inform the Independent Experts and each GoS Party of any material issues with the E-Buses Assets;
- 10.2.2 where required by the Independent Experts and SMTA, promptly and in any event within ten (10) Days after being so requested, submit a remediation programme setting out the actions to be taken by the Concessionaire to mitigate the adverse effect of any material issues notified in accordance with Section 10.2.1 and abide by such remediation programme once instructed by the Independent Experts and SMTA; provided, that the submission of any remediation programme and instructions issued by the Independent Experts and SMTA shall in no way relieve the Concessionaire of any liability that would have otherwise accrued;
- 10.2.3 maintain operating communications between the E-Buses Assets and SMTA in accordance with the Operating and Maintenance Procedures; and
- 10.2.4 keep a daily operations log for the E-Buses Assets, which shall include information known to it on the E-Buses Assets, and any Downtime and any significant events related to the foregoing. The Independent Engineer and SMTA shall have the right to review logs not in their possession at all reasonable times and upon reasonable notice to the Concessionaire.
- 10.3 **OPERATING AND MAINTENANCE PROCEDURES**
- 10.3.1 The Concessionaire shall, at its own costs and expense, develop written operating and maintenance procedures for the E-Buses Assets in accordance with this Section 10.3 (*Operating and Maintenance Procedures*) (the **Operating and Maintenance Procedures**).
- 10.3.2 The Operating and Maintenance Procedures shall:
- 10.3.2.1 be based on the design parameters of the E-Buses Assets and other requirements specified in **SCHEDULE A (*Technical Specifications*)**;
- 10.3.2.2 incorporate operating and maintenance procedures specified or recommended by the E-Buses Assets equipment suppliers and manufacturers in their operators' manuals;
- 10.3.2.3 be consistent with Good International Industry Practice; and
- 10.3.2.4 provide comprehensive procedures for all operational interfaces between (a) SMTA, the Electricity Supplier; and (b) the Concessionaire, including in relation to the delivery of Electricity prior and subsequent to the COD (First Segment).
- 10.3.3 The Concessionaire shall submit a draft of the Operating and Maintenance Procedures to the Independent Engineer and SMTA no later than sixty (60) Days prior to the Scheduled Commencement Date and no later than one hundred and twenty (120) Days prior to the Scheduled COD (First Segment).
- 10.3.4 Within thirty (30) Days after its receipt thereof, the Independent Engineer and SMTA shall have the right to provide comments on the draft Operating and Maintenance Procedures.

- 10.3.5 If, within such thirty (30) Day period, the Independent Engineer and SMTA do not provide any comments, the draft proposed by the Concessionaire shall become the Operating and Maintenance Procedures.
- 10.3.6 If the Independent Engineer or SMTA provide comments on the draft Operating and Maintenance Procedures within such thirty (30) Day period, the Concessionaire shall, within thirty (30) Days of its receipt of such comments, either incorporate the requested changes to the draft Operating and Maintenance Procedures or request a meeting with the Independent Engineer or SMTA to discuss any outstanding requested changes. Any Dispute over the requested changes still not resolved within ten (10) Days following any such meeting shall be referred for resolution pursuant to Article 27 (*Governing Law and Dispute Resolution*).
- 10.3.7 The Concessionaire acknowledges and agrees that no review or approval or lack thereof by the Independent Engineer or SMTA of the Operating and Maintenance Procedures shall relieve the Concessionaire from any liability it would otherwise have under this Agreement, and that neither the Independent Engineer nor the GoS Parties nor any of their representatives shall be liable to the Concessionaire or any other person by reason of their review or approval of the Operating and Maintenance Procedures.

10.4 **SCHEDULED MAINTENANCE**

- 10.4.1 The Concessionaire shall undertake all scheduled E-Buses Assets maintenance in accordance with this Agreement, Good International Industry Practice, E&S Requirements, and in accordance with any relevant Approvals, applicable Legal Requirements, Accounting Principles, Operating and Maintenance Procedures, and the maintenance appendices (each, a **Maintenance Schedule**) developed pursuant to this Section 10.4 (*Scheduled Maintenance*).
- 10.4.2 The Concessionaire shall submit to the Independent Engineer and SMTA the proposed Maintenance Schedule for the E-Buses Assets at least forty-five (45) Days prior to:
- 10.4.2.1 the Scheduled Commencement Date, in respect of the first (1st) Contract Year; and
- 10.4.2.2 the commencement of each subsequent Contract Year, in respect of such Contract Year, in each case, setting out:
- (a) its Planned Downtime; and
 - (b) a forecast of the Availability on each Day in the forthcoming Contract Year.
- 10.4.3 The Concessionaire shall plan its Maintenance Schedule so as to minimize interruptions of the O&M Activities.
- 10.4.4 Within thirty (30) Days of receipt of the proposed Maintenance Schedule, the Independent Engineer and SMTA shall notify the Concessionaire whether the proposed Maintenance Schedule is acceptable.

10.4.5 If Independent Engineer and SMTA do not, within such thirty (30) Day period, accept the proposed Maintenance Schedule in whole or in part, the Independent Engineer and SMTA shall advise the Concessionaire of a period or periods when the maintenance can be rescheduled, provided that the Independent Engineer and SMTA shall seek to make such rescheduled period or periods as close as reasonably practicable to the Maintenance Schedule proposed by the Concessionaire and, provided further, that the rescheduled period or periods shall be of equal duration to the period or periods proposed by the Concessionaire. In the event that the Independent Engineer and SMTA fail to provide such advice within the time period stipulated in this Section 10.4 (*Scheduled Maintenance*), SMTA shall be deemed to have accepted the proposed Maintenance Schedule.

10.4.6 With respect to each Planned Downtime, the Concessionaire shall (in addition to the requirement to issue an Unavailability Notice pursuant to Section 10.1.9):

10.4.6.1 confirm ninety (90) Days; and

10.4.6.2 reconfirm thirty (30) Days,

prior to the planned date for such Downtime.

10.4.7 SMTA may, upon sixty (60) Days prior written notice, request the Concessionaire to re-schedule a Planned Downtime and the Concessionaire shall use its best efforts to accommodate such requested rescheduling. The Concessionaire shall notify SMTA within fifteen (15) Days of its receipt of a request for rescheduling of a Planned Downtime whether the Concessionaire is able to comply with such request.

10.4.8 If the Concessionaire is unable to comply with the request for rescheduling of a Planned Downtime, it shall provide SMTA with the reasons therefor and provide alternative periods in which the Planned Downtime may be rescheduled. In such event, SMTA shall advise the Concessionaire whether it would prefer that the Planned Downtime occur on the initial date or on a rescheduled date.

10.4.9 The Concessionaire shall, within thirty (30) Days of the end of each Planned Downtime, provide to SMTA a report detailing the activities carried out during the Planned Downtime and the results for any tests carried out during such Planned Downtime.

10.5 **MAINTENANCE DURING UNPLANNED DOWNTIME**

10.5.1 The Concessionaire, during any Unplanned Downtime, shall undertake E-Buses Assets maintenance in a manner consistent with this Agreement, Good International Industry Practices, E&S Requirements, and in accordance with any relevant Approvals, applicable Legal Requirements, Accounting Principles, and Operating and Maintenance Procedures.

10.5.2 The Concessionaire shall (in addition to the requirement to issue an Unavailability Notice pursuant to Section 10.1.9), promptly inform the Independent Engineer and SMTA of the need for any Unplanned Downtime as soon as it becomes aware thereof, detailing the reason for the Unplanned Downtime and each component of the E-Buses Assets that is affected, and submit to the Independent Engineer (with a copy to SMTA) a program detailing:

- 10.5.2.1 the start date and duration of the Unplanned Downtime; and
- 10.5.2.2 the activities, and tests (if any) to be carried out during the Unplanned Downtime (the **Unplanned Downtime Maintenance Program**).
- 10.5.3 The Independent Engineer, keeping in consideration the scheduled start date for the Unplanned Downtime, as soon as reasonably practicable:
- 10.5.3.1 shall notify the Concessionaire whether the Unplanned Downtime Maintenance Program is acceptable; or
- 10.5.3.2 may prescribe changes to the Unplanned Downtime Maintenance Program.
- 10.5.4 If the Independent Engineer prescribes any changes to the Unplanned Downtime Maintenance Program under Section 10.5.3.2, the Concessionaire shall be obligated to carry out the E-Buses Assets maintenance during the Unplanned Downtime in accordance with the changes prescribed.
- 10.5.5 In preparation of the Unplanned Downtime Maintenance Program and the execution of the maintenance works during the Unplanned Downtime, the Concessionaire shall endeavour to reduce the duration of the Unplanned Downtime and the costs associated with the maintenance works, to the extent possible, without adversely impacting the integrity of the maintenance works.
- 10.5.6 The Concessionaire shall, within thirty (30) Days of the end of each Unplanned Downtime, provide to SMTA a report detailing the activities carried out during the Unplanned Downtime and the results for any tests carried out during such Unplanned Downtime.

10.6 **KEY PERFORMANCE INDICATORS**

- 10.6.1 The Concessionaire hereby guarantees that it will comply with the Key Performance Indicators during the Operations Period.
- 10.6.2 The Key Performance Indicators may be reviewed, if required, periodically with the mutual consent of the Parties (in consultation with the Independent Engineer).
- 10.6.3 The performance by the Concessionaire of its obligations under the Agreement, including compliance with Key Performance Indicators, will be monitored, measured and evaluated by the Independent Engineer. Any discrepancies or non-compliances identified by the Independent Engineer, if any, will be reported to the Concessionaire for corrective action in accordance with Section 10.6.4.
- 10.6.4 In the event of any discrepancy or non-compliance with respect to the Key Performance Indicators, the Concessionaire will be required within five (5) Days or such additional time period as notified by the Independent Engineer, or immediately in case of matters identified as urgent by the Independent Engineer, to provide assurance, to the satisfaction of the Independent Engineer, that the Concessionaire: (a) is acting in compliance with the Key Performance Indicators (along with supporting evidence); or (b) shall take all necessary actions to cure any discrepancy or non-compliance with Key Performance

Indicators, to mitigate and prevent similar discrepancies or non-compliances arising in the future and at all times be compliant with the Key Performance Indicators.

- 10.6.5 Any corrective measures taken by the management of the Concessionaire in accordance with Section 10.6.4 will be immediately reported to the Independent Engineer. Thereafter, the Independent Engineer may in accordance with Section 10.6.4 undertake an audit to evaluate and report on status of achievement of Key Performance Indicators.
- 10.6.6 Notwithstanding anything contained in this Section 10.6 (*Key Performance Indicators*), the Concessionaire shall not be liable for any Liquidated Damages (KPIs) due in respect of the Key Performance Indicator during KPIs Exemption Period.

10.7 **LIQUIDATED DAMAGES (KPIs)**

- 10.7.1 If the Concessionaire fails to comply with the Key Performance Indicators, in addition to any rights or remedies that the GoS may have pursuant to Article 21 (*Termination*), the Concessionaire shall pay to the GoS as liquidated damages in an amount described and calculated in accordance with **SCHEDULE L (*KPIs (Performance)*)** (the **Liquidated Damages (KPIs)**).
- 10.7.2 Any Liquidated Damages (KPIs) payable pursuant to this Section 10.7 (*Liquidated Damages (KPIs)*) shall be paid by the Concessionaire within thirty (30) Days of the date of the Concessionaire's receipt of an invoice from the GoS setting out the amount of Liquidated Damages (KPIs) which are then due and payable by the Concessionaire. If the Concessionaire fails to pay such Liquidated Damages (KPIs) when due, the GoS shall be entitled to claim such amounts under the Performance Securities or to take steps to recover such amounts as a debt due from the Concessionaire to the GoS, plus commission at the Late Payment Rate, accruing from the due date of such payment until the GoS is actually paid such amounts. To the extent that the Concessionaire's liability for Liquidated Damages (KPIs) under Section 10.7.1 exceeds the face amount of the Performance Securities, at the date of issue of a demand thereunder, the GoS shall be entitled to take steps to recover such amounts (plus any applicable commission) as a debt due from the Concessionaire to GoS (including by way of set-off against any amounts due to the Concessionaire from GoS or SMTA) under any GoS Project Document.
- 10.7.3 The Parties agree that:
- 10.7.3.1 the Liquidated Damages (KPIs) payable pursuant to this Section 10.7 (*Liquidated Damages (KPIs)*) represent the actual losses, liabilities, damages, costs, charges or expenses that the GoS Parties will suffer as a result of Abandonment by the Concessionaire; and
- 10.7.3.2 there is in any event a commercial justification and legitimate interest in imposing such Liquidated Damages (KPIs) as a payment for failure to comply with KPIs by the Concessionaire which would not be satisfied by a right to recover damages on an unliquidated basis for such default.

10.8 **DISPATCH SCHEDULE AND HEADWAY TARGETS**

- 10.8.1 The Concessionaire shall propose to the Independent Engineer and SMTA: (a) the initial Dispatch Schedule and Headway Targets, no later than fourteen (14) Days prior to the COD (First Segment); (b) the subsequent Dispatch Schedule and Headway Targets, on a monthly basis no later than four (4) Days prior to the end of the month for which it is intended to be implemented; and (c) any change to the Dispatch Schedule and Headway Targets (the **Dispatch Schedule and Headway Targets Change** and together with (a) and (b) the **Dispatch Scheduled and Headway Target Documents**) no later than ten (10) Days prior to any Dispatch Schedule and Headway Target coming into effect.
- 10.8.2 Within five (5) Days after its receipt thereof, the Independent Engineer (in consultation with SMTA) shall have the right to provide comments on each Dispatch Scheduled and Headway Target Document.
- 10.8.3 If, within such five (5) Day period, the Independent Engineer and SMTA do not provide any comments, the draft proposed by the Concessionaire shall become the approved Dispatch Scheduled and Headway Target Document (the **Approved Dispatch Scheduled and Headway Target Document**).
- 10.8.4 If the Independent Engineer (in consultation with SMTA) provides comments on a draft Dispatch Scheduled and Headway Target Document within such five (5) Day period, the Concessionaire shall, within five (5) Days of its receipt of such comments, either incorporate the requested changes to the draft Dispatch Scheduled and Headway Target Document or request a meeting with the Independent Engineer and SMTA to discuss any outstanding requested changes. Any Dispute over the requested changes still not resolved within ten (10) Days following any such meeting shall be referred for resolution pursuant to Article 27 (*Governing Law and Dispute Resolution*).
- 10.8.5 The Concessionaire acknowledges and agrees that no review or approval or lack thereof by the Independent Engineer or SMTA of a Dispatch Scheduled and Headway Target Document shall relieve the Concessionaire from any liability it would otherwise have under this Agreement, and that neither the Independent Engineer nor the GoS Parties nor any of their representatives shall be liable to the Concessionaire or any other person by reason of their review or approval of the draft Dispatch Scheduled and Headway Target Document.
- 10.8.6 The Concessionaire shall operate the Buses in accordance with the Approved Dispatch Schedule and Headway Targets Documents.

10.9 **DISPATCH SCHEDULE**

- 10.9.1 The Concessionaire shall within two (2) Days of receipt of an Approved Dispatch Scheduled and Headway Target Document, prepare and submit to SMTA and the Independent Engineer, the details of the dispatch of specific Buses and O&M Personnel including Drivers assigned for the O&M Activities (the **Dispatch Schedule**). Thereafter, the O&M Activities and scheduling of the Buses by the Concessionaire shall correspond to the Dispatch Schedule.

10.9.2 The Independent Engineer (in consultation with SMTA) shall notify the Concessionaire, within two (2) Days of its receipt of the proposed Dispatch Schedule, whether it: (a) accepts such Dispatch Schedule; or (b) shall propose amendments to the same. In the event the Independent Engineer proposes amendments to the proposed Dispatch Schedule, the Concessionaire and the Independent Engineer shall meet immediately to discuss such amendments and to mutually agree on the same (provided however, any alteration in the in the Dispatch Schedule and Headway Targets or the Dispatch Schedule and Headway Targets Change (as applicable) shall only be made with the prior approval of the Independent Engineer). The Concessionaire and the Independent Engineer are required to complete the review process and finalise the Dispatch Schedule no later than five (5) Days prior to its coming into effect.

10.9.3 The Dispatch Schedule:

10.9.3.1 submitted by the Concessionaire to the Independent Engineer and approved by the Independent Engineer in terms of Section 10.9.2 without any amendments; or

10.9.3.2 submitted by the Concessionaire to the Independent Engineer, as amended by the amendments proposed by the Independent Engineer that are mutually agreed in accordance with Section 10.9.2;

shall be strictly complied with by the Concessionaire and the Concessionaire shall commence and proceed with the implementation of the Dispatch Schedule in accordance therewith.

10.10 **COMPLIANCE MONITORING**

10.10.1 SMTA and the Independent Engineer shall (through the Operations Control Centre) track performance of the Buses for compliance with the Dispatch Schedule and Approved Dispatch Schedule and Headway Targets Document.

10.11 **OPERATION AND MAINTENANCE OF THE E-BUSES ASSETS**

10.11.1 The Concessionaire shall ensure that: (a) the Bus Stations and Bus Depots are maintained at all times in a good, clean and orderly condition; and (b) all Planned Downtime and Unplanned Downtime is carried out in accordance with Applicable Standards.

10.11.2 The Concessionaire shall properly operate and maintain all Buses in accordance with the highest standards of care and prudence and the Operating and Maintenance Procedures. The Concessionaire shall cause the Buses to be operated only by qualified and experienced O&M Personnel. Further, the Concessionaire shall (as part of the O&M Activities) be responsible for: (a) timely execution of all repairs and provision of replacement parts for the Buses; (b) all scheduled overhauls of the Buses; and (c) maintenance of complete records of the O&M Activities carried out in relation to the Buses.

10.12 **ADDITIONAL BUSES**

10.12.1 If the GoS Parties deems it necessary to increase the Buses for the Project, for any reason whatsoever, the GoS Parties shall proceed in accordance with a Change in Scope for

procurement of such additional Buses (with similar specifications as set out in **SCHEDULE A (Technical Specifications)** except as may be agreed otherwise between the Parties). Subject to Section 6.22 (*Change in Scope*), the GoS Parties reserve the right to increase the quantity of Buses by one hundred and fifty (150) Buses to be operated and maintained on same terms and conditions (subject to any changes under Section 6.22 (*Change in Scope*)) as specified in this Agreement.

10.12.2 The Concessionaire shall, during the Operations Period, immediately notify the GoS Parties in writing of any Bus that has travelled 1,200,000 KM and shall specifically state whether a replacement Bus is necessary. The GoS Parties shall determine whether it believes such Bus is suitable to continue in operations or whether a replacement Bus is required. If the GoS Parties determines that a replacement Bus is required, then it shall proceed in accordance with Section 6.22 (*Change in Scope*) for procurement of such replacement Bus.

10.12.3 Any additional Buses procured under Section 10.12.1 and/or Section 10.12.2 shall be deemed to be in the E-Buses Assets and the Concessionaire shall be fully responsible for the same in accordance with the terms and conditions of this Agreement.

10.13 **SPARE PARTS**

10.13.1 The Concessionaire shall be (as part of the overall Project Activities) responsible for the supply and delivery of the Spare Parts throughout the Concession Period. The Concessionaire shall ensure that all such Spare Parts comply with the Applicable Standards.

10.13.2 Within twenty (20) Days (or such other number of Days agreed between the Parties) from use of any Spare Parts by the Concessionaire in respect of: (a) Planned Downtime and/or ordinary wear and tear; (b) Unplanned Downtime; and (c) remedying of any Defect or Deficiencies or damage due to such Defect or Deficiencies, the Concessionaire shall replenish such Spare Parts used and consumed until the Final Expiry Date. The Concessionaire shall replenish and deliver such Spare Parts used at its own cost and expense.

10.13.3 The Concessionaire shall have care, custody and control of, and shall bear the risk of physical loss and/or damage with respect to the Spare Parts until the Final Expiry Date.

10.13.4 Any warranty claims from the Supplier's warranty during the Initial Maintenance Period shall be made through the Concessionaire. Determination of whether any Defect or Deficiency during the Concession Period is to be repaired and/or replaced: (a) by the Concessionaire as part of its O&M Activities; or (b) through making a claim from the Supplier under the manufacturer's warranty, shall be determined by the Concessionaire (in consultation with the Independent Engineer).

10.14 **TRAINING PROGRAMME**

10.14.1 The Concessionaire shall submit its Training Programme to the Independent Engineer for approval as a Condition Precedent.

10.14.2 Within thirty (30) Days of receipt, Independent Engineer shall review the Training Programme and shall either:

- 10.14.2.1 approve the Training Programme (the **Approved Training Programme**); or
- 10.14.2.2 reject the Training Programme and convey its comments/observations (if any) to the Concessionaire.
- 10.14.3 The Concessionaire shall promptly (at its own cost and expense) re-submit the revised Training Programme, no later than thirty (30) Days from receipt of the aforesaid observations under Section 10.14.2.2, and the approval process under this Section 10.14 (*Training Programme*) shall be repeated.
- 10.14.4 The Parties agree that the approval of the Training Programme by the Independent Engineer shall not in any way relieve the Concessionaire of any liabilities arising from the Training Programme or from its obligations under this Agreement.
- 10.14.5 The Concessionaire shall carry out training of Concessionaire's Personnel in accordance with the Training Programme approved under this Section 10.14 (*Training Programme*).

11. GUARANTEED ANNUAL MILEAGE AND INTERVENING EVENT

11.1 GUARANTEED ANNUAL MILEAGE

11.1.1 During the Operations Period, in consideration of the Concessionaire:

11.1.2.1 maintaining the Guaranteed Annual Mileage; and

11.1.2.2 performing the O&M Activities,

the GoS shall make payments in accordance with **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**.

11.2 NOT USED

11.3 EFFECT OF INTERVENING EVENT

11.3.1 Subject to Section 11.4 (*Notice of Intervening Event*), if an Intervening Event affects the ability of the Concessionaire to meet the Guaranteed Annual Mileage, the GoS shall, for the Intervening Event Period, continue to pay, during the Operations Period, the Capital Cost Recovery Payments in respect of the Availability Benchmark (without applying the Deduction for Reduced Contracted Availability).

11.4 NOTICE OF INTERVENING EVENT

11.4.1 If an Intervening Event occurs after the Commencement Date, the Concessionaire must notify the Independent Experts and the GoS Parties in writing promptly (and in any event within fourteen (14) Days) after becoming aware of the occurrence of an Intervening Event. Together with such notice or as soon as possible (and in any event within fourteen (14) Days) following such notice, the Concessionaire shall provide full details of the Intervening Event and its consequences including sufficient details to confirm the existence of an Intervening Event and its impact on the ability of the Concessionaire to meet the Guaranteed Annual Mileage or undertake the Project Activities (including operation of the Buses).

11.4.2 As soon as practicable (and in any event within fourteen (14) Days after receiving the Concessionaire's detailed information and justification) pursuant to Section 11.4.1, the Independent Experts shall confirm whether or not (and if so, to what extent) they agree that an Intervening Event has occurred and the extent of its impact on the ability of the Concessionaire to meet the Guaranteed Annual Mileage or undertake the Project Activities (including operation of the Buses).

11.4.3 Any Dispute as to whether or not an Intervening Event has occurred, or the extent of its impact may be referred by any Party for resolution pursuant to Article 27 (*Governing Law and Dispute Resolution*).

11.4.4 If the Concessionaire does not deliver a notice as required by Section 11.4.1 in accordance with the terms thereof, the Concessionaire shall not be entitled to invoke the benefits of Section 11.3 (*Effect of Intervening Event*) in respect of the relevant Intervening Event.

12. PAYMENT ACCOUNTS, IZP GUARANTEE INSTRUMENT, SBP DEBIT AUTHORITY, REVENUE ACCOUNTS, REVENUES AND REVENUE SHARING

12.1 ESTABLISHMENT AND GoS FUNDING OF PAYMENTS ACCOUNTS

- 12.1.1 The GoS shall establish and maintain the Capital Cost Recovery Payment Account (GoS) until the Final Expiry Date in accordance with the terms of this Agreement.
- 12.1.2 On each Capital Cost Recovery Payment Certificate Issuance Date, the Concessionaire shall procure that the Independent Experts jointly issue the Capital Cost Recovery Payment Certificate.
- 12.1.3 Subject to Section 12.1.9, on each Capital Cost Recovery Payment Funding Date that falls prior to the Final Expiry Date, the GoS shall fund the Capital Cost Recovery Payment Account (GoS) Funding Amount to the Capital Cost Recovery Payment Account (GoS).
- 12.1.4 The Capital Cost Recovery Payment Account (GoS) shall be operated in accordance with the Capital Cost Recovery Payment Account (GoS) Standing Instructions.
- 12.1.5 Upon establishing the GoS Capital Cost Recovery Payment Account (GoS), the GoS shall issue the Capital Cost Recovery Payment Account (GoS) Standing Instructions containing instructions to the Capital Cost Recovery Payment Account (GoS) Bank to debit the Capital Cost Recovery Payment Account (GoS):
- 12.1.5.1 on each Capital Cost Recovery Payment Date, with the amount set out in the Capital Cost Recovery Payment Certificate as payable on such Capital Cost Recovery Payment Date;
- 12.1.5.2 on the Termination Payment Date²⁰ (or in relation to the Financing Due, such other date as set out in the Concession Direct Agreement), with the Termination Payment Amount (Unpaid Total), as set out in Termination Payment Amount (Unpaid Amounts) Certificate, first for payment of the Termination Payment Amount (Unpaid Financing Due) and next for payment of the Termination Payment Amount (Unpaid Other Amount).
- 12.1.6 Subject to Section 12.1.7, the Capital Cost Recovery Payment Account (GoS) Standing Instructions issued by the GoS shall remain effective, in each case, until the Final Expiry Date.
- 12.1.7 Prior to the Final Expiry Date, the Capital Cost Recovery Payment Account (GoS) Standing Instructions issued by the GoS may be revoked pursuant to a written revocation notice duly executed and confirmed by:
- 12.1.7.1 the authorized representatives of the Commercial Parties; or

²⁰ This date will be subject to the terms of the Concession Direct Agreement.

12.1.7.2 the GoS, if this Agreement is terminated under Article 21 (*Termination*) and the Termination Payment have been made.

12.1.8 The Capital Cost Recovery Payment Account (GoS) Standing Instructions may be amended at any time pursuant to a notice issued by the GoS to the Capital Cost Recovery Payment Account (GoS) Bank instructing amendment of the Capital Cost Recovery Payment Account (GoS) Standing Instructions (or any part thereof) and the same shall be confirmed and acknowledged by the Capital Cost Recovery Payment Account (GoS) Bank; provided, that such notice shall only be effective if the same is also duly signed by the authorized representatives of the Commercial Parties.

12.1.9 The GoS agrees to create a lien and right of set-off over the Capital Cost Recovery Payment Account (GoS) in favour of the Financing Parties (including any agent/trustee of the same), to secure payment of the Financing Due component of the applicable unrecovered Termination Payment (the **Capital Cost Recovery Payment Account (GoS) Letter of Lien**). The Capital Cost Recovery Payment Account (GoS) Letter of Lien shall be issued by the GoS simultaneously with the Capital Cost Recovery Payment Account (GoS) Standing Instructions.

12.2 **IZP GUARANTEE INSTRUMENT AND SBP DEBIT AUTHORITY**

12.2.1 The Concessionaire shall, in terms of **SCHEDULE B (*Conditions Precedent*)**, procure issuance of the IZP Guarantee Instrument, whereby IZP shall guarantee payment of an amount equal to the lower of (a) the Termination Payment Amount (Unpaid Financing Due) (as stated in the Termination Payment Amount (Unpaid Amounts) Certificate), (b) the Termination Payment Amount (Coverage), on demand from the Concessionaire, and (c) Termination Payment Amount (Residual 1 Financing Due) (the **Termination Payment Amount (Secured)**); provided, that the demand is made in writing, duly signed by an authorized representative of the Concessionaire and a copy of the Termination Payment Amount (Unpaid Amounts) Certificate or the certificate of the Independent Auditor certifying the Termination Payment Amount (Coverage) (as applicable), is attached thereto (the **IZP Guarantee Demand**). The IZP Guarantee Instrument shall, subject to this Section 12.2.1, remain irrevocable, valid and effective until the earlier of the Financing Termination Date and the date when payments are made to the Concessionaire pursuant to the IZP Guarantee Instrument in terms of this Section 12.2 (*IZP Guarantee Instrument and SBP Debit Authority*).

12.2.2 Should the Concessionaire fail to procure the IZP Guarantee Instrument under Section 12.2.1 or is unable to obtain coverage for the entire Termination Payment Amount (Secured) due to the refusal of IZP, the Concessionaire shall immediately and in any event not later three (3) months prior to the Scheduled Commencement Date:

12.2.2.1 notify the GoS and the Independent Experts that it has failed to procure issuance of the IZP Guarantee Instrument or is unable to obtain coverage for the entire Termination Payment Amount (Secured);

12.2.2.2 provide the GoS and the Independent Experts with the names and contact details of IZP for the purposes of attempting to procure issuance of the IZP Guarantee Instrument;

- 12.2.2.3 provide the GoS and the Independent Experts a report detailing the steps which have been taken by or on behalf of the Concessionaire to obtain the IZP Guarantee Instrument and the terms if any upon which the IZP Guarantee Instrument is available; and
- 12.2.2.4 provide the GoS and the Independent Experts written authority to disclose to the GoS and the Independent Experts, and provide all documents and evidencing, the steps which have been taken by or on behalf of the Concessionaire to obtain the IZP Guarantee Instrument and the terms if any upon which that insurance is available.
- 12.2.3 After receipt of the notice under Section 12.2.2, the GoS shall notify the Concessionaire that the GoS:
 - 12.2.3.1 agrees that issuance of the IZP Guarantee Instrument is not likely or coverage cannot be obtained for the entire Termination Payment Amount (Secured); or
 - 12.2.3.2 disagrees that issuance of the IZP Guarantee Instrument is not likely or coverage can be obtained for only part of the Termination Payment Amount (Secured), in which case the GoS may request the Concessionaire to obtain and maintain the IZP Guarantee Instrument if the GoS reasonably considers that the IZP Guarantee Instrument is available on commercially reasonable terms.
- 12.2.4 Subject to Section 12.2.5, the Concessionaire shall give effect to a request under Section 12.2.3.2 promptly.
- 12.2.5 The Concessionaire shall promptly carry out each request made by the GoS in accordance with the terms of the request under Section 12.2.3.2, unless it Disputes the reasonableness of the GoS' request and within ten (10) Business Days refers the Dispute for resolution in accordance with Article 27 (*Governing Law and Dispute Resolution*).
- 12.2.6 The GoS may advise the Concessionaire that it considers procurement of the IZP Guarantee Instrument to be so uneconomic as to make issuance of the IZP Guarantee Instrument unviable and it requires consultation under Section 12.2.7.
- 12.2.7 If it is agreed or determined that issuance of the IZP Guarantee Instrument is unlikely, unviable or coverage cannot be obtained for the entire Termination Payment Amount (Secured), in each case, in accordance with this Section 12.2 (*IZP Guarantee Instrument and SBP Debit Authority*), the Commercial Parties must meet to discuss the means by which the Termination Payment can be secured to the extent of the Termination Payment Amount (Secured) including:
 - 12.2.7.1 securing the Termination Payment Amount (Secured) through a combination of the IZP Guarantee Instrument and the SBP Debit Authority; or
 - 12.2.7.2 obtaining the IZP Guarantee Instrument on terms that are more onerous than what is deemed commercially reasonable by the Commercial Parties.
- 12.2.8 In the event the Concessionaire fails to procure issuance of the IZP Guarantee Instrument and it is agreed or determined in terms of Sections 12.2.1 to 12.2.7 above that issuance of the IZP Guarantee Instrument is not likely for the entire Termination Payment Amount

(Secured) by the Scheduled Commencement Date, the GoS shall, in terms of **SCHEDULE B (Conditions Precedent)**, issue to the SBP (with a copy to the Concessionaire), in terms of **SCHEDULE B (Conditions Precedent)**, a debit authority (the **SBP Debit Authority**) authorizing the SBP to debit the GoS Account One with an amount equal to such amount of the Termination Payment Amount (Secured) that is not being secured through the IZP Guarantee Instrument in terms of Section 12.2.7.1 above, on demand from the Concessionaire; provided, that the demand is made in writing, duly signed by an authorised representative of the Concessionaire and a copy of the Termination Payment Amount (Unpaid Amounts) Certificate or the certificate of the Independent Auditor certifying the Termination Payment Amount (Coverage) (as applicable), is attached thereto (the **GoS Account One Debit Demand**). The SBP Debit Authority shall, subject to this Section 12.2.2, remain irrevocable, valid and effective until the earlier of the Financing Termination Date and the date when payments are made to the Concessionaire from GoS Account One in terms of this Section 12.2 (*IZP Guarantee Instrument and SBP Debit Authority*). The GoS shall ensure that there are sufficient funds available in the GoS Account One to satisfy the GoS Account One Debit Demand.

12.2.9 If the Concessionaire is unable to obtain the IZP Guarantee Instrument or coverage cannot be obtained for the entire Termination Payment Amount (Secured), in each case, under this Section 12.2 (*IZP Guarantee Instrument and SBP Debit Authority*):

12.2.9.1 the Concessionaire must, in good faith, approach IZP on a regular basis and in any event at intervals of no more than three (3) months, to establish if the IZP Guarantee Instrument can be obtained for the amount Termination Payment Amount (Secured) not already secured through the IZP Guarantee Instrument on commercially reasonable terms); and

12.2.9.2 provide the GoS and the Independent Experts with all relevant information concerning those approaches on a regular basis and in any event at intervals of no more than three (3) months.

12.2.10 If the IZP Guarantee Instrument becomes available on commercially reasonable terms, the Concessionaire must immediately obtain the IZP Guarantee Instrument and otherwise comply with the requirements of this Section 12.2 with respect to the IZP Guarantee Instrument.

12.2.11 In the event of termination of this Agreement pursuant to Article 21 (*Termination*) and any Termination Payment (or part thereof) is due and payable and remains outstanding (the **Termination Payment Amount (Unpaid Total)**) on the Termination Payment Date, the Concessionaire shall cause the Independent Auditor to issue a certificate (the **Termination Payment Amount (Unpaid Amounts) Certificate**) certifying:

12.2.11.1 the Termination Payment Amount (Unpaid Total);

12.2.11.2 the unpaid Financing Due (or part thereof) (the **Termination Payment Amount (Unpaid Financing Due)**);

12.2.11.3 the residual amount of Termination Payment Amount (Unpaid Financing Due) (if any) that will remain unpaid after recovery from the Capital Cost Recovery Payment Account

(GoS) in terms of Section 12.1.5.2 (the **Termination Payment Amount (Residual 1 Financing Due)**);

12.2.11.4 the residual amount of Termination Payment Amount (Unpaid Financing Due) (if any) that will remain unpaid after recovery from (as applicable) demand under the IZP Guarantee Instrument in terms of Section 12.2.1 and/or from the GoS Account One in terms of Section 12.2.8 (the **Termination Payment Amount (Residual 2 Financing Due)**);

12.2.11.5 the unpaid Termination Payment (or part thereof) other than the Financing Due (the **Termination Payment Amount (Unpaid Other Amount)**);

12.2.11.6 the residual amount of Termination Payment Amount (Unpaid Other Amount) (if any) that will remain unpaid after recovery from the Capital Cost Recovery Payment Account (GoS) in terms of Section 12.1.5.2 (the **Termination Payment Amount (Residual Other Amount)**).

12.2.12 Upon issuance of the Termination Payment Amount (Unpaid Amounts) Certificate, the Termination Payment Amount (Unpaid Total) shall be paid to the Concessionaire on the Termination Payment Date in the following manner:

12.2.12.1 the Capital Cost Recovery Payment Account (GoS) Bank shall, in accordance with the Capital Cost Recovery Payment Account (GoS) Standing Instructions, debit the Capital Cost Recovery Payment Account (GoS) and credit funds to the Termination Payment Account first for payment of the Termination Payment Amount (Unpaid Financing Due) and next for payment of the Termination Payment Amount (Unpaid Other Amount);

12.2.12.2 in the event the funds standing to credit of the Capital Cost Recovery Payment Account (GoS) are insufficient to fund the Termination Payment Amount (Unpaid Financing Due) in full, the Concessionaire shall be entitled to issue the IZP Guarantee Demand in accordance with Section 12.2.1 and/or the GoS Account One Debit Demand in accordance with Section 12.2.8 (as applicable) in an amount equal to the Termination Payment Amount (Residual 1 Financing Due); and

12.2.12.3 in the event the Termination Payment Amount (Residual 1 Financing Due) and/or the Termination Payment Amount (Unpaid Other Amount) is not paid in full despite payment in terms of Sections 12.2.12.1 and 12.2.12.2 above, the GoS shall pay the Termination Payment Amount (Residual 2 Financing Due) and/or the Termination Payment Amount (Residual Other Amount) to the Concessionaire by crediting the same to the Termination Payment Account.

12.2.13 Commencing from the date of issuance of the SBP Debit Authority and until the Financing Termination Date, the GoS shall share with the Concessionaire on a semi-annual basis, a statement setting out the limits allowed by National Economic Council and any guarantees issued on the GoS Account One.

12.3 **FARE REVENUE ACCOUNT, FARE REVENUE AND FARE REVENUE SHARING**

12.3.1 **ESTABLISHMENT OF FARE REVENUE ACCOUNT**

- 12.3.1.1 The Concessionaire shall establish and maintain the Fare Revenue Account until the Final Expiry Date in accordance with the terms of this Agreement. The Fare Revenue Account Standing Instructions shall be issued by the Concessionaire as a Condition Precedent.
- 12.3.1.2 The Fare Revenue Account Standing Instructions shall contain instructions to the Fare Revenue Account Bank to debit the Fare Revenue Account on each Fare Revenue Share Payment Date for an amount set out in the Fare Revenue Share Payment Certificate as payable on such Fare Revenue Share Payment Date.
- 12.3.1.3 Subject to Section 12.3.1.4, the Fare Revenue Account Standing Instructions issued by the Concessionaire shall remain effective, in each case, until the Final Expiry Date.
- 12.3.1.4 Prior to the Final Expiry Date, the Fare Revenue Account Standing Instructions issued by the Concessionaire may be revoked pursuant to a written revocation notice duly executed and confirmed by the authorized representatives of the Commercial Parties.
- 12.3.1.5 The Fare Revenue Account Standing Instructions may be amended at any time pursuant to a notice issued by the Concessionaire to the Fare Revenue Account Bank instructing amendment of the Fare Revenue Account Standing Instructions (or any part thereof) and the same shall be confirmed and acknowledged by the Fare Revenue Account Bank; provided, that such notice shall only be effective if the same is also duly signed by the authorized representatives of the Commercial Parties.

12.3.2 FARE REVENUE

- 12.3.2.1 The Concessionaire shall be authorized to demand and collect the Fare Revenue from the Commuters on the Buses based on the Fare Rate (Notified) set out in **SCHEDULE N (Fare Structure)**, as per the requirements specified in **SCHEDULE A (Technical Specifications)**. All Fare Revenue collected shall be, in the event of: (a) collection vide an electronic fare collection mechanism (including electronic tap-in cards), be deposited directly into the Fare Revenue Account; and (b) cash collection, such sums, be deposited within one (1) Day of receipt/collection in the Fare Revenue Account. In no circumstances will the Concessionaire be permitted to deposit or retain the Fare Revenue in any account other than the Fare Revenue Account.
- 12.3.2.2 All Fare Revenue (Actual) shall be collected in Pakistani Rupees and in accordance with the provisions (including in respect of place and method of collection) of all applicable Laws and this Agreement.
- 12.3.2.3 Subject to Sections 12.3.2.3 and 12.3.2.4, the Concessionaire shall be wholly and exclusively responsible for the billing, collection, receipt, deposit and retention of all Fare Rate (Notified) during the Concession Period and shall assume all risks associated therewith.
- 12.3.2.4 If (a) the Concessionaire shall fail to collect any Fare Rate (Notified) due and payable by a Commuter to the Concessionaire, or (b) the Concessionaire shall otherwise fail to receive, deposit or retain any Fare Rate (Notified) due and payable by a Commuter to the Concessionaire during the Concession Period (each of (a) and (b), the **Due and Payable Charges (F)**), said failure shall constitute a breach of this Agreement. Upon written notification of such breach, the Concessionaire shall be entitled to a cure period of thirty

(30) Days to remedy such breach in the manner stated in Section 12.3.2.5 below. If after the said period of thirty (30) Days, the breach remains unremedied, the GoS shall have the right to draw the relevant amount from the O&M Performance Security and/or seek adjustment of the Capital Cost Recovery Payment to the extent of the Due and Payable Charges (F) together with any commission in accordance with Section 13.7 (*Late Payments*).

12.3.2.5 The Concessionaire shall be entitled to cure any breach referred to in Section 12.3.2.3 by depositing the relevant Due and Payable Charges (F) amount in the Fare Revenue Account. In such case, when and if the obligor in respect of such amount shall eventually deposit such amount in the Fare Revenue Account, such amount and any interest, penalty or fine charged with respect thereto shall not constitute Fare Revenue (Actual) for purposes of this Agreement, to the extent such amount and any interest, penalty or fine charged with respect thereto had already been deposited by the Concessionaire in the Fare Revenue Account in accordance with this Section 12.3.2.5.

12.3.2.6 In the event that a failure to collect or receive from any Commuter, or a failure to deposit or retain from any Commuter in accordance with this Agreement, any Fare Rate (Notified) duly owed by such Commuter remains unremedied for ninety (90) Days or more after the delivery of the notice of such breach by the GoS to the Concessionaire referred to in Section 12.3.2.4, the GoS shall have the right to terminate this Agreement in accordance with Section 21.7 (*Termination Due to an Event of Default*).

12.3.3 FARE REVENUE SHARING

12.3.3.1 For each Billing Period:

- (a) the Concessionaire shall be entitled to the Fare Revenue (Concessionaire Share); and
- (b) the GoS shall be entitled to the Fare Revenue (GoS Share),

which shall be paid to the Concessionaire and the GoS, in each case, in accordance with the Fare Revenue Account Standing Instructions.

12.4 NON-FARE REVENUE PLAN, NON-FARE REVENUE AGREEMENTS, NON-FARE REVENUE ACCOUNT, NON-FARE REVENUE AND NON-FARE REVENUE SHARING

12.4.1 NON-FARE REVENUE PLAN

12.4.1.1 Within twenty (20) Days from the Effective Date, the Concessionaire shall submit to the GoS Parties a detailed plan for the matter pertaining to the collection of Non-Fare Revenue (the **Non-Fare Revenue Plan**).

12.4.1.2 The GoS Parties shall notify the Concessionaire, within ten (10) Days of its receipt of the proposed Non-Fare Revenue Plan, whether:

- (a) such Non-Fare Revenue Plan is acceptable; or
- (b) it shall propose amendments to the same. In the event the GoS Parties' propose amendments to the proposed Non-Fare Revenue Plan, the Parties together with

the Independent Auditor shall meet (within three (3) Days of the GoS Parties' proposal of such amendments) to discuss such amendments and to mutually agree on the same.

12.4.1.3 The Non-Fare Revenue Plan:

- (a) submitted by the Concessionaire to the GoS Parties and approved by the GoS Parties in terms of Section 12.4.1.2(a) without any amendments; or
- (b) submitted by the Concessionaire to the GoS Parties, as amended as per the amendments proposed by the GoS Parties that are mutually agreed between the Parties in accordance with Section 12.4.1.2(b),

shall be strictly complied with by the Concessionaire for collection of Non-Fare Revenue and the Concessionaire shall be fully responsible for the implementation of the Non-Fare Revenue Plan.

12.4.1.4 Any alteration to the Non-Fare Revenue Plan shall only be made by the Concessionaire with the prior written approval to the GoS Parties.

12.4.1.5 The Concessionaire shall implement the Non-Fare Revenue Plan in accordance with the Applicable Standards.

12.4.1.6 Notwithstanding anything to the contrary in this Agreement and/or the Financing Documents, the Non-Fare Revenue shall not be subject to any lien, charge, pledge, assignment, security interest or other encumbrance in favour of the Financing Parties, unless otherwise agreed in the Concession Direct Agreement.

12.4.2 AGREEMENTS RELATING TO NON-FARE REVENUE

12.4.2.1 Any agreement entered into by the Concessionaire in relation to the collection of the Non-Fare Revenue in accordance with the Non-Fare Revenue Plan, or any amendment thereof shall be subject to the prior approval of the GoS (in consultation with the Independent Auditor) in respect of payment terms, scope of works and other technical matters to ensure, *inter alia*, conformity with the terms of the Non-Fare Revenue Plan (the **Non-Fare Revenue Agreements**).

12.4.2.2 All Non-Fare Revenue Agreements shall contain, in a form reasonably satisfactory to the GoS, the following provisions:

- (a) an option to assign such Non-Fare Revenue Agreement in favour of the GoS upon expiry or termination of this Agreement pursuant to Article 21 (*Termination*); provided, however, such assignment will be at no cost to the GoS; and
- (b) all payments to the Concessionaire in terms of the Non-Fare Revenue Agreements including any rent, deposits, advances, fee, charges, penalties etc., be deposited by the counter-party directly to the Non-Fare Revenue Account.

12.4.2.3 The Concessionaire shall deliver copies of the proposed Non-Fare Revenue Agreements or any amendment thereof and the GoS (in consultation with the Independent Auditor)

shall within fifteen (15) Days communicate its approval or shall propose amendments to the same. In the event the GoS proposes amendments to the proposed Non-Fare Revenue Agreements, the Parties together with the Independent Auditor shall meet (within three (3) Days of the GoS' proposal of such amendments) to discuss such amendments and to mutually agree on the same.

12.4.3 ESTABLISHMENT OF NON-FARE REVENUE ACCOUNT

- 12.4.3.1 The Concessionaire shall establish and maintain the Non-Fare Revenue Account until the Final Expiry Date in accordance with the terms of this Agreement. The Non-Fare Revenue Account Standing Instructions shall be issued by the Concessionaire as a Condition Precedent.
- 12.4.3.2 The Non-Fare Revenue Account Standing Instructions shall contain instructions to the Non-Fare Revenue Account Bank to debit the Non-Fare Revenue Account on each Non-Fare Revenue Share Payment Date for an amount set out in the Non-Fare Revenue Share Payment Certificate as payable on such Non-Fare Revenue Share Payment Date.
- 12.4.3.3 Subject to Section 12.4.3.4, the Non-Fare Revenue Account Standing Instructions issued by the Concessionaire shall remain effective, in each case, until the Final Expiry Date.
- 12.4.3.4 Prior to the Final Expiry Date, the Non-Fare Revenue Account Standing Instructions issued by the Concessionaire may be revoked pursuant to a written revocation notice duly executed and confirmed by the authorized representatives of the Commercial Parties.
- 12.4.3.5 The Non-Fare Revenue Account Standing Instructions may be amended at any time pursuant to a notice issued by the Concessionaire to the Non-Fare Revenue Account Bank instructing amendment of the Non-Fare Revenue Account Standing Instructions (or any part thereof) and the same shall be confirmed and acknowledged by the Non-Fare Revenue Account Bank; provided, that such notice shall only be effective if the same is also duly signed by the authorized representatives of the Commercial Parties.

12.4.4 NON-FARE REVENUE

- 12.4.4.1 The Concessionaire shall be authorized to demand and collect revenue generated from implementation of the Non-Fare Revenue Plan including all payable amounts under the Non-Fare Revenue Agreements (the **Non-Fare Revenue**), as per the requirements specified in **SCHEDULE A (Technical Specifications)**. All Non-Fare Revenue (Actual) collected shall be deposited in the Non-Fare Revenue Account. In no circumstances will the Concessionaire be permitted to deposit or retain the Non-Fare Revenue in any account other than the Non-Fare Revenue Account.
- 12.4.4.2 All Non-Fare Revenue shall be collected in Pakistani Rupees and in accordance with the provisions (including in respect of place and method of collection) of all applicable Laws and this Agreement.
- 12.4.4.3 Subject to Sections 12.4.4.3 and 12.4.4.4, the Concessionaire shall be wholly and exclusively responsible for the billing, collection, receipt, deposit and retention of all Non-Fare Revenue during the Concession Period and shall assume all risks associated therewith.

12.4.4.4 If (a) the Concessionaire shall fail to collect any Non-Fare Revenue due and payable by any person to the Concessionaire, or (b) the Concessionaire shall otherwise fail to receive, deposit or retain any Non-Fare Revenue due and payable by a person to the Concessionaire during the Concession Period (each of (a) and (b), the **Due and Payable Charges (NF)**), said failure shall constitute a breach of this Agreement. Upon written notification of such breach, the Concessionaire shall be entitled to a cure period of thirty (30) Days to remedy such breach in the manner stated in Section 12.4.4.5 below. If after the said period of thirty (30) Days, the breach remains unremedied, the GoS shall have the right to draw the relevant amount from the O&M Performance Security and/or seek adjustment of the Capital Cost Recovery Payment to the extent of the Due and Payable Charges (NF) together with any commission in accordance with Section 13.7 (*Late Payments*).

12.4.4.5 The Concessionaire shall be entitled to cure any breach referred to in Section 12.4.4.3 by depositing the relevant Due and Payable Charges (NF) amount in the Non-Fare Revenue Account. In such case, when and if the obligor in respect of such amount shall eventually deposit such amount in the Non-Fare Revenue Account, such amount and any interest, penalty or fine charged with respect thereto shall not constitute Non-Fare Revenue (Actual) for purposes of this Agreement, to the extent such amount and any interest, penalty or fine charged with respect thereto had already been deposited by the Concessionaire in the Non-Fare Revenue Account in accordance with this Section 12.4.4.5.

12.4.4.6 In the event that a failure to collect or receive from any person, or a failure to deposit or retain from any person in accordance with this Agreement, any Non-Fare Revenue duly owed by such person remains unremedied for ninety (90) Days or more after the delivery of the notice of such breach by the GoS to the Concessionaire referred to in Section 12.4.4.4, the GoS shall have the right to terminate this Agreement in accordance with Section 21.7 (*Termination Due to an Event of Default*).

12.4.5 NON-FARE REVENUE SHARING

12.4.5.1 For each Billing Period:

(a) the Concessionaire shall be entitled to the Non-Fare Revenue (Concessionaire Share); and

(b) the GoS shall be entitled to the Non-Fare Revenue (GoS Share),

which shall be paid to the Concessionaire and the GoS, in each case, in accordance with the Non-Fare Revenue Account Standing Instructions.

13. INVOICING AND PAYMENT

13.1 INVOICES ISSUED BY THE CONCESSIONAIRE

Save as otherwise provided in this Agreement, the Concessionaire shall issue to the Independent Experts and the GoS itemized invoices together with all supporting data necessary to verify and calculate the Capital Cost Recovery Payment (including any applicable Deduction for Liquidated Damages (KPI)) payable on any Capital Cost Recovery Payment Date in accordance with **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**. The Independent Experts and the GoS may request for any additional information reasonably necessary to verify and calculate such amounts.

13.2 INVOICES ISSUED BY GoS

Save as otherwise provided in this Agreement, the GoS shall issue an itemized invoice to the Concessionaire in relation to any amounts due and payable by the Concessionaire under this Agreement within thirty (30) Days of the end of a Billing Period in which any such amounts accrue. Such invoices shall be accompanied by supporting documents.

13.3 PAYMENT CERTIFICATES

13.3.1 Six (6) months prior to the projected COD (Second Segment) (as certified by the Independent Engineer) and thereafter within five (5) Days of each Capital Cost Recovery Payment Evaluation Date (the **Capital Cost Recovery Payment Certificate Issuance Date**), the Concessionaire shall procure that the Independent Experts jointly issue a written certificate in respect of such Capital Cost Recovery Payment Date (the **Capital Cost Recovery Payment Certificate**) to the Concessionaire, the GoS Parties and the GoS Capital Cost Recovery Payment Account Bank setting out:

13.3.1.1 the Downtime occurring in the Capital Cost Recovery Payment Evaluation Period relating to such Capital Cost Recovery Payment Date;

13.3.1.2 the Deduction of Liquidated Damages (KPI) in relation to the Capital Cost Recovery Payment Evaluation Period relating to such Capital Cost Recovery Payment Date;

13.3.1.3 the Capital Cost Recovery Payment (less Deduction) to be paid on such Capital Cost Recovery Payment Date; and

13.3.1.4 the Capital Cost Recovery Payment Account (GoS) Funding Amount to be funded by the GoS; provided, that the Capital Cost Recovery Payment Account (GoS) Funding Amount shall only be certified in the Capital Cost Recovery Payment Certificate in relation to the Capital Cost Recovery Payment Evaluation Date (Specific).

13.3.2 Notwithstanding anything to the contrary in this Agreement, the Independent Experts shall have no obligation to issue a Capital Cost Recovery Payment Certificate unless:

13.3.2.1 each of the Performance Securities remain valid and in effect;

- 13.3.2.2 the insurances to be obtained by the Concessionaire in accordance with Article 18 (*Insurance*) are valid and in effect;
- 13.3.2.3 the required Approvals are in full force and effect, unless the withdrawal or cancellation of any Approval is not attributable to the Concessionaire's failure to comply with the Legal Requirements; and
- 13.3.2.4 if there is a subsisting Concessionaire Event of Default.
- 13.3.3 Within five (5) Days of expiry of each Billing Period, the Independent Experts shall issue a certificate to the Commercial Parties setting out the Fare Revenue (GoS Share) that is payable by the Concessionaire to the GoS (the **Fare Revenue Share Payment Certificate**) on the Fare Revenue Share Payment Date.
- 13.3.4 Within five (5) Days of expiry of each Billing Period, the Independent Experts shall issue a certificate to the Commercial Parties setting out the Non-Fare Revenue (GoS Share) that is payable by the Concessionaire to the GoS (the **Non-Fare Revenue Share Payment Certificate**) on the Non-Fare Revenue Share Payment Date.
- 13.4 **PAYMENT DATES**
- 13.4.1 The GoS shall pay the Capital Cost Recovery Payment to the Concessionaire on each Capital Cost Recovery Payment Date strictly in accordance with the terms of this Article 13 (*Invoicing and Payment*).
- 13.4.2 Following issuance of the Capital Cost Recovery Payment Certificate by the Independent Experts, the Concessionaire shall (at least ten (10) Days prior to the Capital Cost Recovery Payment Date relating to such Capital Cost Recovery Payment Certificate):
- 13.4.2.1 deliver an invoice (together with copies of the Capital Cost Recovery Payment Certificate appended thereto) to the GoS in triplicate demanding payment of the Capital Cost Recovery Payment (less the Deduction) (the **Capital Cost Recovery Payment Invoice**); and
- 13.4.2.2 deliver the Capital Cost Recovery Payment Certificate to the GoS Capital Cost Recovery Payment Account Bank for payment to the Concessionaire of the Capital Cost Recovery Payment (less the Deduction) on the relevant Capital Cost Recovery Payment Date through, as per Capital Cost Recovery Payment Account Standing Instructions, debiting of funds standing to the credit of the Capital Cost Recovery Payment Account (GoS) on the Capital Cost Recovery Payment Date in an amount equal to the Capital Cost Recovery Payment (less the Deduction) and crediting of the same to the Capital Cost Recovery Payment Account (Concessionaire) on the Capital Cost Recovery Payment Date.
- 13.4.3 The Concessionaire shall pay the Fare Revenue (GoS Share) to the GoS in relation to each Billing Period within ten (10) Business Days of receipt of the Fare Revenue Share Payment Certificate by the Concessionaire from the Independent Experts (each such date, a **Fare Revenue Share Payment Date**) based on the Fare Revenue Account Standing Instructions. Furthermore, the Concessionaire shall pay the Non-Fare Revenue (GoS Share) to the GoS in relation to each Billing Period within ten (10) Business Days of receipt of the Non-Fare Revenue Share Payment Certificate by the Concessionaire from the

Independent Experts (each such date, a **Non-Fare Revenue Share Payment Date**) based on the Non-Fare Revenue Account Standing Instructions.

- 13.4.4 Each invoice issued pursuant to this Agreement other than those referred to in Section 13.4.2 and 13.4.3 above shall be due and payable within twenty (20) Business Days after the date on which it is received by the receiving Party (each such date, an **Other Payment Date**).

13.5 **METHOD OF PAYMENT**

- 13.5.1 All amounts payable by the GoS against invoices for the Capital Cost Recovery Payment, as set out in the Capital Cost Recovery Payment Certificates, shall be paid by the GoS, on or before the Capital Cost Recovery Payment Date, by debiting the Capital Cost Recovery Payment Account (GoS) and crediting the Capital Cost Recovery Payment Account (Concessionaire) in terms of the Capital Cost Recovery Payment Account (GoS) Standing Instructions.

- 13.5.2 Subject to Section 13.5.3 below, all amounts payable by the Concessionaire against invoices issued by GoS pursuant to Section 13.2 shall be paid by the Concessionaire on or before the Other Payment Date, by wire transfer of immediately available funds to GoS Designated Account.

- 13.5.3 The Fare Revenue (GoS Share), as set out in the Fare Revenue Share Payment Certificate, shall be paid by the Concessionaire, on the Fare Revenue Share Payment Date, by debiting the Fare Revenue Account and crediting the GoS Designated Account in terms of the Fare Revenue Account Standing Instructions. Furthermore, the Non-Fare Revenue (GoS Share), as set out in the Non-Fare Revenue Share Payment Certificate, shall be paid by the Concessionaire, on the Non-Fare Revenue Share Payment Date, by debiting the Non-Fare Revenue Account and crediting the GoS Designated Account in terms of the Non-Fare Revenue Account Standing Instructions.

13.6 **DISPUTED PAYMENTS**

- 13.6.1 If a Commercial Party receiving an invoice, the Fare Revenue Share Payment Certificate, a Non-Fare Revenue Share Payment Certificate or a Capital Cost Recovery Payment Certificate (the **Receiving Party**) and Disputes any portion or amount of such invoice, the Fare Revenue Share Payment Certificate, the Non-Fare Revenue Share Payment Certificate or the Capital Cost Recovery Payment Certificate, then the Receiving Party shall:

- 13.6.1.1 inform the other Commercial Party (the **Invoicing Party**) and the Independent Experts of the reason for the Dispute, specifying the amount(s) Disputed; and

- 13.6.1.2 pay to the Invoicing Party the undisputed amounts contained in such invoice, the Fare Revenue Share Payment Certificate, the Non-Fare Revenue Share Payment Certificate or a Capital Cost Recovery Payment Certificate on or before the relevant Fare Revenue Share Payment Date, the Non-Fare Revenue Share Payment Date or the Capital Cost Recovery Payment Date (as applicable); provided, that in the case of invoices relating to the Fare Revenue Share Payment Date, the Non-Fare Revenue Share Payment Date or the Capital Cost Recovery Payment Date, the Independent Experts shall issue the Fare Revenue Share Payment Certificate, the Non-Fare Revenue Share Payment Certificate or

the Capital Cost Recovery Payment Certificate (as applicable) setting out such amount that is not Disputed.

- 13.6.1.3 Each Commercial Party agrees that the invoices rendered by the other Commercial Party may only be Disputed on *bona fide* grounds.
- 13.6.2 No previously un-Disputed invoice, Fare Revenue Share Payment Certificate, Non-Fare Revenue Share Payment Certificate, Capital Cost Recovery Payment Certificate, or payment may be Disputed by:
 - 13.6.2.1 the Concessionaire, more than sixty (60) Days after the applicable Capital Cost Recovery Payment Date, Fare Revenue Share Payment Date, Non-Fare Revenue Share Payment Date or Other Payment Date (as applicable); or
 - 13.6.2.2 the GoS, more than three hundred and sixty-five (365) Days after the applicable Capital Cost Recovery Payment Date, Fare Revenue Share Payment Date, Non-Fare Revenue Share Payment Date or Other Payment Date (as applicable).
- 13.6.3 The Commercial Parties shall use their reasonable endeavours to resolve the payment Dispute by amicable negotiation; provided, that if the Commercial Parties are unable to resolve the Dispute within ten (10) Days of the Capital Cost Recovery Payment Date, Fare Revenue Share Payment Date, the Non-Fare Revenue Share Payment Date or Other Payment Date (as applicable), then either Commercial Party may refer the Dispute for resolution pursuant to Article 27 (*Governing Law and Dispute Resolution*).
- 13.6.4 If it is agreed or determined that a Commercial Party has:
 - 13.6.4.1 underpaid an invoice, such Commercial Party shall pay to the other Commercial Party the full amount of the underpayment, together with the commission thereon at the Late Payment Rate accrued from, but excluding, the relevant Capital Cost Recovery Payment Date, Fare Revenue Share Payment Date, Non-Fare Revenue Share Payment Date or Other Payment Date to, and including, the Day on which such underpayment is paid; or
 - 13.6.4.2 overpaid an invoice, the Commercial Party who has received the overpayment shall be obliged to repay the other Commercial Party the full amount of such overpayment, together with commission thereon at the Late Payment Rate accrued from, but excluding, the Day the amount of such overpayment was originally paid to, and including, the Day on which the amount of such overpayment is fully repaid. If agreed or determined that GoS has overpaid an invoice, GoS shall have the right to deduct the amount of such overpayment from future payments in the immediately following Billing Period(s) until the full amount of the overpayment shall have been deducted.

13.7 **LATE PAYMENTS**

Any amount under any invoice that is not paid in accordance with this Article 13 (*Invoicing and Payment*) on or before the Capital Cost Recovery Payment Date, the Fare Revenue Share Payment Date, the Non-Fare Revenue Share Payment Date or Other Payment Date (as applicable) shall bear commission at the Late Payment Rate accrued from, but excluding, the Capital Cost Recovery Payment Date, the Fare Revenue Share Payment Date, the Non-Fare Revenue Share Payment Date or Other Payment Date (as applicable), and including

the Day on which such payment is made. The GoS shall not be liable to pay any amount under this Section 13.7 (*Late Payments*) if payment of any invoice is delayed due to the Concessionaire's failure to submit a demand for payment in accordance with the GoS Capital Cost Recovery Payment Account Standing Instructions.

13.8 **SET-OFF**

The GoS shall be entitled to set-off against any sum payable by the GoS to the Concessionaire under this Agreement or any other GoS Project Document, any debt or other moneys due and owing (other than any amounts (including any liquidated damages) that are the subject of an on-going Dispute) from the Concessionaire to GoS under or in accordance with this Agreement or any other GoS Project Document.

13.9 **TAXES AND ROYALTIES**

13.9.1 The Capital Cost Recovery Payment are inclusive of all Taxes.

13.9.2 The GoS may deduct from the Capital Cost Recovery Payment and any other amounts due to the Concessionaire, any income tax or withholding Tax that is required to be deducted at source in accordance with the Legal Requirements.

13.9.3 The Concessionaire shall be responsible for the payment of all applicable Taxes and complying with all procedural requirements related to the payment of Taxes pursuant to this Agreement and shall be solely responsible for any proceedings initiated by any Government Authority in respect of any non-payment or short payment of Taxes.

13.9.4 The Concessionaire shall be responsible for payment of all applicable royalties on any fine and coarse aggregate, core sand, fine sand, grit and any other minerals extracted and/or used by the Concessionaire or any Contractor and furnish proof of payment of such royalties to the GoS along with the invoices for the Capital Cost Recovery Payment (as applicable).

13.9.5 Upon a request from the Concessionaire, the GoS will provide all relevant certificates and information it has on record to enable the Concessionaire to obtain any Tax exemptions available in relation to the Project. It is clarified that the GoS shall not be responsible in any manner for ensuring that any applicable Tax exemptions are available to the Concessionaire.

13.9.6 The Concessionaire shall indemnify the GoS Parties from and against any cost or liability that may arise due to the Concessionaire's failure to pay all applicable Taxes, in connection with the Project.

13.9.7 Any Taxes payable in relation to the Project Site shall be borne by the GoS.

14. EMERGENCY DECOMMISSIONING AND SMTA OVERRIDING POWERS

14.1 EMERGENCY DECOMMISSIONING

- 14.1.1 In the event, during the Operations Period, in the reasonable opinion of the Concessionaire, there exists an Emergency that warrants de-commissioning and closure of the whole or any part of the Project Site (the **Decommissioned Project Area**) and/or suspension of the O&M Activities, the Concessionaire shall be entitled to de-commission and close the whole or any part of Decommissioned Project Area and/or suspension of the O&M Activities, as the case may be, for so long as such Emergency and the consequences thereof warrant (the **Emergency Decommissioning**); provided, however, that such Emergency Decommissioning and the particulars thereof shall be notified by the Concessionaire to the GoS, SMTA and the Independent Engineer without any delay, and the Concessionaire shall diligently abide by the applicable standards set out in this Agreement in dealing with such Emergency Decommissioning and act in accordance with the directions that the Independent Engineer may issue for dealing with such Emergency Decommissioning; provided, however:
- 14.1.1.1 the Concessionaire shall procure the Independent Engineer shall, within seven (7) Days from the date of the Emergency Decommissioning, certify whether such Emergency Decommissioning was warranted; and
- 14.1.1.2 the Concessionaire shall re-commission the Decommissioned Project Area and/or resume the O&M Activities (as applicable), without any delay, whenever the Independent Engineer either:
- (a) notifies the Concessionaire to re-commission the same; or
 - (b) certifies that such Emergency Decommissioning was not warranted.
- 14.1.2 Without prejudice to the provisions of Section 14.1.1, the Concessionaire hereby undertakes to re-commission the Decommissioned Project Area and/or resume the O&M Activities (as applicable) efficiently and in a time sensitive manner and as quickly as practicable after the circumstances leading to the Emergency Decommissioning have ceased to exist or have so abated as to enable the Concessionaire to re-commission the Decommissioned Project Area and/or resume the O&M Activities (as applicable) and shall notify the GoS, SMTA and the Independent Engineer of the same without any delay.
- 14.1.3 SMTA shall ensure that the Emergency Decommissioning of the Decommissioned Project Area and/or suspension of the O&M Activities (as applicable) and the re-commissioning thereof shall, as soon as practicable, be brought to the notice of the affected Commuters/persons/users by means of public announcements/notice by SMTA. The Independent Engineer shall determine whether the Concessionaire has successfully re-commissioned the Decommissioned Project Area and/or resumed the O&M Activities (as applicable) as soon as practicable upon the termination/ceasing of the circumstances that have resulted in the Emergency Decommissioning.
- 14.1.4 All expenses, charges, fees, overheads and costs of any nature and all delays, in each case, resulting from and relating to the Emergency Decommissioning shall be borne by and shall be on account of the Concessionaire; provided, however, in the event the Emergency

Decommissioning results from an Intervening Event or Force Majeure Event, the provisions of Article 20 (*Relief Costs, Loss of Revenue or Savings*) shall apply.

14.2 **SMTA OVERRIDING POWERS**

Notwithstanding anything contained in this Agreement, SMTA shall have the right upon the occurrence of a national emergency, civil commotion and/or as a consequence of a Force Majeure Event, to take over the performance of any or all the obligations of the Concessionaire to the extent deemed necessary by SMTA or as directed by the relevant Government Authority, and exercise such control over the E-Buses Assets and the Project Site and/or give such directions to the Concessionaire as may be deemed necessary by SMTA; provided, however, that the exercise of such overriding powers by SMTA shall be of no greater scope and of no longer duration than is reasonably required in the circumstances which causes the exercise of such overriding power by SMTA (the **SMTA Overriding Power Event**). The Concessionaire hereby agrees to act in accordance with the instructions issued by SMTA pursuant to the provisions of this Section and undertakes to provide assistance and co-operation to SMTA for performance of its obligations hereunder. In the event SMTA exercises its overriding powers under this Section 14.2 (*SMTA Overriding Powers*), the provisions of Articles 19 (*Force Majeure*) and/or 20 (*Relief Costs, Loss of Revenue or Savings*) (as applicable) shall apply.

15. RECORDS, REPORTING AND AUDIT

15.1 MONITORING RIGHTS

15.1.1 The Independent Experts and the GoS Parties and their duly appointed representatives shall have the right to:

15.1.1.1 monitor the Project; and

15.1.1.2 review and make copies of all materials required to be obtained and retained by the Concessionaire pursuant to the terms of this Agreement and all materials pertinent to the exercise of audit rights pursuant to Section 15.2 (*Books and Records and Audit Rights*).

15.1.2 The purpose of such monitoring and review shall be to determine:

15.1.2.1 in the case of the Development Activities, whether the E-Buses Assets are designed, engineered, manufactured, supplied, procured, transported, erected, constructed, installed, tested and commissioned in accordance with the design and equipment parameters set out in **SCHEDULE A (*Technical Specifications*)**, and to observe the progress of the Development Activities; and

15.1.2.2 in the case of the O&M Activities, to determine whether the E-Buses Assets are being operated and maintained in accordance with the terms of this Agreement.

15.1.3 The Concessionaire shall permit the Independent Engineer and SMTA and their duly appointed representatives to conduct such monitoring and review at any time and, following the COD (First Segment), during normal operating hours, in each case, upon reasonable notice to the Concessionaire.

15.1.4 Such monitoring and review shall be conducted in the presence of and, in the case of inquiries addressed to the Concessionaire's employees and contractors, through suitably qualified, appropriate representative(s) of the Concessionaire designated by the Concessionaire for this purpose.

15.1.5 The Concessionaire agrees to designate such a representative or representatives and to make such representative(s) available for all such monitoring and review. In the case of monitoring of equipment or supplies, the Independent Engineer and SMTA shall have the right to conduct such monitoring with the prior approval of the Concessionaire, which shall not be unreasonably withheld or delayed, in the presence of a representative of the Concessionaire, at any and all locations inside or outside Pakistan at which such equipment and supplies are designed, manufactured, assembled or tested.

15.1.6 The Concessionaire shall ensure that the Construction Contract, the Supply Contract and the Bus Operator Contract provide for such rights and shall require the Construction Contractor, the Supplier and the Bus Operator to require that their contracts with subcontractors and suppliers provide for such rights.

15.1.7 The foregoing provisions shall be without prejudice to the Independent Engineer's and SMTA's inspection, monitoring and review rights with respect to the E-Buses Assets (or any part thereof) in connection with testing pursuant to **SCHEDULE E (Testing)** or as otherwise provided in this Agreement.

15.1.8 The Concessionaire shall provide to the Independent Experts and the GoS Parties, promptly, and in any event within seven (7) Days of becoming aware, a report describing the occurrence of any act or condition materially affecting the Project or the Concessionaire's ability to perform any of its obligations under this Agreement and any other Project Agreements to which the Concessionaire is a party.

15.1.9 The Concessionaire hereby agrees that:

15.1.9.1 any monitoring or review by any of the Independent Experts or the GoS Parties (or their representatives) pursuant to this Section 15.1 (*Monitoring Rights*) is solely for information, and by conducting any such monitoring or review, neither the Independent Experts nor the GoS Parties (or their representatives) make (or shall be construed to make) any endorsement of the design, or representation or warranty of the safety, durability, or reliability of the E-Buses Assets or any part thereof; and

15.1.9.2 it shall in no way represent to any third party that, as a result of any monitoring or review by Independent Experts and the GoS Parties (or their representatives) pursuant to Section 15.1 (*Monitoring Rights*), the Independent Experts and the GoS Parties (or their representatives) are in any way responsible for the engineering, design or construction soundness of the E-Buses Assets.

15.2 **BOOKS AND RECORDS AND AUDIT RIGHTS**

15.2.1 The Concessionaire shall comply with the Accounting Principles and maintain proper books, data and records in accordance with the Law and this Agreement.

15.2.2 The Independent Experts and the GoS Parties (and their duly appointed representatives) may at reasonable times, and at their expense, audit the Concessionaire's books, data and records in relation to testing, metering, invoicing, payments, Claims, claims for Relief Costs, Loss of Revenue, Termination Payment, reimbursements and any other charges to GoS, in all such cases for the purpose of determining whether the Concessionaire's charges to GoS have been computed in accordance with this Agreement.

15.2.3 The Independent Experts and the GoS Parties shall have the right, upon reasonable prior notice to the Concessionaire, to examine and/or make copies of the books, data and records referred to in Section 15.2.2 during normal office hours during the period such books, data and records are required to be maintained pursuant to Section 15.2.4.

15.2.4 All books, data and records referred to in this Section 15.2 (*Books and Records and Audit Rights*) shall be maintained by the Concessionaire until the Final Expiry Date. The Concessionaire shall provide a notice to SMTA thirty (30) Days prior to the Final Expiry Date for handing over custody of such books, data and records to SMTA, and SMTA shall be entitled to take custody of the same within twenty (20) Days of the date of receipt of the notice provided by the Concessionaire hereunder.

- 15.2.5 The Concessionaire shall provide to the Independent Experts and the GoS Parties, such information concerning the operational and financial performance of the Project and the Concessionaire, as the Independent Experts and the GoS Parties may reasonably require.
- 15.2.6 The Concessionaire hereby agrees that:
- 15.2.6.1 any receipt, review or audit by any of the Independent Experts or the GoS Parties (or their representatives) of any books, data, records or other documentation or information pursuant to this Section 15.2 (*Books and Records and Audit Rights*) is solely for information purposes and by such receipt, review or audit, neither the Independent Experts nor the GoS Parties (or their representatives) make (or shall be construed to make) any endorsement as to the accuracy and completeness of any books, data or records; and
- 15.2.6.2 it shall in no way represent to any third party that, as a result of any receipt, review or audit by the Independent Experts and the GoS Parties (or their representatives) of any books, data or records pursuant to this Section 15.2 (*Books and Records and Audit Rights*), the Independent Experts and the GoS Parties (or their representatives) are in any way responsible for accuracy and completeness of any such books, data or records.
- 15.2.7 The Concessionaire shall provide to the Independent Experts and the GoS Parties an updated Financial Model within three (3) Business Days after any update to the Financial Model is made following a reasonable request by any of the Independent Experts or the GoS Parties.

16. COVENANTS

16.1 LICENCES, PERMITS AND CONSENTS

The Concessionaire shall, as soon as reasonably practicable and in any event within seven (7) Days of request, deliver to the Independent Experts and SMTA copies of all Approvals that have been issued to the Concessionaire and not previously delivered to the Independent Experts and SMTA.

16.2 OTHER BUSINESS

The Concessionaire shall not:

- 16.2.1 engage in any business activity other than as reasonably required to perform its obligations and enjoy its rights under this Agreement;
- 16.2.2 use the E-Buses Assets for any purpose other than the Project;
- 16.2.3 enter into any agreement of merger, consolidation or amalgamation with any entity; or
- 16.2.4 substantially amend or alter its memorandum of association and/or articles of association without the prior written approval of the Independent Experts and the GoS.

16.3 CONTRACTOR'S APPOINTMENT, PROJECT AGREEMENTS, FINANCING DOCUMENTS AND REFINANCING

16.3.1 Prior to the Commencement Date:

- 16.3.1.1 a change of the Bus Operator shall be subject to the prior written approval of the GoS Parties. The proposed new Bus Operator must meet the relevant Bus Operator Criteria as confirmed by the Independent Engineer and consented to by SMTA, such confirmation not to be unreasonably withheld or delayed; and
- 16.3.1.2 the Concessionaire shall ensure that the proposed Construction Contractor meets the Construction Contractor Criteria and the relevant documentation has been submitted to the Independent Engineer (with copies to the GoS Parties) for determination.
- 16.3.2 Drafts of the Construction Contract, the Supply Contract and Bus Operator Contract to be entered into by the Concessionaire shall be provided to the Independent Engineer (with copies to the GoS Parties) for review at least sixty (60) Days prior to the Scheduled Commencement Date. The GoS Parties shall, within fourteen (14) Days of their receipt of the proposed Construction Contract, the Supply Contract and the Bus Operator Contract, provide their comments or observation on the same, if any, to the Independent Engineer. The Independent Engineer shall within twenty (20) Days of the delivery of the proposed Construction Contract, the Supply Contract and the Bus Operator Contract, provide its comments on the same, in consultation with the GoS Parties. Prior to execution of the Construction Contract, the Supply Contract or the Bus Operator Contract, the Concessionaire shall address any comments made by the Independent Engineer. In the event the Independent Engineer fails to provide its comments on the proposed Construction Contract, the Supply Contract or the Bus Operator Contract within twenty

(20) Days of the delivery of the same by the Concessionaire, the Construction Contract, the Supply Contract or the Bus Operator Contract (as applicable) shall be deemed to have been approved by the Independent Engineer. Promptly following the execution and delivery of the Construction Contract, the Supply Contract and the Bus Operator Contract, the Concessionaire shall deliver copies to the Independent Engineer and the GoS Parties.

16.3.3 The Concessionaire shall ensure that the Financing Documents conform to the financing terms submitted as part of the Bid, unless otherwise approved in writing by the Independent Auditor (in consultation with the GoS). Promptly following the execution and delivery of the Financing Documents, the Concessionaire shall deliver copies thereof to the Independent Experts and the GoS Parties.

16.3.4 The Concessionaire shall not enter into:

16.3.4.1 any material amendments, modifications or supplements to, or waivers under any of the Project Agreements;

16.3.4.2 any material amendments, modifications or supplements to, or waivers under any of the Financing Documents; or

16.3.4.3 any material new contracts after the Commencement Date, including any new construction contract for the Development Activities on the Project Site,

without first giving the Independent Experts (with copies to the GoS Parties) thirty (30) Days' notice (or sixty (60) Days' notice where Section 16.3.6 applies) of such matter (along with relevant documentation that may be necessary for assessment by the Independent Experts (in consultation with the GoS Parties) and obtaining the prior written approval of the Independent Engineer), which approval shall not be unreasonably withheld or delayed and which shall be deemed to have been granted if the Independent Engineer does not object to such matter within thirty (30) Days of receiving notice thereof; provided, that:

(a) no approval shall be deemed to have been granted by the Independent Experts if

- (i) the Concessionaire shall have failed to provide such information as the Independent Experts may reasonably request to evaluate the matter proposed; or
- (ii) the Independent Experts consider that the substitute Construction Contractor does not meet (at minimum) the Construction Contractor Criteria or the substitute Bus Operator does not meet (at minimum) the Bus Operator Criteria; and

(b) in relation to any proposed Refinancing, the GoS or the Independent Experts may withhold approval at their absolute discretion if such changes adversely affect the GoS' rights or obligations under any GoS Project Document (including giving rise to any increase in GoS' financial obligations (whether actual or contingent) at any point in time under any GoS Project Document) or the Concessionaire's or any Sponsor's ability to perform its obligations under any GoS Project Document.

16.3.5 Promptly following the execution and delivery of any items referred to in Sections 16.3.4.1 to 16.3.4.3 (inclusive), the Concessionaire shall deliver a copy of all relevant documents to the Independent Experts and the GoS Parties.

16.3.6 Not later than sixty (60) Days prior to the execution by the Concessionaire of any amendments, modifications or supplements to, or consent to any change of any provision of, or waiver under:

16.3.6.1 the Construction Contract, the Supply Contract or the Bus Operator Contract that would result in:

- (a) a change of the Construction Contractor, the Supplier or the Bus Operator;
- (b) a material change to the scope of work of the Construction Contractor, the Supplier or the Bus Operator;
- (c) a material change to the performance standards to which the Construction Contractor, the Supplier or the Bus Operator is subject; or
- (d) a change, in the case of the Construction Contract only, to:
 - (i) the critical path schedule under the Construction Contract, to the extent such change could affect the ability of the Concessionaire to meet the Implementation Schedule; or
 - (ii) a major piece of equipment as to either its manufacturer or country of origin; or

16.3.6.2 the Financing Documents that would result in a Refinancing, the Concessionaire shall deliver to the Independent Experts and the GoS a notice executed by a duly authorised officer, setting out the terms of any of the foregoing in reasonable detail including calculations for consideration by the Independent Auditor for determination of any Refinancing Gains.

16.3.7 The Concessionaire acknowledges and agrees that no review or approval (actual or deemed) by the Independent Experts or the GoS Parties (or any of them) of any amendments, modifications, supplements, waivers or new contracts pursuant to Section 16.3.4 shall in any way relieve the Concessionaire from any liability it would otherwise have under this Agreement, and that neither the Independent Experts nor the GoS Parties (or any of their representatives) shall be liable to the Concessionaire, the relevant Contractor or the Financing Parties by reason of their review or approval of the amendments, modifications, supplements, waivers or new contracts.

16.3.8 The Concessionaire acknowledges and agrees that seventy-five percent (75%) of the Refinancing Gain shall be shared with the GoS. The Refinancing Gain shall be determined by the Independent Auditor based on the calculations provided by the Concessionaire in respect of the proposed Refinancing and such other information and calculations as may be reasonably required by the Independent Auditor from the Concessionaire. The GoS shall select the mechanism for applying the Refinancing Gain (in the aforesaid ratio), through (one or a combination of the following):

16.3.8.1 upfront or staggered payments to the GoS;

16.3.8.2 reduction in Capital Cost Recovery Payment; or

16.3.8.3 any other mechanism agreeable to the Commercial Parties, which in each case, shall take effect from the date when the Refinancing Gain is realised.

16.3.9 The Concessionaire shall not introduce any form of balloon loan or balloon structure, in each case whether or not such balloon loan or balloon structure is supported by letters of credit or letters of guarantee of any form.

16.3.10 The Concessionaire shall pay, on behalf of the GoS, all reasonable costs and fees of external advisers appointed by the GoS for the purposes of considering any approval or review of any documents (including amendments, modifications or supplements to, or waivers pursuant to, any Financing Document or Project Agreement) as contemplated in this Section 16.3 (*Contractor's Appointment, Project Agreements, Financing Documents and Refinancing*).

16.4 **FUNDING OF SPONSOR FUNDING AMOUNT AND COST OVERRUNS, SHAREHOLDING AND RELATED MATTERS**

16.4.1 **FUNDING OF SPONSOR FUNDING AMOUNT AND ORDINARY SHARES**

16.4.1.1 The Concessionaire hereby undertakes to procure funding of the Sponsor Funding Amount by the Sponsors in accordance with this Agreement and the Financing Documents.

16.4.1.2 The Concessionaire shall procure that the Initial Sponsors as well as each New Sponsor executes a shareholder commitment undertaking in favour of the GoS Parties as set out in **SCHEDULE I (*Sponsor(s) Undertaking*)** (the **Sponsor(s) Undertaking**).

16.4.1.3 Each Sponsor shall fulfil its obligation to pay to the Concessionaire that part of the investment on or before the dates and in the amounts and shall hold such proportion of the Ordinary Shares, that is, in each case, apportioned to such Sponsor in the Bid.

16.4.1.4 Subject to the Laws, the Parties agree that the Sponsor and any future Shareholders shall decide on the split between the Concessionaire's Ordinary Shares and Sponsor Loans in their own discretion.

16.4.1.5 The Concessionaire shall evidence any payment of Equity:

- (a) in respect of the amount expressed as Ordinary Shares, by submission to the GoS (with a copy to the Independent Auditor) of a certified copy of all the legal documents that are submitted to the Government Authority pursuant to the Laws in the event of a limited liability share capital increase; or
- (b) in respect of the amount expressed as Sponsor Loan, by submission to the GoS of the Concessionaire's accounting books together with a certificate from the Independent Auditor.

16.4.1.6 The Parties agree that the Maximum Liability Amount set out in the Sponsor(s) Undertaking represents an aggregate cap on the liability of the Shareholders as set out above subject to the terms and conditions of the Sponsor(s) Undertaking. The Parties

also agree that, in the event there are multiple entities evidencing the financial and economic standing as required pursuant to the RFP, the Maximum Liability Amount of any Shareholder shall correspond to the percentage of Equity investment to be made by each Shareholder in the Concessionaire in terms of the Bid and the Financial Model; provided, that, the liability of the Lead Developer shall extend to the total Maximum Liability Amount applicable to the entire Consortium. This shall be without prejudice to any liabilities of the Shareholders under the Finance Documents (including the obligation to fund any Cost Overruns).

16.4.1.7 Promptly following the execution and delivery of any agreements in relation to funding of amounts against issuance of the Ordinary Shares and/or the Sponsor Loans, the Concessionaire shall deliver a copy of such agreements to the Independent Experts and the GoS Parties.

16.4.1.8 The Concessionaire shall not create any classes of shares in the Concessionaire other than the Ordinary Shares without approval of the GoS.

16.4.1.9 The Concessionaire shall not offer for subscription Ordinary Shares to any person other than the Sponsors, save as otherwise provided in this Agreement.

16.4.2 TRANSFER RESTRICTIONS

16.4.2.1 Subject to Sections 16.4.3 and 16.4.2.2:

- (a) up to (and including) the second (2nd) anniversary of the COD (Second Segment), no Sponsor shall transfer its shareholding in the Concessionaire unless such transfer is required by operation of Laws and, subject to the Legal Requirements, the Transfer Criteria is complied with;
- (b) following the second (2nd) anniversary of the COD (Second Segment) and subject to compliance with the Transfer Criteria, any Sponsor may transfer its shareholding in the Concessionaire (the **Transferring Sponsor**) without the consent of the GoS, but with prior notice to the GoS; provided, that such transfer does not result in the Sponsors (in aggregate) holding less than fifty-one percent (51%) of shareholding in the Concessionaire; and
- (c) following the second (2nd) anniversary of the COD (Second Segment), if any proposed transfer of shareholding by a Transferring Sponsor results in the Sponsors holding (in aggregate) less than fifty-one percent (51%) shareholding in the Concessionaire, then the Transferring Sponsors shall be required to:
 - (i) comply with the Transfer Criteria; and
 - (ii) seek prior approval of the GoS.

16.4.2.2 Where the Transferring Sponsor is the Lead Developer, in addition to complying with the Transfer Criteria, the following conditions shall also apply:

- (a) prior to any transfer by the Lead Developer, the Lead Developer confirms to the GoS in writing, that the proposed transferee shall at minimum acquire forty percent (40%) of the Ordinary Shares; and
- (b) in the sole opinion of the GoS, the proposed transferee referred to in Section 16.4.2.2(a), at minimum meets the qualification criteria on the basis of which a Lead Developer can be qualified for the Project at the bidding stage.

16.4.2.3 For the purpose of Sections 16.4.2, 16.4.3 and 16.4.5, the term **transfer** shall mean any issuance, sale, transfer, conveyance, disposal or any event, transaction, arrangement, Encumbrance or agreement of any nature that results in or may result in: (a) the issuance of any Ordinary Share to any person; (b) the transfer of direct and/or indirect, legal and/or beneficial ownership of any shares, or securities convertible into shares, that causes or may cause the sale, transfer, conveyance or disposal of the Sponsor's legal and/or beneficial ownership, direct or indirect, in the total (or any part thereof) paid up and outstanding Ordinary Shares of the Concessionaire; or (c) the Sponsors losing the power to direct the management, policies and decisions, in each case, of the Concessionaire.

16.4.2.4 Prior to the Final Expiry Date, the Lead Developer shall hold at least fifty-one percent (51%) of the issued and outstanding share capital of the Concessionaire in the form of Ordinary Shares. Failure to comply with this Section 16.4.2.4 shall constitute a Concessionaire Event of Default.

16.4.3 OTHER TRANSFER RESTRICTIONS

16.4.3.1 In addition to the restrictions set out in Section 16.4.2, any proposed transfer of Ordinary Shares shall be subject to the following restrictions:

- (a) the proposed transfer of Ordinary Shares must comply with the Legal Requirements;
- (b) the proposed transfer of Ordinary Shares must be in accordance with the terms of this Agreement;
- (c) the GoS (through Independent Experts) has confirmed that it has completed its "*know your customer*" review to its satisfaction (acting reasonably and without unreasonable delay) and that the proposed transferee is acceptable to it (in its sole discretion) on reputational or similar grounds, taking into account without limitation, such transferee's environmental and social track record, links to terrorism, political affiliations and conflicts of interest;
- (d) no default is continuing or will or would result from the transferee becoming a party to this Agreement; and
- (e) the Concessionaire and the Sponsors have delivered certificates to the Independent Experts certifying that each of the relevant foregoing conditions has been satisfied.

16.4.3.2 The Concessionaire shall, refuse to recognize any purported transfer of Ordinary Shares in violation of this Section 16.4.3, or record or register any such transfer of Ordinary Shares. Any transfer made in breach of this Section 16.4.3 shall be null and void.

16.4.3.3 Subject to Section 16.4.5, notwithstanding any transfer of Ordinary Shares pursuant to this Section 16.4.3 or otherwise, each remaining Sponsor shall remain fully liable for all its obligations under this Agreement.

16.4.4 UNDERTAKINGS

16.4.4.1 No later than ninety (90) Days after the execution of this Agreement, the restrictions imposed under Sections 16.4.2 and 16.4.3 shall be recorded in the constitutional documents (so as to effectively constitute restrictions thereunder) of the Concessionaire and noted on all share certificates (if any) in respect of Ordinary Shares issued by the Concessionaire to the Sponsors.

16.4.5 PROCEDURE FOR TRANSFER

16.4.5.1 On the date of any transfer of any Ordinary Shares, the Concessionaire and the Transferring Sponsor shall procure that the New Sponsor shall duly execute and deliver the Sponsor(s) Undertaking, which shall be certified by (in the case of a New Sponsor that is not an individual) a duly authorized officer of such New Sponsor or (in the case of a New Sponsor that is an individual) such New Sponsor, of:

- (a) (in the case of a New Sponsor that is not an individual) the New Sponsor's constitutional documents or (in the case of a New Sponsor that is an individual) his/her passport and other personal identification as required by the Concessionaire;
- (b) (in the case of a New Sponsor that is not an individual) a board resolution or other appropriate authorization authorizing the New Sponsor's execution of the Sponsor(s) Undertaking;
- (c) a legal opinion (in form and substance and from a counsel satisfactory to the Concessionaire) in respect of the laws of the jurisdiction of (in the case of a New Sponsor that is not an individual) incorporation or (in the case of a New Sponsor that is an individual) domicile of the New Sponsor as to (i) to (iv) below (as applicable) confirming (as to the New Sponsor) that:
 - (i) the New Sponsor has the capacity to execute the Sponsor(s) Undertaking (and any other documentation required to be signed by the New Sponsor in connection with such transfer);
 - (ii) the New Sponsor's signatory (or signatories), if any, have been duly authorized;
 - (iii) (in the case of a New Sponsor that is not an individual) such documentation required to be entered into by the New Sponsor has been duly executed in accordance with the New Sponsor's constitutional documents;

- (iv) such documentation required to be entered into by the New Sponsor has been duly executed in accordance with all applicable laws in its jurisdiction of (in the case of a New Sponsor that is not an individual) incorporation or (in the case of a New Sponsor that is an individual) domicile; and
- (v) the obligations of the New Sponsor created pursuant to the documentation entered into by it are legally valid and binding on, and enforceable against, the New Sponsor (subject to any customary legal reservations or qualifications);
- (d) (in the case of a New Sponsor that is not an individual) the latest accounts of the New Sponsor, audited (if audited accounts have been prepared) or unaudited (if audited accounts have not been prepared) prepared in accordance with generally accepted accounting principles in the jurisdiction of its incorporation; and
- (e) (in the case of a New Sponsor that is an individual) a net worth statement for such New Sponsor for the most recent tax year in the jurisdiction of his/her domicile prepared in accordance with generally accepted accounting principles in the jurisdiction of his/her domicile audited by the Auditor (or such other firm of independent accountants of recognized international standing approved by the Concessionaire).

16.4.5.2 Subject to the satisfaction of the conditions in Sections 16.4.2 and 16.4.5, the Concessionaire, the Sponsors and the New Sponsor shall execute the Sponsor(s) Undertaking and deliver the documents referred to in Section 16.4.5.1.

16.4.5.3 Upon any transfer permitted by this Section 16.4.5, the Transferring Sponsor shall be released from its obligations under this Agreement to the extent such obligations are assumed by a New Sponsor.

16.5 **COMPLIANCE WITH APPLICABLE LEGAL REQUIREMENTS**

Each Party agrees that all applicable Legal Requirements shall govern their performance of this Agreement, and each shall respectively comply in all material respects with the applicable Legal Requirements and shall keep in full force and effect all Approvals required to be in their respective names for the performance of their respective obligations under this Agreement and the other Project Agreements to which it is a party. Without limiting the generality of the foregoing, the Concessionaire specifically acknowledges that the applicable Legal Requirements may from time to time prohibit the import of goods or services manufactured, supplied, or performed from or by any Adverse Person and undertakes not to import any such goods or services. The Concessionaire, in addition to the foregoing, agrees to fully comply with the Asian Development Bank's Anticorruption Policy, 1998, as amended from time to time.

16.6 **PROJECT SITE RELATED UNDERTAKINGS**

The Concessionaire agrees and undertakes that:

16.6.1 it shall take all necessary measures to confine the Project Activities, its personnel and equipment to the Project Site and not encroach on any Adjoining Property;

16.6.2 it shall make good any damage to any roads, footpaths, conduits, and other works on any Adjoining Property, which is caused by the Concessionaire or its Contractors or employees;

16.6.3 it shall use all reasonable endeavours not to do or permit to be done anything which might:

16.6.3.1 cause destruction, scarring or defacing of natural surroundings in the vicinity of the Project Site;

16.6.3.2 be or become a danger or nuisance or give rise to liability in tort to any owners or occupiers of the Adjoining Property or to members of the public; or

16.6.3.3 cause any contamination or damage to any Adjoining Property.

16.7 **CARBON CREDITS AND EMISSIONS REDUCTION BENEFITS**

16.7.1 **GENERATION AND RISK ALLOCATION**

The Concessionaire shall, at its sole cost, risk and responsibility, identify, pursue, develop, register, generate, verify, certify, market, sell and monetise any carbon credits, emissions reduction units or similar environmental attributes arising from or in connection with the Project (the **Carbon Credits**). The GoS shall have no obligation, liability or risk in relation to the eligibility, generation, registration, verification, certification, pricing, sale or monetisation of any Carbon Credits.

16.7.2 **COMPLIANCE AND CHANGE IN LAW**

The Concessionaire shall bear all risks associated with applicable Law, regulatory requirements, registry rules, market practices, standards, methodologies, or any change therein (including any Change in Law), and no such matter shall give rise to any relief, compensation, adjustment, claim or entitlement against the GoS under this Agreement or otherwise.

16.7.3 **MANDATORY PURSUIT**

Without prejudice to the foregoing, the Concessionaire shall use best endeavours, consistent with Good International Industry Practice, to pursue the generation and monetisation of Carbon Credits throughout the Concession Period.

16.7.4 **REVENUE SHARING**

To the extent that Carbon Credits are successfully sold or otherwise monetised, the Concessionaire shall pay to the GoS an amount equal to fifty percent (50%) of the gross revenues received from such sale or monetisation. All costs, expenses, fees, taxes, levies, charges and disbursements incurred in connection with the identification, registration, verification, certification, issuance, marketing and sale of Carbon Credits shall be for the sole account of the Concessionaire and shall not be deducted from the GoS' share. Any revenues generated from the Carbon Credits shall not form part of Fare Revenue, Non-Fare Revenue or Third-Party EV Charging revenues.

16.7.5 PAYMENT AND AUDIT

The Concessionaire shall remit the GoS' share of such net revenues within thirty (30) Days of receipt in accordance with a mutually agreed escrow arrangement, together with supporting statements and documentation, and shall maintain complete and accurate records relating to Carbon Credits, which shall be subject to audit by the GoS in accordance with this Agreement.

16.7.6 NO GOVERNMENT SUPPORT OR GUARANTEE

The Parties agree that the GoS provides no representation, warranty, support or assurance in respect of the availability, value, tradability or monetisation of Carbon Credits, and the Concessionaire shall have no claim or recourse against the GoS in respect thereof.

16.8 THIRD-PARTY EV CHARGING AT BUS DEPOTS

16.8.1 THIRD-PARTY CHARGING ACTIVITIES

Subject to compliance with this Agreement and applicable Law, the Concessionaire may, with the prior written approval of the GoS Parties, such approval not to be unreasonably withheld or delayed, permit the use of the Bus Depots and related Charging Infrastructure for the provision of electric vehicle charging services to third parties (the **Third-Party EV Charging**).

16.8.2 SEPARATE REVENUE ARRANGEMENT

Any revenues generated from Third-Party EV Charging shall not form part of Fare Revenue, Non-Fare Revenue or Carbon Credit revenues and shall be subject to a separate revenue-sharing arrangement to be agreed in writing between the GoS and the Concessionaire prior to the commencement of such Third-Party EV Charging.

16.8.3 CONCESSIONAIRE RESPONSIBILITY AND RISK

All costs, risks, liabilities and obligations associated with Third-Party EV Charging, including capital expenditure, operational costs, power procurement, metering, billing, regulatory Approvals, grid compliance, safety, insurance and third-party claims, shall be borne exclusively by the Concessionaire. The GoS shall bear no obligation, liability or risk whatsoever in respect thereof.

16.8.4 NO IMPACT ON PROJECT OBLIGATIONS

The provision of Third-Party EV Charging shall not adversely affect the Concessionaire's obligations under this Agreement, including the Guaranteed Annual Mileage, compliance with the Applicable Standards or the uninterrupted operation of the Buses, and shall at all times remain subordinate to the primary purpose of the Bus Depots and Charging Infrastructure for the Project Activities.

16.8.5 NO ENTITLEMENT OR RELIEF

Nothing in this Section shall be construed as granting the Concessionaire any entitlement to provide Third-Party EV Charging or as giving rise to any claim for relief, compensation, tariff adjustment or Change in Scope in the event that such activities are restricted, delayed or prohibited.

17. INDEPENDENT EXPERTS

17.1 SELECTION OF INDEPENDENT ENGINEER

- 17.1.1 Within ten (10) Days from the Effective Date, the Concessionaire shall provide the GoS Parties with a list of three (3) reputable firms of engineers for appointment of the Independent Engineer (the **First IE List**). In the event the proposed Independent Engineer is a consortium of engineers then: (a) a lead consortium member shall serve as the lead Independent Engineer and shall be fully responsible for the overall management, coordination and implementation of the services under the Independent Engineer Contract; and (b) the consortium members shall be jointly and severally liable for the services under the Independent Engineer Contract.
- 17.1.2 Within seven (7) Days of receipt by the GoS Parties of the First IE List, the GoS Parties shall (subject to one (1) of the firms in the First IE List being acceptable to the GoS) select a firm of engineers from First IE List and the Parties shall finalise and execute the Independent Engineer Contract.
- 17.1.3 If the firms of engineers identified in the First IE List are not acceptable to the GoS Parties, the Parties shall select as the Independent Engineer a firm acceptable to them and the Parties shall finalise and execute the Independent Engineer Contract.
- 17.1.4 The Independent Engineer Contract shall be executed within thirty (30) Days from the Effective Date.
- 17.1.5 The Independent Engineer shall provide the services set out in the Independent Engineer Contract, which shall be in accordance with the Indicative Independent Engineer Terms of Reference, provided, however, upon execution of the Independent Engineer Contract, the terms and conditions including scope of work under the Independent Engineer Contract shall supersede.

17.2 TERM OF APPOINTMENT OF THE INDEPENDENT ENGINEER

- 17.2.1 The appointment of the Independent Engineer shall initially be for a term not less than the Development Period (the **Independent Engineer Initial Term**).
- 17.2.2 The Concessionaire shall ensure that until the Final Expiry Date, an Independent Engineer is retained for the purposes of carrying out the functions of the Independent Engineer under this Agreement.
- 17.2.3 Prior to the expiry of the Independent Engineer Initial Term, the Concessionaire, the Sponsors and the GoS shall have the option to extend the Independent Engineer Contract (on terms and conditions agreeable to the Concessionaire, the Sponsors, the GoS and the Independent Engineer) or appoint a new independent engineer (such appointment to be effective upon expiry of the Independent Engineer Initial Term). In the event a new Independent Engineer is to be appointed, the Parties shall follow the process set out in Section 17.1 (*Selection of Independent Engineer*), *mutatis mutandis*, for appointment of a new independent engineer so as to ensure that at all times until the Final Expiry Date an Independent Engineer is retained.

17.2.4 The Parties shall have the right to terminate the Independent Engineer Contract in accordance with its terms; provided, however, that prior to such termination and subject to Section 17.5 (*Independent Engineer Remuneration*), the Commercial Parties shall select and appoint a replacement Independent Engineer and execute (with SMTA), the Independent Engineer Contract.

17.2.5 The Concessionaire shall ensure that all provisions of this Agreement pertaining to the Independent Engineer and its responsibilities in respect of the matters set out herein are duly incorporated in the Independent Engineer Contract.

17.3 **INDEPENDENT ENGINEER AUTHORIZED SIGNATORIES**

17.3.1 The Parties shall require the Independent Engineer to designate and notify, suitably qualified and appropriate representatives, authorized to represent the Independent Engineer in all matters relating to this Agreement and sign for and on behalf of the Independent Engineer any communication or document required to be signed by the Independent Engineer (the **Independent Engineer Authorized Representative(s)**). Any document shall be valid and effective only if is signed by such Independent Engineer Authorized Representative. The Independent Engineer, may by prior notice in writing to the Parties, substitute the Independent Engineer Authorized Representative.

17.4 **DECISION OF INDEPENDENT ENGINEER & DISPUTE RESOLUTION**

17.4.1 Subject to Section 17.4.2, any advice, instruction, certification, approval or determination of the Independent Engineer shall be binding on the Parties.

17.4.2 In the event the GoS, SMTA, the Sponsors or the Concessionaire disagree with any decision of the Independent Engineer, then it will be deemed as a Dispute under this Agreement and shall be resolved in accordance with Article 27 (*Governing Law and Dispute Resolution*).

17.4.3 The Concessionaire shall be responsible for procuring from the Independent Engineer any approval, consent, determination, certificate or other document or decision required or contemplated under any GoS Project Document within the necessary timelines stated herein and any delay in the procurement of the same shall not give rise to any claim for extension in the Scheduled Commencement Date or Scheduled COD (First Segment) and/or the Scheduled COD (Second Segment), adjustment in the Implementation Schedule or any additional payments (including Relief Costs and/or Loss of Revenue).

17.5 **INDEPENDENT ENGINEER REMUNERATION**

17.5.1 Subject to funding in accordance with Section 17.5.2, the Concessionaire (and, until the Commencement Date, the Sponsors) shall be solely responsible for the payment of fees and expenses due to the Independent Engineer under the Independent Engineer Contract (the **Independent Engineer Payments**). In the event the Independent Engineer terminates the Independent Engineer Contract due to the Independent Engineer Payments not being paid, the GoS (without prejudice to its rights under Article 21) shall be entitled to appoint a third party to carry out the functions of the Independent Engineer (the **GoS Appointed IE**) and all fees and expenses relating to the same shall be payable on demand of the GoS by the Sponsors or the Concessionaire (as the case maybe). The GoS shall be

entitled to encash the Performance Securities (to the extent demanded) or deduct such amounts from payments due by the GoS to the Concessionaire, in case the Sponsors or the Concessionaire fail to provide the necessary funds demanded by GoS to pay the GoS Appointed IE. Where a GoS Appointed IE is appointed by the GoS, all references to Independent Engineer herein shall be considered as a reference to the GoS Appointed IE.

17.5.2 The Independent Engineer Payments shall be funded by the:

17.5.3 Sponsors from the date of signing of the Independent Engineer Contract until the Commencement Date; and

17.5.4 the Concessionaire from the Commencement Date until the Final Expiry Date.

17.6 **INDEPENDENT ENGINEER PAYMENT ACCOUNT**

17.6.1 The Concessionaire shall establish and maintain the Independent Engineer Payment Account from the date of signing of the Independent Engineer Contract until the Final Expiry Date.

17.6.2 The Concessionaire shall issue standing instructions (that may be suspended, amended or revoked only with the consent of the Parties) to the Independent Engineer Payment Account Bank (the **Independent Engineer Payment Account Standing Instructions**) for making payments to the Independent Engineer in accordance with the Independent Engineer Contract.

17.7 **SELECTION OF INDEPENDENT AUDITOR**

17.7.1 Within ten (10) Days from the Effective Date, the Concessionaire shall provide the GoS with a list of three (3) reputable firms of auditors for appointment of the Independent Auditor (the **First IA List**). In the event the proposed Independent Auditor is a consortium of auditors then: (a) a lead consortium member shall serve as the lead Independent Auditor and shall be fully responsible for the overall management, coordination and implementation of the services under the Independent Auditor Contract; and (b) the consortium members shall be jointly and severally liable for the services under the Independent Auditor Contract.

17.7.2 Within seven (7) Days of receipt by the GoS of the First IA List, the GoS shall (subject to one (1) of the firms in the First IA List being acceptable to the GoS) select a firm of auditors from First IA List and the Parties shall finalise and execute the Independent Auditor Contract.

17.7.3 If the firms of auditors identified in the First IA List are not acceptable to the GoS, the Commercial Parties shall select as the Independent Auditor a firm acceptable to them and the Parties shall finalise and execute the Independent Auditor Contract.

17.7.4 The Independent Auditor Contract shall be executed within thirty (30) Days from the Effective Date.

17.7.5 The Independent Auditor shall provide the services set out in the Independent Auditor Contract which shall be in accordance with the Indicative Independent Auditor Terms of

Reference, provided, however, upon execution of the Independent Auditor Contract, the terms and conditions including scope of work under the Independent Auditor Contract shall supersede.

17.8 **TERM OF APPOINTMENT OF THE INDEPENDENT AUDITOR**

17.8.1 The appointment of the Independent Auditor shall initially be for a term not less than the Development Period (the **Independent Auditor Initial Term**).

17.8.2 The Concessionaire shall ensure that until the Final Expiry Date, an Independent Auditor is retained, for the purposes of carrying out the functions of the Independent Auditor under this Agreement.

17.8.3 Prior to the expiry of the Independent Auditor Initial Term, the Concessionaire, the Sponsors and GoS shall have the option to extend the Independent Auditor Contract (on terms and conditions agreeable to the Concessionaire, the Sponsors, GoS and the Independent Auditor) or appoint a new independent auditor (such appointment to be effective upon expiry of the Independent Auditor Initial Term). In the event a new Independent Auditor is to be appointed, the Commercial Parties shall follow process set out in Section 17.7 (*Selection of Independent Auditor*), *mutatis mutandis*, for appointment of a new independent auditor so as to ensure that at all times until the Final Expiry Date, an Independent Auditor is retained.

17.8.4 The Commercial Parties shall have the right to terminate the Independent Auditor Contract in accordance with its terms provided, however, that prior to such termination and subject to Section 17.11 (*Independent Auditor Remuneration*), the Commercial Parties shall select and appoint a replacement Independent Auditor and execute (with SMTA), the Independent Auditor Contract.

17.8.5 The Concessionaire shall ensure that all provisions of this Agreement pertaining to the Independent Auditor and its responsibilities in respect of the matters set out herein are duly incorporated in the Independent Auditor Contract.

17.9 **INDEPENDENT AUDITOR AUTHORIZED SIGNATORIES**

17.9.1 The Parties shall require the Independent Auditor to designate and notify, suitably qualified and appropriate representatives, authorized to represent the Independent Auditor in all matters relating to this Agreement and sign for and on behalf of the Independent Auditor any communication or document required to be signed by the Independent Auditor (the **Independent Auditor Authorized Representative(s)**). Any document shall be valid and effective only if is signed by such Independent Auditor Authorized Representative. The Independent Auditor may, by prior notice in writing to the Parties, substitute the Independent Auditor Authorized Representative.

17.10 **DECISION OF INDEPENDENT AUDITOR & DISPUTE RESOLUTION**

17.10.1 Subject to Section 17.10.2, any advice, instruction, certification, approval or determination of the Independent Auditor shall be binding on the Parties.

17.10.2 In the event the GoS, SMTA, the Sponsors or the Concessionaire disagree with any decision of the Independent Auditor, then it will be deemed as a Dispute under this Agreement and shall be resolved in accordance with Article 27 (*Governing Law and Dispute Resolution*).

17.10.3 The Concessionaire shall be responsible for procuring from the Independent Auditor any approval, consent, determination, certificate or other document or decision required or contemplated under this Agreement within the necessary timelines stated herein and any delay in the procurement of the same shall not give rise to any claim for extension of the Scheduled Commencement Date or Scheduled COD (First Segment) and/or the Scheduled COD (Second Segment), adjustment in the Implementation Schedule or any additional payments (including Relief Costs and/or Loss of Revenue).

17.11 **INDEPENDENT AUDITOR REMUNERATION**

17.11.1 Subject to funding in accordance with Section 17.11.2, the Concessionaire (and, until the Commencement Date, the Sponsors) shall be solely responsible for the payment of fees and expenses due to the Independent Auditor under the Independent Auditor Contract (the **Independent Auditor Payments**). In the event the Independent Auditor terminates the Independent Auditor Contract due to the Independent Auditor Payments not being paid, the GoS (without prejudice to its rights under Article 21 (*Termination*)) shall be entitled to appoint a third party to carry out the functions of the Independent Auditor (the **GoS Appointed IA**) and all fees and expenses relating to the same shall be payable on demand of the GoS by the Sponsors or the Concessionaire (as the case maybe). The GoS shall be entitled to encash the Performance Securities (to the extent demanded) or deduct such amounts from payments due by the GoS to the Concessionaire, in case the Sponsors or the Concessionaire fail to provide the necessary funds demanded by GoS to pay the GoS Appointed IA. Where a GoS Appointed IA is appointed by the GoS, all references to Independent Auditor herein shall be considered as a reference to the GoS Appointed IA.

17.11.2 The Independent Auditor Payments shall be funded by the:

17.11.2.1 the Sponsors from the date of signing of the Independent Auditor Contract until the Commencement Date; and

17.11.2.2 the Concessionaire from Commencement Date until the Final Expiry Date.

17.12 **INDEPENDENT AUDITOR PAYMENT ACCOUNT**

17.12.1 The Concessionaire shall establish and maintain the Independent Auditor Payment Account from the date of signing of the Independent Auditor Contract until the Final Expiry Date.

17.12.2 The Concessionaire shall issue standing instructions (that may be suspended, amended and/or revoked only with the consent of the Commercial Parties) to the Independent Auditor Payment Account Bank (the **Independent Auditor Payment Account Standing Instructions**) for making payments to the Independent Auditor in accordance with the Independent Auditor Contract.

18. INSURANCE

18.1 INSURANCE POLICIES

18.1.1 The Concessionaire, at its sole cost and expense, shall obtain and maintain in effect such Insurance Policies and coverage as is required by the Legal Requirements, the Financing Documents, Good International Industry Practices, **SCHEDULE G (*Minimum Insurance Requirements*)** and this Article 18 (*Insurance*) (the **Insurance Policies**); provided, that such coverage may be changed from time to time with the prior written consent of the GoS Parties (in consultation with the Independent Experts), which consent shall not be unreasonably withheld or delayed. Nothing under this Section 18.1 (*Insurance Policies*) shall prevent the Concessionaire, at its sole cost and expense, from procuring insurance cover in addition to those required under this Section 18.1 (*Insurance Policies*).

18.1.2 Subject to Section 18.4 (*Compliance With Insurance Obligations*) and compliance with the Legal Requirements, any Insurance Policies or cover placed by the Concessionaire shall:

18.1.2.1 be placed through a competitive process; and

18.1.2.2 subject to compliance with other applicable Laws, include reinsurance to the extent of ninety-five percent (95%) of one hundred percent (100%) of sum insured with reputable underwriters having not less than Standard & Poor's A-/AM Best A- or equivalent rating.

18.2 POLICY ENDORSEMENTS

18.2.1 The Concessionaire shall cause the insurers to provide the following endorsement items in the Concessionaire's 'Third-Party Liability' Insurance Policy (as provided in paragraph 3 of **SCHEDULE G (*Minimum Insurance Requirements*)**) and, if applicable, umbrella or excess liability Insurance Policies, relating to the ownership, construction, rehabilitation, operation and maintenance of the E-Buses Assets:

18.2.1.1 the GoS Parties and the Independent Experts shall each receive at least thirty (30) Days prior notice of any cancellation of the Insurance Policies except in the event of non-payment of premium, in which case the prior notice of cancellation period shall be ten (10) Days and any such notice shall be delivered by facsimile and confirmed in writing delivered by first class mail or, if sent from an office outside Pakistan, by international courier;

18.2.1.2 the insurance shall be primary with respect to the interest of each GoS Party and any other insurance maintained by it is excess and not contributory with such Insurance Policies; and

18.2.1.3 a cross-liability Section shall be made a part of the policy to provide that in the event of claims being made by reason of:

- (a) personal or bodily injuries suffered by any employee of one insured thereunder for which another insured thereunder is or may be liable; or
- (b) damage to property belonging to any insured thereunder for which another insured thereunder is or may be liable,

then the policy shall cover such insured against whom a claim is made or may be made in the same manner as if separate policies had been issued to each insured thereunder, except with respect to the limits of insurance.

18.2.2 The Concessionaire shall cause its insurers to waive all rights of subrogation against the GoS Parties (and their employees and contractors) and the Concessionaire (and its employees and Contractors) in respect of a claim arising under its Insurance Policies.

18.2.3 The Concessionaire shall be responsible for all deductibles under all policies.

18.3 **EVIDENCE OF COVER**

18.3.1 Not later than thirty (30) Days after the date any of the Insurance Policies and coverage required to be in effect in accordance with this Article 18 (*Insurance*) are issued, or renewed in accordance with their terms, the Concessionaire shall cause its insurers or agents to provide the GoS Parties and the Independent Experts with such Insurance Policies, and where the Insurance Policies are being renewed, provide Insurance Policies evidencing the same terms and conditions as the expiring policies and coverage.

18.3.2 The Concessionaire shall provide the GoS Parties and the Independent Experts with copies of receipts or statements from the Concessionaire's insurers evidencing payment by the Concessionaire of the premiums in respect of such Insurance Policies, reinsurance policies and cover.

18.4 **COMPLIANCE WITH INSURANCE OBLIGATIONS**

18.4.1 With regard to Sections 18.1 (*Insurance Policies*) to 18.3 (*Evidence of Cover*), to the extent that the Concessionaire is in compliance with insurance obligations under the Financing Documents which provide wider coverage, terms more favourable to the Concessionaire and include the policy endorsements set out in Section 18.2 (*Policy Endorsements*), the Concessionaire shall be deemed to be in compliance with its obligations under Sections 18.1 (*Insurance Policies*) to 18.3 (*Evidence of Cover*).

18.4.2 Failure by the Concessionaire to obtain the insurance coverage or Insurance Policies required by Sections 18.1 (*Insurance Policies*) or 18.3 (*Evidence of Cover*), respectively, shall not relieve the Concessionaire of its obligations under this Article 18 (*Insurance*) or in any way relieve or limit the Concessionaire's obligations and liabilities under any other provision of this Agreement.

18.4.3 If the Concessionaire fails to procure or maintain any insurance required pursuant to this Article 18 (*Insurance*), then the GoS Parties shall have the right to procure such insurance at the Concessionaire's expense, provided that the GoS Parties shall provide a twenty (20) Days prior notice to the Concessionaire of their intention to exercise such right, unless such intention arises from the Concessionaire's non-payment of premiums for existing insurance, in which case the GoS Parties shall provide at least five (5) Days' prior notice of such intention.

18.4.4 If the Concessionaire fails to reimburse the GoS Parties for such premiums within seven (7) Days of being notified to do so, the GoS Parties shall be entitled to payment of such

amount(s) under the Performance Securities or by deducting such amount(s) from any payments due to the GoS Parties by the Concessionaire.

18.5 **APPLICATION OF PROCEEDS**

Subject to Section 19.10 (*Reinstatement of the E-Buses Assets*), the Concessionaire shall apply any and all insurance proceeds received in connection with the damage to or loss of the E-Buses Assets, toward the repair, reconstruction or replacement of the E-Buses Assets, in accordance with the provisions of this Agreement.

18.6 **UNINSURABILITY**

18.6.1 The Concessionaire need not affect or maintain any particular insurance to the extent that it covers a risk which, after Financial Close, is agreed or determined in accordance with this Section 18.6 (*Uninsurability*) to be Uninsurable, for so long as it remains Uninsurable.

18.6.2 Should the Concessionaire not be required to obtain an insurance in reliance on its rights under Section 18.6.1, the Concessionaire shall at all times act in good faith with respect to the GoS Parties and shall not less than forty-five (45) Business Days before the Concessionaire is required to effect that Insurance Policy:

18.6.2.1 notify the GoS Parties and the Independent Experts on becoming aware that the risk is, or is likely to become Uninsurable;

18.6.2.2 provide the GoS Parties and the Independent Experts with the names and contact details of the Concessionaire's insurance broker and other insurance advisers for the purposes of attempting to arrange that insurance;

18.6.2.3 provide the GoS Parties and the Independent Experts a report by the Concessionaire's insurance broker or insurance advisers detailing the steps which have been taken by or on behalf of the Concessionaire to obtain that insurance and the terms if any upon which that insurance is available; and

18.6.2.4 provide the GoS Parties and the Independent Experts written authority for the Concessionaire's insurance broker or insurance advisers to disclose to the GoS Parties and the Independent Experts, and provide all documents and evidencing, the steps which have been taken by or on behalf of the Concessionaire to obtain that insurance and the terms if any upon which that insurance is available.

18.6.3 After receipt of the notice under Section 18.6.2, the GoS Parties shall notify the Concessionaire that the GoS Parties:

18.6.3.1 agree that the risk is Uninsurable; or

18.6.3.2 disagrees that the risk is Uninsurable, in which case the GoS Parties may request the Concessionaire to effect and maintain the relevant insurance or Substitute Insurance if the GoS Parties reasonably consider that the relevant insurance or Substitute Insurance is available on commercially reasonable terms.

- 18.6.4 Subject to Section 18.6.5, the Concessionaire shall give effect to a request under Section 18.6.3.2 promptly.
- 18.6.5 The Concessionaire shall promptly carry out each request made by the GoS Parties in accordance with the terms of the request under Section 18.6.3.2, unless it Disputes the reasonableness of the GoS Parties' request and within ten (10) Business Days refers the Dispute for resolution in accordance with Article 27 (*Governing Law and Dispute Resolution*).
- 18.6.6 Not used.
- 18.6.7 If a risk is agreed or determined to be Uninsurable in accordance with this Section 18.6 (*Uninsurability*), the Parties must meet to discuss the means by which the risk may be managed, including:
- 18.6.7.1 consideration of the issue of self-insurance by either Party;
 - 18.6.7.2 if, though Uninsurable, it is still possible to insure the risk by paying high premiums, taking out the insurance cover, and passing the premium charges through to the GoS under the Capital Cost Recovery Payment from the date the insurance cover is taken out;
 - 18.6.7.3 for a period to be specified by the GoS Parties, adjust acceptable credit rating of insurer, or allow lower insurance limits in such Insurance Policy such that Excessive Insurance Premium is eliminated or reduced to a mutually acceptable level, which shall be shared equally with the Concessionaire; or
 - 18.6.7.4 assigning some other allocation of responsibility to the risk.
- 18.6.8 If the Parties agree that the GoS shall indemnify the Concessionaire against the Uninsurable risk in accordance with Section 18.6.7, the Parties must agree on the beneficiaries of the indemnity, and deductible payable to the GoS, and the amount, scope and period of cover under the indemnity.
- 18.6.9 If a risk is agreed or determined under this Section 18.6 (*Uninsurability*) to be Uninsurable but, after the meeting in accordance with Section 18.6.7, the Parties cannot agree as to how to manage the risk, then:
- 18.6.9.1 this Agreement will continue but each Capital Cost Recovery Payment will be adjusted to deduct an amount equal to the premium that was payable by the Concessionaire for insurance of such a risk immediately prior to such risk becoming Uninsurable (but will be increased to reflect the premium payable if the risk ceases to be Uninsurable and the Concessionaire takes out insurance to cover that risk); and
 - 18.6.9.2 on the occurrence of the risk:
 - (a) to the extent it does not amount to an Uninsurable Force Majeure Event, the GoS may at its option indemnify the Concessionaire for the loss or damage suffered or incurred by the Concessionaire to the extent such loss or damage arose from the occurrence of that risk, up to an amount equal to the insurance proceeds that would have been payable had the relevant insurance continued to be available, or, if the insurance had never been available, the amount agreed by the Parties to cover the

loss or damage, or if no agreement, determined in accordance with Article 27 (*Governing Law and Dispute Resolution*), and this Agreement will continue. Any such indemnification amount shall be adjusted from the Equity Recovery Charge component of the upcoming Capital Cost Recovery Payments in such manner as agreed between the Parties in writing;

- (b) to the extent it does not amount to an Uninsurable Force Majeure Event and the GoS does not exercise its right to indemnify the Concessionaire under this Section 18.6 (*Uninsurability*), then the Concessionaire must reinstate or repair any damage or destruction to the Project Activities, the E-Buses Assets or the Project Site or any part of them in accordance with the terms of this Agreement; or
- (c) if occurrence of the risk amounts to an Uninsurable Force Majeure Event within the meaning of Article 19 (*Force Majeure*), then Article 19 (*Force Majeure*) below shall apply to occurrence of such risk.

18.6.10 If the GoS (in its sole and absolute discretion) elects to indemnify the Concessionaire after the occurrence of a risk that is Uninsurable in terms of Section 18.6.9.2(a), the GoS will, within sixty (60) Business Days of the occurrence of the Uninsurable risk (or such longer period as the GoS reasonably requires in order to assess the situation and form its intention), require the Concessionaire:

18.6.10.1 to reinstate or repair the damage or destruction to the Project Activities, the E-Buses Assets or the Project Site or any part of them caused by the Uninsurable risk in accordance with Section 6.2.3, subject to Section 18.6.9.2(a) above;

18.6.10.2 to reinstate or repair the damage or destruction to the Project Activities, the E-Buses Assets or the Project Site or any part of them caused by the Uninsurable risk in accordance with Section 6.2.3 on the basis of different specifications than those for the original Project Activities or the E-Buses Assets (as applicable), in which case the GoS will issue a Change in Scope Order setting out the different specifications and Section 6.22 (*Change in Scope*) shall apply.

18.6.11 If the Concessionaire is not required to effect or maintain any particular insurance under this Article 18 (*Insurance*) then:

18.6.11.1 the Concessionaire must, in good faith, approach the insurance market on a regular basis and in any event at intervals of no more than six (6) months, to establish the extent to which the relevant insurance remains an insurance that is unavailable in respect of projects in the nature of the Project (or is not available on commercially reasonable terms); and

18.6.11.2 provide the GoS Parties and the Independent Experts with all relevant information concerning those approaches on a regular basis and in any event at intervals of no more than six (6) months.

18.6.12 If an Uninsurable risk (which would, but for the operation of Section 18.6.1, otherwise be required to be insured under this Article 18 (*Insurance*)) ceases to be Uninsurable, the Concessionaire must immediately take out and maintain that insurance and otherwise comply with the requirements of this Article 18 (*Insurance*) with respect to that insurance

and the provisions of Section 18.6.1 will not apply to relieve the Concessionaire from the obligations to effect and maintain that insurance.

18.6.13 To the extent the Concessionaire does not affect or maintain any particular insurance under Section 18.6.1, the GoS may set off the amounts of any premiums not paid by the Concessionaire as a consequence against one or more Capital Cost Recovery Payment. For these purposes, the premiums saved will be deemed to be the lower of the maximum amount budgeted for the insurance in the Base Case Financial Model and the amount previously paid for the insurance by the Concessionaire.

19. FORCE MAJEURE

19.1 FORCE MAJEURE EVENT

A **Force Majeure Event** means any circumstance, event or condition (or combination thereof) beyond the reasonable control, directly or indirectly, of the Affected Party but only to the extent that:

- 19.1.1 such circumstance, event or condition, despite the exercise of diligence, cannot be prevented, avoided or overcome by the Affected Party;
- 19.1.2 such circumstance, event or condition prevents the performance by the Affected Party of its obligations under or pursuant to this Agreement (save for payment obligations);
- 19.1.3 such circumstance, event or condition was not foreseeable, or if foreseeable, could not have been prevented or avoided or overcome by the Affected Party having taken all reasonable precautions and due care;
- 19.1.4 the Affected Party has taken all reasonable precautions, due care and measures to prevent, avoid or overcome the effect of such circumstance, event or condition on its ability to perform its obligations under this Agreement and to mitigate its consequences;
- 19.1.5 such circumstance, event or condition is not the direct or indirect result of a breach or failure by the Affected Party to perform any of its obligations under this Agreement or any other Project Agreement (as the case may be);
- 19.1.6 such circumstance, event or condition is without fault or negligence of the Affected Party; and
- 19.1.7 the Affected Party has given the other Party notice in accordance with Section 19.5.1, and shall consist of “*NPFME*” and “*PFME*”.

19.2 NPFME

An **NPFME** means a Force Majeure Event which is not a PFME, including:

- 19.2.1 lightning, fire, earthquake, unusual flood, storm, cyclone, tornado, tsunami, typhoon or other natural disaster or act of God;
- 19.2.2 pandemic, epidemic or plague;
- 19.2.3 accident, explosion or chemical contamination;
- 19.2.4 strikes, works to rule or go-slows (other than solely by employees of the Affected Party or its Affiliates);
- 19.2.5 the long-term, large-scale changes in the global or regional climate due to human-induced global warming or other anthropogenic causes including rising sea levels, extreme weather events, changes in sea temperatures, or significant alterations in ocean salinity and currents,

that materially disrupt the implementation of the Project and cannot be reasonably mitigated by the Concessionaire;

19.2.6 the discovery of hydrocarbons on, under or within the Project Site; and

19.2.7 the discovery of unexploded bombs or munitions on or within the Project Site.

19.3 **PFME**

A **PFME** means:

19.3.1 acts of war (whether declared or not), invasion, armed conflict, act of foreign enemy or blockade in each case occurring within Pakistan or directly involving Pakistan;

19.3.2 acts of rebellion, riot, civil commotion, strikes of a political nature, act or campaign of terrorism, or sabotage of a political nature, in each case, occurring within Pakistan;

19.3.3 any boycott, sanction, embargo penalty or other restriction imposed directly on Pakistan by the government of **[insert main equipment and materials' countries of origin]**²¹ during the period up to and including the latest of the COD (Second Segment) or the expiry of the relevant warranty period stipulated in the Construction Contract and/or the Supply Contract;

19.3.4 any action or failure to act by a Government Authority, including any action or failure that results in any Approval:

19.3.4.1 ceasing to remain in full force and effect; or

19.3.4.2 not being issued or renewed in a timely manner upon due application having been made,

provided, that the proper exercise of any rights of a Government Authority in response to the Concessionaire default under or breach of the terms of any Approval, or any breach of any Legal Requirements by the Concessionaire, shall not constitute a PFME; and

19.3.5 a Change in Law.

19.4 **CERTAIN EVENTS NOT FORCE MAJEURE EVENTS**

Notwithstanding that a Force Majeure Event may otherwise exist, the provisions of this Article 19 (*Force Majeure*) shall not excuse:

19.4.1 failure to make a payment of money in accordance with the Party's obligations under this Agreement;

19.4.2 any failure by the Concessionaire or its Contractors to obtain or maintain any Approval due to negligence or default by the Concessionaire or such Contractor;

19.4.3 any failure to research, consider, plan for or take into account reasonably foreseeable ground and weather conditions at the Project Site;

²¹ List to be inserted based on source of key items of equipment only.

- 19.4.4 any failure by a Contractor which results in the failure or inability of the Concessionaire to perform its obligations under this Agreement where the cause of such failure by the Contractor would not otherwise constitute a Force Majeure Event pursuant to this Agreement;
- 19.4.5 late performance by the Concessionaire or any Contractor, caused by the failure of the Concessionaire or such Contractor for any reason, including failure to engage qualified sub-contractors and suppliers, failure to hire an adequate number of personnel or labour, or any failure of sub-contractors hired by the Concessionaire to perform their respective obligations;
- 19.4.6 late delivery of equipment, machinery, Buses or materials caused by default, negligent acts or omissions on part of the Concessionaire or any Contractor;
- 19.4.7 inability to obtain or maintain adequate funding for the Project;
- 19.4.8 mechanical or electrical breakdown or failure of equipment, machinery or E-Buses Assets owned or operated by any Party due to the manner in which the equipment, machinery or E-Buses Assets has been operated or maintained;
- 19.4.9 delays resulting from reasonably foreseeable unfavourable weather (including monsoon) or sea conditions or other similar reasonably foreseeable adverse conditions;
- 19.4.10 delay or non-performance of any Project Activities as a result of SARS-CoV-2, except where the Concessionaire is restricted from undertaking Project Activities at the Project Site due to measures imposed by a Government Authority; in which case such delay or non-performance shall be treated as a NPFME provided the Concessionaire has complied with the requirements of this Article 19 (*Force Majeure*) (as applicable to a NPFME); and
- 19.4.11 submission of documents and/or drawings for approval by the GoS Parties or the Independent Experts at a time which does not leave sufficient time for review thereof by the GoS Parties or the Independent Experts within the time periods provided therefor in this Agreement.

19.5 **OBLIGATIONS**

- 19.5.1 If a Party (the **Affected Party**) desires to invoke a Force Majeure Event as a cause for delay or failure in performance of any of its obligations under this Agreement (other than payment of money), it shall:
 - 19.5.1.1 as soon as reasonably practicable (and in any event no later than ten (10) Days) after the Affected Party first had knowledge of the occurrence of a Force Majeure Event, as a condition precedent to its entitlement under this Article 19 (*Force Majeure*), give notice to the other Parties and the Independent Experts of the circumstance, event or condition which it alleges constitutes the Force Majeure Event and an estimate of its likely duration. If the Affected Party does not deliver such notice in accordance with the terms hereof, such Affected Party shall not be entitled to invoke the benefits of Articles/Sections 3.4.1, 8.4.1, 19 (*Force Majeure*) or 20 (*Relief Costs, Loss of Revenue or Savings*) of this Agreement in respect of the relevant Force Majeure Event;

19.5.1.2 within ten (10) Days of the date of a notice issued pursuant to Section 19.5.1.1, provide a written report identifying the Force Majeure Event and the Affected Party's understanding of its effects, including particulars of the circumstance, event or condition, a general description of the obligations likely to be affected, an estimate of its likely duration and a statement of the actions to be taken in order to comply with its obligations under this Article 19. If the Affected Party does not deliver such report in accordance with the terms hereof, such Affected Party shall not be entitled to invoke the benefits of Articles/Sections 3.4.1, 8.4.1, 20 (*Relief Costs, Loss of Revenue or Savings*) or 21 (*Termination*) of this Agreement in respect of the relevant Force Majeure Event; and

19.5.1.3 from time to time, at reasonable intervals, and upon any reasonable request from any other Party, provide updates as to the matters set out in Section 19.5.1.2.

19.5.2 The Affected Party shall:

19.5.2.1 make all reasonable efforts to prevent and reduce to a minimum and mitigate the effect of any Force Majeure Event, including recourse to alternate sources of services, equipment and materials, provided that, if there occurs a Force Majeure Event, the effects of which cannot be mitigated by the Concessionaire, and results in the E-Buses Assets not delivering (wholly or partially) Guaranteed Annual Mileage, the GoS Parties shall have the right to take such actions as are necessary to resume delivery of Guaranteed Annual Mileage to ensure that the Bus transportation services are provided to the Commuters;

19.5.2.2 as soon as reasonably possible, and in accordance with Good International Industry Practice, ensure the resumption of normal performance of this Agreement after the cessation of any Force Majeure Event or its effects and shall otherwise perform its obligations under this Agreement to the extent not excused under this Article 19 (*Force Majeure*); and

19.5.2.3 within three (3) Days following the cessation of any Force Majeure Event, submit to the other Parties reasonable proof of the nature of such delay and its effect upon the performance of its obligations under this Agreement.

19.5.3 With respect to the Concessionaire only, if a Force Majeure Event occurs that affects the Concessionaire, such event may only be invoked with respect to the part of the Project affected by such event and not with respect to any other part of the Project not so affected, provided that, with respect to the operation of any part of the Project not so affected, such part of the Project is capable of independent or partial operation in accordance with Good International Industry Practice.

19.6 **EFFECTS OF A FORCE MAJEURE EVENT GENERALLY**

The Affected Party shall not be liable for any delay or failure in performing its obligations under this Agreement due to a Force Majeure Event; provided, that no relief shall be granted to the Affected Party pursuant to this Article 19 (*Force Majeure*) to the extent that such failure or delay:

- 19.6.1 would have nevertheless been experienced by the Affected Party had the Force Majeure Event not occurred; or
- 19.6.2 was caused by the failure of the Affected Party to comply with its obligations under Section 19.5.1.

19.7 **EFFECTS OF A FORCE MAJEURE EVENT DURING DEVELOPMENT PERIOD**

If, during the Development Period, a Force Majeure Event occurs which results in material damage to or loss of the E-Buses Assets (while in the custody, care and control of the Concessionaire) or a delay in achieving the COD (First Segment) or the COD (Second Segment), in addition to any remedies the Concessionaire may have under Section 8.4 (*Deemed COD*) or Article 20 (*Relief Costs, Loss of Revenue or Savings*):

- 19.7.1 the Parties and the Independent Experts shall consult with one another as soon as practicable after the giving of a notice as provided in Section 19.5.1.1 concerning the effect of such Force Majeure Event upon the Implementation Schedule, and the Implementation Schedule shall be adjusted equitably taking into account the effect which the Affected Party reasonably demonstrates is properly attributable to such Force Majeure Event and the ability of such Party to re-schedule its activities to minimise the overall delays to the Implementation Schedule resulting from such event; and
- 19.7.2 if the Parties and the Independent Experts are unable to agree upon the equitable adjustment to the Implementation Schedule within a period of sixty (60) Days from the date the notice referred to in Section 19.7.1 is received, the Dispute shall be referred for resolution pursuant to Article 27 (*Governing Law and Dispute Resolution*) for the determination of the adjustment to the Implementation Schedule.

19.8 **EFFECTS OF A FORCE MAJEURE EVENT AFTER COD (FIRST SEGMENT)**

- 19.8.1 On and from the COD (Second Segment):

- 19.8.1.1 if an NPFME or Uninsurable NPFME affects the ability of:

- (a) the Concessionaire to meet the Guaranteed Annual Mileage; or
- (b) SMTA to perform its obligations under this Agreement,

the GoS shall, during the NPFME Period, continue to make the Capital Cost Recovery Payments based on the extent the Concessionaire is capable of providing the transportation services through the Buses in terms of this Agreement as determined by the Independent Engineer (regardless of whether Commuters can travel on the Buses and without applying the Deduction for Reduced Contracted Availability);

- 19.8.1.2 if a PFME or Uninsurable PFME affects the ability of the Concessionaire to meet the Guaranteed Annual Mileage, the GoS shall, during the PFME Period, continue to make:
- (a) Capital Cost Recovery Payments in respect of the Availability Benchmark (without applying the Deduction for Reduced Contracted Availability); and
 - (b) the Loss of Revenue;

19.8.1.3 If a PFME or Uninsurable PFME does not affect the ability of the Concessionaire to meet the Guaranteed Annual Mileage, but affects the ability of the Concessionaire to deliver the transportation services through the Buses, the GoS shall, during the PFME Period, continue to make:

- (a) Capital Cost Recovery Payments in respect of the Availability Benchmark (without applying the Deduction for Reduced Contracted Availability); and
- (b) the Loss of Revenue; and

19.8.1.4 if a PFME or Uninsurable PFME affects the performance of SMTA's obligations under this Agreement, the GoS shall, during the PFME Period, continue to make:

- (a) Capital Cost Recovery Payments; and
- (b) the Loss of Revenue.

19.8.2 If the Concessionaire has incurred or suffered any Relief Cost and/or Loss of Revenue as a result of a PFME, the provisions of Article 20 (*Relief Costs, Loss of Revenue and Savings*) shall apply.

19.9 **EXTENSION OF TERM**

19.9.1 Without prejudice to the foregoing, if on or after the COD (Second Segment):

19.9.1.1 there occurs a NPFME affecting the Concessionaire, the Concession Period shall be extended by the period equivalent to the period during which the Guaranteed Annual Mileage cannot be met (such extension to be reduced proportionately to the extent the E-Buses Assets are partially Available and/or to the extent the Concessionaire receives insurance proceeds in respect of loss of Revenue, compensating it for such Unavailability); and

19.9.1.2 there occurs a PFME, the Concession Period may, at the GoS Parties' option, be extended by a period equivalent to any period of relief for a PFME during which GoS has continued to pay the Capital Cost Recovery Payments, provided that during any such extension period, GoS shall not be obliged to pay any costs whatsoever in respect of Guaranteed Annual Mileage and the Concessionaire shall be able to recover its costs through the Revenues.

19.9.2 Any extension period under Section 19.9.1.2 shall run successively with any extension granted under Section 19.9.1.1.

19.10 **REINSTATEMENT OF THE E-BUSES ASSETS**

19.10.1 If a Force Majeure Event causes an Event of Loss, the Concessionaire shall rebuild, repair and/or restore the E-Buses Assets, using all insurance proceeds or other amounts actually received on account of the Event of Loss, except proceeds from delay in start-up or business interruption insurance (collectively, **Casualty Proceeds**), together with any other amounts that are available to the Concessionaire for such rebuilding, repair, replacement and/or restoration, in accordance with this Section 19.10 (*Reinstatement of the E-Buses Assets*).

19.10.2 All Casualty Proceeds received by the Concessionaire shall be deposited by the Concessionaire into a restoration account segregated from all other funds of the Concessionaire (the **Restoration Account**) to be applied as provided in Section 19.10.5. The Concessionaire:

19.10.2.1 shall diligently pursue all of its rights to compensation against any person with respect to such Event of Loss;

19.10.2.2 may, in the reasonable judgement of the Concessionaire, compromise or settle any claim against any person with respect to such Event of Loss; and

19.10.2.3 shall hold all amounts of Casualty Proceeds (including financial instruments) received by the Concessionaire in respect of any Event of Loss (after deducting all reasonable expenses incurred by the Concessionaire in litigating, arbitrating, compromising or settling any claims) in the Restoration Account.

19.10.3 As soon as reasonably practicable but no later than the date of receipt by the Concessionaire of any Casualty Proceeds, the Concessionaire shall make a good faith determination as to whether:

19.10.3.1 the E-Buses Assets or such portion thereof that has been affected by the Event of Loss can be rebuilt, repaired, or restored to permit operations of the E-Buses Assets or such portion thereof on a commercially feasible basis; and

19.10.3.2 the Casualty Proceeds, together with any other amounts that are available to the Concessionaire for such rebuilding, repair and/or restoration, are sufficient to permit such rebuilding, repair and/or restoration of the E-Buses Assets or such portion thereof.

19.10.4 The determination of the Concessionaire under Section 19.10.3 shall be evidenced by a certificate of a responsible officer of the Concessionaire to be delivered to the Independent Experts and the GoS Parties which, in the event the Concessionaire determines that the E-Buses Assets or such portion thereof can be rebuilt, repaired and/or restored to permit operation thereof on a commercially feasible basis, shall also set out a reasonable good faith estimate by the Concessionaire of the total cost of such rebuilding, repair and/or restoration.

19.10.5 If the Parties agree or the Independent Experts determine under Section 19.10.3 that:

19.10.5.1 the E-Buses Assets cannot be rebuilt, repaired, replaced and/or restored to permit operations on a commercially feasible basis or that the Casualty Proceeds, together with any other amounts that are available to the Concessionaire for such rebuilding, repair and/or restoration, are not sufficient to permit such rebuilding, repair and/or restoration, then any Commercial Party may elect to terminate this Agreement in accordance with Section 21.7.3 and all of the Casualty Proceeds shall be distributed in the following order of priority:

- (a) first, to the payment of costs and expenses actually incurred and duly evidenced by the Concessionaire in the performance of its obligations under Section 19.10.7 and not already compensated for by way of payments otherwise received by the Concessionaire;

- (b) second, to the payment of any amount due to the GoS Parties under the Project Agreements; and
- (c) third, to the Concessionaire or to whomever may be lawfully entitled to receive the same or as a court of competent jurisdiction may direct, any surplus then remaining from such proceeds;

19.10.5.2 only a portion of the E-Buses Assets can be rebuilt, repaired, replaced and/or restored to permit operations on a commercially feasible basis and that the Casualty Proceeds, together with any other amounts that are available to the Concessionaire for such rebuilding, repair and/or restoration, are sufficient to permit such rebuilding, repair, replacement and/or restoration, then GoS may elect to terminate this Agreement in accordance with Section 21.8.3 and all of the Casualty Proceeds shall be distributed in the following order of priority:

- (a) first, to the payment of costs and expenses actually incurred and duly evidenced by the Concessionaire in the performance of its obligations under Section 19.10.7 and not already compensated for by way of payments otherwise received by the Concessionaire;
- (b) second, to the payment of any amount due to the GoS Parties under the Project Agreements; and
- (c) third, to the Concessionaire or to whomever may be lawfully entitled to receive the same or as a court of competent jurisdiction may direct, any surplus then remaining from such proceeds;

or, if GoS is not entitled to or does not elect to terminate this Agreement:

- (d) the amount equal to the estimate of the total cost of such rebuilding, repair, replacement and/or restoration agreed by the Parties or determined by the Independent Experts shall be deposited in the Restoration Account to be applied towards the costs of rebuilding, repairing, replacing and/or restoring such portion of the E-Buses Assets; and
- (e) the amount, if any, by which all of the Casualty Proceeds exceed the estimate of the total cost shall be distributed in the following order of priority:
 - (i) first, to the payment of any amount due to the GoS Parties under the Project Agreements; and
 - (ii) second, to the Concessionaire or to whomever may be lawfully entitled to receive the same or as a court of competent jurisdiction may direct, any surplus then remaining from such proceeds; or

19.10.5.3 the E-Buses Assets (if applicable) can be rebuilt, repaired, replaced and/or restored to permit operation on a commercially feasible basis and the Casualty Proceeds, together with any other amounts that are available to the Concessionaire for such rebuilding, repair, replacement and/or restoration, are sufficient to permit such rebuilding, repair, replacement and/or restoration, then all of the Casualty Proceeds, together with such

other amounts as are available to the Concessionaire for such rebuilding, repair, replacement and/or restoration, shall be deposited in the Restoration Account to be applied toward the costs of rebuilding, repairing and/or restoring the E-Buses Assets.

19.10.6 It is agreed that the Concessionaire shall not be required to deposit any Capital Cost Recovery Payments payable by the GoS under this Agreement, including in relation to:

19.10.6.1 Capital Cost Recovery Payments under Section 8.4 (*Deemed COD*);

19.10.6.2 Guaranteed Annual Mileage under Section 19.8.1.1; and

19.10.6.3 Availability Benchmark under Section 19.8.1.2,

into the Restoration Account or otherwise apply such Capacity Payments to the rebuilding, repairing, replacing and/or restoring of the E-Buses Assets or any part thereof pursuant to this Section 19.10.6 in an Event of Loss.

19.10.7 Upon the occurrence of an Event of Loss, the Concessionaire shall immediately take all necessary action, consistent with applicable Legal Requirements, to secure and make safe the E-Buses Assets and the Project Site.

19.10.8 If the Concessionaire is required to restore the E-Buses Assets, the Concessionaire shall promptly commence any restoration work and shall diligently pursue the same to completion, subject to a reasonable allowance for the time needed to adjust any insurance claims. Before the Concessionaire shall commence any such restoration, and at all times during the course of such restoration, the Concessionaire shall pay the GoS Parties all amounts due to the GoS Parties under the Project Agreements. In addition, at all times, the Concessionaire shall continue to perform and observe all of the terms, covenants, conditions, agreements and obligations of the Concessionaire to be performed under this Agreement and the other Project Agreements notwithstanding any Event of Loss.

19.10.9 If, at any time during restoration pursuant to Section 19.10.8, the Independent Engineer believes that the Concessionaire is not diligently pursuing the restoration activities, the Independent Engineer will specify a reasonable restoration timetable and if the Concessionaire subsequently fails to adhere to such timetable, the Concessionaire shall not be entitled to receive Capital Cost Recovery Payments with respect to Availability Benchmark pursuant to Section 19.8 (*Effects of a Force Majeure Event after COD (First Segment)*) until such time as restoration is complete and the Concessionaire has resumed normal performance of this Agreement in accordance with Section 19.5.2.2.

19.10.10 For the avoidance of doubt, in the event that only a part of the E-Buses Assets is rebuilt, repaired, replaced and/or restored to allow operation on a commercially feasible basis as referred to in Section 19.10.5.2, the GoS shall continue to make Capital Cost Recovery Payments under Section 19.8.1.2 in respect of the portion of the E-Buses Assets that was unable to be rebuilt, repaired, replaced and/or restored, subject to Section 21.8.2.2.

20. RELIEF COSTS, LOSS OF REVENUE OR SAVINGS

20.1 CLAIM FOR RELIEF COSTS, LOSS OF REVENUE OR SAVINGS

20.1.1 If:

20.1.1.1 any Party believes that:

- (a) a PFME (other than a Change in Law) has occurred; or
- (b) a Change in Law has occurred; and

has resulted in Relief Costs, Loss of Revenue or Savings; or

20.1.1.2 the Concessionaire believes that:

- (a) a failure to achieve the Commencement Date by the Scheduled Commencement Date (under the circumstances described in, and prior to any adjustment pursuant to, Section 3.6.1); or
- (b) an Intervening Event;

has resulted in Relief Costs and/or Loss of Revenue,

then such Party shall promptly (and in any event within ten (10) Days after the affected Party first had knowledge of the relevant event or circumstance) and as a condition precedent to its entitlement to recover Relief Costs, Loss of Revenue and/or Savings under this Article 20 (*Relief Costs, Loss of Revenue or Savings*), issue a notice to the Independent Experts, specifying:

20.1.1.3 the details of such Relief Costs, Loss of Revenue and/or Savings;

20.1.1.4 details of the event or occurrence which gave or gives rise to such Relief Costs, Loss of Revenue and/or Savings, providing reasonable evidence of the economic impact thereof which resulted in such Relief Costs, Loss of Revenue and/or Savings; and

20.1.1.5 any other details required by this Section 20.1 (*Claim for Relief Costs, Loss of Revenue or Savings*).

Such notification obligations shall be in addition to any notice or other requirements under Article 7 (*Implementation Schedule and Delays*) or Article 19 (*Force Majeure*) and shall be a condition precedent to a Party's entitlement to recover Relief Costs, Loss of Revenue and/or Savings under this Article 20 (*Relief Costs, Loss of Revenue or Savings*).

20.1.2 The Party that has made a claim for Relief Costs, Loss of Revenue and/or Savings under Section 20.1.1 may thereafter, from time to time, deliver to the Independent Experts additional notices identifying further Relief Costs, Loss of Revenue and/or Savings that have resulted or are reasonably expected to result from the same circumstances, provided that any such additional notice shall be given not later than sixty (60) Days after the Party

giving such notice, knew of, or should have known of, such additional Relief Costs, Loss of Revenue and/or Savings.

20.1.3 The Concessionaire shall, acting in accordance with Good International Industry Practice, use all reasonable efforts to minimise any Relief Costs and/or Loss of Revenue and maximise any Savings.

20.1.4 If the Parties are unable to agree with the Independent Experts on contents of the notice(s) delivered pursuant to Section 20.1.1 or 20.1.2 within sixty (60) Days of receipt thereof, then the Dispute shall be referred for resolution pursuant to Article 27 (*Governing Law and Dispute Resolution*).

20.1.5 To the extent that a claim for Relief Costs, Loss of Revenue and/or Savings under Sections 20.1.1 or 20.1.2 has been allowed by the Independent Experts or otherwise allowed under Article 27 (*Governing Law and Dispute Resolution*):

20.1.5.1 with respect to a Relief Cost and/or Loss of Revenue, if the Relief Cost and/or Loss of Revenue occurs:

- (a) prior to the COD (Second Segment), the Concessionaire shall, to the extent available and permissible under the terms of the Financing Documents, draw on any funds under the Financing Documents, to fund such Relief Costs and/or Loss of Revenue and/or request for injection of additional equity by the Shareholders on a best-efforts basis; or
- (b) during the Operations Period, the Concessionaire shall use its best efforts to raise additional capital to fund such Relief Costs and/or Loss of Revenue; and

20.1.5.2 the GoS shall (in consultation with the Independent Experts) propose to the Concessionaire:

- (a) a mechanism to adjust (upward or downwards) the Capital Cost Recovery Payments, as appropriate;
- (b) a mechanism to compensate the Concessionaire or the GoS (as applicable) through the payment of a lump-sum amount or staggered payments; and/or
- (c) an extension to the Concession Period,

which takes account of all relevant circumstances and is structured so as to put the Concessionaire into a neutral financial position which results in it deriving neither gain nor loss as a consequence of the relevant event giving rise to the claim under this Article 20 (*Relief Costs, Loss of Revenue or Savings*).

20.1.6 Notwithstanding the foregoing, any:

20.1.6.1 PFME; or

20.1.6.2 Intervening Event;

that results in Relief Costs and/or Loss of Revenue shall be funded:

- (a) by the Concessionaire drawing on any funds available under the Financing Documents or injection of additional equity by the Shareholders on a best-efforts basis;
- (b) thereafter, by means of a lump-sum payment by the GoS under Section 20.1.5.2(b); and
- (c) in the event that the Concessionaire draws on any funds under the Financing Documents pursuant to Section 20.1.5.1(a), the GoS shall propose a mechanism to adjust (at the GoS' discretion) the, as referred to in Section 20.1.5.2(a) to put the Concessionaire into a neutral financial position which results in it deriving neither gain nor loss as a consequence of the relevant event giving rise to the claim under this Article 20 (*Relief Costs, Loss of Revenue or Savings*).

20.1.7 The Parties shall use reasonable endeavours to agree upon the appropriate adjustment or reimbursement mechanism within thirty (30) Days of the Concessionaire's receipt of the GoS' proposal under Section 20.1.5.2(b), failing which, the Dispute shall be referred for resolution pursuant to Section 27.2 (*Negotiation*).

20.2 **CLAIMS IN AGGREGATE**

No Party shall be entitled to assert any claim for Relief Costs, Loss of Revenue and/or Savings under this Article 20 (*Relief Costs, Loss of Revenue or Savings*) until:

20.2.1 in the case of any claim for Relief Costs, Loss of Revenue and/or Savings, asserted prior to the COD (First Segment), the earlier of: (a) the date thirty (30) Days after the end of the Development Contract Year in which the relevant event or circumstance entitling the Party to claim Relief Costs, Loss of Revenue and/or Savings occurred; and (b) the date on which the aggregate of all accrued and outstanding claims of such Party under this Article 20 (*Relief Costs, Loss of Revenue or Savings*) exceeds the equivalent of Pakistani Rupees One Hundred Fifty Million only (PKR 150,000,000/-); or

20.2.2 in the case of any claim for Relief Costs, Loss of Revenue and/or Savings, asserted after the COD (First Segment), the earlier of: (a) the date thirty (30) Days after the end of the Operating Contract Year in which the relevant event or circumstance entitling the Party to claim Relief Costs, Loss of Revenue and/or Savings occurred; and (b) the date on which the aggregate of all accrued and outstanding claims of such Party under this Article 20 (*Relief Costs, Loss of Revenue or Savings*) exceeds the equivalent of Pakistani Rupees One Hundred Fifty Million only (PKR 150,000,000/-),

at which time all accrued and outstanding claims of such Party may be asserted, provided that once such claims have been asserted, no future claims may be asserted until such time as all future claims again exceed such threshold, or the next annual deadline is reached.

21. TERMINATION

21.1 EXPIRY OF THE TERM

Unless terminated earlier in accordance with this Article 21 (*Termination*), this Agreement shall expire on the Term Expiry Date.

21.2 NOT USED

21.3 TERMINATION DUE TO NON-OCCURRENCE OF THE COMMENCEMENT DATE

21.3.1 If the Commencement Date is not achieved by the Scheduled Commencement Date (as may be extended pursuant to Section 3.4.3) then, provided that the Parties have first used their reasonable endeavours to adjust the Scheduled Commencement Date in accordance with Section 3.4.1, either Commercial Party may terminate this Agreement by issuing a Termination Notice to the other Parties. Upon issuance of such Termination Notice, this Agreement shall terminate on the date of termination specified therein, or such later date as the Commercial Parties may agree in writing and, thereafter no Party shall have any liability to the other except for payment by the GoS of the Termination Payment Sum (Pre-Commencement Date) (in case termination has been caused by delay or failure on the part of a GoS Party in the performance of its obligations under this Agreement, which is not otherwise attributable to the Sponsors, the Concessionaire or any of its Contractors) to the Concessionaire and provided that if such failure is due to reasons solely attributable to the Sponsors, the Concessionaire or any of its Contractors, the Parties acknowledge and agree that the GoS may draw upon and retain the full amount of the Development Period Performance Security as payment of liquidated damages for such termination. On payment by the GoS of Termination Payment Sum (Pre-Commencement Date) (if applicable) to the Concessionaire, all the Concessionaire's right, title and interest in the Project shall stand transferred to the GoS (or its nominee).

21.3.2 The Parties agree that:

21.3.2.1 the full amount of the Development Period Performance Security are the actual losses that the GoS Parties will suffer in the event that this Agreement is terminated for reasons solely attributable to the Concessionaire as set out in this Section 21.3 (*Termination due to Non-Occurrence of the Commencement Date*); and

21.3.2.2 there is in any event a commercial justification and legitimate interest in imposing such liquidated damages as a payment for the termination of this Agreement for reasons set out in this Section 21.3 (*Termination due to Non-Occurrence of the Commencement Date*) which would not be satisfied by a right to recover damages on an unliquidated basis for such default.

21.4 TERMINATION FOR CONVENIENCE

21.4.1 The GoS may at its absolute discretion and at any time, terminate this Agreement for convenience by giving at least two (2) months' Termination Notice to the Concessionaire, whereupon this Agreement shall terminate on the date of termination specified therein.

21.4.2 If the GoS exercises its right to terminate this Agreement for convenience pursuant to Section 21.4.1 prior to the Commencement Date, the Concessionaire shall sell, and the GoS shall purchase (on behalf of SMTA), the Concessionaire's right, title and interest in the Project for Termination Payment Sum (Pre-Commencement Date).

21.4.3 If the GoS exercises its right to terminate this Agreement for convenience pursuant to Section 21.4.1, after the Commencement Date, the Concessionaire shall sell, and the GoS shall purchase (on behalf of SMTA), the Concessionaire's right, title and interest in the Project for Termination Payment Sum (GoS Default).

21.5 **CONCESSIONAIRE EVENT OF DEFAULT**

Except where the relevant event occurs as a consequence of a Permitted Event or a GoS Event of Default, each of the following events shall constitute a **Concessionaire Event of Default**:

21.5.1 a failure by the Concessionaire to achieve the COD (First Segment) by the Scheduled COD (First Segment) or the COD (Second Segment) by the Scheduled COD (Second Segment);

21.5.2 the O&M Activities undertaken by the Concessionaire fail to meet the Key Performance Indicators and/or the Applicable Standards;

21.5.3 in any Billing Period falling in the Development Period, Deduction in such Billing Period exceed the Capital Cost Recovery Payment due in such period (before applying Deduction);

21.5.4 in any Billing Period falling in the Operations Period, Deduction in such Billing Period exceed the Capacity Payment due in such period (before applying Deduction);

21.5.5 a failure by the Concessionaire to pay any undisputed Fare Revenue (GoS Share) or the Non-Fare Revenue (GoS Share) within fifteen (15) Days from the due date therefor;

21.5.6 a failure by the Concessionaire to obtain and maintain any Approvals required under the Legal Requirements or by a Government Authority in order for it to perform its obligations pursuant to this Agreement where the Concessionaire has failed to use all reasonable endeavours to obtain or renew such Approvals;

21.5.7 a failure by the Concessionaire to pay any undisputed Liquidated Damages within the time periods specified therefor under Sections 7.3 (*Liquidated Damages (Delay)*), 7.4 (*Liquidated Damages (Abandonment)*) or 10.7 (*Liquidated Damages (KPIs)*), as applicable, or a failure by the Concessionaire to pay any other amount due under this Agreement or any other GoS Project Document within sixty (60) Days after such amount has become due and payable;

21.5.8 Abandonment;

21.5.9 a material breach by the Concessionaire of its obligations under this Agreement, which is not remedied within sixty (60) Days after notice from a GoS Party to the Concessionaire stating that a breach has occurred, identifying the breach and demanding remedy thereof provided that, notwithstanding the exercise of reasonable efforts by the Concessionaire, if such breach cannot be cured within the sixty (60) Days following the notice from the GoS Party, the Concessionaire shall be afforded a further period of sixty (60) Days within which

to cure such breach, provided always that the Concessionaire shall throughout such further sixty (60) Days period, exercise reasonable continuous efforts to cure the breach;

- 21.5.10 a material breach by the Concessionaire of the License Agreement;
- 21.5.11 termination of the Independent Engineer Contract by the Independent Engineer due to non-payment by the Concessionaire or the Sponsors (as applicable);
- 21.5.12 termination of the Independent Auditor Contract by the Independent Auditor due to non-payment by the Concessionaire or the Sponsors (as applicable);
- 21.5.13 the voluntary filing by the Concessionaire of a petition of bankruptcy, moratorium, winding up, or other similar relief and/or the passing of a resolution for the bankruptcy, insolvency, winding up, liquidation or other similar proceeding relating to the Concessionaire;
- 21.5.14 the appointment of a liquidator, custodian or similar person in respect of the Concessionaire in a proceeding referred to in Section 21.5.14, which appointment has not been stayed or set aside within sixty (60) Days of such appointment;
- 21.5.15 the making by a Government Authority of an order for the winding up or otherwise confirming the bankruptcy or insolvency of the Concessionaire, which order has not been set aside or stayed within sixty (60) Days of such making;
- 21.5.16 a failure of the Concessionaire to comply with its obligation to obtain and maintain the required insurances in accordance with Article 18 (*Insurance*);
- 21.5.17 a failure of the Concessionaire to establish, keep valid and maintain either of the Performance Securities in accordance with the terms of this Agreement;
- 21.5.18 a failure of the Concessionaire to increase the face amount of the O&M Performance Security by the Estimated Remedial Cost or extend the validity thereof, in each case, in accordance with the Section 21.10.3;
- 21.5.19 an event of default (howsoever described) has occurred under the Financing Documents;
- 21.5.20 any conditions to disbursement of debt by the Financing Parties under the Financing Documents have not been satisfied (unless deferred or waived in terms thereof);
- 21.5.21 occurrence of an event set out in Section 25.2.2; and
- 21.5.22 any event constituting a Concessionaire Event of Default under a GoS Project Document.

21.6 **GoS EVENT OF DEFAULT**

Except where the relevant event occurs as a consequence of a failure or delay on the part of the Concessionaire or a Concessionaire Event of Default, each of the following events shall constitute a **GoS Event of Default**:

- 21.6.1 a failure by the GoS to pay any undisputed Capital Cost Recovery Payment within thirty (30) Days from the due date therefor;
- 21.6.2 a failure by the GoS to make any undisputed payment under this Agreement, other than a Capital Cost Recovery Payment, within ninety (90) Days from the due date therefor;
- 21.6.3 the termination of the License Agreement due to a breach or default by SMTA;
- 21.6.4 the expropriation, nationalisation or compulsory acquisition of any material asset of the Concessionaire or any shares or other interest in the Concessionaire by any Government Authority;
- 21.6.5 a material breach by a GoS Party of its obligations under this Agreement which is not remedied within sixty (60) Days after notice from the Concessionaire to the GoS Parties stating that a breach has occurred, identifying the breach and demanding remedy thereof provided that, notwithstanding the exercise of reasonable efforts by the relevant GoS Party, if such breach cannot be cured within the sixty (60) Days following the notice from the Concessionaire, the GoS Party shall be afforded a further period of sixty (60) Days within which to cure such breach, provided always that the GoS Party shall throughout such further sixty (60) Days period, exercise reasonable continuous efforts to cure the breach;
- 21.6.6 a failure of the GoS to keep valid and maintain the Capital Cost Recovery Payment Account (GoS) in accordance with the terms of this Agreement;
- 21.6.7 prior to the Financing Termination Date, if issued, the SBP Debit Authority is no longer valid and effective; and
- 21.6.8 the occurrence of an Unenforceability Event.

21.7 **TERMINATION DUE TO AN EVENT OF DEFAULT**

- 21.7.1 Upon the occurrence of a GoS Event of Default, the Concessionaire may give notice (the **Concessionaire Notice of Intent to Terminate**) to the GoS specifying in reasonable detail the relevant GoS Event of Default giving rise to such notice and the date upon which the Concessionaire proposes to terminate this Agreement, which date shall not be less than thirty (30) Days after the date of the Concessionaire Notice of Intent to Terminate or such longer period as specified in this Agreement (the **GoS Cure Period**).
- 21.7.2 Upon the occurrence of a Concessionaire Event of Default, the GoS may give notice (the **GoS Notice of Intent to Terminate**) to the Concessionaire specifying in reasonable detail the relevant Concessionaire Event of Default giving rise to such notice and the date upon which the GoS proposes to terminate this Agreement, which date shall not be less than thirty (30) Days after the date of the GoS Notice of Intent to Terminate or such longer period as specified in this Agreement (the **Concessionaire Cure Period**); provided, that upon the occurrence of any of the Concessionaire Events of Default under Sections 21.5.14, 21.5.15, or 21.5.16, the GoS may terminate this Agreement immediately.
- 21.7.3 During the Cure Period, the Commercial Parties shall consult as to what steps shall be taken, and the Defaulting Party shall use its reasonable efforts, to mitigate the consequences of, and cure, the relevant Event of Default.

21.7.4 If, upon the expiry of the Cure Period, the relevant Event of Default has not been cured, unless the Commercial Parties have otherwise agreed, the GoS or the Concessionaire (as applicable) may issue a Termination Notice to the Defaulting Party whereupon this Agreement shall terminate on the Termination Date specified therein or such later date as the Commercial Parties may agree in writing.

21.7.5 If this Agreement is terminated by the GoS due to a Concessionaire Event of Default:

21.7.5.1 the GoS shall have the right to encash the Performance Securities to their full outstanding value; and

21.7.5.2 the GoS shall purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for no compensation where termination occurs prior to the Commencement Date and for the Termination Payment Sum (Concessionaire Default) where termination occurs after the Commencement Date.

21.7.6 If this Agreement is terminated by the Concessionaire due to a GoS Event of Default, the Concessionaire shall require the GoS to purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for the Termination Payment Sum (Pre-Commencement Date) where termination occurs prior to the Commencement Date and for the Termination Payment Sum (GoS Default) where termination occurs after the Commencement Date, and it shall do so by giving notice to the GoS, and the GoS shall be obliged to purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for such compensation.

21.7.7 In the event that the circumstances giving rise to a Concessionaire Event of Default pursuant to Section 21.5.10 constitute a delay which directly impacts the Implementation Schedule and would, following the passage of time if not remedied, give rise to a Concessionaire Event of Default pursuant to Section 21.5.1, the GoS undertakes and agrees that it shall not terminate this Agreement with respect to such circumstances other than pursuant to Section 21.5.1 thereof.

21.8 **TERMINATION FOR A PROLONGED FORCE MAJEURE EVENT**

21.8.1 Subject to Section 21.8.4, the Concessionaire shall have the right to terminate this Agreement if a PFME prevents SMTA from performing any of its obligations under this Agreement for a continuous period of one hundred twenty (120) Days; provided, that, if the GoS elects in such event to continue paying the Capacity Payments in respect of Availability Benchmark beyond such one hundred twenty (120) Day period, the Concessionaire shall not have the right to terminate this Agreement pursuant to this Section 21.8.1.

21.8.2 Subject to Section 21.8.4, the GoS shall have the right to terminate this Agreement if:

21.8.2.1 a PFME prevents SMTA from performing any of its obligations under this Agreement for a continuous period of one hundred twenty (120) Days;

21.8.2.2 a PFME prevents the Concessionaire from performing any of its obligations under this Agreement for a continuous period of one hundred twenty (120) Days;

- 21.8.2.3 one or more PFME or a combination thereof, results in the GoS incurring Relief Costs and/or Loss of Revenue; or
- 21.8.2.4 an NPFME prevents SMTA or the Concessionaire from performing any of its obligations under this Agreement for a continuous period of one hundred twenty (120) Days.
- 21.8.3 Subject to Section 21.8.4, either Commercial Party shall have the right to terminate this Agreement if it is agreed, or determined that the E-Buses Assets cannot be rebuilt, repaired, replaced and/or restored pursuant to Section 19.10.5.1, and the GoS shall have the right to terminate this Agreement if it is agreed, or determined that the E-Buses Assets can only be partially rebuilt, repaired, replaced and/or restored pursuant to Section 19.10.5.2, in either case following an Event of Loss caused by a Force Majeure Event.
- 21.8.4 If a Commercial Party wishes to exercise its right to terminate this Agreement pursuant to Sections 21.8.1, 21.8.2 or 21.8.3, it shall issue a Termination Notice to the other Parties, whereupon this Agreement shall terminate on the Termination Date or such later date as the Commercial Parties may agree in writing.
- 21.8.5 If this Agreement is terminated after the Commencement Date by:
- 21.8.5.1 the Concessionaire pursuant to Section 21.8.1, the Concessionaire shall have the right to require the GoS to purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for Termination Payment Sum (GoS Default), and it shall do so by giving notice to the GoS, and the GoS shall be obliged to purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for such compensation;
- 21.8.5.2 the GoS pursuant to Section 21.8.2.1, the GoS shall purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for Termination Payment Sum (PFME);
- 21.8.5.3 the GoS pursuant to Section 21.8.2.2, the GoS shall purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for Termination Payment Sum (PFME);
- 21.8.5.4 the GoS pursuant to Section 21.8.2.3, the GoS shall purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for Termination Payment Sum (PFME);
- 21.8.5.5 the GoS pursuant to Section 21.8.2.4 with respect to a prolonged NPFME affecting the Concessionaire, the GoS shall purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for Termination Payment Sum (NPFME);
- 21.8.5.6 the GoS pursuant to Section 21.8.2.4 with respect to a prolonged NPFME affecting SMTA, the GoS shall purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for Termination Payment Sum (NPFME);
- 21.8.5.7 either Commercial Party pursuant to Section 21.8.3 with respect to an Event of Loss caused by a PFME that prevents the Concessionaire from rebuilding, repairing, replacing and/or restoring the E-Buses Assets (in whole) pursuant to Section 19.10.5.1, the GoS

shall purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for Termination Payment Sum (PFME);

21.8.5.8 the GoS pursuant to Section 21.8.3 with respect to an Event of Loss caused by a PFME that prevents the Concessionaire from rebuilding, repairing and/or restoring the E-Buses Assets (in part) pursuant to Section 19.10.5.2, the GoS shall purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for Termination Payment Sum (PFME);

21.8.5.9 either Commercial Party pursuant to Section 21.8.3 with respect to an Event of Loss caused by a NPFME that prevents the Concessionaire from rebuilding, repairing, replacing and/or restoring the E-Buses Assets (in whole) pursuant to Section 19.10.5.1, the GoS shall purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for Termination Payment Sum (NPFME); or

21.8.5.10 the GoS pursuant to Section 21.8.3 with respect to an Event of Loss caused by a NPFME that prevents the Concessionaire from rebuilding, repairing, replacing and/or restoring the E-Buses Assets (in part) pursuant to Section 19.10.5.2, the GoS shall purchase (on behalf of SMTA) the Concessionaire's right, title and interest in the Project for Termination Payment Sum (NPFME).

21.9 **PAYMENTS ON TERMINATION**

All amounts payable pursuant to this Article 21 (*Termination*) shall be paid in Pakistani Rupees in immediately available funds as follows:

21.9.1 with respect to any amounts payable by the Concessionaire, immediately on the date of termination of this Agreement, by way of credit directly to a GoS Designated Account;

21.9.2 subject to Section 21.10.5, with respect to Termination Payment, as set out in the Termination Payment Amount Certificate, payable by the GoS, by the Termination Payment Date, by way of credit directly to the Termination Payment Account; and

21.9.3 with respect to the Termination Payment to the extent not recovered by the Concessionaire in terms of Section 21.9.2, in the manner set out in Sections 12.2.11 and 12.2.12 above.

The obligations of the GoS under this Section 21.9 (*Payments on Termination*) shall survive termination of this Agreement until such time as all amounts due and owing by the GoS hereunder have been paid.

21.10 **TRANSFER OF THE PROJECT**

21.10.1 Within one (1) year prior to the Term Expiry Date or within one (1) month following the Termination Date (as applicable), the Independent Experts shall carry out such tests and inspections as set out in **SCHEDULE E (*Testing*)** to determine if the E-Buses Assets satisfies the Handover Conditions.

21.10.2 If, in the opinion of the Independent Experts:

- 21.10.2.1 the E-Buses Assets meets the Handover Conditions, making allowances for any Force Majeure Event or GoS Event of Default that may have affected the E-Buses Assets and for which the Concessionaire shall not be responsible, then the Independent Experts shall issue a Handover Certificate, together with such inspection reports, tests and other data reasonably adequate to substantiate the conclusions reached in the Handover Certificate;
- 21.10.2.2 the E-Buses Assets does not meet the Handover Conditions, making allowances for any Force Majeure Event or GoS Event of Default that may have affected the E-Buses Assets and for which the Concessionaire shall not be responsible, then as soon as reasonably practicable, and in any event within six (6) months prior to the Term Expiry Date or within two (2) months following the Termination Date (as applicable), the Independent Experts shall issue a report (the **Remedial Report**) providing to the Parties (a) a list of the works and services required to be undertaken by the Concessionaire to meet the Handover Conditions (the **Remedial Works**), (b) a remediation plan, including the time period, for completing the Remedial Works (the **Remedial Plan**), and (c) an estimate of the costs of carrying out the Remedial Works (the **Estimated Remedial Costs**). The Concessionaire shall reinstate the Project Site if and to the extent that it is required in accordance with the Remedial Report.
- 21.10.3 Immediately upon the issuance of a Remedial Report, the Concessionaire shall increase the face amount of the O&M Performance Security by the Estimated Remedial Costs and extend the validity thereof to the date falling six (6) months following the estimated date stated in the Remedial Report for completion of the Remedial Works.
- 21.10.4 The Concessionaire shall complete all Remedial Works in accordance with the Remedial Plan at its own costs and expense. Upon completion of the Remedial Works in accordance with the Remedial Plan, as determined by the Independent Experts, the Independent Experts shall issue a Handover Certificate, together with such inspection reports, tests and other data reasonably adequate to substantiate the conclusions reached in the Handover Certificate. Where the Remedial Plan has been prepared following issuance of a Termination Notice, the Termination Payment Date shall be extended (by such period as determined by the Independent Experts) to account for the timelines stated in the Remedial Plan.
- 21.10.5 Any Termination Payment due to the Concessionaire (other than the Financing Due) shall be made by the GoS subject to the issuance of the Handover Certificate.
- 21.10.6 If the Concessionaire fails to comply with the Remedial Plan, unless the Parties agree otherwise, the GoS shall have the option to:
- 21.10.6.1 encash the O&M Performance Security to the extent of the Estimated Remedial Costs;
or
- 21.10.6.2 deduct the Estimated Remedial Costs from any payments due to the Concessionaire from the GoS in terms of this Agreement,
- following which (and subject to full recovery of the Estimated Remedial Costs by the GoS) the Handover Certificate shall be deemed as issued.

21.10.7 Upon issuance or deemed issuance (in terms of Section 21.10.6) of the Handover Certificate and payment by the GoS of the Termination Payment under Section 21.9.2, or immediately following the Term Expiry Date, the Concessionaire shall transfer to SMTA, free and clear of all liens and Encumbrances, at no cost to the GoS (other than payment of the Termination Payment, if applicable), all of the Concessionaire's right, title and interest in the Project, including insofar as they are a part of or used in the Project, all of the Concessionaire's right, title and interest in:

21.10.7.1 all raw materials, consumables and spare parts;

21.10.7.2 all tangible personal property;

21.10.7.3 all intangible personal property, including any Intellectual Property Rights;

21.10.7.4 all buildings and fixtures;

21.10.7.5 computerised and non-computerised records, reports, data, files, and information;

21.10.7.6 all drawings, test results, and documents relating to the Project;

21.10.7.7 all warranties of equipment, materials and work;

21.10.7.8 all contract rights and Insurance Policies;

21.10.7.9 all work in progress under contracts with vendors, suppliers, contractors and subcontractors; and

21.10.7.10 all rights with respect to any insurance proceeds payable to or for the account of the Concessionaire, but unpaid at the date of termination of the Agreement, in respect of the Concessionaire's right, title and interest in the Project.

21.10.8 Following the Termination Date and until the issuance of the Handover Certificate, except for the termination of this Agreement pursuant to Concessionaire Events of Default under Sections 21.5.7, 21.5.12, 21.5.13 or 21.5.14, the Concessionaire shall continue to perform the relevant Project Activities in accordance with the requirements of this Agreement and in consideration thereof, shall be entitled to receive the Output Payments in accordance with **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**.

21.11 **OTHER REMEDIES**

21.11.1 Except as otherwise expressly provided in this Agreement, upon termination of this Agreement, the Parties shall have no further obligations or liabilities hereunder, save those obligations or liabilities that arose on or before the date, or as a result of termination, shall survive until satisfied in full.

21.11.2 This Article 21 (*Termination*) sets out the sole and exclusive grounds upon which this Agreement may be terminated, provided that upon the breach by any Party of any covenant or warranty hereunder, the Party damaged by any such default or breach may, in its sole discretion, in addition to exercising any other remedies provided for hereunder, proceed in accordance with Article 27 (*Governing Law and Dispute Resolution*) to protect and enforce

its rights, to recover any damages to which it may be entitled (including all costs and expenses reasonably incurred in the exercise of its remedy), or to seek specific performance by the other Party of such breaching Party's obligations under this Agreement and the other Project Agreements (as applicable).

21.12 **SURVIVAL**

The provisions of Articles/Sections 12 (*Payment Accounts, IZP Guarantee Instrument, SBP Debit Authority, Revenue Accounts, Revenue and Revenue Sharing*), 13 (*Invoicing and Payment*), 14 (*Emergency Decommissioning and SMTA Overriding Powers*), 14.5.4, 21 (*Termination*), 26 (*Technological Improvements*), 27 (*Governing Law and Dispute Resolution*) and 29 (*Confidentiality*) shall survive the termination of this Agreement.

22. WARRANTY

22.1 WARRANTY

22.1.1 For the Project Activities provided for under this Agreement, the Concessionaire provides the following warranties, set out in this Article 22 (*Warranty*) (the **Warranty**).

22.1.2 The Concessionaire warrants to the GoS Parties that as part of the Warranty obligations during the Warranty Period:

22.1.2.1 the Goods (including the Bus Electric Powertrain and Vehicle Structure) delivered under this Agreement shall be in accordance with the Applicable Standards and applicable operations manual for the Buses shall be free from any Defects or Deficiencies, including defects in material, workmanship and title; and

22.1.2.2 the O&M Activities performed under this Agreement shall be performed in a competent and diligent manner in accordance with the Applicable Standards and shall be free from any Defects or Deficiencies.

22.2 WARRANTY PERIOD

22.2.1 The Warranty Period in respect of:

22.2.1.1 Bus Electric Powertrain and Vehicle Structure, shall be for the Bus Electric Powertrain and Vehicle Structure Warranty Period;

22.2.1.2 Goods (other than the Bus Electric Powertrain and Vehicle Structure), shall be for the Goods Warranty Period;

22.2.1.3 any Parts, shall be at least twenty-four (24) months from the date of repair or replacement of such Parts;

22.2.1.4 any O&M Activities shall be for the remaining Concession Period from the date of execution of O&M Activities in respect of the E-Buses Assets.

22.2.2 Such period of time as described above with respect to the E-Buses Assets, Spare Parts and O&M Activities shall be defined as the **Warranty Period**.

22.3 WARRANTY REMEDY

22.3.1 If any of the Goods (including the Bus Electric Powertrain and Vehicle Structure), Parts and/or Spare Parts do not meet the above warranties during the applicable Warranty Period, the Concessionaire shall, at its cost, correct or shall cause to correct the defective Good(s) (including the Bus Electric Powertrain and Vehicle Structure), Parts and/or Spare Parts by, at its option, repairing or replacing the defective Good(s) (including the Bus Electric Powertrain and Vehicle Structure), Parts and/or Spare Parts and, at its option, taking possession of the defective Good(s) (including the Bus Electric Powertrain and Vehicle Structure), Parts and/or Spare Parts.

22.3.2 Where defective Good(s) (including the Bus Electric Powertrain and Vehicle Structure), Parts and/or Spare Parts is discovered during the applicable Warranty Period, the Concessionaire shall be responsible for the Costs of removing and transporting the defective Good(s) (including the Bus Electric Powertrain and Vehicle Structure), Parts and/or Spare Parts. However, where a defect in any Goods (including the Bus Electric Powertrain and Vehicle Structure), Parts and/or Spare Parts cannot be corrected by the Concessionaire's reasonable efforts, the defective Good (including the Bus Electric Powertrain and Vehicle Structure), Part and/or Spare Part shall be replaced.

22.3.3 If any part of the O&M Activities does not meet the above warranties during the applicable Warranty Period for such part of the O&M Activities, the Concessionaire shall thereupon correct any defective part of the O&M Activities by re-performing the defective O&M Activities at the cost of the Concessionaire.

22.4 **EXTENDED WARRANTY**

22.4.1 Any re-performed O&M Activity or repaired or replaced Good (including the Bus Electric Powertrain and Vehicle Structure), Part and/or Spare Part furnished under the Warranty shall carry warranties on the same terms as set forth above, except that the period of Warranty on such re-performed O&M Service or repaired or replaced Good (including the Bus Electric Powertrain and Vehicle Structure), Part and/or Spare Part shall be the longer of:

22.4.1.1 the remaining balance of the applicable Warranty Period; or

22.4.1.2 a period of twelve (12) months from the date of such re-performed O&M Activity or repaired or replaced Good (including the Bus Electric Powertrain and Vehicle Structure), Part and/or Spare Part (as applicable).

In any event the period where Warranty can be claimed in respect to any O&M Activity or repaired or replaced Good (including the Bus Electric Powertrain and Vehicle Structure), Part and/or Spare Part and the Concessionaire's responsibilities set forth herein for such re-performed O&M Activity or repaired or replaced Good (including the Bus Electric Powertrain and Vehicle Structure), Part and/or Spare Part (as applicable) shall end twelve (12) months after expiry of the Warranty Period applicable to the initial O&M Activity or repaired or replaced Good (including the Bus Electric Powertrain and Vehicle Structure), Part and/or Spare Part (as applicable).

22.5 **FAILURE TO REMEDY DEFECTS IN THE GOODS**

22.5.1 The Concessionaire shall be required to remedy any Defects or Deficiencies or damage to the Goods within such reasonable time as is instructed by the GoS Parties (which period may be extended by the GoS Parties in its discretion).

22.5.2 If the Concessionaire fails to remedy the Defects or Deficiencies or damage in accordance with Section 22.5.1, the GoS Parties may (at their option):

22.5.2.1 carry out the work themselves or by others, in a reasonable manner and at the Concessionaire's cost, but the Concessionaire shall have no responsibility for this work; and the Concessionaire shall pay to the GoS Parties the costs reasonably incurred by the

GoS Parties in remedying the Defects or Deficiencies, as certified by the Independent Experts;

22.5.2.2 agree or determine a reasonable reduction in the Capital Cost Recovery Payment; or

22.5.2.3 if the Defects or Deficiencies deprives the GoS Parties of substantially the whole benefit of the Supply Obligations or any major part of the Supply or any part thereof do not meet the Applicable Standards, terminate this Agreement as a whole, or in respect of such part. Without prejudice to any other rights, under this Agreement or otherwise, the GoS shall then be entitled to recover all sums paid for the Supply Obligations and returning the Goods to the Concessionaire.

22.5.3 At any time following the end of each month, the Independent Experts shall compute and advise the Concessionaire in an invoice of the amount(s) due to the GoS pursuant to this Section 22.5 (*Failure to Remedy Defects in the Goods*). Such amounts shall be payable by the Concessionaire within twenty (20) Days of the date of delivery of such invoice to the Concessionaire. However, failure by the GoS to provide such invoice in a timely manner shall not preclude the GoS from claiming the same from the Concessionaire at a later stage.

22.6 **EXCLUSIONS**

22.6.1 The Concessionaire's aforementioned Warranty does not warrant Parts:

22.6.1.1 against normal wear and tear, including effects of the environment or operation;

22.6.1.2 when done by a person other than the Concessionaire or its Supplier or Contractors, against: (a) improper; (b) untimely routine or planned maintenance of the Goods (including the Bus Electric Powertrain and Vehicle Structure), Parts and/or Spare Parts and/or its associated unit; or (c) repair or modification of the Goods (including the Bus Electric Powertrain and Vehicle Structure), Parts and/or Spare Parts and/or the unit which is not in accordance with the Concessionaire's instructions/manuals other than when such activities are carried out by the Concessionaire; and

22.6.1.3 against improper installation of Spare Parts and/or Parts other than when such improper installation is carried out by the Concessionaire.

22.7 **SERIAL DEFECTS**

22.7.1 If before the expiry of the Serial Defects Notification Period, upon the Concessionaire having become aware of or having been notified by the GoS Parties of a Serial Defect, the Concessionaire shall investigate and ascertain whether the Serial Defect(s) exist. If a Serial Defect(s) exists and is discovered, the Concessionaire shall furnish the GoS Parties with a report, detailing the source and root cause of the Serial Defect(s).

22.7.2 The Concessionaire shall submit to the GoS Parties for its approval details of the remedial work which it proposes to make pursuant to this Section 22.7 (*Serial Defects*), the estimated duration of such remedial work, details of such Buses as it may be necessary to halt operations and the proposed dates for the remedial work. If the remedial work can be carried out without halting operations of the Buses, the Concessionaire shall carry out such remedial work as soon as reasonably practicable. If the remedial work necessitates halting

operations of Buses, the remedial work shall be carried out at a time and for periods agreed with the GoS Parties or failing agreement at such times which minimize disruption to the Operation of the Buses as far as practicable having regard to the nature of defect.

- 22.7.3 The Concessionaire shall forthwith replace all such parts affected by the Serial Defect(s) with brand new parts and promptly rectify the same free of cost.

23. INDEMNITIES

23.1 INDEMNIFICATION BY THE CONCESSIONAIRE

The Concessionaire shall indemnify, defend and hold harmless the GoS Parties (and their Affiliates and contractors and respective shareholders, directors, officers, employees, agents or representatives (collectively the **GoS Indemnified Parties**)), from and against all Claims made against or suffered by any of the GoS Indemnified Parties in relation to:

- 23.1.1 any loss of or damage to property or death or injury to persons (except for workers' compensation claims), resulting from any negligent act or omission of the Concessionaire or any of the Concessionaire Indemnified Parties, or that arising out of or in any manner connected with the performance of this Agreement, except to the extent that such loss, damage, injury or death is attributable to the negligence or misconduct of the GoS Indemnified Parties, or breach of this Agreement by the GoS Indemnified Parties, or the failure of the GoS Indemnified Parties, as applicable, to take reasonable steps in mitigation of the foregoing;
- 23.1.2 the violation of any E&S Requirements by any of the Concessionaire Indemnified Parties occurring at the Project Site or in any way related to the E-Buses Assets, except to the extent that such Claim results from or arises out of:
 - 23.1.2.1 the condition of the affected Project Site existing prior to the effective date of the License Agreement; or
 - 23.1.2.2 any discharge, release or leaching of any Hazardous Substance on, in, over, under or otherwise affecting the Project Site (including the soil, subsoil, surface water or ground water on or beneath the Project Site and the air above the same) caused by a person other than the Concessionaire or any of the Concessionaire Indemnified Parties;
- 23.1.3 any use, presence, suspected presence, disposal, discharge, storage, treatment, transportation, handling, generation, leaching, release, or threatened release of any Hazardous Substance on, in, over, under or otherwise affecting the Project Site and their respective neighbouring properties (including the soil, subsoil, surface water or ground water on or beneath the Project Site and the surrounding environs and the air above the same):
 - 23.1.3.1 caused by the Concessionaire or any of the Concessionaire Indemnified Parties;
 - 23.1.3.2 originating from the Project Site after the Effective Date or, if earlier, the date of issue of the limited notice to proceed under the Construction Contract and the Supply Contract (if any); or
 - 23.1.3.3 in any way related to the E-Buses Assets;
- 23.1.4 the violation of any Legal Requirements arising out of the Concessionaire's performance of the Project Activities, including the design, construction, testing, commissioning, operation or maintenance of the E-Buses Assets;

23.1.5 the performance or non-performance by the Concessionaire or the Contractors of their obligations under any of the Project Agreements; and

23.1.6 the presence of the Concessionaire Indemnified Parties on the Project Site.

23.2 **INDEMNIFICATION BY GoS**

The GoS shall indemnify, defend and hold harmless the Concessionaire (and its Affiliates and Contractors and its or their respective shareholders, directors, officers, employees, agents or representatives (collectively the **Concessionaire Indemnified Parties**), from and against all Claims made against or suffered by the Concessionaire or any of the Concessionaire Indemnified Parties in relation to any loss of or damage to property or death or injury to persons (except for workers' compensation claims), resulting from any negligent act or omission of the GoS Parties or otherwise that arises out of or is in any manner connected with the performance of this Agreement, except to the extent such loss, damage, injury or death is attributable to the negligence or misconduct of the Concessionaire or any Concessionaire Indemnified Parties, or breach of this Agreement by the Concessionaire, or the failure of the Concessionaire or any of the Concessionaire Indemnified Parties, as applicable, to take reasonable steps in mitigation of the foregoing.

23.3 **LIABILITY**

No Party shall be liable to the other in contract, tort, warranty, strict liability, or any other legal theory for any indirect, consequential, incidental, punitive, or exemplary damages, except as expressly provided herein.

23.4 **MITIGATION**

The Parties shall make all reasonable endeavours to mitigate any loss, cost or expense they may suffer as a result of any breach of the other Party's material obligations under this Agreement.

23.5 **JOINT NEGLIGENCE**

In the event any injury or damage results from the joint or concurrent negligent or intentional acts or omissions of the Parties (as determined by the Independent Experts), each Party shall be liable under this indemnification in proportion to its relative degree of fault, as determined by the Independent Experts.

24. ASSIGNMENT

24.1 ASSIGNMENT WITH CONSENT

Save as expressly provided otherwise in this Agreement, no Party shall be entitled to assign or transfer its rights or obligations under this Agreement without the prior written consent of the other Parties.

24.2 ASSIGNMENT TO FINANCING PARTIES

24.2.1 The Concessionaire shall have the right, in accordance with the Legal Requirements and the Concession Direct Agreement, to assign its rights under this Agreement to any Financing Parties, IZP (if applicable) and/or to any third-party security agent or trustee nominated by the Financing Parties and/or IZP (if applicable). Upon the Concessionaire's request, the GoS Parties shall provide such co-operation to the Financing Parties and IZP (if applicable) as may be requested by the Financing Parties and IZP (if applicable), including providing acknowledgements and notices to the Financing Parties and IZP (if applicable) dealing with matters such as the respective rights and obligations of the Financing Parties and the Concessionaire under the Financing Documents, provided that:

24.2.1.1 such co-operation and the terms of such acknowledgements and notices shall not (except as expressly provided in this Agreement) be interpreted as diminishing the GoS Parties' rights and entitlements under this Agreement; and

24.2.1.2 by providing such co-operation, the GoS Parties shall not assume (and shall not be deemed to be assuming) any obligations under the Financing Documents (other than under any Concession Direct Agreement).

24.2.2 The GoS Parties agree to enter into the Concession Direct Agreement with the Financing Parties and IZP (if applicable) in respect of this Agreement as the Concessionaire, or the Financing Parties, and IZP (if applicable) may reasonably request in connection with the financing of the Project, provided that, in so doing, the GoS Parties shall not assume (and shall not be deemed to be assuming) any obligations under the Financing Documents (other than as expressly set out in the Concession Direct Agreement); provided, that the GoS Parties shall reserve the right, under the Concession Direct Agreement, to negotiate the appointment or introduction of a substitute entity to continue the Project in accordance with the terms of the Concession Direct Agreement.

25. REPRESENTATIONS AND WARRANTIES

25.1 CONCESSIONAIRE REPRESENTATIONS AND WARRANTIES

The Concessionaire represents and warrants to each of the GoS Parties as follows:

- 25.1.1 it is duly incorporated and is validly existing and in good standing under the Legal Requirements;
- 25.1.2 it has the power and authority to enter into and perform its obligations under this Agreement;
- 25.1.3 it has the financial standing and capability to undertake and implement the Project in accordance with the terms of this Agreement;
- 25.1.4 the Sponsors have the financial standing and resources to comply with their obligations under this Agreement;
- 25.1.5 neither the Concessionaire nor the Sponsors have committed a breach in respect of their payment obligations in relation to a financial indebtedness;
- 25.1.6 this Agreement has been duly authorised, executed and delivered by it and constitutes the legal, valid and binding obligation of it;
- 25.1.7 there is no pending or threatened litigation or claim which would materially impair its ability to perform its obligations under this Agreement;
- 25.1.8 the performance of its obligations under this Agreement will not result in the breach of any term or provision of, or constitute a default under, any judgment, decree, indenture, mortgage or other agreement or instrument to which it is a party or by which it is bound, nor will such performance conflict with any charter, by-law or similar provision applicable to it. There are no conflicts or violations of Legal Requirements which would materially affect its right or ability to comply with the terms of this Agreement;
- 25.1.9 it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of any Government Authority which may result in any material impairment of its ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would result in material impairment of its ability to perform its obligations under this Agreement;
- 25.1.10 it has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may materially impair its ability to perform its obligations under this Agreement;
- 25.1.11 no representation or warranty made by the Concessionaire and contained herein or in any other document furnished by it to the GoS or to any Government Authority in relation to the Approvals contains any untrue or misleading statement of material fact or omits or will omit to state a material fact rendering such representation or warranty misleading;

25.1.12 the Concessionaire is aware of, understands, has complied with, and will comply with, all Anti-Corruption Laws and will ensure the same level of compliance by any Shareholder; and

25.1.13 the Concessionaire has undertaken all acts and deeds necessary and complied with all Legal Requirements and the RFP for the award of the Concession to the Concessionaire and the performance of its obligations under this Agreement.

25.2 **BREACH OF REPRESENTATIONS AND WARRANTIES**

25.2.1 In the event that any occurrence or circumstance renders any of its representations or warranties incorrect, the Concessionaire shall immediately notify the GoS Parties and the Independent Experts of the same and take reasonable steps to ensure compliance with its representations or warranties. Such notification shall not have the effect of remedying any incorrect representation or warranty made by the Concessionaire nor shall it adversely affect or waive any right, remedy or obligation of the Parties under this Agreement.

25.2.2 In the event any statement, representation or warranty made by the Concessionaire in this Agreement is rendered incorrect, in any material respect, due to any occurrence or circumstance, when made or reaffirmed, and such incorrect statement, representation or warranty has materially impaired the Concessionaire's ability to perform its obligations under this Agreement, then such incorrect statement, representation or warranty shall give rise to a Concessionaire Event of Default pursuant to Section 21.5 (*Concessionaire Event of Default*).

25.2.3 The representations and warranties under Section 25.1 (*Concessionaire Representations and Warranties*) shall be deemed repeated on the Commencement Date and each Capital Cost Recovery Payment Date, Fare Revenue Share Payment Date, Non-Fare Revenue Share Payment Date and Other Payment Date.

25.3 **GoS PARTIES' REPRESENTATIONS AND WARRANTIES**

Each GoS Party, severally, represents and warrants to the Concessionaire as follows:

25.3.1 it has the power and authority to enter into and perform its obligations under this Agreement;

25.3.2 this Agreement has been duly authorised, executed and delivered by it and constitutes its legal, valid and binding obligation;

25.3.3 there is no pending or threatened litigation or claim which would materially impair its ability to perform its obligations under this Agreement; and

25.3.4 the performance of its obligations under this Agreement will not result in the breach of any term or provision of, or constitute a default under, any judgment, decree, indenture, mortgage or other agreement or instrument to which it is a party or by which it is bound, nor will such performance conflict with any decree, charter, by-law or similar provision applicable to the GoS Party. There are no conflicts or violations of Legal Requirements that would materially affect its right or ability to comply with the terms of this Agreement.

25.4 **IMMUNITY**

25.4.1 Each GoS Party unconditionally and irrevocably:

- 25.4.1.1 agrees that the execution, delivery and performance by it of this Agreement constitutes private and commercial acts and not public or governmental acts;
 - 25.4.1.2 agrees that should any proceedings be brought against it or its assets (other than any of its assets which are significant in respect of national security of Pakistan (the **GoS Protected Assets**)) in any jurisdiction in relation to this Agreement or any transaction contemplated by this Agreement, no immunity, sovereign or otherwise, from such proceedings, execution, attachment or other legal process shall be claimed by or on behalf of itself or with respect to any of its assets (other than the GoS Protected Assets); and
 - 25.4.1.3 waives any such right of immunity, sovereign or otherwise, which the GoS or its assets (other than the GoS Protected Assets) now has or may acquire in the future, in respect of proceedings under this Agreement.
- 25.4.2 The Concessionaire expressly and irrevocably waives any immunity in any jurisdiction in respect of this Agreement and/or any matters arising hereunder including any obligation, liability, or responsibility hereunder.

25.5 **PROJECT IMPLEMENTATION UNIT**

25.5.1 The Project Implementation Unit shall:

- 25.5.1.1 oversee Day to Day implementation of the Project on behalf of the GoS Parties in accordance with the Legal Requirements;
 - 25.5.1.2 together with SMTA and the Concessionaire, develop and establish a grievance redressal mechanism in accordance with the Legal Requirements and the E&S Standards to record, address, and manage grievances related to the Project Activities, including a focus on:
 - (a) SMTA employees; and
 - (b) other Stakeholders (the **Grievance Redressal Mechanism**); and
 - 25.5.1.3 forward any matter, which cannot be resolved in accordance with the Grievance Redress Mechanism, to the Public Private Partnership Policy Board for resolution.
- 25.5.2 The Concessionaire shall provide all necessary cooperation and coordination:
- 25.5.2.1 to the Project Implementation Unit to allow it to carry out its functions; and
 - 25.5.2.2 to SMTA and the Project Implementation Unit to ensure Stakeholder grievances (whether addressed to the Concessionaire or otherwise) are adequately and timely resolved.

26. TECHNOLOGICAL IMPROVEMENTS

26.1 MAINTENANCE OF TECHNOLOGY

26.1.1 As part of operating, maintaining and repairing the E-Buses Assets during the Operations Period, the Concessionaire must maintain a level of technology in its systems that:

26.1.1.1 is consistent with Good International Industry Practices; and

26.1.1.2 ensures the E-Buses Assets are able to operate effectively and efficiently.

26.2 RESEARCH AND DEVELOPMENT OF TECHNOLOGICAL IMPROVEMENTS

26.2.1 The Concessionaire must:

26.2.1.1 keep abreast of relevant advances in technology; and

26.2.1.2 undertake or procure access to research and development,
with the aim of readily identifying Technological Improvements.

26.3 IMPLEMENTING TECHNOLOGICAL IMPROVEMENTS

26.3.1 As soon as practical after the Concessionaire becomes aware of a Technological Improvement, the Concessionaire must notify the GoS Parties and the Independent Experts of that Technological Improvement and:

26.3.1.1 submit a proposal in accordance with Section 6.22.2 in relation to the Technological Improvement; or

26.3.1.2 notify the GoS Parties and the Independent Experts that the Concessionaire does not intend to implement the Technological Improvement.

26.3.2 If the Concessionaire:

26.3.2.1 fails to notify the GoS Parties and the Independent Experts of a Technological Improvement under Section 26.3.1; or

26.3.2.2 notifies the GoS Parties and the Independent Experts that it does not intend to implement a Technological Improvement under Section 26.3.1.2,

the GoS Parties may:

26.3.2.3 if they consider that the Technological Improvement is not an Assumed Technological Improvement, issue a Change in Scope Order for the implementation of that Technological Improvement; or

26.3.2.4 if it considers that the Technological Improvement is an Assumed Technological Improvement, direct the Concessionaire to provide the GoS Parties with the Concessionaire's planned program for implementing the Assumed Technological Improvement.

26.3.3 If the Concessionaire receives a direction from the GoS Parties under Section 26.3.2.4, the Concessionaire must:

26.3.3.1 as soon as practicable after receiving the direction, notify the GoS Parties of the Concessionaire's planned program for implementing the Assumed Technological Improvement; and

26.3.3.2 after providing the notice in Section 26.3.3.1, proceed to implement the Assumed Technological Improvement.

26.3.3.3 Subject to Section 26.3.5, the allocation of Savings arising from implementation of a Technological Improvement (including an Assumed Technological Improvement) will be determined in accordance with Section 6.22 (*Change in Scope*) above.

27. GOVERNING LAW AND DISPUTE RESOLUTION

27.1 GOVERNING LAW

This Agreement and any non-contractual obligations arising out of or in connection with it shall be governed by and construed in accordance with the Laws.

27.2 NEGOTIATION

The Parties agree to attempt to resolve any Dispute promptly, amicably, and in good faith. Each Party shall designate a representative who shall be entitled to enter into discussions to resolve by amicable agreement any Dispute in connection with this Agreement.

27.3 PUBLIC PRIVATE PARTNERSHIP POLICY BOARD

If any Dispute is not finally resolved between the Parties pursuant to the Section 27.2 (*Negotiation*) within thirty (30) Days from the date on which a Party receives notice from any of the other Parties that a Dispute exists, then the Parties shall endeavour to settle the Dispute in an amicable manner by mediation administered by an independent and impartial person appointed by the Public Private Partnership Policy Board. If any Dispute is not resolved between the Parties pursuant to this Section 27.3 (*Public Private Partnership Policy Board*) within sixty (60) Days from the date on which the matter has been referred by the Public Private Partnership Policy Board to an independent and impartial person so appointed, then such Dispute shall be settled exclusively and finally in accordance with Section 27.4 (*Arbitration*).

27.4 ARBITRATION

27.4.1 Each of the Parties unconditionally and irrevocably agrees in respect of a Dispute, which cannot be resolved by the Parties pursuant to Section 27.3 (*Public Private Partnership Policy Board*):

27.4.1.1 to the submission of such Dispute to binding arbitration governed by the Arbitration Act 1940, by appointment of three (3) arbitrators, of which, one (1) shall be appointed jointly by the GoS Parties, one (1) shall be appointed by the Concessionaire, and one shall be appointed jointly by the two (2) arbitrators appointed by the GoS Parties and the Concessionaire (the **Arbitrators**). Any arbitration proceedings commenced pursuant to this Section 27.4.1 shall be referred to as the **Arbitration**;

27.4.1.2 not to claim any right it may have under the Laws to hinder, obstruct, or nullify the submission of the Dispute to Arbitration; and

27.4.1.3 to accept the Award rendered by the Arbitrators and any judgment entered thereon by a court of competent jurisdiction as final and binding and not to hinder, obstruct or nullify the enforcement or execution of any decision rendered by the Arbitrators or court of competent jurisdiction.

27.4.2 The place of Arbitration shall be Karachi, Pakistan.

- 27.4.3 The language of Arbitration shall be English.
- 27.4.4 Any decision or award resulting from the Arbitration (the **Award**) shall be final and binding upon the Parties.
- 27.4.5 The Parties hereby waive, to the extent permitted under the Laws, any rights to appeal or to review of such Award by any Government Authority.
- 27.4.6 The fees and expenses of the Arbitrators and all other expenses relating to Arbitration shall be borne and paid by the respective Parties, unless the Award states otherwise. The Arbitrators may provide in the Award, for reimbursement to a Party, of its costs and expenses in bringing or defending the Arbitration claim, including legal fees and expenses incurred by such Party.
- 27.4.7 This Agreement and the rights and obligations of the Parties shall remain in full force and effect pending the Award for any Arbitration, which Award, if appropriate, shall determine whether and when any termination shall become effective.

27.5 **EXCLUSIVE JURISDICTION**

No Party shall have the right to, nor shall they, commence or maintain any legal proceedings in or outside of Pakistan, concerning a Dispute, until the Dispute has been resolved in accordance with Sections 27.3 (*Public Private Partnership Policy Board*) or 27.4 (*Arbitration*) and then only to enforce or execute an award.

27.6 **OBLIGATIONS CONTINUING**

Unless otherwise agreed in writing, the existence of a Dispute shall not relieve any Party from the performance of its obligations under this Agreement not the subject of the Dispute.

28. INTELLECTUAL PROPERTY RIGHTS

28.1 CONCESSIONAIRE IPR

- 28.1.1 The Concessionaire (or its relevant licensor) shall retain exclusive ownership of the Concessionaire IPR and nothing in this Agreement (other than the licence granted under Section 28.1.2) shall operate to transfer to SMTA or vest in SMTA any licence to use or rights in the Concessionaire IPR.
- 28.1.2 The Concessionaire shall cause to be granted to SMTA a perpetual, irrevocable, royalty-free, and non-exclusive licence (with the free right to sub-licence and/or assign to any third party) to use, reproduce and maintain the Concessionaire IPR to the extent and for the duration necessary to enable SMTA to exercise its rights and perform its obligations under this Agreement.
- 28.1.3 The Concessionaire shall ensure that SMTA is provided with copies of such items of the Concessionaire IPR as SMTA may from time-to-time reasonably request.

28.2 PROJECT IPR

- 28.2.1 The Concessionaire shall use its best endeavours to procure that any licence or other arrangement with a third party or a Contractor relating to the Project IPR permits the Concessionaire to:

- 28.2.1.1 grant the licence set out in Section 28.2.2; and
- 28.2.1.2 make the transfer required by Section 28.2.3.3.

If the Concessionaire, despite the use of its best endeavours, is unable to secure the rights described above, the Concessionaire shall notify SMTA and shall (at its cost) take such other measures as are required to put SMTA in the position it would have been in if such rights had been procured or as close thereto as is reasonably possible in the circumstances. The Concessionaire shall pay any costs resulting from the performance of this Section 28.2.1, save for any on-going fees payable for the maintenance in force of the Project IPR following the Final Expiry Date to the extent such fees are unaffected, directly or indirectly, by its transfer to SMTA or its nominee, which fees shall, to that extent, be paid by SMTA.

- 28.2.2 The Concessionaire hereby grants to SMTA a royalty-free and non-exclusive licence (with the free right to sub-licence and/or assign to any third party) to use, reproduce and maintain the Project IPR to the extent and for the duration necessary to enable SMTA to exercise its rights and perform its obligations under this Agreement.

- 28.2.3 On:

- 28.2.3.1 the Final Expiry Date where SMTA has elected under the Handover Conditions that the Concessionaire should not fully reinstate in terms thereof; or
- 28.2.3.2 early termination of this Agreement for any reason where the GoS is obliged to purchase the Concessionaire's right, title and interest in the Project in accordance with Section 21.8

(Termination for a Prolonged Force Majeure Event) and has paid the purchase price in accordance with Section 21.9.2,

the Concessionaire shall deliver to SMTA or its nominee copies of all Project IPR, in each case in the form utilised by the Concessionaire in the operation of the Project and either:

28.2.3.3 transfer by way of future assignment to SMTA all Project IPR and execute a transfer or any other documents necessary to transfer absolutely such Intellectual Property Rights to SMTA and otherwise to perfect SMTA's title thereto; or

28.2.3.4 to the extent that Project IPR is capable of use by the Concessionaire in any project other than in respect of the Project, grant SMTA a royalty free, non-exclusive, sub-licensable, irrevocable, perpetual and freely assignable licence to use the Project IPR for any purpose in connection with the Project or the E-Buses Assets, any such licence to be effective from the Final Expiry Date.

28.3 **BREACHES OF INTELLECTUAL PROPERTY RIGHTS**

28.3.1 The Concessionaire shall defend, indemnify and hold the GoS Indemnified Parties harmless against all Claims, costs, charges and expenses arising from or incurred by reason of any actual infringement or alleged infringement of the Concessionaire IPR or the Project IPR licenced to SMTA under Sections 28.1 (*Concessionaire IPR*) or 28.2 (*Project IPR*) because of the use by or on behalf of SMTA of the rights granted under Sections 28.1 (*Concessionaire IPR*) or 28.2 (*Project IPR*); provided, that such infringement has arisen out of the use of the Concessionaire IPR or the Project IPR in accordance with the terms of this Agreement.

28.3.2 Without in any way limiting the foregoing provisions of this Section 28.3 (*Breaches of Intellectual Property Rights*), in circumstances where the Concessionaire is liable to indemnify the GoS Indemnified Parties in accordance with Section 28.3.1, the Concessionaire shall at SMTA's request but at the Concessionaire's own expense, complete one or more of the following without delay:

28.3.2.1 procure for SMTA the right to continue to use the Intellectual Property Rights in question; or

28.3.2.2 modify or replace the subject-matter of the activities permitted by this Agreement (at no cost to SMTA) so that it becomes non-infringing without loss of functionality or compatibility or affecting its use.

29. CONFIDENTIALITY

29.1 CONFIDENTIALITY OBLIGATION

During the term of this Agreement and after termination or expiry of this Agreement for any reason whatsoever, a Party shall:

- 29.1.1 keep the Confidential Information confidential;
- 29.1.2 not disclose the Confidential Information to any other person who is not a Party other than:
 - 29.1.2.1 with the prior written consent of the other Parties; or
 - 29.1.2.2 in accordance with Section 29.2 (*Disclosure*); and
- 29.1.3 not use the Confidential Information for any purpose other than the performance of its obligations under this Agreement.

29.2 DISCLOSURE

During the term of this Agreement and after termination or expiry of this Agreement for any reason, a Party may disclose the Confidential Information:

- 29.2.1 in the case of GoS Parties, to any of its ministers, civil servants, directors, officers and employees, and in the case of the Concessionaire, to its direct shareholders, directors, officers or employees (each a **Recipient**) to the extent necessary to achieve the purposes of this Agreement, provided that:
 - 29.2.1.1 the disclosing Party shall procure that each Recipient is made aware of and complies with the disclosing Party's obligations of confidentiality under this Agreement as if the Recipient was a party to this Agreement; and
 - 29.2.1.2 in no circumstances shall disclosure to the public be permitted pursuant to this Section 29.2.1;
- 29.2.2 if, and only to the extent, required to disclose such information by judicial, regulatory or administrative process or otherwise in accordance with any law or the rules of any recognised stock exchange applicable to the disclosing Party;
- 29.2.3 with the consent of the other Parties (not to be unreasonably withheld), in the interests of attracting debt or equity financing for the Project; provided, that prior to making such disclosure, the disclosing Party obtains an appropriate confidentiality undertaking from the person to whom the Confidential Information is to be disclosed;
- 29.2.4 to its Contractors, provided that prior to making such disclosure, the disclosing Party obtains an appropriate confidentiality undertaking from the person to whom the Confidential Information is to be disclosed;
- 29.2.5 to its legal, financial and/or technical advisors or pursuant to the Financing Documents, provided that prior to making such disclosure, the disclosing Party obtains an appropriate

confidentiality undertaking from the person to whom the Confidential Information is to be disclosed; or

29.2.6 in a legal action or proceeding brought by the disclosing Party in pursuit of its rights or in exercise of its remedies; or

29.2.7 to its insurers; provided, that prior to making such disclosure, the disclosing Party obtains an appropriate confidentiality undertaking from the person to whom the Confidential Information is to be disclosed.

29.3 **EXCEPTIONS**

The obligations contained in Sections 29.1 (*Confidentiality Obligation*) and 29.2 (*Disclosure*) shall not apply to any Confidential Information which:

29.3.1 is at the Effective Date in, or at any time after the Effective Date comes into, the public domain other than through breach of this Agreement by the disclosing Party or any Recipient;

29.3.2 can be shown by the disclosing Party to the reasonable satisfaction of the other Parties to have been known to the disclosing Party independently; or

29.3.3 on, before or after the Effective Date, has come lawfully into the possession of the disclosing Party from a third party.

29.4 **PRESS RELEASES**

This prohibition shall not forbid a Party, with the prior written consent of the other Parties, from issuing press releases containing Confidential Information in relation to the progress of the Project.

29.5 **DEFINITION**

For the purposes of this Article 29 (*Confidentiality*), **Confidential Information** means this Agreement and all information concerning the Project and the other Parties (or their Affiliates), whether:

29.5.1 in writing, verbally or by any other means; or

29.5.2 acquired directly or indirectly before or after the Effective Date.

30. NOTICES

30.1 ADDRESSES FOR SERVICE

A notice and all other forms of written communication shall be personally delivered, sent by registered post, sent by facsimile transfer or sent by email to the relevant address below. Notice or communication by email shall only be valid if receipt is confirmed by the recipient acknowledging receipt of the email.

30.1.1 **GoS**

Address:	☐
Attention:	☐
Fax:	☐
Email	☐

30.1.2 **SMTA**

Address:	☐
Attention:	☐
Fax:	☐
Email	☐

30.1.3 **CONCESSIONAIRE**

Address:	☐
Attention:	☐
Fax:	☐
Email	☐

30.2 DEEMED SERVICE

A notice or communication shall be deemed to have been made or delivered:

- 30.2.1 in the case of any communication made by letter, when delivered by hand, by recognised courier or by mail (registered return receipt requested) at the address set out in Section 30.1.1, Section 30.1.2 or Section 30.1.3 (as applicable);

- 30.2.2 in the case of any communication made by facsimile, when transmitted properly addressed to the facsimile number set out in Section 30.1.1, Section 30.1.2 or Section 30.1.3 (as applicable) and the sender has received a sent receipt; and
- 30.2.3 in the case of any communication made by email, when transmitted properly addressed to the email address set out in Section 30.1.1, Section 30.1.2 or Section 30.1.3 (as applicable), and the sender has received a sent receipt.

30.3 **CHANGES TO ADDRESSES FOR SERVICE**

If a Party changes its notice details set out in Section 30.1 (*Addresses for Service*), it shall provide the other Parties with prompt notice of any such changes prior to effecting the same.

31. MISCELLANEOUS

31.1 AMENDMENTS

This Agreement may be amended only with the prior written consent of all the Parties.

31.2 NO IMPLIED WAIVER

The failure of any Party to insist upon strict performance of any provisions of this Agreement shall not be construed as a waiver of any such provisions or the relinquishment of any such right for the future.

31.3 INVALIDITY

The invalidity or unenforceability of any provisions of this Agreement shall be determined in accordance with Section 0 (*Arbitration*). The Parties hereby agree to use good faith efforts to negotiate an equitable adjustment to any provisions of this Agreement determined to be invalid or unenforceable with a view towards effecting the purposes of this Agreement, and the validity or enforceability of the remaining provisions of this Agreement shall not be affected by such determination.

31.4 BINDING EFFECT

This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors, legal representatives and permitted assigns.

31.5 RELATIONSHIP OF THE PARTIES

31.5.1 Nothing contained in this Agreement shall be construed to create an association, trust, partnership or joint venture between the Parties. Each Party shall be liable individually and severally for its own obligations under this Agreement.

31.5.2 Unless stated otherwise herein, the obligations of the GoS in this Agreement are limited to payments due to the Concessionaire. The GoS' obligations in this Agreement shall, in no event, extend to the performance obligations of SMTA.

31.5.3 SMTA shall not be responsible for any payments due to the Concessionaire pursuant to this Agreement by the GoS.

31.5.4 Obligations of the GoS and SMTA under this Agreement and the GoS Project Documents are several and not joint.

31.6 EXPENSES

Without prejudice to the terms of this Agreement, each Party shall pay its own costs and expenses (including the fees and expenses of its agents, representatives, advisors, counsel and accountants) necessary for the negotiation, execution, delivery, performance of, and compliance with this Agreement.

31.7 **LANGUAGE**

This Agreement is being executed in the English language.

31.8 **ENTIRE AGREEMENT**

This Agreement and its appendices constitute the entire agreement and understanding between the Parties with respect to the subject matter hereof and supersedes all previous understandings, representations, or agreements between the Parties, whether written or oral.

31.9 **NO WAIVER**

The granting of any consent, approval or review by the Independent Experts or a GoS Party to any of the designs, works, plans or time programmes or the manner of implementation of the Project shall not relieve or reduce the Concessionaire's responsibility in performing its obligations as stipulated in the Agreement, or its responsibility to achieve the level of performance provided for in the Agreement.

31.10 **COUNTERPARTS**

The Parties may execute this Agreement in counterparts, which shall, in the aggregate, when signed by all the Parties constitute one and the same instrument; and thereafter, each counterpart shall be deemed to be an original instrument as against any Party who has signed it.

SCHEDULES

SCHEDULE A
TECHNICAL SPECIFICATIONS

SCHEDULE A (*Technical Specifications*) to this Agreement will comprise **VOLUME II (*TECHNICAL SPECIFICATIONS*)** of the RFP and will be inserted at signing with any necessary changes for references to the Bid.

SCHEDULE B
CONDITIONS PRECEDENT

1. CONCESSIONAIRE'S RESPONSIBILITY

It shall be a condition precedent to the Commencement Date that each of the following conditions has been satisfied and evidence thereof has been provided by the Concessionaire to the Independent Experts, unless any such condition is deferred or waived in writing by the GoS:

- 1.1 copies of its corporate documents duly certified as true copies by the Concessionaire secretary or director of each of the Concessionaire, the Sponsors and the Contractors;
- 1.2 copies of its Board Resolution that duly authorizes:
 - (a) the Concessionaire, the Sponsors and the Contractors (as the case may be) to enter into the relevant Project Agreements (to which they are a party) and to undertake the obligations, liabilities, as set out in the applicable Project Agreements, and the transactions as contemplated by the Project Agreement (to which they are a party); and/or
 - (b) a specified person or persons to:
 - (i) execute the relevant Project Agreements, on behalf of the Concessionaire, the Sponsors and the Contractors, to which they are a party; and
 - (ii) undertake all other acts, specifically relating to the Project Agreements (to which they are a party), as contemplated therein;
- 1.3 certified copy of the Development Period Performance Security;
- 1.4 the Base Case Financial Model;
- 1.5 certified true copies of the signed Financing Documents;
- 1.6 within thirty (30) Days of the Effective Date, signed and entered into a valid and effective:
 - (a) Independent Engineer Contract for the appointment of the Independent Engineer; and
 - (b) Independent Auditor Contract for the appointment of the Independent Auditor;
- 1.7 two (2) certified copies of the Concession Direct Agreement;
- 1.8 two (2) certified copies of the License Agreement;
- 1.9 evidence of establishment of the:
 - (a) Independent Engineer Payment Account and issuance of the Independent Engineer Payment Account Standing Instructions; and

- (b) Independent Auditor Payment Account and issuance of the Independent Auditor Payment Account Standing Instructions;
- 1.10 evidence that the Construction Contractor meets the Construction Contractor Criteria;
- 1.11 two (2) certified copies of its executed Construction Contract(s), the Supply Contract and the Bus Operator Contract, which are executed in accordance with Section 16.3 (*Contractor's Appointment, Project Agreements, Financing Documents and Refinancing*);
- 1.12 in case of change of the Bus Operator prior to the Commencement Date, evidence that the proposed new Bus Operator meets the relevant Bus Operator Criteria;
- 1.13 two (2) certified copies of the valid Pakistan Engineering license(s) for the Construction Contractor;
- 1.14 copies of a full or limited notice to proceed (as applicable), in the event the Concessionaire has issued a full or limited notice to proceed to the Construction Contractor;
- 1.15 copies of the Approvals procured by the Concessionaire and the same are effective and valid and have not been cancelled and/or rescinded;
- 1.16 a copy of the E&S Impact Assessment report, duly approved by the Sindh Environmental Protection Agency, Government of Sindh;
- 1.17 evidence of establishment of the Capital Cost Recovery Payment Account (Concessionaire);
- 1.18 evidence of establishment of the Fare Revenue Account and issuance of the Fare Revenue Account Standing Instructions;
- 1.19 evidence of establishment of the Non-Fare Revenue Account and issuance of the Non-Fare Revenue Account Standing Instructions;
- 1.20 a legal opinion from the legal counsel of the Concessionaire confirming that (a) the Concessionaire has been duly organized and is validly existing under the laws of Pakistan and has the requisite power and authority to enter into this Agreement and to undertake the transactions as contemplated by this Agreement and to assume the obligations as contained herein and the enforceability of the same against the Concessionaire, (b) this Agreement has been duly executed and is legally valid, binding and enforceable against the Concessionaire in accordance with the terms herein, and (c) all consents and approvals or actions required to be undertaken, fulfilled and obtained (including the obtaining of any necessary Approvals on behalf of or in the name of the Concessionaire) in order for the Concessionaire to enter into and comply with its obligations under this Agreement, have been undertaken, fulfilled or obtained;
- 1.21 a legal opinion from the legal counsel(s) of the Sponsor(s) confirming that: (a) the Sponsor(s) has/have been duly organized and is/are validly existing under the laws of the jurisdiction where it/they are incorporated and has/have the requisite power and authority to issue the Sponsor(s) Undertaking and to undertake the transactions as contemplated by

the Sponsor(s) Undertaking and to assume the obligations as contained in the Sponsor(s) Undertaking and the enforceability of the same against the Sponsor(s); (b) the Sponsor(s) Undertaking has been duly executed and is legally valid, binding and enforceable against the Sponsor(s) in accordance with the terms of the Sponsor(s) Undertaking; and (c) all consents and approvals or actions required to be undertaken, fulfilled and obtained (including the obtaining of any necessary Approvals on behalf of or in the name of the Sponsor(s)) in order for the Sponsor(s) to enter into and comply with its/their obligations under the Sponsor(s) Undertaking, have been undertaken, fulfilled or obtained;

- 1.22 not later than thirty (30) Days prior to the Scheduled Commencement Date, submit evidence of establishment of the E&S Management System;
- 1.23 not later than twenty (20) Days from the Effective Date, submit the Non-Fare Revenue Plan and procure approval for the same;
- 1.24 submit to the Independent Engineer and procure approval for the HR Policy and Procedure;
- 1.25 submit to the Independent Engineer and procure approval for the Training Programme;
- 1.26 submit evidence of procurement of all insurances in terms of Article 18 (*Insurances*);
- 1.27 evidence of incorporation of share transfer restrictions for Sponsors in the corporate documents of the Concessionaire;
- 1.28 evidence of payment of the Success Fee having been made by the Concessionaire;
- 1.29 a letter from the Financing Parties (or an agent of the same) confirming that the Financing Documents have been signed and that all conditions precedents to Financial Close have been satisfied, deferred or waived except:
 - (a) establishment of the Capital Cost Recovery Payment Account (GoS) and issuance of the Capital Cost Recovery Payment Account (GoS) Standing Instructions and the Capital Cost Recovery Payment Account Letter of Lien; and
 - (b) issuance of the IZP Guarantee Instrument and/or the SBP Debit Authority,

(the **Conditional FC Letter**);
- 1.30 following confirmation by the Independent Experts to the GoS that the Conditions Precedent set out in paragraph 1.29 have been satisfied, deferred or waived and the Conditional FC Letter has been issued, evidence of issuance of the IZP Guarantee Instrument (if applicable);
- 1.31 such other documents which the GoS may require in connection with the above.

2. **SMTA'S RESPONSIBILITY**

It shall be a condition precedent to the Commencement Date that each of the following conditions have been satisfied and evidence thereof provided by SMTA to the Independent

Experts by SMTA, unless any such condition precedent is deferred or waived in writing by the Concessionaire:

- 2.1 within thirty (30) Days of the Effective Date, signed and entered into a valid and effective:
 - (a) Independent Engineer Contract for the appointment of the Independent Engineer; and
 - (b) Independent Auditor Contract for the appointment of the Independent Auditor;
- 2.2 two (2) certified copies of the Concession Direct Agreement; and
- 2.3 two (2) certified copies of the License Agreement.

3. GOS' RESPONSIBILITY

It shall be a condition precedent to the Commencement Date that each of the following conditions is satisfied and supplied to the Independent Experts by the GoS, unless any such condition precedent is deferred or waived in writing by the Concessionaire:

- 3.1 within thirty (30) Days of the Effective Date, signed and entered into a valid and effective:
 - (a) Independent Engineer Contract for the appointment of the Independent Engineer; and
 - (b) Independent Auditor Contract for the appointment of the Independent Auditor;
- 3.2 two (2) certified copies of the Concession Direct Agreement;
- 3.3 two (2) certified copies of the License Agreement;
- 3.4 following confirmation by the Independent Experts to the GoS that the Conditions Precedent set out in paragraphs 1.29 and 1.30 have been satisfied, deferred or waived and the Conditional FC Letter has been issued, evidence of:
 - (a) establishment of the Capital Cost Recovery Payment Account (GoS) and issuance of the Capital Cost Recovery Payment Account (GoS) Standing Instructions and the Capital Cost Recovery Payment Account Letter of Lien; and
 - (b) issuance of the SBP Debit Authority (if applicable).

4. GENERAL CONDITIONS PRECEDENT

It shall be a condition precedent to the Commencement Date that by the Scheduled Commencement Date, as such date may be extended pursuant to the terms of this Agreement, or such later date as the Parties hereto may agree in writing, a closing certificate dated the date of the Commencement Date from each Party hereto in favour of the other Parties to the effect that the representations and warranties of each of the GoS Parties and the Concessionaire (as applicable), contained or incorporated by reference herein are true and correct in all material respects on and as of the Commencement Date with the same force as though made on and as of the Commencement Date.

ATTACHMENT A: CONSTRUCTION CONTRACTOR CRITERIA

1. CONSTRUCTION CONTRACTOR CRITERIA

- 1.1 The Construction Contractor (or a Sponsor, in case a Sponsor intends to undertake the relevant Construction Works for the Project itself) must be legally constituted, incorporated or registered and operating in accordance with the laws of its country of origin, and may have the nationality of any country, subject to applicable Laws and restrictions. This requirement shall also apply to any proposed specialized subcontractors.
- 1.2 Where operating in Pakistan, the Construction Contractor shall be registered with the Pakistan Engineering Council (PEC) and shall hold valid registration throughout the Development Period, with a minimum classification of PEC Category C-A, including specialisation codes **CE-01 (Civil Works)** and **CE-10 (Building Works)**.
- 1.3 The Construction Contractor shall have experience under construction contracts as a prime contractor, subcontractor or management contractor for a period of not less than ten (10) years, preceding the Effective Date.
- 1.4 The Construction Contractor shall have satisfactorily and substantially completed similar works of comparable nature and complexity meeting either of the following criteria:
 - (a) two (2) contracts, each having a minimum value of Pakistani Rupees Six Hundred Million only (PKR 600,000,000/-); or
 - (b) one or more contracts having an aggregate value of not less than Pakistani Rupees Twelve Hundred Million only (PKR 1,200,000,000/-),in each case calculated based on the value attributable to the Construction Contractor, whether acting as prime contractor or subcontractor.
- 1.5 The Construction Contractor shall demonstrate experience in executing the following key construction activities under completed or ongoing contracts:
 - (a) multi-storey reinforced concrete structures, including parking floors;
 - (b) retaining walls; and
 - (c) underground tanks, including water, fire-fighting, fuel or utility tanks.
- 1.6 The Construction Contractor shall declare any civil works contracts that were suspended, terminated, or in respect of which performance security was called due to breach of environmental, social, occupational health and safety or similar obligations (including SEA/SH related breaches) during the five (5) years preceding the Effective Date. Such declaration shall identify the relevant contract, counterparty, nature of the breach and remedial actions taken, and shall be supported, where available or reasonably requested by the Concessionaire, by relevant environmental and social documentation, correspondence, notices, determinations or other records evidencing such non-performance. Where

specialised subcontractors are proposed, equivalent declarations and supporting documentation shall be provided for such subcontractors.

- 1.7 The Construction Contractor shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, committed lines of credit or other financial means, independent of any contractual advance payment, sufficient to meet construction cash-flow requirements for the Development Activities estimated at not less than Pakistani Rupees Two Hundred and Forty Million (PKR 240,000,000/-), net of the Construction Contractor's other contractual commitments.
- 1.8 The Construction Contractor shall further demonstrate that it has adequate and reliable sources of finance to meet the cash-flow requirements for works currently in progress as well as future contractual commitments.
- 1.9 The Construction Contractor shall submit audited balance sheets and financial statements for the last three (3) financial years, or, where auditing is not required under the laws of the Construction Contractor's country of incorporation, such other financial statements as are acceptable to the Concessionaire, evidencing the soundness of the Construction Contractor's financial position.
- 1.10 The Construction Contractor shall have achieved a minimum average annual construction turnover of Pakistani Rupees One Billion and Eight Hundred Million (PKR 1,800,000,000/-), calculated as the average of total certified payments received for construction contracts in progress and/or completed during the preceding three (3) financial years.
- 1.11 Specialised non-structural works may be subcontracted with the prior approval of the Independent Engineer, including electrical works, charger installation, mechanical and HVAC systems, fire-fighting and fire alarm systems, plumbing, drainage and ancillary works. Such subcontracting shall not relieve the Construction Contractor or the Concessionaire of any responsibility or liability under this Agreement.

2. **REQUIRED DOCUMENTATION:**

- 2.1 For the proposed Construction Contractor, the Concessionaire shall submit the following documentation:
 - (a) most recent performance certificate/report, or other relevant evidence issued by an employer or a third-party engaging the proposed Construction Contractor (or the Sponsor) for the relevant works/projects, undertaken by the proposed Construction Contractor (or the Sponsor) in the last ten (10) years preceding the Effective Date, and with respect to each of the works/projects, the information in the format provided in Annexure A (*Proposed Construction Contractor Technical Criteria Evidence Sheet*) of this attachment, clearly indicating the name of the proposed Construction Contractor, scope of construction and development works undertaken by such proposed Construction Contractor and the period of execution, in each case evidencing compliance with Construction Contractor Criteria;

- (b) evidence of PEC registration in accordance with Section 1.2 (where operating in Pakistan);
- (c) the declaration required under Section 1.6, together with copies of relevant environmental and social documents, notices, correspondence, contractual records or other supporting evidence, to the extent available, and where specialized subcontractors are proposed, equivalent declarations and supporting documentation for such specialized subcontractors;
- (d) audited financial statements and such other supporting documentation as may be required to evidence compliance with Sections 1.7 to 1.10, including evidence of available liquidity/credit lines and computation of average annual construction turnover;
- (e) such additional environmental and social documentation, records or certifications relating to the Construction Contractor's past performance under civil works contracts as the Concessionaire may reasonably require for the purposes of verifying compliance with Section 1.6;
- (f) a detailed description of the proposed Construction Contractor containing:
 - (i) legal name;
 - (ii) complete head office contact information, including mailing address, telephone and fax numbers, and an e-mail address; and
 - (iii) incorporation details, including corporate charter and articles of incorporation. If the proposed Construction Contractor is an unincorporated legal entity, then the proof of that legal entity's existence must be provided.

ANNEXURE A - PROPOSED CONSTRUCTION CONTRACTOR TECHNICAL CRITERIA
EVIDENCE SHEET

The Concessionaire shall attach to this Annexure A information that describes the proposed Construction Contractor's background and experience in construction and development works of a similar nature and complexity to the Construction Works.

A summary table shall be provided for each project or reference, and relevant documents shall be attached herein as evidence, including completion certificates, performance certificates, employer references, technical reports and, where applicable, documentation evidencing environmental, social and occupational health and safety performance under the relevant contract.

Note: The Concessionaire may include construction and development projects meeting the criteria above, specifying the period in which the proposed Construction Contractor has undertaken such works, which shall not be beyond ten (10) years preceding the Effective Date.

SUITABLE RELEVANT PROJECT EXPERIENCE

REQUIREMENT	COMPLIANCE
Project involves construction and development works of similar nature and complexity to the Construction Works	[Y/N]
Project includes material civil, electrical and systems integration components	[Y/N]
Contract value attributable to the Construction Contractor $\geq$ PKR 600 million	[Y/N]
Aggregate value of submitted projects attributable to the Construction Contractor $\geq$ PKR 1,200 million (if applicable)	[Y/N]
Experience falls within the last ten (10) years preceding the Effective Date	[Y/N]

PROJECT DETAILS

Name of Project	Location and Country	Description (overview) of the Project and key components	Scope of construction and development works undertaken by the Proposed Construction Contractor	Role of the Construction Contractor (Prime / Subcontractor / Management Contractor)	Contract value attributable to the Construction Contractor (PKR)	Start and completion dates of construction / development activities	Ownership in Project (if applicable)

<i>[one line per project]</i>							

REFERENCE/COUNTERPARTY DETAILS

Name of Developer counterparty, organization and/or individual for reference	Scale and key characteristics of the Project (e.g. size, complexity, systems integrated)	Name of Counterparty	Period during which the Construction Contractor performed construction and development works under the relevant contract
<i>[one line per project]</i>			

SCHEDULE C
IMPLEMENTATION SCHEDULE

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MILESTONES	DATE
Effective Date (date of signing of the Concession Agreement)	Day 0
Scheduled Commencement Date	Six (6) months from the Effective Date
Submission of Concept E-Bus Design by the Concessionaire	Within fifteen (15) Days of the Effective Date
Approval of Concept E-Bus Design by the Independent Engineer	Within such time period as set out in Section 6.2 (<i>Concept E-Bus Design</i>)
Submission of Detailed E-Bus Design by the Concessionaire	Within fifteen (15) Days of approval of the Concept E-Bus Design
Approval of Detailed E-Bus Design by the Independent Engineer	Within such time period as set out in Section 6.3 (<i>Detailed E-Bus Design</i>)
Manufacture of Prototype Bus and Commencement of Prototype Tests	Within thirty (30) Days of approval of the Detailed E-Bus Design
Completion of Prototype Tests and issuance of Prototype Tests Acceptance Certificate by the Independent Engineer	Within such time period as set out in Section 6.4 (<i>Prototype Tests</i>)
Submission of Final E-Bus Design by the Concessionaire	Within ten (10) Days of issuance of the Prototype Tests Acceptance Certificate
Approval of Final E-Bus Design by the Independent Engineer	Within such time period as set out in Section 6.5 (<i>Final E-Bus Design</i>)
Submission of Detailed Engineering Design for the Construction Works	Within two (2) months of the Effective Date
Approval of Detailed Engineering Design by the Independent Engineer	Within such time period as set out in Section 6.6 (<i>Detailed Engineering Design</i>)
Achievement of Commencement Date (issuance of Commencement Certificate)	Within six (6) months of the Effective Date
Commencement of manufacture of Supplied E-Buses	Immediately upon achievement of the Commencement Date and approval of the Final E-Bus Design
First Scheduled Delivery Date (in respect of the First Batch of Goods)	Within six (6) months of the Commencement Date

First Delivery Completion Date	On issuance of the Certificate of Compliance for the First Batch of Goods
Second Scheduled Delivery Date (in respect of the Second Batch of Goods)	Within eight (8) months of the Commencement Date
Second Delivery Completion Date	On issuance of the Certificate of Compliance for the Second Batch of Goods
Completion of the Development Activities, as certified by the Independent Engineer	On completion of delivery, testing and certification obligations under Article 6 (<i>Supply and Construction Works</i>)
COD (First Segment)	The Day immediately following issuance of the COD (First Segment) Certificate
COD (Second Segment)	The Day immediately following issuance of the COD (Second Segment) Certificate

SCHEDULE D SCHEDULE OF DELIVERY

For the purposes of this **SCHEDULE D (*Schedule of Delivery*)**, all Supply Obligations shall be the responsibility of the Concessionaire, whether performed directly or through any Supplier, manufacturer, contractor or sub-contractor. Any reference to such terms shall be construed accordingly. This **SCHEDULE D (*Schedule of Delivery*)** stipulates the timelines for the execution of the Supply Obligations, culminating in the issuance of the relevant Delivery Completion Certificate (First Segment) or Delivery Completion Certificate (Second Segment), as applicable, in accordance with the Concession Agreement.

SUPPLY OBLIGATIONS RELATED TO GOODS & SERVICES				
SUPPLY AND MAINTENANCE SUPERVISION OF BUSES/GOODS				
ITEM No.	NAME OF SUPPLY OBLIGATIONS	DESCRIPTION	UNIT OF MEASUREMENT	QUANTITY/DURATION
A. LIST OF BUSES, SPARE PARTS AND EQUIPMENT				
	Supply of 12-meter Buses ²²	Refer to SCHEDULE A (<i>Technical Specifications</i>) for detailed description	No.	Three Hundred (300)
	Supply of 8.5 to 9-meter Buses ²³		No.	Two Hundred (200)
	Supply of full Spare Parts package for the Buses	In accordance with Article 22 (<i>Warranty</i>) (including the applicable Warranty Period) and the Concessionaire's Supply Obligations under this Agreement	Lump sum	[Concessionaire to Insert Value]
	Supply of tools and diagnostic	Delivered as part of the Goods and subject to	No.	[Concessionaire to Insert Value]

²² Supply of Buses shall be deemed to fully encompass:

(a) the supply of Buses in the quantities specified under the Project Documents; and

(b) the provision of warranties covering the Buses, Spare Parts, and components for a period of two (2) years from the date of acceptance of

the final tranche of Buses and Spare Parts.

Notwithstanding the foregoing, warranties for Bus batteries and structural components, including battery packs, electric motors, bus structure, and chargers, shall be valid for a period of twelve (12) years or 1.2 million kilometres of operation, whichever milestone is achieved earlier.

²³ Same as above.

	equipment for the Project	inspection at the Delivery Point		Value]
B. LIST OF SERVICES INCLUDED IN SUPPLY OBLIGATIONS				
4.	Maintenance Supervision	Refer to SCHEDULE A (Technical Specifications) for detailed description	Month	36
	Maintenance Training Program	Conducted as part of the Training Programme in accordance with SCHEDULE A (Technical Specifications) and Section 10.14 (<i>Training Programme</i>) of this Agreement	Lump sum	[Concessionaire to Insert Value]
6.	Driver Training Program	Conducted as part of the Training Programme in accordance with SCHEDULE A (Technical Specifications) and Section 10.14 (<i>Training Programme</i>) of this Agreement	Lump sum	[Concessionaire to Insert Value]
7	Vehicle Registration Formalities	For each Bus, in accordance with Applicable Law and Standards	Lump sum	[Concessionaire to Insert Value]
8	Inland transport and insurance	In accordance with Article 18 (<i>Insurances</i>) of this Agreement and SCHEDULE G (Minimum Insurance Requirements)	Lump sum	[Concessionaire to Insert Value]

DELIVERY AND COMPLETION SCHEDULE

The delivery period shall start from the Commencement Date.

DESIGN, PROTOTYPE AND PRODUCTION MILESTONES

No.	MILESTONE	REQUIREMENT	TIMELINE
1.	Concept E-Bus Design submission	Submission of Concept E-Bus Design	Within fifteen (15) Days of the Effective Date

No.	MILESTONE	REQUIREMENT	TIMELINE
2.	Concept E-Bus Design approval	Review and approval by the Independent Engineer (in consultation with the GoS Parties under this Agreement)	Within ten (10) Days from submission date
3.	Detailed E-Bus Design submission	Submission of Detailed E-Bus Design	Within fifteen (15) Days from of the Concept E-Bus Design approval
4.	Detailed E-Bus Design Approval	Review and approval by the Independent Engineer (in consultation with the GoS Parties under this Agreement)	Within ten (10) Days from submission of the Detailed E-Bus Design
5.	Prototype Bus production & testing	First full Prototype Bus produced and tested at factory	Within thirty (30) Days of Detailed E-Bus Design approval
6.	Final E-Bus Design submission	Submission of Final E-Bus Design following issuance of the Prototype Tests Acceptance Certificate by the Independent Engineer	Within ten (10) Days of Prototype Tests Acceptance Certificate issuance
7.	Approved Final E-Bus Design	Approval for Bus manufacture, by the Independent Engineer	Within ten (10) Days of submission of the Final E-Bus Design

BUS DELIVERY SCHEDULE

NO	BATCH	SCOPE	DELIVERY TIMELINE	LOCATION
1.	First Batch of Goods	150 × 12-m Buses + 100 × 8.5 to 9-m buses	Within six (6) months from the Commencement Date	Karachi & Hyderabad
2.	Second Batch of Goods	150 × 12-m Buses + 100 × 9-m Buses	Within eight (8) months from the Commencement Date	Karachi & Hyderabad

WARRANTY OBLIGATIONS

Sr. No.	COMPONENT	WARRANTY PERIOD	COMMENCEMENT
1.	General bus systems & components (other than the Bus Electric Powertrain and Vehicle Structure)	Goods Warranty Period (Two (2) years commencing on the respective Delivery Completion Date)	From issuance of the relevant Delivery Completion Certificate in respect of each Batch of Goods

Sr. No.	COMPONENT	WARRANTY PERIOD	COMMENCEMENT
2.	Battery packs forming part of the Bus Electric Powertrain and Vehicle Structure	Bus Electric Powertrain and Vehicle Structure Warranty Period i.e. from the Delivery Completion Date to the earlier of twelve (12) years after the Delivery Completion Date (First Segment) or 1.2 million kilometres of service in respect of the relevant Bus.	From issuance of the relevant Delivery Completion Certificate in respect of each Batch of Goods
3.	Electric drivetrain and motors forming part of the Bus Electric Powertrain and Vehicle Structure	As specified in the OEM warranty, provided that such warranty shall not be less than the minimum performance and availability obligations of the Concessionaire under this Agreement	From issuance of the relevant Delivery Completion Certificate in respect of each Batch of Goods

SPARES, TOOLS AND SUPPORT

Sr. No.	ITEM	REQUIREMENT	TIMELINE
1.	Spare Parts availability	Sufficient Spare Parts available to support operations in accordance with the approved Spare Parts List as specified in SCHEDULE A (Technical Specifications)	From first Bus delivery
2.	Tools & diagnostics	One complete set per depot as specified in SCHEDULE A (Technical Specifications)	From first Bus delivery
3.	Maintenance Supervision	Continuous advisory and technical support	From first Bus delivery

TRAINING PROGRAMMES

Sr. No.	PROGRAM	REQUIREMENT	COMPLETION TIMELINE
1.	Maintenance Training Programme (Initial)	Core technical, high-voltage safety and occupational health and safety training	Within six (6) months from the Commencement Date
2.	Maintenance Training Programme (Final)	Advanced & refresher training	Prior to COD (First Segment)

SR. No.	PROGRAM	REQUIREMENT	COMPLETION TIMELINE
3.	Driver Training Programme	Safe EV operations & passenger safety	Completed within two (2) months from commencement of driver training, which shall commence no later than six (6) months from the COD (First Segment)

HOMOLOGATION, REGISTRATION AND TRANSPORT

SR. No	OBLIGATION	REQUIREMENT	COMPLETION TIMELINE
1.	Homologation & Registration	Completed for each Bus in accordance with applicable Law and regulatory requirements	Within forty-five (45) Days of delivery
2.	Inland Transport & Insurance	Coverage until acceptance at Delivery Point	From dispatch until acceptance at the Delivery Point

SCHEDULE E TESTING

1.1 INTRODUCTION

- 1.1 This **SCHEDULE E (*Testing*)** sets out the testing and inspection requirements applicable during the Development Period and the Operations Period, including: (a) Prototype testing of the Prototype Bus (and associated certification), inspection of each Batch of Goods prior to dispatch and at the Delivery Point, and testing required for issuance of the COD (First Segment) Certificate and the COD (Second Segment) Certificate; and (b) testing and commissioning of the Bus Depots and Charging Infrastructure forming part of the Development Activities.
- 1.2 This **SCHEDULE E (*Testing*)** is neither addressing nor referring to the quality control and quality assurance testing for construction materials, such as concrete and earthworks, where, for instance, compressive strength or compaction tests are carried out. The Detailed Engineering Design, the Concept E-Bus Design, the Detailed E-Bus Design and the Final E-Bus Design, each that must be developed by the Concessionaire and approved by the Independent Engineer, shall address the necessary materials quality control according to current regulations and engineering standards. This shall be explicitly included in all Development Documents and the quality control and assurance plan to be developed by the Concessionaire and approved by the Independent Engineer.

1.2 DEFINITIONS

- 1.2.1 **Bus Basic Compliance Tests** means the initial prototype testing conducted on the Prototype Bus to confirm compliance with the minimum requirements set out in **SCHEDULE A (*Technical Specifications*)** and this Agreement.
- 1.2.2 **Bus Braking Performance Test** means the prototype test conducted to measure and record braking performance and braking distances of the Prototype Bus in accordance with **SCHEDULE A (*Technical Specifications*)** and the Applicable Standards.
- 1.2.3 **Bus Physical Inspection** means the physical inspection of the Prototype Bus (including interior and exterior) conducted as part of the Prototype Tests to assess general build quality, workmanship, fit-out, and the condition and functionality of visible components.
- 1.2.4 **COD (First Segment) Tests** means the tests, inspections, procedures and demonstrations required under this Agreement and this **SCHEDULE E (*Testing*)** to confirm achievement of the conditions for issuance of the COD (First Segment) Certificate.
- 1.2.5 **COD (Second Segment) Tests** means the tests, inspections, procedures and demonstrations required under this Agreement and this **SCHEDULE E (*Testing*)** to confirm achievement of the conditions for issuance of the COD (Second Segment) Certificate.

- 1.2.6 **Completion Tests** means the final inspection(s) and tests conducted for the Bus Depots and Charging Infrastructure (and any other relevant E-Buses Assets developed as part of the Development Activities) to confirm compliance with **SCHEDULE A (Technical Specifications)**, the Applicable Standards, and the requirements for issuance of the COD Certificate.
- 1.2.7 **Completion Tests Date Notice** means the notice issued by the Concessionaire to the GoS Parties and the Independent Engineer specifying the proposed date and time for conducting the Completion Tests.
- 1.2.8 **Construction Tests** means the tests and inspections conducted during execution of the Construction Works to verify that the Construction Works conform to **SCHEDULE A (Technical Specifications)** and the Applicable Standards.
- 1.2.9 **Double Lane Change Test (Obstacle Avoidance Test)** means the Prototype Test conducted to assess handling and stability of the Prototype Bus under a double lane-change manoeuvre in accordance with **SCHEDULE A (Technical Specifications)** and the Applicable Standards.
- 1.2.10 **Exit Report** means the written condition assessment report prepared following the handover/transfer inspection conducted prior to the Term Expiry Date for purposes of assessing compliance with the Handover Conditions.
- 1.2.11 **Factory Acceptance Tests** means the inspections and tests conducted at the place of manufacture and/or assembly (as applicable) for the charging equipment forming part of the Charging Infrastructure to verify compliance with **SCHEDULE A (Technical Specifications)** and the Applicable Standards prior to dispatch for delivery to Pakistan.
- 1.2.12 **Gradeability, Acceleration and Top Speed Test** means the Prototype Test conducted to determine acceleration, gradeability and top speed performance of the Prototype Bus in accordance with **Schedule A (Technical Specifications)** and the Applicable Standards.
- 1.2.13 **Handover Inspection** means the tests and inspections carried out by the Independent Experts, in accordance with this Agreement and this **SCHEDULE E (Testing)**, within one (1) year prior to the Term Expiry Date or, where applicable, within one (1) Month following the Termination Date, for purposes of determining whether the E-Buses Assets satisfy the Handover Conditions.
- 1.2.14 **Noise Tests** means Prototype Tests comprising (a) interior noise and vibration testing and (b) exterior noise testing, each conducted in accordance with **SCHEDULE A (Technical Specifications)** and the Applicable Standards.
- 1.2.15 **Prototype Tests** means the tests and inspections carried out on the Prototype Bus at the Test Location in accordance with this Agreement and this **SCHEDULE E (Testing)**, as a condition to issuance of the Prototype Tests Acceptance Certificate.

- 1.2.16 **Structural Integrity Tests** means the Prototype Tests conducted to verify structural performance and integrity of the Prototype Bus, including static and dynamic towing, shakedown and distortion testing, and other tests specified in **SCHEDULE A (Technical Specifications)** and/or required under the Applicable Standards.
- (b) **Structural Shakedown Test** means the test conducted to determine static structural characteristics of the Prototype Bus, including floor deflection, permanent structural deformation and load-bearing performance under prescribed static loading conditions.
 - (c) **Structural Distortion Test** means the test conducted to observe the performance and operation of the Prototype Bus subsystems and structure when the bus is subjected to a longitudinal twist simulating operation over uneven surfaces, curbs or potholes.
 - (d) **Static Towing Test** means the test conducted to determine the characteristics and adequacy of the towing mechanisms of the Prototype Bus under static loading conditions.
 - (e) **Dynamic Towing Test** means the test conducted to verify the integrity of towing fixtures and the feasibility of towing the Prototype Bus under dynamic conditions in accordance with manufacturer-specified procedures and the Applicable Standards.
 - (f) **Jacking Test** means the test conducted to inspect the Prototype Bus for damage resulting from a deflated tyre and to determine the feasibility of lifting the bus using a portable hydraulic jack to a height sufficient to replace the deflated tyre.
 - (g) **Hoisting Test** means the test conducted to determine whether hoisting or supporting the Prototype Bus using jacks or stands causes damage, deformation or impairment to structural or mechanical components.
 - (h) **Rollover Test** means the test conducted to assess the crashworthiness of the Prototype Bus, including the ability of the vehicle structure to protect occupants in the event of a rollover, which may be satisfied through validated simulation-based testing where permitted under **SCHEDULE A (Technical Specifications)** and the Applicable Standards.

1.3 **PROTOTYPE TESTS**

- 1.3.1 Following approval of the Approved Detailed E-Bus Design in accordance with this Agreement, the Concessionaire shall cause at least one (1) Prototype Bus to be produced.
- 1.3.2 The Prototype Bus shall be subjected to the Prototype Tests for the purpose of verifying compliance with the requirements of this Agreement, including **SCHEDULE A (*Technical Specifications*)** and the Applicable Standards, and to ascertain the performance, safety, reliability and structural integrity of the Prototype Bus.
- 1.3.3 The Prototype Tests shall include, at a minimum, the tests expressly specified in this **SCHEDULE E (*Testing*)**. Additional tests may be required only to the extent mandated under the Applicable Standards or **SCHEDULE A (*Technical Specifications*)**, and shall be conducted under the supervision and certification of the Independent Engineer.

1.4 **FACTORY ACCEPTANCE TEST FOR CHARGING INFRASTRUCTURE**

- 1.4.1 Prior to dispatch of any components of the Charging Infrastructure for delivery to the Project Site, the Concessionaire shall ensure that such Charging Infrastructure is subjected to Factory Acceptance Tests for the purpose of verifying compliance with the requirements of this Agreement, including **SCHEDULE A (*Technical Specifications*)** and the Applicable Standards.
- 1.4.2 The Factory Acceptance Tests shall include, at a minimum, the inspections and tests expressly specified in this Section 4. No Factory Acceptance Test shall be waived except in accordance with the express provisions of this Agreement and subject to certification by the Independent Engineer.
- 1.4.3 **VISUAL INSPECTION**

The Visual Inspection shall include the following inspections in respect of the Charging Infrastructure:

Housing Inspection means inspection to verify that external surfaces are flat and free from mechanical damage, including depressions, bulges or cracks.

Surface Coating Inspection means inspection to verify that surface coatings are uniform and free from defects, including missing coating, sagging, blistering, pinholes, scratches or color variation.

Connection Parts Inspection means inspection to verify that screws, clips and other fasteners are securely tightened, with no looseness or missing components, and that joints are properly aligned and free from visible gaps.

Edge and Corner Treatment Inspection means inspection to verify that there are no sharp edges or corners and that all fillet transitions comply with the applicable design requirements.

1.4.4 FASTENER INSPECTION

The Fastener Inspection shall include the following inspections in respect of the Charging Infrastructure:

Screw Tightening Inspection means inspection to verify that all screws and fasteners are correctly installed and tightened in accordance with the applicable specifications.

Surface Condition Inspection means inspection to verify that fastener surfaces are free from slippage, oxidation, cracking or other visible defects.

1.4.5 ELECTRICAL INSPECTION

Terminal Inspection means inspection of the electrical terminals forming part of the Charging Infrastructure to verify that:

- (a) terminal surfaces are free from oxidation, deformation and burrs;
- (b) terminals are properly and securely crimped to the associated conductors; and
- (c) terminals are fully mated with the corresponding connectors, without looseness or risk of disengagement.

Connector Inspection means inspection of electrical connectors forming part of the Charging Infrastructure to verify that:

- (a) connector housings are free from cracks or physical damage;
- (b) sealing rings and insulation components are intact; and
- (c) connectors are correctly installed and remain secure when subjected to light manual pull.

Wire Harness Inspection means inspection of wire harnesses forming part of the Charging Infrastructure to verify that:

- (a) wiring is neatly routed without crossing, tangling or undue stress;
- (b) wire identification and labelling are clear and legible; and
- (c) harnesses are securely fastened and adequately supported.

1.4.6 FUNCTION CHECKS

Protection Class Check means inspection to verify that the Charging Infrastructure meets a minimum protection class of IP54 for outdoor installation, or such higher protection class as may be specified in **SCHEDULE A (*Technical Specifications*)**.

Relative Humidity Tolerance Check means testing to verify that the Charging Infrastructure operates within a relative humidity range of than five percent (5%) to ninety-five percent (95%), or such other range as specified in **SCHEDULE A (Technical Specifications)**.

Operating Temperature Range Check means testing to verify that the Charging Infrastructure operates within an ambient temperature range of -25°C to $+55^{\circ}\text{C}$, or such other range as specified in **SCHEDULE A (Technical Specifications)**.

Efficiency Check means testing to verify that the Charging Infrastructure achieves an efficiency of not less than ninety-five percent (95%), measured from grid input power to the charging output interface, or such higher efficiency as specified in **SCHEDULE A (Technical Specifications)**.

Noise Level Check means testing to verify that the operational noise level of the Charging Infrastructure does not exceed 65 dB, or such other limit as specified in **SCHEDULE A (Technical Specifications)**.

Display Content Integrity Check means inspection to verify that the display interface of the Charging Infrastructure clearly and legibly presents operational information, including charging mode, current, voltage, charging progress and charging time, without missing characters, distortion or blurring, to the extent such display functionality is required under **SCHEDULE A (Technical Specifications)**.

Display Response Check means inspection to verify that the display interface responds promptly to user inputs and commands, without delay, malfunction or system freeze.

Indicator and Lighting Function Check means inspection to verify that all indicator lights and illumination features forming part of the Charging Infrastructure operate correctly and that any timer-based control logic functions as intended.

Start and Stop Function Check means testing to verify that the Charging Infrastructure initiates and terminates charging operations correctly under both single-output and multiple-output operating modes (where applicable), and that simultaneous operations function independently without mutual interference.

Power and Output Characteristics Check means testing to verify that:

- (a) in single-output operation, the Charging Infrastructure is capable of delivering rated output power;
- (b) in multiple-output operation, power is distributed in accordance with the preset control logic; and
- (c) output voltage and current ranges comply with **SCHEDULE A (Technical Specifications)**, including continuous adjustment capability within the specified operating range.

Human-Machine Interface Function Check means testing to verify that, during charging operations, the user interface functions correctly, operational responses are accurate and timely, and status indicators correctly reflect the operating state of each charging output.

Communication Function Check means testing to verify that the Charging Infrastructure is capable of transmitting operational data and status information to the relevant project monitoring or control systems, to the extent such functionality is required under **SCHEDULE A (*Technical Specifications*)**.

Emergency Shutdown Protection Check means testing to verify that activation of the emergency stop mechanism immediately interrupts all charging outputs and that the Charging Infrastructure cannot be restarted unless the emergency stop is reset and power is reapplied in accordance with the applicable safety procedures.

Connector Safety Interlock Check means testing to verify that charging operations cannot be initiated unless the charging connector is properly engaged and that the connector cannot be disengaged while charging is in progress, in accordance with the applicable safety requirements.

1.5 PRE-DELIVERY INSPECTION

1.5.1 Prior to dispatch of each Batch of Goods, the Independent Inspector shall inspect such shipment of the Batch of Goods including:

- (a) Supplied E-Buses, to ensure that each Bus conforms with the Approved Final E-Bus Design;
- (b) Spare Parts, to ensure that the Spare Parts meet the Applicable Standards; and
- (c) Set of tools and diagnostic equipment, to ensure that the tools and diagnostic equipment meets the Applicable Standards.

1.5.2 Following inspection of each Batch of Goods, the Independent Inspector shall either:

- (a) issue a certificate of compliance in respect of the entire Batch of Goods to be delivered, verifying that each of the Goods is in compliance with the requirements or standards prescribed under this Agreement including as specified under Section 6.9 (*Inspection and Issuance of II Certificate of Compliance*); or
- (b) issue a Certificate of Rejection in respect of the entire Batch of Goods to be delivered, specifying the reasons for rejection, where any of the Goods within such Batch of Goods is found to have any Defect or Deficiency (the Non-Compliant Goods).

1.5.3 In the event a Certificate of Rejection is issued, the Concessionaire shall, at its sole cost and risk, remedy, replace, modify or otherwise make good all Defects or Deficiencies in the Non-Compliant Goods within fourteen (14) Days (or such other period as the

Parties may agree in writing). Upon completion of such remedial actions, the Pre-Delivery Inspection procedure set out in this Section 1.5 shall be repeated in respect of the Non-Compliant Goods, and a Certificate of Compliance shall be issued only upon acceptance of all Goods in the relevant Batch of Goods.

- 1.5.4 Any defect or deficiencies in the Non-Compliant Goods shall be remedied by the Concessionaire, at its sole cost and risk, without any extension for delay in achieving the Delivery Completion date.

1.6 INSPECTION AT DELIVERY POINT

- 1.6.1 Upon delivery of each Batch of Goods at the Delivery Point, the Independent Engineer shall inspect such shipment of the Batch of Goods including:

- (a) Supplied E-Buses, to ensure that each Bus conforms with the Approved Final E-Bus Design;
- (b) Spare Parts, to ensure that the Spare Parts meet the Applicable Standards; and
- (c) Set of tools and diagnostic equipment, to ensure that the tools and diagnostic equipment meets the Applicable Standards.

- 1.6.2 Following inspection of each Batch of Goods, the Independent Engineer shall:

- (a) issue a Certificate of Compliance in respect of the entire Batch of Goods, confirming that all Goods comply with the requirements of this Agreement; or
- (b) issue a Certificate of Rejection in respect of the entire Batch of Goods, specifying the reasons for rejection, where any of the Goods within such Batch of Goods is found to have any Defect or Deficiency (the Defective Goods).

- 1.6.3 In the event a Certificate of Rejection is issued, the Concessionaire shall, at its sole cost and risk, remedy, replace, modify or otherwise make good all Defects or Deficiencies in the Defective Goods within fourteen (14) Days (or such other period as the Parties may agree in writing). Upon completion of such remedial actions, the inspection procedure set out in this Section 1.6 shall be repeated in respect of the Defective Goods, and a Certificate of Compliance shall be issued only upon acceptance of all Goods in the relevant Batch of Goods.

- 1.6.4 Any Defect or Deficiencies in the Defective Goods shall be remedied by the Concessionaire, at its sole cost and risk, without any extension for delay in achieving the Delivery Completion Date.

1.7 TESTING OF THE DEPOTS AND TRANSIT BUS SHELTERS

1.7.1 CONSTRUCTION TESTS

- (a) During the Development Period, the Concessionaire shall conduct, or procure the conduct of, such tests and inspections as are specified in this **SCHEDULE**

E (*Testing*) (including the Attachments hereto setting out the List of Tests and Completion Tests), and under the Applicable Standards, including ASTM and AASHTO standards to the extent adopted by the National Highway Authority in the NHA General Specifications of 1998, for the purpose of determining whether the Construction Works forming part of the Bus Depots and Transit Bus Shelters conform to the requirements of this Agreement (the **Construction Tests**).

- (b) The Construction Tests shall be conducted at such times, at such frequency and in such manner as may be specified or approved by the Independent Engineer, in accordance with the Applicable Standards.
- (c) The Concessionaire shall conduct the Construction Tests under the supervision of the Independent Engineer, at its own cost and expense. Where, during the Development Period, the GoS Parties reasonably consider that any part of the Construction Works may not be in accordance with the requirements of this Agreement, the Independent Engineer may require additional tests or inspections to be carried out for the purpose of verifying compliance.
- (d) If, as determined by the Independent Engineer, any part of the Construction Works is found not to be in accordance with the requirements of this Agreement and/or the Applicable Standards, the Concessionaire shall, at its own cost and risk, promptly carry out all necessary remedial measures and repeat the relevant Construction Tests until compliance is achieved.
- (e) Where such additional tests confirm non-compliance, the costs of such tests shall be borne by the Concessionaire. Where such additional tests confirm compliance, the costs shall be borne in accordance with the relevant provisions of this Agreement.
- (f) The Concessionaire shall maintain complete and accurate records of all Construction Tests conducted, including test results, observations and details of any remedial measures undertaken to cure identified Defects or Deficiencies.
- (g) The results of all Construction Tests shall be jointly recorded by the Independent Engineer and the Concessionaire, and shall form part of the project records maintained under this Agreement.

1.7.2 COMPLETION TESTS

- (a) At least thirty (30) Days prior to the expected COD (First Segment) or COD (Second Segment), as applicable, the Concessionaire shall issue a Notice to SMTA and the Independent Engineer fixing a date and time for performance of the Completion Tests (the **Proposed Completion Tests Date**).

- (b) The Proposed Completion Tests Date proposed by the Concessionaire shall be final for the conducting of the Completion Tests; provided, however, that in the event the Proposed Completion Tests Date is unacceptable to the Independent Engineer, the Concessionaire, SMTA and the Independent Engineer shall meet within seven (7) Days of SMTA and Independent Engineer's receipt of the Completion Tests Date Notice with an aim to mutually agree on an alternative date and time for performance of the Completion Tests, which date shall be no later than ten (10) Days from the Proposed Completion Tests Date. If the Parties are unable to mutually agree on an alternative date and time for performance of the Completion Tests, the Concessionaire shall be entitled (with prior Notification to the Independent Engineer and SMTA) to carry out the Completion Tests on or after the tenth (10th) Day from the Proposed Completion Tests Date.
- (c) Subject to the terms of this Agreement, in the event any Completion Tests are to be repeated due to reasons not attributable to SMTA, as determined by the Independent Engineer, such Completion Tests shall be repeated on account of the Concessionaire.
- (d) The Completion Tests shall be attended by representatives of the GoS Parties, the Independent Engineer, and such other persons as the GoS Parties may nominate in writing, subject to prior notice to the Concessionaire.
- (e) The Concessionaire shall provide all reasonable assistance, facilities, documentation and access as the Independent Engineer may require for the proper conduct of the Completion Tests.

1.8 INSPECTION AT ASSET HANDOVER

- 1.8.1 Within one (1) year prior to the Term Expiry Date (or, where applicable, within one (1) Month following the Termination Date), the Independent Experts shall carry out such tests and inspections as are set out in this **SCHEDULE E (*Testing*)** to determine whether the E-Buses Assets satisfy the Handover Conditions.
- 1.8.2 The tests and inspections under this Section 1.8 shall include, at a minimum:
 - (a) inspection and testing of the E-Buses Assets, including the Buses and the Charging Infrastructure (including the charging equipment and related electrical and control components forming part of the Charging Infrastructure);
 - (b) inspection and testing of the Bus Depots (including all civil, structural, mechanical, electrical and utility systems forming part of the Bus Depots and required for operation and maintenance of the Buses under this Agreement); and
 - (c) inspection and testing of the Transit Bus Shelters (to the extent they form part of the Project Works and are subject to handover under this Agreement).

- 1.8.3 The tests and inspections under this Section 1.8 shall be carried out:
- (a) in accordance with this Agreement, including **SCHEDULE A (*Technical Specifications*)** and the Applicable Standards; and
 - (b) applying Good International Industry Practices, to the extent consistent with this Agreement and the Applicable Standards.
- 1.8.4 The Concessionaire shall provide the Independent Experts (and any representatives of the GoS Parties entitled under this Agreement) with all reasonable access to the Project Site(s), the E-Buses Assets and the Bus Depots for purposes of conducting the tests and inspections under this Section 1.8.
- 1.8.5 The Concessionaire shall provide all documentation, records, logs and test data reasonably required by the Independent Experts to verify compliance with the Handover Conditions, including maintenance records and operational histories maintained under this Agreement.
- 1.8.6 Without prejudice to the generality of Section 1.8.2 and 1.8.3, the tests and inspections under this Section 1.8 shall include verification of the condition of the traction batteries installed in the Buses, including measurement and confirmation of compliance with any minimum battery state of health requirement specified in **SCHEDULE A (*Technical Specifications*)** and/or required under the Applicable Standards (as applicable), using the testing method, parameters and acceptance criteria specified therein.
- 1.8.7 Following completion of the tests and inspections under this Section 8, the Independent Experts shall issue a written report (the **Handover Inspection Report**) addressed to the Parties, setting out:
- (a) the tests and inspections performed and the methodology applied;
 - (b) the Independent Experts' determination as to whether the E-Buses Assets and the Bus Depots satisfy the Handover Conditions;
 - (c) any identified defects, deficiencies, non-compliances or shortfalls relevant to the Handover Conditions; and
 - (d) where applicable, the Independent Experts' recommended remedial measures and the basis for such recommendations by reference to this Agreement, **SCHEDULE A (*Technical Specifications*)** and/or the Applicable Standards.
- 1.8.8 If the Independent Experts determine that any part of the E-Buses Assets and/or the Bus Depots does not satisfy the Handover Conditions, the Independent Experts shall record such determination in the Handover Inspection Report, and the Parties shall proceed in accordance with the applicable provisions of this Agreement in respect of rectification, remediation, withholding, deductions, extensions (if any), or other consequences (as the case may be). Where re-testing or re-inspection is required under this Agreement or reasonably required by the Independent Experts to confirm

satisfaction of the Handover Conditions, such re-testing or re-inspection shall be carried out in accordance with this **SCHEDULE E (Testing)**.

ATTACHMENTS: LISTS OF CONSTRUCTION TESTS & COMPLETION TESTS

The Concessionaire shall, during the Development Period and for the purposes of conducting the Construction Tests and Completion Tests under this **SCHEDULE E (Testing)**, furnish or procure access to the laboratory testing facility with the necessary testing equipment, services, supplies, technical personnel, furniture and bear all associated running and maintenance costs for the tests to be conducted.

The Concessionaire shall also provide, where reasonably required and subject to approval by the Independent Engineer, appropriate transport arrangements for the sole use of the laboratory to transport testing equipment, testing samples and laboratory technicians for carrying out inspection and testing on site during the relevant testing period.

All tests shall be executed in accordance with the Applicable Standards, and all required equipment for facilitation of the tests shall be made available in the laboratory together with two (2) complete and current sets of the applicable standards, one to be placed in the laboratory and the other at the office of the Independent Engineer.

The Concessionaire shall submit to the Independent Engineer, for review and approval, the list of tests to be carried out and the corresponding sample forms as part of the proposed testing methodology, prior to commencement of the relevant Construction Tests.

THE TESTS

(A) CONSTRUCTION TESTS - LABORATORY TESTS

The Concessionaire shall ensure that laboratory facilities are available and equipped to perform the following Construction Tests, as required under this **SCHEDULE E (Testing)** and as directed by the Independent Engineer.

SR No	TEST DESCRIPTION	APPLICABLE STANDARD (ASTM/AASHTO)
1	Dry preparation of soil samples	T-87
2	Soil Classification	M-145
3	Determination of Moisture Content	T-265
4	Atterberg Limits	T-89 & 90
5	Moisture density relationship (Modified Method)	T-180
6	CBR Test and swelling test	T-193
7	Relative Density Test	ASTM D4253, D4254
8	Sieve Analysis of Soils, aggregate and Mineral Filler	T-88, T-27 & T-37
9	Los Angeles Abrasion Test of Aggregates	T-96
10	Sand Equivalent	T-176
11	Soundness of aggregates	T-104

SR No	TEST DESCRIPTION	APPLICABLE STANDARD (ASTM/AASHTO)
12	Asphalt Coating Test	T-195
13	Coating and stripping of Bitumen Aggregate	T-182
14	Specific Gravity & Absorption of Coarse Aggregate	T-85
15	Specific Gravity and Absorption of Fine Aggregate	T-84
16	Penetration Test of Bituminous Material	T-49
17	Amount of Passing No. 200 sieve	T-11
18	Quantitative Extraction of Bitumen from Mixtures	T-164
19	Gradation analysis of bitumen extracted aggregates	T-30
20	Specific gravity of compacted bitumen mixture	T-166
21	Marshall test and loss in stability	T-245
22	Maximum specific gravity of bitumen paving mixture	T-209
23	Air voids in compacted paving bitumen mix	T-269
24	Specific Gravity of Bituminous Material	T-228
25	Softening point of bitumen (Ring and Ball method)	T-53
26	Sampling aggregates	T-2
27	Fineness Modulus	T-27
28	Organic impurities	T-21
29	Mortar Strength	T-71
30	Friable particles	T-112
31	Potential reactivity of carbonate rocks for concrete aggregates (Rock-Cylinder method)	ASTM C-586
32	Unit weight of aggregates	T-19
33	Air content of freshly mixed concrete by volumetric method	T-196
34	Making and curing of concrete test specimens	T-126
35	Curing concrete compressive test specimens	T-23
36	Compressive strength of cylinder concrete specimens	T-22
37	Setting time and consistency of cement	T-131
38	Normal consistency of hydraulic cement	T-129

(B) CONSTRUCTION TESTS - FIELD TEST

The following Construction Tests shall be carried out for field control and spot-checking purposes during execution of the Development Activities, as the Construction Works progress, in accordance with the directions of the Independent Engineer.

SR No	TESTS DESCRIPTION	APPLICABLE STANDARD (ASTM/AASHTO)
1	In-place density by Sand Cone Method	T-191
2	Sampling fresh concrete	T-141
3	Slump of Portland cement concrete	T-119
4	Sampling bituminous materials	T-40
5	Determination of Temperature of Bituminous Paving Mixtures	-

SR No	TESTS DESCRIPTION	APPLICABLE STANDARD (ASTM/AASHTO)
6	Determining Degree of Pavement Compaction by coring	T-230
7	Bulk specific gravity	T-166
8	Density of soil and soil aggregate by nuclear methods	T-238
9	Moisture content of soil and soil aggregate by nuclear method	T-239

(C) THE COMPLETION TESTS

The Completion Tests shall mean the final inspections and tests conducted by the Independent Engineer in respect of the Bus Depots and Transit Bus Shelters, and any other relevant Project facilities constructed as part of the Development Activities, to verify compliance with the Applicable Standards, and the conditions for issuance of the COD (First Segment) Certificate and the COD (Second Segment) Certificate, in accordance with this Agreement and **SCHEDULE E (*Testing*)**.

SCHEDULE F
INDEPENDENT EXPERTS' TERMS OF REFERENCE

PART 1 - INDICATIVE INDEPENDENT AUDITOR TERMS OF REFERENCE

The scope of work of the Independent Auditor for the Project shall include the following:

- (a) perform all actions and services set out in the GoS Project Documents to be performed by the Independent Auditor diligently and within the timelines set out therein (the **IA Services**);
- (b) exercise, in the performance of the IA Services, all skill, care and diligence to be expected of a properly qualified and competent professional experienced in each of the disciplines to which the IA Services relate;
- (c) act at all times as an independent certifier and verifier, and not as an agent, advisor, or advocate of any Party, and ensure that all certifications are strictly in accordance with the GoS Project Documents;
- (d) cooperate with the parties to the GoS Project Documents in respect of matters relating to the Independent Auditor for the purposes of, *inter alia*, facilitating of the Project and the Project Activities;
- (e) the IA Services include:
 - (i) monitoring financial aspects;
 - (ii) certification and approvals;
 - (iii) issuing monthly progress reports;
 - (iv) cost verification and certification where required under this Agreement;
 - (v) acting as an expert certifier on financial matters relating to force majeure, terminations, project delays or other project issues as and when they arise of the Project's issues, funding mechanisms, project risks and intimate the party concerned of their responsibility as laid down in the GoS Project Documents; and
 - (vi) other matters detailed in GoS Project Documents;
- (f) to work in close coordination with the Independent Engineer and exchange information as required for the performance of their respective tasks;
- (g) to give presentations to various GoS tiers on the Financial Model and explain the impact of Fare revisions, Liquidated Damages, Deduction, payments related to an Intervening Event, Force Majeure Event and termination events, on the value for

money and also attend meetings of the SMTA/GoS at during various approvals (if and as required);

- (h) on intimation from the Concessionaire, the Financing Parties or GoS Parties, establish the occurrence of a material adverse effect on the Project and recommend based on the terms of the GoS Project Documents, a mechanism to overcome the same;
- (i) follow a system of periodic reports in such frequency and formats as approved by the GoS Parties;
- (j) during the Development Period, monitor financial progress against the approved Implementation Schedule and Financial Model;
- (k) review and report on the Concessionaire's alignment with and compliance to the applicable Sustainable Development Goals (SDGs) and SDG-linked Key Performance Indicators set out more specifically in the **SCHEDULE K (KPIs SDG)**, for monitoring and reporting purposes only and without assuming any policy-setting or enforcement role;
- (l) determine, *inter alia*, the Capital Cost Recovery Payments, including any applicable adjustments or deductions, strictly in accordance with the payment structure, payment waterfall and escrow arrangements set out in this Agreement;
- (m) determine and certify Relief Costs, Loss of Revenue and/or Savings in accordance with Article 20 (*Relief Costs, Loss of Revenue or Savings*);
- (n) upon receipt of a notice of Change in Law from the Concessionaire pursuant to this Agreement, as and when requested or required, confirm occurrence of the Change in Law and certify the consequent financial impact, in accordance with this Agreement;
- (o) if applicable, issue certifications to facilitate disbursement of funding from stakeholders (including equity) with respect to construction and other expenditures in accordance with the GoS Project Documents;
- (p) in respect of the occurrence of an Intervening Event or Force Majeure Event in accordance with the provisions of this Agreement, consult with the Concessionaire and the GoS Parties in order to determine the number of resultant compensations, if any, in accordance with the provisions of this Agreement and issue necessary certifications in this respect;
- (q) in respect of Termination Payments, determine the amount of resultant compensations, if any, in accordance with the provisions of this Agreement and issue necessary certifications in this respect;
- (r) certify the Financing Termination Date as defined in this Agreement;
- (s) issue the Termination Payment Amount Certificate (together with the Independent Engineer) and/or the Termination Payment Amount (Unpaid Amounts) Certificate

(together with the Independent Engineer) (as applicable), in accordance with Article 12 (*Payment Accounts, IZP Guarantee Instrument, SBP Debit Authority, Revenue Accounts, Revenues and Revenue Sharing*) of this Agreement;

- (t) issue, together with the Independent Engineer, the Capital Cost Recovery Payment Certificate determining the Capital Cost Recovery Payment Account (GoS) Funding Amount in accordance with Article 12 (*Payment Accounts, IZP Guarantee Instrument, SBP Debit Authority, Revenue Accounts, Revenues and Revenue Sharing*) and Article 13 (*Invoicing and Payment*) of this Agreement;
- (a) issue, together with the Independent Engineer, the Fare Revenue Share Payment Certificate and the Non-Fare Revenue Share Payment Certificate in accordance with Article 13 (*Invoicing and Payment*) of this Agreement;
- (u) monitor the financial covenants and debt-to-equity ratio and ensure it does not exceed 70:30;
- (v) monitor the shareholding percentage of each Shareholder on a quarterly basis from the Commencement Date;
- (w) endorse calculations prepared by the Concessionaire of any amounts in respect of Refinancing Gains described in Section 16.3.8 of this Agreement;
- (x) issue various certificates together with the Independent Engineer (as more particularly described in this Agreement. The Independent Auditor will rely on reports, studies, surveys, and other documents provided by the Concessionaire or its appointed consultants;
- (y) in case of a failure to achieve the scheduled project milestones, issue delay notices, in consultation with the Independent Engineer, as described in this Agreement;
- (z) together with the Independent Engineer, act to resolve any Disputes arising due to a conflict between the clauses and appendices of this Agreement;
- (aa) together with the Independent Engineer, advise GoS on the financial implications of a Change in Scope requested by the Concessionaire;
- (bb) together with the Independent Engineer, advise GoS on any changes, modifications, amendments, supplements or waivers to the Financing Documents, the EPC Contract, the Supply Contract, the O&M Contract or in respect of any Refinancing. The Independent Auditor will rely on the timely provision of relevant documents by the Concessionaire and will make its recommendations in accordance with Section 16.4 (*Funding of Sponsor Funding Amount and Cost Overruns, Shareholding and Related Matters*) of this Agreement;
- (cc) together with the Independent Engineer, advise GoS on any changes, modifications, amendments, supplements to the Insurance Policies;

- (dd) comply with the Laws of Pakistan in its performance of the IA Services;
- (ee) perform such other obligations and responsibilities as set out in the GoS Project Documents;
- (ff) perform such other obligations and responsibilities as mutually agreed between the Parties; and
- (gg) perform any other action or services set out in the Independent Auditor Contract.

INDEPENDENT AUDITOR CRITERIA

An international or local firm (not an individual), being either:

- (a) a firm of Chartered Accountants duly registered with the relevant professional body in Pakistan or in its jurisdiction of incorporation; or
- (b) a consortium led or supported by a financial advisory firm with demonstrated public-private partnership (PPP) experience,

provided that a firm of Chartered Accountants meeting the requirements under sub-paragraph (i) above shall be responsible for the review, certification and sign-off of all financial reports, certificates and deliverables issued under the engagement,

shall be eligible for appointment as the Independent Auditor and shall meet the following criteria:

- (i) have demonstrable experience of undertaking a similar independent auditor, financial certifier or monitoring role in at least two (2) projects being either: (A) project-financed infrastructure projects; or (B) projects involving financial monitoring, certification or evaluation under International Standard on Related Services (ISRS) 4400 (Agreed-Upon Procedures) and/or ISAE 3000 (Assurance Engagements Other Than Audits or Reviews); or (C) PPP projects;
- (ii) be independent of the Concessionaire, the Construction Contractor, the Bus Operator, Shareholders, and Financing Parties, and not have any present or recent conflict of interest that may reasonably impair its independence under the GoS Project Documents;
- (iii) have the following permanent employees (for at least one (1) year prior to appointment):
 - (A) team leader with at least fifteen (15) years of experience and demonstrated knowledge of project-financed infrastructure projects or PPP projects, including financial models, escrow mechanisms, and lender-aligned certifications;
 - (B) tax expert with at least ten (10) years of experience and complete knowledge of Pakistani tax law and its application to the Project;

- (C) auditing expert with at least ten (10) years of experience in financial audits, certifications, and compliance reviews for large-scale projects;
 - (D) financial modelling expert with at least ten (10) years of experience in reviewing, validating, and monitoring financial models; and
 - (E) such other experts as may be reasonably required to perform the obligations of the Independent Auditor under the GoS Project Documents;
- (iv) provide an undertaking that the above personnel shall be deployed on the Project if the work is awarded to the firm. Relevant staff members must be available to attend all inspections and meetings with the SMTA/GoS officials and any replacement of key personnel shall be subject to prior approval of GoS, with replacements possessing equivalent or superior qualifications and experience; and
- (v) ensure that its staff are fully familiar with project financed infrastructure projects or PPP projects and the role of the Independent Auditor in such projects. In addition, staff should be familiar with Pakistan Income Tax Ordinance, 2001, GoS public procurement regulatory framework and GoS Project Documents.

PART 2 - INDICATIVE INDEPENDENT ENGINEER TERMS OF REFERENCE

The scope of work of the Independent Engineer for the Project shall include the following:

- (a) perform all actions and services set out in the GoS Project Documents to be performed by the Independent Engineer under the Concession Agreement and other GoS Project Documents, diligently and within the timelines set out therein (the **IE Services**);
- (b) exercise, in the performance of the IE Services, all skill, care and diligence to be expected of a properly qualified and competent professional experienced in each of the disciplines to which the IE Services relate;
- (c) cooperate with the parties to the GoS Project Documents in respect of matters relating to the Independent Engineer for the purposes of, *inter alia*, facilitating implementation of the Project and the Project Activities;
- (d) review the GoS Project Documents delivered by the Parties and all documents that are provided to it pursuant to the GoS Project Documents;
- (e) coordinate and liaise with the Parties in respect of matters that require the Independent Engineer's inputs for performance of the IE Services;
- (f) as and when requested or required, consult with the parties to the GoS Project Documents and/or any other relevant stakeholders of the Project for the performance of IE Services and request (where available and applicable) any documents that are required by the Independent Engineer to perform the IE Services;
- (g) as and when requested or required pursuant to this Agreement and other GoS Project Documents, review and comment on any documents provided to it pursuant to the GoS Project Documents and request further documents as may be required for performance of the IE Services;
- (h) prepare, issue, deliver, review and/or approve (as applicable) all documents contemplated to be prepared, issued, delivered, reviewed and/or approved (as applicable) by the Independent Engineer under this Agreement or the other GoS Project Documents;
- (i) visit any of the offices of the Concessionaire or any other location where relevant personnel or records of the Concessionaire are located;
- (j) comply with the Laws of Pakistan in its performance of the IE Services;
- (k) in performing the IE Services, not in any way materially adversely interfere with the performance of the Concessionaire's, the Contractors' and the GoS' obligations and with the conduct of their business.

- (l) review and report on the Concessionaire's alignment with and compliance to the applicable Sustainable Development Goals (SDGs) and SDG-linked Key Performance Indicators set out more specifically in the **SCHEDULE K (KPIs SDG)**, for monitoring and reporting purposes only and without assuming any policy-setting or enforcement role;
- (m) report to the Parties in case the quality standards and quality control provisions are not maintained on the Project Site;
- (n) perform all such duties and obligations that are to be performed by the Independent Engineer under the GoS Project Document;
- (o) perform functions relating to emergency works or emergency operations, in respect of Project Assets, including buses, depots, charging infrastructure and ITS, as expressly provided in the GoS Project Documents;
- (p) perform its duties in respect of insurance claims and proceeds, as set out in this Agreement;
- (q) perform functions in respect of a Change in Scope, as set out in this Agreement;
- (r) perform the respective roles and duties that are to be performed by the Independent Engineer upon termination of this Agreement or upon expiry of the Concession Period;
- (s) as and when requested or required, inspect, examine, measure or test any works, equipment, Buses, Charging Infrastructure, ITS or materials to be incorporated into the E-Buses Assets, at any location where such works or equipment are being carried out or manufactured;
- (t) as and when requested or required, certify any delays in the achievement of the COD (First Segment) and the COD (Second Segment) (including identifying the party responsible for such delay) and coordinate with the Independent Auditor in respect of matters relating to the same;
- (u) advise the Parties on the technical sufficiency and/or insufficiency of the insurance proceeds required to repair, replace, reinstate or rectify the relevant loss or damage to Project assets in accordance with this Agreement;
- (v) be present at and observe performance of all Test Procedures under **SCHEDULE E (Testing)** of this Agreement or provide for authorized representatives to perform the foregoing functions;
- (w) provide operational recommendations in risk management reports to the Parties, from time to time, during the Concession Period;
- (x) upon receipt of a notice of Change in Law from the Concessionaire pursuant to this Agreement, as and when requested or required, confirm occurrence of the Change in Law and certify the consequent financial impact, in accordance with this Agreement;

- (y) inspect the E-Buses Assets at the time of handing over thereof by the Concessionaire to the GoS and perform functions in respect of such handing over as provided in this Agreement;
- (z) present to the Parties as and when required on the progress of the Project and other milestones specified in the **SCHEDULE C (*Implementation Schedule*)**;
- (aa) pursuant to the terms of the License Agreement, review and approve the status report submitted by the Concessionaire, on an annual basis, on the occurrence and status of occupations, thefts, encroachments and Encumbrances arising from time to time on the Project Site to ensure compliance by the Concessionaire of its obligations to protect the Project Site from such encroachments under the GoS Project Documents;
- (bb) issue various certificates together with the Independent Auditor as more particularly described in this Agreement. The Independent Engineer will rely on reports, studies, surveys, and other documents provided by the Concessionaire or its appointed consultants;
- (cc) in case of a failure to achieve the scheduled project milestones, issue delay notices, in consultation with the Independent Auditor as described in this Agreement;
- (dd) together with the Independent Auditor, act to resolve any disputes arising due to a conflict between the clauses and appendices of this Agreement;
- (ee) together with the Independent Auditor, advise the GoS on the technical implications of a Change in Scope requested by the Concessionaire;
- (ff) together with the Independent Auditor, advise the GoS on any changes, modifications, amendments, supplements or waivers to the Financing Documents, Construction Contract, the Supply Contract, the O&M Contract or in respect of any Refinancing. The Independent Engineer will rely on the timely provision of relevant documents by the Concessionaire and will make its recommendations in accordance with this Agreement;
- (gg) together with the Independent Auditor, advise GoS on any changes, modifications, amendments, or supplements to the Insurance Policies;
- (hh) issue the Termination Payment Amount Certificate (together with the Independent Auditor) and/or the Termination Payment Amount (Unpaid Amounts) Certificate (together with the Independent Engineer) (as applicable), in accordance with Article 12 (*Payment Accounts, IZP Guarantee Instrument, SBP Debit Authority, Revenue Accounts, Revenues and Revenue Sharing*) of this Agreement;
- (hh) issue, together with the Independent Auditor, the Capital Cost Recovery Payment Certificate determining the Capital Cost Recovery Payment Account (GoS) Funding Amount in accordance with Article 12 (*Payment Accounts, IZP Guarantee Instrument, SBP*

Debit Authority, Revenue Accounts, Revenues and Revenue Sharing) and Article 13 (*Invoicing and Payment*) of this Agreement;

- (ii) issue, together with the Independent Auditor, the Fare Revenue Share Payment Certificate and the Non-Fare Revenue Share Payment Certificate in accordance with Article 13 (*Invoicing and Payment*) of this Agreement;
- (jj) issue various certificates together with the Independent Auditor as more particularly described in this Agreement. The Independent Auditor will rely on reports, studies, surveys, and other documents provided by the Concessionaire or its appointed consultants;
- (kk) in case of a failure to achieve the scheduled project milestones, issue delay notices, in consultation with the Independent Auditor, as described in this Agreement;
- (ll) together with the Independent Auditor, act to resolve any disputes arising due to a conflict between the clauses and appendices of this Agreement;
- (mm) together with the Independent Auditor, advise GoS on the financial implications of a Change in Scope requested by the Concessionaire;
- (nn) together with the Independent Auditor, advise GoS on any changes, modifications, amendments, supplements or waivers to the Financing Documents, the EPC Contract, the Supply Contract, the O&M Contract or in respect of any Refinancing;
- (oo) together with the Independent Auditor, advise GoS on any changes, modifications, amendments, supplements to the Insurance Policies;
- (pp) perform such other obligations and responsibilities as set out in the GoS Project Documents;
- (qq) perform such other obligations and responsibilities as mutually agreed between the Parties; and
- (rr) perform any other action or services set out in the Independent Engineer Contract.

PROPOSED DEVELOPMENT DOCUMENTS REVIEW PHASE

With respect to the review and approval of Proposed Development Documents, the IE Services shall include the following:

- (a) review and approve the adequacy of surveys and investigations relevant to depots, charging infrastructure, substations, utilities integration and civil works conducted to prepare the Proposed Development Documents;
- (b) review and approve the Proposed Development Documents for depots, transit shelters, charging infrastructure, power distribution systems, substations, and associated civil

and MEP works, for adequacy, completeness, engineering integrity and compliance with **SCHEDULE A (*Technical Specifications*)**;

- (c) identification of Project design features or any major equipment component that does not appear to meet the design or performance requirements or fails to adhere to the technical specifications provided in this Agreement;
- (d) provide an opinion on the design quality with respect to service life, maintainability and long-term availability of E-Buses Assets over the Concession Period;
- (e) comply with the design parameters set out in **SCHEDULE A (*Technical Specifications*)** of this Agreement;
- (f) review and approve the reports prepared and submitted by the Concessionaire or its Contractors, with respect to the Implementation Schedule, the Operating and Maintenance Procedures, safety and management plan etc.;
- (g) determine that adequate provisions have been made for the following in the Proposed Development Documents:
 - (i) design;
 - (ii) material sourcing;
 - (iii) material transportation equipment;
 - (iv) utilities;
 - (v) equipment procurement;
 - (vi) construction; and
 - (vii) testing;
- (h) review and comment on the consistency of all GoS Project Documents insofar as such consistency affects technical design, construction, testing and acceptance obligations under this Agreement;
- (i) review the available Approvals or applications for Approvals;
- (j) review and comment on the utilities' arrangements for the Project, including (without limitation) the power supply, grid interconnection, depot power distribution, charging loads, and standby/backup arrangements;
- (k) review and approve the adequacy and reasonableness of the Project coordination and monitoring systems;

- (l) review the safety measures proposed for the construction of the facilities and their compliance with the safety regulations and Applicable Standards;
- (m) review, audit, comment and approve the working methodology submitted by the Concessionaire regarding the construction of Project infrastructure in densely populated areas to avoid disturbance to traffic and public; and
- (n) report to the GoS Parties in case the quality standards and quality control provisions are not maintained on the Project Site.

ENVIRONMENTAL AND SOCIAL MATTERS

Concerning the environmental and social matters under the Project, the IE Services to be performed by the Independent Engineer shall include the following:

- (a) before the start of operations: review for compliance with the Legal Requirements, including the E&S Standards:
 - (i) the ESIA to be prepared by the Concessionaire in accordance with this Agreement (and drafts and revisions of the same); and
 - (ii) the ESMS and associated programs to be prepared by the Concessionaire in accordance with this Agreement (and drafts and revisions of any of the same) and, where any such assessment or plan is not compliant, recommend changes to address any shortcomings;
- (b) during the Development Activities, at least visit the Project Site monthly to:
 - (i) review environmental and social management, monitoring and reporting undertaken by the Concessionaire, including implementation of mitigation measures, which shall include but not be limited to:
 - (A) labour and working conditions;
 - (B) access to public transport services and local access and any grievances in relation to construction impacts, safety risks, and access constraints, made by the settlements;
 - (C) potential impacts to traffic, local access, noise, dust and community safety from the Development Activities;
 - (D) solid and hazardous waste management, storage, treatment and disposal, including sub-contractor practices;
 - (E) noise level compliance at nearby sensitive receptors;

- (F) hazardous materials handling (including batteries where applicable), workshop effluents (if any), and compliance with applicable disposal requirements;
 - (G) emergency response procedures;
 - (H) other required environmental, health, and safety management practices;
 - (I) Grievance Redress Mechanism; and
 - (J) health and safety procedures;
- (ii) undertake independent verification field monitoring of the Concessionaire's compliance with its environmental and OHS requirements; and
 - (iii) inspect the Project Site and review grievance logs,
- in each case, as needed to ascertain whether the Concessionaire's activities are in compliance with the Legal Requirements, including the E&S Standards.
- (c) On a semi-annual basis during the first two (2) years of the Operations Period, and on an annual basis for another three (3) years thereafter:
 - (i) review environmental and social management, monitoring and reporting undertaken by the Concessionaire;
 - (ii) undertake independent verification field monitoring of the Concessionaire's compliance with its environmental and OHS requirements; and
 - (iii) inspect the Project Site, review grievance logs and interview representatives of affected communities,

in each case, as needed to ascertain whether the Concessionaire's activities are in compliance with the Legal Requirements, including the E&S Standards.
 - (d) Within sixty (60) Days following the end of the first three (3) years of the Operations Period, the Independent Engineer shall issue a report indicating whether:
 - (i) the Concessionaire has performed the Development Activities and is conducting the O&M Activities in accordance with the Legal Requirements, including the E&S Standards, and has in place adequate procedures and practices to manage environmental and social risks and impacts; and
 - (ii) the GoS and any relevant Government Authority is adequately equipped to monitor and enforce, and is effectively monitoring and enforcing, the Parties' environmental and social obligations under this Agreement.

If both the foregoing conditions are met, there will be no need for further annual review. If at least one of the two foregoing conditions is not met, the Parties will in good faith

agree on a supplementary scope of work to be carried out by the Independent Engineer for a period up to the duration of the Project or such shorter period as the Parties may agree based on the nature of the gaps identified.

SUPERVISION SERVICES DURING THE DEVELOPMENT PERIOD

During the Development Period, the IE Services to be performed by the Independent Engineer shall include the following:

- (a) supervise the Development Activities excluding Day-to-Day management, in detail and to approve the materials, formworks, and workmanship of the Development Activities on a daily and fulltime basis. As stated in this Agreement, the Independent Engineer shall have no authority to relieve the Concessionaire of any of its duties or to impose additional obligations;
- (b) review and approve the construction manuals and operation and maintenance manuals prepared and submitted by the Concessionaire. The Capital Cost Recovery Payments will be made upon Independent Engineer's certification, with final approval of the Independent Auditor;
- (c) supervise and approve testing of charging systems, electrical safety, earthing, fire safety, ITS integration, depot systems and buses;
- (d) review and approve work methodology of each component of the Development Activities;
- (e) review quality assurance and quality control during the Development Period;
- (f) review Operating and Maintenance Procedures for E-Buses Assets, ensuring compliance with **SCHEDULE L (KPIs (Performance))** and **SCHEDULE E (Testing)**;
- (g) identify construction delays, if any and recommend to the GoS the remedial measures to expedite the progress of the Development Activities;
- (h) review and approve shop drawings for each component of the Project Activities prepared and submitted to Independent Engineer by the Concessionaire;
- (i) review the "*Construction Drawings*" and "*as-built*" drawings for each component of the Project Activities prepared and submitted to Independent Engineer by the Concessionaire;
- (j) review the safety measures provided for the Project workers;
- (k) determine any extension of the Implementation Schedule, to which the Concessionaire is entitled and notify the GoS in writing accordingly;
- (l) review compliance by the Concessionaire of its obligations under this Agreement;

- (m) have a review period not exceeding twenty-one (21) Days, or as otherwise stated in this Agreement, calculated from the date on which the Independent Engineer receives a document or a notice from the Concessionaire (the **Review Period**);
- (n) within the Review Period, give a notice to the Concessionaire:
 - (i) of '*no-objection*' which may include comments concerning minor matters which will not substantially affect the Project Activities; or
 - (ii) that the Concessionaire fails, to the extent stated, to comply with the requirements of the Independent Engineer or as otherwise stated in this Agreement, with reasons.

If the Independent Engineer gives no notice within the Review Period, it shall be deemed to have given a notice of no-objection to the Concessionaire.

If the Independent Engineer instructs that further documents are reasonably required from the Concessionaire to demonstrate that the Project Activities or design comply with this Agreement, the Concessionaire shall prepare and submit the same promptly to the Independent Engineer at the Concessionaire's cost.

If the Independent Engineer gives a notice that the Concessionaire fails to comply with the requirements of the Independent Engineer or those stated in this Agreement, the Concessionaire shall revise the documents, resubmit them to the Independent Engineer in accordance with this clause, and the review period shall be calculated from the date that the Independent Engineer receives the documents.

For performance testing, the Independent Engineer shall:

- (a) review test procedures developed by the Bus Operator and confirm compliance with applicable test codes and standards and with testing criteria specified in this Agreement and **SCHEDULE E (*Testing*)**;
- (b) review the quality control reports, performance testing results and testing reports and results in accordance with **SCHEDULE E (*Testing*)** of this Agreement;
- (c) review test reports prepared by the Concessionaire or the Concessionaire's testing consultant; and
- (d) make visits to the Project Site to verify that the Development Activities, including testing requirements, have been completed and thereafter sign and issue the COD Certificate.

COMMISSIONING SUPERVISION SERVICES

During the commissioning phase, the IE Services to be performed by the Independent Engineer shall include the following:

- (a) supervise and approve '*as-built records*' of the execution of the Development Activities, as prepared by the Concessionaire, showing the exact as-built locations, sizes and details of the Development Activities. As stated in this Agreement, the Independent Engineer shall have no authority to relieve the Concessionaire of any of its duties or to impose additional obligations;
- (b) require as-built records before the beginning of the testing on completion of the Development Activities, but also updated as-built records to the extent that any construction and/or rehabilitation activities are executed by the Concessionaire during and/or after the testing;
- (c) review and approve the Operating and Maintenance Procedures prepared by the Concessionaire. The Operating and Maintenance Procedures shall include enough detail to ensure the operation, maintenance and performance of the E-Buses Assets to comply with the key performance indicators included in this Agreement and **SCHEDULE E (*Testing*)** of this Agreement. The Operating and Maintenance Procedures shall also allow to operate, maintain, dismantle, reassemble, adjust and repair Desalinated Water Supply System as necessary, including an inventory of spare parts;
- (d) detect errors, omissions, ambiguities, inconsistencies, inadequacies or other defects in the Development Activities and issue the necessary notices of no-objection;
- (e) review the test programmes submitted by the Concessionaire to carry out the tests on completion, as specified in **SCHEDULE E (*Testing*)** of this Agreement;
- (f) give a notice to the Concessionaire stating the extent to which the testing programme does not comply with this Agreement or the Independent Engineer's requirements. Within fourteen (14) Days after receiving this notice, the Concessionaire shall review the test programme to rectify any non-compliance. If the Independent Engineer gives no such notice within fourteen (14) Days after receiving the test programme (or the revised programme), the Independent Engineer shall be deemed to have given a notice of no-objection. The Concessionaire shall not commence the tests until a notice of no-objection is given, or is deemed to have been given, by the Independent Engineer; and
- (g) issue the COD (First Segment) Certificate and the COD (Second Segment) Certificate after checking the results and workability of the E-Buses Assets after the prescribed tests.

INDEPENDENT ENGINEER CRITERIA

An international or local engineering firm (not individuals) appointed as the Independent Engineer shall meet the following criteria:

- (a) have the experience of undertaking a similar role in at least two (2) either (i) project-financed infrastructure projects; or (ii) PPP projects as an independent engineer/lender's engineer/ engineer-in-charge or equivalent certification role;

- (b) have demonstrable experience in electric mobility, urban transport, metro, Bus Rapid Transit (BRT), or fleet-based public transport projects, including testing, inspection, certification and acceptance;
- (c) have experience in supervising at least two (2) transport infrastructure or mass transit projects, preferably involving fleet sizes of fifty (50) vehicles or more;
- (d) be independent from the OEM, the Bus Operator, the Construction Contractor, and key suppliers, and provide a conflict-of-interest declaration;
- (e) have the following permanent employees for at least one (1) year:
 - (i) team leader with at least twenty (20) years of experience with demonstrated knowledge and understanding of transport or mass transit projects, project-financed infrastructure, and PPP frameworks and independent engineer roles;
 - (ii) transport/fleet systems expert with at least fifteen (15) years of experience in public transport, fleet-based mobility or mass transit systems;
 - (iii) electrical/charging infrastructure expert with at least fifteen (15) years of experience in power systems, depot power distribution, EV charging systems, earthing and electrical safety;
 - (iv) civil/depot development expert with at least fifteen (15) years of experience in transport infrastructure, depots, terminals or allied civil works;
 - (v) ITS/systems integration expert with at least ten (10) years of experience in intelligent transport systems, fleet monitoring systems and control centres;
 - (vi) MEP expert with at least fifteen (15) years of experience relevant to transport or depot facilities;
 - (vii) contract management expert with at least ten (10) years of experience in contract administration under PPP or FIDIC-based arrangements; and
 - (viii) other experts required to perform the obligations of the Independent Engineer under the Project as specified herein;
- (f) provide an undertaking that the above staff shall be deployed on the Project if the work is awarded to the engineering firm. Relevant staff members must be available to attend all inspections and meetings with the SMTA/GoS officials. any replacement of key personnel shall be subject to GoS approval and shall possess equivalent or superior qualifications and experience;
- (g) ensure that its staff are fully familiar with project financed infrastructure projects or PPP projects and the role of the Independent Engineer in such projects. In addition, the staff should be familiar with FIDIC conditions of contract, GoS public procurement regulatory framework, and the Project Agreements; and

- (h) ensure that its personnel possess at least a bachelor's degree in the relevant engineering discipline; specialisation or demonstrable experience in transport, electric mobility, power systems or mass transit projects shall be preferred.

SCHEDULE G²⁴
MINIMUM INSURANCE REQUIREMENTS

DEVELOPMENT PERIOD INSURANCE

During the Development Period, the Concessionaire shall, at its own cost, procure and maintain the following insurance coverage(s), in the names and for the respective rights and interests of the Insured Parties specified herein, with insurers of sound financial standing and on terms acceptable to SMTA and, where applicable, the Financing Parties.

1. **MARINE CARGO/INLAND TRANSIT INSURANCE**

Cover : Physical loss or damage to all Goods, materials, equipment, machinery, Spare Parts and other items for incorporation in the Project Activities, on an “*all risks*” basis, whilst in transit by sea, air, or land from country of origin (or place of manufacture or procurement) anywhere in the world, including Karachi Port and/or any other port of entry, customs bonded areas, inland transit routes and temporary storage locations, to the Project Site(s), including Bus Depots and Charging Facilities;

Cover is to be on the basis of Institute Cargo Clauses (A) including war, strike, riot and civil commotion risks, and shall include a minimum storage period of sixty (60) Days at the Project Site(s).

Sum Insured : The greater of the (a) value of largest shipment or (b) the highest value of Goods in temporary storage as part of transit to the Project Site, in each case on a CIF (Cost, Insurance and Freight) basis, including duties, taxes (if any), freight and insurance costs.

At any time, the shipment value shall not exceed [United States Dollars] [•].

Deductibles : Not exceeding [United States Dollars [•]] for each loss.

Period of Insurance : From commencement of the first shipment until unloading, delivery and acceptance of the final shipment at the relevant Project Site(s).

Insured Parties : SMTA, the Concessionaire, the Construction Contractor and all other contractors and sub-contractors of any tier

²⁴ All amounts under this **SCHEDULE G (Minimum Insurance Requirements)** shall be finalized by the Concessionaire under the Financing Documents with the consent of the GoS and the Independent Auditor, based on precedent PPP projects and IPP/project financing deals.

involved in the supply of goods, materials or equipment for incorporation into the Project Activities.

Extensions and Conditions : Cover to include:

- i. Institute Cargo clauses “A”;
- ii. Institute Cargo clauses (Air);
- iii. Institute War clauses (Cargo and Air);
- iv. Institute Strikes clauses (Cargo and Air);
- v. Institute Replacement clause;
- vi. Institute Classification clause;
- vii. 50/50 clause; and
- viii. 200% accumulation clause.

subject to prevailing insurance market norms.

2. **CONTRACTOR’S/ERECTION ALL RISKS (CAR/EAR) INSURANCE**

Cover : Physical loss of or damage to all permanent and temporary works, assets and property installed, constructed, erected, tested, commissioned or rehabilitated as part of the Development Activities, including:

- i. Bus Depots and associated civil works;
- ii. Charging Infrastructure (including (without limitation) chargers, pantographs, substations, transformers, cabling and grid-interface equipment);
- iii. Service Bays, workshop facilities, control rooms and auxiliary buildings;
- iv. electrical, mechanical and utility installations;
- v. testing, commissioning and trial operations; and
- vi. all other property of whatsoever nature required for completion of the Project,

		but excluding equipment belonging to or the responsibility of contractors which is not intended to form part of the permanent E-Buses Assets.
<i>Sum Insured</i>	:	The full reinstatement or replacement value of the insured assets under construction or installation as part of Development Activities, including any “ <i>free issue</i> ” items.
<i>Deductibles</i>	:	Not to exceed for each and every occurrence: i. United States Dollars [●] in respect of testing, commissioning and trial operations; ii. United States Dollars [●] in respect of storm, tempest, flood, earthquake, tsunami and other natural perils; and iii. United States Dollars [●] in respect of all other losses.
<i>Period of Insurance</i>	:	From the earlier of the Commencement Date or commencement of the Development Activities at the Project Site(s), until COD, including extended maintenance cover for a minimum of twelve (12) Months.
<i>Insured Parties</i>	:	The GoS Parties, the Concessionaire, the Construction Contractor, the Supplier and all other contractors and sub-contractors of any tier, including consultants for their activities on or about the Project Site only.
<i>Extensions and Conditions</i>	:	To include: i. Offsite storage; ii. Inland transit of locally procured materials wholly within Pakistan; iii. Strike, riot and civil commotion (unless covered under the Terrorism and Sabotage insurance); iv. Waiver of subrogation in favour of SMTA and all other Insured Parties as provided above; v. LEG 2/96 faulty design and defects coverage; vi. Escalation provision; vii. Inadvertent errors and omissions; viii. Claims payable in the currency in which the cost is incurred; ix. 50/50 clause;

- x. Removal of debris;
 - xi. Expediting expenses;
 - xii. Public authority requirements; and
 - xiii. Professional fees,
- and subject to sub-limits based on prevailing insurance market norms.

3. **THIRD PARTY LIABILITY**

- Cover*** : Legal liability of the Insured Parties for death, bodily injury or illness of third parties, and loss of or damage to third party property arising out of or in connection with the mobilisation activities and Development Activities.
- Limit of Indemnity*** : No less than [United States Dollars [•]] for each occurrence and in the aggregate for sudden and accidental pollution risks.
- Deductibles*** : Not to exceed [United States Dollars [•]] for each and every occurrence.
- Period of Insurance*** : Co-terminous with the Contractor's/Erection All Risks Insurance.
- Insured Parties*** : The GoS Parties, the Concessionaire, the Construction Contractor and all other contractors and sub-contractors of any tier and their respective directors, officers and employees, and including consultants for their activities on or about the Project Site only.
- Geographical Limits*** : Pakistan, including worldwide business travel in connection with the Project.
- Extensions and Conditions*** : To include:
- i. Cross liability;
 - ii. Worldwide jurisdiction subject to North American conditions; and
 - iii. Sudden, unintended and unexpected seepage, pollution and contamination.

4. **TERRORISM AND SABOTAGE**

- Cover*** : Physical loss or damage to the Project and consequential delay to COD (First Segment) and COD

(Second Segment) arising from acts of terrorism and/or sabotage during the Development Period.

Sum Insured : An amount sufficient to cover the maximum foreseeable full reinstatement loss.

Indemnity Period : Twelve (12) Months from the anticipated COD (Second Segment).

Deductibles : Not to exceed [United States Dollars ■] in respect of physical loss or damage for each and every occurrence.

Period of Insurance : Co-terminous with the Contractor's/Erection All Risks Insurance.

Insured Parties : SMTA, the Concessionaire, the Construction Contractor and all other contractors and sub-contractors of any tier.

Geographical Limits : Pakistan.

5. **MARINE DELAY IN START-UP ("MDSU") INSURANCE [(IF REQUIRED BY FINANCING PARTIES)]**

Cover : Loss arising from delay in achieving COD (First Segment) and/or the COD (Second Segment) caused by physical loss or damage insured under the Marine Cargo Insurance.

Sum Insured : Estimated gross revenue or an amount at least equal to the estimated amount due to Financing Parties under the Financing Documents and fixed expenses incurred during the Indemnity Period.

Indemnity Period : Not less than twelve (12) Months from the anticipated COD (Second Segment).

Period of Cover : As per Marine/Inland Transit Cargo insurance above.

Insured : The Concessionaire and the Financing Parties, each for their respective rights and interests.

Deductibles : No more than forty-five (45) Days.

General : To include delay due to damage to the carrying vessel or conveyance.

6. **DELAY IN START UP (“DSU”) INSURANCE**

- Cover*** : Loss arising from delay in commencement of commercial operations due to physical loss or damage insured under the Construction/Erection All Risks Insurance.
- Sum Insured*** : Estimated gross revenue or an amount at least equal to the estimated amount due to Financing Parties under the Financing Documents and fixed expenses during the Indemnity Period.
- Indemnity Period*** : Not less than twelve (12) Months from the anticipated COD (Second Segment).
- Period of Cover*** : As per the Contractor’s/Erection All Risks insurance.
- Insured*** : The borrower and the lenders each for their respective rights and interests.
- Deductible*** : No more than sixty (60) Days.
- General*** : To include:
- i. Denial of access; and
 - ii. Customers’ and suppliers’ extensions (in respect of FLEXA perils.

7. **MISCELLANEOUS**

Other insurance as is customary, desirable or necessary to comply with Legal Requirements, such as workers’ compensation and employers’ liability insurance in relation to all workmen employed in the construction of the Project, and motor vehicle liability insurance for all vehicles owned, hired, leased, used or borrowed for use in connection with the Project.

OPERATIONS PERIOD INSURANCE

From the COD (First Segment) and renewable annually unless otherwise agreed by SMTA, the Concessionaire shall, at its own cost, procure and maintain the following insurance coverage(s) throughout the Operations Period:

1. PROPERTY DAMAGE “ALL RISKS”

- Cover*** : To cover physical loss or damage to all assets forming part of the Project including the E-Buses Assets on an “*all risks*” basis, including machinery breakdown, comprising (without limitation) electric buses (where not insured under a comprehensive motor fleet policy), traction batteries and battery management systems; Charging Infrastructure (including chargers, pantographs, substations, transformers, cabling and grid-interface equipment); Depots, buildings and workshops and their contents; machinery, Spare Parts, fixtures, fittings and other property of whatsoever nature forming part of the E-Buses Assets.
- Sum Insured*** : An amount sufficient to reinstate the Project assets at full replacement cost.
- Deductibles*** : Not to exceed for each and every occurrence:
- i. [United States Dollars [●]] in respect of storm, tempest, flood, earthquake, tsunami, other natural perils; and
 - ii. [United States Dollars [●]] for all other losses.
- Period of Insurance*** : From the COD (First Segment) and renewable annually till the Term Expiry Date.
- Insured Parties*** : The GoS Parties, the Concessionaire, the Bus Operator (if applicable) and all other contractors and sub-contractors of any tier and including consultants for their activities on or about the Project Site only.
- Extensions and Conditions*** : To include:
- i. Offsite storage;
 - ii. Inland transit of locally procured materials wholly within Pakistan;
 - iii. Strike, riot and civil commotion (unless covered under the Terrorism and Sabotage insurance);

- iv. Waiver of subrogation in favour of the GoS Parties and, in respect of Project Site activities only, in favour of all other Insured Parties as provided above;
 - v. Escalation provision;
 - vi. Inadvertent errors and omissions;
 - vii. Claims payable [Pakistani Rupees or] in the currency in which the cost is incurred;
 - viii. Removal of debris;
 - ix. Expediting expenses;
 - x. Public authority requirements; and
 - xi. Professional fees,
- and subject to sub-limits based on prevailing insurance market norms.

2. **THIRD PARTY LIABILITY**

- Cover*** : Legal liability of the Insured Parties for death, bodily injury or illness of third parties, or loss of or damage to third-party property arising out of or in connection with the ownership, operation, use or maintenance of the Project, including the operation of E-Buses Assets.
- Limit of Indemnity*** : No less than [United States Dollars [•]] for each occurrence and in the aggregate in respect of sudden and accidental pollution risks.
- Deductibles*** : Not to exceed [United States Dollars [•]] for each and every occurrence.
- Period of Insurance*** : Co-terminous with the Property Damage All Risks insurance.
- Insured Parties*** : The GoS Parties, the Concessionaire, the Bus Operator (if applicable), and all other contractors and sub-contractors of any tier and their respective directors, officers and employees, and including consultants for their activities on or about the Project Site only.
- Geographical Limits*** : Pakistan, including worldwide business travel in connection with the Project.
- Extensions and Conditions*** : To include:
- i. Cross liability;
 - ii. Worldwide jurisdiction excluding North American unless otherwise agreed; and
 - iii. Sudden, unintended and unexpected seepage, pollution and contamination.

3. **TERRORISM AND SABOTAGE**

<i>Cover</i>	:	Physical loss or damage to the E-Buses Assets and interruption of O&M Activities caused by act(s) of terrorism and/or sabotage to the Project during the Operations Period.
<i>Sum Insured</i>	:	A sum which is sufficient to cover the largest foreseeable loss scenario at full reinstatement value of such lost or damaged property.
<i>Indemnity Period</i>	:	Twelve (12) Months from the anticipated COD (Second Segment).
<i>Deductibles</i>	:	Not to exceed [United States Dollars [●]] in respect of physical loss or damage for each and every occurrence.
<i>Period of Insurance</i>	:	As per the Property Damage All Risks insurance.
<i>Insured Parties</i>	:	The GoS Parties, the Concessionaire, the Bus Operator (if applicable) and all other contractors and sub-contractors of any tier.
<i>Geographical Limits</i>	:	Pakistan.

4. **BUSINESS INTERRUPTION/AVAILABILITY INTERRUPTION INSURANCE (IF REQUIRED BY FINANCING PARTIES)**

<i>Cover</i>	:	Loss of revenue as a direct consequence of interruption of O&M Activities or as a direct consequence of loss of or damage to the E-Buses Assets insured under the Property All Risks Insurance.
<i>Sum Insured</i>	:	Gross revenue or an amount equal to the estimated amount due to Financing Parties under the Financing Documents due and fixed expenses incurred during the Indemnity Period.
<i>Indemnity Period</i>	:	Not less than twelve (12) Months.
<i>Period of Cover</i>	:	As per Property All Risks Insurance above.
<i>Insured</i>	:	The Concessionaire, the Bus Operator (if applicable) and the Financing Parties, each for their respective rights and interests.
<i>Deductibles</i>	:	No more than thirty (30) Days for each and every loss.
<i>General</i>	:	To include denial of access.

5. **MISCELLANEOUS**

Other insurances which:

- (a) are customary or necessary to comply with Legal Requirements, including workers' compensation and employers' liability insurance in respect of all persons employed in connection with the operation of the Project, and comprehensive motor vehicle and fleet insurance (including third-party liability) for all electric buses and other vehicles owned, leased, hired or used in connection with the Project in Pakistan; and
- (b) are required by applicable Laws of Pakistan

SCHEDULE H
PERFORMANCE SECURITIES

PART 1 - DEVELOPMENT PERIOD PERFORMANCE SECURITY

To

GOVERNMENT OF SINDH
[INSERT DETAILS]

GUARANTEE NO. [●] (the **Bank Guarantee**)

Dated: [●]

[INSERT NAME OF BANK], being the Bank Guarantee issuing bank (the **Guarantor Bank**) understands that the following parties shall enter into an agreement titled the “*CONCESSION AGREEMENT*” (the **Agreement**) for the design, finance, build, operate, maintain and transfer of the E-Buses Assets under the public-private partnership mode (the **Project**):

1. **THE GOVERNOR OF SINDH** (through Secretary, Transport and Mass Transit Department, Government of Sindh) having its office located at [●], Karachi, Pakistan, for and on behalf of the Government of Sindh (the **GoS**, which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors and assigns);

AND

2. **SINDH MASS TRANSIT AUTHORITY**, a statutory body constituted pursuant to Section 4 of the Sindh Mass Transit Authority Act, 2014, with its office located at [[●], Karachi, Pakistan] (**SMTA** which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors in interest, administrators and permitted assigns);

AND

3. [●], a company incorporated under the Laws of Pakistan, with its registered office at [●] (the **Concessionaire** which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors in interest, administrators and permitted assigns).

Further, the Guarantor Bank understands that pursuant to the terms of the request for proposals issued in respect of the Project by SMTA (the **RFP**) read with the Agreement, the Concessionaire is required to provide the GoS with a Bank Guarantee (referred to in the RFP and the Agreement as the Development Period Performance Security) in an amount equal to Pakistani Rupees [●] only (PKR [●]/).

The above premised, the Guarantor Bank hereby undertakes irrevocably, unconditionally and on demand to pay to the GoS (without any notice, reference or recourse to the Concessionaire or to any other entity or without any recourse or reference to any contract, agreement, document or

other instruments (including the RFP and the Agreement) whether executed or not), any sum or sums (or any part thereof) equivalent in aggregate up to but not exceeding a maximum amount of:

Pakistani Rupees [●] only (PKR [●]/-)
(the **Guaranteed Amount**)

immediately, however not later than within five (5) business Days from the date of the Guarantor Bank's receipt of the GoS' first written demand (the **Demand**) at the Guarantor Bank's office located at [INSERT ADDRESS OF THE GUARANTOR BANK AT WHICH DEMAND SHALL BE MADE], or through SWIFT instructions transmitted by the GoS' bank, on behalf of the GoS, to the Guarantor Bank, or through fax sent by the GoS at the Guarantor Bank's fax number i.e., [●], such Demand stating:

- (a) the Bank Guarantee number;
- (b) the total amount demanded; and
- (c) the bank account to which the amounts demanded pursuant to the demand are to be credited/transferred (the **Beneficiary Account**).

A Demand shall only be honoured by us: (i) in the case of a written Demand, if it is made by and bears the signature of an authorised officer or other representative of the GoS; or (ii) in the case of a Demand transmitted through SWIFT, if it is transmitted through authenticated SWIFT instructions by the GoS' bank, on behalf of the GoS; or (iii) in the case of a Demand made through fax, it is made by and bears the signature of an authorised officer or other representative of the GoS.

The Guarantor Bank shall unconditionally honour a Demand hereunder made in compliance with this Bank Guarantee at sight and immediately on the date of receipt of your Demand, as stated earlier, and shall transfer the amount specified in the Demand to the Beneficiary Account, in immediately available and freely transferable funds in the currency of this Bank Guarantee, free and clear of and without any set-off or deduction for or on account of any present or future taxes, levies, imposts, duties, charges, fees, deductions or withholdings of any nature whatsoever and by whomsoever imposed.

This Bank Guarantee shall come into force and shall become automatically effective upon its issuance.

After having come into force, this Bank Guarantee and the Guarantor Bank's obligations hereunder shall expire on [INSERT DATE AND TIME] (the **Expiry Date**) irrespective of whether this Bank Guarantee has been returned to the Guarantor Bank provided that, in the event that the GoS issues a Demand to the Guarantor Bank on or immediately prior to the Expiry Date and the same is received by the Guarantor Bank on or prior to the Expiry Date, the Guarantor Bank shall honour such Demand.

Upon expiry, this Bank Guarantee shall be returned to the Concessionaire without undue delay. multiple Demands may be made by the GoS under this Bank Guarantee, but the Guarantor Bank's aggregate liability shall be restricted up to the Guaranteed Amount.

The Guaranteed Amount shall be revised upon receipt by the Guarantor Bank of a notice duly signed by the GoS and the Concessionaire of the revised Guaranteed Amount. The Expiry Date shall be revised upon receipt by the Guarantor Bank of a notice duly signed by the GoS and the Concessionaire of the revised date.

The Guarantor Bank hereby agrees that any part of the Agreement or the RFP may be amended, renewed, extended, modified, compromised, released or discharged without:

- (a) in any way impairing or affecting the Guarantor Bank's liabilities hereunder;
- (b) notice to the Guarantor Bank; and
- (c) the necessity for any additional endorsement, consent or guarantee by the Guarantor Bank.

This Bank Guarantee, for its validity period, shall not be affected in any manner by any change in the Guarantor Bank's constitution or of the Concessionaire's constitution or of their successors and assignees and this Bank Guarantee shall be legally valid, enforceable and binding on each of their successors and permitted assignees.

All references to any contract, agreement, document or other instruments (including the Agreement and the RFP), whether executed or not, are by way of reference only and shall not affect the Guarantor Bank's obligations to make payment under the terms of this Bank Guarantee.

If one or more of the provisions of this Bank Guarantee are held or found to be invalid, illegal, or unenforceable for any reason whatsoever, in any respect, any such invalidity, illegality, or unenforceability of any provision shall not affect the validity of the remaining provisions of this Bank Guarantee.

The Guarantor Bank hereby declares and confirms that under its constitution and applicable laws, it has the necessary power and authority and all necessary authorizations, approvals and consents thereunder, to:

- (a) enter into, execute and deliver this Bank Guarantee; and
- (b) perform the obligations it has undertaken under this Bank Guarantee, which obligations are valid and legally binding on and enforceable against the Guarantor Bank under the laws of Pakistan.

Further, the Guarantor Bank hereby declares and confirms that the signatory(ies) to this Bank Guarantee is/are its duly authorized officer(s) to execute this Bank Guarantee.

This Bank Guarantee and all rights and obligations arising from this Bank Guarantee shall be governed and construed in all respects in accordance with the laws of Pakistan. The courts in Karachi, Pakistan shall have exclusive jurisdiction in respect of any dispute relating to any matter contained herein.

The issuance of this Bank Guarantee is permitted according to the laws of Pakistan and the laws of the jurisdiction where this Bank Guarantee is issued.

This Bank Guarantee is subject to the Uniform Rules for Demand Guarantee, ICC Publication No.758. To the extent that there is any inconsistency between the terms of this Bank Guarantee and the Uniform Rules for Demand Guarantees, ICC Publication No. 758, the terms of this Bank Guarantee shall prevail.

EXECUTED & ISSUED
FOR & ON BEHALF OF THE GUARANTOR BANK

.....

NAME:

DESIGNATION:

DATED:

PART 2 - O&M PERFORMANCE SECURITY

To

GOVERNMENT OF SINDH
[*INSERT DETAILS*]

GUARANTEE NO. [●] (the **Bank Guarantee**)

Dated: [●]

[INSERT NAME OF BANK], being the Bank Guarantee issuing bank (the **Guarantor Bank**) understands that the following parties have entered into an agreement titled the “*CONCESSION AGREEMENT*” dated [●] (the **Agreement**) for the design, finance, build, operate, maintain and transfer of the E-Buses Assets under the public-private partnership mode (the **Project**):

1. **THE GOVERNOR OF SINDH** (through Secretary, Transport and Mass Transit Department, Government of Sindh) having its office located at [●], Sindh Secretariat, Karachi, Pakistan, for and on behalf of the Government of Sindh (the **GoS**, which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors and assigns);

AND

2. **SINDH MASS TRANSIT AUTHORITY**, a statutory body constituted pursuant to Section 4 of the Sindh Mass Transit Authority Act, 2014, with its office located at [●], Karachi, Pakistan] (**SMTA** which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors in interest, administrators and permitted assigns);

AND

3. [●], a company incorporated under the Laws of Pakistan, with its registered office at [●] (the **Concessionaire** which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors in interest, administrators and permitted assigns).

Further, the Guarantor Bank understands that pursuant to the terms of the Agreement, the Concessionaire is required to provide the GoS with a Bank Guarantee (referred to in the Agreement as the O&M Performance Security) in an amount equal to Pakistani Rupees [●] only (PKR [●]/-).

The above premised, the Guarantor Bank hereby undertakes irrevocably, unconditionally and on demand to pay to the GoS (without any notice, reference or recourse to the Concessionaire or to any other entity or without any recourse or reference to any contract, agreement, document or other instruments (including the Agreement) whether executed or not), any sum or sums (or any part thereof) equivalent in aggregate up to but not exceeding a maximum amount of:

Pakistani Rupees [●] only (PKR [●]/-)
(the **Guaranteed Amount**)

immediately, however not later than within five (5) business Days from the date of the Guarantor Bank's receipt of the GoS' first written demand (the **Demand**) at the Guarantor Bank's office located at [INSERT ADDRESS OF THE GUARANTOR BANK AT WHICH DEMAND SHALL BE MADE], or through SWIFT instructions transmitted by the GoS' bank, on behalf of the GoS, to the Guarantor Bank, or through fax sent by the GoS at the Guarantor Bank's fax number i.e., [●], such Demand stating:

- (a) the Bank Guarantee number;
- (b) the total amount demanded; and
- (c) the bank account to which the amounts demanded pursuant to the demand are to be credited/transferred (the **Beneficiary Account**).

A Demand shall only be honoured by us: (i) in the case of a written Demand, if it is made by and bears the signature of an authorised officer or other representative of GoS; or (ii) in the case of a Demand transmitted through SWIFT, if it is transmitted through authenticated SWIFT instructions by GoS' bank, on behalf of GoS; or (iii) in the case of a Demand made through fax, it is made by and bears the signature of an authorised officer or other representative of GoS.

The Guarantor Bank shall unconditionally honour a Demand hereunder made in compliance with this Bank Guarantee at sight and immediately on the date of receipt of your Demand, as stated earlier, and shall transfer the amount specified in the Demand to the Beneficiary Account, in immediately available and freely transferable funds in the currency of this Bank Guarantee, free and clear of and without any set-off or deduction for or on account of any present or future taxes, levies, imposts, duties, charges, fees, deductions or withholdings of any nature whatsoever and by whomsoever imposed.

This Bank Guarantee shall come into force and shall become automatically effective upon its issuance.

After having come into force, this Bank Guarantee and the Guarantor Bank's obligations hereunder shall expire on [INSERT DATE AND TIME] (the **Expiry Date**) irrespective of whether this Bank Guarantee has been returned to the Guarantor Bank provided that, in the event that the GoS issues a Demand to the Guarantor Bank on or immediately prior to the Expiry Date and the same is received by the Guarantor Bank on or prior to the Expiry Date, the Guarantor Bank shall honour such Demand.

Upon expiry, this Bank Guarantee shall be returned to the Concessionaire without undue delay. multiple Demands may be made by the GoS under this Bank Guarantee, but the Guarantor Bank's aggregate liability shall be restricted up to the Guaranteed Amount.

The Guaranteed Amount shall be revised upon receipt by the Guarantor Bank of a notice duly signed by the GoS and the Concessionaire of the revised Guaranteed Amount. The Expiry Date shall be revised upon receipt by the Guarantor Bank of a notice duly signed by the GoS and the Concessionaire of the revised date.

The Guarantor Bank hereby agrees that any part of the Agreement may be amended, renewed, extended, modified, compromised, released or discharged without:

- (a) in any way impairing or affecting the Guarantor Bank's liabilities hereunder;
- (b) notice to the Guarantor Bank; and
- (c) the necessity for any additional endorsement, consent or guarantee by the Guarantor Bank.

This Bank Guarantee, for its validity period, shall not be affected in any manner by any change in the Guarantor Bank's constitution or of the Concessionaire's constitution or of their successors and assignees and this Bank Guarantee shall be legally valid, enforceable and binding on each of their successors and permitted assignees.

All references to any contract, agreement, document or other instruments (including the Agreement), whether executed or not, are by way of reference only and shall not affect the Guarantor Bank's obligations to make payment under the terms of this Bank Guarantee.

If one or more of the provisions of this Bank Guarantee are held or found to be invalid, illegal, or unenforceable for any reason whatsoever, in any respect, any such invalidity, illegality, or unenforceability of any provision shall not affect the validity of the remaining provisions of this Bank Guarantee.

The Guarantor Bank hereby declares and confirms that under its constitution and applicable laws, it has the necessary power and authority and all necessary authorizations, approvals and consents thereunder, to:

- (a) enter into, execute and deliver this Bank Guarantee; and
- (b) perform the obligations it has undertaken under this Bank Guarantee, which obligations are valid and legally binding on and enforceable against the Guarantor Bank under the laws of Pakistan.

Further, the Guarantor Bank hereby declares and confirms that the signatory(ies) to this Bank Guarantee is/are its duly authorized officer(s) to execute this Bank Guarantee.

This Bank Guarantee and all rights and obligations arising from this Bank Guarantee shall be governed and construed in all respects in accordance with the laws of Pakistan. The courts in Karachi, Pakistan shall have exclusive jurisdiction in respect of any dispute relating to any matter contained herein.

The issuance of this Bank Guarantee is permitted according to the laws of Pakistan and the laws of the jurisdiction where this Bank Guarantee is issued.

This Bank Guarantee is subject to the Uniform Rules for Demand Guarantee, ICC Publication No.758. To the extent that there is any inconsistency between the terms of this Bank Guarantee and the Uniform Rules for Demand Guarantees, ICC Publication No. 758, the terms of this Bank Guarantee shall prevail.

**EXECUTED & ISSUED
FOR & ON BEHALF OF THE GUARANTOR BANK**

.....

NAME:

DESIGNATION:

DATED:

SCHEDULE I
SPONSOR(S) UNDERTAKING

FROM:

[*Initial Sponsors*] (the **Sponsors** and each a **Sponsor**)

TO:

1. THE GOVERNMENT OF SINDH (through Secretary, Transport and Mass Transit Department, Government of Sindh) (the **GoS**);
 2. SINDH MASS TRANSIT AUTHORITY (**SMTA**);
 3. [●] (the **Concessionaire**),
- together, the **Parties** and each a **Party**.

Dated: [●]

Ref: [●]

RE: THE PEOPLES GREEN TRANSPORT PROJECT - ACCESSION TO THE AGREEMENT

Dear Sir(s)/Madam(s):

In this undertaking (this **Undertaking**) we, the Sponsors of the Concessionaire, refer to the concession agreement dated [●] between the GoS Parties and the Concessionaire (the **Agreement**). Specifically, but not limited to, reference is made to Section 16.4 (*Funding of Sponsor Funding Amount and Cost Overruns, Shareholding and Related Matters*) of the Agreement. Terms defined in the Agreement shall have the same meaning in this Undertaking unless given a different meaning herein.

Furthermore, we are hereby agreeing to accede to the Agreement in respect of the obligations and responsibilities under section 16.4 (*Funding of Sponsor Funding Amount and Cost Overruns, Shareholding and Related Matters*) of the Agreement and as set out in Section 2 (*Shareholder Undertakings*) of this Undertaking as well as in relation to the representations and warranties set out in Section 3 (*Limited Warranties and Representations*), the undertakings set out in Section 4 (*Additional Undertakings*) and indemnities set out in Section 5 (*Limited Indemnities Undertaking*) of this Undertaking for the additional benefit for and in favour of the GoS Parties.

1. ACCESSION

- 1.1 The Sponsors agree to become a party to the Agreement and to be bound by the terms and conditions of the Agreement as the acceding party (the **Acceding Party**). The Acceding Party confirms and undertakes to procure the performance of all the relevant obligations and responsibilities as set out herein. The Sponsors also undertake to ensure that each subsequent Shareholder accedes to this Undertaking concurrently with its acquisition of shares in the Concessionaire.

- 1.2 The Acceding Party enters into the Agreement exclusively in relation to the obligations and undertakings encompassed in Section 16.4 (*Funding of Sponsor Funding Amount and Cost Overruns, Shareholding and Related Matters*) of the Agreement (the **Shareholder Undertakings**) and set out in Section 2 (*Shareholder Undertakings*) in this Undertaking as well as in relation to the representations and warranties set out in Section 3 (*Limited Warranties and Representations*), the undertakings set out in Section 4 (*Additional Undertakings*) and indemnities set out in Section 5 (*Limited Indemnities Undertaking*) of this Undertaking.
- 1.3 The GoS Parties and the Concessionaire hereby explicitly accept and confirm the accession of the Acceding Party to the Agreement.

2. SHAREHOLDER UNDERTAKINGS

Pursuant to Section 16.4 (*Funding of Sponsor Funding Amount and Cost Overruns, Shareholding and Related Matters*) of the Agreement, the Acceding Party shall implement the following undertakings:

2.1 EQUITY INVESTMENT UNDERTAKING

2.1.1 The Acceding Party undertakes the following pursuant to Section 16.4 (*Funding of Sponsor Funding Amount and Cost Overruns, Shareholding and Related Matters*) of the Agreement:

- (a) each Sponsor shall fulfil its obligation to pay to the Concessionaire that part of the Sponsor Funding Amount on or before the dates and in the amounts and shall hold such proportion of the Ordinary Shares, that is, in each case, apportioned to such Sponsor in the Financial Model;
- (b) that the Sponsors and any future Shareholders shall decide on the split between the Concessionaire's Ordinary Shares and Sponsor Loans at their own discretion.

2.1.2 The payment of the Sponsor Funding Amount shall be evidenced as follows:

- (a) in respect of the amount expressed as Ordinary Shares, by submission to the GoS (with a copy to the Independent Auditor) of a certified copy of all the legal documents that are submitted to the Government Authority pursuant to the Laws in the event of a limited liability share capital increase;
- (b) in respect of the amount expressed as Sponsor Loan, by submission to the GoS of the Concessionaire's accounting books together with a certificate from the Independent Auditor.

2.2 SHARE CAPITAL UNDERTAKING AND OTHER MATTERS

2.2.1 The Acceding Party acknowledges, agrees to and undertakes to strictly comply with the transfer restrictions, undertakings and procedures for transfer, in each case, in relation to the Ordinary Shares, as set out in Section 16.4 (*Funding of Sponsor Funding Amount and Cost Overruns, Shareholding and Related Matters*) of the Agreement.

2.2.2 The Acceding Party undertakes to do all things and take all actions that are required to be done or taken by the Acceding Party under the Laws of Pakistan to enable the Concessionaire to comply with its obligations under the GoS Project Documents.

2.3 **LEAD DEVELOPER LIABILITY**

- 2.3.1 Notwithstanding anything to the contrary contained herein, the Lead Developer's liability shall extend to the total Maximum Liability Amount applicable to the entire Consortium.

3. **LIMITED WARRANTIES AND REPRESENTATIONS**

- 3.1 The Acceding Party represents and warrants to the GoS Parties that on the Effective Date and the Commencement Date or on the Day of its accession as Shareholder each of the following is true and correct in all material respects:
- (a) it has full power, authority and right and has taken all actions necessary to enter into the Agreement and to assume and perform its rights and obligations as set out in the Agreement;
 - (b) there is no proceeding, action, claim or investigation, pending or threatened against the Acceding Party the outcome of which may constitute a Concessionaire Event of Default or have a material adverse effect on its financial condition or its ability to perform its obligations under the Agreement; and
 - (c) there are no fines, penalties or other sanctions imposed on the Acceding Party which may have a material adverse effect on its financial condition or its ability to perform its obligations under the Agreement.

4. **ADDITIONAL UNDERTAKINGS**

- 4.1 The Acceding Party is aware of, understands, has complied with, and will comply with, all Anti-Corruption Laws and Anti-Corruption Guidelines.
- 4.2 The Acceding Party confirms that all funds (whether in the form of financing or equity) that are or will be used by the Acceding Party for the fulfilment of its obligations under the Agreement are not and will not be acquired through or in connection with a crime. The Acceding Party shall be obliged to provide any and all information confirming its compliance with the Measures Against Money Laundering Laws and its implementing regulations.
- 4.3 The Acceding Party confirms that it has received all the information about the Concession that was prepared by the GoS Parties for the purposes of the Agreement and which was made available to the Acceding Party, namely the documents and information provided in the RFP and those contained in the schedules to the Agreement. The Acceding Party confirms that it has made its own preliminary assessment of the Concession.

5. **LIMITED INDEMNITIES UNDERTAKING**

- 5.1 Subject to the Maximum Liability Amount set out in Section 5.2 below, each Sponsor shall bear explicit liability for the undertakings set out in Section 2 (*Shareholder Undertakings*) hereof, for the representations and warranties as well as the undertakings set out in Sections 3 (*Limited Warranties and Representations*) and 4 (*Additional Undertakings*) hereof, jointly and

severally with the other Shareholders as well as with the Concessionaire, towards the GoS Parties under the Agreement.

- 5.2 By signing this Undertaking, the GoS Parties acknowledge and agree that the total maximum liability of Sponsors and any subsequent Shareholder (where this provision under no circumstances should be understood and interpreted as limiting in any way the Concessionaire's liability) shall be **insert amount**²⁵ (as updated from time to time in accordance with the Financial Model) (the **Maximum Liability Amount**) inasmuch as such liability arises for the Sponsor or any subsequent Shareholder as the Acceding Party under this Undertaking and/or as a matter of Law; provided, the Maximum Liability Amount shall apply to the aggregate of the claims by the GoS Parties against the Sponsors and any subsequent Shareholder(s). This shall be without prejudice to any liabilities of the Shareholders under the Finance Documents (including the obligation to fund any Cost Overruns).

6. **GOVERNING LAW**

This Undertaking and any contractual and non-contractual matters deriving therefrom shall be governed by the Laws of Pakistan.

7. **DISPUTE RESOLUTION**

Any dispute or difference arising out of or in connection with this Undertaking, shall regardless of the nature thereof, be referred to dispute resolution pursuant to the provisions of article 27 (*Governing law and Dispute Resolution*) of the Agreement, which provisions are incorporated herein by reference and shall apply *mutatis mutandis* to this Undertaking.

Regards,

**FOR AND ON BEHALF OF
SPONSORS**

[Date]

Signature _____
Signed by _____
acting as _____

²⁵ This amount will be updated based on the Equity investment requirements set out in the Financial Model (as updated from time to time).

ACKNOWLEDGED AND ACCEPTED BY THE GOS PARTIES

GOS

Signature

.....

Name

(block capitals)

.....

Title

.....

In the presence of:

Witness signature

.....

Witness name

(block capitals)

.....

Witness signature

.....

Witness name

(block capitals)

.....

SINDH MASS TRANSIT AUTHORITY

Signature

Name
(block capitals)

Title

In the presence of:

Witness signature

Witness name
(block capitals)

Witness signature

Witness name
(block capitals)

SCHEDULE J
ENVIRONMENT, HEALTH AND SAFETY REQUIREMENTS

PART I - E&S IMPACT ASSESSMENT

The E&S Impact Assessment shall be prepared by the Concessionaire in accordance with the following minimum criteria:

- (a) The Concessionaire shall submit the ESIA to SMTA and obtain all required E&S Approvals (including the Sindh Environmental Protection Agency's no-objection certificate) prior to commencing any construction activities;
- (b) the E&S Impact Assessment shall address all E&S risk and impacts of the Project, including ancillary and associated facilities, as presented in the terms of reference specified in part 3 (*Environmental and Social Impact Assessment Terms of Reference*) of this **SCHEDULE J (Environment, Health and Safety Requirements)**;
- (c) the E&S Impact Assessment shall identify, assess and evaluate all environmental, social, health and safety risks and impacts of the Project throughout its lifecycle, including those arising from (i) the deployment, commissioning, operation and maintenance of the E-Bus Assets; (ii) the development, construction, operation and maintenance of bus depots, charging facilities, workshops, parking areas and associated infrastructure; (iii) high-voltage electrical systems, charging equipment, substations and battery storage, handling and disposal, and (iv) Project-related activities on public roads affecting commuters, pedestrians, road users and surrounding communities, including all ancillary and associated facilities; and
- (d) the E&S Impact Assessment shall comply with all applicable Legal Requirements and E&S Standards, including Good International Industry Practices, and shall be prepared by suitably qualified and experienced professionals with demonstrated experience in comparable urban public transport and electric mobility projects in the region.

PART II - E&S MANAGEMENT SYSTEM

The Concessionaire shall establish, implement, maintain and continuously improve an Environmental and Social Management System (the **E&S Management System** or **ESMS**) applicable to all phases and components of the Project. An initial ESMS framework shall be established within ninety (90) Days of the Commencement Date, and the ESMS shall be fully operational no later than the commencement of operations.

The ESMS shall be proportionate to the nature, scale and risk profile of the Project and shall, at a minimum, provide for the following:

- (a) an overarching environmental and social policy setting out the Concessionaire's E&S principles and commitments, including reference to applicable E&S Standards and Legal Requirements, for the effective identification, management and mitigation of E&S risks and impacts throughout the Concession Period. Such policy shall be approved by senior

management of the Concessionaire and shall apply to fleet operations, depot and charging infrastructure operations, and all Contractors and Sub-contractors engaged in the Project;

- (b) organizational capacity and competency to implement the E&S Management System, defining key E&S roles and responsibilities, assigning staff with appropriate skills and expertise, and training staff in the management of E&S risks and impacts; including the designation of qualified EHS personnel responsible for electric bus operations, depot and charging infrastructure safety, high-voltage electrical systems, battery handling, and contractor oversight;
- (c) a systematic risk assessment procedure to identify actual and potential negative E&S risks and impacts associated with the Project across its lifecycle, and to determine appropriate avoidance, mitigation, monitoring and corrective measures in accordance with the mitigation hierarchy;
- (d) a management program defining mitigation measures, performance improvement actions and performance targets to address identified E&S risks and impacts, including monitoring requirements, implementation timelines and assignment of responsibility for each measure. The management program shall consist of a documented combination of operational procedures, practices, plans and supporting documents that further develop and detail the measures identified in the E&S Impact Assessment. Not all plans or procedures shall be required as a Condition Precedent if not necessary at the commencement of Development Activities or Operations (as applicable); however, all relevant plans shall be developed and implemented at least thirty (30) Days prior to the activity to which they relate. The management program shall comply with the E&S Requirements and shall include, at a minimum, the following components:
 - (i) **Waste Management.** Standard operating procedures for the management of construction-phase and operational solid and hazardous waste arising from depot development, electric bus operations and maintenance activities, including handling, segregation, storage, recycling and disposal of batteries and battery components; used oils, lubricants and coolants; tyres and electronic waste; and other recyclable and non-recyclable materials. Where third parties are engaged for waste management, treatment or disposal, the Concessionaire shall contract only entities holding valid legal permits and authorizations;
 - (ii) **Energy conservation and resource management.** Measures to minimize resource consumption and promote efficient use of electricity, water and other resources, including optimization of charging operations and resource-efficient operation of depots and facilities.
 - (iii) **Wastewater and Effluent Management.** Measures to manage wastewater and effluents generated from depot operations, vehicle washing, maintenance activities and associated facilities, including treatment, reuse or recycling where feasible, and disposal in compliance with applicable Legal Requirements and Good International Industry Practice.
 - (iv) **Soil Management Plan.** A Soil Management Plan addressing excavated soils and construction-related disturbance, including soil separation and storage,

minimization of vegetation clearance, working-area rehabilitation and soil reuse, as applicable to depot, workshop and charging infrastructure construction activities.

- (v) ***Pollution Prevention and Spill Response and Hazardous Materials Management.*** Plans and procedures for the safe handling, storage and use of hazardous materials, including batteries, fuels (if any), oils, lubricants, coolants and cleaning agents, and for the prevention and mitigation of dust, air emissions and noise, including monitoring, corrective actions and compliance with applicable E&S Standards.
- (vi) ***Water Management.*** Measures to monitor and manage water consumption and water quality associated with depot operations, vehicle washing and maintenance activities, ensuring compliance with applicable national and international standards, and including corrective measures in the event of non-compliance.
- (vii) ***Occupational Health and Safety (OHS).*** the Concessionaire, Contractors and subcontractors shall ensure safe working conditions for their employees, including staff training, job safety instructions and measures to ensure workplace safety and mitigate OHS risks. Such requirements, at a minimum, shall include:
 - A. job-and task-specific hazard analysis and controls for all activities;
 - B. safety training for all personnel in their language, covering hazards and safety protocols of their jobs;
 - C. special training for specific hazards: high-voltage electrical systems, battery handling and storage, fire and explosion risks, depot and workshop operations, and work on or near public roads.;
 - D. provision of personal protection equipment (PPE), requirements for use of PPE, and enforcement of PPE use;
 - E. OHS monitoring implemented by accredited professionals. Arrangements in place to manage OHS incidents, including first aid arrangements, emergency response plans, including provision for emergency medical treatments, and system for reporting and acting on ‘near misses’; and
 - F. recording incident statistics, including total work hours, lost time incidents, major injuries, fatalities, etc.
- (viii) ***Safety management*** including health and safety of commuters, road users and communities around Project facilities and along Project routes, with measures to control access to depots and charging facilities, prevent unauthorized entry, and manage traffic and pedestrian risks. Safety management shall also include emergency preparedness and response, and life and fire safety. Emergency preparedness and response plan shall specify responsibilities of the parties and the relevant authorities, procedures to minimize the harm of any potential accident and ensure that appropriate response equipment and materials are in place. The plan shall also include provisions for continual updates, including drills to test the effectiveness.

- (ix) ***Contractor/sub-contractor management:*** to manage EHS planning and performance of Contractors/sub-contractors, including at a minimum:
 - A. inclusion of relevant E&S Management Program requirements in contracts/subcontracts (OHS requirements shall be adopted by all Contractors/subcontractors as applicable);
 - B. clear assignment of EHS responsibilities for the Concessionaire, Contractors and subcontractor;
 - C. Contractor/sub-contractors reporting adequate information to allow the Concessionaire to evaluate the need for corrective actions and provide relevant data and information to the required authorities; and
 - D. verification of training and/or proper credentials for Contractor/sub-contractor managers and staff responsible for EHS management.
- (x) ***External communication protocol, Stakeholder Engagement Plan and the Grievance Redress Mechanism:*** to receive and address Stakeholders' grievances. The Grievance Redressal Mechanism shall be easily accessible, understandable, and sufficiently advertised to the Stakeholders, and ensure the confidentiality of a person raising a complaint.
- (xi) ***Code of conduct*** to avoid gender-based violence among the workforce, including Contractors and subcontractors, and towards the Affected Communities, and definition of differentiated training to workers' supervisors and managers on its implementation.
- (xii) ***Traffic and Pedestrian Safety Plan:*** setting out construction and operation management measures, including safe movement of traffic during construction, operation and decommissioning, and allowing safe access to communities and crossing of the Project Site; including safe operation of electric buses on public roads.
- (xiii) ***Security personnel management plan:*** a common plan for personnel hired or contracted by the Concessionaire or GoS Parties, including Contractors/sub-contractors. The plan shall be based on the Concessionaire's assessment of the risks posed by its security arrangements for workers, the public and Affected Communities, and shall include a code of conduct for security personnel in line with applicable E&S Standards. The code of conduct shall: aim to ensure that security personnel are screened for implication in past abuses and adequately trained in the use of force and appropriate conduct toward communities, the public, and workers; include a mechanism to raise grievances related to the conduct of security personnel, an assurance that any incidents will be properly investigated, and that the Concessionaire does not sanction use of force in relation to the Project, except when used for preventive and defensive purposes and in proportion to the nature and extent of the threat.

1. INTRODUCTION

SMTA aims to engage the private sector on a PPP basis for the DFBOMT of an integrated electric bus system under the Project in Karachi and Hyderabad. The Project is intended to improve urban mobility, reduce transport-related emissions, enhance passenger safety and accessibility, and support the transition to sustainable public transport in Sindh.

Given the nature of the Project as an urban electric bus system operating primarily on existing road infrastructure, the environmental and social risks associated with the Project are largely operational, distributed and reversible, and are therefore addressed through proportionate operational controls and management measures.

The Project entails, inter alia, the following components:

- deployment, commissioning, operation and maintenance of an electric bus fleet;
- development, construction, operation and maintenance of bus depots, charging facilities, workshops, parking areas, substations and associated power and electrical infrastructure;
- implementation of intelligent transport systems (ITS), automated fare collection systems (AFC), fleet management and monitoring systems; and
- E&S mitigation measures.

Figures illustrating the proposed Project locations, routes, depots and associated facilities shall be included in the Project documentation.

The Project includes multiple bus routes in Karachi and Hyderabad operating on public roads, together with associated depots and facilities located at designated sites.

A detailed description of the Project components, routes, depots and facilities shall be maintained by the Concessionaire and made available to SMTA upon request.

2. OVERVIEW

This Part III established the minimum environmental, social, health and safety framework applicable to the Project.

The aim is to identify, manage and mitigate the environmental and social impacts of the Project, to assess such impacts in accordance with applicable national requirements and Good International Industry Practices, and to implement mitigation and management measures to enable such impacts to be avoided or minimized to an acceptable level.

These provisions describe the minimum environmental, social, health and safety obligations applicable to the Project. The applicable provincial legislation in Sindh, applicable national legislation, generally accepted Good International Industry Practices,

Asian Development Bank's Safeguard Policy Statement (2009), and the IFC Performance Standards should be used to establish minimally acceptable conditions for satisfying the requirements applicable to the Project.

3. MINIMUM ENVIRONMENTAL AND SOCIAL STANDARDS

Without prejudice to the Concessionaire's obligation to comply with applicable provincial and federal laws and regulations, the Concessionaire shall perform its obligations under this Part III in a manner consistent with GIIP applicable to urban electric public transport systems.

The Concessionaire shall ensure that its environmental, social, health and safety practices and procedures meet or exceed the minimum standards reflected in:

- (a) the International Finance Corporation's Performance Standards on Environmental and Social Sustainability;
- (b) the Asian Development Bank's Safeguard Policy Statement (2009); and
- (c) other relevant standards;²⁶

to the extent relevant and proportionate to the nature, scale and risk profile of the Project.

The standards referenced above shall operate as a minimum benchmark for the purposes of this Part III and shall not limit SMTA's right to require higher or more specific measures where necessary to address Project-specific environmental, social, health or safety risks.

4. ENVIRONMENTAL AND SOCIAL MANAGEMENT APPROACH

The Concessionaire shall implement and maintain environmental and social management measures that are compliant with applicable provincial and federal laws, relevant transport, labour and safety regulations, and the minimum standards set out in Clause 3 above, local environmental and other relevant legislation notified by provincial and federal governments in order to obtain environmental approvals from the Sindh Environmental Protection Agency, GoS and other relevant agencies, as described herein and the E&S Scoping Report.

The Concessionaire shall establish and implement appropriate environmental and social management procedures addressing, at a minimum:

- (a) waste management (including batteries, oils, tyres and electronic waste);
- (b) occupational health and safety;
- (c) public, passenger and road safety;
- (d) traffic and pedestrian safety;

²⁶ When referring to E&S, this includes also assessment and management of labour and working conditions including workers' rights and occupational health and safety (OHS) risks and impacts.

- (e) labour and social safeguards;
- (f) grievance redress mechanisms; and
- (g) emergency preparedness and response.

5. GENERAL ENVIRONMENTAL AND SOCIAL REQUIREMENTS

In general, the Concessionaire's environmental and social management measures shall address:

- (a) applicable environmental standards, norms, and international requirements set forth in national, local and international law, along with the IFC Performance Standards and ADB standards;
- (b) identification of Project Stakeholders and implementation of proportionate Stakeholder engagement measures, including a Grievance Redress Mechanism accessible to workers, commuters and affected communities;
- (c) detailed description of Project phases relevant to environmental and social risk, including depot construction, electric bus operations, maintenance and decommissioning;
- (d) identification and management of direct and indirect environmental, social, health and safety impacts associated with Project activities;
- (e) monitoring and reporting of compliance with environmental and social obligations; and
- (f) clear assignment of responsibilities, implementation timelines, and corrective actions.

6. MONITORING, REPORTING AND COMPLIANCE

The Concessionaire shall monitor compliance with this Part III on an ongoing basis and submit periodic environmental and social compliance reports to SMTA in accordance with this Agreement.

SMTA shall have the right to inspect, audit and require corrective actions in relation to environmental, social, health and safety matters.

7. ACRONYMS AND ABBREVIATIONS

All acronyms and abbreviations used in Project environmental and social documentation must be clearly and succinctly defined and described in this section.

8. EXECUTIVE SUMMARY

A general summary of the Project's key environmental, social, health and safety risks,

mitigation measures and compliance obligations shall be prepared, written in clear language understandable to the public.

9. GENERAL INFORMATION

9.1 INTRODUCTION

A brief overview of the Project, including who is developing the Project, where it is located and the current stage of development. Further information shall include the purpose of this Part III, which is to set out the environmental, social, health and safety framework applicable to the Project.

9.2 PROJECT OBJECTIVES AND JUSTIFICATION

9.2.1 OBJECTIVES:

A statement of the general and specific objectives (purpose) of the proposed Project.

9.2.2 PROJECT JUSTIFICATION:

Provide a justification for the proposed Project (need) highlighting the benefits of the Project, including to surrounding communities and the economic development of the region and country.

The justification shall also reflect the Project's contribution to climate mitigation objectives, including potential greenhouse gas emission reductions associated with electric bus operations.

10. LEGAL AND REGULATORY FRAMEWORK

This section shall define the legal and regulatory framework applicable to the Project and the minimum environmental, social, health and safety standards to be observed by the Concessionaire.

Without prejudice to compliance with applicable provincial and federal laws, the Project shall be implemented in a manner consistent with generally accepted Good International Industry Practices, and with the minimum standards reflected in the IFC Performance Standards on Environmental and Social Sustainability and the Asian Development Bank's Safeguard Policy Statement (2009), to the extent relevant and proportionate to the nature, scale and risk profile of the Project.

This section should include:

- (a) information that demonstrates rights and access such as land ownership and rights-of-way, depot sites and access arrangements, with written authorization and mapping, where applicable;
- (b) applicable environmental, labour, occupational health and safety, transport and road safety standards and requirements at the international, national, provincial and/or local levels;

- (c) required regulatory approvals and/or permits relevant to depot construction, charging infrastructure and operations, and their status;
- (d) applicable land use and zoning requirements for depots and associated facilities; and
- (e) institutional arrangements including relevant government agencies responsible for oversight and enforcement.

In applying Good International Industry Practices, reference may be made, where relevant, to the following guidance documents, without creating any obligation to comply with them in their entirety:

- (a) Stakeholder Engagement: A Good Practice Handbook for Companies doing Business in Emerging Markets (IFC, 2007);
- (b) IFC Good Practice Note on Managing Contractor's Environmental and Social Performance (2017);
- (c) Workers' Accommodation: Processes and Standards: A guidance note by IFC and the EBRD (IFC and EBRD, 2009);
- (d) IFC Good Practice Handbook: Use of Security Forces: Assessing and Managing Risks and Impacts (2017); and
- (e) UN Voluntary Principles on Security and Human Rights.

11. **PROJECT DESCRIPTION**

This section shall include a description of the Project, associated infrastructure and operations relevant to environmental, social, health and safety considerations.

11.1 **PROJECT LOCATION**

The general location of the Project and associated activities in terms of:

- (a) political-administrative location (region, district, town and other relevant political means of Site access to depots and facilities;
- (b) indicative geographic coordinates of depot sites;
- (c) maps administrative units) with accompanying route and depot maps; and
- (d) at an appropriate scale sufficient to identify routes, depots and facilities.

11.2 **PROJECT DESCRIPTION**

11.2.1 **GENERAL**

The Project comprises an integrated urban electric bus transport system, including the following components, as relevant for EHS assessment:

- (a) a fleet of battery electric buses operating on designated urban routes;
- (b) bus depots, including parking, maintenance and workshop areas;
- (c) electric charging infrastructure, including depot-based and any on-route charging facilities, power distribution systems and associated electrical infrastructure; and
- (d) ancillary systems and facilities required for safe and efficient operations.

This subsection shall include:

- (a) a description of Project operations, including operational hours, service frequency, daily and monthly operating cycles and peak/off-peak patterns, to the extent relevant for assessing EHS risks and impacts;
- (b) an overview of indicative layouts and design concepts for depots, charging facilities and associated infrastructure, sufficient to understand land use, spatial requirements and interfaces with surrounding areas; and
- (c) a description of any associated activities or interventions (such as minor civil works, utility connections or interface works) that may have environmental, social or safety implications.

11.2.2 SITE ACCESS

Identify new and existing roads to be used for access to depots and facilities, traffic volumes where relevant, and any road improvements required.

11.2.3 DEVELOPMENT PHASE

To the extent applicable to depot and charging infrastructure construction:

- (a) indicative construction schedule;
- (b) waste management procedures for construction activities;
- (c) labour requirements and workforce arrangements;
- (d) handling and storage of hazardous materials; and
- (e) temporary facilities, if any.

Construction camps, if any, shall comply with applicable labour and safety standards.

11.2.4 OPERATIONS PERIOD

This subsection shall include, at a minimum:

- (a) description of operational activities, equipment and maintenance;

- (b) workforce requirements and training;
- (c) energy requirements and electricity sources;
- (d) inventory and handling of hazardous materials (e.g. batteries, oils);
- (e) waste management during operations;
- (f) environmental and safety monitoring; and
- (g) ongoing community engagement and grievance handling.

11.2.5 CLOSURE AND DECOMMISSIONING PHASE

This subsection shall outline the general approach to closure and decommissioning, including:

- (a) decommissioning of buses, batteries, charging equipment and depot facilities; and
- (b) disposal of hazardous components in accordance with applicable law and E&S Standards.

11.2.6 PROJECT ALTERNATIVES

Where practicable, consideration of reasonable Project alternatives relevant to environmental and social performance shall be included, such as alternatives relating to routing, depot locations and charging strategies.

12. ENVIRONMENTAL AND SOCIAL SETTING/BASELINE CONDITIONS

Based on information available from secondary data sources such as existing literature and government data, along with proportionate primary data collection and site verification where required to identify and manage the Project's material environmental, social, health and safety risks. Indicate the direct and indirect and cumulative impact areas of influence for physical, biological, and social-economic-cultural impacts and basis for defining area.

For the avoidance of doubt, given that the Project operates primarily on existing roads, the Area of Influence shall be defined in a proportionate manner, focusing on: (i) depot and charging facility footprints and immediate surroundings; (ii) bus routes and key stops/terminals where crowding, safety or nuisance impacts may arise; and (iii) any sensitive receptors (schools, hospitals, religious places, markets and residential areas) located adjacent to depots, charging facilities or major operational corridors.

This section shall include at a minimum, the following information:

12.1 PHYSICAL ENVIRONMENT

12.1.1 Geology And Soils

Description of soils and ground conditions relevant to depot sites, charging facilities and associated civil works, including:

- (a) Site topography, drainage and flood susceptibility at depot and facility locations;
- (b) Seismicity considerations to the extent relevant to safe design of depots and electrical infrastructure;
- (c) Identify any site-specific hazards relevant to depot construction and operation (including flood risk, drainage constraints, and legacy contamination risks); and
- (d) Any available geotechnical information for depot sites shall be summarized, together with any additional verification required for safe construction and operations.

12.1.2 Water Resources

- Surface Water
Identify and describe surface water features and drainage systems in the vicinity of depot sites and charging facilities (including stormwater drains, canals and low-lying areas) to inform flood risk management, spill containment, and wastewater handling.
- Groundwater
To the extent relevant, identify whether depot construction or operations may interact with groundwater (e.g., through excavation, dewatering, or contamination risks). Where there is a material risk of groundwater contamination (for example, due to oils, chemicals or battery-related incidents), identify baseline conditions through available secondary data and proportionate verification.
- Applicable Water Standards
Describe the surface water and groundwater standards applicable to the Project (including national/provincial standards and international standards (e.g., World Bank/IFC General Environmental Health and Safety Guidelines).
For the avoidance of doubt, the relevant standards for the Project include standards applicable to wastewater, stormwater discharge, and spill prevention and containment at depots and facilities.

12.1.3 Air Quality

Air quality monitoring baseline shall be based primarily on available secondary data and, where necessary, proportionate verification at depot sites and other identified sensitive receptors. The minimum suite of air quality parameters shall be those relevant to construction-related dust at depots and facilities and any residual operational emissions (if any).

The environmental and social baseline summary is expected to provide a classification of Site environment (e.g., degraded or non-degraded airshed), establish present background air pollutants, and applicable ambient air quality limits for the area.

For the Project, particular emphasis shall be placed on identifying net air quality benefits attributable to the transition from conventional buses to electric buses, to the extent measurable and relevant to climate and carbon objectives.

12.1.4 **Climate And Meteorology**

Available baseline information for weather and climate related data shall be collected and shall include at a minimum the following:

- source of data (Pakistan Meteorological Department or other credible sources);
- temperature variations;
- relative humidity;
- rainfall (total precipitation, rainfall intensity and duration by month);
- wind rose (wind direction and speed); and
- climate resilience considerations relevant to electric bus operations and depot infrastructure, including heat stress implications for battery performance, flooding risks affecting depot access, and operational continuity.

Climate risk considerations shall be addressed in a proportionate manner, focusing on operational continuity and asset integrity over the Concession Period.

12.1.5 **Noise And Vibration**

Noise, and if applicable vibration, monitoring baseline shall be established using secondary data and proportionate site verification, focusing on depot locations, charging facilities, workshops and other fixed facilities. Provide a classification of the Project Site environment, establish existing background noise levels, and identify applicable noise limits and location of boundary sufficient to assess and mitigate any nuisance impacts associated with depot operations, workshop activity, night-time charging activity and associated traffic. The baseline summary shall include location of monitoring stations, Daytime, and night-time noise levels (measured in decibels) and an inventory of existing noise sources.

12.1.6 **Solid, Liquid and Hazardous Waste**

Determine the expected types and amounts of waste streams from Project related activities. Identify legally permitted disposal, recycling and treatment options for waste streams arising from depot construction and operations, with emphasis on: (a) traction batteries and battery components; (b) used oils, lubricants and filters; (c) tyres; (d) electronic waste; (e) wastewater and sludge (if any) from depot operations; and (f) general municipal waste. Assess local recycling and take-back arrangements for batteries and other hazardous

wastes, including OEM or authorized vendor responsibilities, and identify any gaps requiring specific contractual controls.

12.1.7 **Landscape And Visual Amenity**

Description of general landscape and visual conditions within the Area of Influence, focusing on depot and facility sites and fixed infrastructure. Visual impacts along bus routes on existing roads shall not be a primary focus unless associated with fixed structures.

12.2 **BIOLOGICAL ENVIRONMENT**

Biological environment assessment shall be proportionate to the nature of the Project and shall focus on depot and facility sites and any locations where construction may affect vegetation or habitats.

Consult with relevant authorities (including Sindh Wildlife and Forest Departments) only to the extent that depot sites or associated facilities are proximate to protected areas, sensitive habitats or legally protected species. Where depot sites or facilities may affect vegetation or habitats, identify any legally protected or sensitive ecological receptors, and apply avoidance and mitigation measures.

12.2.1 **Vegetation/Flora**

Identify vegetation and trees within or adjacent to depot and facility sites, including any trees requiring removal, and propose mitigation such as minimization of clearance and compensatory planting, where required under law.

12.2.2 **Wildlife/Fauna**

Where depot construction may affect open areas or vegetated plots, identify any material wildlife considerations using secondary data and proportionate site verification. The Area of Influence and any necessary site verification shall be defined by the Concessionaire in a proportionate manner and made available to SMTA upon request. Any baseline data collected shall be documented and retained, and made available to SMTA for audit and compliance verification.

12.2.3 **Endangered or Threatened Species and Habitats**

Identify any endangered or threatened species or habitats only where depot sites or associated facilities are located in proximity to protected areas or sensitive habitats, and

apply avoidance and mitigation measures consistent with applicable law and Good International Industry Practices.

A Biodiversity Action Plan shall only be required where a depot or facility is likely to cause material impacts on legally protected habitats or species.

12.3 SOCIO-ECONOMIC AND CULTURAL ENVIRONMENT

12.3.1 Demographics

Provide a brief demographic overview of communities and land uses in the vicinity of depot sites, terminals and other fixed facilities, and identify sensitive receptors (schools, hospitals, religious places, markets, residential areas) relevant to safety, nuisance and accessibility.

12.3.2 Livelihoods and Income

Description of income generating activities relevant to communities and commercial activity potentially affected by depot construction, terminal operations, route changes or temporary traffic management measures, including:

- (a) qualitative description of the most common activities;
- (b) commuting and travelling habits relevant to public transport usage; and
- (c) any potential impacts on informal vendors or micro-businesses at stops/terminals.

12.3.3 Land Use and Ownership

Description of land use within and surrounding depot sites and fixed assets, supported by land use mapping, including confirmation of land rights, access arrangements and any resettlement-related implications, if applicable.

12.3.4 Health and Education

Identify public health infrastructure elements available and accessible in the Project Area of Influence, and provide indicators on current health context relevant to the Project. Identify road safety risks and any existing accident hotspots relevant to bus routes and depots.

12.3.5 Infrastructure and Utilities

For each settlement identified, describe the infrastructure in or serving the settlement, including transportation infrastructure, roads, energy infrastructure and utilities.

For the Project, include specific identification of: (a) grid connectivity and capacity constraints relevant to depot charging; (b) any planned utility works affecting routes or depots; and (c) emergency response infrastructure relevant to fire and medical incidents.

12.3.6 **Archaeological and Cultural Heritage**

Identify cultural, archaeological, ceremonial, and historic resources within the area of influence. Cultural heritage assessment shall be proportionate and focus on depot and facility sites and any civil works, including “chance find” procedures where excavation is anticipated.

12.3.7 **Ecosystem Services**

Identify ecosystem services only where depot and facility sites intersect with green spaces, drainage corridors or other natural features that provide community benefits (e.g., shading, flood mitigation, recreational use). Any ecosystem services assessment shall be proportionate and limited to material impacts arising from depot and facility construction and operations.

12.4 **DEVELOPMENT OF E&S CONSTRAINTS AND RED FLAG MAPPING**

Based on the outcomes of the environmental and social risk identification and baseline summary above, constraint analysis mapping shall be undertaken on a proportionate basis, and used by the Concessionaire to inform depot/facility layout, charging infrastructure placement, traffic management and operational planning, including any practical alternatives analysis.

This constraint analysis could include for example, land use and community interface or socio-economic related aspects within the Site to be avoided, sensitive receptors which need to be avoided, or require buffer or set-back zones, etc.

For the Project, constraint and red-flag mapping shall focus on: (i) depot and charging facility footprints and immediate surroundings; (ii) sensitive receptors adjacent to depots, terminals and major corridors (schools, hospitals, religious places, dense residential areas, markets); (iii) safety-critical locations (accident blackspots, high pedestrian crossings, constrained intersections); and (iv) utility and grid constraints relevant to charging and electrical infrastructure.

13. **ASSESSMENT OF IMPACTS**

The Concessionaire shall identify and assess, in a proportionate manner, on potential impacts (direct, indirect, induced and cumulative) and the magnitude and frequency of potential impacts on the physical, biological, socio-economic, and cultural environments resulting from depot/facility construction, bus operations and maintenance, and decommissioning (as applicable).

The assessment shall use appropriate methods commensurate with the risk profile of the Project. Detailed modelling shall only be required where impacts are likely to be material and cannot reasonably be assessed through established screening, site verification and operational planning methods.

A methodology section shall describe the methods used to determine the impacts and their significance. The assessment shall identify which impacts are significant and the criteria used to make this judgment. Data inputs from Project description and environmental setting analysis shall be used as the baseline upon which potential impacts are predicted.

The assessment shall also identify sources of data used in the analysis and the uncertainties associated with the outputs of each method used.

The assessment of impacts will be carried out for all Project phases (pre-construction, construction, operations, closure, and decommissioning, as applicable).

13.1 PHYSICAL ENVIRONMENT IMPACTS

Potential impacts to the physical environment shall be described, including but not limited to the following:

13.1.1 Geology and Soils

Potential impacts to geologic resources and potential effects on the Project facilities shall be described including but not limited to the following:

- (a) geologic hazards and potential effects on facility;
- (b) changes in topography and drainage patterns;
- (c) soils: potential impacts to soil resources shall be described including but not limited to the following: soil quality, structure and moisture arising from depot and facility construction and related civil works, contamination (accidental spills of fuel, oil or other hazardous substances) including battery-related incidents, erosion, slope alteration, vegetation removal and drainage patterns, sediment accumulation and transport, and hazardous waste removal and disposal; and
- (d) overall assessment of significance of direct, indirect, and cumulative impacts for all phases of the proposed Project based upon analysis of magnitude, frequency, scope and duration in context.

For the avoidance of doubt, this section shall focus on depot sites and charging/workshop facilities; geologic impacts along bus routes operating on existing roads are not expected to be material.

13.1.2 Water Quality and Resources

Potential impacts to surface water and groundwater resources shall be described, including but not limited to the following:

- (a) stormwater and drainage interactions at depot and facility sites, including flood susceptibility and runoff management;
- (b) effects of Project construction and operation on water quality parameters in surface water and groundwater, including the results of any water quality modelling (if appropriate);
- (c) description of effects due to runoff, erosion, and sedimentation from roads, disturbed areas, including sources, receiving waters, and effects on physical, chemical, and biological parameters;

- (d) spills and accidents (chemical, hazardous waste and fuel spills, containment failures); and
- (e) overall assessment of significance of direct, indirect, and cumulative impacts for all phases of the proposed Project based upon analysis of magnitude, frequency, scope, and duration in the context of the Project.

Where relevant, this section shall include wastewater generated from depot operations (vehicle washing and maintenance) and applicable discharge or disposal requirements.

13.1.3 **Air Quality**

Potential impacts to air shall be described including but not limited to the following:

- (a) impacts on ambient air quality including construction dust at depots/facilities, and any residual operational emissions, if any);
- (b) sensitive receptors (e.g., communities, schools etc.);
- (c) greenhouse gas generation (GHG); and, where relevant, net greenhouse gas emission reductions attributable to the transition from conventional buses to electric buses, including any implications for carbon crediting integrity; and
- (d) overall assessment of significance of direct, indirect, and cumulative impacts for all phases of the proposed Project based upon analysis of magnitude, frequency, scope, and duration in the context of the Project.

13.1.4 **Climate and Meteorology**

The assessment shall identify:

- (a) potential effects of severe weather events on the Project (including heatwaves, heavy rainfall and flooding) relevant to service continuity and asset integrity; and
- (b) climate resilience risks relevant to depot infrastructure and charging operations, including heat stress implications for battery performance and flooding risks affecting depot access.

13.1.5 **Noise and Vibration**

Potential impacts from noise shall be described, including but not limited to the following:

- (a) proportionate assessment of noise impacts, potential noise levels at different representative sites adjacent to depots, charging facilities, workshops and other fixed facilities and in communities near such locations;
- (b) potential vibration due to blasting (if applicable) and movement of heavy equipment, and related damage to materials and structures; and

- (c) overall assessment of significance of direct, indirect, and cumulative impacts for all phases of the proposed Project based upon analysis of magnitude, frequency, scope and duration in the context of the Project.

For bus routes operating on existing roads, material noise impacts are not expected; however, traffic management and night-time depot operations shall be assessed where adjacent receptors exist.

13.1.6 **Solid, Liquid and Hazardous Waste**

Provide a description of impacts from solid, liquid and hazardous waste discharges, accidental spills and accidents or impacts on capacity of local land fill facilities.

This shall include specific focus on battery end-of-life management, battery storage risks, and authorized take-back/recycling arrangements.

13.1.7 **Landscape and Visual Amenity**

Potential impacts to Visual Amenity or Aesthetic Resources, including light pollution, shall be described as including but not limited to the following:

- (a) impacts on visual resources and landscapes;
- (b) increases in light contamination; and
- (c) overall assessment of significance of direct, indirect and cumulative impacts for all phases of the proposed Project based upon analysis of magnitude, frequency, scope and duration in the context of the Project.

This section shall focus on depot and facility sites and any fixed structures; visual impacts from buses on existing roads are not expected to be material.

13.2 **BIOLOGICAL ENVIRONMENT IMPACTS**

Potential impacts to biological resources shall be described, including but not limited to the following:

13.2.1 **Vegetation/Flora and Associated Habitats**

- (a) describe and quantify alterations in vegetative cover due to depot and facility construction, permanent or temporary, other vegetative type conversions, direct vegetative removal, indirect vegetation impacts (e.g., by dust and air contaminants), increased road access leading to destruction of existing vegetative cover (land use changes), spread of noxious or invasive species.
- (b) overall assessment of significance of direct, indirect, and cumulative impacts for all phases of the proposed Project based upon analysis of magnitude, frequency, scope, and duration in the context of the Project.

This section shall apply only where depot and facility sites involve vegetation clearance or are adjacent to sensitive habitats.

13.2.2 **Wildlife/Fauna and Associated Habitats**

Describe and quantify alterations in terrestrial wildlife populations due to the following (as applicable):

- (a) loss of habitat and breeding areas due to changes in vegetation cover;
- (b) disturbance due to construction and depot operations (noise, illumination, vehicular movement); and
- (c) animals attracted to waste.

Overall assessment of significance of direct, indirect, and cumulative impacts for all phases of the proposed Project, based upon analysis of magnitude, frequency, scope, and duration in the context of the Project.

13.2.3 **Endangered or Threatened Species and/or Habitats; Protected Areas**

Assessment shall be undertaken only where depot or facility sites are located in proximity to protected areas or sensitive habitats. A detailed critical habitat analysis shall be required only where material impacts are likely.

13.3 **SOCIAL-ECONOMIC-CULTURAL IMPACTS**

The assessment shall identify potential positive and negative socio-economic and cultural impacts arising from depot construction, depot operations and route operations, including:

- impacts on mobility, accessibility and safety for pedestrians, commuters, women, elderly persons and persons with disabilities;
- temporary restrictions, nuisance or disruption due to depot construction, traffic management and operational arrangements;
- public health and safety impacts, with emphasis on road safety risks, accident prevention and emergency response readiness;
- workforce composition, labour conditions, worker health and safety (including high-voltage and battery hazards), and risks of fire and electrical incidents; and
- community acceptance and stakeholder concerns identified through engagement.

Where any land acquisition, displacement, loss of access or livelihood impacts arise in connection with depot sites, terminals, charging facilities or associated works, the Concessionaire shall identify and assess physical and/or economic displacement impacts and shall prepare and implement proportionate resettlement and livelihood restoration instruments consistent with applicable law and the minimum standards reflected in IFC Performance Standard 5 and ADB SPS (2009), to the extent relevant.

13.3.1 ***Infrastructure and Utilities***

Transportation Infrastructure and Traffic

The assessment shall address impacts on transportation and traffic patterns, including:

- (a) changes to traffic patterns, densities and road safety risks;
- (b) accident risk and congestion where relevant;
- (c) interface with pedestrian movement and crossings;
- (d) bus stop and terminal locations and safety interface; and
- (e) interaction with informal transport, where relevant.

Increased Pressure on Public Services and Utilities

The assessment shall address potential impacts or constraints relating to:

- (a) emergency response and public health infrastructure (relevant to incident response);
- (b) communications infrastructure (relevant to ITS and incident response); and
- (c) energy infrastructure, including increased demand due to charging and any constraints or outage risks affecting operations.

13.3.2 ***Archaeology and Cultural Heritage***

Impacts on cultural heritage are not expected to be material; however, the assessment shall identify any cultural, archaeological, religious or historic resources relevant to depot and facility sites and describe chance-find procedures where excavation is anticipated.

13.3.3 ***Ecosystem Services***

Where ecosystem services were identified in the baseline, the assessment shall address impacts to such services only to the extent material and relevant to depot and facility sites.

13.4 CUMULATIVE IMPACTS

Cumulative impacts are those that result from the incremental impact of the proposed activity on a common resource when added to the impacts of other past, present, or reasonably foreseeable future activities.

The cumulative impacts will be assessed by identifying other applicable projects, such as construction and upgrade of electricity generation, and transmission, distribution facilities or other infrastructure projects in the local area within an appropriate and proportionate area of influence relevant to routes and depot/facility sites.

Use IFC's Good Practice Handbook: Cumulative Impact Assessment and Management:

14. **MITIGATION AND MONITORING MEASURES**

Identify mitigation measures as per the Mitigation Hierarchy. Specifically, these should include the following:

- (a) avoidance measures;
- (b) minimization measures;
- (c) restoration measures; and
- (d) compensation/offset measures.

This section must include measures designed to mitigate potential adverse impacts to physical, biological, and social-economic-cultural resources from construction, operation and closure of the proposed Project and alternatives. These shall include measures to avoid and prevent, and if needed, to reduce or minimize adverse impacts and, where residual impacts remain, compensate/offset for risks and impacts to workers, Affected Communities, and the environment, according to the mitigation hierarchy shown in the following figure. The Project proponent must include measures considered to be “best practices” in the design of all alternatives.

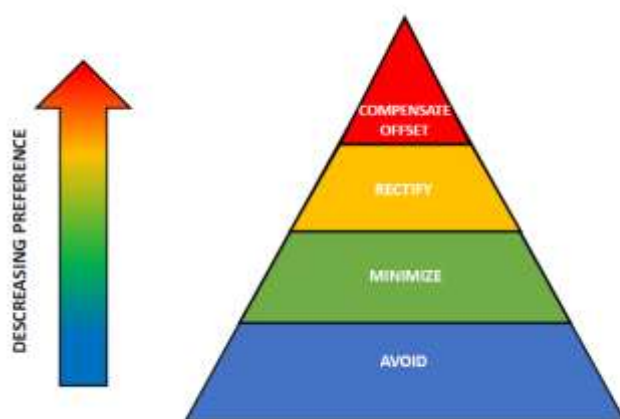


Figure 21. Mitigation hierarchy

Either herein and/or in the Environmental and Social Management Plan (ESMP) section, proposed mitigation shall be described in auditable terms and at a level of detail sufficient to demonstrate its effectiveness in addressing the concern or performance criterion, including its anticipated level of effectiveness and/or measurable performance, and design specifications.

The monitoring plan must include monitoring throughout the life of the Project for each potential mitigation to confirm the effectiveness of the measure and support contingency plans to provide assurance that the Project, at the pre-construction, construction, operation, expansion/modification, and closure stages will meet applicable environmental and legal requirements and fall within the limits of impacts deemed acceptable upon approval of the applicable environmental approvals/E&S documentation.

For the Project, mitigation and monitoring measures shall specifically address, at minimum, the following e-bus risk areas: (a) battery safety and thermal runaway prevention and response; (b) high-voltage electrical safety at depots and charging facilities; (c) fire life safety and emergency response arrangements at depots/workshops; (d) hazardous materials handling and storage (oils, coolants, cleaning chemicals, battery components); (e) end-of-life management of batteries and e-waste through authorized take-back/recycling; (f) community health and safety including road safety and pedestrian/passenger interface; (g) worker OHS for depot operations and maintenance activities; and (h) charging load management and grid interface risks, including outage contingencies.

Some important items to address in the mitigation plan and associated monitoring plans include, but are not limited to the following:

15. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The Concessionaire shall establish, implement and maintain an Environmental and Social Management Plan (**ESMP**) (together with associated procedures and management plans) to prevent, mitigate and monitor each impact identified in the applicable E&S documentation and the Project risk assessment.

The ESMP shall describe actions in sufficient detail to provide an auditable basis for monitoring compliance with commitments, including: (a) what will be done; (b) by whom; (c) when; (d) how it will be implemented; (e) what measurable outputs or outcomes will be achieved; and (f) how effectiveness will be verified and corrective actions undertaken where required.

The ESMP shall include, at a minimum, do the following:

15.1 OVERVIEW OF ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN ORGANIZATION AND POLICY

- 15.1.1 Describe the Project management arrangements and how environmental and social management integrates into overall Project responsibilities, including accountability arrangements for design, construction, operations, maintenance and closure/decommissioning (as applicable).
- 15.1.2 Describe the environmental and social policy applicable to the Project, including its objectives, scope, commitment to continuous improvement, internal controls (including compliance monitoring and routine audits), and measures to maintain appropriate engagement and relations with neighbouring communities.
- 15.1.3 Identify the persons responsible for implementing mitigation and monitoring measures in each Project phase.
- 15.1.4 Describe the Concessionaire's governance for environmental and social management, including: (a) designation of an E&S focal person; (b) contractor/sub-contractor

compliance management and enforceable flow-down requirements; (c) incident reporting and investigation; and (d) internal compliance monitoring and periodic reporting to SMTA.

15.2 MITIGATION AND MONITORING PLANS

15.2.1 The Concessionaire shall develop and implement detailed Environmental, Social, Health and Safety management plans and procedures (**ESHS Plans**) identifying, for each material impact, the mitigation, monitoring and management measures to be applied during the relevant Project phases (including construction, operations and decommissioning, as applicable) to avoid, reduce, mitigate, restore and, where necessary, compensate for adverse impacts.

15.2.2 For each identified material impact, the Concessionaire shall establish:

- (a) A set of mitigation measures that will include feasible measures to prevent significant adverse impacts or reduce them to acceptable levels. Such measures will involve technical requirements, guidelines or procedures and practices to be implemented during design, construction, operation and decommissioning phase of the Project;
- (b) A set of monitoring requirements that ensure that the identified mitigation measures are considered, implemented properly and are sufficient measures for protecting the environment and environment resources, local communities, and workers.

15.2.3 For the Project, the ESHS Plans shall include, at a minimum, plans and/or procedures for:

- (a) Battery Safety and End-of-Life Management (including authorised take-back and recycling arrangements);
- (b) High-Voltage Electrical Safety, including lockout/tagout and access controls;
- (c) Fire and Life Safety and Emergency Preparedness/Response (including depot fire strategy, drills, and coordination with emergency services);
- (d) Hazardous Materials Management (including batteries, oils, coolants and cleaning chemicals);
- (e) Waste Management (including tyres, e-waste, oils, packaging and municipal waste);
- (f) Occupational Health and Safety (including workshop safety, PPE, training and incident reporting);
- (g) Community Health and Safety, including traffic and pedestrian safety and passenger safety at stops/terminals;
- (h) Contractor/Sub-contractor management and ESHS flow-down requirements;
- (i) (Security management (if security personnel are used), consistent with GIIP and applicable E&S Standards;

- (j) Stakeholder Engagement and the Grievance Redress Mechanism, including channels for GBV/SEA/SH complaints where relevant; and
- (k) Charging Operations and Energy Management (including load management and outage contingency planning).

16. STAKEHOLDER ENGAGEMENT PLAN

The Concessionaire shall develop and implement a Stakeholder Engagement Plan (the **SEP**) as a standalone document consistent with the minimum standards reflected in IFC Performance Standard 1 and ADB SPS 2009, and proportionate to the Project's risks and impacts. The SEP should recognize that Stakeholder engagement is an ongoing process that involves Stakeholder analysis & planning, disclosure and dissemination of information, consultation & participation, grievance mechanism and on-going reporting to affected communities.

The SEP shall be scaled to the Project risks and impacts and be tailored to the characteristics and interests of the Affected Communities and key Stakeholders.

The Concessionaire should build the SEP based on the environmental and social impact assessment outcomes considering local settings. The SEP should be developed to include the following:

- (a) introduce the SEP and include information on the purpose and scope;
- (b) include information on legislative and international requirements;
- (c) identify all Project related stakeholders influenced by the Project to include central governmental entities, local governmental entities, NGOs, local communities and CSOs; academic and research institutions; private sector companies; media organizations; and most important any vulnerable groups if applicable;
- (d) evaluate Project related Stakeholders to understand their priorities and relevance to the Project;
- (e) define the Project's approach to stakeholder engagement (post ESIA study, during construction and operations). Priority should be given to identification of engagement mechanisms that are: (i) culturally appropriate, (ii) scaled to the Project risks and impacts, (iii) tailored to the characteristics and interests of the Stakeholder group's language preferences, and decision-making process;
- (f) identify the objective of undertaking such consultation activities for each Stakeholder group;
- (g) identify the phase of involvement of Stakeholders. This will include: (i) summary of Stakeholder consultations and engagement undertaken as part of the ESIA (scoping process, baseline, impact assessment, mitigation, etc.) and (ii) future engagement including both disclosure of the ESIA and post-ESIA phase to be

implemented through the project duration to include four distinct phases – planning, construction, operation, and decommissioning;

- (h) include information on monitoring requirements including frequency of all engagement activities and reporting; and
- (i) a detailed grievance/project complaints mechanism that is responsive and facilitates establishing and facilitating the resolution of Stakeholders' concerns and grievances.

Within the SEP, the Concessionaire shall describe the process by which PAPs/stakeholders and interested people can express their grievances for consideration and redress, in accordance with national law and the applicable international standards, including the minimum standards reflected in IFC PS1. The process shall be free of any cost for users, and readily accessible. The GRM should ensure it can receive both external and internal grievances. The GRM should be designed to address complaints of gender-based violence including SEA/SH risks associated with workforce-community interactions. The Consultant shall describe a least the following elements of the GRM:

- (a) establishment of Grievance Committee, appointment of members and functioning rules;
- (b) eligibility criteria for grievances;
- (c) reception and registration of grievances;
- (d) referral and escalation process;
- (e) response timelines;
- (f) development, communication, and implementation of proposed responses; and
- (g) reporting of GRM metrics (number of complaints, themes, resolution time) to SMTA.

A separate GRM shall be defined and implemented for the engagement of workers regarding possible health and safety occupational risks. The worker GRM shall be aligned with labour and OHS requirements and shall ensure confidentiality and protection against retaliation.

17. APPENDICES AND TECHNICAL SUPPORTING DOCUMENTS

Appendices shall be numbered and referenced in the Environmental and Social Impact Assessment and shall include, as applicable:

- (a) route and depot maps, plans, charts and figures;
- (b) zoning and land use maps relevant to depot and facility sites;

- (c) any special studies undertaken;
- (d) modelling assumptions and detailed outputs where not suitable for the body of the report; and
- (e) survey or measurement results (if undertaken), including monitoring point locations and summary results.

18. REFERENCES

Include a section with all references, (books, articles, technical reports, and other information sources) cited in the various chapters of the ESIA study with full biographic references, and the following conventional procedures cited in the literature: author, year, title, source, number of pages, and city of publication or issuance or webpages accessed on [date].

19. NON-TECHNICAL SUMMARY

The Consultant shall prepare and disclose, where required by law or agreed with SMTA, a Non-Technical Summary (**NTS**) report, which concisely discusses meaningful information on the project, its environmental and social footprint and impacts, significant findings and recommended actions in easily understandable (non-technical) language. The section will include a summary of: project description, baselines (where relevant), impact analysis and mitigation measures, and a summary of the stakeholder engagement process.

20. SCHEDULE

The Concessionaire shall prepare and implement the required E&S documentation and plans in accordance with a schedule agreed with SMTA, ensuring that any plan required as a prerequisite for construction or operations is completed and approved (where applicable) prior to commencement of the relevant activity.

21. STAFFING AND KEY PERSONNEL

The Concessionaire shall ensure that E&S documentation, the ESMP/ESMS and associated management plans are prepared and implemented by competent personnel with experience in similar urban transport and/or electric mobility projects, including familiarity with IFC Performance Standards, ADB SPS (2009) and GIIP.

The Concessionaire shall maintain sufficient E&S capacity throughout the Concession Period, including at minimum:

- (a) an E&S/OHS focal person; and
- (b) competent safety personnel at depots/workshops.

Baseline verification and any measurements or surveys shall be undertaken only to the extent necessary and proportionate to the Project's material risks and to satisfy legal approval requirements.

SCHEDULE K KPIs (SDG)

1. PURPOSE AND APPLICATION

- 1.1 This **SCHEDULE K (KPIs SDG)** sets out the Sustainable Development Goals (SDGs)–related delivery obligations, implementation requirements, and reporting commitments of the Concessionaire for the duration of the Concession Period.
- 1.2 This **SCHEDULE K (KPIs SDG)** shall be read together with **SCHEDULE J (Environment, Health and Safety Requirements)** and the relevant provisions of the Concession Agreement. For the avoidance of doubt:
- (a) **SCHEDULE J (Environment, Health and Safety Requirements)** governs the identification, mitigation and management of environmental and social risks and impacts through the ESMS/ESMP; and
 - (b) this **SCHEDULE K (KPIs SDG)** governs the planned delivery, contribution and reporting of SDG outcomes associated with the Project.
- 1.3 Obligations under this **SCHEDULE K (KPIs SDG)** are binding and enforceable, and compliance shall be subject to monitoring, audit and reporting in accordance with the Concession Agreement.
- 1.4 This **SCHEDULE K (KPIs SDG)** applies to all phases and components of the Project, including:
- (a) deployment, commissioning and operation of the electric bus fleet;
 - (b) depot, charging, workshop, parking and associated power infrastructure;
 - (c) high-voltage systems, battery storage and charging equipment;
 - (d) road operations, passenger interface and community safety; and
 - (e) activities of the Concessionaire, its contractors and sub-contractors.

2. RELATIONSHIP WITH E&S SAFEGUARDS

- a. The Concessionaire shall comply at all times with the environmental and social obligations set out in **SCHEDULE J (Environment, Health and Safety Requirements)**, including the establishment and operation of the ESMS and ESMP.
- b. SDG delivery under this **SCHEDULE K (KPIs SDG)** shall not duplicate E&S risk-management measures under **SCHEDULE J (Environment, Health and Safety Requirements)**. Instead, SDG obligations shall focus on:
- (a) planned interventions,
 - (b) measurable outputs and outcomes, and
 - (c) structured reporting of development contributions arising from the Project.

3. SDG ALIGNMENT OBLIGATION

3.1 Without limitation, SDG alignment for this Project is expected to relate principally to:

- sustainable urban mobility and accessibility;
- climate action and emissions reduction;
- occupational and public safety;
- inclusive employment and skills development;
- responsible resource use and waste management; and
- institutional transparency and accountability.

4. **SDG IMPLEMENTATION PLAN**

4.1 Within two (2) Months of the Effective Date (or such other period specified in this Agreement), the Concessionaire shall prepare and submit for approval an SDG Implementation Plan.

4.2 The SDG Implementation Plan shall:

- identify the SDGs relevant to the Project;
- map applicable SDG targets and indicators to Project activities;
- describe specific Project interventions contributing to each SDG;
- define measurable outputs and outcomes, with baselines where applicable;
- specify timelines, responsibilities and resources for delivery; and
- identify linkages with **SCHEDULE J (*Environment, Health and Safety Requirements*)** (where SDG delivery is supported by E&S measures).

4.3 Upon approval by the Independent Engineer (in consultation with SMTA), the SDG Implementation Plan shall form an integral and enforceable part of this **SCHEDULE K (*KPIs SDG*)**.

5. **SDG PERFORMANCE INDICATORS (REPORTING INDICATORS)**

5.1 The Concessionaire shall monitor and report SDG performance using reporting indicators, which are intended to measure development contribution and outcomes, and not operational availability or service performance.

5.2 **ENVIRONMENTAL CONTRIBUTION INDICATORS**

Without limitation, reporting shall cover:

- (a) improvements in resource efficiency (energy, water and materials);

- (b) emissions avoidance or reduction attributable to electric bus operations;
- (c) waste minimisation and recycling outcomes;
- (d) battery and e-waste end-of-life management outcomes; and
- (e) climate resilience measures implemented for depots and operations, including:
 - (i) resilience of fleet and facilities under extreme heat or flooding,
 - (ii) service continuity and contingency planning, and
 - (iii) safety measures for staff and commuters during climate events.

5.3 SOCIAL CONTRIBUTION INDICATORS

Without limitation, reporting shall cover:

- (a) employment generation, including local employment and participation of women;
- (b) training and skills development programmes delivered;
- (c) occupational health and safety capacity building beyond minimum compliance;
- (d) community engagement activities and outcomes;
- (e) accessibility and inclusion measures for vulnerable users;
- (f) effectiveness and utilisation of the Grievance Redress Mechanism; and
- (g) passenger satisfaction trends, where measured.

5.4 ECONOMIC AND INSTITUTIONAL CONTRIBUTION INDICATORS

Without limitation, reporting shall cover:

- (a) contribution to local economic activity and service efficiency;
- (b) capacity building of local suppliers and service providers (where applicable);
- (c) improvements in operational resource efficiency; and
- (d) institutional practices supporting transparency and accountability.

5.5 The indicators listed above may be refined by mutual agreement of the Parties to reflect updated national priorities or international SDG reporting practices, provided that no such refinement increases the Concessionaire's obligations without due process under the Concession Agreement.

6. SDG MONITORING AND REPORTING

- 6.1 The Concessionaire shall monitor its performance against the SDG Implementation Plan and reporting indicators set out in this **SCHEDULE K (*KPIs SDG*)**.
- 6.2 The Concessionaire shall prepare and submit the following reports to SMTA:
- (a) Quarterly SDG Compliance Report (summary progress);
 - (b) Annual SDG Performance and Impact Report (outputs and outcomes);
 - (c) Mid-Term SDG Evaluation Report (at the midpoint of the Concession Period);
and
 - (d) Final SDG Impact Report at the end of the Concession Period.
- 6.3 Each report shall:
- (a) describe progress against approved SDG interventions;
 - (b) present indicator-based results and trends;
 - (c) identify challenges and corrective actions; and
 - (d) explain linkages with E&S performance under **SCHEDULE J (*Environment, Health and Safety Requirements*)**.
- 6.4 SMTA may inspect records, request clarifications, or require reasonable additional information related to SDG performance.

7. ENFORCEMENT AND COMPLIANCE

- 7.2 Compliance with this **SCHEDULE K (*KPIs SDG*)** shall be monitored through periodic reporting, review and verification by SMTA and, where applicable, the Independent Expert(s). Obligations under this **SCHEDULE K (*KPIs SDG*)** intended to promote structured delivery and transparent reporting of SDG-related outcomes and shall be enforced through review, consultation and corrective action rather than through performance deductions, availability mechanisms, liquidated damages or penalties.
- 7.3 Where any material shortfall, inconsistency or delay is identified, the Concessionaire shall, upon reasonable notice, provide explanations and implement an agreed corrective action plan within the timelines approved by the Independent Engineer. For the avoidance of doubt, the non-achievement of SDG targets or indicators shall not constitute a breach of this Agreement or a Concessionaire Event of Default, shall not give rise to any payment adjustment, and shall not prejudice the Concessionaire's rights thereunder, provided that the Concessionaire continues to comply with applicable E&S Requirements and the enforceable obligations set out in **SCHEDULE J (*Environment, Health and Safety Requirements*)**.

SCHEDULE L KPIs (Performance)

1. INTRODUCTION

- 1.1 The Key Performance Indicators (KPIs) set out the minimum performance standards and service quality levels that the Concessionaire is required to achieve in relation to the operation and maintenance of the E-Buses Assets, and the performance of O&M Activities, in accordance with this Agreement. The KPIs establish the framework and procedures for identifying, measuring, and managing instances of service unavailability or non-performance during the Operations Period.
- 1.2 The KPIs specify the performance parameters, benchmarks, and measurement criteria applicable to the O&M Activities and shall be used by SMTA and/or the Independent Expert as the basis for determining whether the Concessionaire has complied with its obligations under this Agreement, and for the calculation and application of any performance-related deductions, consequences, or adjustments.
- 1.3 Where the Concessionaire fails to meet any applicable KPI, such failure shall be assessed, recorded, and dealt with in accordance with the procedures, thresholds, and consequences set out in Article 10 (*Operation and Maintenance*) of this Agreement and this **SCHEDULE L (KPIs (Performance))**, subject always to the exclusions, reliefs, and carve-outs expressly provided under this Agreement.
- 1.4 Notwithstanding the foregoing, where SMTA and/or the Independent Expert determines, in accordance with Article 10 (*Operation and Maintenance*), that any failure to meet a KPI has arisen due to events or circumstances beyond the reasonable control of the Concessionaire, and is not attributable to any act, omission, negligence, or default of the Concessionaire or any of its Contractors, such failure shall not result in the application of any performance-related deductions or other adverse contractual consequences under this Agreement.

2. KPIs RELATED TO ROAD SAFETY

TABLE L-1: ROAD SAFETY KPIs

(Assessment through self-reporting, subject to verification by SMTA and/or the Independent Expert.)

Sr. No.	KPI	Non-Compliance Event	Performance Deductions
1	Prevention of Severe Accidents	Accident involving a Bus due to Driver's fault or malfunctioning of the Bus resulting in death or severe physical injury of a passenger or other person (a Severe Accident)	Performance deduction equivalent to: (a) PKR 1,000,000/- payable for the benefit of the deceased's family; and (b) PKR 1,000,000/-

SR. No.	KPI	NON-COMPLIANCE EVENT	PERFORMANCE DEDUCTIONS
2	Prevention of Material Accidents	Accident involving a Bus due to Driver's fault or malfunctioning of the Bus resulting in minor physical injury to a passenger or other person or material damage to Authority's assets including road infrastructure or other infrastructure (a Material Accident)	Performance deduction equivalent to: (a) PKR 500,000/- per permanently disabled person; and (b) PKR 100,000/- per temporarily disabled person
3	Prevention of Minor Accidents	Accident involving a Bus due to Driver's fault or malfunctioning of the Bus not resulting in any physical injury to a passenger or other person nor any material damage to SMTA's assets (a Minor Accident)	Performance deduction equivalent to PKR 50,000/- per incident
4	Immediate Reporting of Emergencies (<i>Road Traffic Accidents, Driver/ Passenger-Related Medical Emergencies, Fire & Safety Incidents, Security & Crime-Related Incidents, Natural or External Hazards or Any Incident Requiring Evacuation</i>)	Failure to report any emergency incident (including road traffic accidents, driver- or passenger-related medical emergencies, fire or safety incidents, security or crime-related incidents, natural or external hazards, or any incident requiring evacuation) to SMTA and the police within thirty (30) minutes of occurrence or, at the latest, by the end of the affected trip	Performance deduction equivalent to PKR 500,000/- per incident not reported within the prescribed time
5	Prevention of Traffic Offences	Any instance where a Driver is formally charged by the police for committing a traffic offence while operating a Bus	Performance deduction equivalent to PKR 10,000/- per offence, exclusive of any challan or statutory fine imposed by the competent authority
6	Prevention of Strikes	Any strike by the drivers or staff of the Concessionaire that results in disruption of operations or loss of service	Performance deduction equivalent to PKR 20,000/- per affected Bus per Day,

Sr. No.	KPI	Non-Compliance Event	Performance Deductions
			for the duration of the disruption
7	Staff Conduct	Any instance where personnel of the Concessionaire fail to comply with the applicable Code of Conduct or misbehave with commuters, provided that the complaint is verified as legitimate in accordance with the procedures set out under this Agreement	Performance deduction equivalent to PKR 5,000/- per verified incident
8	Continuity of Service	Any instance where the Concessionaire completely suspends services without the prior approval or consent of SMTA	Performance deduction equivalent to PKR 100,000/- per affected Bus per Day, for the period of suspension

3. KPIs Related to Route Operations

TABLE L-2: ROUTE OPERATIONS KPIs AND PERFORMANCE THRESHOLDS

Sr. No	KPIs	Measurement Methodology	Standard (Per Month)	Performance Deductions
1	Trip Efficiency/Regularity of Operation	(Number of trips operated x 100)/ Number of trips assigned or scheduled (as per approved operation plan)	More than 90%	85%-90%: PKR 10,000/- x number of trips missed 75%-85%: PKR 12,000/- x number of trips missed <75%: shall be treated as material non-performance and dealt with in accordance with Article 10 of this Agreement, including consequences applicable to suspension or prolonged unavailability of service

Sr. No	KPIs	MEASUREMENT METHODOLOGY	STANDARD (PER MONTH)	PERFORMANCE DEDUCTIONS
2	Reliability of Buses	Number of breakdowns	Maximum 1 bus per route	2-5: PKR 50,000/- x number of breakdowns 6-8: PKR 60,000/- x number of breakdowns Above 8: shall be treated as material non-performance and dealt with in accordance with Article 10 of this Agreement, including consequences applicable to suspension or prolonged unavailability of service
3	Punctuality (adherence to time schedule)	(Number of trips on time from first stop x 100)/total number of trips operated	More than 90%	80%-90%: PKR 20,000/- x number of trips observed late <80%: shall be treated as material non-performance and dealt with in accordance with Article 10 of the Agreement, including consequences applicable to suspension or prolonged unavailability of service
4	Cleanliness of Buses	Number of Buses found dirty	5% of the Fleet Size	5%-15%: PKR 10,000/- x number of Buses observed dirty

Sr. No	KPIs	MEASUREMENT METHODOLOGY	STANDARD (PER MONTH)	PERFORMANCE DEDUCTIONS
				Above 15%: PKR 15,000/- x number of Buses observed dirty
5	User Satisfaction	Number of Commuter complaints	Maximum 20	20-50: PKR 1,000/- x number of complaints Above 50: PKR 2,000/- x number of complaints
6	Travel Time Regularity	(Number of trips completed within scheduled time x 100)/Total number of trips operated	More than 85%	85%-95%: PKR 20,000/- x number of trips observed late <85%: shall be treated as material non-performance and dealt with in accordance with Article 10 of the Agreement, including consequences applicable to suspension or prolonged unavailability of service
7	Bus Bunching	Number of verified incidents	Number of incidents	PKR 1,000/- x number of occurrences
8	Safety of Operation/Rate of Accidents		Number of accidents	Up to 5%: PKR 50,000/- x number of accidents 6%-10%: PKR 60,000/- x number of accidents Above 10%: shall be treated as persistent

Sr. No	KPIs	MEASUREMENT METHODOLOGY	STANDARD (PER MONTH)	PERFORMANCE DEDUCTIONS
				and material non-performance and may result in damages or termination in accordance with Article 10 and other applicable provisions of the Agreement

All performance deductions and consequences under this **SCHEDULE L (KPIs (Performance))** shall be assessed, applied, and enforced strictly in accordance with Article 10 of the Agreement, including all applicable reliefs, exclusions, and procedures.

4. KPIs RELATED TO ITS, AFC AND BSS SYSTEMS

TABLE L-3: ITS/AFC/BSS PERFORMANCE KPIs

Sr. No.	SERVICE	PARAMETER	SERVICE LEVEL	VALIDATION	PERFORMANCE DEDUCTIONS
1	Helpdesk	Resolution of issues logged as per fault level categories definitions in the Bus Operations Manual	99%	Generated from complaint management system	95%-98.99% resolved on time: PKR 1,000/-; 90%-94.99% resolved on time: PKR 2,000/-; <90% resolved on time: PKR 3,000/-
2	System Configuration and Report Generation	System Configuration and Required Report Generation Resolution logged as per fault level categories. This includes changing fare rate and fare policy	99%	Generated from complaint management system	95%-98.99% resolved on time: PKR 1,000/-; 90%-94.99% resolved on time: PKR 2,000/-; <90% resolved on time: PKR 3,000/-

Sr. No.	SERVICE	PARAMETER	SERVICE LEVEL	VALIDATION	PERFORMANCE DEDUCTIONS
3	Asset/ Inventory Management System	Conduct annual physical asset verification	100%	Satisfaction report signed off by SMTA	Stock not being available or faulty must be fixed/ provided/settled by the Concessionaire. If issues are not addressed within the prescribed timeframe: PKR 5,000/- per faulty asset
4	Identical Statistics	System Reports must match with the video feed outlining number of commuters passing through	99%	System-generated reports vs. sample testing of video feed	PKR 100 × passenger count differential
5	Database Backup/ Restore Management	Contractor must take data backups on a daily basis. SMTA would periodically request the Concessionaire to restore the backup data on the Disaster Recovery Site (DR)	100%	Restoration of backup data on a sample basis	If negligence is identified in the periodic audit: PKR 500,000/- per instance of negligence or restore failure
6	Problem Management	Contractor shall provide a root cause report every month if there are more than 10 incidents of the same type. Contractor must take corrective action to prevent further issues	100%	Root cause report stating problems faced by users; Document detailing corrective action	PKR 5,000/- if root cause report is not submitted for the month; additional PKR 5,000/- if corrective action is not implemented for more than one calendar month

Sr. No.	SERVICE	PARAMETER	SERVICE LEVEL	VALIDATION	PERFORMANCE DEDUCTIONS
7	Change Management	Resolution of change request	100%	Change management log	PKR 5,000/- if standardised change-management patches are not updated on servers within one calendar month
8	Delay in AFC Data Recording on Servers	Validator data should accumulate in centralized server without delay	100%	Data transmission report	PKR 1,000/- for every 30-minute interval of delay
9	Vehicle Tracking	Real time feed to be supplied to SMTA control centre	99.90%	Uptime of real-time data feeds	Uptime: <99.9%: PKR 1,000/-; <97%: PKR 2,000/-; <95%: PKR 3,000/-
10	PIS Field Equipment	PIS malfunction i.e. PIS data broadcast is inaccurate in bus	N/A	Reports from enforcement/ drivers/ commuters	PKR 5,000/- per verified incident
11	AFCS Financial Consolidation	Daily MIS of revenue generation and monthly MIS of revenue settlement/distribution	100%	Report	PKR 5,000/- for slippage of one calendar Day for the monthly report
12	Improper Implementation of Fare Policy	Wrong fare deduction, incorrect fare system, or non-compliance with	100%	SMTA record/reports	PKR 100/- per passenger impacted

Sr. No.	SERVICE	PARAMETER	SERVICE LEVEL	VALIDATION	PERFORMANCE DEDUCTIONS
		prescribed policy			
13	Unmanned Bus	No bus attendant observed in Bus	N/A	SMTA record	PKR 10,000/- per incident plus PKR 1,000/- for each subsequent hour
14	Improper performance of Bus Attendant	Failed to perform the assigned duties	N/A	SMTA record	PKR 2000/- per incident
15	Inconsistency within Reports	Reports generated from the system are inconsistent with each other	N/A	SMTA record	PKR 5000/- per incident
16	Fare Media travel time duration	Failed to adjust fare media expiry/travel time as instructed by SMTA	N/A	STMA/IE inspection	PKR 5,000/- after the prescribed implementation time plus PKR 1,000/- for each subsequent Day
17	Smart Card Recharging	Failed to recharge or sell Smart Cards at designated points	N/A	SMTA/IE inspection	PKR 500/- per verified incident
18	Fare Evasion System	Validator failed or unable to send tap-in signal to On Board Unit	N/A	SMTA/IE inspection	PKR 100/- per passenger
19	Time Synchronizati on	System time does not conform with Pakistan Standard Time	N/A	SMTA/IE inspection	PKR 1,000/- per incident plus PKR 500/- for each subsequent hour

Sr. No.	SERVICE	PARAMETER	SERVICE LEVEL	VALIDATION	PERFORMANCE DEDUCTIONS
20	Revenue Loss	Loss of data from bus validator failure to deduct fare	N/A	SMTA/IE inspection	PKR 100 per passenger as per PIS count
21	OBU Malfunction	OBU malfunction including failure to show routes, trips and schedules in buses	N/A	SMTA/IE inspection	PKR 10,000 per incident
22	Ticket Validation	Ticket validator malfunction	N/A	SMTA/IE inspection	PKR 100/- per passenger as per PIS count
23	Alarm Management	Delayed or failed alarm generation	N/A	SMTA/IE inspection	PKR 1,000/- per incident

5. **KPIs RELATED TO TRANSIT BUS SHELTERS(S)**

TABLE L-4: TRANSIT BUS SHELTER PERFORMANCE KPIs

Sr. No.	PARAMETER	KPI	PERFORMANCE DEDUCTIONS
1	INFRASTRUCTURE & PHYSICAL CONDITION		
1.1	Shelter Structural Integrity	Percentage of shelters passing monthly structural inspection Target: ≥ 90%	< 90%: PKR 5,000 per shelter per Day failing inspection
1.2	Seating Availability	Percentage of shelters with minimum required seating available and not damaged Target: ≥ 95%	< 95%: PKR 1,000 per shelter per Day with damaged/missing seats
1.3	Weather Protection	Percentage of shelters with intact roof, side panels, and protection against sun and rain Target: ≥ 95%	<95%: PKR 2,000 per shelter per Day with damaged roof/panels

Sr. No.	PARAMETER	KPI	PERFORMANCE DEDUCTIONS
1.4	Accessibility Compliance	Percentage of shelters with accessible ramps, tactile tiles, and barrier-free entry Target: $\geq 90\%$	<90%: PKR 5,000 per shelter per Day non-compliant
2	OPERATIONS & MAINTENANCE		
2.1	Cleanliness Index	Cleaning frequency compliance per Day (AM and PM sweep) Target: $\geq 100\%$	<100%: PKR 1,000 per shelter per missed cleaning cycle
2.2	Waste Management	Percentage of shelters with functional dustbins and timely garbage removal Target: $\geq 95\%$	<95%: PKR 1,000 per shelter per Day without bin / garbage overflow
2.3	Lighting Functionality	Percentage of shelters with operational solar or LED lighting during night hours Target: $\geq 90\%$	<90%: PKR 3,000 per shelter per night lighting non-functional
2.5	Damage & Vandalism Response Time	Average time taken to repair minor damage or vandalism Target: < 48 hours	PKR 3,000/- if response time exceeds 48 hours
3	PASSENGER INFORMATION SYSTEMS		
3.1	Route Map/Timetable/QR Code Availability	Percentage of shelters with updated route maps or route posters displayed or visible timetable information or QR-code link Target: $\geq 95\%$	<95%: PKR 2,000 per shelter per Day missing or incorrect map or timetable or QR

6. **FINES FOR DEFICIENCIES RELATED TO BUS CONDITIONS**

TABLE L-5: BUS CONDITION OPERATIONAL FINES

S R · N O ·	DESCRIPTION OF THE INFRACTION	F I N E (P K R) P E R I N C I D E N T
1	Installation or placement of any decoration or non-functional item inside or outside the Bus not installed by the original manufacturer of the chassis or body	P K R 4, 00 0/ -
2	Polarisation, whether total or partial, of side, front, or rear windows	P K R 6, 00 0/ -
3	Use or modification of colours or external paintwork designs of the Bus (excluding authorised advertising for non-fare revenues) outside the standards established by SMTA	P K R 4, 00 0/ -
4	Installation of additional lamps (including explorers, chassis illumination, or decorative lighting) not required by regulation or installed by the original manufacturer	P K R 4, 00 0/ -

S R · N O ·	DESCRIPTION OF THE INFRACTION	F I N E (P K R) P E R I N C I D E N T
5	Placement of advertising material not authorised by SMTA or violation of applicable advertising regulations inside or outside the Bus	P K R 6, 00 0/ -
6	Operation of a Bus with lights switched off during night-time operations	P K R 4, 00 0/ -
7	Operation of a Bus with unauthorised audio, sound systems, or announcements not approved by SMTA	P K R 4, 00 0/ -
8	Use of unauthorised electronic equipment (including mobile phones) by the Driver while driving	P K R 4, 00 0/ -
9	Operation of a Bus with defective front, side, rear, or brake lights	P K R 4, 00

S R · N O ·	DESCRIPTION OF THE INFRACTION	F I N E (P K R) P E R I N C I D E N T
		0/ -
1 0	Broken, torn, or loose passenger seat(s)	P K R 6, 00 0/ -
1 1	Handrails that are loose or have sharp or cutting edges	P K R 4, 00 0/ -
1 2	Broken front, side, or rear window	P K R 6, 00 0/ -
1 3	Absence, malfunction, or incorrect positioning affecting visibility of front, side, or rear route display systems	P K R 5, 00 0/ -
1 4	Operation of a Bus with visible dents, impacts, or structural damage	P K R

S R · N O ·	DESCRIPTION OF THE INFRACTION	F I N E (P K R) P E R I N C I D E N T
		6, 00 0/ -
1 5	Inadequate operation of passenger access doors due to damage or malfunction, adversely affecting boarding or alighting times	P K R 5, 00 0/ -
1 6	Incorrect operation or damage to emergency exit doors	P K R 6, 00 0/ -
1 7	Unauthorised interference with, alteration of, or violation of ITS-related equipment, including the logical unit, radio, or associated systems	P K R 6, 00 0/ -
1 8	Failure of on-board wireless communication equipment in a Bus to communicate with the control centre	P K R 6, 00 0/ -

S R · N O ·	DESCRIPTION OF THE INFRACTION	F I N E (P K R) P E R I N C I D E N T
1 9	Failure to park Buses at designated night-time or Day-time parking locations, as applicable	P K R 7, 00 0/ -
2 0	Failure or malfunction of any vehicle subsystem, including PIS, door sensors, CAN systems, cameras, door cameras, or display units, affecting passenger safety, boarding, or alighting	P K R 6, 00 0/ -
2 1	Missing or non-functional fire extinguishers, emergency glass-breaking hammers, or emergency door opening switches, as per manufacturer-installed quantities	P K R 7, 00 0/ -
2 2	Failure to charge a Bus overnight resulting in insufficient operational range for the following Day	P K R 15 ,0 00 /-

7. FINES FOR DEFICIENCIES RELATED TO USER OPERATIONS

TABLE L-6: USER OPERATION OPERATIONAL FINES

Sr. No.	DESCRIPTION OF THE INFRACTION	FINE (PKR) PER INCIDENT
1	Parking Buses at depots or stops in quantities and/or for durations exceeding those permitted by SMTA	PKR 7,000/-
2	Parking Buses at locations other than those permitted by SMTA	PKR 8,000/-
3	Stopping at a location not established as a designated stop on the approved route, without prior authorisation or instruction of SMTA	PKR 7,000/-
4	Changing the approved route of a service without prior authorisation or instruction of SMTA	PKR 8,000/-
5	Operating services or during hours not authorised by SMTA	PKR 5,000/-
6	Boarding or alighting commuters at locations other than designated stops	PKR 5,000/-
7	Delaying operation without reasonable cause	PKR 4,000/-
8	Overtaking Buses operating on the same service	PKR 7,000/-
9	Operating a Bus with insufficient charge during a trip	PKR 13,000/-
10	Operating a Bus without air-conditioning during summer or heating during winter	PKR 9,000/-
11	Incidents resulting in the towing or hauling of a Bus due to a response time exceeding thirty (30) minutes	PKR 25,000/-
12	A passenger or user found aboard a Bus without a valid ticket during snap checks.	PKR 10,000/-

8. FINES AND SANCTIONS RELATED TO DRIVERS AND CONDUCTORS

TABLE L-7: DRIVER AND CONDUCTOR SANCTIONS

Sr. No.	CONDUCT DESCRIPTION	TEMPORARY SUSPENSION / SANCTION	FINE (AMOUNT (PKR) PER INCIDENT)
1	Failure to carry personal identification and/or Bus identification	Suspension on the following Day	PKR 1,500/-
2	Refusal to provide information when required	One-Day suspension	PKR 2,500/-
3	Crossing a red traffic signal	Immediate substitution and suspension on the following Day	PKR 7,000/-
4	Carrying weapons of any kind	Withdrawal from the system	PKR 15,000/-
5	Disobedience of lawful instructions issued by competent authorities	Suspension for one Day	PKR 7,000/-
6	Drunkenness or use of drugs while on duty	Withdrawal from the system	PKR 13,000/-
7	Smoking while driving	One-Day suspension	PKR 5,000/-
8	Causing an accident due to irresponsible behaviour	Suspension for one Day	PKR 5,000/-
9	Driving above prescribed speed limits	One-Day suspension	PKR 3,000/-
10	Illegal zebra crossing violations	—	PKR 3,000/-
11	Allowing a passenger to travel without payment of fare	One-Day suspension	PKR 3,000/-
12	Abandoning or alighting from the Bus without reasonable cause and/or authorisation of SMTA	—	PKR 3,000/-
13	Verbal or physical ill-treatment of commuters (driver or conductor)	—	PKR 8,000/-
14	Operating a Bus without fully closing passenger doors	Withdrawal from the system	PKR 125,000/-

9. **ADMINISTRATIVE NON-COMPLIANCE FINES**

TABLE L-8: ADMINISTRATIVE NON-COMPLIANCE FINES

Sr. No.	DESCRIPTION OF THE INFRACTION	FINE (PKR) PER INCIDENT
1	Failure to deliver information required by SMTA, or delivery of such information outside the terms or timelines established by SMTA for such purpose	PKR 7,000/-
2	Refusal to allow inspections or visits by SMTA, its inspectors, representatives, or the Independent Expert, or concealment, misrepresentation, partial disclosure, or provision of erroneous information	PKR 7,000/-
3	Implementation of administrative or accounting practices that impair the reliability of accounting or financial information required to be maintained by the Concessionaire under this Agreement	PKR 3,000/-
4	Engagement in deliberate practices that restrict free competition or constitute abuse of a dominant position arising as a result of this Agreement	PKR 3,000/-
5	Failure to comply with specifications, content limitations, or norms set out in manuals or regulations issued by SMTA regarding placement of advertising material inside Buses	PKR 3,000/-
6	Failure to comply with obligations relating to Driver training	PKR 3,000/-
7	Failure to comply with obligations established under applicable employment and social security laws in respect of Drivers	PKR 3,000/-
8	Breach of contractual provisions relating to financial mechanisms and liens on Buses	PKR 3,000/-
9	Encumbrance or transfer of title of Buses without the prior, express, and written authorisation of SMTA	PKR 3,000/-

10. ENVIRONMENTAL VIOLATIONS**TABLE L-9: ENVIRONMENTAL VIOLATION FINES**

SR. NO.	DESCRIPTION OF THE INFRACTION	FINE (PKR) PER INCIDENT
1	Noise emissions exceeding applicable environmental standards	PKR 20,000/-
2	Operation of a Bus with leaking lubricants or any other fluids	PKR 10,000/-
3	Gas or exhaust emissions exceeding applicable environmental standards	PKR 20,000/-
4	Non-compliance with applicable waste management or waste disposal requirements	PKR 20,000/-
5	Non-compliance with the approved O&M Plan, including prescribed operating indices, recommended driving habits, or approved methodologies of work	PKR 20,000/-
6	Compliance with hazardous waste, oil disposal, wash water, chemical handling for Bus Depots	PKR 20,000/-

11. DEPOT RELATED FINES

TABLE L-10: OPERATION AND MAINTENANCE OF DEPOTS

SR. NO.	DESCRIPTION	SERVICE LEVEL	PENALTY
1	Depot Systems Availability (Uptime of critical systems: power, charging infrastructure, lifts, wash-plant, Depot Management System, IT & CCTV)	95%	PKR 5,000 per hour of downtime of any critical system
2	Charging Infrastructure Readiness (99% availability of EV Chargers)	99%	PKR 50,000 for each charger out of service
3	Preventive Maintenance of Depot Equipment (Timely servicing of workshop equipment lifts, jacks, compressors, diagnostic tools etc.)		PKR 15,000 per missed preventive maintenance cycle as per OEM Manual
4	Cleanliness and Housekeeping (Monthly Audit score to be carried out by Authority or its Authorized Representative for waste control, housekeeping and depot hygiene)	≥ 90/100	PKR 250,000 for monthly score < 90

5	Spare Parts Availability (Availability of spares parts as per details available in the Contract agreement)	95%	PKR 5,000 per item per Day unavailable
6	Depot Infrastructure Defect Rectification (Repair of broken glass, structural damage, roof damage, gates, drainage blockage, non-functional lighting, or any safety critical component within 24 hours.)		PKR 50,000 per defect per 24 hours delay (High safety priority)
7	Safety & Fire System Readiness (Fire extinguishers, hydrants, alarms, emergency exits fully functional.)		PKR 100,000 Per failed audit or missing equipment

12. PERFORMANCE LIQUIDATED DAMAGES

12.1 The Liquidated Damages (KPIs) shall be:

12.1.1 during the first three (3) months following the COD (First Segment), zero; and

12.1.2 from the fourth (4th) month following the COD (First Segment), the aggregate of all Liquidated Damages (KPIs) for events of non-compliance occurring during that Month, shall be capped at fifteen percent (15%) of the relevant Fare Revenue for that month.

12.2 All Liquidated Damages (KPIs) shall be determined and collected in accordance with this Agreement including Article 13 (*Invoicing and Payment*).

13. EXCESS HEADWAY TIME/ SCHEDULED HEADWAY TIME VARIATIONS

13.1 The Independent Engineer shall, based on the Approved Dispatch Schedule and Headway Target Document and in consultation with SMTA, confirm the number and location of stops proposed by the Concessionaire (the **Timing Points**) at which Excess Headway Time between Buses operating on the same Route (in each direction) is to be calculated.

13.2 Excess Headway Time and any associated non-compliance determination shall be measured and verified by reference to the Approved Dispatch Schedule and Headway Target Document, the AFC-BSS/ITS data (where applicable), and the procedures set out in Article 10 (*Operation and Maintenance*) of the Agreement and this **SCHEDULE L (KPIs (Performance))**.

14. BUS INSPECTIONS

14.1 The Independent Engineer shall, on a monthly basis, observe and inspect the Buses and associated operations for the purpose of assessing compliance with the Bus-related KPIs and other applicable requirements under this **SCHEDULE L (KPIs (Performance))**.

- 14.2 To ensure representativeness, the Independent Engineer shall ensure that at least ten percent (10%) of the fleet is inspected each month. If the Independent Engineer fails to meet this minimum sample in any month, then no Liquidated Damages (KPIs) shall be applied for that month solely in respect of Bus-related KPIs that require physical inspection (and not in respect of KPIs validated through system data, logs, or other independent records).

15. MATERIAL BREACH

- 15.1 With effect from expiry of the KPIs Exemption Period, the following shall constitute a material breach by the Concessionaire under Section 21.5.9 of this Agreement for the purposes of the Agreement:

15.1.1 Liquidated Damages (KPIs) reaching the cap of fifteen percent (15%) of the Fare Revenue for three (3) consecutive months; or

15.1.2 Liquidated Damages (KPIs) reaching the cap of fifteen percent (15%) of the Fare Revenue for any six (6) months within any rolling period of twelve (12) months.

16. DEFINITIONS

- 16.1 For the purposes of this **SCHEDULE L (KPIs (Performance))**:

Severe Bus Defect means a defect to a Bus affecting or potentially affecting the roadworthiness of that Bus, the safety of passengers, the collection of fares or operational control by Authority, including, but not limited to, any of the following:

- any Driver's Bus Defect Report (in the form attached as *Exhibit 1 (Driver's Bus Defect Report)*) for any of the last thirty (30) Days being unavailable, incomplete or misrepresentative;
- any Safety Inspection Report (in the form attached as *Exhibit 2 (Safety Inspection Report)*) for any of the last thirty (30) Days being unavailable, incomplete or misrepresentative;
- any item from the Safety Inspection Checklist (in the form attached in *Part 1 of Exhibit 2 (Safety Inspection Report)*) being defective or not in full and complete working order;
- operations control being defective or not in full and complete working order;
- control management being defective or not in full and complete working order; and
- Buses are not maintained in accordance with manufacturer manual/recommendations.

Material Bus Defect means a defect to a Bus affecting the usage/operations of the Project, including, but not limited to, any of the following:

- any item from the Driver's Bus Defect Report (in the form attached as Exhibit 1 (Driver's Bus Defect Report)) being defective or not in full and complete working order;
- any destination display being defective or not in full and complete working order;
- any passenger information display being defective or not in full and complete working order;
- passenger announcement system being defective or not in full and complete working order.

Minor Bus Defect means a defect to a Bus affecting the comfort of passengers, including, but not limited to, any of the following:

- the Bus not being in satisfactory operational condition and/or any item from the Driver's Bus Defect Report (in the form attached as Exhibit 1 (*Driver's Bus Defect Report*)) being unclean or in untidy condition;
- the average interior temperature as measured by Authority directly or through system being below 23°C or above 25°C when the ambient temperature is 25°C or other such temperature specified by the Independent Engineer/SMTA
- up-to-date map (A3 size) with all stops being not displayed properly in a Bus interior;
- currently applicable fares being not displayed properly in a Bus interior;
- current passenger timetable being not displayed properly in a Bus interior;
- any required SMTA poster/stickers being not displayed properly in a Bus interior;
- advertising outside of designated advertising surfaces.

EXHIBIT 1: DRIVER'S BUS DEFECT REPORT

Driver's Name:		Date:			
Bus Reg.:					
Tachograph reading beginning of shift:		End of shift:			
Fleet / Serial no.:		Odometer Reading:			
Daily or shift check (tick or cross)					
Lubricants / other fluids Leaks	(a)	Wipers	(b)	Mirrors	(c)
Battery Issues	(d)	Washers	(e)	Steering	(f)
Tyres and Wheel Fixing	(g)	Horn	(h)	Heating / Ventilation	(i)
Brakes (incl. ABS/EBS)	(j)	Glass	(k)	Lights	(l)
Doors and Exits	(m)	Reflectors	(n)	Body interior	(o)
Indicators / Side Repeaters	(p)	Body Exterior	(q)	Excessive Engine Exhaust Smoke	(r)
Fire Extinguisher	(s)	First-Aid Kit	(t)	Emergency Exit Hammer	(u)
Seats Fixtures and Coverings	(v)	Disabled Accessibility Requirements	(w)	Registration Plates	(x)
Floor Coverings	(y)	On-board Units	(z)	Fans or Other Air Handling Equipment	(aa)
Radios or other Communication Equipment	(bb)	Commuter Information Displays	(cc)	Driver's Console	(dd)
Report Defects Here:			Defects warranting a refusal to use the Vehicle:		
Any other issue regarding Driver's Bus defect Report:					
Defects reported to:			Rectified:		
Write NIL here if no defects found			Driver's signature:		

Note: Format may be revised by Authority at its discretion to cover all defects faced during operations

Defects Rectified By:

Signature:

Date:

EXHIBIT 2: SAFETY INSPECTION REPORT

Bus Reg.:		Odometer Reading:	
Make and Type:			
Date of Inspection:		ISO Wk No.:	
Company:			
(a)	'Serviceable' (col 4) – enter the appropriate code:		
		= Satisfactory Safety Item Defect	R N/A = Repair Required = Not Applicable
	M	= Monitor (possible maintenance required before next SI)	

PART I - INSPECTION

CHECK No	ITEM INSPECTED	SERVICEABLE	DEFECT FOUND	RECTIFIED BY
1	Driver's Seat			
2	Seat Belts and Supplementary Restraint Systems			
3	Mirrors and Indirect Vision Devices			
4	Glass and View of the Road			
5	Accessibility Features			
6	Windscreen Washers and Wipers			
7	Speedometer / Tachograph			
8	Horn			
9	Driving Controls			
10	Steering Control			
11	Service Brake Pedal			
12	Service Brake Operation			
13	Pressure / Vacuum Warning and Build Up			
14	Hand Lever Operating Mechanical Brakes			
15	Hand Operated Brake Control Valves			
16	Driver's Area			
17	Interior of Body, Commuter Entrance, Exit Steps and Platforms			
18	Commuter Doors, Driver's Doors and Emergency Exits			
19	Registration Plates			
20	Security of Body			
21	Exterior of Body including Luggage Compartments			

22	Exhaust Emissions			
23	Road Wheels and Hubs			
24	Size and Type of Tyres			
25	Condition of Tyres			
26	Bumper Bars			
27	Spare Wheel and Carrier			
28	Condition of Chassis			
29	Wings and Wheel Arches			
30	Bus to Trailer Coupling			
31	Speed Limiter			
32	Electrical Wiring and Equipment			
33	Transmission Mountings			
34	Oil and Waste Leaks			
35	Battery & Motors			
36	Exhaust and Waste Systems			
37	Steering Mechanism			
38	Suspension			
39	Axles, Stub Axles and Wheel Bearings			
40	Transmission			
41	Additional Braking Devices			
42	Brake Systems and Components			
43	Reflectors and Rear Markings			
44	Lamps			
45	Direction Indicators and Hazard Warning Lamps			
46	Aim of Headlamps			
47	Ancillary Equipment			
48	Other Dangerous Defects			
Condition of Tyres (enter N/A if not applicable)				
49	Axle 1	Axle 2		
o/s out	mm	mm		
	bar	bar		
o/s in		mm		
		psi		
n/s in		mm		
		bar		
n/s out	mm	mm		
	bar	bar		
Brake Performance (Laden / Unladen) (roller brake / decelerometer test)			D: Road Test	
50	71	Service Brake Performance	%	Inspector Comments:
51	72	Secondary Brake Performance	%	
52	73	Parking Brake Performance	%	

Note: Format may be revised by the Independent Engineer at its discretion to covered all defects faced during.

SCHEDULE M
CAPITAL COST RECOVERY PAYMENT CALCULATION

1. DEFINITIONS

In this **Schedule M (*Capital Cost Recovery Payment Calculation*)**, the following terms shall have the meanings set forth below. Capitalised terms used but not defined herein shall have the meanings assigned to them in the Agreement:

Available or **Availability** means the condition where a Bus is operational, charged and ready for service in accordance with the **SCHEDULE A (*Technical Specifications*)** and **SCHEDULE L (*KPIs (Performance)*)**;

Bi-Annual Period means each six (6) month period, the first (1st) such period starting on COD (Second Segment). For purposes of this definition, the term **month** means a period starting on one Day in a calendar Month and ending on the numerically corresponding Day in the next calendar Month, save that where any such period would otherwise end on a Day which is a public holiday in Pakistan, it shall end on the next Day, unless that Day falls in the calendar Month succeeding that in which it would otherwise have ended, in which case it shall end on the preceding Day; provided, however, that if a period starts on the last Day in the month in which that period ends, that period shall end on the last Day in that later month, and references to **months** shall be construed accordingly;

Bid Sheet has the meaning given to it in the RFP;

Billing Period means from the COD (Second Segment), each Bi-Annual Period falling within the Operations Period, with the first (1st) Bi-Annual Period starting at 00:00 hours on the COD (Second Segment) and ending at 23:59 on the Day immediately preceding the start of the next Bi-Annual Period and the last Bi-Annual Period ending at 23:59 on the Term Expiry Date;

Capital Cost Recovery Payment means the aggregate amount (in PKR) payable by the GoS, calculated based on the Capital Cost Recovery Payment Rate (Bid) per KM per Bus and the Guaranteed Annual Mileage;

Capital Cost Recovery Payment Rate (Bid) means the per KM Capital Cost Recovery Payment rate, quoted by the Successful Bidder in its Financial Proposal, and calculated in accordance with Part 2 (*Financial Evaluation Criteria*) of Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (*TENDER PROCEDURE*)** of the RFP, as set out in the Bid Sheet (*Bidding Form F2-A*);

Commuters (Committed) means the number of Commuters committed by the Successful Bidder in its Bid for each Month, based on four hundred and thirty (430) Commuters per Bus per Day, for purposes of determination of the Fare Revenue (GoS Share);

CPI means the National Consumer Price Index (NCPI) General, the headline inflation marker for all consumer goods and services across urban and rural Pakistan, as published by the Pakistan Bureau of Statistics;

Debt Interest Recovery Charge means the portion of the Debt Service allocated for the payment of mark-up on debt;

Debt Principal Recovery Charge means the portion of the Debt Service allocated for the repayment of debt principal;

Debt Service or **DS** means the portion of the Capital Cost Recovery Payment Rate (Bid) allocated to repayment of Debt Principal Recovery Charge and Debt Interest Recovery Charge;

Deduction means any amount deducted from a payment otherwise payable to the Concessionaire on account of Liquidated Damages (KPIs) or any other adjustment expressly permitted under the Agreement;

Downtime means the Planned Downtime or the Unplanned Downtime (as applicable);

Electricity Price or **EP** means the special EV charging tariff (PKR/kWh) notified by NEPRA applicable to the Project;

Equity Recovery Charge means the portion of the Capital Cost Recovery Payment Rate allocated for the recovery of the Concessionaire's Equity;

Fare Rate (Bid) means the Fare rate per Commuter, quoted by the Successful Bidder in its Financial Proposal, and calculated in accordance with Part 2 (*Financial Evaluation Criteria*) of Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, as set out in the Bid Sheet (*Bidding Form F2-A*);

Guaranteed Annual Mileage means sixty thousand (60,000) KM per Bus per annum representing the guaranteed annual mileage against which the Capital Cost Recovery Payment is payable;

Insurance Cost means the actual and verifiable cost of insurance premiums in respect of the Buses, paid by the GoS (including any upfront or advance premiums paid to satisfy Financial Close requirements), and recoverable by the GoS from the Equity Recovery Charge, which cost shall constitute an indexed pass-through component and shall be recovered strictly on an actual-cost basis, in each case in accordance with this **SCHEDULE M (Capital Cost Recovery Payment Calculation)**;

KIBOR means the Karachi Inter-Bank Offer Rate used for the Debt Interest Component;

Fare Revenue (GoS Share) has the meaning to it in Article 1 (*Definitions and Interpretation*) of this Agreement;

Fare Rate (Notified) has the meaning to it in Article 1 (*Definitions and Interpretation*) of this Agreement;

Non-Power Component means the portion of the Fare Rate (Bid) allocated for operation and maintenance expenses excluding the Power Component, the Insurance Costs and the Operator Margin, which component shall be subject to indexation in accordance with this **SCHEDULE M (Capital Cost Recovery Payment Calculation)**;

Operator Margin means the portion of the Fare Rate (Bid) representing the Shareholders' return for undertaking the O&M Activities, excluding the Power Component, the Non-Power Component and the Insurance Cost, which component shall be subject to indexation in accordance with this **SCHEDULE M (Capital Cost Recovery Payment Calculation)**;

Planned Downtime has the meaning to it in Article 1 (*Definitions and Interpretation*) of this Agreement;

Power Component means the portion of the Fare Rate (Bid) allocated for Electricity consumption, constituting twenty-five percent (25%) of the Fare Rate (Bid), and treated as a pass-through item in accordance with this **SCHEDULE M (Capital Cost Recovery Payment Calculation)**;

Reduced Contracted Availability means a reduction in the Guaranteed Annual Mileage attributable to Downtime;

Unavailable or **Unavailability** means any period during which the E-Buses Assets (or any part thereof) is undergoing a Downtime;

Unavailability Notice means a written or system-generated notice issued by the Independent Engineer or recorded through the AFC-BSS/ITS systems, identifying a Bus as Unavailable, specifying the cause, time of commencement, and duration of such Unavailability, and forming part of the basis for certification by the Independent Engineer.

Unplanned Downtime has the meaning to it in Article 1 (*Definitions and Interpretation*) of this Agreement.

2. PAYMENT STRUCTURE

2.1 CAPITAL COST RECOVERY PAYMENT

2.1.1 The **Capital Cost Recovery Payment** shall constitute payment by the GoS for recovery of the capital cost, including financing costs, in accordance with this **SCHEDULE M (Capital Cost Recovery Payment Calculation)**.

2.1.2 The Capital Cost Recovery Payment shall comprise the following two (2) distinct payment streams:

- (a) Debt Service component payable to the Financing Parties; and
- (b) Equity Recovery Charge, payable to the Concessionaire.

2.1.3 The Capital Cost Recovery Payment shall be made by way of structured bi-annual payments over a period of ten (10) years. Such payments shall be calculated and certified for each Billing Period in accordance with this **SCHEDULE M (Capital Cost Recovery Payment Calculation)**.

3. PAYMENT CALCULATION FORMULAE

3.1 CAPITAL COST RECOVERY PAYMENT

- 3.1.1 The total Capital Cost Recovery Payment shall represent the aggregate amount payable by the GoS for recovery of the capital cost over the Capital Cost Recovery Payment tenor and shall be calculated in accordance with the following formula:

$$\text{CCRP} = \text{CRR} \times \text{FM} \times \text{NBus} \times \text{N Years}$$

Where:

- CCRP = the total Capital Cost Recovery Payment, expressed in Pakistani Rupees (PKR);
- CRR = the Capital Cost Recovery Payment Rate (Bid) expressed in PKR per KM per Bus;
- GAM = the Guaranteed Annual Mileage, calculated as sixty thousand (60,000) kilometres per Bus per annum;
- NBus = the number of Buses, being five hundred (500); and
- NYears = the Capital Cost Recovery Payment tenor, being ten (10) years.

3.2 CAPITAL COST RECOVERY PAYMENT RATE

- 3.2.1 The Capital Cost Recovery Payment Rate shall be calculated in accordance with the following formula:

$$\text{CCRPR} = [(\text{DS} + \text{ER}) \times \text{M}] / \text{TM}$$

Where:

- DS = Debt Service Component per period;
- ER = Equity Recovery Component per period;
- TM = Total Mileage, calculated as the Guaranteed Annual Mileage multiplied by the number of Buses; and
- M = Number of Billing Periods per annum.

3.3 DEBT SERVICE COMPONENT (DS)

3.3.1 The Debt Service Component (DS) shall be calculated in accordance with the following formula:

$$DS = (L_p \times \text{Rate} / M) / (1 - (1 + \text{Rate} / M)^{-(L_n \times M)})$$

Where:

- Rate = the applicable annual interest rate, being KIBOR (as specified) plus the applicable spread;
- L_p = the total loan amount;
- L_n = the loan tenor, being ten (10) years;
- M = the number of Billing Periods per annum.

3.4 EQUITY RECOVERY CHARGE (ER)

3.4.1 The Equity Recovery Charge shall be calculated in accordance with the following formula:

$$ER = E_p / (E_n \times M)$$

Where:

- E_p = Total Equity amount invested by the Sponsor;
- E_n = Equity redemption tenor i.e. ten (10) years; and
- M = Number of Billing Periods per annum.

4. AVAILABILITY-LINKED ADJUSTMENTS

4.1 EQUITY RECOVERY MILEAGE ADJUSTMENT

4.1.1 Where, in any Operational Year, the aggregate annual KM operated per Bus fall below Guaranteed Annual Mileage, the Equity Recovery Charge payable for such Operational Year shall be proportionately reduced on a per-KM to reflect the shortfall between the Guaranteed Annual Mileage and the actual KM operated, as measured and certified by the Independent Engineer in accordance with the following formula:

If KM driven per Bus is less than sixty thousand (60,000) KM per annum, then the reduction from the Equity Recovery Charge shall be calculated as follows:

$$\text{Equity Reduction} = [60,000 - \text{Actual KM per Bus per annum}] \times [\text{total Equity injected} / (60,000 \times 500 \times 10)]$$

5. DEDUCTIONS AND SET-OFF MECHANISM

5.1 Where, in any Billing Period, the aggregate amounts payable by the Concessionaire to the GoS, comprising the (a) Fare Revenue (GoS Share), (b) Insurance Cost recovery, (c) the damages payable in terms of Section 4.1.1 above, and (d) Liquidated Damages (KPIs), as determined by the Independent Engineer in accordance with **SCHEDULE L (KPIs (PERFORMANCE))**, exceeds the Equity Recovery Charge payable to the Concessionaire for such Billing Period, the GoS shall be entitled to set-off such amounts against the Equity Recovery Charge in the following order of priority:

- (a) Fare Revenue (GoS Share) (not already recovered through the Fare Revenue);
- (b) Insurance Cost recovery; and
- (c) the damages payable in terms of Section 4.1.1 above and the Liquidated Damages (KPIs).

5.2 To the extent that the Equity Recovery Charge payable for such Billing Period is insufficient to satisfy the amounts referred to in Section 5.1, the outstanding balance shall be recovered from the Fare Revenue (Concessionaire Share).

5.3 APPLICATION OF CAPITAL COST RECOVERY PAYMENT ON A SEMI-ANNUAL BASIS

- (a) For the purposes of billing and payment, the Capital Cost Recovery Payment shall be calculated, invoiced, and payable on a bi-annual basis.
- (b) The Capital Cost Recovery Payment payable in respect of each Billing Period shall be determined by applying the Capital Cost Recovery Payment Rate (Bid) to the KM operated and certified during such Billing Period, in accordance with this Agreement, provided that the aggregate KM applied for capital cost recovery during any Contract Year shall not exceed the Guaranteed Annual Mileage.
- (c) For the avoidance of doubt, where the Guaranteed Annual Mileage is expressed as sixty thousand (60,000) KM per Bus per annum, the reference mileage applicable to each Billing Period shall be thirty thousand (30,000) KM per Bus, subject always to the actual Availability certified by the Independent Experts during such Billing Period.

6. PASS THROUGH AND INDEXATION

6.1 PASS THROUGH OF DEBT INTEREST RECOVERY CHARGE (KIBOR)

6.1.1 The Debt Interest Recovery Charge forming part of the Capital Cost Recovery Payment shall be adjusted to reflect variations in KIBOR in accordance with the terms of the Financing Documents.

- 6.1.2 The payment of the Debt Interest Recovery Charge shall be made semi-annually by GoS based on changes in KIBOR. The applicable spread shall be capped at three percent (3%) per annum, and any savings arising from a lower spread shall be fully passed on to the GoS.
- 6.1.3 The Debt Interest Recovery Charge (IRC) shall be calculated as follows:

$$\text{IRC}_p = \text{IRC}_{\text{base}} \times [(\text{KIBOR}_p + \text{Spread}) / (\text{KIBOR}_{\text{base}} + \text{Spread})]$$

Where:

- IRC_p = the Debt Interest Recovery Charge for the relevant Billing Period;
- IRC_{base} = Debt Interest Recovery Charge as at the Bid Submission Date or the last price set;
- KIBOR_p = the prevailing six (6) month KIBOR for the relevant Billing Period;
- $\text{KIBOR}_{\text{base}}$ = KIBOR applicable as at the Bid Submission Date or the last price set.

ANNEXURE 1: DEBT SERVICE SCHEDULE

YEAR	BILLING PERIOD (SEMI ANNUALLY)	OPENING PRINCIPAL (OP)	INTEREST PAYMENT (I)	PRINCIPAL REPAYMENT (P)	EQUAL INSTALMENT (INS) = (I) + (P)	CLOSING PRINCIPAL (CP) = (OP) – (P)
1	1	-	-	-	-	-
1	2	-	-	-	-	-
2	3	-	-	-	-	-
2	4	-	-	-	-	-
3	5	-	-	-	-	-
3	6	-	-	-	-	-
4	7	-	-	-	-	-
4	8	-	-	-	-	-
5	9	-	-	-	-	-
5	10	-	-	-	-	-
6	11	-	-	-	-	-
6	12	-	-	-	-	-
7	13	-	-	-	-	-
7	14	-	-	-	-	-
8	15	-	-	-	-	-
8	16	-	-	-	-	-
9	17	-	-	-	-	-
9	18	-	-	-	-	-
10	19	-	-	-	-	-
10	20	-	-	-	-	-
Total						

ANNEXURE 2: EQUITY REDEMPTION SCHEDULE

YEAR	BILLING PERIOD (SEMI ANNUALLY)	OPENING BALANCE (OB)	CAPITAL REDEMPTION (CR)	CLOSING PRINCIPAL (CP) = (OB) – (CR)
1	1	-	-	-
1	2	-	-	-
2	3	-	-	-
2	4	-	-	-
3	5	-	-	-
3	6	-	-	-
4	7	-	-	-
4	8	-	-	-
5	9	-	-	-
5	10	-	-	-
6	11	-	-	-
6	12	-	-	-
7	13	-	-	-
7	14	-	-	-
8	15	-	-	-
8	16	-	-	-
9	17	-	-	-
9	18	-	-	-
10	19	-	-	-
10	20	-	-	-
Total				

SCHEDULE N FARE STRUCTURE

1. FARE DETERMINATION

- 1.1 The Fare payable by a Commuter for travel on the Buses shall be the Fare Rate (Notified), as notified from time to time by the GoS, in accordance with this **SCHEDULE N (Fare Structure)**.
- 1.2 The initial Fare Rate (Notified) and applicable from the COD (First Segment) shall be Pakistani Rupees One Hundred and Twenty (PKR 120) per Commuter, unless otherwise notified by the GoS prior to the COD (First Segment).
- 1.3 The Concessionaire shall collect Fare in accordance with the Fare Rate (Notified) which shall be the maximum (ceiling) Fare chargeable to Commuters. The Concessionaire may charge Fares at or below the Fare Rate (Notified), but shall have no right or authority to independently determine, revise, escalate, or otherwise vary the Fare Rate (Notified) or to charge any fare in excess thereof. Any Fare charged in excess of the Fare Rate (Notified) shall constitute a material breach in terms of Section 21.5.9 of this Agreement.

2. FARE RATE (BID)

- 2.1 The Fare Rate (Bid) means the Fare rate per Commuter quoted by the Successful Bidder in its Financial Proposal, calculated in accordance with Part 2 (*Financial Evaluation Criteria*) of Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP.
- 2.2 The Fare Rate (Bid) represents the bid-derived O&M Costs, which comprises only the Power Component, Non-Power Component, Insurance Cost and Operator Margin, and shall not constitute, determine or otherwise affect the passenger-facing Fare.
- 2.3 For the avoidance of doubt, the Fare Rate (Bid) shall be used solely for financial evaluation, internal settlement, revenue sharing and subsidy computation purposes, and shall not, directly or indirectly, limit, determine or control the Fare Rate (Notified).

3. FARE REVENUE AND INTERNAL SETTLEMENT CALCULATIONS

3.1 FARE REVENUE CALCULATION

- 3.1.1 The Fare Revenue per Commuter shall be calculated as follows:

$$\text{Fare Revenue (per Commuter)} = \text{Fare Rate (Bid)} + \text{Fare Revenue (GoS Share) per Commuter}$$

Where:

- Fare Revenue (GoS Share) = Difference between the Fare Rate (Notified) per Commuter and the Fare Rate (Bid) per Commuter

3.2 FARE RATE (BID) CALCULATION

3.2.1 The Fare Rate (Bid) shall be calculated as follows:

$$\text{Fare Rate (Bid)} = (\text{PC} + \text{NPC} + \text{Ins} + \text{OM}) / (\text{NPax} \times (\text{Opn} / \text{Nm}))$$

Where:

- PC = Power Component per Bus per Month, calculated on the basis of the NEPRA-notified electric vehicle charging tariff of PKR 39.7 per kWh;
- NPC = Non-Power Component per Bus per Month, indexed in accordance with CPI;
- Ins = Insurance Cost per Bus per Month, calculated at actual cost;
- OM = Operator Margin, indexed in accordance with CPI;
- NPax = Commuters (Committed), being four hundred and thirty (430);
- Opn = Number of operating Days in a year, being three hundred and forty-two (342) Days; and
- Nm = Number of Months in a calendar year i.e. twelve (12)

3.3 FARE REVENUE (GOS SHARE) AND FARE REVENUE (GOS SHARE)

3.3.1 The Fare Revenue Share (GoS share) shall be calculated as follows:

$$\text{Fare Revenue (GoS Share)} = (\text{Fare Rate (Notified)} - \text{Fare Rate (Bid)})$$

3.3.2 Notwithstanding the foregoing, GoS shall, in all cases, be entitled to receive a Fare Revenue (GoS Share) of Pakistani Rupees Ten (PKR 10/-) per Commuter, calculated on the basis of four hundred and thirty (430) Commuters per Day per Bus calculated based on three hundred and forty two (342) days in an Operational Year, in accordance with the provisions of this Agreement.

4. ADJUSTMENT OF FARE RATE (BID) COMPONENTS

4.1 PASS THROUGH OF POWER COMPONENT

4.1.1 The Power Component of the Fare Rate (Bid) shall be treated as a pass-through item and shall be actualised based on the electric vehicle charging tariff notified by NEPRA.

4.1.2 The adjusted Power Component shall be calculated as follows:

$$\text{PC}_m = \text{PC}_{\text{base}} \times [\text{EP}_m / \text{EP}_{\text{base}}]$$

Where:

- EP_base = the special electric vehicle tariff notified by NEPRA (PKR 39.7 per kWh) or the last adjusted tariff rate;
- EP_m = means the prevailing special electric vehicle tariff as notified or revised by NEPRA;
- PC_m = the adjusted Power Component; and
- PC_base = the Power Component, constituting twenty-five percent (25%) of the Fare Rate (Bid), or the last price set.

4.2 INDEXATION OF NON-POWER COMPONENT AND OPERATOR MARGIN (OM)(CPI)

4.2.1 The Non-Power Component and Operator Margin of the Fare Rate (Bid) shall be adjusted annually in accordance with changes in CPI.

4.2.2 The adjusted Non-Power Component, Insurance Cost and Operator Margin shall be calculated as follows:

$$\text{NPC}_m = \text{NPC}_{\text{base}} \times [\text{CPI}_m / \text{CPI}_{\text{base}}]$$

Where:

- NPC_m = the Adjusted Non-Power Component, Insurance Cost and Operator Margin;
- NPC_base = Non-Power Component and Operator Margin as at the Bid Submission Deadline or the last adjusted price set;
- CPI_m = The most recent annual NCPI published by PBS based on the indexation formula where 100 is the base and r1 is the percentage NCPI published by PBS in year one of operations: Index to nth year = $100 \times (1 + r_1) \times (1 + r_2) \times \dots \times (1 + r_n)$;
- CPI_base = an index value of one hundred (100) or the Last CPI Index determined.

5. TREATMENT OF O&M COST INCREASES

5.1 Any increase, escalation or variation in the Power Component and other indexed based component as per **SCHEDULE M (Capital Cost Recovery Payment Calculation)**, shall not automatically result in any increase, escalation or adjustment to the Fare Rate (Notified). Any such impact shall be addressed sequentially and on a priority basis, subject to Approvals, through the following measures, in the order set out below:

5.1.1 **First Priority - Adjustment through Fare Revenue (GoS Share):** Adjustment or absorption of the relevant cost impact through the Fare Revenue (GoS Share);

- 5.1.2 ***Second Priority - Revision of Fare Rate (Notified)***: Where the mechanism under Section 5.1.1 above has been exhausted or is insufficient, revision of the Fare Rate (Notified) in accordance with the Fare Revenue mechanism set out in this **SCHEDULE N (FARE STRUCTURE)**;
- 5.1.3 ***Third Priority – Viability Gap Fund (VGF)***: Where neither Section 5.1.1 nor Clause 5.1.2 is sufficient to address such impact, the residual amount shall be borne by the Concessionaire through Viability Gap Funding (VGF) or any other mechanism expressly agreed in writing between the Parties, under this Agreement.
- 5.2 For the avoidance of doubt:
- (a) the Fare Rate (Bid) shall continue to be used solely for the purposes of financial evaluation, internal settlement, revenue-sharing calculations, and subsidy or support computation under this Agreement; and
 - (b) any increase, escalation, or adjustment in O&M Costs, whether indexed, formula-based, or otherwise adjusted pursuant to this Agreement or **SCHEDULE M (Capital Cost Recovery Payment Calculation)**, shall be applied automatically in accordance with the agreed indexation or adjustment mechanism, subject to verification, review, and confirmation by the Independent Auditor and/or Independent Engineer, as applicable, and shall not, of itself, whether individually or cumulatively create any right or entitlement of the Concessionaire to require an increase in the Fare Rate (Notified).

6. FARE REVIEW MECHANISM

- 6.1 Any revision, escalation, adjustment or rationalisation of the Fare Rate (Notified) if undertaken, shall be undertaken solely by the GoS, acting through a fare review committee or such other mechanism as may be notified by the GoS from time to time.
- 6.2 In conducting any fare review, the GoS may take into account such factors as it deems appropriate, including, without limitation, inflation, operating costs, affordability considerations, ridership patterns and public policy objectives.
- 6.3 Any revised Fare Rate (Notified) shall take effect only upon formal notification issued by the GoS from the date specified in such notification, and shall thereafter constitute the applicable Fare under this Agreement.

7. NO AUTOMATIC FARE ESCALATION

- 7.1 For the avoidance of doubt, the Fare Rate (Notified) shall not be subject to any automatic escalation, indexation, pass-through or adjustment by reference to CPI, electricity prices, operating costs, exchange rates or any other factor.
- 7.2 No adjustment to the Fare Rate (Bid), or to any indexed component thereof under **SCHEDULE M (Capital Cost Recovery Payment Calculation)**, shall of itself give rise to any entitlement, expectation or contractual right of the Concessionaire to require an increase in the Fare Rate (Notified), whether directly or indirectly.

SCHEDULE O
LICENSE AGREEMENT

LICENSE AGREEMENT

BY AND BETWEEN

SINDH MASS TRANSIT AUTHORITY
(AS **SMTA**)

AND


(AS THE **CONCESSIONAIRE**)

IN RESPECT OF

THE CONCESSION TO DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER
THE PEOPLES GREEN TRANSPORT PROJECT

DATED _____, 2026

AT KARACHI, PAKISTAN



²⁷ Name to be inserted upon incorporation of the Concessionaire.

LICENSE AGREEMENT

THIS LICENSE AGREEMENT (this **Agreement**) is made on [●] at Karachi, Pakistan by and between:

1. **SINDH MASS TRANSIT AUTHORITY**, a statutory body constituted pursuant to Section 4 of the Sindh Mass Transit Authority Act, 2014, with its office located at [●] (**SMTA** which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors in interest, administrators and permitted assigns);

AND

2. [●], a company incorporated under the Laws of Pakistan, with its registered office at [●] (the **Concessionaire** which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors in interest, administrators and permitted assigns).

(SMTA and the Concessionaire are hereinafter collectively referred to as the **Parties** and each individually as a **Party**).

RECITALS

WHEREAS:

- A. the Governor of Sindh, acting through the Transport and Mass Transit Department, Government of Sindh (the **GoS**) and the Parties have entered into a concession agreement dated [●] (the **Concession Agreement**);
- B. in terms of the Concession Agreement, SMTA has agreed to grant a license to the Concessionaire in respect of the Project Site for the purposes of carrying out the Project Activities;
- C. the Parties are now entering into this Agreement to set out the terms and conditions relating to the use of the Project Site by the Concessionaire and the rights and obligations of the Parties with respect thereto.

NOW THEREFORE, in consideration of the mutual covenants contained herein, the Parties agree as follows:

1. DEFINITIONS AND INTERPRETATION

1.1 DEFINITIONS

Unless specified otherwise herein in this Agreement (including the Recitals), all capitalized terms shall have the meanings assigned to them under the Concession Agreement. In addition, the following terms shall have the following meanings, unless the context otherwise requires:

- (a) **Agreement** means this license agreement, as amended, and supplemented from time to time;
- (b) **Commencement Date** has the meaning given to it in the Concession Agreement;
- (c) **Concession Agreement** has the meaning given to it in Recital A;
- (d) **Concessionaire** has the meaning given to it in the Preamble;
- (e) **Encumbrance** means any encumbrance on the Project Site (or part thereof), including but not restricted to mortgage, charge, pledge, lien, hypothecation and/or any security interest, assignment, privilege, or priority of any kind having the effect of security or other such obligations and shall include without limitation physical encumbrances and encroachments thereon;
- (f) **GoS** has the meaning given to it in Recital A;
- (g) **SMTA** has the meaning given to it in the Preamble;
- (h) **License** has the meaning given to it in Section 2.1.1 of this Agreement;
- (i) **License Period** has the meaning given to it in Section 2.1.1 of this Agreement;
- (j) **Parties** has the meaning given to it in the Preamble;
- (k) **Party** has the meaning given to it in the Preamble;
- (l) **Preamble** means the preamble of this Agreement;
- (m) **Project Site** means the location of the E-Buses Assets, as more fully described in **SCHEDULE A (*Technical Specifications*)** of the Concession Agreement;
- (n) **Recitals** means the recitals of this Agreement; and
- (o) **Signing Date** has the meaning given to it in the Preamble.

1.2 **INTERPRETATION**

The rules of construction and interpretation set forth in Section 1.2 (*Interpretation*) of the Concession Agreement shall apply, *mutatis mutandis*, to this Agreement.

2. **RIGHT TO ACCESS, LICENSE AND RELATED MATTERS**

2.1 **RIGHT TO ACCESS AND LICENSE OF THE SITE**

- 2.1.1 SMTA grants to the Concessionaire, commencing from the Commencement Date (upon the physical handing over of the possession of the Project Site by SMTA to the Concessionaire) and until the issuance of the Handover Certificate (the **License Period**),

a license in respect of the Project Site for the purposes of carrying out the Project Activities in accordance with the Concession Agreement (the **License**).

- 2.1.2 Subject to Section 3, the License granted in terms of Section 2.1.1 shall terminate without the need for any action to be taken by the Parties on expiry of the License Period.
- 2.1.3 SMTA shall provide the Concessionaire such assistance as may be reasonably requested by the Concessionaire to enjoy the License, provided always that the Concessionaire is in compliance with all Legal Requirements and the provision of any assistance by SMTA (including delay or omission to provide such assistance) shall not relieve or absolve the Concessionaire of its obligations under this Agreement or the Concession Agreement.
- 2.1.4 The Concessionaire shall ensure that, during the License Period, SMTA, any relevant Government Authority, the Independent Experts and each of their representatives, officers, employees, and agents shall have the right to access the Project Site to exercise their rights under the Law and perform their obligations under the Concession Agreement; provided, however, such access shall be subject to any reasonable requirements of the Concessionaire regarding safety and security of the E-Buses Assets.
- 2.1.5 This Agreement shall be duly executed by the Parties and all costs, fees, expenses, duties, charges, and taxes relating to the same shall be borne by the Concessionaire. Notwithstanding anything contained herein or the Concession Agreement, the Parties hereby acknowledge and confirm that no right, title, interest, benefit or otherwise is granted to the Concessionaire under this Agreement which may attract the registration requirement under the Laws. However, in the event it is envisaged that this Agreement is a registrable instrument with the relevant Government Authority under the Laws, all costs, fees, expenses, duties, charges, and taxes relating to the registration of this Agreement shall be borne by the Concessionaire.

2.2 TITLE AND USE OF PROJECT SITE

- 2.2.1 SMTA represents and warrants that it has the power and authority to grant the License to the Concessionaire for the Project Activities during the License Period, provided the title to the Project Site shall always vest with SMTA.
- 2.2.2 The Concessionaire undertakes, covenants and agrees that it shall only use the Project Site solely for the purposes of undertaking the relevant Project Activities in accordance with the requirements of the Concession Agreement.

2.3 NO SALE OR CREATION OF ENCUMBRANCE

The Concessionaire shall not part with, dispose of, sell, lease, sub-lease, license or sub-license or create any Encumbrance of any nature whatsoever on the whole or any part of the Project Site and shall not place or create nor permit any Contractor or other person claiming through or under the Concessionaire to place or create any Encumbrance over all or any part of the Project Site, or on any rights of the Concessionaire therein or under this Agreement.

2.4 PROTECTION OF PROJECT SITE FROM ENCROACHMENTS

2.4.1 For the duration of the License Period, the Concessionaire shall:

- (a) be fully responsible for and shall protect the Site from, in each case, any and all occupations, thefts, encroachments and Encumbrances;
- (b) develop a security protocol for security of the Project Site and arrange for (at its own cost and expense) appropriately trained and qualified security personnel to undertake the security of the Project Site;
- (c) immediately upon becoming aware, notify SMTA and the Independent Engineer, of any occupations, thefts, encroachments and Encumbrances on the Project Site, and SMTA shall, upon receipt of such notification, provide reasonable assistance to the Concessionaire in procuring police assistance for removal of trespassers and/or encroachments on the Project Site; provided however, the provision of any assistance by SMTA (including delay or omission to provide such assistance) shall not relieve or absolve the Concessionaire of its obligations under this Agreement or the Concession Agreement; and
- (d) submit an annual report intimating to SMTA and the Independent Engineer either:
 - (i) occurrence and status of occupations, thefts, encroachments, and Encumbrances on the Project Site in the relevant year (if any); or
 - (ii) confirming that the Project Site is free from any occupations, thefts, encroachments and Encumbrances in the relevant year of the License Period.

2.4.2 The Concessionaire undertakes, covenants and agrees that it shall, throughout the License Period, remain liable for any Claims and/or damage to the Project Site or the E-Buses Assets.

3. BREACH AND TERMINATION

3.1 Any breach or default by a Party of its obligations under this Agreement shall be dealt with in accordance with the terms of the Concession Agreement. This Agreement shall stand automatically terminated on the expiry of the License Period.

4. REPRESENTATIONS AND WARRANTIES

4.1 SMTA'S REPRESENTATIONS AND WARRANTIES

4.1.1 SMTA hereby represents and warrants to the Concessionaire that it has the power and authority to:

- (a) grant the License to the Concessionaire;
- (b) it has the power and authority to enter into and deliver this Agreement, and that this Agreement forms the valid, binding, and enforceable obligations of SMTA; and
- (c) at the time of grant of License, the Project Site shall be free of Encumbrances.

4.2 CONCESSIONAIRE’S REPRESENTATIONS & WARRANTIES

4.2.1 The Concessionaire hereby represents and warrants to SMTA that:

- (a) it has the power and authority to enter into and deliver this Agreement and that this Agreement forms the valid, binding, and enforceable obligations of the Concessionaire; and
- (b) the execution and performance of this Agreement by the Concessionaire does not violate any Law or any other obligations to which the Concessionaire is subject.

5. NOTICES

5.1 NOTICES

5.1.1 The provisions of article 30 (*Notices*) of the Concession Agreement shall be incorporated by reference into this Agreement and apply, *mutatis mutandis*, hereto.

6. GOVERNING LAW AND DISPUTE RESOLUTION

6.1 GOVERNING LAW

61.1 This Agreement and any non-contractual obligations arising out of or in connection with it shall be governed by and construed in accordance with the Laws of Pakistan.

6.2 DISPUTE RESOLUTION

6.2.1 The provisions of article 27 (*Governing law and Dispute Resolution*) of the Concession Agreement shall be incorporated by reference into this Agreement and apply, *mutatis mutandis*, hereto.

7. MISCELLANEOUS

7.1 PARTIAL INVALIDITY AND SEVERABILITY

7.1.1 If for any reason whatsoever, any provision of this Agreement is, or becomes invalid, illegal or unenforceable, or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions of this Agreement shall not be affected in any manner, and the Parties shall negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provision(s), as nearly as is practicable.

7.2 AMENDMENT

7.2.1 No amendment or modification of this Agreement shall be valid and effective unless agreed to by the Parties, confirmed by the GoS, and evidenced in writing.

8. ORIGINALS

8.1 NUMBER OF ORIGINALS

8.1.1 This Agreement shall be executed in two (2) originals.

SIGNATURE PAGES

IN WITNESS WHEREOF, the Parties, intending to be legally bound, have caused this Agreement to be executed by their duly authorised representatives as of the date first written above.

SINDH MASS TRANSIT AUTHORITY

Signature

Name
(block capitals)

Title

In the presence of:

Witness signature

Witness name
(block capitals)

Witness signature

Witness name
(block capitals)

THE CONCESSIONAIRE

Signature

.....

Name
(block capitals)

.....

Title

.....

In the presence of:

Witness signature

.....

Witness name
(block capitals)

.....

Witness signature

.....

Witness name
(block capitals)

.....

SCHEDULE P²⁸
ACCOUNTS STANDING INSTRUCTIONS

PART 1 - CAPITAL COST RECOVERY PAYMENT ACCOUNT (GoS) STANDING INSTRUCTIONS

[ON THE LETTERHEAD OF THE GoS]

DATE: [●]

REFERENCE: [●]

To,
[Capital Cost Recovery Payment Account (GoS) Bank]

.....

.....

CC:

.....

RE: STANDING INSTRUCTIONS IN RESPECT OF CAPITAL COST RECOVERY PAYMENT ACCOUNT (GoS)

Dear Sir/Madam:

1. CAPITAL COST RECOVERY PAYMENT ACCOUNT (GoS) & ISSUANCE OF STANDING INSTRUCTIONS NOTICE

- 1.1 We, [●] (through [●]) (the **Account Holder**) refer you, [INSERT BANK NAME] (a banking company established under the laws of Pakistan having its registered office located at [●]) (the **Account Bank**) to the following bank account established and maintained in the name of the Account Holder at the Account Bank's branch, located at [●]:

Account Number [●], Account Title [●] (the **Capital Cost Recovery Payment Account (GoS)**);

AND, We, the Account Holder, hereby issue this notice (the **Standing Instructions Notice**) containing the Standing Instructions for the maintenance and operation of the Capital Cost Recovery Payment Account (GoS) and for matters relating to the same.

2. DEFINITIONS

- 2.1 In this Standing Instructions Notice, the following capitalized words shall bear the meaning ascribed to the same as below:

²⁸ The standing instructions set out in this **SCHEDULE P (Accounts Standing Instructions)** may be amended based on comments and feedback of proposed Financing Parties in light of standard project finance/banking industry practices and precedent PPP transactions.

- (a) **Account Bank** has the meaning given to it in paragraph 1 of the Standing Instructions Notice;
- (b) **Account Holder** has the meaning given to it in paragraph 1 of the Standing Instructions Notice;
- (c) **Certified CCRP Amount** means the amount payable by the GoS to the Concessionaire as set out in the Capital Cost Recovery Payment Certificate;
- (d) **Concession Agreement** means the concession agreement dated [●] between the Governor of Sindh (acting through Secretary, Transport and Mass Transit Department, Government of Sindh), the Sindh Mass Transit Authority, and the Concessionaire in respect of the Project;
- (e) **Concessionaire** means [●], a company incorporated under the laws of Pakistan, having its registered office located at [●];
- (f) **Capital Cost Recovery Payment Account (Concessionaire)** means the account to be established and maintained by the Concessionaire, in which the Concessionaire shall receive the amounts payable by the Account Holder in accordance with the Capital Cost Recovery Payment Certificates;
- (g) **Capital Cost Recovery Payment Account (GoS)** has the meaning given to it in paragraph 1 of the Standing Instructions Notice;
- (h) **Capital Cost Recovery Payment Date** means the date of payment of the Certified CCRP Amount set out in the Capital Cost Recovery Payment Certificate;
- (i) **Independent Auditor** means [●];
- (j) **Independent Engineer** means [●];
- (k) **Project** means the design, build, finance, operate, maintain and transfer of the E-buses Assetsto be undertaken in public-private partnership mode by the Concessionaire in terms of the Agreement;
- (l) **Revocation Notice** has the meaning given to it in paragraph 5.1(b) of the Standing Instructions Notice;
- (m) **Sponsors** means [●];
- (n) **Standing Instructions** means these standing instructions for the operations of the Capital Cost Recovery Payment Account (GoS);
- (o) **Standing Instructions Notice** has the meaning given to it in paragraph 1 of the Standing Instructions Notice;
- (p) **Termination Payment Amount (Unpaid Amounts) Certificate** means the certificate issued by the Independent Auditor setting out the Termination Payment

Amount (Unpaid Total), the Termination Payment Amount (Unpaid Financing Due) and the Termination Payment Amount (Unpaid Other Amount);

- (q) **Termination Payment Amount (Unpaid Financing Due)** means the unpaid Financing Due (or part thereof) set out in the Termination Payment Amount (Unpaid Amounts) Certificate;
- (r) **Termination Payment Amount (Unpaid Other Amount)** means the unpaid Termination Payments (or part thereof) other than the Financing Due set out in the Termination Payment Amount (Unpaid Amounts) Certificate; and
- (s) **Capital Cost Recovery Payment Certificate** means the certificate jointly issued and duly signed by the Independent Auditor and the Independent Engineer, setting out the Certified CCRP Amount.

3. INTERPRETATION

3.1 Save where the contrary is indicated, any reference in this Standing Instructions Notice to:

- (a) a paragraph or an annexure shall be construed as a reference to a paragraph of or an annexure to this Standing Instructions Notice;
- (b) any instrument, memorandum, agreement, contract or document shall be construed as a reference to that instrument, memorandum, agreement, contract or document (together with any recitals or sections thereto) all as amended, varied, restated, novated or supplemented from time to time;
- (c) any person shall be construed so as to include their respective administrators, successors in interest and permitted assigns from time to time;
- (d) a statute, enactment or order shall be construed as a reference to such statute, enactment or order as the same may have been, or may from time to time be, amended or re-enacted and all subsidiary legislation and other instrument made under or deriving validity therefrom;
- (e) the singular shall include the plural and vice versa, where appropriate;
- (f) the words '*including*' and '*includes*' and any grammatical variants of those words, will be read as if followed by the words '*without limitation*,'
- (g) a reference to a person shall be construed to include a juridical person;
- (h) a time of Day shall be construed as a reference to Pakistan Standard Time; and
- (i) headings in this Standing Instructions Notice are for ease of reference only and shall be ignored in construing this Standing Instructions Notice.

3.2 The annexures to this Standing Instructions Notice shall form an integral part of this Standing Instructions Notice.

4. **THE INSTRUCTIONS IN RESPECT OF MATTERS RELATING TO THE CERTIFIED CCRP AMOUNT AND THE TERMINATION PAYMENT AMOUNT**

4.1 The Account Holder instructs and authorizes the Account Bank to act as follows:

THAT, upon receipt of a Capital Cost Recovery Payment Certificate by the Account Bank from time to time, the Account Bank shall, on the Capital Cost Recovery Payment Date, debit the Capital Cost Recovery Payment Account (GoS) in an amount equal to the Certified CCRP Amount and credit the same to the Capital Cost Recovery Payment Account (Concessionaire).

THAT, upon receipt of a Termination Payment Amount (Unpaid Amounts) Certificate by the Account Bank, the Account Bank shall, within one (1) Business Day of receipt of the Termination Payment Amount (Unpaid Amounts) Certificate²⁹ (a) first debit the Capital Cost Recovery Payment Account (GoS) in an amount equal to the Termination Payment Amount (Unpaid Financing Due), and (ii) second debit the Capital Cost Recovery Payment Account (GoS) in an amount equal to the Termination Payment Amount (Unpaid Other Amount) and, in each case, credit the same to the **[insert details of relevant Concessionaire account]**.

5. **REVOCATION AND AMENDMENT OF STANDING INSTRUCTIONS**

5.1 The Standing Instructions shall remain effective until such date which is the earlier of:

- (a) the date on which a written certificate, duly issued by the Independent Auditor, is received by the Account Bank from the Independent Auditor certifying that the Account Holder has fully complied with and has satisfied its payment obligations for the Project;
- (b) the date on which the Standing Instructions are revoked pursuant a written revocation notice (the **Revocation Notice**) duly executed and confirmed by the authorized representatives of each of the Account Holder and the Concessionaire and subsequently duly issued by the Account Holder to the Account Bank instructing revocation of the Standing Instructions;
- (c) the date on which a written certificate, duly issued jointly by the Independent Engineer and the Independent Auditor, is received by the Account Bank from the Account Holder certifying that the Agreement has (i) expired, or (ii) been terminated in accordance with the terms thereof and the Termination Payments have been made; and
- (d) the date on which a written certificate, duly issued by the Account Holder, is received by the Account Bank from the Account Holder certifying that the '*IZP Guarantee Instrument*' has been established or issued in accordance with the Agreement.

5.2 The Standing Instructions Notice may be amended pursuant a written notice duly executed and confirmed by the authorized representatives of the Account Holder and the

²⁹ This date will be subject to the terms of the Concession Direct Agreement.

Concessionaire and subsequently duly issued by the Account Holder to the Account Bank instructing amendment to this Standing Instructions Notice.

6. SEVERABILITY

- 6.1 If for any reason whatsoever any provision of this Standing Instruction Notice is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Account Bank and the Account Holder will negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable.

7. GOVERNING LAW & DISPUTE RESOLUTION

- 7.1 These Standing Instructions Notice shall be governed by and construed in accordance with the laws of Pakistan and the courts of law at Karachi, Pakistan with competent jurisdiction shall entertain all disputes arising hereunder.

PART 2 - FARE REVENUE ACCOUNT STANDING INSTRUCTIONS

[ON THE LETTERHEAD OF THE CONCESSIONAIRE]

DATE: [●]

REFERENCE: [●]

To,

[Fare Revenue Account Bank]

.....

.....

CC:

.....

RE: STANDING INSTRUCTIONS IN RESPECT OF FARE REVENUE ACCOUNT

Dear Sir/Madam:

1. FARE REVENUE ACCOUNT & ISSUANCE OF STANDING INSTRUCTIONS NOTICE

- 1.1 We, [●] (through [●]) (the **Account Holder**) refer you, [INSERT BANK NAME] (a banking company established under the laws of Pakistan having its registered office located at [●]) (the **Account Bank**) to the following bank account established and maintained in the name of the Account Holder at the Account Bank's branch, located at [●]:

Account Number [●], Account Title [●] (the **Fare Revenue Account**);

AND, We, the Account Holder, hereby issue this notice (the **Standing Instructions Notice**) containing the Standing Instructions for the maintenance and operation of the Fare Revenue Account and for matters relating to the same.

2. DEFINITIONS

- 2.1 In this Standing Instructions Notice, the following capitalized words shall bear the meaning ascribed to the same as below:

- (a) **Account Bank** has the meaning given to it in paragraph 1 of the Standing Instructions Notice;
- (b) **Account Holder** has the meaning given to it in paragraph 1 of the Standing Instructions Notice;
- (c) **Certified Fare Revenue** means the amount payable by the Concessionaire to the GoS as set out in the Fare Revenue Share Payment Certificate;
- (d) **Concession Agreement** means the concession agreement dated [●] between the Governor of Sindh (acting through Secretary, Transport and Mass Transit

Department, Government of Sindh), the Sindh Mass Transit Authority, and the Concessionaire in respect of the Project;

- (e) **Concessionaire** means [●], a company incorporated under the laws of Pakistan, having its registered office located at [●];
- (f) **Fare Revenue Account** has the meaning given to it in paragraph 1 of the Standing Instructions Notice;
- (g) **Fare Revenue Share Payment Certificate** means the certificate jointly issued and duly signed by the Independent Auditor and the Independent Engineer, setting out the Certified Fare Revenue;
- (h) **GoS Designated Account** means the account to be established and maintained by the GoS, in which the GoS shall receive the amounts payable by the Account Holder in accordance with the Fare Revenue Share Payment Certificate;
- (i) **Independent Auditor** means [●];
- (j) **Independent Engineer** means [●];
- (k) **Project** means the design, build, finance, operate, maintain and transfer of E-Buses Assets to be undertaken in public-private partnership mode by the Concessionaire in terms of the Agreement;
- (l) **Revocation Notice** has the meaning given to it in paragraph 5.1(b) of the Standing Instructions Notice;
- (m) **Sponsors** means [●];
- (n) **Standing Instructions** means these standing instructions for the operations of the Fare Revenue Account; and
- (o) **Standing Instructions Notice** has the meaning given to it in paragraph 1 of the Standing Instructions Notice.

3. **INTERPRETATION**

Save where the contrary is indicated, any reference in this Standing Instructions Notice to:

- (a) a paragraph or an annexure shall be construed as a reference to a paragraph of or an annexure to this Standing Instructions Notice;
- (b) any instrument, memorandum, agreement, contract or document shall be construed as a reference to that instrument, memorandum, agreement, contract or document (together with any recitals or sections thereto) all as amended, varied, restated, novated or supplemented from time to time;
- (c) any person shall be construed so as to include their respective administrators, successors in interest and permitted assigns from time to time;

- (d) a statute, enactment or order shall be construed as a reference to such statute, enactment or order as the same may have been, or may from time to time be, amended or re-enacted and all subsidiary legislation and other instrument made under or deriving validity therefrom;
- (e) the singular shall include the plural and vice versa, where appropriate;
- (f) the words '*including*' and '*includes*' and any grammatical variants of those words, will be read as if followed by the words '*without limitation*;'
- (g) a reference to a person shall be construed to include a juridical person;
- (h) a time of Day shall be construed as a reference to Pakistan Standard Time; and
- (i) headings in this Standing Instructions Notice are for ease of reference only and shall be ignored in construing this Standing Instructions Notice.

The annexures to this Standing Instructions Notice shall form an integral part of this Standing Instructions Notice.

4. THE INSTRUCTIONS IN RESPECT OF MATTERS RELATING TO THE CERTIFIED FARE REVENUE

4.1 The Account Holder instructs and authorizes the Account Bank to act as follows:

THAT, upon receipt of a Fare Revenue Share Payment Certificate by the Account Bank from time to time, the Account Bank shall, within one (1) Business Day of receipt of the Fare Revenue Share Payment Certificate, debit the Fare Revenue Account in an amount equal to the Certified Fare Revenue and credit the same to the Designated GoS Account.

5. REVOCATION AND AMENDMENT OF STANDING INSTRUCTIONS

5.1 The Standing Instructions shall remain effective until such date which is the earlier of:

- (a) the date on which a written certificate, duly issued by the Independent Auditor, is received by the Account Bank from the Independent Auditor certifying that the Account Holder has fully complied with and has satisfied its payment obligations for the Project;
- (b) the date on which the Standing Instructions are revoked pursuant a written revocation notice (the **Revocation Notice**) duly executed and confirmed by the authorized representatives of each of the Account Holder and the Concessionaire and subsequently duly issued by the Account Holder to the Account Bank instructing revocation of the Standing Instructions; and
- (c) the date on which a written certificate, duly issued jointly by the Independent Engineer and the Independent Auditor, is received by the Account Bank from the Account Holder certifying that the Agreement has (i) expired, or (ii) been terminated in accordance with the terms thereof and the Termination Payments have been made.

- 5.2 The Standing Instructions Notice may be amended pursuant a written notice duly executed and confirmed by the authorized representatives of the Account Holder and the Concessionaire and subsequently duly issued by the Account Holder to the Account Bank instructing amendment to this Standing Instructions Notice.

6. SEVERABILITY

- 6.1 If for any reason whatsoever any provision of this Standing Instruction Notice is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Account Bank and the Account Holder will negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable.

7. GOVERNING LAW & DISPUTE RESOLUTION

- 7.1 These Standing Instructions Notice shall be governed by and construed in accordance with the laws of Pakistan and the courts of law at Karachi, Pakistan with competent jurisdiction shall entertain all disputes arising hereunder.

PART 3 - NON-FARE REVENUE ACCOUNT STANDING INSTRUCTIONS

[ON THE LETTERHEAD OF THE CONCESSIONAIRE]

DATE: [●]

REFERENCE: [●]

To,

[Non-Fare Revenue Account Bank]

.....

.....

CC:

.....

RE: STANDING INSTRUCTIONS IN RESPECT OF NON-FARE REVENUE ACCOUNT

Dear Sir/Madam:

1. NON-FARE REVENUE ACCOUNT & ISSUANCE OF STANDING INSTRUCTIONS NOTICE

- 1.1 We, [●] (through [●]) (the **Account Holder**) refer you, [INSERT BANK NAME] (a banking company established under the laws of Pakistan having its registered office located at [●]) (the **Account Bank**) to the following bank account established and maintained in the name of the Account Holder at the Account Bank's branch, located at [●]:

Account Number [●], Account Title [●] (the **Non-Fare Revenue Account**);

AND, We, the Account Holder, hereby issue this notice (the **Standing Instructions Notice**) containing the Standing Instructions for the maintenance and operation of the Fare Revenue Account and for matters relating to the same.

2. DEFINITIONS

- 2.1 In this Standing Instructions Notice, the following capitalized words shall bear the meaning ascribed to the same as below:

- (a) **Account Bank** has the meaning given to it in paragraph 1 of the Standing Instructions Notice;
- (b) **Account Holder** has the meaning given to it in paragraph 1 of the Standing Instructions Notice;
- (c) **Certified Non-Fare Revenue** means the amount payable by the Concessionaire to the GoS as set out in the Non-Fare Revenue Share Payment Certificate;
- (d) **Concession Agreement** means the concession agreement dated [●] between the Governor of Sindh (acting through Secretary, Transport and Mass Transit

Department, Government of Sindh), the Sindh Mass Transit Authority, and the Concessionaire in respect of the Project;

- (e) **Concessionaire** means [●], a company incorporated under the laws of Pakistan, having its registered office located at [●];
- (f) **GoS Designated Account** means the account to be established and maintained by the GoS, in which the GoS shall receive the amounts payable by the Account Holder in accordance with the Non-Fare Revenue Share Payment Certificate;
- (g) **Independent Auditor** means [●];
- (h) **Independent Engineer** means [●];
- (i) **Non-Fare Revenue Account** has the meaning given to it in paragraph 1 of the Standing Instructions Notice;
- (j) **Non-Fare Revenue Share Payment Certificate** means the certificate jointly issued and duly signed by the Independent Auditor and the Independent Engineer, setting out the Certified Non-Fare Revenue;
- (k) **Project** means the design, build, finance, operate, maintain and transfer of E-Buses Assets to be undertaken in public-private partnership mode by the Concessionaire in terms of the Agreement;
- (l) **Revocation Notice** has the meaning given to it in paragraph 5.1(b) of the Standing Instructions Notice;
- (m) **Sponsors** means [●];
- (n) **Standing Instructions** means these standing instructions for the operations of the Fare Revenue Account; and
- (o) **Standing Instructions Notice** has the meaning given to it in paragraph 1 of the Standing Instructions Notice.

3. INTERPRETATION

3.1 Save where the contrary is indicated, any reference in this Standing Instructions Notice to:

- (a) a paragraph or an annexure shall be construed as a reference to a paragraph of or an annexure to this Standing Instructions Notice;
- (b) any instrument, memorandum, agreement, contract or document shall be construed as a reference to that instrument, memorandum, agreement, contract or document (together with any recitals or sections thereto) all as amended, varied, restated, novated or supplemented from time to time;
- (c) any person shall be construed so as to include their respective administrators, successors in interest and permitted assigns from time to time;

- (d) a statute, enactment or order shall be construed as a reference to such statute, enactment or order as the same may have been, or may from time to time be, amended or re-enacted and all subsidiary legislation and other instrument made under or deriving validity therefrom;
 - (e) the singular shall include the plural and vice versa, where appropriate;
 - (f) the words ‘*including*’ and ‘*includes*’ and any grammatical variants of those words, will be read as if followed by the words ‘*without limitation*’;
 - (g) a reference to a person shall be construed to include a juridical person;
 - (h) a time of Day shall be construed as a reference to Pakistan Standard Time; and
 - (i) headings in this Standing Instructions Notice are for ease of reference only and shall be ignored in construing this Standing Instructions Notice.
- 3.2 The annexures to this Standing Instructions Notice shall form an integral part of this Standing Instructions Notice.

4. THE INSTRUCTIONS IN RESPECT OF MATTERS RELATING TO THE CERTIFIED NON-FARE REVENUE

- 4.1 The Account Holder instructs and authorizes the Account Bank to act as follows:

THAT, upon receipt of a Non-Fare Revenue Share Payment Certificate by the Account Bank from time to time, the Account Bank shall, within one (1) Business Day of receipt of the Non-Fare Revenue Share Payment Certificate, debit the Non-Fare Revenue Account in an amount equal to the Certified Non-Fare Revenue and credit the same to the Designated GoS Account.

5. REVOCATION AND AMENDMENT OF STANDING INSTRUCTIONS

- 5.1 The Standing Instructions shall remain effective until such date which is the earlier of:
- (a) the date on which a written certificate, duly issued by the Independent Auditor, is received by the Account Bank from the Independent Auditor certifying that the Account Holder has fully complied with and has satisfied its payment obligations for the Project;
 - (b) the date on which the Standing Instructions are revoked pursuant a written revocation notice (the **Revocation Notice**) duly executed and confirmed by the authorized representatives of each of the Account Holder and the Concessionaire and subsequently duly issued by the Account Holder to the Account Bank instructing revocation of the Standing Instructions; and
 - (c) the date on which a written certificate, duly issued jointly by the Independent Engineer and the Independent Auditor, is received by the Account Bank from the Account Holder certifying that the Agreement has (i) expired, or (ii) been

terminated in accordance with the terms thereof and the Termination Payments have been made.

- 5.2 The Standing Instructions Notice may be amended pursuant to a written notice duly executed and confirmed by the authorized representatives of the Account Holder and the Concessionaire and subsequently duly issued by the Account Holder to the Account Bank instructing amendment to this Standing Instructions Notice.

6. SEVERABILITY

- 6.1 If for any reason whatsoever any provision of this Standing Instruction Notice is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Account Bank and the Account Holder will negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable.

7. GOVERNING LAW & DISPUTE RESOLUTION

- 7.1 These Standing Instructions Notice shall be governed by and construed in accordance with the laws of Pakistan and the courts of law at Karachi, Pakistan with competent jurisdiction shall entertain all disputes arising hereunder.

SCHEDULE Q
LOSS OF REVENUE

Loss of Revenue

In any Intervening Period, if Loss of Revenue is payable then the same shall be calculated as follows:

Loss of Revenue means, the loss incurred by the Concessionaire during the Intervening Event Period, directly as a result of the Intervening Event (other than Electricity Unavailability), computed as X: $(A - B) - C$

Where:

X: Loss of Revenue

A: Potential Concessionaire Revenue

B: Actual Concessionaire Revenue

DEFINITIONS

In this **SCHEDULE Q (*Loss of Revenue*)**, the following terms shall have the following meaning:

Actual Concessionaire Revenue means the Fare Revenue (Concessionaire Share) within the Fare Revenue (Actual) during the Intervening Event Period;

Intervening Event has the meaning given to it in Article 1 (*Definitions and Interpretation*) of this Agreement;

Intervening Event (Fare Reduction) has the meaning given to it in Article 1 (*Definitions and Interpretation*) of this Agreement;

Intervening Event Period has the meaning given to it in Article 1 (*Definitions and Interpretation*) of this Agreement;

Intervening Event Period Commuter Count means the actual daily number of Commuters during the Intervening Event Period;

Potential Concessionaire Revenue means the Fare Revenue (Concessionaire Share) within the Fare Revenue that could have been generated by the Concessionaire during the Intervening Event Period but was not so generated directly as a result of the Intervening Event computed as:

- (a) (i) in case of Intervening Event (Fare Reduction), the Intervening Event Period Commuter Count multiplied by the Fare Rate (O&M Costs), as set out in the Fare Structure, during Intervening Event Period; or (ii) in case of an Intervening Event that directly causes reduction of Commuters on the Buses and/or delays achievement of the COD (First Segment) and/or COD (Second Segment), the Potential Commuter Count multiplied by

the Fare Rate (O&M Costs), as set out in the Fare Structure, during the Intervening Event Period;

Potential Commuter Count means (a) if the Intervening Event (i) occurs prior to the COD (First Segment) or the COD (Segment Segment) and delays achievement of the COD (First Segment) or the COD (Second Segment), respectively; or (ii) occurs after the COD (First Segment) or the COD (Segment Segment); and, in each case (A) subsists up to the first (1st) Operational Year, the Commuters (Committed) in respect of the Intervening Event Period; and (b) if the Intervening Event occurs after the first (1st) Operational Year, the potential Commuters during the Intervening Event Period, computed as the average daily number of Commuters for each Bus multiplied by the number of Days in a Intervening Event Period capped at the Commuters (Committed).

SCHEDULE R
TERMINATION PAYMENT

Sr. No.	TERMINATION PAYMENT AMOUNT	COMPENSATION PAYABLE BY THE GoS
1.	TERMINATION PAYMENT SUM (PRE-COMMENCEMENT DATE)	In the event this Agreement is terminated by the Concessionaire prior to the Commencement Date pursuant to Section 21.3 (<i>Termination Due to Non-Occurrence of the Commencement Date</i>), the GoS shall make payment to the Concessionaire for the actual costs and expenses (as certified by the Independent Experts) incurred by the Shareholders and/or the Concessionaire for obtaining E&S Approvals and/or undertaking the Detailed Engineering Design/Construction Drawings, which shall under no shall exceed the value of the Development Period Performance Security
2.	TERMINATION PAYMENT SUM (NPFME)	(a) the Termination Equity; plus (b) the Financing Due; less Deductible Termination Amounts
3.	TERMINATION PAYMENT SUM (PFME)	(a) the Termination Equity; plus (b) the Termination Dividend Amount; plus (c) the Financing Due; less Deductible Termination Amounts
4.	TERMINATION PAYMENT SUM (CONCESSIONAIRE DEFAULT)	(a) the Financing Due; less Deductible Termination Amounts
5.	TERMINATION PAYMENT SUM (GoS DEFAULT)	(a) the Termination Equity; plus (b) the Termination Dividend Amount, plus (c) the Financing Due; less Deductible Termination Amounts

COMPENSATION ELEMENTS

Unless specified otherwise or the context requires to the contrary, all capitalized terms used in this **SCHEDULE R (*Termination Payment*)** shall bear the meaning ascribed thereto in the Main Body. In addition, the following capitalized terms shall bear the meaning ascribed below:

Deductible Termination Amounts means, to the extent it is a positive amount, the aggregate, up to the date immediately preceding the Termination Date, of:

- (a) all credit balances on any bank accounts, held by or on behalf of the Concessionaire on the Termination Date (provided, that in the event the Financing Due is outstanding, to the extent the Financing Parties including any agent or trustee for such person, in each case, not objected to by the GoS, have valid security interests over such bank accounts and can recover such credit balances), insurance proceeds actually received (save where such credit balances or insurance proceeds are paid to the GoS/SMTA and/or to be applied in reinstatement), proceeds from the liquidation of any authorized investment, and letters of credit issued in lieu of maintaining credit balance in any account; and
- (b) amounts GoS is entitled to off-set due to deductions/adjustments in terms of this Agreement;

Financing Due means the aggregate of the following sums outstanding and payable to the Financing Parties up to the date immediately preceding the Termination Date:

- (a) the Outstanding Principal Amount;
- (b) the interest, mark-up or profit (or any other term connoting the return paid to Financing Parties on debt financing) accruing on the Outstanding Principal Amount; and
- (c) only in the event of Termination due to PFME or a GoS Event of Default (i) penal interest; or (ii) charges payable under the Financing Documents to the Financing Parties;

Outstanding Principal Amount means:

- (a) prior to the COD (Second Segment), all actual outstanding principal amount required to be repaid by the Concessionaire pursuant to the Financing Documents in effect as of Financial Close, such amount not to exceed ●³⁰; and
- (b) at any time on or after the COD (Second Segment), the actual outstanding principal amount required to be repaid by the Concessionaire pursuant to the Financing Documents in effect as of Financial Close, such amount not exceeding the principal amount stated for the relevant time period in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)**,

in each case, to the extent such principal amount was actually applied for the purposes of financing the Project;

Termination Equity means, as of the Termination Date occurring due to Termination, the aggregate of the Sponsor Funding Amount reduced on a straight-line basis from COD (Second Segment) through the term of this Agreement;

³⁰ Insert principal amount specified in the Bid of the Successful Bidder.

Termination Equity (IRR) means the post-tax internal rate of return, the same being seventeen percent (17%), on the Ordinary Shares;

Termination Dividend Amount means the aggregate return on Termination Equity for each of the three (3) Accounting Years falling immediately after the Termination Date, the same being an amount equal to the aggregate of Termination Equity IRR applied to the Termination Equity for each of the three (3) Accounting Years falling after the Termination Date.

SIGNATURE PAGES

IN WITNESS WHEREOF, the Parties, intending to be legally bound, have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

GOS

Signature

Name

(block capitals)

Title

In the presence of:

Witness signature

Witness name

(block capitals)

Witness signature

Witness name

(block capitals)

SINDH MASS TRANSIT AUTHORITY

Signature

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Name

(block capitals)

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Title

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In the presence of:

Witness signature

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Witness name

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Witness signature

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THE CONCESSIONAIRE

Signature

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Name
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Title

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In the presence of:

Witness signature

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VOLUME II - TECHNICAL SPECIFICATIONS

1. PROJECT OVERVIEW AND CONTEXT

1.1 PROJECT BACKGROUND AND RATIONALE

- 1.1.1 Public transport needs of the Province of Sindh present significant challenges due to rapid and unpredictable population growth driven by employment, housing and livelihood requirements. The expansion of urban areas, coupled with increasing population density, has resulted in heightened demand for efficient, safe and reliable public transport services. At present, several cities in Sindh lack an adequate intra-city public transport system. In such cities, commuters primarily rely on private vehicles, informal vans and Qingqis, which are insufficient in terms of capacity, reliability, passenger comfort and public safety.
- 1.1.2 Karachi, being the economic hub of Pakistan and home to a population exceeding twenty million (20,000,000), faces the most acute transport challenges. A heterogeneous traffic mix dominated by private vehicles, many of which are poorly maintained, combined with inadequate enforcement of traffic regulations, has resulted in severe congestion, inefficiencies and safety risks.
- 1.1.3 In order to address these challenges, the Government of Sindh has established the **SMTA** with the mandate to plan, develop, operate and regulate safe, efficient and comfortable urban public transport systems across major cities of the province of Sindh.
- 1.1.4 SMTA has proposed the development of an integrated Bus operations system to cater to intra-city public transport demand in major cities of Sindh, including Karachi, Hyderabad, Mirpurkhas, Sukkur, Larkana and Shaheed Benazirabad.

1.2 PROJECT DESCRIPTION AND OBJECTIVES

- 1.2.1 Under the Project, the Concessionaire shall procure, deploy, operate and maintain a fleet of five hundred (500) full electric city Buses in Karachi and Hyderabad, comprising:
- (a) three hundred (300) twelve-meter (12 m) electric city Buses; and
 - (b) two hundred (200) eight point five to nine meter (8.5 to 9 m) electric city Buses,
- together with *inter alia* the required Bus Depots, Charging Infrastructure, Intelligent Transport System, Operations Control Centre and Transit Bus Shelters to support uninterrupted operations.
- 1.2.2 The Project is intended to:
- (a) provide high-quality, safe and reliable public transport services;
 - (b) reduce congestion and environmental impacts;
 - (c) improve passenger comfort and accessibility; and

- (d) contribute towards the development of a sustainable urban transport system.

Detailed technical specifications of the Buses are provided in **Exhibit 1**, and route descriptions are provided in **Exhibit 2**, of this **SCHEDULE A (Technical Specifications)**.

1.3 PROJECT CITIES, PHASING AND DEPLOYMENT STRATEGY

- 1.3.1 The Project shall be implemented in phases across multiple cities of Sindh. In the initial phase, SMTA intends to deploy electric city Buses in Karachi and Hyderabad, followed by subsequent phases covering other cities as may be determined by SMTA/GoS.
- 1.3.2 The Concessionaire shall be responsible for supporting phased fleet induction, Charging Infrastructure deployment and Depot readiness in accordance with the timelines and deployment strategy approved by SMTA/GoS.

1.4 ROUTE NETWORK AND SMTA DIRECTIONS

- 1.4.1 The Project routes shall be operated on approved alignments primarily to complement existing Operational BRT Green and Orange lines and other BRT projects identified under JICA study.
- 1.4.2 SMTA/GoS may assist the Concessionaire in securing parking and turn-around spaces at designated route terminals. Notwithstanding such assistance, the Concessionaire shall remain solely responsible for ensuring that all required spaces are available, developed, compliant with basic operational requirements and fully functional. In the event of any delay by SMTA/GoS, the Concessionaire shall arrange suitable alternatives within the existing financial arrangements of the Agreement.
- 1.4.3 SMTA reserves the right to modify, amend or re-align routes in accordance with GoS directives or policy decisions. Any route changes approved by SMTA/GoS shall not give rise to any claims by the Concessionaire.

1.5 APPROVED ROUTE ALIGNMENTS

- 1.5.1 The Project shall be implemented on the basis of the route network approved by SMTA/GoS. The approved route alignments for the Project, covering Karachi and Hyderabad, are set out below. The Concessionaire shall operate the electric Bus fleet strictly in accordance with the approved routes, subject to SMTA/GoS' rights under this **SCHEDULE A (Technical Specifications)** and this Agreement to modify routes from time to time.

1.6 ROUTE NETWORK

- 1.6.1 The approved public transport routes for Karachi and Hyderabad shall consist of the following thirty (30) routes; twenty-five (25) routes in Karachi and five (5) in Hyderabad:

TABLE - 1 PROPOSED PUBLIC TRANSPORT ROUTES IN KARACHI AND HYDERABAD

ROUTE ID	ROUTE ALIGNMENT	ROUTE LENGTH (KM)
KARACHI (25 ROUTES)		
P-1	Altaf Nagar – Tower	28
P-2	Khairabad – Cantt Station	28
P-3	Rais Amrohi – Kiran Hospital	28
P-4	Port Qasim – Shershah	37
P-5	Baldia Stadium – Gulshan-e-Maymar	29
P-6	Nishan-e-Haider – Landhi	37
P-7	Malir -15 (Jama Milliyya Rd.) – Clock Tower	31
P-8	Scheme 33 – Tower	35
P-9	Phehlwan Goth – Tower	35
P-10	Landhi – Orangi	36
P-11	Gulshan-e-Bahar – Keamari	27
P-12	Tower – Data Nagar Orangi	20
P-13	Babar Market – Empress Market	20
P-14	Water Pump – Keamari	33
P-15	Ittehad Town – Cantt Station	26
P-16	Gulberg – Tower	16
P-17	Bhains Colony – New Sabzi Mandi	36
P-18	Orangi Town – Pehlwan Goth	30
P-19	Orangi Town – Khokhrapar	36
P-20	Bhains Colony – Qalandaria	45
P-21	AO Clinic – Bhains Colony	42
P-22	Coast Guard – Godhra	35
P-23	Qasba Colony – Qayyumabad	40
P-24	Scheme 33 – Tower	25
P-25	Coast Guard – Tower	26
HYDERABAD		
H-1	Qaim Khani Hostel – Regional Passport	19
H-2	Qaim Khani Hostel – Kohsar	15
H-3	Haider Chowk – Gulistan -e-Sajjad	09
H-4	Nasim Nagar – Hyderabad Jn. Railway Station	11
H-5-	Liaquat University of Medical & Health Sciences Jamshoro – Fateh Chowk Hyderabad	19

1.6.2 Route lengths are indicative and may vary due to alignment refinements approved by SMTA/GoS.

1.7 ROUTE MODIFICATIONS AND DIRECTIONS

1.7.1 SMTA may, from time to time, amend, modify or re-align any approved route due to Government directives, policy decisions, operational requirements or public interest considerations.

1.7.2 All route changes approved by SMTA/GoS shall be binding on the Concessionaire and shall not give rise to any claim, compensation or relief by the Concessionaire.

1.7.3 The Concessionaire shall have the right to review and propose modifications to routes and operational plans to achieve the Guaranteed Annual Mileage of 60,000 KM per Bus. Any such modifications shall be subject to technical verification by the Independent Engineer and prior approval of SMTA/GoS. Route overlap in excess of thirty percent (30%) shall not be permitted.

1.8 TURN-AROUND AND TERMINAL ARRANGEMENTS

1.8.1 Without prejudice to Section 1.4.2 above, SMTA/GoS may assist the Concessionaire in securing parking or turn-around spaces at route terminals. Notwithstanding such assistance, the Concessionaire shall bear sole responsibility for ensuring that such spaces are available, developed, compliant with basic operational requirements and fully functional.

1.8.2 In the event of any delay or inability on the part of SMTA/GoS to provide such spaces, the Concessionaire shall arrange suitable alternatives within the existing financial arrangements of this Agreement.

2. GENERAL SCOPE OF THE CONCESSION

2.1 The Concessionaire shall be responsible for the procurement, development, installation, operation and maintenance of all assets, systems and services required for implementation of the Project in accordance with the Applicable Standards.

2.2 The scope of work of the Concessionaire shall include, without limitation, the obligations set out in this Section 2 and the detailed technical requirements specified elsewhere in this **SCHEDULE A (*Technical Specifications*)**.

2.3 PROCUREMENT OF ELECTRIC BUS FLEET AND CHARGING INFRASTRUCTURE

2.3.1 **BUS FLEET PROCUREMENT**

The Concessionaire shall procure a fleet of full electric city Buses in accordance with the specifications set out in **Exhibit 1** of this **SCHEDULE A (*Technical Specifications*)**, comprising:

- (a) three hundred (300) twelve-meter (12.0 m) full electric city Buses; and
- (b) two hundred (200) eight point five to nine meter (8.5 - 9m) full electric city Buses.

The Concessionaire shall also procure all Spare Parts, maintenance tools and diagnostic equipment specified in Exhibit 3 of this **SCHEDULE A (*Technical Specifications*)**, required for the operation and maintenance of the Buses.

2.3.2 **CHARGING INFRASTRUCTURE**

The Concessionaire shall procure and install an adequate number of electric chargers to energize the Buses in a timely manner.

Chargers shall have a rated capacity in the range of **160 kW to 240 kW**, based on SMTA/GoS' calculation of **one hundred and twenty-five (125) chargers**, inclusive of **twenty percent (20%) redundancy**.

The final number, configuration and deployment of chargers shall be subject to approval by Independent Engineer based on operational requirements. The Concessionaire shall not be entitled to any adjustment or claim solely due to changes in charger configuration approved by Independent Engineer.

2.4 **ELECTRICITY SUPPLY INFRASTRUCTURE**

2.4.1 The Concessionaire shall procure, install and maintain all electricity supply infrastructure required to power the Bus Depots and Transit Bus Shelters, including but not limited to:

- (a) supply lines;
- (b) transformers;
- (c) protection equipment; and
- (d) associated electrical infrastructure.

All such electricity infrastructure shall be developed and operated in compliance with the requirements of the relevant distribution company and Applicable Laws.

2.5 **BUS DEPOT AND TRANSIT BUS SHELTERS DESIGN, CONSTRUCTION AND DEVELOPMENT**

2.5.1 The Concessionaire shall design, construct and develop Bus Depots and Transit Bus Shelters at locations provided by SMTA/GoS. Land for such Depots shall be provided to the Concessionaire at no cost.

2.5.2 The Bus Depots shall, in aggregate, have the capacity to accommodate a minimum of five hundred (500) electric Buses and shall be complete in all respects prior to commencement of operations.

2.5.3 Each Bus Depot shall include, at a minimum:

- (a) workshop and maintenance areas;
- (b) storage areas;
- (c) inspection pits;

- (d) washing areas;
- (e) Bus parking areas;
- (f) Bus charging facilities; and
- (g) administrative blocks.

2.5.4 Bus Depots may be developed at multiple locations, as approved in terms of this Agreement. The detailed specifications are provided in the **Exhibit 4** of this **SCHEDULE A (*Technical Specifications*)**.

2.6 OPERATIONS AND MAINTENANCE RESPONSIBILITIES

2.6.1 The Concessionaire shall be responsible for the complete operation and maintenance of:

- (a) electric Buses;
- (b) Charging Infrastructure;
- (c) all electricity infrastructure;
- (d) Transit Bus Shelters; and
- (e) Bus Depots,

in accordance with the requirements set out in this **SCHEDULE A (*Technical Specifications*)**.

2.7 INTELLIGENT TRANSPORT SYSTEMS (ITS) AND OPERATIONS CONTROL

2.7.1 The Concessionaire shall procure, install, operate and maintain a fully integrated Intelligent Transport System interoperable with existing BRT and feeder Bus systems and capable of integration with future systems.

2.7.2 The ITS shall include, without limitation:

- (a) Automated Fare Collection System (AFC);
- (b) Bus Scheduling System (BSS);
- (c) Depot Management System (DMS);
- (d) Charging Management System (CMS); and
- (e) Operations Control Centre (OCC).

- 2.7.3 The ITS shall provide live tracking of Bus operations with complete visibility to SMTA/GoS through the existing Green Line Operations Control Centre, including necessary updates to hardware and software systems to reflect live operational data.

2.8 REGISTRATION, LICENSING AND INSURANCE

- 2.8.1 The Concessionaire shall ensure that all Buses are locally registered, licensed and homologated by the relevant authorities.
- 2.8.2 The Concessionaire shall be the named lead for official registration and licensing, and shall facilitate and manage all processes required to ensure timely registration, licensing and homologation.
- 2.8.3 The Concessionaire shall bear all costs of inland transportation and associated insurance for delivery of the Buses to the designated Bus Depots.
- 2.8.4 Insurance coverage procured by the Concessionaire shall include comprehensive coverage against terrorism, vandalism and sabotage and shall remain valid for the full Term of the Agreement.

2.9 TRAINING OBLIGATIONS

- 2.9.1 The Concessionaire shall ensure that the Bus manufacturer provides maintenance training programs to the Concessionaire's staff in accordance with **Exhibit 1** of this **SCHEDULE A (Technical Specifications)**. Without prejudice to the foregoing, the Concessionaire shall also comply with all training requirements for drivers, conductors and operational staff as specified elsewhere in this Schedule A.

2.10 GENERAL OBLIGATIONS OF THE CONCESSIONAIRE

2.10.1 **FLEET IDENTIFICATION AND BRANDING**

The Concessionaire shall allocate a unique identifying fleet number to each Bus, which shall be displayed on the Bus at all times.

The Concessionaire shall provide Independent Engineer with an initial set of display decals for the Buses and shall replace such display decals whenever required, as directed by Independent Engineer from time to time.

2.10.2 **FLEET CONDITION AND OPERATIONAL STANDARDS**

The Concessionaire shall ensure that all Buses are maintained in satisfactory operational condition at all times and conform to the operational standards of a first-class intra-city public transport system.

Without limitation, all Buses shall be:

- (a) clean and tidy;

- (b) well-maintained;
- (c) safe and secure for public use;
- (d) roadworthy and drivable; and
- (e) compliant with all applicable health and safety requirements.

2.10.3 **INSPECTIONS AND COMPLIANCE**

The Independent Engineer shall be entitled to conduct random inspections of any Bus during the Operations Period.

If any inspection reveals defects, deficiencies or health and safety issues that render a Bus unsuitable for operations on designated routes, SMTA/GoS shall be entitled to prohibit the use of such Bus.

The prohibition of use of any Bus shall not release or absolve the Concessionaire from any of its obligations under this Agreement. The Concessionaire shall remain fully responsible for all Buses while in its possession.

3. **BUS FLEET - TECHNICAL, WARRANTY AND ACCEPTANCE REQUIREMENTS**

3.1 **FLEET COMPOSITION AND QUANTITIES**

- 3.1.1 The Concessionaire shall procure, deploy, operate and maintain a fleet of full electric city Buses strictly in accordance with the requirements set out in the **Exhibit 1** of this **SCHEDULE A (Technical Specifications)**.

The fleet shall comprise:

- (a) **three hundred (300)** full electric city Buses of **twelve meters (12 m)** in length; and
 - (b) **two hundred (200)** full electric city Buses of **eight point five to nine meters (8.5 to 9 m)** in length.
- 3.1.2 No Bus shall be inducted into service unless it fully complies with the technical specifications, performance requirements and acceptance criteria set out in **SCHEDULE A (Technical Specifications)**.
- 3.1.3 No deviation, substitution or modification to the approved Bus specifications shall be permitted without the prior written approval of the Independent Engineer or the GoS, as the case may be.

3.2 BUS SPECIFICATIONS AND TECHNICAL COMPLIANCE

3.2.1 All Buses supplied under the Project shall conform to the detailed technical specifications, performance parameters and component requirements set out in **Exhibit 1** of this **SCHEDULE A (Technical Specifications)**, including but not limited to:

- (a) vehicle dimensions and layout;
- (b) passenger carrying capacity;
- (c) electric propulsion and drivetrain systems;
- (d) battery systems and charging interfaces;
- (e) braking, suspension and steering systems;
- (f) heating, ventilation and air-conditioning systems; and
- (g) onboard safety and monitoring equipment.

3.2.2 Without limitation, the Buses shall be capable of sustained operation under high ambient temperatures, humidity, dust and traffic congestion conditions typical of urban environments in Sindh. The Concessionaire shall ensure that all Buses are suitable for intensive urban public transport operations and local climatic conditions.

3.3 WARRANTY REQUIREMENTS

3.3.1 The Concessionaire shall ensure that warranties are provided for each Bus and its components in accordance with **Exhibit 1** of this **SCHEDULE A (Technical Specifications)**. Without limitation:

- (a) the chassis, body and all Bus components (other than battery packs and electric motors) shall be covered by a warranty commencing from the date of delivery of the Bus for a period of two (2) years; and
- (b) warranties for battery packs, electric motors, controllers and charging equipment, including replacement obligations, shall be provided in accordance with the specifications set out in **Exhibit 1** of this **SCHEDULE A (Technical Specifications)**.

3.3.2 The Concessionaire shall ensure that all warranties are valid, enforceable and assignable in accordance with the Agreement.

3.4 BUS ACCEPTANCE AND READINESS FOR OPERATIONS

3.4.1 The induction of Buses into operations shall be subject to delivery, inspection and acceptance protocols as specified in this **SCHEDULE A (Technical Specifications)**, and specifically its **Exhibit 1**.

- 3.4.2 The Concessionaire shall ensure that each Bus is fully operational, tested, insured, registered and compliant with all Applicable Laws prior to deployment on any route. Acceptance shall be conducted by Independent Engineer in accordance with the Applicable Standards.

4. CHARGING AND ELECTRICAL INFRASTRUCTURE

4.1 CHARGING PHILOSOPHY AND OPERATIONAL APPROACH

- 4.1.1 The Charging Infrastructure for the Project shall be designed, installed, operated and maintained to ensure uninterrupted and reliable operation of the electric Bus fleet.
- 4.1.2 Charging shall primarily be undertaken at Bus Depots with provision for opportunity or fast charging during operations where required and as agreed between SMTA and the Concessionaire.
- 4.1.3 The Concessionaire shall ensure that charging operations are fully coordinated with Bus schedules, Depot operations and operational readiness requirements.

4.2 TYPES OF CHARGERS AND RATED CAPACITY

- 4.2.1 The Concessionaire shall procure and install equipment forming part of the Charging Infrastructure suitable for the charging requirements of the electric Bus fleet.
- 4.2.2 Charging infrastructure shall include:
- (a) Medium chargers with a rated capacity of 160 kWh; and
 - (b) Fast chargers with a rated capacity of 240 kWh.
- 4.2.3 Each charger shall be equipped with two (2) charging guns, enabling the simultaneous charging of two Buses. Only one gun per charger shall be used at a time unless otherwise approved and technically certified by Independent Engineer.

4.3 CHARGER QUANTITIES AND REDUNDANCY

- 4.3.1 The Charging Infrastructure for the Project shall be developed on the basis of SMTA/GoS' assessment requiring a total of one hundred and twenty-five (125) chargers, inclusive of a twenty percent (20%) redundancy margin, in order to ensure operational continuity, reliability, and system resilience.
- 4.3.2 The Concessionaire shall provide and maintain a sufficient number of chargers at each Bus Depot to support uninterrupted operations of the electric Bus fleet, taking into account, *inter alia*:

- (a) the approved fleet size and Bus deployment schedules;
 - (b) charging duration, turnaround times, and operational cycles; and
 - (c) redundancy requirements to address charger downtime, maintenance activities, or faults.
- 4.3.3 At all times during the Operations Period, the Charging Infrastructure shall be capable of supporting full fleet availability in accordance with the approved Dispatch Schedule and Headway Targets and the operational requirements of the Project.
- 4.4 CHARGER MANAGEMENT SYSTEM (CMS)
 - 4.4.1 The Concessionaire shall procure, install, operate and maintain a **Charger Management System (CMS)** to monitor, control and optimize charging operations at all Bus Depots.
 - 4.4.2 The CMS shall be integrated with Bus Depot operations and relevant ITS subsystems to enable coordinated charging schedules, charging status monitoring and reporting. The CMS shall interface with vehicle Battery Management Systems (BMS) and other relevant ITS subsystems to support charging prioritisation, state-of-charge monitoring and operational readiness.
 - 4.4.3 The Concessionaire shall deploy a centralized **Charger Management System (CMS)** integrated with:
 - (a) Bus Battery Management Systems (BMS);
 - (b) Depot Management System (DMS); and
 - (c) Operations Control Centre.
 - 4.4.4 The CMS shall provide, at a minimum:
 - (a) real-time monitoring of charger status (available, in use, fault, offline);
 - (b) charging power, voltage, current, energy consumption, and duration;
 - (c) automated charging schedules based on State of Charge (SoC), dispatch readiness, and priority rules;
 - (d) load balancing, demand management, and peak shaving;
 - (e) alarm and event management for faults, safety triggers, and emergency stops;
 - (f) generation of charger utilization and energy consumption reports.

4.5 ELECTRICAL SUPPLY AND GRID CONNECTIVITY

4.5.1 The Concessionaire shall be responsible for procuring, installing and maintaining all electricity supply infrastructure required to power the charging systems, Bus Depots and associated facilities. All electricity supply arrangements shall be established in compliance with the requirements of the relevant electricity distribution company and Applicable Laws.

4.5.2 Electricity supply may be provided through:

- (a) a dedicated electrical transmission line installed at the Bus Depot; and/or
- (b) an installed solar power system, where applicable.

4.5.3 The Concessionaire shall manage all electricity bills, including matters relating to net metering, if applicable, and shall ensure uninterrupted electricity supply to support Depot operations, washing plants and Bus charging.

4.6 ELECTRICITY SUBSTATIONS, TRANSFORMERS AND PROTECTION EQUIPMENT

4.6.1 The Concessionaire shall install and maintain all necessary electricity substations, transformers, switchgear, protection devices and related equipment required to support the charging load and overall electrical demand of the Bus Depots.

4.6.2 All such infrastructure shall comply with applicable standards, regulations and safety requirements.

4.7 INTERNAL POWER DISTRIBUTION SYSTEMS

4.7.1 The Concessionaire shall design and install internal power distribution systems within each Bus Depot, including cabling, panels, meters and protection equipment, to safely and efficiently distribute electrical power to chargers, washing plants, lighting and other Depot facilities.

4.8 BACKUP POWER FACILITIES

4.8.1 The Concessionaire shall procure, install, operate and maintain electricity backup facilities to ensure continuity of critical Depot operations in the event of grid power failure.

4.8.2 Backup power provision shall include diesel generators of 350 kVA capacity, with four (4) generators at each Bus Depot, unless otherwise approved by Independent Engineer.

4.8.3 The Concessionaire shall ensure that all backup systems remain in fully functional condition at all times.

4.9 ELECTRICAL SAFETY, EARTHING AND COMPLIANCE

- 4.9.1 All charging and electrical infrastructure shall incorporate appropriate electrical safety measures, earthing arrangements and protection systems to ensure safe operations.
- 4.9.2 The Concessionaire shall ensure that all electrical installations comply with Applicable Laws, safety regulations and relevant authority requirements and shall promptly address any electrical faults or safety incidents. Any material electrical fault or safety incident shall be reported to Independent Engineer in accordance with the reporting requirements set out in this Schedule.

5. DEPOT AND TBSS INFRASTRUCTURE

5.1 BUS DEPOTS - GENERAL REQUIREMENTS

- 5.1.1 Bus Depot locations provided by SMTA/GoS shall be used by the Concessionaire to meet the operational requirements of the Project. Each Bus Depot shall be used strictly for Bus operations and associated activities only. No commercial, residential or unrelated third-party activities shall be permitted within the Bus Depots without the prior written approval of SMTA.
- 5.1.2 SMTA/GoS shall grant the Concessionaire a **licence** for use of the Bus Depots in accordance with the terms of the Agreement.
- 5.1.3 For the purposes of delivery, inspection and acceptance of the Goods, the **Delivery Point** shall mean such Bus Depot(s), terminal(s) and/or other Project location(s) forming part of the Project, as may be notified in writing by SMTA to the Concessionaire, through the Independent Engineer, prior to the delivery of any Batch of Goods, for delivery, inspection and acceptance in accordance with this Agreement.
- 5.1.4 Unless expressly stated otherwise, the Concessionaire shall, at its own cost, be responsible for the complete operation and maintenance of the Bus Depots throughout the Concession Period.

5.2 BUS DEPOT DESIGN AND DEVELOPMENT

- 5.2.1 The Concessionaire shall design, develop and construct Bus Depots in accordance with SMTA/GoS' requirements and the Applicable Standards. The details are provided in the Exhibit 4 of this **SCHEDULE A (*Technical Specifications*)**.
- 5.2.2 Each Bus Depot shall be complete in all respects prior to commencement of operations and shall include, at a minimum:
- Bus parking areas;
 - Bus charging facilities;
 - maintenance workshops;

- inspection pits;
- storage areas;
- washing facilities; and
- management and administrative offices.

5.2.3 The Detailed Engineering Design in relation to all Construction Works, including in relation to each Bus Depot shall be prepared by the Concessionaire and submitted to Independent Engineer for approval prior to commencement of on-site Construction Works.

5.2.4 Only permanent structures shall be constructed at the Bus Depots. Temporary structures, including portable cabins, shall not be permitted.

5.3 DEPOT UTILITIES AND SERVICES

5.3.1 The Concessionaire shall provide electricity and water connections within each Bus Depot and shall bear all costs associated with the consumption of such utilities.

5.3.2 All utility bills related to Bus Depot facilities, including electricity, water and any other utilities required for operations, shall be the responsibility of the Concessionaire.

5.3.3 Any additional utility connections required for operations shall be arranged by the Concessionaire at its own cost. Electrical infrastructure, charging equipment and backup power systems at Bus Depots shall be provided and governed in accordance with Section 4 (*Charging and Electrical Infrastructure*) hereof.

5.4 DEPOT OPERATIONS, ACCESS CONTROL AND SECURITY

5.4.1 The Concessionaire shall be responsible for:

- (a) access control of staff and Buses at the Bus Depots;
- (b) parking of Buses only within designated Depot areas when not in operation;
- (c) maintenance and cleaning of Depot premises, including all signage and facilities;
- (d) maintenance of landscaping within the Bus Depots; and
- (e) security and surveillance of all Bus Depots.

5.5 DEPOT MANAGEMENT SYSTEM

5.5.1 **SCOPE AND PURPOSE**

The Concessionaire shall provide, operate and maintain a centralized Depot Management System (DMS) to manage daily Depot operations, fleet readiness and maintenance activities.

5.5.2 **CORE FUNCTIONALITIES**

The DMS shall include, at a minimum:

- (a) real-time monitoring of Buses within Depot premises, including entry and exit logs, parking bay allocation and operational readiness;
- (b) fleet dispatch and return coordination;
- (c) driver duty allocation, workforce scheduling, attendance and roster management;
- (d) preventive and corrective maintenance workflows, including work orders, inspections and maintenance history;
- (e) Spare Parts and inventory management, including tracking of usage and replenishment;
- (f) integration with the Charging Management System (CMS) for coordinated charging schedules;
- (g) management of washing bays, maintenance bays, storage areas and Depot utilities; and
- (h) health, safety and compliance monitoring, including digital inspection checklists and incident reporting.

5.5.3 **REPORTING AND ANALYTICS**

The DMS shall generate daily, weekly and monthly reports, including:

- (a) fleet availability;
- (b) maintenance KPIs;
- (c) Depot performance indicators;
- (d) charging efficiency; and
- (e) operational analytics.

5.6 **OPERATIONS CONTROL CENTRE**

5.6.1 The Concessionaire shall establish a command-and-control centre at one of the Bus Depots to monitor and manage overall operations. SMTA and the Independent Engineer shall have real-time viewing access to operational data generated by the Operations Control Centre.

5.6.2 At a minimum, the following ITS components shall be deployed at the Bus Depots:

- (a) Automatic Fare Collection System (AFC);
- (b) Bus Scheduling System (BSS);
- (c) Real-Time Passenger Information System;
- (d) Automatic Vehicle Location System;
- (e) Depot Management System (DMS); and
- (f) Charging Management System (CMS).

5.7 BUS STOPS AND TRANSIT BUS SHELTERS

- 5.7.1 Most Project routes operate on major arterials with existing Bus stops that may be used for passenger boarding and alighting. The list of Bus stops for each route is provided in **Exhibit 4** of this **SCHEDULE A (Technical Specifications)**. The concept design of Transit Bus Shelter is provided in **Exhibit 4** hereof.
- 5.7.2 The Concessionaire shall upgrade existing Bus stops, where necessary, to workable condition, including provision of passenger shelters.
- 5.7.3 Buses shall only stop at designated Bus stops for boarding and alighting and shall not stop elsewhere along the routes.
- 5.7.4 Where Bus stops do not exist along a route, the Concessionaire shall provide Transit Bus Shelters in accordance with designs developed by the Concessionaire and approved by Independent Engineer. Transit Bus Shelters shall comply with Applicable Standards relating to accessibility, passenger safety, visibility and durability.

6. INTELLIGENT TRANSPORTATION SYSTEM (ITS), AFC-BSS AND DEPOT SYSTEM

- 6.1 The Concessionaire shall design, procure, install, integrate, operate, maintain and administer a fully integrated Intelligent Transport System (ITS) comprising, *inter alia*, the Automated Fare Collection and Bus Scheduling System (AFC-BSS), Vehicle Location System (VLS), Passenger Information System (PIS), Depot Management System (DMS) and Charger Management System (CMS).
- 6.2 All systems shall be interoperable with existing BRT and feeder Bus systems and capable of seamless integration with future systems as directed by SMTA/GoS.

ITS, AFC-BSS AND CONTROL SYSTEMS

6.3 GENERAL SYSTEM OBLIGATION

- 6.3.1 The Concessionaire shall design, procure, install, configure, customise, deploy, test, operate, maintain and administer a fully integrated Intelligent Transport System (ITS), interoperable

with existing BRT and feeder Bus systems and capable of integration with future systems, in accordance with Applicable Laws, Applicable Standards, Good International Industry Practice and SMTA's requirements.

- 6.3.2 The ITS shall include, without limitation, the Automated Fare Collection and Bus Scheduling System (AFC-BSS), Vehicle Location System, Passenger Information System, Depot Management System and Charging Management System, fully integrated with the Operations Control Centre.

6.4 AFC-BSS SYSTEM SCOPE

- 6.4.1 The AFC-BSS shall include all hardware, software, communication networks, databases, and interfaces required for uninterrupted operations of the Project.

The Concessionaire shall:

- (a) develop, install, configure, customise, deploy, thoroughly test, maintain and administer all AFC-BSS components;
- (b) ensure robustness, scalability, cybersecurity and data integrity of the system;
- (c) comply with all Applicable Laws and permits relating to AFC-BSS deployment and operations.

6.5 FARE COLLECTION FUNCTIONAL CAPABILITIES

- 6.5.1 The AFC-BSS shall be capable of handling:

- (a) flat-fare, zone-based, stage-based and distance-based fare policies;
- (b) full fare, concessional fare and free fare categories;
- (c) on-board and off-board ticketing modes;
- (d) passenger transfers across routes and ticketing modes.

- 6.5.2 Validators shall deduct fare value in real time, store transactional data and transmit the same securely to the central system.

6.6 HANDHELD DEVICES AND VALIDATORS

- 6.6.1 The Concessionaire shall install handheld fare collection devices on each Bus, including:

- (a) one (1) device at the entrance gate (tap-in); and
- (b) one (1) device at the exit gate (tap-out).

6.6.2 The Conductor shall ensure compliance by all passengers for tap-in and tap-out during boarding and alighting.

6.6.3 Portable validators shall be provided as a backup mechanism and for spot checks by SMTA assigned inspectors. Each handheld device shall remain operational for a minimum of eight (8) hours.

6.7 FARE MEDIA, SALE POINTS AND RECHARGING INFRASTRUCTURE

6.7.1 The Concessionaire shall:

- (a) introduce card-based fare collection and progressively deploy a minimum of two hundred thousand (200,000) fare media cards within one (1) year from commencement of operations;
- (b) arrange Bulk Initialization Machines (BIMs) at locations specified by SMTA/ Independent Engineer;
- (c) deploy Ticket Office/Top-Up Machines at sale points on feeder routes, each equipped to transmit transactional data in real time;
- (d) ensure refund functionality for overcharging incidents, subject to due diligence and SMTA policy.

6.8 REPORTING, ANALYTICS AND AUDIT TRAILS

6.8.1 The AFC-BSS shall generate standard and configurable reports, including but not limited to:

- (a) Fare Media Utilisation Reports;
- (b) Origin-Destination Matrix Reports;
- (c) Ridership Reports for user-defined periods;
- (d) Vehicle Tracking Reports (time, geo-coordinates, speed);
- (e) Time-Space Diagrams by trip and route;
- (f) Incident, alarm and fault reports;
- (g) Schedule adherence and missed-trip reports.

6.8.2 The system shall include a built-in report-writer tool and detailed audit logs of critical user activities.

6.9 CAPACITY, SCALABILITY AND AVAILABILITY

6.9.1 The AFC-BSS and associated ITS infrastructure shall be capable of handling daily passenger volumes of up to one million (1,000,000) passengers without service degradation.

6.9.2 All components shall be deployed on industrial-grade, high-availability servers and storage platforms, with appropriate redundancy, backup and disaster-recovery mechanisms.

6.10 CYBERSECURITY AND DATA PROTECTION

(a) The Concessionaire shall implement:

- (i) secure access controls and user-role management;
- (ii) encrypted data transmission;
- (iii) automated data backup;
- (iv) protection against unauthorized access, tampering or data loss.

(b) Only authorized personnel of GoS shall have access to modify fare policies and critical system parameters.

6.11 TRAINING AND ON-SITE TECHNICAL SUPPORT

6.11.1 The Concessionaire shall deploy suitably skilled personnel for:

- (a) installation and commissioning;
- (b) ongoing configuration and maintenance;
- (c) prompt technical support.
- (d) comprehensive training shall be provided to Concessionaire staff and designated SMTA personnel.

6.12 INTEGRATION AND INTEROPERABILITY

6.12.1 The AFC-BSS shall:

- (a) integrate with banking systems for revenue reconciliation;
- (b) provide APIs/web services for future system integration;
- (c) cooperate with other SMTA-appointed service providers.

6.13 TESTING, COMMISSIONING AND CONTINUITY

6.13.1 The system shall undergo User Acceptance Testing (UAT) and commissioning prior to full operational deployment.

6.13.2 The Concessionaire shall guarantee smooth, uninterrupted functioning of all AFC-BSS components throughout the Term.

6.14 REVENUE COLLECTION AND FARE MEDIA

6.14.1 The Concessionaire shall be responsible for **fare and non-fare revenue collection** in accordance with the Agreement.

6.14.2 During the first Operational Year, cash collection may be permitted; however, handheld devices shall be operational from commencement of operations.

6.14.3 The Concessionaire shall:

- (a) arrange paper-based ticketing integrated with handheld devices;
- (b) promote card-based fare collection during the first year;
- (c) introduce **200,000 fare media cards** on an incremental basis within one (1) year;
- (d) arrange **Bulk Initialization Machines (BIMs)** at SMTA-designated premises; and
- (e) deposit all fare revenues into the Fare-Revenue Account.

6.14.4 Payments to the Concessionaire shall be based on agreed reconciliation reports generated from the AFC-BSS.

6.14.5 The AFC-BSS shall support flat, zone-based, stage-based and distance-based fare policies, including full, concessional and free fare categories.

6.15 SALE POINTS AND TOP-UP INFRASTRUCTURE

6.15.1 The Concessionaire shall establish and operate sale points on feeder routes, operational for a minimum of eighteen (18) hours per Day.

6.15.2 Each sale point shall be equipped with at least one fully functional top-up machine capable of:

- (a) issuing and recharging fare media;
- (b) transmitting transactional data reliably;
- (c) processing refunds for validated overcharging incidents.

6.16 UHF/VHF/Wi-Fi COMMUNICATION SYSTEMS

- 6.16.1 The Concessionaire shall obtain all licenses, permits and approvals required for deployment of UHF/VHF/Wi-Fi communication systems.
- 6.16.2 The Concessionaire shall be responsible for deployment, integration, operation and maintenance of such systems for the entire Concession Period, and shall provide reports to SMTA/GoS as required.
- 6.16.3 All associated costs shall be borne by the Concessionaire.

6.17 AFC-BSS DEPLOYMENT AND TECHNICAL SUPPORT

- 6.17.1 The Concessionaire shall:
- (a) deploy a robust, scalable and secure AFC-BSS;
 - (b) provide a reliable data communication network connecting Buses, Depots and data centers;
 - (c) deploy skilled personnel for installation, operation and support;
 - (d) integrate AFC-BSS with banking systems;
 - (e) ensure cybersecurity, access controls and audit logs; and
 - (f) replace faulty equipment at its own cost.
- 6.17.2 Only authorized SMTA personnel shall have rights to modify fare policies, smart-card parameters and key configuration settings after seeking prior approval from SMTA.

6.18 BUS SCHEDULING AND VEHICLE LOCATION SYSTEM

- 6.18.1 The Concessionaire shall deploy a GIS-based Bus Scheduling and Vehicle Location System enabling:
- (a) real-time monitoring of Bus movement;
 - (b) distance travelled and trip counts;
 - (c) schedule adherence reporting; and
 - (d) basis for payments to the Concessionaire.
- 6.18.2 All Buses shall be equipped with GPS-enabled driver consoles integrated with the AFC-BSS.

6.19 DRIVER CONSOLE AND CAN DATA INTEGRATION

6.19.1 Driver consoles shall collect, transmit and report CAN-Bus data including, but not limited to:

- (a) acceleration and braking;
- (b) gear shifting;
- (c) Bus speed and RPM;
- (d) battery on/off status;
- (e) door operation;
- (f) saloon temperature and engine temperature.

6.19.2 Driver consoles shall also support audio and visual passenger announcements.

6.20 PASSENGER INFORMATION SYSTEM (PIS)

6.20.1 The Concessionaire shall deploy an integrated PIS capable of:

- (a) automated voice announcements in **Urdu and English**;
- (b) real-time display of schedules and service information inside Buses and at Bus Stops;
and
- (c) integration with vehicle location and scheduling data.

6.21 DEPOT MANAGEMENT SYSTEM (DMS)

6.21.1 A centralized DMS shall be deployed to manage:

- (a) fleet dispatch and readiness;
- (b) parking and charging coordination;
- (c) workforce and shift management;
- (d) preventive and corrective maintenance;
- (e) Spare Parts inventory; and
- (f) Depot health, safety and compliance monitoring.

6.22 CHARGER MANAGEMENT SYSTEM (CMS)

The CMS shall provide real-time monitoring, control and optimization of all chargers, including:

- (a) charger status and fault alerts;
- (b) energy consumption and charging cycles;
- (c) load balancing and peak management;
- (d) integration with BMS and DMS; and
- (e) charging performance analytics.

6.23 SERVERS, STORAGE AND SCALABILITY

- 6.23.1 The Concessionaire shall deploy industrial-grade servers and storage infrastructure capable of handling **up to one million (1,000,000) passengers per Day**, with provision for scalability, redundancy, backup and disaster recovery.

6.24 MANDATORY REPORTS AND MIS

- 6.24.1 The AFC-BSS shall generate, at a minimum, the following reports:

- (a) Fare media utilization (tap-in/tap-out with time and location);
- (b) Origin-Destination Matrix;
- (c) Ridership reports;
- (d) Vehicle tracking and speed violation reports;
- (e) Missed trips, missed stops and Bus bunching reports;
- (f) Schedule adherence and Time-Space Diagrams;
- (g) Incident and penalty-trigger reports; and
- (h) at least thirty (30) additional configurable reports.

A standardized report-writer tool shall be provided for custom analytics.

6.25 COMPLAINT MANAGEMENT AND PASSENGER SUPPORT

- 6.26 The Concessionaire shall maintain a complaint management system integrated with the AFC-BSS, providing:

- (a) complaint logging and tracking;
- (b) defined resolution timelines;
- (c) audit trails; and
- (d) SMTA visibility into complaint handling.

6.27 USER ACCEPTANCE TESTING (UAT) AND COMMISSIONING

- 6.27.1 All ITS and AFC-BSS components shall undergo **User Acceptance Testing (UAT)** and formal commissioning prior to live operations, in accordance with SMTA/Independent Engineer-approved protocols.

6.28 TRAINING AND KNOWLEDGE TRANSFER

- 6.28.1 The Concessionaire shall provide comprehensive training to:
 - (a) its own staff; and
 - (b) designated SMTA personnel,
 covering all hardware, software, databases and operational workflows.

6.29 COORDINATION WITH OTHER SERVICE PROVIDERS

- 6.29.1 The Concessionaire shall take all necessary and reasonable measures and fully cooperate with all other service providers engaged by SMTA/GoS and facilitate their integration and operations within the ITS ecosystem.

7. **OPERATIONS, MAINTENANCE AND SERVICE DELIVERY**

7.1 GENERAL OPERATIONS OBLIGATIONS

- 7.1.1 The Concessionaire shall be responsible for the complete operation and maintenance of the Bus Fleet, Depots, charging infrastructure, ITS systems, and all associated facilities throughout the Operations Period, in accordance with this Agreement, Applicable Standards, and Independent Engineer/SMTA/GoS' instructions.
- 7.1.2 The Concessionaire shall operate the Buses strictly in accordance with the **Dispatch Schedule** and **Headway Targets** approved in terms of this Agreement.

7.2 DRIVERS AND CONDUCTORS

7.2.1 **Licensing and Records**

- (a) The Concessionaire shall ensure that all drivers hold valid and appropriate **PSV Licences**. Copies of such licences shall be furnished to Independent Engineer no later than ten (10) Days after the Commencement Date and/or appointment of a driver.
- (b) An updated list of drivers and conductors shall be submitted to Independent Engineer within two (2) Business Days after the Commencement Date and updated monthly thereafter.
- (c) Each driver and conductor shall be issued a **unique identification number**.

7.2.2 **Conduct, Safety and Replacement**

Where Independent Engineer reasonably believes that a driver or conductor poses a safety risk or where a public complaint is received, the Concessionaire shall immediately investigate and, where appropriate, suspend and replace such personnel. Investigation outcomes shall be reported to Independent SMTA/GoS without delay.

7.2.3 **Training of Drivers and Conductors**

- (a) The Concessionaire, together with the Sub-Supplier (OEM), shall ensure that all drivers and conductors complete required training prior to operations.
 - **DRIVER TRAINING - 12 M BUSES**: Each trainee driver shall undergo **eighty (80) hours** of training, including classroom instruction and a minimum of **eight (8) hours of on-road testing**, delivered over four (4) hours per Day, five (5) Days per week.
 - **DRIVER TRAINING - 8.5 TO 9 M BUSES**: Training requirements for 8.5 to 9 m Buses shall be identical to those for 12 m Buses.
- (b) All fuel and training-related costs shall be borne by the Concessionaire.
- (c) Independent Engineer may conduct spot checks and examinations to verify ongoing driver competence.

7.3 **STAFF UNIFORMS**

- 7.3.1 All Concessionaire staff interacting with the public shall wear SMTA-approved uniforms at all times.
- 7.3.2 The Concessionaire shall submit three (3) uniform designs prior to commencement of operations, from which Independent Engineer shall select one (1) for implementation in coordination with SMTA/GoS.
- 7.3.3 Uniform categories shall include:
 - (a) Bus Drivers (male and female);

- (b) Conductors (male and female);
- (c) Maintenance staff (dry, wet and cleaning).

7.4 PUBLIC RELATIONS AND PASSENGER INTERFACE

7.4.1 The Concessionaire shall ensure that all staff:

- (a) communicate professionally and courteously;
- (b) assist passengers with routes, schedules and fares;
- (c) handle complaints responsively; and
- (d) act in a manner consistent with the Project's public image.

7.4.2 Mandatory training shall include:

- (a) disability access and assistance;
- (b) conflict management;
- (c) occupational health and safety;
- (d) passenger safety procedures;
- (e) inspection and dispatch protocols.

7.5 PASSENGER INFORMATION AND COMFORT

7.5.1 The Concessionaire shall ensure that:

- (a) up-to-date timetables and fare tables are displayed inside all Buses;
- (b) a minimum of twenty-five (25) stickers per Bus are installed as prescribed by Intendent Engineer; and
- (c) air-conditioning systems maintain internal temperatures between 23°C and 25°C, reaching target temperature within thirty (30) minutes at ambient temperatures up to 45°C, and remaining functional up to 50°C.
- (d) Temperature data transmitted via Bus logic units shall be used for verification.

7.6 PASSENGER CAPACITY

7.6.1 Maximum passenger capacity shall be:

- (a) Ninety (90) passengers for 12 m Buses; and

(b) Sixty (60) passengers for 8.5 to 9 m Buses,
subject to adjustment by Independent Engineer in coordination with SMTA/GoS.

7.7 BRANDING, MARKETING AND ADVERTISING

7.7.1 The Concessionaire shall comply with all Independent Engineer/SMTA/GoS instructions relating to branding, signage, livery and advertising.

7.7.2 Advertising activities may be managed through a separate entity; however, the Concessionaire shall remain fully responsible for compliance and performance.

7.8 OPERATIONS AND MAINTENANCE (O&M) PLAN

7.8.1 The Concessionaire shall prepare and implement an **O&M Plan** covering, at a minimum:

- (a) dispatch, scheduling and headway compliance;
- (b) labor and occupational health and safety compliance;
- (c) planned maintenance processes and locations;
- (d) unplanned maintenance protocols;
- (e) maintenance frequencies;
- (f) quality assurance mechanisms, KPIs and audits;
- (g) waste disposal and recycling procedures; and
- (h) agreed Standard Operating Procedures (SOPs).

7.9 MAINTENANCE OF BUSES

7.9.1 **Initial Maintenance Period**

- (a) An Initial Maintenance Period of thirty-six (36) months from Bus delivery in terms of this Agreement.
- (b) During this period, the Supplier shall supervise maintenance; however, the Concessionaire shall remain fully responsible for maintenance and repair costs.

7.9.2 **Maintenance Staff Training**

Maintenance staff shall undergo:

- (a) **200 hours** of initial training (classroom and hands-on); and

- (b) **20 hours** of advanced training focusing on future maintenance and battery replacement.

All costs shall be borne by the Concessionaire.

7.9.3 **Detailed Maintenance Obligations**

- (a) Maintenance obligations shall include, without limitation:
 - (i) tyre and wheel replacement;
 - (ii) lubricants, additives and fluids;
 - (iii) accident and damage repairs;
 - (iv) breakdown attendance;
 - (v) daily washing and interior cleaning;
 - (vi) brake testing every **5,000 km**;
 - (vii) compliance with OEM manuals and Applicable Standards;
 - (viii) safeguarding of onboard equipment and fare systems;
 - (ix) pre-trip inspections and diagnostics; and
 - (x) permitting SMTA and Independent Engineer inspections and data access.
- (b) For the avoidance of doubt, the maintenance obligations set out above shall include responsibility for all repairs, replacements, losses, or damages arising from negligence, improper use, overloading, unauthorized repairs, misuse of consumables, non-compliance with OEM manuals, theft, vandalism, labour disturbances, operation outside design parameters, or breach of this Agreement.

7.10 **WASHING PLANTS AT DEPOTS**

- 7.10.1 The Concessionaire shall install one automatic washing plant at each Bus Depot, capable of washing all Bus surfaces including rooftop and chassis. The details of Washing Plants is provided in the Exhibit 5 of this Annexure.
- 7.10.2 A water recycling system shall be provided, and all waste shall be disposed of in compliance with applicable Law.
- 7.10.3 All operational Buses shall be washed daily during non-operational hours.

7.11 OPERATION AND MAINTENANCE OF CHARGERS

- 7.11.1 The Concessionaire shall operate and maintain all chargers installed at Bus Depots.
- 7.11.2 Buses shall primarily be charged overnight, with fast charging during operations used only where required and agreed.

7.12 SPARE PARTS MANAGEMENT

- 7.12.1 The Concessionaire shall maintain a minimum inventory of Spare Parts sufficient for approximately two (2) years of operations.
- 7.12.2 The Concessionaire shall be solely responsible for the sourcing (through OEM or approved Sub-Suppliers), procurement, importation, storage, record-keeping, replenishment, and condition of all Spare Parts required for routine, unplanned, and accident-related maintenance of the Buses.
- 7.12.3 An automated inventory management system integrated with the Depot Management System shall be deployed.
- 7.12.4 The Concessionaire shall maintain auditable records of Spare Parts usage and shall bear all costs, risks, and liabilities arising from any failure to maintain the required inventory levels or condition, including impacts on operations or availability.
- 7.12.5 Spare Parts inventories shall be topped up prior to expiry or termination of the Agreement.

7.13 TOOLS AND DIAGNOSTIC EQUIPMENT

- 7.13.1 The Concessionaire shall provide complete sets of tools, software and diagnostic equipment for both 12 m and 8.5 to 9 m Buses at each Bus Depot, in accordance with Exhibit 3.

7.14 REGULATORY REGISTRATION AND RENEWALS

- 7.14.1 The Concessionaire shall obtain and renew (as per applicable Laws):

- (a) Fitness Certificates;
- (b) Route Permits; and
- (c) motor vehicle taxes,

in accordance with applicable Law.

7.15 OPERATING AND CONTROL PROCEDURES

- 7.15.1 The Concessionaire shall submit the Dispatch Schedules and Headway Targets to Independent Engineer for approval.

7.15.2 The Concessionaire shall:

- (a) comply with all schedules and instructions issued directly or through Operations Control Centre;
- (b) submit Bus and personnel deployment plans within three (3) Days of receipt;
- (c) operate services between **0600 and 2300 hours**, except on public holidays or as otherwise directed; and
- (d) respond to schedule changes in accordance with SMTA timelines.

7.15.3 In the event of system or tracker failure, Bus operations shall continue, and KM travelled shall be validated through Independent Engineer approved manual logs or historical system data, which shall be binding on the Parties.

7.16 MONTHLY OPERATIONS REPORTS

7.16.1 By the fifth (5th) Business Day of each month, the Concessionaire shall submit a Monthly Operations Report covering:

- (a) road safety incidents;
- (b) punctuality and headway performance;
- (c) Bus performance and maintenance;
- (d) passenger complaints; and
- (e) service improvement measures.

7.17 FLEET AVAILABILITY AND SERVICE RELIABILITY

7.17.1 The Concessionaire shall ensure that a minimum fleet availability level is maintained at all times to meet the Dispatch Schedule and Headway Targets.

7.17.2 Fleet availability shall account for:

- (a) Planned Downtime;
- (b) Unplanned Downtime;
- (c) charging constraints; and
- (d) contingency reserves.

The Concessionaire shall ensure that operational planning includes adequate spare Buses to prevent service disruption.

7.18 PLANNED AND UNPLANNED DOWNTIME MANAGEMENT

7.18.1 The Concessionaire shall define, monitor and manage:

- (a) **Planned Downtime**, including scheduled maintenance and inspections; and
- (b) **Unplanned Downtime**, including breakdowns, system failures, accidents, or electrical faults. Unplanned Downtime events shall be:
 - (i) logged in the Depot Management System;
 - (ii) investigated for root cause; and
 - (iii) reported in the Monthly Operations Report.

7.19 BREAKDOWN RESPONSE AND ROADSIDE RECOVERY

7.19.1 The Concessionaire shall establish and maintain:

- (a) roadside assistance capability;
- (b) recovery vehicles and equipment; and
- (c) emergency response teams.

7.19.2 Breakdown response procedures shall minimize passenger inconvenience and restore services in the shortest practicable time.

7.20 INCIDENT, ACCIDENT AND EMERGENCY MANAGEMENT

7.20.1 The Concessionaire shall implement documented procedures for:

- (a) traffic accidents;
- (b) passenger medical emergencies;
- (c) fire, electrical or battery-related incidents; and
- (d) security-related events.

7.20.2 All incidents shall be recorded, investigated and reported to the Independent Engineer/SMTA in accordance with this Agreement.

7.21 BATTERY HEALTH MONITORING AND LIFECYCLE MANAGEMENT

7.21.1 The Concessionaire shall continuously monitor battery State of Health (SoH) and performance through integrated vehicle and charger systems.

7.21.2 Battery degradation trends shall be:

- (a) tracked over time;
- (b) factored into maintenance planning; and
- (c) reported to Independent Engineer as part of periodic performance reporting.
- (d) Battery replacement, refurbishment or decommissioning shall be carried out in accordance with OEM recommendations and Applicable Standards.

7.22 CONTINUITY OF OPERATIONS DURING SYSTEM FAILURES

7.22.1 The Concessionaire shall ensure continuity of operations in the event of:

- (a) AFC-BSS failures;
- (b) communication outages;
- (c) charger or CMS failures; or
- (d) partial system outages.

7.22.2 Manual or fallback procedures shall be maintained and periodically tested.

7.23 DATA INTEGRITY, SECURITY AND AUDITABILITY

7.23.1 All operational data generated by Buses, Depots and ITS systems shall be:

- (a) protected against tampering;
- (b) backed up regularly; and
- (c) auditable by Independent Engineer.

7.23.2 Access to operational and financial data shall be role-based and logged.

7.24 CHANGE MANAGEMENT AND SYSTEM UPGRADES

7.24.1 The Concessionaire shall manage:

- (a) route changes;
- (b) service pattern adjustments;
- (c) software upgrades; and

- (d) technology enhancements

in a controlled manner, ensuring no degradation of service quality or system integrity.

7.25 END-OF-LIFE HANDLING AND ENVIRONMENTAL COMPLIANCE

7.25.1 The Concessionaire shall ensure environmentally responsible handling of:

- (a) batteries;
- (b) electrical components;
- (c) lubricants; and
- (d) consumables

in accordance with applicable Law and OEM guidance.

8. SAFETY, HEALTH, ENVIRONMENT AND EMERGENCY MANAGEMENT

8.1 GENERAL SAFETY AND COMPLIANCE OBLIGATIONS

8.1.1 The Concessionaire shall ensure that all operations, maintenance activities, Depot functions, charging activities, and passenger services are carried out in full compliance with:

- (a) Applicable Laws;
- (b) Applicable Standards;
- (c) OEM requirements; and
- (d) SMTA's Instructions issued from time to time.

Safety shall be treated as a **non-delegable obligation** of the Concessionaire across all Project activities.

8.2 OCCUPATIONAL HEALTH AND SAFETY (OHS)

8.2.1 The Concessionaire shall establish and implement documented occupational health and safety procedures covering:

- (a) drivers, conductors, maintenance staff, Depot staff and subcontractors;
- (b) safe working practices at Depots, workshops, charging areas and washing facilities;
- (c) use of personal protective equipment (PPE);
- (d) electrical safety, high-voltage handling and battery-related risks; and

- (e) emergency evacuation procedures at Depots.

8.2.2 All staff shall receive periodic OHS training appropriate to their roles.

8.3 PASSENGER SAFETY

8.3.1 The Concessionaire shall ensure passenger safety at all times, including but not limited to:

- (a) safe boarding and alighting procedures;
- (b) operation of Bus doors only when safe to do so;
- (c) clear passenger information and announcements;
- (d) availability and maintenance of safety equipment (fire extinguishers, first aid kits, warning triangles, emergency exits); and
- (e) adherence to permitted passenger capacity limits.

8.4 ROAD SAFETY AND DRIVING STANDARDS

8.4.1 The Concessionaire shall enforce safe driving practices, including:

- (a) compliance with speed limits;
- (b) adherence to Dispatch Schedules and Headway Targets;
- (c) monitoring of driving behaviour using CAN-Bus data and vehicle tracking systems; and
- (d) corrective actions, retraining or disciplinary measures where unsafe driving patterns are detected.

8.5 ELECTRICAL AND CHARGING SAFETY

8.5.1 The Concessionaire shall ensure that all electrical and charging infrastructure is operated safely, including:

- (a) compliance with earthing, grounding and electrical protection requirements;
- (b) restricted access to high-voltage areas;
- (c) emergency shut-off mechanisms for chargers and substations;
- (d) periodic inspection and testing of electrical systems; and
- (e) staff training in electrical and battery safety.

8.6 ENVIRONMENTAL MANAGEMENT

8.6.1 The Concessionaire shall implement environmentally responsible practices, including:

- (a) safe disposal or recycling of oils, lubricants, coolants and contaminated water;
- (b) operation of water recycling systems at washing plants;
- (c) prevention of soil and water contamination at Depots;
- (d) noise and emission control in accordance with Applicable Standards; and
- (e) environmentally compliant handling of batteries and electrical components.

8.7 INCIDENT AND ACCIDENT MANAGEMENT

8.7.1 The Concessionaire shall maintain documented procedures for responding to:

- (a) road traffic accidents;
- (b) passenger injuries or medical emergencies;
- (c) fires, including battery or electrical fires;
- (d) security incidents; and
- (e) major system failures affecting service continuity.

8.7.2 All incidents shall be:

- (a) recorded in an incident log;
- (b) investigated to determine root cause; and
- (c) reported to SMTA/GoS in accordance with SMTA instructions.

8.8 EMERGENCY RESPONSE AND CONTINUITY PLANNING

8.8.1 The Concessionaire shall maintain emergency response and Business continuity arrangements to ensure safe and orderly operations during:

- (a) power outages;
- (b) communication system failures;
- (c) AFC-BSS or ITS failures;

- (d) natural disasters;
- (e) other emergency situations; or
- (f) fallback and manual procedures shall be maintained and periodically reviewed.

8.9 TRAINING AND AWARENESS

8.9.1 The Concessionaire shall ensure that all staff receive training appropriate to their safety and emergency responsibilities, including:

- (a) emergency response roles;
- (b) passenger evacuation procedures;
- (c) handling of confrontational or distressed passengers;
- (d) electrical and battery hazard awareness; and
- (e) reporting of safety incidents and near-misses.

8.10 MONITORING, AUDITS AND OVERSIGHT

8.10.1 The Independent Engineer shall have the right to:

- (a) inspect safety practices at any time;
- (b) audit safety records and incident logs; and
- (c) require corrective actions where deficiencies are identified.

The Concessionaire shall cooperate fully with all such inspections and audits.

9. HANDOVER REQUIREMENTS, RECORDS AND DATA OWNERSHIP

9.1 GENERAL HANDOVER OBLIGATION

9.1.1 Upon expiry of the Concession Period, or upon earlier termination (if applicable), the Concessionaire shall hand over the E-Buses Assets to SMTA/GoS, **free of charge, free of encumbrances, liens, claims, or third-party rights**, and in accordance with this Section.

9.1.2 The handover shall be conducted in a manner that ensures **continuity of public transport services**, passenger safety, and operational readiness, without disruption to ongoing services.

9.1.3 Unless expressly stated otherwise in the Agreement, no compensation shall be payable to the Concessionaire for the E-Buses Assets at handover.

9.2 SCOPE OF E-BUSES ASSETS SUBJECT TO HANDOVER

The E-Buses Assets to be handed over shall include, without limitation, the following:

9.2.1 **Electric Bus Fleet**

All five hundred (500) Buses, including:

- (a) chassis, body and superstructure;
- (b) traction motors, controllers and power electronics;
- (c) battery packs and Battery Management Systems (BMS);
- (d) HVAC systems;
- (e) onboard ITS, AFC, CCTV and Passenger Information Systems;
- (f) fare collection equipment;
- (g) onboard software, firmware and configuration files; and
- (h) all Bus-mounted safety, fire detection and suppression systems.

9.2.2 **Depots and Civil Infrastructure**

All Bus Depots and associated infrastructure, including:

- (a) buildings, sheds, workshops and administrative blocks;
- (b) parking areas, internal roads, pavements and foundations;
- (c) drainage systems, utilities and service connections;
- (d) boundary walls, gates and security installations; and
- (e) any Depot facilities constructed, upgraded or modified during the Concession Period.

9.2.3 **Charging and Electrical Infrastructure**

All electric charging and power infrastructure, including:

- (a) fast, medium and slow chargers;
- (b) substations, transformers, switchgear, panels and meters;
- (c) internal power distribution networks within Depots;

- (d) backup power generators installed for charging operations;
- (e) energy and charging management systems; and
- (f) all associated electrical safety, earthing and protection systems.

9.2.4 **Workshop Equipment, Tools and Machinery**

All workshop assets, including:

- (a) maintenance and diagnostic tools as per Exhibit 3 hereof;
- (b) EV-specific diagnostic hardware and software;
- (c) lifting equipment, cranes, jacks and workshop machinery; and
- (d) calibration and testing instruments.

9.2.5 **ITS, ICT and Software Systems**

All operational technology systems, including:

- (a) AFC-BSS, fleet management, scheduling and dispatch systems;
- (b) Depot Management System (DMS) and Charger Management System (CMS);
- (c) servers, networking equipment and data storage infrastructure;
- (d) system licenses, access rights and credentials; and
- (e) source codes, APIs or license transfer rights, where applicable and permitted.

9.2.6 **Spare Parts and Inventory**

- (a) Spare Parts as per Exhibit 3;
- (b) critical EV components and consumables;
- (c) specialized tools and battery handling equipment; and
- (d) inventory records and stock registers.

9.3 **ASSET CONDITION AT HANDOVER**

- 9.3.1 All E-Buses Assets shall be handed over in **Good Operating Condition**, subject to normal wear and tear consistent with industry standards.

9.3.2 **Electric Buses**

Each Bus shall be:

- (a) roadworthy and compliant with applicable Laws;
- (b) free from structural damage or major defects;
- (c) capable of operating on designated routes; and
- (d) equipped with battery packs having a minimum State of Health (SoH) of not less than seventy-five percent (75%), unless otherwise approved by the Independent Experts/SMTA.

9.3.3 **Depots and Infrastructure**

All Depots and facilities shall be:

- (a) structurally sound;
- (b) fully operational;
- (c) free from deferred maintenance; and
- (d) free from safety hazards.

9.3.4 **Charging and Electrical Systems**

Charging and electrical systems shall be:

- (a) fully functional and compliant with applicable electrical codes;
- (b) capable of supporting fleet operations at original design capacity; and
- (c) inclusive of fully operational backup power systems.

9.4 **HANDOVER INSPECTION AND CERTIFICATION**

9.4.1 **Handover Inspection**

The handover inspection shall be undertaken in terms of this Agreement.

9.4.2 **Defect Rectification**

Any defects, deficiencies or non-compliances identified during inspection shall be rectified by the Concessionaire at its own cost within the timeframe set out in this Agreement.

9.4.3 **Final Handover Certificate**

Upon satisfactory completion of inspection and rectification, a final certificate shall be issued in terms of this Agreement confirming completion of the handover obligations under this Section.

9.5 **DOCUMENTATION, RECORDS AND KNOWLEDGE TRANSFER**

9.5.1 At handover, the Concessionaire shall provide SMTA/GoS with complete and up-to-date documentation, including:

- (a) as-built drawings (civil, electrical and mechanical);
- (b) Operation and Maintenance manuals;
- (c) software documentation and user manuals;
- (d) asset registers and full maintenance histories;
- (e) battery lifecycle data and health reports;
- (f) warranty records (to the extent residual warranties exist);
- (g) standard operating procedures (SOPs); and
- (h) training materials and technical manuals.

9.6 **DATA OWNERSHIP AND CONTINUITY**

9.6.1 All operational, technical, maintenance and performance data generated during the Project shall vest in SMTA/GoS.

9.6.2 The Concessionaire shall ensure that all data is:

- (a) complete, accurate and up to date;
- (b) transferred in usable digital formats; and
- (c) accompanied by access credentials, databases and system documentation required for continued operation.

9.7 **STAFF TRANSITION AND TRAINING SUPPORT**

9.7.1 Where required by SMTA/GoS, the Concessionaire shall provide:

- (a) refresher training to SMTA-nominated personnel for a minimum period of **three (3) months prior to handover**; and

- (b) operational shadowing and knowledge transfer support.
- 9.7.2 SMTA/GoS shall have no obligation to absorb the Concessionaire's employees unless expressly agreed.
- 9.8 LIABILITIES, CLEARANCES AND INDEMNITIES
- 9.8.1 The Concessionaire shall ensure that, at handover:
 - (a) all statutory dues, taxes, utility bills and payments are settled; and
 - (b) no outstanding claims, disputes or liabilities exist against the E-Buses Assets.
- 9.8.2 The Concessionaire shall indemnify SMTA/GoS against claims arising from acts, omissions or defaults during the Concession Period.
- 9.9 NO REMOVAL OR DISMANTLING
- 9.9.1 The Concessionaire shall not remove, dismantle or dispose of any Project Asset without the prior written consent of SMTA/GoS.
- 9.9.2 Any unauthorized removal or disposal shall constitute a material breach.
- 9.10 SURVIVAL OF OBLIGATIONS
- 9.10.1 Obligations relating to:
 - (a) defect rectification;
 - (b) indemnities; and
 - (c) settlement of outstanding claimsshall survive expiry or termination of this Agreement until fully discharged.
- 10. PERFORMANCE STANDARDS AND TECHNICAL KPIS**
- 10.1 PURPOSE AND APPLICATION
- 10.1.1 This Section sets out the **technical performance standards and Key Performance Indicators (KPIs)** applicable to the Project, covering fleet operations, service reliability, maintenance quality, charging performance, safety, and system availability.
- 10.1.2 Compliance with these KPIs is mandatory throughout the Operating Period and shall be monitored through the ITS, AFC-BSS, DMS, CMS, and other Project systems.

10.2 FLEET AVAILABILITY AND SERVICE READINESS

10.2.1 The Concessionaire shall ensure that a sufficient number of Buses are available at all times to meet the Dispatch Schedule and Headway Targets approved by Independent Engineer.

10.2.2 Fleet availability shall account for:

- (a) planned maintenance
- (b) unplanned breakdowns
- (c) charging cycles
- (d) contingency reserves

- (e) daily dispatch readiness

10.2.3 All Buses scheduled for service shall:

- (a) complete pre-trip inspections
- (b) be fully charged to required dispatch State of Charge (SoC)
- (c) be free from safety-critical defects
- (d) have fully operational ITS, AFC-BSS and communication systems.

10.3 SCHEDULE ADHERENCE AND SERVICE RELIABILITY

10.3.1 The Concessionaire shall operate the Buses in accordance with the approved Dispatch Schedule and Headway Targets.

10.3.2 Schedule adherence shall be measured using:

- (a) vehicle tracking data;
- (b) scheduled vs actual trip completion; and
- (c) headway variance metrics.

10.3.3 Missed trips, early terminations, or short-turns shall be logged, investigated and reported, with root-cause analysis captured in Monthly Operations Reports.

10.4 PLANNED AND UNPLANNED DOWNTIME

10.4.1 Planned maintenance downtime shall be scheduled so as to minimize impact on service delivery and shall be reflected in fleet planning and availability calculations.

10.4.2 Unplanned downtime events, including breakdowns and system failures, shall be:

- (a) recorded in the DMS;
- (b) categorized by cause; and
- (c) tracked for recurrence and corrective action.

10.5 MAINTENANCE PERFORMANCE

10.5.1 Preventive maintenance activities shall be performed strictly in accordance with:

- (a) OEM manuals;
- (b) the approved O&M Plan; and
- (c) Applicable Standards.

10.5.2 Maintenance compliance shall be auditable through maintenance logs and system records.

10.5.3 The Concessionaire shall monitor breakdown frequency and repeat defects per Bus and per subsystem, and shall implement corrective measures to reduce recurrence.

10.6 CHARGING AND ENERGY PERFORMANCE

10.6.1 Charging infrastructure shall be available and operational to support full fleet charging requirements, including redundancy for fault conditions.

10.6.2 Charging performance shall be monitored using CMS data, including

- (a) charging duration;
- (b) energy delivered per session;
- (c) charger utilization rates; and
- (d) charging-related faults.

10.7 BATTERY PERFORMANCE AND HEALTH

10.7.1 The Concessionaire shall monitor battery performance using BMS data, including:

- (a) State of Charge (SoC);

- (b) State of Health (SoH);
- (c) temperature and voltage parameters; and
- (d) degradation trends.

10.7.2 Battery health data shall be reported periodically to Independent Engineer/SMTA/GoS.

10.8 PASSENGER SERVICE QUALITY

10.8.1 Passenger information systems shall function reliably, including:

- (a) in-Bus announcements;
- (b) display of next stops; and
- (c) real-time service updates.

10.8.2 HVAC systems shall maintain prescribed temperature ranges as specified in this **SCHEDULE A (*Technical Specifications*)** and shall be monitored via onboard systems.

10.9 SAFETY PERFORMANCE

10.9.1 Safety performance shall include monitoring of:

- (a) accidents and incidents;
- (b) near-miss events;
- (c) speed violations; and
- (d) unsafe driving patterns derived from CAN-Bus data.

10.9.2 All safety incidents shall be logged, investigated and reported in accordance with this Section.

10.10 ITS AND SYSTEM AVAILABILITY

10.10.1 The Concessionaire shall ensure high availability of:

- (a) AFC-BSS;
- (b) vehicle tracking systems;
- (c) Depot systems; and
- (d) communication networks.

10.10.2 System outages shall be logged and root causes analyzed.

10.10.3 Operational data used for performance measurement shall be:

- (a) accurate;
- (b) time-synchronized;
- (c) protected from tampering; and
- (d) auditable by Independent Engineer.

10.11 REPORTING AND REVIEW

10.11.1 Performance against the KPIs set out in this Section shall be:

- (a) monitored continuously through Project systems; and
- (b) summarized in the Monthly Operations Reports.

10.11.2 SMTA/GoS may review KPI definitions and measurement methodologies periodically, provided that any revisions are applied consistently and prospectively.

10.12 CONTINUOUS IMPROVEMENT

10.12.1 The Concessionaire shall use performance data and trend analysis to:

- (a) identify systemic issues;
- (b) improve operational efficiency;
- (c) enhance passenger experience; and
- (d) reduce safety and reliability risks.

11 REVENUE COLLECTION SYSTEMS

11.1 REVENUE COLLECTION RESPONSIBILITY

11.1.1 The Concessionaire shall be responsible for collection of both fare and non-fare revenue in accordance with the Project requirements.

11.2 CASH AND DIGITAL FARE COLLECTION TRANSITION

11.2.1 During the first Operational Year, the Concessionaire may carry out cash fare collection.

11.2.2 During this period, the Concessionaire shall:

- (a) deploy handheld devices to record cash transactions;
- (b) ensure connectivity of ticket sales data with the command-and-control centre through ITS; and
- (c) actively promote card-based fare collection.

11.2.3 Within one (1) year from commencement of operations, the Concessionaire shall deploy a minimum of **200,000 fare media cards** on an incremental basis.

11.3 SALE POINTS AND RECHARGE INFRASTRUCTURE

11.3.1 The Concessionaire shall provide:

- (a) Bulk Initialization Machines (BIMs) at SMTA-designated locations;
- (b) Ticket Office / Top-Up Machines at sale points on feeder routes;
- (c) trained personnel at sale points operating up to eighteen (18) hours per Day.

11.3.2 All sale and recharge transactions shall be transmitted reliably to the central system.

11.4 REVENUE RECONCILIATION

11.4.1 Payments to the Concessionaire from the Revenue Collection Account shall be based on reconciliation reports generated from AFC-BSS, in accordance with agreed policies and formulas.

11.5 COMMUNICATION SYSTEMS (UHF/VHF/Wi-Fi)

11.5.1 The Concessionaire shall be responsible for the allocation, deployment, operation and maintenance of a UHF/VHF/Wi-Fi based communication system required for effective operation of the Project.

11.5.2 The communication system shall support uninterrupted voice and data communication between:

- (a) Buses;
- (b) Depots;
- (c) Operations Control Centre; and
- (d) other Project systems.

11.6 **LICENSING AND REGULATORY COMPLIANCE**

11.6.1 The Concessionaire shall obtain all necessary licenses, permits and approvals for allocation and deployment of communication frequencies, including coordination with the relevant regulatory authorities.

11.6.2 All allocated frequencies shall comply with Applicable Laws, regulations and standards.

11.7 **DEPLOYMENT AND INTEGRATION**

11.7.1 The Concessionaire shall ensure that the communication systems are:

- (a) fully deployed within a reasonable period;
- (b) operational prior to full commencement of services; and
- (c) fully integrated with AFC-BSS, vehicle tracking, OCC and other ITS components; and
- (d) any delay in deployment shall be promptly notified to Independent Engineer/SMTA together with a corrective action plan.

11.8 **OPERATIONS, MAINTENANCE AND CONTINUITY**

11.8.1 The Concessionaire shall remain solely responsible for:

- (a) continuous monitoring;
- (b) troubleshooting;
- (c) maintenance; and
- (d) necessary upgrades
- (e) of the communication systems throughout the Concession Period.

11.8.2 Upon termination or expiry of this Agreement, the Concessionaire shall cooperate with SMTA/GoS to ensure seamless transition of operational responsibility, including transfer of licenses and documentation.

11.9 **COST RESPONSIBILITY AND REPORTING**

11.9.1 All costs and expenses associated with the allocation, deployment and operation of the communication system, including regulatory fees, shall be borne by SMTA/GoS, as specified in the Base document.

11.9.2 The Concessionaire shall provide reports to SMTA/GoS on system status, faults, maintenance activities and upgrades, as and when required.

11.10 REPORTING CAPABILITIES

11.10.1 All ITS, AFC-BSS, DMS and CMS components shall generate standard reports typically expected from an internationally deployed public transport system, including:

- (a) fare media utilisation reports;
- (b) origin-destination matrices;
- (c) ridership reports;
- (d) vehicle tracking and speed reports;
- (e) schedule adherence and trip status reports;
- (f) passenger transfer reports; and
- (g) incident and penalty-trigger reports.

11.10.2 The system shall support generation of at least thirty (30) additional configurable reports.

11.11 ALARMS AND EVENT MANAGEMENT

11.11.1 The system shall generate automated alarms for, *inter alia*:

- (a) speed violations;
- (b) breakdowns;
- (c) missed trips;
- (d) missed stops;
- (e) unplanned stoppages;
- (f) Bus bunching;
- (g) late starts; and
- (h) charging or system failures.

11.12 DATA INTEGRITY AND AUDIT

11.12.1 All operational data shall be:

- (a) time-stamped;
- (b) securely stored;

- (c) protected against tampering; and
- (d) auditable by the Independent Engineer.

12 **DOCUMENTATION, STANDARDS AND INTERPRETATION**

12.1 **APPLICABLE STANDARDS AND COMPLIANCE HIERARCHY**

12.1.1 All design, supply, installation, operation, maintenance, safety, charging, and system activities under this Schedule A shall comply with:

- (a) Applicable Laws;
- (b) Applicable Standards;
- (c) OEM manuals, specifications and technical bulletins;
- (d) SMTA's Requirements and Instructions; and
- (e) the provisions of this **SCHEDULE A (*Technical Specifications*)**.

12.1.2 In the event of any inconsistency between documents forming part of **SCHEDULE A (*Technical Specifications*)**, the more stringent requirement (as determined by SMTA/GoS) shall prevail.

12.2 **TECHNICAL DOCUMENTS AND EXHIBITS**

12.2.1 All Exhibits, Annexures, tables, drawings, specifications, and technical schedules referenced in this Schedule A form an integral part hereof and shall be read together with this Schedule.

12.2.2 Where numerical values, capacities, quantities or technical thresholds are specified in more than one location, the requirement that ensures higher performance, safety, or reliability shall apply.

12.3 **UPDATES TO TECHNICAL DOCUMENTATION**

12.3.1 The Concessionaire shall keep all technical documentation, manuals, asset registers, system configurations, and operational records accurate, current, and complete throughout the Concession Period.

12.3.2 Any material update to technical documentation resulting from system upgrades, replacements, or operational changes shall be documented and made available to SMTA/GoS.

12.4 **SMTA'S RIGHT TO INSPECT AND AUDIT**

12.4.1 The Independent Engineer shall have the right to:

- (a) inspect any E-Buses Asset, system or facility;
- (b) audit technical records, maintenance logs and system data; and verify compliance with this **SCHEDULE A (*Technical Specifications*)**.

12.4.2 Such inspections shall not relieve the Concessionaire of any obligation under the Agreement.

12.5 INTERPRETATION AND NO LIMITATION

12.5.1 This Schedule A shall be interpreted so as to give full effect to the intent of establishing a **safe, reliable, high-quality electric public transport system**.

12.5.2 The absence of any specific item, specification or procedure shall not relieve the Concessionaire of its obligation to provide everything necessary for safe, compliant and continuous operations in accordance with Applicable Standards.

12.6 SURVIVAL OF TECHNICAL OBLIGATIONS

12.6.1 Technical obligations relating to:

- (a) safety;
- (b) environmental compliance;
- (c) data ownership;
- (d) asset condition at handover; and
- (e) defect rectification,

shall survive expiry or termination of this Agreement to the extent required to give effect to this Schedule.

12.7 ENTIRE TECHNICAL SPECIFICATION

12.7.1 This **SCHEDULE A (*Technical Specifications*)** along with its following Exhibits 1 through 5, constitutes the entire Technical Specifications Schedule for the Project and supersedes any prior technical descriptions, drafts or representations, whether written or oral, relating to the technical scope of the Project.

SCHEDULE EXHIBITS

EXHIBIT 1 - TECHNICAL SPECIFICATIONS

Table 1.1: Vehicle Specifications

NO.	SPECIFICATION	8.5 TO 9-METER VEHICLES
SECTION 1: SPECIFICATION COMPONENTS		
1.	Vehicles, Components And Training To Be Provided	The Concessionaire will be entering into the Agreement with the manufacturer who will have to supply the Buses for the purposes of the Project.
2.	Vehicle Fleet Size	200 Nos. – 8.5 to 9 m Pure Electric Buses.
3.	Not Used	Not used
4.	Installation Of Medium & Fast Charging Units	The Concessionaire will provide medium and fast chargers compatible with the Buses. The Concessionaire will also install the chargers at respective Depots in quantities required per Depot or designated locations. The civil works and connectivity establishment will be the responsibility of the Concessionaire.
5.	Spare Parts Package	The Concessionaire will be responsible to provide all replacement parts and supplies for all maintenance issues resulting from normal wear and tear as well as items requiring scheduled replacements. The Concessionaire will also be responsible for all materials and associated costs for repair actions caused by road collisions or other unscheduled incidents. The Spare Parts package as mentioned in the RFP shall be delivered within one month of the delivery of the last Bus of each phase As a minimum, the quantity of Spare Parts shall be kept at hand at the Depot site at all times during the whole concession period. If a part or supply item is replaced, the stock at the Depot site shall be replenished within twenty (20) Days. At the end of Concession Period, the Concessionaire will ensure the availability of final stock of Spare Parts and supplies at the Depot facility. The quantity listed in these Technical Specifications lists the minimum Spare Parts that will be included in the final stock of Spare Parts at the Depot facility.

NO.	SPECIFICATION	8.5 TO 9-METER VEHICLES
		The Concessionaire will also provide the documentation on how the procurement of any future Spare Parts and supplies will be conducted. This information will include a full list of the required Spare Parts and supplies along with pertinent parts order numbers, estimated lead times for delivery, and payment mechanisms and payment terms.
6.	Maintenance Tools	The Concessionaire shall ensure availability of one set per Depot of the specified maintenance tools, software, and diagnostic equipment required to repair, service, and maintain each type of vehicles. The Concessionaire will ensure the Depot facility with an initial set of required tools that will serve the typical Day-to-Day requirements of vehicle repair and maintenance. The diagnostic software and equipment are required for evaluating the status of the vehicle and for directing Depot staff to take necessary corrective maintenance and repair actions. As a minimum, the Concessionaire shall ensure the availability of the following items: ■ One set per Depot of the dollies and cradles necessary for the handling of motors, transmissions and other heavy components requiring specialist handling equipment. ■ One set of all tools per Depot required for the maintenance of the principal vehicle components, including all tools for standard maintenance, repair, and re-installing of vehicle components. ■ One set per Depot of maintenance diagnostic software, with a multi-site and multi-use license. ■ One set per Depot of diagnostic equipment to evaluate the status of vehicle components, including diagnostic equipment for the motor unit, gearbox, system electronics, air suspension system, and wheel and axle alignment. These Technical Specifications lists the minimum tools requirements to be made available by the Concessionaire at the end of the Term of the

NO.	SPECIFICATION	8.5 TO 9-METER VEHICLES
		Agreement. The Concessionaire must also provide a list of any additional/specialized tools listed by manufacturer to service the vehicles.
7.	Warranty	The warranty shall be obtained from the manufacturer on the chassis, body, and all vehicle components to protect against any defects in design, workmanship, equipment, or materials. With the exception of the electric storage and propulsion system (i.e. battery packs and electric motors), the warranty for all other parts and components will commence from the date of delivery of the last vehicle to second year of operations. For the battery packs the manufacturer will provide all necessary replacement for twelve (12) years, for electric motors, and controller the manufacturer will provide all necessary replacements for twelve (12) or 1.2 million KM of service, whichever of these two milestones are realized first and in respect of the medium and fast chargers the manufacturer will provide all necessary replacement for twelve (12). The battery packs shall be replaced under this warranty whenever the battery capacity falls below 80% of its original capacity at full charge. The warranty will stipulate that the Concessionaire is responsible for all repair and replacement costs due to the premature failure of any part or component due to defects in design, workmanship, equipment, or materials. The warranty will cover all costs associated with repairs or replacements due to the actions of the manufacturer. Among the types of repairs or replacements not covered under the warranty are road collisions or other unscheduled incidents.
8.	Registration, Licensing And Homologation	The Concessionaire will bear all the cost related to registration, licensing, whitelisting and homologation.
9.	Cost Of Inland Transport And Associated Insurance To Delivery Point	The Concessionaire will be responsible to bear all the cost of inland transport and associated insurances while delivering all the Goods to the designated Bus Depot. Insurances procured by the Concessionaire should include comprehensive insurance for terrorism, vandalism and sabotage.

NO.	SPECIFICATION	8.5 TO 9-METER VEHICLES
		The Concessionaire shall ensure that the relevant insurances shall continue to be valid for three (3) months after the delivery of the Goods to the designated Bus Depot In the event any insurance claims arise within this timeframe, appropriate compensations will be ensured
10.	Maintenance Supervision	The Concessionaire shall be responsible for the fleet maintenance for the period of concession. The Concessionaire shall ensure that sufficient maintenance is applied during the concession period so that at least 90% of the fleet will be operationally available at any time during system operating hours. "Operationally Available" means that the vehicles are in a functional condition that could be utilized in customer services without any restrictions while meeting all requirements in this Technical Specifications. The maintenance services will include but not limited to motor, battery packs, replacement of filters, coolant, spark plugs, fuses, worn wiper blades, worn brake pads and linings or worn clutch linings, replacement of tires (if required), batteries, air conditioning. The Concessionaire shall also be responsible for any maintenance arising out of the following; Repairs and adjustments required as a result of racing, overloading, negligence, modification, alteration, tampering, disconnection, improper adjustments or repairs, accident and use of add-on-parts/material. Cosmetic or surface corrosion from stone chips or scratches in the paint. Damage or Surface corrosion from the environment such as acid rain, air borne fall out (chemicals, tree sap, etc.), salt, hail, windstorms, lightning, floods, other acts of God and the like is not covered. Repairs and adjustments caused by improper maintenance not carried out, use of fluids other than the fluids specified in manufacturer's manual. Normal noise, vibration, wear, tear or deterioration such as discoloration, fading, deformation or blur.

NO.	SPECIFICATION	8.5 TO 9-METER VEHICLES
11.	Maintenance Training Program	The Concessionaire shall ensure that the manufacturer shall deliver a maintenance training program that will properly prepare the Concessionaire to independently maintain its vehicle fleet throughout the concession period. The training program will take place at regular intervals. These sessions will include both classroom instruction as well as hands-on repair work in the Depot maintenance area. In particular, the training shall also focus on any potential rebuild work or battery pack replacement work that would be required.
12.	Driver Training Program	In order to facilitate a disciplined operation of the vehicle fleets, the Concessionaire shall implement a driver training program that will install safe and professional driving skills. The training course will culminate in the drivers receiving a course (competency) certificate indicating driving proficiency. The driver training program will prepare the drivers to undertake licensing exams under National law to operate large public transport vehicles. Approximately 500 drivers for each phase over a period of four months. Each trainee shall spend at least 8 hours in the actual road testing of a vehicle during the course of the training program. The selection of the drivers for the course will be the responsibility of the Concessionaire. The training venue (including classrooms and driver training area preferably be arranged/developed inside the Depot facility. • The course topics will include: • Driving skills • Traffic regulations • Safety • Emergency protocols • Customer service • Public transport license testing.

NO.	SPECIFICATION	8.5 TO 9-METER VEHICLES
		The actual testing for a National public transport driver's license will be the responsibility of the Concessionaire. The GOS will therefore NOT be responsible for any direct testing costs, such as application fees. The schedule of driver training program is: Commencement of driver training program: Within such time period as set out in this Agreement. Completion of driver training program: Within maximum two (2) months after the commencement of driver training program.
13.	Fleet & Chargers Delivery Schedule	■ Completion of first full unit at Factory: Sixty (60) Days from the date of the Effective Date. ■ Delivery of single batch/tranche of vehicles comprising of a full (100%) of the 8.5 to 9 meter vehicle quantity: Within ninety (90) Days from approval of Prototype Bus and issuance of Prototype Test Acceptance Certificate ■ Delivery of Medium & Fast Chargers: The OEM shall ensure delivery of all Medium & Fast Chargers at least fifteen (15) Days prior to the delivery of Bus fleet.

SECTION 2: SPECIFICATIONS SUMMARY		
S. No.	Criteria	Specification
1.	Make / Manufacturing	2025 or above
2.	Vehicle length (minimum - maximum)	8 - 9 meters
3.	Vehicle width (not including mirrors)	2.4-2.5 meters
4.	Vehicle height (from road surface to highest point on roof) (maximum)	3.5 meters
5.	Floor height (from road surface to interior floor at doorways)	350 mm
6.	Ground Clearance (minimum)	260 - 280 mm (From the ground to the lower edge of entrance floor)
7.	Ceiling height in front passenger area (from interior floor to ceiling) (minimum)	2.1 meters

8.	Clearance at doorway (from interior floor to door header) (minimum)	1.9 meters
9.	Axle load, front axle (maximum)	4,800 - 5,500 kg
10.	Axle load, rear-axle (maximum)	9,000 – 10,000 kg
11.	Grade ability (Fully Laden)	Min 17%
12.	Angle of Approach (Fully Laden)	Minimum 7 degrees
13.	Angle of Departure (Fully Laden)	Minimum 7 degrees
14.	Steering	Driver compartment on right-hand side of vehicle for vehicle operation on left-hand side of Roadway. Power Steering electric assisted with height and angle adjustment.
15.	Useful life of vehicle (projected)	1.2 million km or 12 years
16.	Free door width per passenger door (minimum)	1.2 meters
17.	Number of curb-side passenger doorways	1
18.	Number of manual pull-out boarding bridges from curb-side doors	1
19.	General seat configuration	2 x 2 (predominantly)
20.	Seat pitch (minimum)	660 mm
21.	Seat width (minimum)	420 mm
22.	Number of passenger seats (including preferential seats but excluding flip down seats and driver seat) (minimum)	18
23.	Number of wheelchair bays (minimum)	1
24.	Total number of flip-down seats in wheelchair bay(s) (minimum)	2
25.	Length of wheelchair bay(s) (minimum)	1.3 meters each
26.	Number of seats in front women-only section (minimum)	8
27.	Thickness of flooring material (minimum)	2 mm
28.	Side window height (minimum)	900 mm (excluding last row of seats)
29.	For the median side (right-side) of the vehicle, distance of outside edge of the wing mirror from the vehicle body (maximum)	150-225 mm

30.	For the curb side (left-side) of the vehicle, distance of outside edge of the wing mirror from the vehicle body (maximum)	200-230 mm
31.	Tire Construction / Width	Aluminum Alloy Rim, 255/ 70R19.5 to 275/70R22.5
32.	Distance between outside edge of tire sidewall to outside edge of vehicle body for front axle (maximum)	125 mm
33.	Distance between outside edge of tire sidewall to outside edge of vehicle body for rear axle (maximum)	80 mm
34.	Power on gradient (minimum)	Maintain 50 km/hr on 4% up grade and 30 km/hr on 8% upgrade when fully loaded
35.	Projected maximum operating speed (maximum)	80 km/hr
36.	Propulsion system	Pure Electric Bus
37.	Size of electric motor for propulsion system (peak power minimum)	240 kW
38.	Size of electric motor for propulsion system (Rated power minimum)	120 kW
39.	Motor Type	Permanent Magnet Synchronous Motor (PMSM), with the Protection level IP6k9k
40.	Battery Type	Lithium-ion (LiFePO4) with protection level IP6k9k.
41.	Battery Pack Safety	The battery pack is designed with an anti-collision structure, and the test force is not less than 200KN. A nitrogen protection system is required in the battery box to ensure the battery box in an anaerobic environment to reduce the risk of fire when the battery pack is short or thermally out of control in a low oxygen environment. Each Battery pack is equipped with fireproof paper with a fire resistance of 1,300 degree centigrade. A certificate of nitrogen protection system shall be required before or at the time of prototype testing.
42.	Battery Capacity (minimum)	281.9 kWh

43.	Bus Mileage	Not less than 225 km (throughout twelve (12) years of operations from the start of O&M date) on single charge (100% to 20% battery consumption) fully loaded with AC working
44.	Internal idling noise standard (maximum)	60 dB
45.	External idling noise standard (maximum)	65 dB
46.	Turning radius, outer wheel track (maximum)	12.0 meters

SECTION 3: LEGISLATION AND STANDARDS

1.	National legislation and standards	All vehicles shall comply with all national, provincial and local legislation, regulation or by-law as well as with the relevant national standards. The Concessionaire is expected to be fully familiarized with the legal requirements of public transport vehicles, of the types proposed, in the given national context.

SECTION 4: WEIGHTS AND DIMENSIONS

1.	Axle loads	The vehicle axles must be capable of operating with the following maximum loads: ▪ Front axle: 4,800 5,500 kg ▪ Middle axle: Not Applicable ▪ Rear axle: 9,000 – 10,000 kg
2.	Overall vehicle width	The vehicles shall meet a targeted width of 2.4-2.5 meters (variation with $\pm 2\%$), as measured from one exterior side to the other (excluding wing mirrors).
3.	Floor height	The vehicles are to be low entry, allowing ease of access for the curb- side boarding. The targeted floor height, based on the distance from the road level to the floor of the vehicle is 350 mm. This dimension must be achieved within a tolerance of +/- 10 mm even when the vehicle is unevenly loaded with passengers bunching on one side. The rear portion of the vehicle (i.e. the portion of the vehicles after the last doorway) may be raised with steps.
4.	Vehicle length	The vehicle length may be in the range from 8.0 meters to 9.0 meters.

5.	Interior floor to ceiling	The interior clearance height (from the vehicle floor to the ceiling) for the front passenger area shall be a minimum of 2.1 m. The interior clearance height (from the aisle way floor to the ceiling) for the raised rear passenger area shall be a minimum of 1.85 m. At the doorways, the minimum clearance height, from the vehicle floor to the door header, shall be 1.9 m. The manufacturers are encouraged to maximize ceiling clearance heights.

SECTION 5: BODY

1.	Structure	The body shall be designed to meet a useful vehicle life of 12 years or 1.2 million kilometres, whichever of these two milestones arrive first. The body shall be reinforced at joints where stress concentration may occur. The vehicle shall safely withstand road shocks and other conditions found in urban services. Body panelling shall have adequate thermal and acoustic properties and shall not vibrate unduly while the vehicle is in operation. Bus structure shall meet the structural requirements of structural strengths, stability, deflection, vibration, crashworthiness, roll over protection etc. Amongst others for at least following main loads: ▪ Static Loads ▪ Dynamic Loads ▪ Single Wheel bump loads ▪ Double Wheel bump (Diagonally opposite) loads ▪ Braking and acceleration loads ▪ Front-impact loads ▪ Speed breaker loads The structure shall meet the compliance standards for the rollover test stipulated through Regulation 66 of the United

		Nations Economic Commission for Europe (ECE-R66). Furthermore, when the Bus is loaded to GVW, with crush load and under static condition, shall not exhibit deflection or deformation that impairs the operation of the steering, doors, windows, passenger escape mechanism and service doors.
2.	Materials and corrosion resistance	High strength corrosive-resistant material shall be used in construction of the body. Mild steel is the minimum requirement for the vehicles. The use of materials with superior strength, corrosion resistance, and overall durability is encouraged. The use of stainless-steel alloys (such as 3CR-12), high-carbon steel, glass-reinforced plastic (GFRP), aluminium, and other materials should be considered, particularly for critical sections of the body and structural elements.
3.	Body Shape	These new Buses shall represent an overall transformation of public transport for the major cities of Sindh. The aesthetics of the vehicles will play a significant role in transforming the public's perceptions of public transport services. The Concessionaire therefore requires a body design that evokes a modern appearance with sleek and aerodynamic curve lines. This visual effect can be achieved by: a rounded vehicle front with a curved windscreen. A slanted vehicle front; or a rounded augmented body piece added to the front roofline of the vehicle. Option 1 (curved vehicle front) and option 2 (slanted vehicle front) may also include the rounded augmented body piece on the roof-top (option 3).

		A flat vehicle front with no rounded, aerodynamic features will mean that the manufacturer's proposal will be considered non-responsive to the technical requirements.
4.	Conduciveness to washing	The exterior and body features, including grilles and louvers, shall be shaped to allow complete and easy cleaning by an automatic vehicle washer without snagging washer brushes. Water and dirt should not be retained in or on any feature of the vehicle after leaving the washer.
PAINT		
5.	Vehicle livery	Vehicle exteriors shall be used for advertisement to generate Non-Fare Revenue (NFR). The details of the final design shall be provided during the pre-production period.
6.	Painting of vehicle body	The painting of the vehicle shall employ modern best practice. Paints shall produce a superior finish that will support efforts to position the system as a choice option for all passengers. It is preferred that the paint materials and application procedures utilized will be as environmental - friendly as is practically possible, including consideration of water-based paints. The paint shall be hard wearing and able to withstand the operating conditions of an urban Bus. Such wear resistance shall include the ability to withstand regular machine-washing of the vehicles. The process and materials used shall be such as to allow ready repainting of minor scratches and scrapes. All primers, sealers, paint and any other materials used shall be compatible to assure chemical bond, adhesion, overall gloss retention, and to assure full warranty by the manufacturer. The finish coat shall be free of runs, sags, and areas of no gloss. There shall be no bare or exposed metal surfaces showing on the exterior of the vehicles. If vehicle

		components are to be imported and shipped via sea, then a special coating shall be applied to protect against damage from sea spray. It is to be noted that there will be advertisements on the external side of the Bus to exploit Non-Fare Revenue potential. Hence the paint should be such that it facilitates the purpose.
7.	Undercoating	The underside of the under-frame, flooring and stepwells, wheel-housings and all exposed underfloor surfaces shall be treated with a fire-retardant coating.
DOORWAYS		
1.	Number of passenger doors and dimensions	The vehicle shall have one curb-side passenger doorway. The doorways shall be located between the two axles of the vehicles. Each doorway will provide a minimum free width of 1.2 m for ease of passenger entry and egress. The minimum clearance height at the doorway shall be 1.9 m.
2.	Door type and characteristics	Doors should be two-leaf inward swinging doors. Structure of the doors, their attachments, inside and outside trim panels, and any mechanism exposed to the elements shall be corrosion-resistant. Door panel construction shall be of corrosion-resistant metal or reinforced non-metallic composite materials. The doors, when fully opened, shall provide a firm support and shall not be damaged if used as an assist by passengers during ingress or egress. Door edges shall be sealed to prevent infiltration of exterior moisture, noise, dirt and air elements from entering the passenger compartment, to the maximum extent possible based on door types. The closing edge of each door panel shall have no less than 5 cm of soft weather stripping. The doors, when closed, shall be effectively sealed, and the hard surfaces of

		the doors shall be at least 10 cm apart (not applicable to single doors). The combined weather seal and window glazing elements of the front door shall not exceed 10 deg of binocular obstruction of the driver's view through the closed door.
3.	Opening / closing mechanism	Doors shall be electro-pneumatically operated by the driver and shall be able to be opened or closed independently or in unison with each other. System shall include an audible announcement that informs passengers when the doors are either about to open or close. Door movements shall also be shown by luminous indicators. The indicators shall show red when the door is closed and green when the door is open.
4.	Door safety and emergency operation	A pilot lamp on the driver's dashboard should be provided to warn that the door is open or completely closed. Doors shall not open until the vehicle comes to a stop. Doors shall have an interlock control with brake and accelerator to prevent movement of vehicle with doors in open position. The doors shall function even with the ignition off. Anti-pinch sensors shall be installed to retract the door automatically if any obstruction with a width of 25 mm or greater is caught between any point of the doorway. The anti-pinch system will prevent injury due to wrists, ankles, or belongings being caught in the doorway.
5.	Closing Force	Closing door edge speed shall not exceed 30 cm per second, and opening door speed shall not exceed 50 cm per second. Power doors shall not slam closed under any circumstance, even if the door is obstructed during the closing cycle. If a door is obstructed during the closing cycle, the pressure exerted on the obstruction shall not increase once initial contact has been made.

		Doors shall be equipped with a sensitive edge or other obstruction sensing system such that if an obstruction is struck by a closing door edge, the doors will stop and/or reverse direction prior to imparting a 5- kilogram force on 7 square centimetres of that obstruction. Whether or not the obstruction sensing system is present or functional it shall be possible to withdraw a 3.8-centimeter diameter cylinder from between the center edges of a closed and locked door with an outward force not greater than 16 kilograms.
		WINDOWS
1.	Side and rear windows	Windows shall be provided along the sides of the vehicle as well as the rear of the vehicle. The side and rear window areas shall be as large as possible to give the seated and standing passengers an unobstructed exterior view. The window unit shall be a minimum of 900 mm in height. The manufacturers are encouraged to provide larger panoramic-styled windows. However last rear window can be smaller in size for any space constraint. Windows shall be of the bonded type. Windows shall not be mounted in rubber moulds. All glass shall be tinted to an approximate level of 70% to 80% light transmission (i.e. glass permits approximately 70% - 80% of light to enter). Side windows shall have the look of a seamless or continuous window when viewed from exterior of the vehicle. The exterior of the windows shall withstand damage and scratching from use of vehicle wash system. This would include, but not limited to soaps, spinning brushes, as well as hand brushes.

		The driver's side windows shall be split, sliding windows. The sliding portion shall move freely without rocking or binding. Driver windows shall be glazed with tinted laminated safety glass. Glass shall be tinted at the top third (1/3), to meet safety standards.
2.	Opening of windows	While the vehicles will be fitted with air conditioning, there will be the option of manually-opened vents to be used in case of air conditioning failure besides the roof vents. These windows shall incorporate an upper transom portion. The transom shall be between 25 and 35 percent of the total window area. The lower portion of the window shall be fixed. The transom portion shall be hinged along the lower edge and open inward. This should be visually merged as much as possible with the fixed windows around them. However, the window vents will normally be locked during periods of the year when air conditioning is to be utilized. The unlocking of the windows should be controllable by the driver via keys whereby driver can walk from the cabin and open them. They should not be unlocked by a passenger. The locking can be done manually at each vent by simply closing them. Moreover, three (3) set of keys should be provided for each Bus.
3.	Windshield and windshield wipers	The windshield shall be designed for easy replacement and maintenance. Windshields shall be angled sufficiently to reduce glare from the interior vehicle lighting. A fully adjustable sun visor shall be installed for driver's use. The installation shall preclude vibration in normal street operation. The visor shall be a full see through, mesh style with a release cord that allows the visor to return to the normal position. Two electric-operated heavy duty windshield wipers shall be furnished. The wiper motors shall be variable speed having at least a high and low speed setting with an intermittent setting. The

	windshield wiper system shall include a “self-parking” feature, which means the wiper returns to its base position when the wiper is disengaged. A windshield washer shall also be provided. A heavy-duty, three-speed plus intermittent facility wiper system should be driven by 24-volt electric brushless motor. Wiper arms and blades are to be “Pantograph” type with black finish. Wiper blades must be easily replaceable. Swept area should be maximized to cover driver’s forward vision and the driver’s view to the nearside exterior rear view mirror at normal driving position. Wiper spindles are to be recessed into front GRP moulding and to be secured by disc-lock nuts. The wiper motor, the linkage assembly and wire connections should be easily accessible for regular maintenance. The wiper arm design (suitable wiper arm tension or appropriate deflectors) should enable normal wiper operation even when the vehicle is running at the maximum speed of 80 kph and under high wind loading condition. The wiper arms and windscreen should not be protruding beyond the front GRP moulding in order to prevent damage of windscreen during the operation of Bus washing machine. Overload protection for the wiper motor circuit is required. Anti-corrosion materials should be used for the wiper arm and the associated fittings. Wiper blades should be securely mounted to the wiper arms, and can be replaced

		independently during routine maintenance.
	EXTERIOR PANELS, ROOF GUTTER AND BUMPERS	
1.	Exterior panels	Exterior panels shall be sufficiently stiff to prevent vibration, drumming or flexing while the vehicle is in service.
2.	Roof gutter	Roof gutters shall be installed if body style does not stop water flow into or on windows, doors, and mirrors. The roof gutters will be installed over the side windows and doors, if necessary. When the vehicle is decelerated, the gutters shall not drain onto the windshield, or operator's side window, or into the door boarding area. Cross sections of the gutters shall be adequate for proper operation.
3.	Bumpers	No part of the vehicle except Bumpers shall be damaged because of a ten (10) kph impact at the front or rear of the vehicle. The energy absorption system of the bumper areas shall not require service or maintenance in normal operation during service life of the vehicle.
4.	License Plate provisions	Provisions shall be made to mount local standard size license plates on the front and rear of the vehicle. The manufacturers are encouraged to arrange license plate dimensions which are standard as per industry practices. These provisions shall direct mount or recess the license plates so that they can be cleaned by automatic vehicle washing equipment without being caught by the brushes. License plates shall be mounted according to local rules and shall not allow a toehold or handhold for unauthorized riders.
5.	Wing mirrors	Vehicles shall be equipped with two outside rear-view mirrors, mounted on each front corner of the vehicle. The wing mirrors shall be motorized. The control switches shall be mounted on the driver's control console. The mirrors shall be fully adjustable to give the driver a full view of the required area.

		In order to ensure effective driver visibility, the wing mirrors shall have a minimum width of 170 mm and a minimum height of 250 mm.
		EXTERNAL ACCESS POINTS
1.	External access doors	Access doors shall be provided, where necessary, for the easy maintenance of equipment. The access doors shall be provided with positive hold open devices and corrosion resistant latches. Access openings shall be sized for easy performance of tasks within the compartment including tool operating space. Access doors shall be of rugged construction and shall maintain mechanical integrity and function under normal operations throughout the service life of the vehicle. They shall close flush with the body surface. When motor access door is open, it shall not obstruct the rear vehicle lights. Access to the motor, transmission and ITS control compartment doors shall be controlled by some form of key access ("T" key style is acceptable). There shall be an access door for emergency workers to gain entry to the "Battery Disconnect" and it shall be labelled as such. This access door shall not require tools to gain access.
2.	Service Area Lighting	Lights shall be provided in the motor and all other compartments, where service may be required, to generally illuminate the area for night emergency repairs or adjustments. Sealed lamp assemblies shall be provided in the motor compartment and shall be controlled by a switch located near the rear start controls in the motor compartment. Necessary lights, located in other service compartments, shall be provided with switches on the light fixture or convenient to the light.
3.	Roof escape hatch/air vents	At least one emergency roof escape hatch shall be provided in each vehicle. The hatch shall have a seal around the

		opening, and shall be opened by pulling the release handle. Instruction decals shall be placed on the underside of the hatch. The roof hatch may also act as a fresh air ventilator at times when the air conditioning is not in use.

INTERIOR		
Colors, maps, and advertising		
1.	Color Scheme	The colour of the wall panels shall contrast with that of the surface of the floor and this contrast is to be most clearly defined at the junction of the floor to the wall. The actual colours to be utilized will be determined by SMTA during the pre-production period.
2.	Panels and trim	The interior of the access doors shall blend in with the appearance of the vehicle interior. The interior side walls, ceiling trim panels, and sections between large side windows down to the bottom of the window openings shall consist of an aesthetically-attractive and durable material. The materials must be approved by SMTA during the pre-production period.
3.	System map	To provide excellence in system legibility, system network maps will be placed on all vehicles. The system maps will be provided in a large size that will be visible to the passenger area to the extent possible. At least two locations should be provided inside the Buses for a system map. The actual provision of the maps is the responsibility of the SMTA.
4.	Advertising	In order to optimize system revenues, some discrete advertising space will be permitted inside the vehicles. The possible spaces for the advertising include the space above the windows as well as on any partition panels not utilized for the system route map. The advertising spaces will be designed to include mechanisms to hold the advertising in place. The manufacturer will note the proposed locations of the advertising in the submitted interior layout drawings of the vehicle.
Grab-rails/stanchions/straps		

1.	Grab-rails and stanchions	Full grip stanchions and grab-rails shall be provided for the safety of the standing passengers and for ingress and egress. The stanchions and grab rails shall be properly supported and held in place according to industry standards. Ceiling grab-rails, one on each side of vehicle aisle way, shall be even with aisle edge of the seats. If relevant to the chosen interior design, a horizontal passenger assist shall be placed across the front of the vehicle in order to prevent injuries on the windshield in the event of a sudden stop. A high-contrast colour shall be used for the grab-rails and the stanchions. The colour will be determined by SMTA during the pre-production period. The height and number of grab handles should facilitate passenger in having comfortable standing position.
2.	Straps	Colour coordinated subway straps shall be installed on grab-rails running length of vehicle. The straps shall be of a soft material such as leather and shall have a positive fastening system.
3.	Internal layout	The manufacturers shall provide drawings of the proposed interior layout of each vehicle. The chosen layout may be altered through discussions with SMTA, provided there are no cost implications of such alterations.
PASSENGER SEATS		
1.	Seating configuration	In general, seats will be oriented in a 2 x 2 configuration, with the exception of areas such as the back of the vehicle and the flip-down seats in the wheelchair bays. Since customer comfort and personal security is a principal objective, a configuration of 3 x 3 or 3 x 2 is not permitted. For the most part, the seats will face forward. However, the flip-down seats in the wheelchair bays will be orientated to the side. It is also acceptable to include some side-facing or rear-facing seating if the configuration helps to maximize the number of seats. For example,

		rear-facing seating may be applied for this purpose on the rear-side of the wheel wells.
2.	Seating dimensions	A minimum 660 mm leg pitch shall be provided. At preferential seats, the clear distance from the front of the seat to the rear of the next seat shall not be less than 230 mm. Where the preferential seat faces a bulkhead or partition more than 1,200 mm in height, this distance is to increase to a minimum of 300 mm. The seat width shall be a minimum of 420 mm.
3.	Number of seats	A minimum of 18 seats shall be provided. This amount excludes the additional seats provided by flip-down seats in the wheelchair bays. It is expected that the one wheelchair bay of 1.3 m each in length will each be able to accommodate space for at least a total of two flip-down seats.
4.	Standing passengers	No vehicle is expected to exceed a standing passenger capacity of 6.0 passengers per square meter. However, the axle load specifications have been set to accommodate temporary conditions of over-crowding.
5.	Seating materials	The base structure of the seat shall be hard, durable plastic. The passenger contact areas at the base and at the back shall be a soft padded plastic material. All materials shall be durable and easily maintained and cleaned. The colour of the seat will be selected by SMTA during the pre-production period. The colour of the seating in the women-only section of the vehicle shall be different than the colour of the seating in the men's section of the vehicle. The type, style, and colour of the seating materials must be approved by SMTA during the pre-production period.
6.	Hand-hold rail	All aisle passenger seats shall be equipped with a hand-hold rail at the top of the seat back-rest. A hand-hold rail at the sides is encouraged, since it is often useful for small children.
SPECIALS ASSISTANCE PROVISIONS		
1.	Wheelchair bays	The vehicle shall include provisions for wheelchair-compatible open bays.

		Minimum one wheelchair bay shall be provided. Wheelchair bay shall be forward facing. Minimum of 1 wheelchair bay will be accommodated in the wheelchair bay area. Each wheelchair bay shall be a minimum of 1.3 m in length. The wheelchair bay will also accommodate flip-down seating that can be utilized when no wheelchair patron is using the space. The wheelchair bay is to be provided with approved independent passenger and wheelchair restraint systems including seat belts and stanchions as necessary. The equipment is to comply with ISO 10542 or GB13094-2017 standard. The wheelchair bay shall include a headrest backboard to minimize injury in case of an accident or sudden stop. The wheelchair bay shall be designated a priority area for wheelchair patrons as well as other disabled persons and customers with prams. The wheelchair bays shall have signage indicating this prioritization. A pictogram indicating this priority will also be placed adjacent to the exterior of the doorway nearest to the wheelchair bay.
DRIVER'S COMPARTMENT		
1.	Driver's seat	The driver's seat shall include headrest, high back, dual air lumbar, air operated side bolsters, and an automatic/manual fore and aft slide. The driver's seat shall be upholstered in all cloth fabric. The driver's seat will be equipped with a 3-point seat belt, and a built-in maxi alarm indicating that the brake has not been applied when driver takes pressure off the seat.
2.	Enclosed compartment	The driver's area shall be an enclosed compartment. Behind the driver shall be a partition wall, but the wall shall include a window to allow visibility into the passenger area. To the left-side of the driver shall be a clear upper wall and doorway to allow the driver to have full peripheral vision and to be able to communicate freely with the conductors. The doorway to the driver's compartment shall be lockable for security purposes.

3.	Compartment ergonomics	The manufacturer shall supply state of the art ergonomics engineering to the vehicle driver's environment to maximize driver comfort and ease of operation for extended periods of time. All switches and controls necessary for the operation of the vehicle, including door master, shall be conveniently located in the driver's area and shall provide for ease of operation.
4.	Interior mirrors	In addition to the presence of cameras and displays, mirrors shall be provided for the driver to observe passengers throughout the vehicle without leaving his/her seat and without shoulder movement.
5.	Signage	Signage shall be provided near the driver's compartment. This signage shall state that passengers shall not address the driver, except in emergency situations. The signage shall also state that the driver carries no cash and that any violation shall result in prosecution.
6.	Components	The following are the various components to be found in the area of the driver's compartment: ▪ Basic toolbox fitted behind the driver ▪ Horn ▪ ITS components (described below) ▪ Driver's sun visor on both the right and left hand windscreen ▪ Fire extinguisher placed near the driver, approved to national standards ▪ Triangle kit for roadway incidents ▪ Lockable storage holder next to driver to place personal belongings ▪ Provision of space/holders for operating license certificate and valid operational permit on dashboard or driver side window.
	Driver Cabin Standards	Compliance with ISO16121-2 or GB13094-2017 standard
FLOOR		
1.	Floor base	The floor base shall be resistant to moisture and moisture related deterioration. The underframe shall have sufficient stiffeners to keep the flooring from excessive flexing under maximum loads.
2.	Floor covering	The floor covering shall be both aesthetically pleasing as well as durable. The floor covering

		shall be capable of withstanding daily mopping / wet scrubbing. The floor covering shall be a heavy-duty non-slip material with a minimum thickness of 2 mm. The walking area of the floor shall be level in each section. The colour of the floor at the passenger doorways shall contrast with that elsewhere in the vehicle. In front of each doorway, the floor colour will be a high-contrast yellow to indicate that passengers are not to block that area. Manufacturers shall provide samples of the floor material options being offered. The type and colour of the floor covering must be approved by the SMTA during the pre-production period.
3.	Access doors in floor	Floor inspection trap doors shall have a quick-acting coupling system to facilitate the access and maintenance of chassis components. All holes in the floor material, for mounting bolts, seams, etc., shall be caulked and sealed before sanding. Access openings in the floor shall be avoided with the exception of access for the fuel tanks sending unit and driveshaft.
4.	Wheel housing	To the extent, any exposed wheel housings are present in the interior space: ▪ The wheel housings shall be trimmed and sealed at its mating edges; ▪ The colour of the wheel housing shall compliment vehicle interior. The color will be determined by SMTA during pre-production; ▪ The wheel housing shall be finished on the vehicle interior to withstand scuffing, wear and abuse from passenger feet.
5.	Partition walls	A partition wall shall be installed behind the driver; this barrier shall be transparent above 1,000 mm so that the driver has a clear view of the passenger area. Some of the partition walls will be fitted to accommodate a system map and/or advertising.

		Partitions shall incorporate hand-holds that assist seated passengers in arising or steadying themselves. Adequate clearance shall be provided for passenger's hand between panel and rear half of door, during complete opening and closing cycle. Material colour and finish to be determined during the pre-production period.
6.	Fire and safety equipment	The manufacturer shall furnish and install or cause to be furnished and installed a dry chemical extinguisher with hose assembly. The fire extinguishers shall be located in easily accessible locations. The interior of the vehicle shall be fitted with the required fire and safety decals. The placement of the fire equipment and the decals shall be approved by SMTA during the pre-production period.
7.	Interior insulation	Aside from the general thermal and acoustic requirements for the body, any seat area over the motor shall be heavily insulated for both noise and heat protection with fiberglass blankets or approved equal.
8.	Integrity	Water leakage tests should be carried out by the bodybuilder to the satisfaction of the Concessionaire prior to the handover of the vehicles. The Concessionaire shall be advised when such tests are to be carried out so that representatives of the Concessionaire can attend if required.

MECHANICAL		
Engine/propulsion system		
1.	Propulsion System	The vehicle fleet shall be based on a Full-Electric System where Vehicles should be capable of taking fast charging and slow charging both to drive a total of not less than 225 km on single charge (100% to 20% battery consumption) fully loaded with AC working. The driveline configuration should be optimized in reaching the highest possible energy efficiency to achieve the required vehicle road performance,

		including but not limited to acceleration and hill climbing capability under a fully laden condition. The Bus must be powered by electricity from on board battery packs.
2.	Propulsion System Service	The propulsion system shall be arranged so that accessibility for all routine maintenance is ensured. No special tools, other than dollies and hoists, shall be required to remove the propulsion system or any subsystems. However, the Independent Engineer shall recognize that properly rated test equipment and safe electrical work practices are essential when servicing high-voltage components. The air compressor, all motor accessories, and any other component requiring service or replacement shall be easily removable. The manufacturer shall provide or cause to be provided all specialty tools and diagnostic equipment required for maintaining the propulsion system in accordance with the special tools list.
3.	Primary Propulsion Unit And Traction Motor	The propulsion system may be configured in a variety of methods dependent upon type of drive. The definition of motor in the context of this specification assumes that the device can provide or consume energy as well as provide or retard mechanical motion. The function of overheating protection and overheating warning of the electric traction motor should be provided. The power of electric traction motor shall be restricted when respective warning is triggered.
4.	Energy Storage And Controller	Design and performance data shall be provided by the manufacturer. Energy storage shall be of a commercial design capable of operating in the relevant transit environment. The primary charging of the energy storage system shall be accomplished by external charger and regenerative braking. Thermal management will be provided to ensure optimal life and performance of the Electrical Storage System (ESS) over the environmental operating range.
5.	Motor Controller	The Motor Controller regulates energy flow throughout Bus propulsion system components in order to provide motive performance and accessory loads, as applicable, while maintaining critical system parameters (e.g., voltages, currents,

		temperatures, etc.) within specified operating ranges. The controller shall monitor and process inputs and execute outputs as appropriate to control the operation of all propulsion system components. The data from such controller should be retrievable by diagnostic equipment provided and readable for data analysis to ensure performance metrics are met. The temperatures of motor controller should be displayed on the dashboard and warning of overheating should be triggered if the temperature is beyond the optimal operating range. Fuses should be placed before the motor controller in the wire bringing current to MCU so in case of any positive variation of current, fuses should blow to protect any voltage variation resulting in capacitors overheating. Motor Controller must be able to perform following function: ▪ Under-voltage protection and alarm; ▪ Control on power reduction for under-voltage; ▪ Overvoltage protection function; ▪ Over-current and short circuit protection; ▪ Overheat protection of motor controller: grading mode, warning in advance, and cooling in the mode of reducing power. ▪ Controllers must incorporate a range of additional features which oversee other vehicle and battery systems, including: ▪ Vehicle control interfaces (accelerator and brake pedal etc.); ▪ Battery communications and pre-charge and isolation systems; ▪ Auxiliary inverters for driving external pump motor and external air compressor motor.
6.	Motor Controller Protection	At least IP6k9k certification for Controller protection. The system includes Integrated drive motor controller, DC/DC converter, steering motor controller, air compressor controller, and high-voltage distribution module.

7.	Coolant Pump	The electric coolant pump (if fitted) used to recirculate coolant for cooling the electric traction motor or other parts of the powertrain system must have the warning function and the corresponding warning should be displayed on the dashboard.
8.	Water Integrity	Motor Control Units (MCU) and all electric motor components designed for IP6k9k water integrity.
9.	Drive Mode	The electric motor shall be a direct or single geared drive to the drive axle or wheel hubs.
10.	Design Life	The propulsion system shall have a design life of at least 1,200,000 KM, subject to proper maintenance practices.
11.	Power	The propulsion system shall be sized to provide enough power to enable the vehicle to meet the defined acceleration, top speed and grade ability requirements, and operate all propulsion-driven accessories using actual road test results and computerized vehicle performance data.
12.	Propulsion System	The vehicle fleet shall be based on a Full-Electric System where Vehicles should be capable of taking fast charging and slow charging both to drive a total of not less than 225 km on single charge (100% to 20% battery consumption) fully loaded with AC working. The driveline configuration should be optimized in reaching the highest possible energy efficiency to achieve the required vehicle road performance, including but not limited to acceleration and hill climbing capability under a fully laden condition. The Bus must be powered by electricity from on board battery packs.
Fuel / energy system		
1.	Fuel and emission standard	The regenerative braking shall operate at all speeds and shall be actuated from the brake pedal (an initial primary stage deceleration from throttle pedal release may also be employed as part of a multi-stage regenerative braking control). The regenerative braking shall be integrated with the vehicle's braking system for a smooth and seamless blending with the foundation service brake. The regenerative braking system is to be incorporated with the EBS to ensure no wheel slip during slippery conditions. Front and Rear brakes should be disc brakes.

2.	Fuel tank	The battery portion of the Full Electric system shall hold a charge capacity capable of delivering a minimum drive range of not less than 225 KM. The drive range refers to before Bus moves to limp mode to avoid damage to battery system which is usually set around twenty percent (20%) of remaining charge of Bus. Battery capacity must be capable of operating continuously and uninterrupted for a minimum of eight (8) hours in service under all possible conditions but minimised so as not to compromise overall vehicle weight. Longer overnight charging of up to four (4) hours will also be provisioned for.
3.	Filler provision	The electric motor that will provide the power for electric portion of the vehicle's propulsion system shall be at least 240 kW (peak power) in size.
4.	Regenerative braking system	As per the warranty obligations, the manufacturer shall replace the battery packs on any vehicle once the capacity falls below 80% of its original capacity at full charge.
5.	Battery size and range capacity	Lithium-ion (LiFePO4) with protection level IP6k9k shall be provided. The vehicle must have a set of batteries that allows the features indicated in this document and must be compatible with the chargers offered, and must be able to withstand currents, voltages, and temperatures in different charging events. The battery system must have a thermal management system that ensures that the batteries do not exceed the temperature range recommended by the manufacturer in conditions of maximum ambient temperature of 50 °C for a period of eight (8) hours.
6.	Electric motor size	The BMS shall manage the rechargeable battery system (battery cell or pack) by monitoring its state, measuring and reporting the key operational parameters, protecting and controlling the battery system, and balancing it. The BMS shall communicate with the dedicated vehicle controller, charger and instrument in achieving safe, reliable and effective management of battery system. Two levels SOC warning shall be triggered on the dashboard to alert of the low SOC status. The Bus

		shall be able to travel an additional 50 km when the first level amber SOC warning had been triggered. The dashboard shall be able to display the cell status. The BMS must include following features: ▪ battery measurement (including maximum and minimum value) of cell voltage, charge and discharge current, temperature, current control, and impedance; ▪ safety protection including, but not limited to, over/under voltage, over/under temperature; over current, short circuit, overpressure, current limiting, chassis shorts, fail-safe operation of pack protection circuits, insulation resistance monitoring, anti-humidity and condensation, protection against dust and flood water; ▪ thermal management such as cell temperature monitor and control; ▪ cell balancing; ▪ charge / discharge control; ▪ regeneration braking energy control; ▪ battery state estimation including but not limiting to State of Charge (SOC) ▪ fault detection; ▪ communication interface; and ▪ data logging and acquisition.
7.	Battery pack replacement	The battery pack is designed with an anti-collision structure, and the test force is not less than 200KN. A nitrogen protection system is required in the battery box to ensure the battery box in an anaerobic environment to reduce the risk of fire when the battery pack is short or thermally out of control in a low oxygen environment. Each Battery pack is equipped with fireproof paper with a fire resistance of 1,300 degrees centigrade. A certificate is required.

		The propulsion system shall be separated from the passenger compartment by means of a fireproof wall.
8.	Battery Cooling System	Efficient and robust liquid battery cooling system calling for minimal maintenance.
9.	Medium & Fast Charger	The Concessionaire will install medium and fast chargers at respective Depot. The charging units shall be compatible with the Buses. The charging units should have 2 guns per charger so that 2 Buses can be charged at the same time. medium chargers should have the capacity to charge at 80 kw per hour per gun so that at a time it can dispense out 160 kw per charger. The charger should be designed such that in case a single gun is used, it should dispense out 160 kw per hour. Fast chargers should have the capacity to charge at 120 kw per hour per gun so that at a time it can dispense out 240 kw per charger. The charger should be designed such that in case dual guns are used on single Bus, it should dispense out 240 kw per hour. Productivity of the chargers should not be less than 95% and power factor should be 0.98 or more (above 50% load). The chargers shall comply with relevant IEC standards or GB/T 18487.1 standard. The chargers should have the provision that during the charging process, the power module can cut off the current output immediately, so as to prevent the occurrence of personal safety accidents. Moreover, when the input AC voltage is higher than or lower than the rated input voltage range, the power module automatically shuts off, and the voltage is automatically restored automatically after the normal voltage. The output voltage range for fast charger should be 100 V ~ 1,000 V, and slow charger should be 200V~750V. Safety of Chargers:

	■ All charging equipment to be independently certified to be compliant with the standard IEC 61851 or GB/T18487.1 standard ■ All charging equipment exterior casings must be demonstrably capable of achieving the IP55 standard of “Ingress Protection” from dust, humidity, condensation and flood water. This standard prevails over any other standards quoted within this section of the specifications. International series of standard for Low Voltage Electrical Installations (IEC 60364 series or GB/T 16895 standard) contains a new part dedicated to supply of electric vehicle. First published in 2015 and updated in 2018 defining a set of safety measures for EV charging. The Manufacturer must demonstrate compliance. The manufacturer must comply with IEC 60364 part 7-722 or GB/T 16895 standard which requires electrical safety protective measures to address outdoor charging in public places with reference to: ■ Protection against short-circuits and overloads ■ Protection against electric shocks and risks of electrocution ■ Protection against overvoltage Moreover, the Electric Vehicle Supply Equipment shall be in accordance to the relevant part of IEC 61851 series or GB/T 18487.1 standard (Mode 4 for DC charging of electric vehicles). This standard also covers: ■ EMC requirements for conductive connection to AC/DC supply Electric vehicle requirements for conductive connection to an AC/DC supply ■ EMC requirements for off board electric vehicle charging systems DC electric vehicle charging station ■ Digital communication between a DC EV charging station and an electric vehicle for control of DC charging.

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4	Rated grid frequency	50 Hz
5	Grid frequency range	±2%
6	Total current waveform distortion rate	<5% (from 50% to 100% Full Load)
7	Power Factor	> 0.99
8	Output voltage	200VDC-750 VDC
9	Output Current	0-250A
10	Voltage regulation accuracy	<1%
11	Output ripple	<0.5%
12	Maximum efficiency	> 95% (From grid power to the charging terminal)
13	Protection class	Outdoor IP54
14	Relative Humidity	5% to 95%
15	Working Environment Temperature	-25°C to 55°C
16	Number of charging guns	Double guns
17	Standard gun cable	5m*2
18	Noise	≤ 65dB
10.	Water Integrity Of Battery Packs	The batteries and battery management system (BMS) external casings should be capable of meeting IP6k9k.
11.	Fire Suppression	All battery packs and BMS must be covered by a compliant fire suppression system suitable for suppressing electrical fires.
12.	Isolation	A manually operated isolation switch which disconnects the power circuits from the traction battery supply must be provided in a readily accessible position and its position shall be clearly indicated externally on the Bus.

13.	Battery Pack Standards	Batteries must comply with the latest safety standards of UNECE R100 (with the possible equivalent alternatives such as IEC62133 or ISO12405) and be independently certified.
14.	Electrical Safety	The Manufacturer shall strive to minimize any electrical hazards leading to fire, or electrocution to passengers, drivers, other road users or maintenance staff. The Manufacturer shall present evidence that the electrical drive is designed to meet the latest version of the following recognized safety standards or their equivalence: Safety Standards on Functional Safety and Occupant Protection against Electric Shock: ▪ UN/ECE R100, or ▪ ISO 6469-1: 2019, ISO 6469-2: 2018, ISO 6469-3: 2018, ISO 6469-4: 2015 or ▪ GB/T 18384-2020 ▪ Safety Standards on Traction Battery Pack (or Module) for Electric Vehicles: ▪ ISO 12405, or ▪ IEC 62660 (2018), or ▪ SAE J2464 (2009) or SAE J2929-2013, or ▪ QC/T 743-2006 ▪ Electromagnetic Compatibility (EMC) standards for Electric Vehicles: ▪ UN/ECE R10, ▪ GB/T 18387-2017
15.	Battery Cell Life Cycle	The Charge/Discharge cycle life of battery cells must beat least 3500. The battery capacity must remain greater than 80% after continuous charging and discharging (SOC 20%-100%, 100%-20%) at a charging rate of 1C and discharging rate of 1C, in a laboratory environment of 25 °C after at least 3500 cycles.
Environmental and safety standards		
1.	Noise standards	In no mode of operation shall the vehicle generate external noise levels greater than 65 dB, measured 15 meters from the centreline of the lane in which the vehicle is travelling. The interior noise at any location greater than 300 mm from an interior window or wall and 1.2 m from the floor shall not exceed 60 dB during any vehicle operating condition.

		In addition, the manufacturer shall comply with the exterior noise requirements defined in applicable Laws identified by SMTA.
2.	Safety standards	The vehicle must meet all safety performance standards set for public transport vehicles under the Applicable Standards. The vehicle shall be designed and manufactured in accordance with all applicable fire safety and smoke emission regulations. These provisions shall include the use of fire-retardant/low- smoke materials, fire detection systems, firewalls, and facilitation of passenger evacuation. All materials used in the construction of the Passenger Compartment of the vehicle shall be in accordance with the Recommended Fire Safety Practices defined in FTA Docket 90, dated October 20, 1993 or later or another internationally recognized standard approved by SMTA. Materials entirely enclosed from the passenger compartment, such as insulation within the sidewalls, need not comply. In addition, smaller components and items, such as seat grabrails, switch knobs and small light lenses, shall be exempt from this requirement. Fire sensing and suppression systems shall be provided. The requirements for passenger evacuation provisions related to doors, windows, and escape hatches are defined in Section 5 - Body. Other accident and structural safety standards and tests are either in the Attachment or described and determined throughout this document.
3.	Drive Axles	Single heavy-duty rear axle preferably with a drop centre beam, hypoid reduction gears, full floating axle shafts with optimal gear ratios suitable for urban operations with adequate capacity to take care of maximum GVW & crush loading. Lubricant drain plug would be magnetic type, external hex head. If a planetary gear design is employed, oil level in the planetary gears would be easily checked

		through plug or sight gauge. Minimum overhaul interval of 6 years.
4.	Axles	The vehicles shall have two axles. The vehicle should sustain a maximum axle load on the front axle of 4,800 - 5,500 Kgs. The vehicle should be capable of sustaining a maximum axle load on the rear axles of 9,000 - 10,000 Kgs.
5.	Suspension System	All vehicles shall have air suspension with electronic self-levelling control. The suspension system shall be self-adjusting with respect to any load imbalances that may occur. The basic suspension system shall last the life of the vehicle without major overhaul or replacement. All friction parts or suspension shall be equipped with replaceable Bushings and inserts. All axles should be properly aligned so the vehicle tracks accurately within its size and geometry.
6.	Steering	All vehicles shall be fitted with Electro-hydraulic power steering with steering box to last vehicle life and reduce steering effort. Steering columns shall be adjustable to accommodate driver needs. Height and Angle adjustment as per ISO16121-1 or GB 13094-2017 standard.
7.	Brakes	Vehicles are to have Regenerative Electronic Brake Systems designed to ensure safe braking under normal and emergency conditions and appropriate for the operating environment. The braking system shall be balanced such that braking effort is appropriately distributed between all wheels to ensure maximum tire kilometres and equal rate of wear in front and rear brake blocks. The braking system shall meet all current national and local safety standards. An emergency brake release shall also be provided to release the brakes in the event of automatic emergency brake application. The driver shall be able to manually depress and hold down the emergency brake release valve to release the brakes and manoeuvre the vehicle to safety. Once the driver releases the emergency brake release valve, the brakes shall engage to hold the vehicle in place. Air to the emergency brake release system shall be

		provided by a dedicated emergency air tank supplied by the electric pump system. Disc Brakes at front and at rear wheels. Graduated hand controlled, spring actuated parking brakes acting on rear wheels. Asbestos free brake Pads at all wheels.
8.	Air Compressor	Air compressor to be provided to supply braking suspension and ancillaries as required and capable of fully charging the fully evacuated air system within 3 minutes.
Tires and wheels		
1.	Tires	The tires shall be capable of operational speeds up to 80 km/h with the specified axle loads. The load on any tire at full GVM shall not exceed required tire rating. The tires shall have a radial ply construction. Tires shall be interchangeable between axles on the vehicle.
2.	Tire to body distance	The effectiveness of the vehicle-to-platform alignment is also affected by the distance from the outer edge of the tire sidewall to the outer edge of the vehicle body. Quite often the tire sidewalls are inset to the inside of the body. The maximum inset distance from the outside edge of the tire sidewall to the outside edge of the vehicle body shall be 125 mm for the front axle and 80 mm for the rear axle.
3.	Wheel characteristics	All wheels on the vehicle shall be of the same size and type interchangeable between front and rear. Each shall be powder coated a colour determined by SMTA during the pre-production period. The manufacturer shall furnish one full set of wheels, with one spare for every vehicle provided. The wheels should not have joints in between and should be in continuous form without any welds visible.
4.	Splash guards/splash aprons	Splashguards/aprons made of composition or rubberized material shall be installed on the body around the periphery of the wheel. The design of the splashguards/aprons shall preclude the accumulation of dirt.
5.	Turning radius and tracking	The turning radius of the vehicles is a critical parameter in determining the vehicle's ability to

		properly dock at stop/stations. The minimum turning radius of the vehicles is defined through the tracking movement of the front inner and outer wheels. The maximum turning radius for the outer wheels is specified as 12.0 meters.
6.	Air conditioning system	The air conditioning system must be capable of maintaining an average interior temperature of between 23°C and 25°C when the ambient temperature is 45°C. The air conditioning system shall be capable of reaching the targeted interior temperature of between 23°C and 25°C within 30 minutes of vehicle operation when the ambient temperature is 45°C. The system shall continue to provide a cooling function until a cut-off temperature of 50°C. The heating system must be capable of maintaining an average interior temperature of between 18°C and 22°C when the ambient temperature is 0°C. The heating system shall be capable of reaching the targeted interior temperature of between 18°C and 22°C within 30 minutes of vehicle operation when the ambient temperature is 0°C. The system shall continue to provide a heating function until a cut-off temperature of -5°C. Compliance to these temperature targets will be measured at two points in the vehicle. The first location will be the second passenger row behind the driver. The second location will be the second to last passenger row at the back of the vehicle. All measurements will be taken at the height of the seat headrest. The design should be such that it minimizes electricity usage. The system's weight shall also be minimized in order to reduce impacts on axle loads and to reduce impacts on vehicle operating speeds. The system shall be designed to function for the life of the vehicle (twelve (12) years) when maintained properly. The air conditioning system shall meet these performance requirements using a specified and approved by SMTA.

		The coefficient of performance should not be less than 3.5.
7.	Air Flow – Passenger Area	The cooling mode of the interior climate control system shall introduce air into the vehicle at or near the ceiling height at a minimum rate of 0.7 cubic meters per passenger based on the standard configuration vehicle carrying a number of passengers equal to 1.5 times of the seated load. Airflow shall be evenly distributed throughout the vehicle, with air velocity not exceeding 30 meters per minute on any passenger. The ventilating mode shall provide air at a minimum flow rate of 0.85 cubic meters per passenger. The climate control blower motors and fans shall be designed such that their operation complies with the interior noise level requirements.
8.	Air Flow - Driver's Area	The vehicle interior climate control system shall deliver at least 2.8 cubic meters of air to the operator's area when operating in the ventilating and cooling modes. Adjustable nozzles shall permit variable distribution or shutdown of the airflow. The windshield defroster unit shall meet best Practice, Windshield Defrosting Systems Performance Requirements. The defroster or interior climate control system shall maintain visibility through the operator's side window. A separate ventilation, and defroster system for the operator's area shall be provided and shall be controlled by the Bus operator.
9.	Air Filtration	Air shall be filtered before discharge into the passenger compartment. The filter shall meet the US American National Standards Institute/ American Society of Heating and Air conditioning Engineers (ANSI/ASHRAE 52.1) requirement for 5% or better atmospheric dust spot efficiency, 50 percent weight arrestance, and a minimum dust holding capacity of 120 gram per 28 cm cell. More efficient air filtration may be provided to maintain efficient heater and/or evaporator operation. Air filters shall be easily removable for service. Air filters shall be cleanable.
10.	Roof Ventilators	At least one roof ventilators shall be provided in the roof of the vehicle, approximately in the middle of the vehicle

		The ventilators shall be easily opened and closed manually by a 1.5-meter-high passenger. If roof ventilator(s) cannot be reached by this passenger, then a tool shall be provided to allow this. When open with the vehicle in motion, these ventilators shall provide fresh air inside the vehicle. Ventilator shall cover an opening area no less than 0.28 square meters and shall be capable of being positioned as a scoop with either the leading or trailing edge open no less than 10cm, or with all four edges raised simultaneously to a height of no less than 9cm. An escape hatch shall be incorporated into the roof ventilator. Roof ventilator(s) shall be sealed to prevent entry of water when closed.
11.	Maintainability	Manually controlled shutoff valves in the refrigerant lines shall allow isolation of the compressor and dehydrator filter for service. To the extent practicable, self-sealing couplings utilizing O-ring seals shall be used to break and seal the refrigerant lines during removal of major components, such as the refrigerant compressor. Shut-off valves may be provided in lieu of self-sealing couplings. The condenser shall be located to efficiently transfer heat to the atmosphere and shall not ingest air warmed above the ambient temperature by the vehicle mechanical equipment, or to discharge air into any other system of the vehicle. The location of the condenser shall preclude its obstruction by wheel splash, road dirt or debris. HVAC components located within 15 centimetres of floor level shall be constructed to resist damage and corrosion. Must have high and low refrigerant pressure electronic gauges to be in the return air area.
12.	Air Flow System of the Bus	In addition to automatic air ventilation system, an option should be available to the driver with push button to collect all breathe air from the roof and exhaust it without recycling during passenger trip. Meanwhile fresh dust free / filtered air of equal proportion is to be pumped in from the driver's side of the Bus for normal breathing of passengers.
13.	Air Curtains	Air curtains on all access doors to avoid loss / gain of heat and / or cool air when doors are frequently opened for boarding & alighting of passengers with minimum air flow of 1000 ± 50 m³/hr.

14.	Heating System	A proper Heating System will be provided in the Buses for winter season.
15.	Maintenance and servicing	The motor and battery packs shall be arranged so that accessibility for all routine maintenance is assured. No special tools, other than dollies and hoists shall be required to remove the power plant. The motor/accessories shall be removable as one complete unit.
Tools, software, diagnostic equipment, and manuals		
1.	Tools	The Concessionaire shall provide manufacturer specified following tools: One complete set per Depot (for 8-9 meter vehicle type) of the dollies and cradles necessary for the handling of motor, transmissions and other heavy components requiring specialist handling equipment. One complete set of all tools required for the maintenance of the principal vehicle components.
2.	Diagnostic equipment and software	The Concessionaire shall provide manufacturer specified 1 set per Depot of diagnostic equipment and 1 set per Depot of software that permits status evaluation of the critical vehicle components. This equipment and software shall indicate the status of the specified equipment and shall be accompanied by clear information on any required remedial actions. The diagnostic equipment shall provide information on the following vehicle components: ▪ Motor ▪ Battery packs ▪ Gearbox ▪ System electronics. ▪ Air Suspension system ▪ Wheel and Axle Alignment ▪ Any codes related to any other component failure
3.	Guidance and instruction manuals	The Concessionaire shall provide manufacturer provided complete set of vehicle guidance and instructional manuals. These manuals shall as a minimum cover the following topics: ▪ Description of all parts and components, including instructions for assembly and disassembly

		▪ Description of maintenance and diagnostic procedures ▪ Troubleshooting recommendations and procedures ▪ Contact details for emergencies, maintenance support, and parts procurement. The manuals shall be provided in correct and proper English. At least four (4) colour printed copies shall be provided. At least three (3) digital copies on three (3) USBs shall also be provided.
4.	Performance documentation	The Concessionaire shall ensure, that manufacturer shall furnish or cause to be furnished the following performance graphs as part of the bid documentation: ▪ Motor Speed vs. Road Speed ▪ Horsepower vs. Motor Speed ▪ Electricity Consumption Chart (for electric operation) ▪ Vehicle Speed vs. Grade (both loaded and unloaded)

Electrical		
1.	Internal lighting	The light source shall be located to minimize windshield glare, with distribution of the light focused primarily on the passengers' reading plane while casting enough light onto the advertising display. The lighting system may be designed to form part of or the entire air distribution duct. The lens material shall be translucent polycarbonate. Lenses shall be designed to effectively "mask" the light source. Lenses shall be sealed to inhibit incursion of dust and insects yet be easily removable for service. Access panels shall be provided to allow servicing of components located behind light panels. If necessary, the entire light fixture shall be hinged. When the driver master switch is in the "run" or "night/run" mode, the first light module on each side of the vehicle shall automatically close or dim when the doors are in the closed position and illuminate when the doors are opened. When in "Off" or "On" all lights shall be also on or off.

2.	Passenger area	Energy-efficient lighting such as LED shall be installed in the cover area on both sides and along the total length of the vehicle and shall not occupied on the minimum interior headroom. The lenses shall be made of polycarbonate material and be sealed to prevent the entrance of dust and insects but shall be easily opened for cleaning and service of ballast and lamp.
3.	Driver's compartment	A driver's compartment lamp, with a full-range dimmer, shall be mounted to illuminate the entire driver's area.
4.	Interior door lighting	All door threshold areas shall be adequately illuminated with Light- Emitting Diode (LED) type lights activated only when the door is open. The lights shall be shielded to prevent light from directly shining into passenger or driver's eyes. Light fixtures shall be totally enclosed, splash proof, designed to provide ease of cleaning as well as lamp and housing removal and shall not be easily removable by passengers.
5.	Exterior lighting	All exterior lights shall be designed to prevent entry and accumulation of moisture or dust. Lamps, lenses and fixtures shall be interchangeable to the extent practicable. Two hazard lamps at the rear of the vehicle shall be visible from behind when the motor service doors are opened. Light lenses shall be designed and located to prevent damage when running the vehicle through an automatic vehicle washer. Commercially available LED-type lamps shall be utilized at all exterior lamp locations. LED lamps shall be potted type and designed to last the life of the vehicle.
6.	Headlamps	The headlamps shall utilize halogen/LED technology. The headlamps shall have a sealed beam unit. They should be designed for ease of replacement. Headlamps shall incorporate a Daytime running light feature.
7.	Exterior door lighting	An exterior white LED light shall be provided at each door to adequately illuminate the outside area when the doors open.

		These lamps shall illuminate the street surface to a level of no less than 11 lux for a distance of 90 cm outward from the outboard edge of the door threshold.
8.	Indicator lights, reversing lights, marker lights and reflectors	The indicator lights, reversing lights, marker lights, and reflectors shall have the following characteristics: ▪ LED lights shall be preferred where appropriate. ▪ Direction indicator lights shall be visible from front, rear and sides of the vehicle, with additional side units fitted if necessary. ▪ The vehicle shall be fitted with reversing lights, which shall also engage an audible reversing signal, clearly audible in the vicinity of the vehicle with the motor running. The reversing signal shall be audible buzzer or human voice along with audible buzzer can also be provided. ▪ Marker lights shall be installed, one on each upper corner of the body. ▪ Reflectors at the front, rear and on each side of the vehicle shall be provided. Reflectors shall be installed on both sides of the vehicle.
Battery and Battery Compartment		
1.	Battery	Battery and starter cable shall be properly bracketed, sized and fastened to carry the maximum loads that may be encountered. Each battery shall have a purchase date no more than one year from the date of release for shipment to the Procuring Agency.
2.	Master battery switch	A master battery switch shall be provided near the batteries in the battery compartment, mounted to prevent corrosion, for complete disconnection of the electrical system. The master switch shall be capable of carrying and interrupting the total circuit load.

3.	Battery compartment	The battery compartment shall prevent accumulation of debris on top of the batteries and shall be vented and self-draining. It shall be accessible only from the outside of the vehicle. All components within the battery compartment, and the compartment itself, shall be protected from damage or corrosion from the electrolyte. The inside surface of the battery compartment's access doors shall be electrically insulated, as required, to prevent the battery terminals from shorting on the door if the door is damaged in an accident or if a battery comes loose. The battery compartment temperature should not exceed manufacturers specification. The batteries shall be securely mounted on a stainless steel or equivalent tray that can accommodate the size and weight of the batteries. The battery tray, if applicable, shall pull out easily and properly support the batteries while they are being serviced. The tray shall allow each battery cell to be easily serviced. A locking device shall retain the battery tray to the stowed position. Placement of battery packs should not be done below passenger level at 600 mm (placement of battery packs in chassis area is not permitted). If not located in the motor compartment, the same fire-resistant properties must apply to the battery compartment. No sparking devices should be located within the battery box. A reliable fire alarm system should be provided, with sufficient number of fire sensors (at least two) and sufficient length of detector cables to cover the area with high fire risk including but not limited to the areas where the traction battery system are located. When the fire sensors sense an abnormally high temperature or other phenomena as specified by the Manufacturer indicating that there is potentially a fire at the monitored locations, an alarm should be triggered to alert the driver by means of a buzzer and a warning light at the dashboard. Once the fire warning is triggered, the system should send a signal to deactivate the air conditioning system blower motors automatically.

4.	Wiring and cabling	The wiring and cabling on the vehicle shall be color-coded for ease of repair and maintenance as well as safety.
5.	Stop request system	The vehicle shall be fitted with a stop request system to allow passengers to request for the vehicles to stop at a certain stop/ station. Stop-request buttons shall be provided on the hand-hold bars on both sides of the vehicles. The placement of the stop-request buttons shall be such that no passenger is more than 1.2 meters away from a button. An indicator light showing the deployment of the stop request will be visible both in the passenger area and in the driver's compartment. The deployment of the stop request button will also be accompanied by a chime noise.
6.	Cabling Standard	All cables should be of adequate capacity, correct rating and fully flexible grades with PVC insulation, and protected where necessary by sleeves, grommets and/or Bushes and capable of operation within a continuous 100°C environment. Copper conductors with fire retardant as per IS/ISO:6722:2006 as per appropriate class. Conductor cross- section varying as per circuit requirements, minimum cross- section 0.5 sq. mm. Quality marking may also be as per equivalent European, Japanese, US standards conforming to IP 68.
7.	Electro Magnetic Compatibility	The complete vehicle will need to demonstrate EMC compliance with ECE R10 or equivalent through independent certification.

Intelligent Transportation System (ITS)		
1.	Overview of ITS system	The ITS equipment will consist of components that will be procured and installed by the manufacturer. It includes: ▪ Vehicle Performance Monitoring ▪ Vehicle Weight ▪ Passenger Door Count System ▪ Vehicle Logic Unit (VLU) ▪ Communications Unit ▪ Driver Data Terminal (DDT)

		▪ Mobile Digital Video Recorder (MDVR) ▪ Vehicle WiFi system ▪ UHF/VHF/Wifi Communication System ▪ External Variable Messaging Display ▪ Internal Variable Messaging Display/ Passenger information system ▪ Internal Infotainment Display ▪ Infotainment Display Back Screen ▪ Audio System ▪ Driver Display Unit And On-Board CCTV Cameras ▪ Driver Panic Alarm ▪ USB ports ▪ Driver Console ▪ Fare Validator ▪ Automated Vehicle Location System (AVLS) ▪ UHF/VHF/Wifi Communication System ▪ Traffic signal priority equipment (space provision for future addition only). The aforementioned ITS equipment will be fitted and installed by the Manufacturer.
2.	Vehicle performance monitoring	Vehicle performance monitoring is an essential element for effective fleet management and driver control. The Manufacturer will monitor and record the most pertinent performance statistics of the major mechanical and electrical components. It is essential that all the vehicles are equipped with performance monitoring that will provide information of, at least, the following: ▪ Speed (wheel based and Tachometer based) ▪ Battery Management System (BMS) ▪ Energy used and remaining energy levels (Battery) ▪ Vehicle distance ▪ Tachograph performance ▪ Handling information ▪ Ambient air temperature ▪ Status of doors and boarding bridges ▪ Time/date ▪ Brake pressures ▪ Parking brake status ▪ Direction indicators

		▪ Vehicle weight ▪ Battery On/Off Status ▪ Vehicle Health Monitoring Data outputs from the monitoring equipment shall be recorded onto the Vehicle Logic Unit (VLU) for later compilation and analysis. The Manufacturer shall confirm or cause to be confirmed the required interfaces and applicable standards during the final design approval process. The driver panel shall include one display meter of carbon footprint/emissions savings compared to a diesel Bus, based on battery KWh dispensed. The readings on the meter shall display instant values, daily values and values since commencement of commercial operations of the Bus. The monitoring system must comply with an open interface standard for information exchange typically used for Fleet Management Systems (FMS). For these purposes the system must comply with Bus-FMS- Standards (www.Bus-fms-standard.com). It shall be capable of transmitting all readings to a remote control room.
3.	Vehicle weight	The Manufacturer shall measure and record the vehicle weight at different points of time. The data recorded will include the total weight of the vehicle. Preferably, this data will also include the distribution of the weight, and in particular, will include measurement of the axle loads. There will be at least two general uses for the data collected. First, this data shall be correlated to GPS position to estimate the number of passengers on board the vehicle at different segments of the route. The weight values shall thus be used to estimate the number of passengers boarding and alighting at each Bus stop. Second, the axle load data will help ensure compliance to the legal load- carrying limits of the vehicle. Data from the vehicle weight device shall be recorded onto the Vehicle Logic Unit (VLU) and made available through the Bus-FMS interface.

4.	Vehicle Logit Unit (VLU)	The VLU is the core computer server for most of the data and ITS functions onboard the vehicle. The VLU shall be placed in a location that allows effective connectivity to the various ITS components over the LAN. The location shall also ensure that the VLU is physically well-protected. The Manufacturer will provide all necessary wiring and cabling for the system and must be completed in all aspects. The Manufacturer will provide complete SDKs of VLU to the purchaser. The VLU must be compatible to function with the ITS components in this specification. The manufacturer shall provide or cause to be provided a description of the technical specifications (hardware, interfaces, and operating system) of the VLU and interface specifications allowing the integration of the unit with: ▪ Vehicle performance monitoring (CAN data) ▪ Communications unit ▪ GPS positioning data ▪ Mobile Digital Video Recorder ▪ External variable messaging display ▪ Internal variable messaging display ▪ Internal infotainment display ▪ Audio system ▪ Panic alarm. Note: (Supplier may provide an integrated unit or a standalone unit) <table><tr><th colspan="2">Minimum Hardware Specifications</th></tr><tr><td>Accuracy</td><td>The device must be able to track the location of Buses with an accuracy of +/- 10 meters.</td></tr><tr><td>Update Frequency</td><td>The device must update the location of Buses at least once every second.</td></tr><tr><td>Communication Protocol</td><td>The device must communicate smoothly with other on-board components.</td></tr></table>	Minimum Hardware Specifications		Accuracy	The device must be able to track the location of Buses with an accuracy of +/- 10 meters.	Update Frequency	The device must update the location of Buses at least once every second.	Communication Protocol	The device must communicate smoothly with other on-board components.
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		Power Requirements	built-in power supply for last status update.
		Durability	The VLU must be durable enough to withstand the rigors of every Day use.
		- Real-time location tracking: The device must be able to track the real-time location of Buses. - Data logging: The device must be able to log data about the Bus's location, speed, and other operational parameters. - Communication with other systems: The device must be able to communicate with other systems in the Bus, such as the Driver Console and the fare collection system. - Fault detection and reporting: The device must be able to detect and report faults. Note: All relevant functional SDK's & API's, along with their documentation (complete in all aspects) in English Language must be provided Android with Local/International support.	
5.	Communications Unit	The Communications Unit will control the flow of communications and information between the vehicle and the control centre. This includes both real-time data exchange as well as stored information for later downloads at the Depots. The communication system will also permit verbal communication between the driver and the control centre. The verbal communications system will be designed so that the driver may communicate hands-free of the device, but still capable of hearing vehicle cabin sound. The Communications Unit will provide connectivity through 3G and 4G mobile networks. The Communications Unit will provide at least one slot. Due to concerns regarding the reliability of the existing 3G and 4G mobile networks, the provision of communications via UHF/VHF radio bandwidths with all the necessary peripherals on both sending and receiving ends should also be provided by the Manufacturer as a complete communication solution over UHF/VHF.	

		Note: Equipment will be covered under one (1) year standard manufacturer’s warranty.						
6.	Driver Data Terminal (DDT)	The Driver Data Terminal (DDT) is a computing device that enables the driver to visually understand vehicle performance and parameters. The device shall be equipped with a color LCD touchscreen display designed for operation in a public transport environment and shall be managed and controlled by the VLU. Note: Equipment will be covered under one (1) year standard manufacturer’s warranty. QTY: 1 in each Bus						
7.	Mobile Digital Video Recorder (MDVR)	All CCTV footage shall be recorded on-board by the Mobile Digital Video Recorder (MDVR). The MDVR shall be connected to the VLU for management purposes. Video footage on the MDVR will be downloadable at the Depot if required. MDVR must have the capability to store recordings for seven (7) Days. The device must be able to record video and audio. MDVR should support real-time video streaming to a third-party server over the internet via secure transmission protocol, ensuring low-latency data transfer and compliance with network security standards. The MDVR should feature a combination of multiple industrial Ethernet and analog ports while ensuring seamless integration with all onboard devices via dedicated LAN interface. The system must support Ethernet-based connectivity for data transmission, device synchronization, and efficient network communication, enabling a unified and scalable architecture. The MDVR should be compatible with AI camera systems installed in the Buses. <table><tr><th colspan="2">Minimum Hardware Specifications</th></tr><tr><td>OS</td><td>Linux or Android</td></tr><tr><td>CPU</td><td>Dual-core with 1.3Mhz at least</td></tr></table>	Minimum Hardware Specifications		OS	Linux or Android	CPU	Dual-core with 1.3Mhz at least
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Communication	WIFI, 3G, 4G,
Minimum Resolution	1080p
Video Input	8 Channel with 4 additional digital input (minimum 720p, 25/30fps per channel, H.264/ H.265 encoding)
Video Output	1 Channel
GPS	The device must be able to track the location of Buses with an accuracy of +/- 10 meters and should have an external antenna.
Storage	Min 1TB SATA
Interface	RS232, RS485, Digital IOs for Bus sensors interface Industrial-grade LAN connected with all devices installed in the Bus LAN interface (100M/1G) CAN Bus, USB
Power Input	Built-in power supply for last status update
Alarms	Panic, Over speed, Geo-Fence Power Failure, Gate Opening
Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 9.18)
Additional feature	FTP, remote and local SSH, root access, RTSP Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.

Data Required using CAN Bus:

- (a) Acceleration and Deceleration
- (b) Breaking (All Kind of brakes)
- (c) Battery Capacity Information
- (d) Motor RPM

		(e) Bus Speed (f) Doors Control (Open/Close) Information (g) Bus Saloon Temperature (h) Motor Temperature (i) Battery On/Off Status (j) Passenger Count (k) Mileage DBC file or equivalent documentation for precise signal decoding. The device must be able to record video and audio. Note: Equipment will be covered under one (01) year standard manufacturer's warranty Note. All relevant functional SDK's and API's, alongwith their documentation (complete in all aspects) in English Language must be provided in Android/Linux/.Net with Local/International support. The functional SDK's must include the following functionalities: (a) Internet / Networking Source Prioritization & Control (b) CAN Data Management. Data Interval Control (c) Integrated Logging Console (d) IP Camera Stream Control (e) GPS Frequency Control & Geo-fencing Qty: 1 in each
8.	Vehicle Wifi	The vehicle shall provide free Wi-Fi to passengers. The Manufacturer will procure and install the vehicle Wi-Fi system. The Wi-Fi equipment will include a 4G receiver and router. The minimum download speed for the Wi-Fi system within the vehicle shall be at least 3.0 megabits per second (Mbps). The Manufacturer will be responsible for fitting and installing the Wi-Fi receiver and router into the vehicle. The fitting of the equipment will be provided in a manner to ensure Wi-Fi connectivity in all passenger sections of the vehicle. The Manufacturer will provide all necessary wiring and cabling for the system.

		The passenger Wi-Fi may also be provided by a receiver and router integrated with the vehicle Communication Unit (see 9.5 above). QTY: 1 in each Bus Note: Equipment will be covered under one (1) year standard manufacturer's warranty.
9.	External Variable Messaging Display	An external variable messaging display shall be provided on the top front and back of the vehicle, as well as curb side of the Bus. The external variable messaging display will indicate three possible types of information: (a) Route destination; (b) Name of route; and (c) Emergency messages. The external display shall utilize high brightness, wide viewing angle, and amber LED technology. LED brightness shall be controlled by photocells installed as part of the sign. The controller shall communicate with the on-vehicle VLU. It shall also be possible to override messages directly from the control centre under emergency conditions. The display shall be capable of showing upper- and lower-case characters with proportional fonts. The display shall be capable of showing double-stroke width (bold) fonts. The front face of the display shall be designed to minimize glare. The display shall have the functionality to display messages in the following modes, set through configuration data: (a) A single, non-scrolling or changing message (b) A right-to-left scrolling message (c) An alternating (between two states) message. The LEDs shall have a minimum service life of 80000 hours in their installed configuration. The system shall be designed for continuous operation without the need to manually computers or devices. Visible messages shall begin playing within five (5) second of being triggered.

		External variable message signs shall be capable of displaying the message in Urdu and English dynamically/remotely. QTY: At least 3 in each Bus Note: Equipment will be covered under one (1) year standard manufacturer’s warranty. Note: All relevant functional SDKs & APIs, along with their documentation (complete in all aspects) in English Language must be provided, Android with Local/International support.												
10.	Internal Variable Messaging Display/Passenger Information System (Vehicle Grade)	Two internal variable messaging displays shall be provided in the front portion and middle of the vehicle. The display will provide the following types of information: (a) Name of next stop/station (b) Route name and route map (c) Route destination Time The onboard displays shall utilize high brightness, wide viewing angle, liquid crystal display (LCD) technology. The display will be readable for a distance of up to 8 meters. Messages on the displays shall be legible during any time of Day and from any designated passenger position on the Bus. The proposed location of the display will be mentioned in the tenderer’s vehicle layout drawing. During the pre-production stage, the Purchaser will specify the font type, color of the background, color of the lettering, and the use of any branding on the display. Internal variable message sign shall be capable of displaying the message in Urdu and English. <table><tr><th colspan="2">Minimum Hardware Specifications</th></tr><tr><td>Screen Size</td><td>28 to 34 inches AS per the size available in Bus</td></tr><tr><td>Luminance</td><td>Must be clearly visible in Day light</td></tr><tr><td>Display Colors</td><td>16M</td></tr><tr><td>Operating System</td><td>Android 9.0 or higher</td></tr><tr><td>Resolution</td><td>720p or higher</td></tr></table>	Minimum Hardware Specifications		Screen Size	28 to 34 inches AS per the size available in Bus	Luminance	Must be clearly visible in Day light	Display Colors	16M	Operating System	Android 9.0 or higher	Resolution	720p or higher
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		Display Interface	HDMI/VGA/or any other interface
		Networking Interface	LAN interface
		Peripherals	USB2.0/USB3.0 x1, SD Card, Audio Output
		Memory	2GB RAM, 8GB Storage
		Protection	4mm tampered protective glass on screen Metal Case
		Video Support	MP4, AVI,
		Image Support	JPEG,
		Audio Support	MP3
		Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 9.18)
		Additional Feature	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.
		1. The passenger information shall comprise of following features: (a) The Passenger Information System Display Unit shall receive display information and voice announcement commands from the on-board GPS vehicle control module based on stored memory on the Bus. (b) The Passenger Information System Display Unit shall function as independent system and shall not be directly dependent on the Central System. (c) There shall be scrolling display of destination in Urdu & English alternatively along with fixed route number.	

		(d) The audio message and the video display shall be clearly audible/visible in all weathers inside the Bus. (e) Integration of Multimedia System to broadcast audio messages. (f) Link to the internal/external system(s) remote & local server in real-time. All relevant SDKs and APIs in English Language is compulsory with Local/International support. 2. All supplied AFC items (including all hardware, software, networking, fare media etc. should be integrated with third party Mobile Application both Android & IOS. 3. All relevant functional SDKs & APIs, along with their documentation (complete in all aspects) in English Language must be provided Android with Local/International support. Provided hardware should have capability to work in decentralized/centralized mode. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: 2 in each Bus
11.	Internal Infotainment Display Back Screen	An internal rectangular infotainment display screen shall be provided at the back of the Bus for advertisement purposes. This screen shall be visible to commuters outside the Bus in mixed traffic and pedestrians. The displays shall utilize high brightness, wide viewing angle, LCD technology. The display resolution shall be at least 1920 x 1080p. The displays will be enclosed in a tamperproof casing with toughened glass. The surface of the display shall be coated with an anti-glare layer to enable viewing during anytime of the Day. Content for the infotainment display will be stored and connected via the VLU. Standard video signal input ports will be provided.

		The size of the screen shall be finalized at the concept design stage of Bus. However, it is envisaged that this screen will cover entire back windscreen.
12.	Audio System	The audio system shall be capable of both digital audio messages programmed into the Vehicle Logical Unit (VLU)/MDVR as well as public address messages from the driver. The audio system will be programmable in relation to the vehicle position in order to automatically deliver specific Bus stop information. Upon arriving at a Bus stop, the digitally-recorded message will announce the Bus stop name as well as the name of possible transfer routes. A digital announcement will also be made noting that the doors are opening. Upon departing a station, a digitally-recorded message will note the doors are closing. The digital announcement will then note the route name, final destination, and the next Bus stop. Messages from the driver on the public address system will only occur to announce special messages or situations, such as reasons for delays or emergency instructions. The digital recording of the messages will be the responsibility of the Purchaser. The volume of the announcements shall be adjustable to a standard level through configuration data. The system shall include an automatic gain control to automatically and independently adjust interior and exterior volumes depending on interior and exterior ambient noise levels. The audio system will be controlled by the VLU/MDVR and the input ports must therefore be able to interface with the VLU/MDVR. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: 1 in each Bus
13.	Driver displays and on-board CCTV cameras	Closed-circuit television (CCTV) cameras shall be provided for vehicle surveillance to ensure passenger security and vehicle safety.

		The vehicle shall be fitted with at least six CCTV cameras. One camera will cover the front curb- side door and the driver compartment. One camera will cover the front passenger area as well as the middle doorways. One camera will cover the rear passenger area. One camera will face behind the vehicle, and thus will assist the driver when reversing. One camera will be mounted on the dashboard, acting as a ‘dashcam’, to continuously record the view through the vehicle’s front windscreen. 1 camera on each entry/exit gate must be installed for passenger counting system. Output from the cameras will be shown through a visual display on or near the dashboard. The driver shall have a visual digital display of the area behind the vehicle whenever the vehicle is in reverse gear. The video footage from these cameras shall also be stored on-board on the Mobile digital video recorder (MDVR). The Manufacturer will provide all cabling and connectivity between the cameras and the MDVR. In normal conditions, the video footage will be downloaded when the vehicle enters the Depot. The Manufacturer must design the system so the data can be readily downloaded after the vehicle enters the Depot. In emergency situations, the system shall allow streaming of onboard footage to the control centre. The Manufacturer shall ensure the video output can be integrated with the control centre’s hardware and software. All cameras will be integrated into the interior layout of the vehicle in a visually appealing manner. The precise location of the cameras will be determined in the pre-production phase with approval from the Purchaser. Both the cameras and the dashboard displays should ideally be highly visible to the passengers to give assurances that their security is being surveilled. Note: Equipment will be covered under one (1) year standard manufacturer’s warranty. QTY:

		AI Cameras: DMS (Driver Behavior Monitoring System) x1 Passenger Counting at entry/exit passenger gate x1 SURVEILLANCE CAMERAS: General surveillance x2 Reverse Gear x1 Dashcam x1
14.	Driver panic alarm	The panic alarm will be utilized in circumstances in which the driver is not able to utilize the normal communications system. The panic alarm shall be located discretely in the driver's compartment. The location should be such that it is known to the driver but not clearly evident to passengers. The Manufacturer shall provide the button and the wiring required to connect it to the VLU. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: 1 in each Bus
15.	USB ports for passenger devices	The provision of USB ports in the passenger seating area will allow customers to charge their personal devices while travelling on public transport. This service helps further encourage ridership. The preferable configuration would be a USB Type-A & Type-C ports provided around each seat or at the vehicle interior sidewall for seats without another seat directly in front. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: 13 set Minimum (Type A Type C)
16.	Traffic signal priority equipment (future option)	The Concessionaire will ensure that space is available inside the vehicle for the deployment of traffic signal equipment. This deployment would likely involve the placement of a transducer device, which would be fitted onto the vehicle and used to activate the traffic signal equipment at a particular intersection.
17.	Fare Validator	The on-board fare validators will be required at the curb side doorways. The on-board fare validators will be pre-installed by the Manufacturer of the Buses.

	The Manufacturer will be responsible for purchasing, fitting, installing and testing the on-board fare validators into the vehicle. The Manufacturer will also ensure the integration of the on-board fare validators with the VLU/MDVR over a dedicated wired connection, preferably LAN interface. The Manufacturer will provide the wiring and cabling to connect the fare validators. The on-board fare validators will be located at each curb-side doorway (a total of two fare validators on the vehicle). LAN connectivity, along with LAN cabling shall be ensured by the manufacturer with the rest of the ITS ecosystem. Must be covered in concealed Anti-dust casing Position (Protection from frequent contact/damage) Wiring (Concealed & not exposed to public) Buttons (Not exposed to public) The software development for Fare Validation will be done by an ITS service provider, which is contracted by the client. The Manufacturer will work closely with the Purchaser/ITS service provider to determine the size and location of installation of the on-board fare validators in the Bus. During the pre-production and production period, the Manufacturer shall communicate with the Purchaser/ITS service provider regarding any clarifications required. A representative of the ITS Concessionaire will inspect the prototype Bus to ensure all issues are resolved. The Manufacturer shall work in close consultation with the Purchaser/ITS service provider to ensure full functionality with physical and software integration, including the exact size of the units and the electrical requirements. <table><tr><th colspan="2">Minimum Hardware Specifications</th></tr><tr><td>Screen Size</td><td>28 to 34 inches AS per the size available in Bus</td></tr></table>	Minimum Hardware Specifications		Screen Size	28 to 34 inches AS per the size available in Bus
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		Luminance	Must be clearly visible in Day light
		Display Colors	16M
		Operating System	Android 9.0 or higher
		Resolution	720p or higher
		Display Interface	HDMI/VGA/or any other interface
		Networking Interface	LAN interface
		Peripherals	USB2.0/USB3.0 x1, SD Card, Audio Output
		Memory	2GB RAM, 8GB Storage
		Protection	4mm tampered protective glass on screen Metal Case
		Video Support	MP4, AVI,
		Image Support	JPEG,
		Audio Support	MP3
		Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 9.18)
		Additional Feature	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.
		Minimum Hardware Specifications	
		Payment Modes	Smart card, bank EMV card, mobile QR payment, NFC payment
		Processing	4 cores, at least 2.0 GHz, 3GB RAM 16GB flash MicroSD support 500,000 data record supported
		Operating System	Android 9.0 or higher
		Display	7 inch, 1024*600 resolution

		Indications	2 LED status indicators Built-in buzzer Built-in speaker Real-time Clock
		Contactless Smart Card Reader	Support ISO / IEC 14443 A & B, Mifare EV1 EV2, Felica Card, in line with EMV specifications, NFC enabled
		SAM Slots	ISO7816 SMA Slot x 1
		Physical Interface	1x RS232/RS485 interface, 1 x RJ45 LAN interface 1x USB 2.0/3.0 interface 1x USB debugging interface
		Wireless Connectivity	4G, Wi-Fi, and GPS All interfaces should be registered from concerned authorities
		Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 9.18)
		Additional features	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.
		Certifications	EMV L1, EMV L2 certificates must be provided by the supplier EMV L3 certification is the responsibility of the GOS however, the support should be ensured by the Concessionaire in order to achieve the EMV L3 certification.
		Durability	Robust and rugged design, suitable for in-vehicle use

		Operating Temperature	-10°C to +70°C
		Vibration and Shock testing(s)	60068-2-6, 60068-2-27, EN60721-3-5
		1. The Fare Validator shall comprise of following features: (a) The Validator shall be capable of performing a transaction with ISO 14443 “Type A/B” cards, including the reading and writing of user data in memory. (b) For all its data connection, recording, and transmission, validator shall use the latest security standards. (c) The Validator must have capability to accept not only contactless cards but also QR tickets and mobile application generated QR codes as a payment option. (d) The validator should read cards at a distance of 0mm to 30mm, but shall not operate at a distance that introduces a risk of unintentional operation (tolerance limit $\pm 5\%$). (e) The validator shall read, write and verify all required data for the transactions associated with fare media to permit the application of all the Business rules and collection of all records required for the accounting and reporting purposes. (f) Transaction time shall not exceed 300ms. (g) Validator should have RTC in-built for clock management and should have onboard memory to manage Business rules. (h) The validator will be integrated with the VLU/MDVR in order to process fare data. (i) Link to internal/external system(s) remote & local server.	

		(j) All relevant standard SDK's and API's, including open loop SDKs along with their documentation (complete in all aspects) in English language must be provided with Local/International support but not limited to Android. (k) Payment Application: Complete functional payment application for open loop payment such as visa, master and other payment schemes must be provided by supplier. EMV L3 certification is the responsibility of the GOS however, the support should be ensured by the Concessionaire in order to achieve the EMV L3 certification. 2. The fare validator must have the ability to read QR and NFC through an integrated or separate module. 3. All supplied AFC items (including hardware, software, networking, fare media etc.) should be integrable/compatible with third party Mobile application both Android & IOS. Provided hardware should have capability to work in decentralized/centralized mode. Note: Equipment will be covered under two (2) years standard manufacturer's warranty. QTY: 2 for each Bus
18.	Automatic Vehicle Location (AVL) System	All vehicles in the system will be tracked by an Automated Vehicle Location (AVL) system utilizing Global Positioning System (GPS) technology. Data from this system will form the basis of compensation to the vehicle operators, and therefore, this represents a critical data collection feature for the overall operation of the system. This GPS hardware should be installed by the OEM, and the AVL system (excluding hardware and SDKs) should be provided by third party or ITS software provider. The AVL system also provides instructions to the drivers to maintain the correct headway between vehicles. The AVL system will provide real- time,

		automatic information to drivers on the correct speed in order to maintain the headway. The system will clearly display on the driver console the target speed in real-time to maintain the headway. The AVL system thus encompasses all hardware and software components to achieve real-time positioning control of the vehicle. The AVL unit will be fitted into the driver console in an ergonomic manner. The AVL unit will also be integrated with the Vehicle Logic Unit (VLU), allowing it to: ■ Relay vehicle performance data to the Control Centre ■ Receive GPS positioning data ■ Relay the video to the Control Centre ■ Control the content on all messaging and infotainment displays ■ Feed the audio system with audio ■ Relay panic messages to the Control Centre. The AVL system of the entire fleet will be monitored from the operational control centre. The Purchaser is separately procuring a third-party agent, an ITS Concessionaire, to supply and operate the control centre. The same ITS Concessionaire will be responsible for the supply of all components required to monitor the fleet from within the control centre. These components include workstations, communications equipment, and software licenses. The AVL and GPS shall be pre-fitted in the Bus. The Manufacturer will work closely with the Purchaser/ITS Concessionaire to determine the size and location of the AVL system being provided by the Manufacturer. During the pre-production and production period, the Manufacturer shall communicate with the Purchaser and ITS service Concessionaire. The Manufacturer shall work in close consultation with the ITS Concessionaire to ensure full functionality with physical and software integration, including the exact size of the units and the electrical requirements.

		Note: Equipment will be covered under one (1) year standard manufacturer's warranty.	
		QTY: 1 in each Bus	
19.	Driver Console	Minimum Hardware Specifications	
		Processor	Minimum quad-core processor
		RAM	Minimum 4GB RAM
		Flash	16GB flash
		Storage Capacity	Minimum 64GB or equivalent
		External Card Reader	MicroSD card reader
		Display	Touchscreen display with a size of 9- 12 inches with 720p 1280*720 min
		GPS	High sensitivity GPS module with external antenna
		Connectivity	GSM/GPRS, 4G/LTE module, Wi-Fi connectivity and GPS connectivity with external antenna
		Contactless Card Reader	Support ISO / IEC 14443 A & B, Mifare
		Durability	Robust and rugged design, suitable for in-vehicle use
		SAM Slot	ISO7816 SAM Slot x 1
		Physical Interface	1x RS232/RS485 interface, 1 x RJ45 LAN interface 1x USB 2.0/3.0 interface 1x USB debugging interface
		Operating Temperature	-10°C to +70°C
		Vibration and Shock testing(s)	60068-2-6, 60068-2-27, EN60721-3-5
		Minimum Software Specifications	
		Operating System	Android 9.0 or above

		Fare Collection System Integration	Complete Compatibility with the third-party Automated Fare Collection System
		Communication	Real-time communication with the internal/external system and other modules
		Localization and Language Support	Localization options and support for multiple languages
		External Antennas for GPS	For strong signal strength external antennas may be installed
		Maintenance and Support	OTA, USB Upgrade, Remote management (Refer to 9.18)
		Additional Feature	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.
		Compliance	Compliance with relevant industry standards and security regulations
		Documentation	Comprehensive documentation, user manuals, and training materials in English Language
1. The Driver Console shall comprise of following features:			
(a) The Driver's console must be able to display dispatch plan/schedule, interval information to the Bus driver including location, current speed, time headway, distance from the previous and next Bus, alert messages and play			

		voice recordings accordingly to timely inform passengers of the next approaching Bus. (b) Drive console unit shall be used to provide vehicle tracking accurately and reliably utilizing Global Positioning System (GPS). (c) Must have fully functional and advanced GPS system that can gather location wise data and transmit to central servers and related software modules. (d) Handling and storing MP3-files for announcements, as well as manual override for Passenger Information System. (e) Control destination and line number signs. (f) Control interior information and display & announcement. (g) Keep track of the vehicle's Real-time position via GPS and distance counting etc. (h) Map applications, navigation and driver guidance. (i) Driver console may receive other information relating to Realtime traffic information (accidents, breakdowns and traffic conditions etc.) (j) Must have capability to change the route manually if it is incorrect and once confirmed, Bus stages will be automatically updated based on GPS position. (k) Communication and interface with other onboard units, e.g. passenger information system and fare validators etc. (l) GPS time synchronization (m) Clock and Date Function (n) Link to the internal/external system(s) remote & local server in real-time (all relevant

		functional SDKs and APIs in English language is compulsory with Local/International support) (o) Business rules customization compliance (p) Collection of all records required for the accounting and reporting purposes. 2. All supplied AFC items (including hardware, software, networking, fare media etc.) should be integrable/compatible with third party Mobile application both Android & IOS. 3. All relevant functional SDKs & APIs, along with their documentation (complete in all aspects) in English must be provided for Android but not limited to DOT.NET/Android with Local/International support. 4. Provided hardware should have capability to work in decentralized/centralized mode. 5. The Driver Console should be capable of display messages and play voice recordings accordingly, to timely inform passengers of the next approaching station as well as to make any other critical announcements. The Driver Console should also be capable storing these other critical announcements of at least one (01) hour duration and playing some prescribed voice recordings through driver OBU interface. 6. The Driver Console must be capable of collecting, transmitting and reporting in a prescribed Format following data from Controller Area Network (CAN) Bus module. I. Acceleration and Deceleration II. Breaking (All kind of brakes) III. Battery Capacity Information IV. Motor RPM V. Bus Speed VI. Doors Control (Open/Close) Information VII. Bus Saloon Temperature VIII. Motor Temperature IX. Battery On/Off Status X. Auto rear view on reversing the Bus

		The DBC file or equivalent documentation for precise signal decoding Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: 1 in each Bus
20.	UHF/VHF/Wifi Mesh System	Due to concerns over the reliability of mobile telephone networks, the vehicles will also be fitted with a communications system along with master controller based on UHF/VHF/Wifi Mesh radio bandwidth technology. Note: Equipment will be covered under two (2) years standard manufacturer's warranty. QTY: 1 in each Bus
21.	Charging Management System	API for remote monitoring and data analytics ▪ Local Data Storage: 128MB onboard memory for offline data logging ▪ Scheduled Charging Configurable through remote management system ▪ Remote Firmware Updates: OTA support for software enhancements ▪ User Interaction: RFID, Mobile App, Web Portal, ▪ Live updates on charging status, duration, energy consumed ▪ Instant notifications for malfunctions ▪ CAN Bus interface for battery management system (BMS) integration.
22.	Certifications and Approvals	Provision of all relevant documents/specifications or any other necessary requirement for certification and approvals from local authorities such as PTA etc. will be the responsibility of Concessionaire. The approval from the relevant authorities will be obtained by the Concessionaire.
23.	Documentations and SDKs	All relevant functional SDKs & APIs, along with their documentation (complete in all aspects) in English Language must be provided. Android with Local/International support.
24.	Installation	All cables and peripherals must be properly installed within designated compartments and concealed from view.
25.	Redundant Internet Provider	SIM Based industrial gated network router with Wifi and LAN interfaces must be provided as a redundant internet provider to all devices. It must

		be interfaceable with MDVR over LAN interface and automatically manage availability of internet. GUI and remote management must be provided.

Bus Prototype Testing		
1.	Overview of Bus Prototype Test	A Prototype Bus will be produced after the approval of detailed design. Certain tests will be conducted with this Prototype Bus in order to ascertain the performance of Bus. A minimum list of these tests are given in the section below, however the manufacturer can proposed any additional tests deemed necessary. Also the Client can ask for a few additional tests while finalizing these Prototype Testing.
2.	Bus Basic Compliance Tests	The objective of this test is to go through the initial screening process to make sure that the Bus complies with all the basic requirements.
3.	Bus Physical Inspection	The objective of this test is to carry out of physical inspection of the Bus both from external and internal sides to assess the overall condition of the Bus.
4.	Safety Test – Double Lane Change (Obstacle Avoidance Test)	The objective of this test is to determine handling and stability of the Bus by measuring speed through a double lane change test.
Performance Tests		
1.	Acceleration, Grade ability and Top Speed Test	The objective of this test is to determine the acceleration, gradeability, and top speed capabilities of the Bus. Best is to have instrumentation set to read acceleration directly and to trace a speed curve. Gradeability can then be calculated.
2.	Bus Braking Performance Test	The objective of this test is to provide braking performance data.
Structural Integrity Tests		
1.	Structural Shakedown Test	The objective of this test is to determine certain static characteristics (e.g., Bus floor deflection, permanent structural deformation, etc.) under static loading conditions.
2.	Structural Distortion	The objective of this test is to observe the operation of the Bus subsystems when the Bus is placed in a longitudinal twist simulating operation over a curb or through a pothole.
3.	Static Towing Test	The objective of this test is to determine the characteristics of the Bus towing mechanisms under static loading conditions.

4.	Dynamic Towing Test	The objective of this test is to verify the integrity of the towing fixtures and determine the feasibility of towing the Bus under manufacturer specified procedures.
5.	Jacking Test	The objective of this test is to inspect for damage due to the deflated tire and determine the feasibility of jacking the Bus with a portable hydraulic jack to a height sufficient to replace a deflated tire.
6.	Hoisting Test	The objective of this test is to determine possible damage or deformation caused by the jack/stands.
7.	Rollover Test	The objective of this test is to measure crashworthiness - the ability of the vehicle to protect its passengers in the event of a crash. Simulation based results for this test will be accepted.
Noise Tests		
1.	Interior Noise and Vibration Test	The objective of these tests is to measure and record interior noise levels and check for audible vibration under various operating conditions.
2.	Exterior Noise Test	The objective of this test is to measure and record exterior noise levels when a Bus is operated under various conditions.

Table 2.1: Vehicle Specifications

NO.	SPECIFICATION	12-METER VEHICLES
SECTION 1: SPECIFICATION COMPONENTS		
1.1	Vehicles, components and training to be provided	The Concessionaire will be entering into the Agreement with the manufacturer who will have to supply the Buses for the purposes of the Project.
1.1.1	Vehicle fleet size	300 Nos. - 12 m Pure Electric Buses.
1.1.2	Not Used	Not Used
1.1.3	Installation Of Medium & Fast Charging Units	The Concessionaire will provide medium and fast chargers compatible with the Buses. The Concessionaire will also install the chargers at respective Depots in quantities required per Depot or designated locations. The civil works and connectivity establishment will be the responsibility of the Concessionaire.
1.1.4	Spare Parts Package	The Concessionaire will be responsible to provide all replacement parts and supplies for all maintenance issues resulting from normal wear and tear as well as items requiring scheduled

NO.	SPECIFICATION	12-METER VEHICLES
		replacements. The Concessionaire will also be responsible for all materials and associated costs for repair actions caused by road collisions or other unscheduled incidents. The Spare Parts package as mentioned in the RFP shall be delivered within one month of the delivery of the last Bus of each phase As a minimum, the quantity of Spare Parts shall be kept at hand at the Depot site at all times during first year of operations. If a part or supply item is replaced, the stock at the Depot site shall be replenished within 20 Days. At the end of the Concession Period, the Concessionaire will ensure the availability of final stock of Spare Parts and supplies at the Depot facility. The quantity listed in these Technical Specifications lists the minimum Spare Parts that will be included in the final stock of Spare Parts at the Depot facility. The Concessionaire will also provide the documentation on how the procurement of any future Spare Parts and supplies will be conducted. This information will include a full list of the required Spare Parts and supplies along with pertinent parts order numbers, estimated lead times for delivery, and payment mechanisms and payment terms.
1.1.5	Maintenance Tools	The Concessionaire shall ensure availability of one set per Depot of the specified maintenance tools, software, and diagnostic equipment required to repair, service, and maintain each type of vehicles. The Concessionaire will ensure the Depot facility with an initial set of required tools that will serve the typical Day-to-Day requirements of vehicle repair and maintenance. The diagnostic software and equipment are required for evaluating the status of the vehicle and for directing Depot staff to take necessary corrective maintenance and repair actions. As a minimum, the Concessionaire shall ensure the availability of the following items:

NO.	SPECIFICATION	12-METER VEHICLES
		▪ One set per Depot of the dollies and cradles necessary for the handling of motors, transmissions and other heavy components requiring specialist handling equipment. ▪ One set of all tools per Depot required for the maintenance of the principal vehicle components, including all tools for standard maintenance, repair, and re-installing of vehicle components. ▪ One set per Depot of maintenance diagnostic software, with a multi-site and multi-use license. ▪ One set per Depot of diagnostic equipment to evaluate the status of vehicle components, including diagnostic equipment for the motor unit, gearbox, system electronics, air suspension system, and wheel and axle alignment. These Technical Specifications lists the minimum tools requirements to be made available by the Concessionaire at the end of the Term of the Agreement. The Concessionaire must also provide a list of any additional/specialized tools listed by manufacturer to service the vehicles.
1.1.6	Warranty	The warranty shall be obtained from the manufacturer on the chassis, body, and all vehicle components to protect against any defects in design, workmanship, equipment, or materials. With the exception of the electric storage and propulsion system (i.e. battery packs and electric motors), the warranty for all other parts and components will commence from the date of delivery of the last vehicle to second year of operations. For the battery packs the manufacturer will provide all necessary replacement for twelve (12) years, for electric motors, and controller the manufacturer will provide all necessary replacements for twelve (12) years or 1.2 million kilometres of service, whichever of these two milestones are realized first and in respect of the medium and fast chargers the manufacturer will provide all necessary replacement for eight (8) years. The battery packs shall be replaced under

NO.	SPECIFICATION	12-METER VEHICLES
		this warranty whenever the battery capacity falls below 80% of its original capacity at full charge. The warranty will stipulate that the Concessionaire is responsible for all repair and replacement costs due to the premature failure of any part or component due to defects in design, workmanship, equipment, or materials. The warranty will cover all costs associated with repairs or replacements due to the actions of the manufacturer. Among the types of repairs or replacements not covered under the warranty are road collisions or other unscheduled incidents.
1.1.7	Registration, Licensing And Homologation	The Concessionaire will bear all the cost related to registration, licensing, whitelisting and homologation.
1.1.8	Cost Of Inland Transport And Associated Insurance To Delivery Point	The Concessionaire will be responsible to bear all the cost of inland transport and associated insurances while delivering all the Goods to the designated Bus Depot. Insurances procured by the Concessionaire should include comprehensive insurance for terrorism, vandalism and sabotage. The Concessionaire shall ensure that the relevant insurances shall continue to be valid for three (3) months after he delivery of the Goods to the designated Bus Depot. In the event any insurance claims arise within this timeframe, appropriate compensations will be ensured
1.1.9	Maintenance Supervision	The Concessionaire shall be responsible for the fleet maintenance for the period of concession. The Concessionaire shall ensure that sufficient maintenance is applied during the concession period so that at least 90% of the fleet will be operationally available at any time during system operating hours. "Operationally Available" means that the vehicles are in a functional condition that could be utilized in customer services without any restrictions while meeting all requirements in this Technical Specifications. The maintenance services will include but not limited to motor, battery packs, replacement of filters, coolant, spark plugs, fuses, worn wiper blades, worn brake pads and linings or worn clutch

NO.	SPECIFICATION	12-METER VEHICLES
		linings, replacement of tires (if required), batteries, air conditioning. The Concessionaire shall also be responsible for any maintenance arising out of the following; Repairs and adjustments required as a result of racing, overloading, negligence, modification, alteration, tampering, disconnection, improper adjustments or repairs, accident and use of add-on-parts/material. Cosmetic or surface corrosion from stone chips or scratches in the paint. Damage or Surface corrosion from the environment such as acid rain, air borne fall out (chemicals, tree sap, etc.), salt, hail, windstorms, lightning, floods, other acts of God and the like is not covered. Repairs and adjustments caused by improper maintenance not carried out, use of fluids other than the fluids specified in manufacturer's manual. Normal noise, vibration, wear, tear or deterioration such as discoloration, fading, deformation or blur.
1.1.10	Maintenance Training Program	The Concessionaire shall ensure that the manufacturer shall deliver a maintenance training program that will properly prepare the Concessionaire to independently maintain its vehicle fleet throughout the concession period. The training program will take place at regular intervals. These sessions will include both classroom instruction as well as hands-on repair work in the Depot maintenance area. In particular, the training shall also focus on any potential rebuild work or battery pack replacement work that would be required.
1.1.11	Driver Training Program	In order to facilitate a disciplined operation of the vehicle fleets, the Concessionaire shall implement a driver training program that will install safe and professional driving skills. The training course will culminate in the drivers receiving a course (competency) certificate indicating driving proficiency. The driver training program will prepare the drivers to undertake licensing exams under National law to operate large public transport vehicles.

NO.	SPECIFICATION	12-METER VEHICLES
		Approximately 600 drivers for each phase over a period of four months. Each trainee shall spend at least 8 hours in the actual road testing of a vehicle during the course of the training program. The selection of the drivers for the course will be the responsibility of the Concessionaire. The training venue (including classrooms and driver training area preferably be arranged/developed inside the Depot facility. • The course topics will include: • Driving skills • Traffic regulations • Safety • Emergency protocols • Customer service • Public transport license testing. The actual testing for a National public transport driver's license will be the responsibility of the Concessionaire. The GOS will therefore NOT be responsible for any direct testing costs, such as application fees. The schedule of driver training program is: Commencement of driver training program: Within such time period as set out in this Agreement. Completion of driver training program: Within maximum two (2) months after the commencement of driver training program.
1.2	Fleet Delivery Schedule	Completion of first full unit at Factory: Sixty (60) Days from the date of the Effective Date. Delivery of single batch/tranche of vehicles comprising of a full (100%) of the 12-meter vehicle quantity: Within ninety (90) Days from approval of Prototype Bus and issuance of Prototype Test Acceptance Certificate Delivery of Medium & Fast Chargers: The OEM shall ensure delivery of all Medium & Fast Chargers at least fifteen (15) Days prior to the delivery of Bus fleet.
1.3	Approval process	As per the relevant provisions of the Agreement including the approvals set out in the Agreement.

SECTION 2: SPECIFICATIONS SUMMARY		
S. No.	Criteria	Specification
1.	Make / Manufacturing	2025 or above
2.	Vehicle length (minimum - maximum)	11.4 - 12.6 meters
3.	Vehicle width (not including mirrors)	2.55 meters
4.	Vehicle height (from road surface to highest point on roof) (maximum)	3.5 meters
5.	Floor height (from road surface to interior floor at doorways)	350 mm
6.	Ground Clearance (minimum)	260 - 280 mm (From the ground to the lower edge of entrance floor)
7.	Ceiling height in front passenger area (from interior floor to ceiling) (minimum)	2.1 meters
8.	Clearance at doorway (from interior floor to door header) (minimum)	1.9 meters
9.	Axle load, front axle (maximum)	7,000 – 8,000 kg
10.	Axle load, rear-axle (maximum)	12,500 – 13,500 kg
11.	Grade ability (Fully Laden)	Min 17%
12.	Angle of Approach (Fully Laden)	Minimum 7 degrees
13.	Angle of Departure (Fully Laden)	Minimum 7 degrees
14.	Steering	Driver compartment on right-hand side of vehicle for vehicle operation on left-hand side of Roadway. Power Steering electric assisted with height and angle adjustment.
15.	Useful life of vehicle (projected)	1.2 million km or 12 years
16.	Centre-line distance between the two doorways	2.4-2.75 meters
17.	Free door width per passenger door (minimum)	1.2 meters
18.	Number of curb-side passenger doorways	2
	Number of median-side passenger doorways	2
19.	Number of manual pull-out boarding bridges from curb-side doors	4 (for rear door)
20.	General seat configuration	2 x 2 (predominantly)
21.	Seat pitch (minimum)	730 mm

22.	Seat width (minimum)	420 mm
23.	Number of passenger seats (including preferential seats but excluding flip down seats and driver seat) (minimum)	26
24.	Number of wheelchair bays (minimum)	1
25.	Total number of flip-down seats in wheelchair bay(s) (minimum)	2
26.	Length of wheelchair bay(s) (minimum)	1.3 meters each
27.	Number of seats in front women-only section (minimum)	8
28.	Thickness of flooring material (minimum)	2 mm
29.	Side window height (minimum)	900 mm (excluding last row of seats)
30.	For the median side (right-side) of the vehicle, distance of outside edge of the wing mirror from the vehicle body (maximum)	150-225 mm
31.	For the curb side (left-side) of the vehicle, distance of outside edge of the wing mirror from the vehicle body (maximum)	200-230 mm
32.	Tire Construction / Width	Aluminum Alloy Rim 275/ 70R 22.5 to 295/80R 22.5
33.	Distance between outside edge of tire sidewall to outside edge of vehicle body for front axle (maximum)	125 mm
34.	Distance between outside edge of tire sidewall to outside edge of vehicle body for rear axle (maximum)	80 mm
35.	Power on gradient (minimum)	Maintain 50 km/hr on 4% up grade and 30 km/hr on 8% upgrade when fully loaded
36.	Projected maximum operating speed (maximum)	80 km/hr
37.	Propulsion system	Pure Electric Bus
38.	Size of electric motor for propulsion system (peak power minimum)	350 kW
39.	Size of electric motor for propulsion system (Rated power minimum)	230 kW

40.	Motor Type	Permanent Magnet Synchronous Motor (PMSM), with the Protection level IP6k9k
41.	Battery Type	Lithium-ion (LiFePO4) with protection level IP6k9k
42.	Battery Pack Safety	The battery pack is designed with an anti-collision structure, and the test force is not less than 200KN. A nitrogen protection system is required in the battery box to ensure the battery box in an anaerobic environment to reduce the risk of fire when the battery pack is short or thermally out of control in a low oxygen environment. Each Battery pack is equipped with fireproof paper with a fire resistance of 1,300 degree centigrade. A certificate is required before or at the time of prototype testing .
43.	Battery Capacity (minimum)	315.07 kWh
44.	Bus Mileage	Not less than 275 km on single charge (100% to 20% battery consumption) fully loaded with AC working.
45.	Internal idling noise standard (maximum)	60 dB
46.	External idling noise standard (maximum)	65 dB
47.	Turning radius, outer wheel track (maximum)	12.0 meters

For any dimensions in the table above that are not set as a specific range or described as a maximum / minimum value, then the accepted tolerance for a deviation from the given nominal value will be +/- 2%.

SECTION 3: LEGISLATION AND STANDARDS		
3.1	National legislation and standards	All vehicles shall comply with all national, provincial and local legislation, regulation or by-law as well as with the relevant national standards. All manufacturers are expected to be fully familiarized with the legal requirements of public transport vehicles, of the types proposed, in the given national context.

SECTION 4: WEIGHTS AND DIMENSIONS		
4.1	Axle loads	The vehicle axles must be capable of operating with the following maximum loads: ▪ Front axle: 7,000 – 8,000 kg ▪ Middle axle: Not Applicable ▪ Rear axle: 12,500 – 13,500 kg
4.2	Overall vehicle width	The vehicles shall meet a targeted width of 2.55 meters (variation with $\pm 2\%$), as measured from one exterior side to the other (excluding wing mirrors).
4.3	Floor height	The vehicles are to be low entry, allowing ease of access for the curb- side boarding. The targeted floor height, based on the distance from the road level to the floor of the vehicle is 350 mm. This dimension must be achieved within a tolerance of ± 10 mm even when the vehicle is unevenly loaded with passengers bunching on one side. The rear portion of the vehicle (i.e. the portion of the vehicles after the last doorway) may be raised with steps.
4.4	Vehicle length	The vehicle length may be in the range from 11.4 meters to 12.6 meters.
4.5	Interior floor to ceiling	The interior clearance height (from the vehicle floor to the ceiling) for the front passenger area shall be a minimum of 2.1 m. The interior clearance height (from the aisle way floor to the ceiling) for the raised rear passenger area shall be a minimum of 1.85 m. At the doorways, the minimum clearance height, from the vehicle floor to the door header, shall be 1.9 m. The manufacturers are encouraged to maximize ceiling clearance heights.

SECTION 5: BODY		
5.1	Structure	The body shall be designed to meet a useful vehicle life of twelve (12) years or 1.2 million kilometres, whichever of these two milestones arrive first. The body shall be reinforced at joints where stress concentration may occur. The vehicle shall safely withstand road shocks and

		other conditions found in urban services. Body panelling shall have adequate thermal and acoustic properties and shall not vibrate unduly while the vehicle is in operation. Bus structure shall meet the structural requirements of structural strengths, stability, deflection, vibration, crashworthiness, roll over protection etc. Amongst others for at least following main loads: ▪ Static Loads ▪ Dynamic Loads ▪ Single Wheel bump loads ▪ Double Wheel bump (Diagonally opposite) loads ▪ Braking and acceleration loads ▪ Front-impact loads ▪ Speed breaker loads The structure shall meet the compliance standards for the rollover test stipulated through Regulation 66 of the United Nations Economic Commission for Europe (ECE-R66). Furthermore, when the Bus is loaded to GVW, with crush load and under static condition, shall not exhibit deflection or deformation that impairs the operation of the steering, doors, windows, passenger escape mechanism and service doors.
5.2	Materials and corrosion resistance	High strength corrosive-resistant material shall be used in construction of the body. Mild steel is the minimum requirement for the vehicles. The use of materials with superior strength, corrosion resistance, and overall durability is encouraged. The use of stainless-steel alloys (such as 3CR- 12), high-carbon steel, glass-reinforced plastic (GFRP), aluminium, and other materials should be considered, particularly for critical sections of the body and structural elements.
5.3	Body Shape	These new Buses shall represent an overall transformation of public transport for the major cities of Sindh. The aesthetics of the vehicles will play a significant role in transforming the public's perceptions of public transport services. SMTA therefore requires a body design that evokes a modern appearance with sleek and

		aerodynamic curve lines. This visual effect can be achieved by: a rounded vehicle front with a curved windscreen A slanted vehicle front; or a rounded augmented body piece added to the front roofline of the vehicle. Option 1 (curved vehicle front) and option 2 (slanted vehicle front) may also include the rounded augmented body piece on the roof-top. A flat vehicle front with no rounded, aerodynamic features will mean that the manufacturer's proposal will be considered non-responsive to the technical requirements.
5.4	Conduciveness to washing	The exterior and body features, including grilles and louvers, shall be shaped to allow complete and easy cleaning by an automatic vehicle washer without snagging washer brushes. Water and dirt should not be retained in or on any feature of the vehicle after leaving the washer.
5.5	Painting	
5.5.1	Vehicle livery	Vehicle exteriors shall be used for advertisement to generate Non-Fare Revenue (NFR). The details of the final design shall be provided during the pre-production period.
5.5.2	Painting of vehicle body	The painting of the vehicle shall employ modern best practice. Paints shall produce a superior finish that will support efforts to position the system as a choice option for all passengers. It is preferred that the paint materials and application procedures utilized will be as environmental - friendly as is practically possible, including consideration of water-based paints. The paint shall be hard wearing and able to withstand the operating conditions of an urban Bus. Such wear resistance shall include the ability to withstand regular machine-washing of the vehicles. The process and materials used shall be such as to allow ready repainting of minor scratches and scrapes. All primers, sealers, paint and any other materials used shall be compatible to assure chemical bond,

		adhesion, overall gloss retention, and to assure full warranty by the manufacturer. The finish coat shall be free of runs, sags, and areas of no gloss. There shall be no bare or exposed metal surfaces showing on the exterior of the vehicles. If vehicle components are to be imported and shipped via sea, then a special coating shall be applied to protect against damage from sea spray. It is to be noted that there will be advertisements on the external side of the Bus to exploit Non-Fare Revenue Potential. Hence the paint should be such that it facilitates the purpose.
5.5.3	Undercoating	The underside of the under-frame, flooring and stepwells, wheel-housings and all exposed underfloor surfaces shall be treated with a fire-retardant coating.
5.6	DOORWAYS	
5.6.1	Number Of Passenger Doors And Dimensions	The vehicle shall have two curb-side passenger doorways and two median-side passenger doorways. The doorways shall be located between the two axles of the vehicles. The minimum distance between the centreline of the first and the second doors shall be 2.4-2.75m. Each doorway will provide a minimum free width of 1.2 m for ease of passenger entry and egress. The minimum clearance height at the doorway shall be 1.9 m.
5.6.2	Door Type And Characteristics	Doors should be two-leaf inward swinging doors. Structure of the doors, their attachments, inside and outside trim panels, and any mechanism exposed to the elements shall be corrosion-resistant. Door panel construction shall be of corrosion-resistant metal or reinforced non-metallic composite materials. The doors, when fully opened, shall provide a firm support and shall not be damaged if used as an assist by passengers during ingress or egress. Door edges shall be sealed to prevent infiltration of exterior moisture, noise, dirt and air elements from entering the passenger compartment, to the maximum extent possible based on door types. The closing edge of each door panel shall have no less than 5 cm of soft weather stripping.

		The doors, when closed, shall be effectively sealed, and the hard surfaces of the doors shall be at least 10 cm apart (not applicable to single doors). The combined weather seal and window glazing elements of the front door shall not exceed 10 deg of binocular obstruction of the driver's view through the closed door.
5.6.3	Opening / Closing Mechanism	Doors shall be electro-pneumatically operated by the driver and shall be able to be opened or closed independently or in unison with each other. ▪ System shall include an audible announcement that informs passengers when the doors are either about to open or close. Door movements shall also be shown by luminous indicators. The indicators shall show red when the door is closed and green when the door is open.
5.6.4	Door Safety And Emergency Operation	A pilot lamp on the driver's dashboard should be provided to warn that the door is open or completely closed. Doors shall not open until the vehicle comes to a stop. Doors shall have an interlock control with brake and accelerator to prevent movement of vehicle with doors in open position. The doors shall function even with the ignition off. Anti-pinch sensors shall be installed to retract the door automatically if any obstruction with a width of 25 mm or greater is caught between any point of the doorway. The anti-pinch system will prevent injury due to wrists, ankles, or belongings being caught in the doorway.
5.6.5	Closing Force	Closing door edge speed shall not exceed 30 cm per second, and opening door speed shall not exceed 50 cm per second. Power doors shall not slam closed under any circumstance, even if the door is obstructed during the closing cycle. If a door is obstructed during the closing cycle, the pressure exerted on the obstruction shall not increase once initial contact has been made. Doors shall be equipped with a sensitive edge or other obstruction sensing system such that if an obstruction is struck by a closing door edge, the

		doors will stop and/or reverse direction prior to imparting a 5- kilogram force on 7 square centimeters of that obstruction. Whether or not the obstruction sensing system is present or functional it shall be possible to withdraw a 3.8-centimeter diameter cylinder from between the center edges of a closed and locked door with an outward force not greater than 16 kilograms.
5.7	Windows	
5.7.1	Side and rear windows	Windows shall be provided along the sides of the vehicle as well as the rear of the vehicle. The side and rear window areas shall be as large as possible to give the seated and standing passengers an unobstructed exterior view. The window unit shall be a minimum of 900 mm in height. The manufacturers are encouraged to provide larger panoramic-styled windows. However last rear window can be smaller in size for any space constraint. Windows shall be of the bonded type. Windows shall not be mounted in rubber moulds. All glass shall be tinted to an approximate level of 70% to 80% light transmission (i.e. glass permits approximately 70% - 80% of light to enter). Side windows shall have the look of a seamless or continuous window when viewed from exterior of the vehicle. The exterior of the windows shall withstand damage and scratching from use of vehicle wash system. This would include, but not limited to soaps, spinning brushes, as well as hand brushes. The driver's side windows shall be split, sliding windows. The sliding portion shall move freely without rocking or binding. Driver windows shall be glazed with tinted laminated safety glass. Glass shall be tinted at the top third (1/3), to meet safety standards.
5.7.2	Opening of windows	While the vehicles will be fitted with air conditioning, there will be the option of manually-opened vents to be used in case of air conditioning failure besides the roof vents. These windows shall incorporate an upper transom portion. The transom shall be between 25 and 35 percent of the total window area. The lower

		portion of the window shall be fixed. The transom portion shall be hinged along the lower edge and open inward. This should be visually merged as much as possible with the fixed windows around them. However, the window vents will normally be locked during periods of the year when air conditioning is to be utilized. The unlocking of the windows should be controllable by the driver via keys whereby driver can walk from the cabin and open them. They should not be unlocked by a passenger. The locking can be done manually at each vent by simply closing them. Moreover, three (3) set of keys should be provided for each Bus.
5.7.3	Windshield and windshield wipers	The windshield shall be designed for easy replacement and maintenance. Windshields shall be angled sufficiently to reduce glare from the interior vehicle lighting. A fully adjustable sun visor shall be installed for driver's use. The installation shall preclude vibration in normal street operation. The visor shall be a full see through, mesh style with a release cord that allows the visor to return to the normal position. Two electric-operated heavy duty windshield wipers shall be furnished. The wiper motors shall be variable speed having at least a high and low speed setting with an intermittent setting. The windshield wiper system shall include a "self-parking" feature, which means the wiper returns to its base position when the wiper is disengaged. A windshield washer shall also be provided. A heavy-duty, three-speed plus intermittent facility wiper system should be driven by 24-volt electric brushless motor. Wiper arms and blades are to be "Pantograph" type with black finish. Wiper blades must be easily replaceable. Swept area should be maximized to cover driver's forward vision and the driver's view to the nearside exterior rear view mirror at normal driving position. Wiper spindles are to be recessed into front GRP moulding and to be secured by disc-lock nuts. The wiper motor, the linkage assembly and wire

		connections should be easily accessible for regular maintenance. The wiper arm design (suitable wiper arm tension or appropriate deflectors) should enable normal wiper operation even when the vehicle is running at the maximum speed of 80 kph and under high wind loading condition. The wiper arms and windscreen should not be protruding beyond the front GRP moulding in order to prevent damage of windscreen during the operation of Bus washing machine. Overload protection for the wiper motor circuit is required. Anti-corrosion materials should be used for the wiper arm and the associated fittings. Wiper blades should be securely mounted to the wiper arms, and can be replaced independently during routine maintenance.
5.8	EXTERIOR PANELS, ROOF GUTTER AND BUMPERS	
5.8.1	Exterior panels	Exterior panels shall be sufficiently stiff to prevent vibration, drumming or flexing while the vehicle is in service.
5.8.2	Roof gutter	Roof gutters shall be installed if body style does not stop water flow into or on windows, doors, and mirrors. The roof gutters will be installed over the side windows and doors, if necessary. When the vehicle is decelerated, the gutters shall not drain onto the windshield, or operator's side window, or into the door boarding area. Cross sections of the gutters shall be adequate for proper operation.
5.8.3	Bumpers	No part of the vehicle except Bumpers shall be damaged because of a ten (10) kph impact at the front or rear of the vehicle. The energy absorption system of the bumper areas shall not require service or maintenance in normal operation during service life of the vehicle.
5.8.4	License Plate provisions	Provisions shall be made to mount local standard size license plates on the front and rear of the vehicle. The manufacturers are encouraged to arrange license plate dimensions which are standard as per industry practices. These

		provisions shall direct mount or recess the license plates so that they can be cleaned by automatic vehicle washing equipment without being caught by the brushes. License plates shall be mounted according to local rules and shall not allow a toehold or handhold for unauthorized riders.
5.9	Wing mirrors	Vehicles shall be equipped with two outside rear-view mirrors, mounted on each front corner of the vehicle. The wing mirrors shall be motorized. The control switches shall be mounted on the driver's control console. The mirrors shall be fully adjustable to give the driver a full view of the required area. In order to ensure effective driver visibility, the wing mirrors shall have a minimum width of 170 mm and a minimum height of 250 mm.

5.10		EXTERNAL ACCESS POINTS
5.10.1	External access doors	Access doors shall be provided, where necessary, for the easy maintenance of equipment. The access doors shall be provided with positive hold open devices and corrosion resistant latches. Access openings shall be sized for easy performance of tasks within the compartment including tool operating space. Access doors shall be of rugged construction and shall maintain mechanical integrity and function under normal operations throughout the service life of the vehicle. They shall close flush with the body surface. When motor access door is open, it shall not obstruct the rear vehicle lights. Access to the motor, transmission and ITS control compartment doors shall be controlled by some form of key access ("T" key style is acceptable). There shall be an access door for emergency workers to gain entry to the "Battery Disconnect" and it shall be labelled as such. This access door shall not require tools to gain access.
5.10.2	Service Area Lighting	Lights shall be provided in the motor and all other compartments, where service may be required, to generally illuminate the area for night emergency repairs or adjustments. Sealed lamp assemblies shall be provided in the motor

		compartment and shall be controlled by a switch located near the rear start controls in the motor compartment. Necessary lights, located in other service compartments, shall be provided with switches on the light fixture or convenient to the light.
5.10.3	Roof escape hatch/air vents	At least one emergency roof escape hatch shall be provided in each vehicle. The hatch shall have a seal around the opening, and shall be opened by pulling the release handle. Instruction decals shall be placed on the underside of the hatch. The roof hatch may also act as a fresh air ventilator at times when the air conditioning is not in use.

SECTION 6: INTERIOR		
6.1	COLORS, MAPS, AND ADVERTISING	
6.1.1	Color Scheme	The colour of the wall panels shall contrast with that of the surface of the floor and this contrast is to be most clearly defined at the junction of the floor to the wall. The actual colours to be utilized will be determined by SMTA during the pre-production period.
6.1.2	Panels and trim	The interior of the access doors shall blend in with the appearance of the vehicle interior. The interior side walls, ceiling trim panels, and sections between large side windows down to the bottom of the window openings shall consist of an aesthetically-attractive and durable material. The materials must be approved by SMTA during the pre-production period.
6.1.3	System map	To provide excellence in system legibility, system network maps will be placed on all vehicles. The system maps will be provided in a large size that will be visible to the passenger area to the extent possible. At least two locations should be provided inside the Buses for a system map. The actual provision of the maps is the responsibility of the SMTA.
6.1.5	Advertising	In order to optimize system revenues, some discrete advertising space will be permitted inside the vehicles. The possible spaces for the advertising include the space above the windows as well as on any partition panels not utilized for the system route map. The advertising spaces will be designed to include mechanisms to hold the advertising in place.

		The manufacturer will note the proposed locations of the advertising in the submitted interior layout drawings of the vehicle.
6.2	GRAB-RAILS/STANCHIONS/STRAPS	
6.2.1	Grab-rails and stanchions	Full grip stanchions and grab-rails shall be provided for the safety of the standing passengers and for ingress and egress. The stanchions and grab rails shall be properly supported and held in place according to industry standards. Ceiling grab-rails, one on each side of vehicle aisle way, shall be even with aisle edge of the seats. If relevant to the chosen interior design, a horizontal passenger assist shall be placed across the front of the vehicle in order to prevent injuries on the windshield in the event of a sudden stop. A high-contrast colour shall be used for the grab-rails and the stanchions. The colour will be determined by the SMTA during the pre-production period. The height and number of grab handles should facilitate passenger in having comfortable standing position.
6.2.2.	Straps	Colour coordinated subway straps shall be installed on grab-rails running length of vehicle. The straps shall be of a soft material such as leather and shall have a positive fastening system.
6.3	Internal layout	The manufacturers shall provide drawings of the proposed interior layout of each vehicle. The chosen layout may be altered through discussions with the SMTA, provided there are no cost implications of such alterations.
6.4	PASSENGER SEATS	
6.4.1	Seating configuration	In general, seats will be oriented in a 2 x 2 configuration, with the exception of areas such as the back of the vehicle and the flip-down seats in the wheelchair bays. Since customer comfort and personal security is a principal objective, a configuration of 3 x 3 or 3 x 2 is not permitted. For the most part, the seats will face forward. However, the flip-down seats in the wheelchair bays will be orientated to the side. It is also acceptable to include some side-facing or rear-facing seating if the configuration helps to maximize the number of seats. For example, rear-facing seating may be

		applied for this purpose on the rear-side of the wheel wells.
6.4.2	Seating dimensions	A minimum 730 mm leg pitch shall be provided. At preferential seats, the clear distance from the front of the seat to the rear of the next seat shall not be less than 230 mm. Where the preferential seat faces a bulkhead or partition more than 1,200 mm in height, this distance is to increase to a minimum of 300 mm. The seat width shall be a minimum of 420 mm.
6.4.3	Number of seats	A minimum of 26 seats shall be provided. This amount excludes the additional seats provided by flip-down seats in the wheelchair bays. It is expected that the one wheelchair bay of 1.3 m each in length will each be able to accommodate space for at least a total of two flip-down seats.
6.4.4	Standing passengers	No vehicle is expected to exceed a standing passenger capacity of 6.0 passengers per square meter. However, the axle load specifications have been set to accommodate temporary conditions of over-crowding.
6.4.5	Seating materials	The base structure of the seat shall be hard, durable plastic. The passenger contact areas at the base and at the back shall be a soft padded plastic material. All materials shall be durable and easily maintained and cleaned. The colour of the seat will be selected by the Procuring Agency during the pre-production period. The colour of the seating in the women-only section of the vehicle shall be different than the colour of the seating in the men's section of the vehicle. The type, style, and colour of the seating materials must be approved by SMTA during the pre-production period.
6.4.6	Hand-hold rail	All aisle passenger seats shall be equipped with a hand-hold rail at the top of the seat back-rest. A hand-hold rail at the sides is encouraged, since it is often useful for small children.
6.5	Specials needs seating	The vehicle shall include provisions for wheelchair-compatible open bays.
6.5.1	Wheelchair bays	Minimum one wheelchair bay shall be provided. Wheelchair bay shall be forward facing. Minimum of 1 wheelchair bay will be accommodated in the wheelchair bay area. Each wheelchair bay shall be a minimum of 1.3 m in length.

		The wheelchair bay will also accommodate flip-down seating that can be utilized when no wheelchair patron is using the space. The wheelchair bay is to be provided with approved independent passenger and wheelchair restraint systems including seat belts and stanchions as necessary. The equipment is to comply with ISO 10542 or GB 13094-2017 standard. The wheelchair bay shall include a headrest backboard to minimize injury in case of an accident or sudden stop. The wheelchair bay shall be designated a priority area for wheelchair patrons as well as other disabled persons and customers with prams. The wheelchair bays shall have signage indicating this prioritization. A pictogram indicating this priority will also be placed adjacent to the exterior of the doorway nearest to the wheelchair bay.
6.6	DRIVER'S COMPARTMENT	
6.6.1	Driver's seat	The driver's seat shall include headrest, high back, dual air lumbar, air operated side bolsters, and an automatic/manual fore and aft slide. The driver's seat shall be upholstered in all cloth fabric. The driver's seat will be equipped with a 3-point seat belt, and a built-in maxi alarm indicating that the brake has not been applied when driver takes pressure off the seat.
6.6.2	Enclosed compartment	The driver's area shall be an enclosed compartment. Behind the driver shall be a partition wall, but the wall shall include a window to allow visibility into the passenger area. To the left-side of the driver shall be a clear upper wall and doorway to allow the driver to have full peripheral vision and to be able to communicate freely with the conductors. The doorway to the driver's compartment shall be lockable for security purposes.
6.6.3	Compartment ergonomics	The manufacturer shall supply state of the art ergonomics engineering to the vehicle driver's environment to maximize driver comfort and ease of operation for extended periods of time. All switches and controls necessary for the operation of the vehicle, including door master, shall be conveniently located in the driver's area and shall provide for ease of operation.
6.6.4	Interior mirrors	In addition to the presence of cameras and displays, mirrors shall be provided for the driver to observe

		passengers throughout the vehicle without leaving his/her seat and without shoulder movement.
6.6.5	Signage	Signage shall be provided near the driver's compartment. This signage shall state that passengers shall not address the driver, except in emergency situations. The signage shall also state that the driver carries no cash and that any violation shall result in prosecution.
6.6.6	Components	The following are the various components to be found in the area of the driver's compartment: ▪ Basic toolbox fitted behind the driver ▪ Horn ▪ ITS components (described below) ▪ Driver's sun visor on both the right and left hand windscreen ▪ Fire extinguisher placed near the driver, approved to national standards ▪ Triangle kit for roadway incidents ▪ Lockable storage holder next to driver to place personal belongings ▪ Provision of space / holders for operating license certificate and valid operational permit on dashboard or driver side window.
6.6.7	Driver Cabin Standards	Compliance with ISO16121-2 or GB 13094 – 2017 standard

6.7	FLOOR	
6.7.1	Floor base	The floor base shall be resistant to moisture and moisture related deterioration. The underframe shall have sufficient stiffeners to keep the flooring from excessive flexing under maximum loads.
6.7.2	Floor covering	The floor covering shall be both aesthetically pleasing as well as durable. The floor covering shall be capable of withstanding daily mopping/wet scrubbing. The floor covering shall be a heavy-duty non-slip material with a minimum thickness of 2 mm. The walking area of the floor shall be level in each section. The colour of the floor at the passenger doorways shall contrast with that elsewhere in the vehicle. In

		front of each doorway, the floor colour will be a high-contrast yellow to indicate that passengers are not to block that area. Manufacturers shall provide samples of the floor material options being offered. The type and colour of the floor covering must be approved by the Procuring Agency during the pre-production period.
6.7.3	Access doors in floor	Floor inspection trap doors shall have a quick-acting coupling system to facilitate the access and maintenance of chassis components. All holes in the floor material, for mounting bolts, seams, etc., shall be caulked and sealed before sanding. Access openings in the floor shall be avoided with the exception of access for the fuel tanks sending unit and driveshaft.
6.7.4	Wheel housing	To the extent, any exposed wheel housings are present in the interior space: ▪ The wheel housings shall be trimmed and sealed at its mating edges; ▪ The colour of the wheel housing shall compliment vehicle interior. The color will be determined by the Procuring Agency during pre-production; ▪ The wheel housing shall be finished on the vehicle interior to withstand scuffing, wear and abuse from passenger feet.
6.8	Partition walls	A partition wall shall be installed behind the driver; this barrier shall be transparent above 1,000 mm so that the driver has a clear view of the passenger area. Some of the partition walls will be fitted to accommodate a system map and/or advertising. Partitions shall incorporate hand-holds that assist seated passengers in arising or steadying themselves. Adequate clearance shall be provided for passenger's hand between panel and rear half of door, during complete opening and closing cycle. Material colour and finish to be determined during the pre-production period.
6.9	Fire and safety equipment	The manufacturer shall furnish and install or cause to be furnished and installed a dry chemical extinguisher with hose assembly. The fire

		extinguishers shall be located in easily accessible locations. The interior of the vehicle shall be fitted with the required fire and safety decals. The placement of the fire equipment and the decals shall be approved by SMTA during the pre-production period.
6.10	Interior insulation	Aside from the general thermal and acoustic requirements for the body, any seat area over the motor shall be heavily insulated for both noise and heat protection with fiberglass blankets or approved equal.
6.11	Integrity	Water leakage tests should be carried out by the bodybuilder to the satisfaction of the Concessionaire prior to the handover of the vehicles. The Concessionaire shall be advised when such tests are to be carried out so that representatives of the Concessionaire can attend if required.

SECTION 7: MECHANICAL		
7.1	ENGINE / PROPULSION SYSTEM	
7.1.1	Propulsion System	The vehicle fleet shall be based on a Full-Electric System where Vehicles should be capable of taking fast charging and slow charging both to drive a total of not less than 275 KM on single charge (100% to 20% battery consumption) fully loaded with AC working. The driveline configuration should be optimized in reaching the highest possible energy efficiency to achieve the required vehicle road performance, including but not limited to acceleration and hill climbing capability under a fully laden condition. The Bus must be powered by electricity from on board battery packs.
7.1.2	Propulsion Service System	The propulsion system shall be arranged so that accessibility for all routine maintenance is ensured. No special tools, other than dollies and hoists, shall be required to remove the propulsion system or any subsystems. However, the Client shall recognize that properly rated test equipment and safe electrical work practices are essential when servicing high-voltage components. The air compressor, all motor accessories, and any other component requiring service or replacement shall be easily removable. The manufacturer shall

		provide or cause to be provided all specialty tools and diagnostic equipment required for maintaining the propulsion system in accordance with the special tools list.
7.1.3	Primary Propulsion Unit And Traction Motor	The propulsion system may be configured in a variety of methods dependent upon type of drive. The definition of motor in the context of this specification assumes that the device can provide or consume energy as well as provide or retard mechanical motion. The function of overheating protection and overheating warning of the electric traction motor should be provided. The power of electric traction motor shall be restricted when respective warning is triggered.
7.1.4	Energy Storage And Controller	Design and performance data shall be provided by the manufacturer. Energy storage shall be of a commercial design capable of operating in the relevant transit environment. The primary charging of the energy storage system shall be accomplished by external charger and regenerative braking. Thermal management will be provided to ensure optimal life and performance of the Electrical Storage System (ESS) over the environmental operating range.
7.1.5	Motor Controller	The Motor Controller regulates energy flow throughout Bus propulsion system components in order to provide motive performance and accessory loads, as applicable, while maintaining critical system parameters (e.g., voltages, currents, temperatures, etc.) within specified operating ranges. The controller shall monitor and process inputs and execute outputs as appropriate to control the operation of all propulsion system components. The data from such controller should be retrievable by diagnostic equipment provided and readable for data analysis to ensure performance metrics are met. The temperatures of motor controller should be displayed on the dashboard and warning of overheating should be triggered if the temperature is beyond the optimal operating range.

		Fuses should be placed before the motor controller in the wire bringing current to MCU so in case of any positive variation of current, fuses should blow to protect any voltage variation resulting in capacitors overheating. Motor Controller must be able to perform following function: ● Under-voltage protection and alarm; ● Control on power reduction for under-voltage; ● Overvoltage protection function; ● Over-current and short circuit protection; ● Overheat protection of motor controller: grading mode, warning in advance, and cooling in the mode of reducing power. Controllers must incorporate a range of additional features which oversee other vehicle and battery systems, including: ● Vehicle control interfaces (accelerator and brake pedal etc.); ■ Battery communications and pre-charge and isolation systems; Auxiliary inverters for driving external pump motor and external air compressor motor.
7.1.6	Motor Controller Protection	At least IP6k9k certification for Controller protection. The system includes Integrated drive motor controller, DC/DC converter, steering motor controller, air compressor controller, and high-voltage distribution module.
7.1.7	Coolant Pump	The electric coolant pump (if fitted) used to recirculate coolant for cooling the electric traction motor or other parts of the powertrain system must have the warning function and the corresponding warning should be displayed on the dashboard.
7.1.8	Water Integrity	Motor Control Units (MCU) and all electric motor components designed for IP69k water integrity.
7.1.9	Drive Mode	The electric motor shall be a direct or single geared drive to the drive axle or wheel hubs.
7.1.10	Design Life	The propulsion system shall have a design life of at least 1,200,000 KM, subject to proper maintenance practices.
7.1.11	Power	The propulsion system shall be sized to provide enough power to enable the vehicle to meet the

		defined acceleration, top speed and grade ability requirements, and operate all propulsion-driven accessories using actual road test results and computerized vehicle performance data.
7.1.12	Maximum Speed	The vehicle shall be capable of reaching a top speed of 80 KM/hr on a straight, level road at GVWR with all accessories operating. The vehicle shall be capable of safely maintaining the vehicle speed according to the recommendations by the tire manufacturer. For actual operational use the vehicle shall be set to limit maximum vehicle speed to 80 KM/hr.
7.2	Energy system	
7.2.1	Fuel and emission standard	The diesel-fuel portion of the hybrid propulsion system shall conform to a Euro 3 emission and fuel standard. Currently, only diesel fuel meeting a EURO 2 emission standard is available in Pakistan. EURO 2 fuel will thus be utilized in the vehicles. However, it is recognized that EURO 2 compatible engines are generally being phased out of production. In addition, the service would benefit from the potential future option of a cleaner emission standard. Thus, the vehicle is to be designed with a propulsion system capable of meeting a EURO 3 emission standard (while recognizing EURO 2 fuel will be employed in the system).
7.2.2	Fuel tank	For the diesel-fueled option, the fuel tank(s) shall be securely mounted to the vehicle to prevent movement during vehicle maneuvers, but shall be easily removed for cleaning or replacement. The tank shall have an inspection plate or removable filler neck to enhance cleaning and inspection. The tank shall be baffled internally to, prevent fuel sloshing regardless of fuel level. The diesel fuel tank shall be sized to allow at least 300 KM of operation prior to re-fueling.
7.2.3	Filler provision	The tank filler pipe shall be so designed as to prevent back splash when the tank reaches full, as the fuel fill nozzle shuts off. It is preferred that the fuel filler be located on the left side of the vehicle.

7.2.4	Regenerative braking system	The vehicle shall be equipped with a regenerative braking system to capture the kinetic energy from vehicle deceleration. The energy from the regenerative braking system will be stored in the vehicle's battery bank.
7.2.5	Battery size and range capacity	The battery portion of the regenerative diesel-electric hybrid system shall hold a charge capacity capable of delivering a minimum service range of 50 kilometers. The battery size is estimated at minimum 60 kWh to deliver the target electric-only range.
7.2.6	Electric motor size	The electric motor that will provide the power for electric portion of the vehicle's propulsion system shall be at least 120 kw (peak power) in size.
7.2.7	Battery pack replacement	As per the warranty obligations, the Concessionaire shall replace the battery packs on any vehicle once the capacity falls below 70% of its original capacity at full charge.
7.2.8	Regenerative Braking System	The regenerative braking shall operate at all speeds and shall be actuated from the brake pedal (an initial primary stage deceleration from throttle pedal release may also be employed as part of a multi-stage regenerative braking control). The regenerative braking shall be integrated with the vehicle's braking system for a smooth and seamless blending with the foundation service brake. The regenerative braking system is to be incorporated with the EBS to ensure no wheel slip during slippery conditions. Front and Rear brakes should be disc brakes.
7.2.9	Battery Size And Range Capacity	The battery portion of the Full Electric system shall hold a charge capacity capable of delivering a minimum drive range of not less than 275 KM. The drive range refers to before Bus moves to limp mode to avoid damage to battery system which is usually set around 20% of remaining charge of Bus. Battery capacity must be capable of operating continuously and uninterrupted for a minimum of 8 hours in service under all possible conditions but minimised so as not to compromise overall vehicle weight. Longer overnight charging of up to 4 hours will also be provisioned for.
7.2.10	Electric Motor Size	The electric motor that will provide the power for electric portion of the vehicle's propulsion system shall be at least 350 kW (peak power) in size.

7.2.11	Battery Replacement	Pack	As per the warranty obligations, the manufacturer shall replace the battery packs on any vehicle once the capacity falls below 80% of its original capacity at full charge.
7.2.12	Battery Type		Lithium-ion (LiFePO ₄) with protection level IP6k9k shall be provided. The vehicle must have a set of batteries that allows the features indicated in this document and must be compatible with the chargers offered, and must be able to withstand currents, voltages, and temperatures in different charging events. The battery system must have a thermal management system that ensures that the batteries do not exceed the temperature range recommended by the manufacturer in conditions of maximum ambient temperature of 50 °C for a period of 8 hours.
7.2.13	Battery System	Management	The BMS shall manage the rechargeable battery system (battery cell or pack) by monitoring its state, measuring and reporting the key operational parameters, protecting and controlling the battery system, and balancing it. The BMS shall communicate with the dedicated vehicle controller, charger and instrument in achieving safe, reliable and effective management of battery system. Two levels SOC warning shall be triggered on the dashboard to alert of the low SOC status. The Bus shall be able to travel an additional 50 km when the first level amber SOC warning had been triggered. The dashboard shall be able to display the cell status. The BMS must include following features: ■ battery measurement (including maximum and minimum value) of cell voltage, charge and discharge current, temperature, current control, and impedance; ■ safety protection including, but not limited to, over/under voltage, over/under temperature; over current, short circuit, overpressure, current limiting, chassis shorts, fail-safe operation of pack protection circuits, insulation resistance monitoring, anti-humidity and condensation, protection against dust and flood water; ■ thermal management such as cell temperature monitor and control;

		■ cell balancing; ■ charge / discharge control; ■ regeneration braking energy control; ■ battery state estimation including but not limiting to State of Charge (SOC) ■ fault detection; ■ communication interface; and ■ data logging and acquisition.
7.2.14	Battery Pack Safety	The battery pack is designed with an anti-collision structure, and the test force is not less than 200KN. A nitrogen protection system is required in the battery box to ensure the battery box in an anaerobic environment to reduce the risk of fire when the battery pack is short or thermally out of control in a low oxygen environment. Each Battery pack is equipped with fireproof paper with a fire resistance of 1,300 degrees centigrade. A certificate is required. The propulsion system shall be separated from the passenger compartment by means of a fireproof wall.
7.2.15	Battery System Cooling	Efficient and robust liquid battery cooling system calling for minimal maintenance.
7.3	Environmental and safety standards	
7.3.1	Noise standards	In no mode of operation shall the vehicle generate external noise levels greater than 65 dB, measured 15 meters from the centreline of the lane in which the vehicle is travelling. The interior noise at any location greater than 300 mm from an interior window or wall and 1.2 m from the floor shall not exceed 60 dB during any vehicle operating condition. In addition, the manufacturer shall comply with the exterior noise requirements defined in Applicable Laws identified by the Procuring Agency.
7.3.2	Safety standards	The vehicle must meet all safety performance standards set for public transport vehicles under the Applicable Standards. The vehicle shall be designed and manufactured in accordance with all applicable fire safety and smoke emission regulations. These provisions shall include the use of fire-retardant/low- smoke

		materials, fire detection systems, firewalls, and facilitation of passenger evacuation. All materials used in the construction of the Passenger Compartment of the vehicle shall be in accordance with the Recommended Fire Safety Practices defined in FTA Docket 90, dated October 20, 1993 or later or another internationally recognized standard approved by SMTA. Materials entirely enclosed from the passenger compartment, such as insulation within the sidewalls, need not comply. In addition, smaller components and items, such as seat grabrails, switch knobs and small light lenses, shall be exempt from this requirement. Fire sensing and suppression systems shall be provided. The requirements for passenger evacuation provisions related to doors, windows, and escape hatches are defined in Section 5 - Body. Other accident and structural safety standards and tests are either in the Attachment or described and determined throughout this document.
7.4	Drive Axles	Single heavy-duty rear axle preferably with a drop centre beam, hypoid reduction gears, full floating axle shafts with optimal gear ratios suitable for urban operations with adequate capacity to take care of maximum GVW & crush loading. Lubricant drain plug would be magnetic type, external hex head. If a planetary gear design is employed, oil level in the planetary gears would be easily checked through plug or sight gauge. Minimum overhaul interval of 6 years.
7.5	Axles	The vehicles shall have two axles. The vehicle should sustain a maximum axle load on the front axle of 7,000 - 8,000 Kgs. The vehicle should be capable of sustaining a maximum axle load on the rear axles of 12,500 – 13,500 Kgs.
7.6	Suspension System	All vehicles shall have air suspension with electronic self-levelling control. The suspension system shall be self-adjusting with respect to any load imbalances that may occur. The

		basic suspension system shall last the life of the vehicle without major overhaul or replacement. All friction parts or suspension shall be equipped with replaceable bushings and inserts. All axles should be properly aligned so the vehicle tracks accurately within its size and geometry.
7.7	Steering	All vehicles shall be fitted with Electro-hydraulic power steering with steering box to last vehicle life and reduce steering effort. Steering columns shall be adjustable to accommodate driver needs. Height and Angle adjustment as per ISO16121-1 or GB 13094-2017 standard
7.8	Brakes	Vehicles are to have Regenerative Electronic Brake Systems designed to ensure safe braking under normal and emergency conditions and appropriate for the operating environment. The braking system shall be balanced such that braking effort is appropriately distributed between all wheels to ensure maximum tire kilometres and equal rate of wear in front and rear brake blocks. The braking system shall meet all current national and local safety standards. An emergency brake release shall also be provided to release the brakes in the event of automatic emergency brake application. The driver shall be able to manually depress and hold down the emergency brake release valve to release the brakes and maneuver the vehicle to safety. Once the driver releases the emergency brake release valve, the brakes shall engage to hold the vehicle in place. Air to the emergency brake release system shall be provided by a dedicated emergency air tank supplied by the electric pump system. Disc Brakes at front and at rear wheels. Graduated hand controlled, spring actuated parking brakes acting on rear wheels. Asbestos free brake Pads at all wheels.
7.9	Air Compressor	Air compressor to be provided to supply braking suspension and ancillaries as required and capable of fully charging the fully evacuated air system within 3 minutes.
7.10	TIRES AND WHEELS	

7.10.1	Tires	The tires shall be capable of operational speeds up to 80 km/h with the specified axle loads. The load on any tire at full GVM shall not exceed required tire rating. The tires shall have a radial ply construction. Tires shall be interchangeable between axles on the vehicle.
7.10.2	Tire to body distance	The effectiveness of the vehicle-to-platform alignment is also affected by the distance from the outer edge of the tire sidewall to the outer edge of the vehicle body. Quite often the tire sidewalls are inset to the inside of the body. The maximum inset distance from the outside edge of the tire sidewall to the outside edge of the vehicle body shall be 125 mm for the front axle and 80 mm for the rear axle.
7.10.3	Wheel characteristics	All wheels on the vehicle shall be of the same size and type interchangeable between front and rear. Each shall be powder coated a colour determined by SMTA during the pre-production period. The manufacturer shall furnish one full set of wheels, with one spare for every vehicle provided. The wheels should not have joints in between and should be in continuous form without any welds visible.
7.10.4	Splash guards/splash aprons	Splashguards/aprons made of composition or rubberized material shall be installed on the body around the periphery of the wheel. The design of the splashguards/aprons shall preclude the accumulation of dirt.
7.11	Turning radius and tracking	The turning radius of the vehicles is a critical parameter in determining the vehicle's ability to properly dock at stop/stations. The minimum turning radius of the vehicles is defined through the tracking movement of the front inner and outer wheels. The maximum turning radius for the outer wheels is specified as 12.0 meters.
7.12	Heating, Ventilation & AIR Conditioning (HVAC) System	The air conditioning system must be capable of maintaining an average interior temperature of between 23°C and 25°C when the ambient temperature is 45°C. The air conditioning system shall be capable of reaching the targeted interior

		temperature of between 23°C and 25°C within 30 minutes of vehicle operation when the ambient temperature is 45°C. The system shall continue to provide a cooling function until a cut-off temperature of 50°C. The heating system must be capable of maintaining an average interior temperature of between 18°C and 22°C when the ambient temperature is 0°C. The heating system shall be capable of reaching the targeted interior temperature of between 18°C and 22°C within 30 minutes of vehicle operation when the ambient temperature is 0°C. The system shall continue to provide a heating function until a cut-off temperature of -5°C. Compliance to these temperature targets will be measured at two points in the vehicle. The first location will be the second passenger row behind the driver. The second location will be the second to last passenger row at the back of the vehicle. All measurements will be taken at the height of the seat headrest. The design should be such that it minimizes electricity usage. The system's weight shall also be minimized in order to reduce impacts on axle loads and to reduce impacts on vehicle operating speeds. The system shall be designed to function for the life of the vehicle (12 years) when maintained properly. The air conditioning system shall meet these performance requirements using a specified and approved by SMTA. The coefficient of performance should not be less than 3.5.
7.12.1	Air Flow – Passenger Area	The cooling mode of the interior climate control system shall introduce air into the vehicle at or near the ceiling height at a minimum rate of 0.7 cubic meters per passenger based on the standard configuration vehicle carrying a number of passengers equal to 1.5 times of the seated load. Airflow shall be evenly distributed throughout the vehicle, with air velocity not exceeding 30 meters per minute on any passenger. The ventilating mode

		shall provide air at a minimum flow rate of 0.85 cubic meters per passenger. The climate control blower motors and fans shall be designed such that their operation complies with the interior noise level requirements.
7.12.2	Air Flow - Driver's Area	The vehicle interior climate control system shall deliver at least 2.8 cubic meters of air to the operator's area when operating in the ventilating and cooling modes. Adjustable nozzles shall permit variable distribution or shutdown of the airflow. The windshield defroster unit shall meet best Practice, Windshield Defrosting Systems Performance Requirements. The defroster or interior climate control system shall maintain visibility through the operator's side window. A separate ventilation, and defroster system for the operator's area shall be provided and shall be controlled by the Bus operator.
7.12.3	Air Filtration	Air shall be filtered before discharge into the passenger compartment. The filter shall meet the US American National Standards Institute/American Society of Heating and Air conditioning Engineers (ANSI/ASHRAE 52.1) requirement for 5 percent or better atmospheric dust spot efficiency, 50 percent weight resistance, and a minimum dust holding capacity of 120 gram per 28 mm cell. More efficient air filtration may be provided to maintain efficient heater and/or evaporator operation. Air filters shall be easily removable for service. Air filters shall be cleanable.
7.12.4	Roof Ventilators	At least one roof ventilators shall be provided in the roof of the vehicle, one approximately over or just forward of the front axle. The ventilators shall be easily opened and closed manually by a 1.5-meter-high passenger. If roof ventilator(s) cannot be reached by this passenger, then a tool shall be provided to allow this. When open with the vehicle in motion, these ventilators shall provide fresh air inside the vehicle. Ventilator shall cover an opening area no less than 0.28 square meters and shall be capable of being positioned as a scoop with either the leading or trailing edge open no less than 10cm, or with all four edges raised simultaneously to a height of no less than 9cm. An

		escape hatch shall be incorporated into the roof ventilator. Roof ventilator(s) shall be sealed to prevent entry of water when closed.
7.12.5	Maintainability	Manually controlled shutoff valves in the refrigerant lines shall allow isolation of the compressor and dehydrator filter for service. To the extent practicable, self-sealing couplings utilizing O-ring seals shall be used to break and seal the refrigerant lines during removal of major components, such as the refrigerant compressor. Shut-off valves may be provided in lieu of self-sealing couplings. The condenser shall be located to efficiently transfer heat to the atmosphere and shall not ingest air warmed above the ambient temperature by the vehicle mechanical equipment, or to discharge air into any other system of the vehicle. The location of the condenser shall preclude its obstruction by wheel splash, road dirt or debris. HVAC components located within fifteen (15) centimetres of floor level shall be constructed to resist damage and corrosion. Must have high and low refrigerant pressure electronic gauges to be in the return air area.
7.12.6	Air Flow System of the Bus	In addition to automatic air ventilation system, an option should be available to the driver with push button to collect all breathe air from the roof and exhaust it without recycling during passenger trip. Meanwhile fresh dust free/filtered air of equal proportion is to be pumped in from the driver's side of the Bus for normal breathing of passengers.
7.12.8	Air Curtains	Air curtains on all access doors to avoid loss/gain of heat and/or cool air when doors are frequently opened for boarding & alighting of passengers with minimum air flow of $1000 \pm 50 \text{ m}^3/\text{hr}$.
7.13	Heating System	A proper Heating System will be provided in the Buses for winter season.
7.14	Maintenance and servicing	The motor and battery packs shall be arranged so that accessibility for all routine maintenance is assured. No special tools, other than dollies and hoists shall be required to remove the power plant. The motor/accessories shall be removable as one complete unit.

7.15	TOOLS, SOFTWARE, DIAGNOSTIC EQUIPMENT, AND MANUALS	
7.15.1	Tools	The manufacturer shall deliver to the Client the following tools: ▪ One complete set per Depot of the dollies and cradles necessary for the handling of motor, transmissions and other heavy components requiring specialist handling equipment. ▪ One complete set of all tools required for the maintenance of the principal vehicle components.
7.15.2	Diagnostic equipment and software	The manufacturer shall provide or cause to be provided 1 set per Depot of diagnostic equipment and 1 set per Depot of software that permits status evaluation of the critical vehicle components. This equipment and software shall indicate the status of the specified equipment and shall be accompanied by clear information on any required remedial actions. The diagnostic equipment shall provide information on the following vehicle components: ▪ Motor ▪ Battery packs ▪ Gearbox ▪ System electronics. ▪ Air Suspension system ▪ Wheel and Axle Alignment ▪ Any codes related to any other component failure
7.15.3	Guidance and instruction manuals	The manufacturer shall provide or cause to be provided a complete set of vehicle guidance and instructional manuals. These manuals shall as a minimum cover the following topics: ▪ Description of all parts and components, including instructions for assembly and disassembly ▪ Description of maintenance and diagnostic procedures ▪ Troubleshooting recommendations and procedures

		Contact details for emergencies, maintenance support, and parts procurement. The manuals shall be provided in correct and proper English. At least four (4) colour printed copies shall be provided. At least three (3) digital copies on three (3) USBs shall also be provided.
7.16	Performance documentation	The manufacturer shall furnish or cause to be furnished the following performance graphs as part of the bid documentation: - Motor Speed vs. Road Speed - Horsepower vs. Motor Speed - Electricity Consumption Chart (for electric operation) - Vehicle Speed vs. Grade (both loaded and unloaded)

SECTION 8: ELECTRICAL		
8.1	Internal lighting	The light source shall be located to minimize windshield glare, with distribution of the light focused primarily on the passengers' reading plane while casting enough light onto the advertising display. The lighting system may be designed to form part of or the entire air distribution duct. The lens material shall be translucent polycarbonate. Lenses shall be designed to effectively "mask" the light source. Lenses shall be sealed to inhibit incursion of dust and insects yet be easily removable for service. Access panels shall be provided to allow servicing of components located behind light panels. If necessary, the entire light fixture shall be hinged. When the driver master switch is in the "run" or "night/run" mode, the first light module on each side of the vehicle shall automatically close or dim when the doors are in the closed position and illuminate when the doors are opened. When in "Off" or "On" all lights shall be also on or off.
8.1.1	Passenger area	Energy-efficient lighting such as LED shall be installed in the cover area on both sides and along the total length of the vehicle and shall not occupied on the minimum interior headroom.

		The lenses shall be made of polycarbonate material and be sealed to prevent the entrance of dust and insects but shall be easily opened for cleaning and service of ballast and lamp.
8.1.2	Driver's compartment	A driver's compartment lamp, with a full-range dimmer, shall be mounted to illuminate the entire driver's area.
8.1.3	Interior door lighting	All door threshold areas shall be adequately illuminated with Light- Emitting Diode (LED) type lights activated only when the door is open. The lights shall be shielded to prevent light from directly shining into passenger or driver's eyes. Light fixtures shall be totally enclosed, splash proof, designed to provide ease of cleaning as well as lamp and housing removal and shall not be easily removable by passengers.
8.2	Exterior lighting	All exterior lights shall be designed to prevent entry and accumulation of moisture or dust. Lamps, lenses and fixtures shall be interchangeable to the extent practicable. Two hazard lamps at the rear of the vehicle shall be visible from behind when the motor service doors are opened. Light lenses shall be designed and located to prevent damage when running the vehicle through an automatic vehicle washer. Commercially available LED-type lamps shall be utilized at all exterior lamp locations. LED lamps shall be potted type and designed to last the life of the vehicle.
8.2.1	Headlamps	The headlamps shall utilize halogen/LED technology. The headlamps shall have a sealed beam unit. They should be designed for ease of replacement. Headlamps shall incorporate a Daytime running light feature.
8.2.2	Exterior door lighting	An exterior white LED light shall be provided at each door to adequately illuminate the outside area when the doors open. These lamps shall illuminate the street surface to a level of no less than 11 lux for a distance of 90 cm outward from the outboard edge of the door threshold.

8.2.3	Indicator lights, reversing lights, marker lights and reflectors	The indicator lights, reversing lights, marker lights, and reflectors shall have the following characteristics: ▪ LED lights shall be preferred where appropriate. ▪ Direction indicator lights shall be visible from front, rear and sides of the vehicle, with additional side units fitted if necessary. ▪ The vehicle shall be fitted with reversing lights, which shall also engage an audible reversing signal, clearly audible in the vicinity of the vehicle with the motor running. The reversing signal shall be audible buzzer or human voice along with audible buzzer can also be provided. ▪ Marker lights shall be installed, one on each upper corner of the body. ▪ Reflectors at the front, rear and on each side of the vehicle shall be provided. Reflectors shall be installed on both sides of the vehicle.
8.3	BATTERY AND BATTERY COMPARTMENT	
8.3.1	Battery	Battery and starter cable shall be properly bracketed, sized and fastened to carry the maximum loads that may be encountered. Each battery shall have a purchase date no more than one (1) year from the date of release for shipment to SMTA.
8.3.2	Master battery switch	A master battery switch shall be provided near the batteries in the battery compartment, mounted to prevent corrosion, for complete disconnection of the electrical system. The master switch shall be capable of carrying and interrupting the total circuit load.
8.3.3	Battery compartment	The battery compartment shall prevent accumulation of debris on top of the batteries and shall be vented and self-draining. It shall be accessible only from the outside of the vehicle. All components within the battery compartment, and the compartment itself, shall be protected from damage or corrosion from the electrolyte. The inside surface of the battery compartment's access doors shall be electrically insulated, as required, to prevent the battery terminals from shorting on the

		door if the door is damaged in an accident or if a battery comes loose. The battery compartment temperature should not exceed manufacturers specification. The batteries shall be securely mounted on a stainless steel or equivalent tray that can accommodate the size and weight of the batteries. The battery tray, if applicable, shall pull out easily and properly support the batteries while they are being serviced. The tray shall allow each battery cell to be easily serviced. A locking device shall retain the battery tray to the stowed position. Placement of battery packs should not be done below passenger level at 500 mm (placement of battery packs in chassis area is not permitted). If not located in the motor compartment, the same fire-resistant properties must apply to the battery compartment. No sparking devices should be located within the battery box. A reliable fire alarm system should be provided, with sufficient number of fire sensors (at least two) and sufficient length of detector cables to cover the area with high fire risk including but not limited to the areas where the traction battery system are located. When the fire sensors sense an abnormally high temperature or other phenomena as specified by the Manufacturer indicating that there is potentially a fire at the monitored locations, an alarm should be triggered to alert the driver by means of a buzzer and a warning light at the dashboard. Once the fire warning is triggered, the system should send a signal to deactivate the air conditioning system blower motors automatically.
8.4	Wiring and cabling	The wiring and cabling on the vehicle shall be color-coded for ease of repair and maintenance as well as safety.
8.5	Stop request system	The vehicle shall be fitted with a stop request system to allow passengers to request for the vehicles to stop at a certain stop/ station. Stop-request buttons shall be provided on the hand-hold bars on both sides of the vehicles. The placement of the stop-request buttons shall be such

		that no passenger is more than 1.2 meters away from a button. An indicator light showing the deployment of the stop request will be visible both in the passenger area and in the driver's compartment. The deployment of the stop request button will also be accompanied by a chime noise.
8.6	Cabling Standard	All cables should be of adequate capacity, correct rating and fully flexible grades with PVC insulation, and protected where necessary by sleeves, grommets and/or Bushes and capable of operation within a continuous 100°C environment. Copper conductors with fire retardant as per IS/ISO: 6722:2006 as per appropriate class. Conductor cross- section varying as per circuit requirements, minimum cross- section 0.5 sq. mm. Quality marking may also be as per equivalent European, Japanese, US standards conforming to IP 68.
8.7	Electro Magnetic Compatibility	The complete vehicle will need to demonstrate EMC compliance with ECE R10 or equivalent through independent certification.

Section 9: Intelligent Transportation System (ITS)		
9.1	Overview of ITS system	The ITS equipment will consist of components that will be procured and installed by the manufacturer. It includes: ▪ Vehicle Performance Monitoring ▪ Vehicle Weight ▪ Passenger Door Count System ▪ Vehicle Logic Unit (VLU) ▪ Communications Unit ▪ Driver Data Terminal (DDT) ▪ Mobile Digital Video Recorder (MDVR) ▪ Vehicle WiFi system ▪ UHF/VHF/Wifi Communication System ▪ External Variable Messaging Display ▪ Internal Variable Messaging Display/ Passenger information system ▪ Internal Infotainment Display ▪ Infotainment Display Back Screen ▪ Audio System ▪ Driver Display Unit And On-Board CCTV

		Cameras ▪ Driver Panic Alarm ▪ USB ports ▪ Driver Console ▪ Fare Validator ▪ Automated Vehicle Location System (AVLS) ▪ UHF/VHF/Wifi Communication System ▪ Traffic signal priority equipment (space provision for future addition only). The aforementioned ITS equipment will be fitted and installed by the Manufacturer.
9.2	Vehicle performance monitoring	Vehicle performance monitoring is an essential element for effective fleet management and driver control. The Manufacturer will monitor and record the most pertinent performance statistics of the major mechanical and electrical components. It is essential that all the vehicles are equipped with performance monitoring that will provide information of, at least, the following: ▪ Speed (wheel based and Tachometer based) ▪ Battery Management System (BMS) ▪ Energy used and remaining energy levels (Battery) ▪ Vehicle distance ▪ Tachograph performance ▪ Handling information ▪ Ambient air temperature ▪ Status of doors and boarding bridges ▪ Time/date ▪ Brake pressures ▪ Parking brake status ▪ Direction indicators ▪ Vehicle weight ▪ Battery On/Off Status ▪ Vehicle Health Monitoring Data outputs from the monitoring equipment shall be recorded onto the Vehicle Logic Unit (VLU) for later compilation and analysis. The Manufacturer shall confirm or cause to be confirmed the required interfaces and applicable standards during the final design approval process.

		The driver panel shall include one display meter of carbon footprint/emissions savings compared to a diesel Bus, based on battery KWh dispensed. The readings on the meter shall display instant values, daily values and values since commencement of commercial operations of the Bus. The monitoring system must comply with an open interface standard for information exchange typically used for Fleet Management Systems (FMS). For these purposes the system must comply with Bus-FMS- Standards (www.Bus-fms-standard.com). It shall be capable of transmitting all readings to a remote control room.
9.3	Vehicle weight	The Manufacturer shall measure and record the vehicle weight at different points of time. The data recorded will include the total weight of the vehicle. Preferably, this data will also include the distribution of the weight, and in particular, will include measurement of the axle loads. There will be at least two general uses for the data collected. First, this data shall be correlated to GPS position to estimate the number of passengers on board the vehicle at different segments of the route. The weight values shall thus be used to estimate the number of passengers boarding and alighting at each Bus stop. Second, the axle load data will help ensure compliance to the legal load- carrying limits of the vehicle. Data from the vehicle weight device shall be recorded onto the Vehicle Logic Unit (VLU) and made available through the Bus-FMS interface.
9.4	Vehicle Logit Unit (VLU)	The VLU is the core computer server for most of the data and ITS functions onboard the vehicle. The VLU shall be placed in a location that allows effective connectivity to the various ITS components over the LAN. The location shall also ensure that the VLU is physically well-protected. The Manufacturer will provide all necessary wiring and cabling for the system and must be completed in all aspects. The Manufacturer will provide complete SDKs of VLU to the purchaser.

	The VLU must be compatible to function with the ITS components in this specification. The manufacturer shall provide or cause to be provided a description of the technical specifications (hardware, interfaces, and operating system) of the VLU and interface specifications allowing the integration of the unit with: ▪ Vehicle performance monitoring (CAN data) ▪ Communications unit ▪ GPS positioning data ▪ Mobile Digital Video Recorder ▪ External variable messaging display ▪ Internal variable messaging display ▪ Internal infotainment display ▪ Audio system ▪ Panic alarm. Note: (Supplier may provide an integrated unit or a standalone unit) <table><tr><th colspan="2">Minimum Hardware Specifications</th></tr><tr><td>Accuracy</td><td>The device must be able to track the location of Buses with an accuracy of +/- 10 meters.</td></tr><tr><td>Update Frequency</td><td>The device must update the location of Buses at least once every second.</td></tr><tr><td>Communication Protocol</td><td>The device must communicate smoothly with other on-board components.</td></tr><tr><td>Power Requirements</td><td>built-in power supply for last status update.</td></tr><tr><td>Durability</td><td>The VLU must be durable enough to withstand the rigors of everyday use.</td></tr></table> ▪ Real-time location tracking: The device must be able to track the real-time location of Buses.	Minimum Hardware Specifications		Accuracy	The device must be able to track the location of Buses with an accuracy of +/- 10 meters.	Update Frequency	The device must update the location of Buses at least once every second.	Communication Protocol	The device must communicate smoothly with other on-board components.	Power Requirements	built-in power supply for last status update.	Durability	The VLU must be durable enough to withstand the rigors of everyday use.
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		▪ Data logging: The device must be able to log data about the Bus's location, speed, and other operational parameters. ▪ Communication with other systems: The device must be able to communicate with other systems in the Bus, such as the Driver Console and the fare collection system. ▪ Fault detection and reporting: The device must be able to detect and report faults. Note: All relevant functional SDKs & APIs, along with their documentation (complete in all aspects) in English Language must be provided Android with Local/International support
9.5	Communications Unit	The Communications Unit will control the flow of communications and information between the vehicle and the control centre. This includes both real-time data exchange as well as stored information for later downloads at the Depots. The communication system will also permit verbal communication between the driver and the control centre. The verbal communications system will be designed so that the driver may communicate hands-free of the device, but still capable of hearing vehicle cabin sound. The Communications Unit will provide connectivity through 3G and 4G mobile networks. The Communications Unit will provide at least one slot. Due to concerns regarding the reliability of the existing 3G and 4G mobile networks, the provision of communications via UHF/VHF radio bandwidths with all the necessary peripherals on both sending and receiving ends should also be provided by the Manufacturer as a complete communication solution over UHF/VHF. Note: Equipment will be covered under one (1) year standard manufacturer's warranty.
9.6	Driver Data Terminal (DDT)	The Driver Data Terminal (DDT) is a computing device that enables the driver to visually understand vehicle performance and parameters. The device shall be equipped with a color LCD touchscreen display designed for operation in a

		public transport environment and shall be managed and controlled by the VLU. Note: Equipment will be covered under one (1) year standard manufacturer’s warranty. QTY: 1 in each Bus												
9.7	Mobile Digital Video Recorder (MDVR)	All CCTV footage shall be recorded on-board by the Mobile Digital Video Recorder (MDVR). The MDVR shall be connected to the VLU for management purposes. Video footage on the MDVR will be downloadable at the Depot if required. MDVR must have the capability to store recordings for seven Days. The device must be able to record video and audio. MDVR should support real-time video streaming to a third-party server over the internet via secure transmission protocol, ensuring low-latency data transfer and compliance with network security standards. The MDVR should feature a combination of multiple industrial Ethernet and analog ports while ensuring seamless integration with all onboard devices via dedicated LAN interface. The system must support Ethernet-based connectivity for data transmission, device synchronization, and efficient network communication, enabling a unified and scalable architecture. The MDVR should be compatible with AI camera systems installed in the Buses. <table><tr><th colspan="2">Minimum Hardware Specifications</th></tr><tr><td>OS</td><td>Linux or Android</td></tr><tr><td>CPU</td><td>Dual-core with 1.3Mhz at least</td></tr><tr><td>Communication</td><td>WIFI, 3G, 4G,</td></tr><tr><td>Minimum Resolution</td><td>1080p</td></tr><tr><td>Video Input</td><td>8 Channel with 4 additional digital input (minimum 720p, 25/30fps per channel, H.264/ H.265 encoding)</td></tr></table>	Minimum Hardware Specifications		OS	Linux or Android	CPU	Dual-core with 1.3Mhz at least	Communication	WIFI, 3G, 4G,	Minimum Resolution	1080p	Video Input	8 Channel with 4 additional digital input (minimum 720p, 25/30fps per channel, H.264/ H.265 encoding)
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Video Output	1 Channel
GPS	The device must be able to track the location of Buses with an accuracy of +/- 10 meters and should have an external antenna.
Storage	Min 1TB SATA
Interface	RS232, RS485, Digital IOs for Bus sensors interface Industrial-grade LAN connected with all devices installed in the Bus LAN interface (100M/1G) CAN Bus, USB
Power Input	Built-in power supply for last status update
Alarms	Panic, Over speed, Geo-Fence Power Failure, Gate Opening
Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 9.18)
Additional feature	FTP, remote and local SSH, root access, RTSP Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.

Data Required using CAN Bus:

- (a) Acceleration and Deceleration
- (b) Breaking (All Kind of brakes)
- (c) Battery Capacity Information
- (d) Motor RPM
- (e) Bus Speed
- (f) Doors Control (Open/Close) Information
- (g) Bus Saloon Temperature
- (h) Motor Temperature
- (i) Battery On/Off Status
- (j) Passenger Count
- (k) Mileage

		DBC file or equivalent documentation for precise signal decoding. The device must be able to record video and audio. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. Note. All relevant functional SDK's and API's, along with their documentation (complete in all aspects) in English Language must be provided in Android / Linux/.Net with Local / International support. The functional SDK's must include the following functionalities: (a) Internet / Networking Source Prioritization & Control (b) CAN Data Management. Data Interval Control (c) Integrated Logging Console (d) IP Camera Stream Control (e) GPS Frequency Control & Geo-fencing Qty: 1 in each
9.8	Vehicle Wifi	The vehicle shall provide free Wi-Fi to passengers. The Manufacturer will procure and install the vehicle Wi-Fi system. The Wi-Fi equipment will include a 4G receiver and router. The minimum download speed for the Wi-Fi system within the vehicle shall be at least 3.0 megabits per second (Mbps). The Manufacturer will be responsible for fitting and installing the Wi-Fi receiver and router into the vehicle. The fitting of the equipment will be provided in a manner to ensure Wi-Fi connectivity in all passenger sections of the vehicle. The Manufacturer will provide all necessary wiring and cabling for the system. The passenger Wi-Fi may also be provided by a receiver and router integrated with the vehicle Communication Unit (see 9.5 above). QTY: 1 in each Bus Note: Equipment will be covered under one (1) year standard manufacturer's warranty.

9.9	External Variable Messaging Display	An external variable messaging display shall be provided on the top front and back of the vehicle, as well as curb side of the Bus. The external variable messaging display will indicate three possible types of information: (a) Route destination; (b) Name of route; and (c) Emergency messages. The external display shall utilize high brightness, wide viewing angle, and amber LED technology. LED brightness shall be controlled by photocells installed as part of the sign. The controller shall communicate with the on-vehicle VLU. It shall also be possible to override messages directly from the control centre under emergency conditions. The display shall be capable of showing upper- and lower-case characters with proportional fonts. The display shall be capable of showing double-stroke width (bold) fonts. The front face of the display shall be designed to minimize glare. The display shall have the functionality to display messages in the following modes, set through configuration data: (a) A single, non-scrolling or changing message (b) A right-to-left scrolling message (c) An alternating (between two states) message. The LEDs shall have a minimum service life of 80000 hours in their installed configuration. The system shall be designed for continuous operation without the need to manually computers or devices. Visible messages shall begin playing within five (5) second of being triggered. External variable message signs shall be capable of displaying the message in Urdu and English dynamically/remotely. QTY: At least 3 in each Bus Note: Equipment will be covered under one (1) year standard manufacturer's warranty.

		Note: All relevant functional SDK's & API's, along with their documentation (complete in all aspects) in English Language must be provided, Android with Local/International support.																				
9.10	Internal Variable Messaging Display/Passenger Information System (Vehicle Grade)	Two internal variable messaging displays shall be provided in the front portion and middle of the vehicle. The display will provide the following types of information: (a) Name of next stop/station (b) Route name and route map (c) Route destination Time The onboard displays shall utilize high brightness, wide viewing angle, liquid crystal display (LCD) technology. The display will be readable for a distance of up to 8 meters. Messages on the displays shall be legible during any time of Day and from any designated passenger position on the Bus. The proposed location of the display will be mentioned in the tenderer's vehicle layout drawing. During the pre-production stage, the Purchaser will specify the font type, color of the background, color of the lettering, and the use of any branding on the display. Internal variable message sign shall be capable of displaying the message in Urdu and English. <table><tr><th colspan="2">Minimum Hardware Specifications</th></tr><tr><td>Screen Size</td><td>28 to 34 inches AS per the size available in Bus</td></tr><tr><td>Luminance</td><td>Must be clearly visible in Day light</td></tr><tr><td>Display Colors</td><td>16M</td></tr><tr><td>Operating System</td><td>Android 9.0 or higher</td></tr><tr><td>Resolution</td><td>720p or higher</td></tr><tr><td>Display Interface</td><td>HDMI/VGA/or any other interface</td></tr><tr><td>Networking Interface</td><td>LAN interface</td></tr><tr><td>Peripherals</td><td>USB2.0/USB3.0 x1, SD Card, Audio Output</td></tr><tr><td>Memory</td><td>2GB RAM, 8GB Storage</td></tr></table>	Minimum Hardware Specifications		Screen Size	28 to 34 inches AS per the size available in Bus	Luminance	Must be clearly visible in Day light	Display Colors	16M	Operating System	Android 9.0 or higher	Resolution	720p or higher	Display Interface	HDMI/VGA/or any other interface	Networking Interface	LAN interface	Peripherals	USB2.0/USB3.0 x1, SD Card, Audio Output	Memory	2GB RAM, 8GB Storage
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Memory	2GB RAM, 8GB Storage																					

		Protection	4mm tampered protective glass on screen Metal Case
		Video Support	MP4, AVI,
		Image Support	JPEG,
		Audio Support	MP3
		Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 9.18)
		Additional Feature	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.
1. The passenger information shall comprise of following features:			
(a) The Passenger Information System Display Unit shall receive display information and voice announcement commands from the on-board GPS vehicle control module based on stored memory on the Bus.			
(b) The Passenger Information System Display Unit shall function as independent system and shall not be directly dependent on the Central System.			
(c) There shall be scrolling display of destination in Urdu & English alternatively along with fixed route number.			
(d) The audio message and the video display shall be clearly audible/visible in all weathers inside the Bus.			
(e) Integration of Multimedia System to broadcast audio messages.			

		(f) Link to the internal/external system(s) remote & local server in real-time. All relevant SDKs and APIs in English Language is compulsory with Local/International support. 2. All supplied AFC items (including all hardware, software, networking, fare media etc. should be integrated with third party Mobile Application both Android & IOS. 3. All relevant functional SDKs & APIs, along with their documentation (complete in all aspects) in English Language must be provided Android with Local/International support. Provided hardware should have capability to work in decentralized/centralized mode. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: 2 in each Bus
9.11	Internal Infotainment Display Back Screen	An internal rectangular infotainment display screen shall be provided at the back of the Bus for advertisement purposes. This screen shall be visible to commuters outside the Bus in mixed traffic and pedestrians. The displays shall utilize high brightness, wide viewing angle, LCD technology. The display resolution shall be at least 1920 x 1080p. The displays will be enclosed in a tamperproof casing with toughened glass. The surface of the display shall be coated with an anti-glare layer to enable viewing during anytime of the Day. Content for the infotainment display will be stored and connected via the VLU. Standard video signal input ports will be provided. The size of the screen shall be finalized at the concept design stage of Bus. However, it is envisaged that this screen will cover entire back windscreen.

9.12	Audio System	The audio system shall be capable of both digital audio messages programmed into the Vehicle Logical Unit (VLU)/MDVR as well as public address messages from the driver. The audio system will be programmable in relation to the vehicle position in order to automatically deliver specific Bus stop information. Upon arriving at a Bus stop, the digitally-recorded message will announce the Bus stop name as well as the name of possible transfer routes. A digital announcement will also be made noting that the doors are opening. Upon departing a station, a digitally-recorded message will note the doors are closing. The digital announcement will then note the route name, final destination, and the next Bus stop. Messages from the driver on the public address system will only occur to announce special messages or situations, such as reasons for delays or emergency instructions. The digital recording of the messages will be the responsibility of the Purchaser. The volume of the announcements shall be adjustable to a standard level through configuration data. The system shall include an automatic gain control to automatically and independently adjust interior and exterior volumes depending on interior and exterior ambient noise levels. The audio system will be controlled by the VLU/MDVR and the input ports must therefore be able to interface with the VLU/MDVR. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: 1 in each Bus
9.13	Driver displays and on-board CCTV cameras	Closed-circuit television (CCTV) cameras shall be provided for vehicle surveillance to ensure passenger security and vehicle safety. The vehicle shall be fitted with at least six CCTV cameras. One camera will cover the front curb- side door and the driver compartment. One camera will cover the front passenger area as well as the middle doorways. One camera will cover the rear passenger area. One camera will face behind the vehicle, and

		thus will assist the driver when reversing. One camera will be mounted on the dashboard, acting as a 'dashcam', to continuously record the view through the vehicle's front windscreen. 1 camera on each entry/exit gate must be installed for passenger counting system. Output from the cameras will be shown through a visual display on or near the dashboard. The driver shall have a visual digital display of the area behind the vehicle whenever the vehicle is in reverse gear. The video footage from these cameras shall also be stored on-board on the Mobile digital video recorder (MDVR). The Manufacturer will provide all cabling and connectivity between the cameras and the MDVR. In normal conditions, the video footage will be downloaded when the vehicle enters the Depot. The Manufacturer must design the system so the data can be readily downloaded after the vehicle enters the Depot. In emergency situations, the system shall allow streaming of onboard footage to the control centre. The Manufacturer shall ensure the video output can be integrated with the control centre's hardware and software. All cameras will be integrated into the interior layout of the vehicle in a visually appealing manner. The precise location of the cameras will be determined in the pre-production phase with approval from the Purchaser. Both the cameras and the dashboard displays should ideally be highly visible to the passengers to give assurances that their security is being surveilled. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: AI Cameras: DMS (Driver Behavior Monitoring System) x1 Passenger Counting at entry/exit passenger gate x1 SURVEILLANCE CAMERAS: General surveillance x2

		Reverse Gear x1 Dashcam x1
9.14	Driver panic alarm	The panic alarm will be utilized in circumstances in which the driver is not able to utilize the normal communications system. The panic alarm shall be located discretely in the driver's compartment. The location should be such that it is known to the driver but not clearly evident to passengers. The Manufacturer shall provide the button and the wiring required to connect it to the VLU. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: 1 in each Bus
9.15	USB ports for passenger devices	The provision of USB ports in the passenger seating area will allow customers to charge their personal devices while travelling on public transport. This service helps further encourage ridership. The preferable configuration would be a USB Type-A & Type-C ports provided around each seat or at the vehicle interior sidewall for seats without another seat directly in front. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: 13 set Minimum (Type A Type C)
9.16	Traffic signal priority equipment (future option)	The Concessionaire will ensure that space is available inside the vehicle for the deployment of traffic signal equipment. This deployment would likely involve the placement of a transducer device, which would be fitted onto the vehicle and used to activate the traffic signal equipment at a particular intersection.
9.17	Fare Validator	The on-board fare validators will be required at the curb side doorways. The on-board fare validators will be pre-installed by the Manufacturer of the Buses. The Manufacturer will be responsible for purchasing, fitting, installing and testing the on-board fare validators into the vehicle. The Manufacturer will also ensure the integration of the

	on- board fare validators with the VLU/MDVR over a dedicated wired connection, preferably LAN interface. The Manufacturer will provide the wiring and cabling to connect the fare validators. The on-board fare validators will be located at each curb-side doorway (a total of two fare validators on the vehicle). LAN connectivity, along with LAN cabling shall be ensured by the manufacturer with the rest of the ITS ecosystem. Must be covered in concealed Anti-dust casing Position (Protection from frequent contact/damage) Wiring (Concealed & not exposed to public) Buttons (Not exposed to public) The software development for Fare Validation will be done by an ITS service provider, which is contracted by the client. The Manufacturer will work closely with the Purchaser/ITS service provider to determine the size and location of installation of the on-board fare validators in the Bus. During the pre-production and production period, the Manufacturer shall communicate with the Purchaser/ITS service provider regarding any clarifications required. A representative of the ITS Concessionaire will inspect the prototype Bus to ensure all issues are resolved The Manufacturer shall work in close consultation with the Purchaser/ITS service provider to ensure full functionality with physical and software integration, including the exact size of the units and the electrical requirements <table><tr><th colspan="2">Minimum Hardware Specifications</th></tr><tr><td>Screen Size</td><td>28 to 34 inches AS per the size available in Bus</td></tr><tr><td>Luminance</td><td>Must be clearly visible in Day light</td></tr><tr><td>Display Colors</td><td>16M</td></tr><tr><td>Operating System</td><td>Android 9.0 or higher</td></tr></table>	Minimum Hardware Specifications		Screen Size	28 to 34 inches AS per the size available in Bus	Luminance	Must be clearly visible in Day light	Display Colors	16M	Operating System	Android 9.0 or higher
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Operating System	Android 9.0 or higher										

		Resolution	720p or higher
		Display Interface	HDMI/VGA/or any other interface
		Networking Interface	LAN interface
		Peripherals	USB2.0/USB3.0 x1, SD Card, Audio Output
		Memory	2GB RAM, 8GB Storage
		Protection	4mm tampered protective glass on screen Metal Case
		Video Support	MP4, AVI,
		Image Support	JPEG,
		Audio Support	MP3
		Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 9.18)
		Additional Feature	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.
		Minimum Hardware Specifications	
		Payment Modes	Smart card, bank EMV card, mobile QR payment, NFC payment
		Processing	4 cores, at least 2.0 GHz, 3GB RAM 16GB flash MicroSD support 500,000 data record supported
		Operating System	Android 9.0 or higher
		Display	7 inch, 1024*600 resolution
		Indications	2 LED status indicators Built-in buzzer Built-in speaker Real-time Clock
		Contactless Smart Card Reader	Support ISO / IEC 14443 A & B, Mifare

			EV1 EV2, Felica Card, in line with EMV specifications, NFC enabled
		SAM Slots	ISO7816 SMA Slot x 1
		Physical Interface	1x RS232/RS485 interface, 1 x RJ45 LAN interface 1x USB 2.0/3.0 interface 1x USB debugging interface
		Wireless Connectivity	4G, Wi-Fi, and GPS All interfaces should be registered from concerned authorities
		Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 9.18)
		Additional features	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.
		Certifications	EMV L1, EMV L2 certificates must be provided by the supplier EMV L3 certification is the responsibility of the GOS however, the support should be ensured by the Concessionaire in order to achieve the EMV L3 certification.
		Durability	Robust and rugged design, suitable for in-vehicle use
		Operating Temperature	-10°C to +70°C
		Vibration and Shock testing(s)	60068-2-6, 60068-2-27, EN60721-3-5

		1. The Fare Validator shall comprise of following features: (a) The Validator shall be capable of performing a transaction with ISO 14443 “Type A/B” cards, including the reading and writing of user data in memory. (b) For all its data connection, recording, and transmission, validator shall use the latest security standards. (c) The Validator must have capability to accept not only contactless cards but also QR tickets and mobile application generated QR codes as a payment option. (d) The validator should read cards at a distance of 0mm to 30mm, but shall not operate at a distance that introduces a risk of unintentional operation (tolerance limit $\pm 5\%$). (e) The validator shall read, write and verify all required data for the transactions associated with fare media to permit the application of all the Business rules and collection of all records required for the accounting and reporting purposes. (f) Transaction time shall not exceed 300ms. (g) Validator should have RTC in-built for clock management and should have onboard memory to manage Business rules. (h) The validator will be integrated with the VLU/MDVR in order to process fare data. (i) Link to internal/external system(s) remote & local server. (j) All relevant standard SDK’s and API’s, including open loop SDKs along with their documentation (complete in all aspects) in English language must be provided with Local/International support but not limited to Android.

		(k) Payment Application: Complete functional payment application for open loop payment such as visa, master and other payment schemes must be provided by supplier. EMV L3 certification is the responsibility of the GOS however, the support should be ensured by the Concessionaire in order to achieve the EMV L3 certification. 2. The fare validator must have the ability to read QR and NFC through an integrated or separate module. 3. All supplied AFC items (including hardware, software, networking, fare media etc.) should be integrable/compatible with third party Mobile application both Android & IOS. Provided hardware should have capability to work in decentralized/centralized mode. Note: Equipment will be covered under two (2) years standard manufacturer's warranty. QTY: two (2) for each Bus
9.18	Automatic Vehicle Location (AVL) System	All vehicles in the system will be tracked by an Automated Vehicle Location (AVL) system utilizing Global Positioning System (GPS) technology. Data from this system will form the basis of compensation to the vehicle operators, and therefore, this represents a critical data collection feature for the overall operation of the system. This GPS hardware should be installed by the OEM, and the AVL system (excluding hardware and SDKs) should be provided by third party or ITS software provider. The AVL system also provides instructions to the drivers to maintain the correct headway between vehicles. The AVL system will provide real- time, automatic information to drivers on the correct speed in order to maintain the headway. The system will clearly display on the driver console the target speed in real-time to maintain the headway. The AVL system thus encompasses all hardware and

		software components to achieve real-time positioning control of the vehicle. The AVL unit will be fitted into the driver console in an ergonomic manner. The AVL unit will also be integrated with the Vehicle Logic Unit (VLU), allowing it to: ■ Relay vehicle performance data to the Control Centre ■ Receive GPS positioning data ■ Relay the video to the Control Centre ■ Control the content on all messaging and infotainment displays ■ Feed the audio system with audio ■ Relay panic messages to the Control Centre. The AVL system of the entire fleet will be monitored from the operational control centre. The Purchaser is separately procuring a third-party agent, an ITS Concessionaire, to supply and operate the control centre. The same ITS Concessionaire will be responsible for the supply of all components required to monitor the fleet from within the control centre. These components include workstations, communications equipment, and software licenses. The AVL and GPS shall be pre-fitted in the Bus. The Manufacturer will work closely with the Purchaser/ITS Concessionaire to determine the size and location of the AVL system being provided by the Manufacturer. During the pre-production and production period, the Manufacturer shall communicate with the Purchaser and ITS service Concessionaire. The Manufacturer shall work in close consultation with the ITS Concessionaire to ensure full functionality with physical and software integration, including the exact size of the units and the electrical requirements. Note: Equipment will be covered under one (1) year standard manufacturer's warranty. QTY: 1 in each Bus	
9.19	Driver Console	Minimum Hardware Specifications	
		Processor	Minimum quad-core processor
		RAM	Minimum 4GB RAM

		Flash	16GB flash
		Storage Capacity	Minimum 64GB or equivalent
		External Card Reader	MicroSD card reader
		Display	Touchscreen display with a size of 9- 12 inches with 720p 1280*720 min
		GPS	High sensitivity GPS module with external antenna
		Connectivity	GSM/GPRS, 4G/LTE module, Wi-Fi connectivity and GPS connectivity with external antenna
		Contactless Card Reader	Support ISO / IEC 14443 A & B, Mifare
		Durability	RoBust and rugged design, suitable for in-vehicle use
		SAM Slot	ISO7816 SAM Slot x 1
		Physical Interface	1x RS232/RS485 interface, 1 x RJ45 LAN interface 1x USB 2.0/3.0 interface 1x USB debugging interface
		Operating Temperature	-10°C to +70°C
		Vibration and Shock testing(s)	60068-2-6, 60068-2-27, EN60721-3-5
		Minimum Software Specifications	
		Operating System	Android 9.0 or above
		Fare Collection System Integration	Complete Compatibility with the third-party Automated Fare Collection System
		Communication	Real-time communication with the internal/external

			system and other modules	
		Localization and Language Support	Localization options and support for multiple languages	
		External Antennas for GPS	For strong signal strength external antennas may be installed	
		Maintenance and Support	OTA, USB Upgrade, Remote management (Refer to 9.18)	
		Additional Feature	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.	
		Compliance	Compliance with relevant industry standards and security regulations	
		Documentation	Comprehensive documentation, user manuals, and training materials in English Language	
		1. The Driver Console shall comprise of following features: (a) the Driver's console must be able to display dispatch plan/schedule, interval information to the Bus driver including location, current speed, time headway, distance from the previous and next Bus, alert messages and play voice recordings accordingly to timely inform passengers of the next approaching Bus; (b) drive console unit shall be used to provide vehicle tracking accurately and reliably utilizing Global Positioning System (GPS);		

		(c) must have fully functional and advanced GPS system that can gather location wise data and transmit to central servers and related software modules; (d) Handling and storing MP3-files for announcements, as well as manual override for Passenger Information System; (e) Control destination and line number signs; (f) Control interior information and display & announcement; (g) Keep track of the vehicle's Real-time position via GPS and distance counting etc.; (h) Map applications, navigation and driver guidance; (i) Driver console may receive other information relating to Realtime traffic information (accidents, breakdowns and traffic conditions etc.); (j) Must have capability to change the route manually if it is incorrect and once confirmed, Bus stages will be automatically updated based on GPS position; (k) Communication and interface with other onboard units, e.g. passenger information system and fare validators etc.; (l) GPS time synchronization; (m) Clock and Date Function; (n) Link to the internal/external system(s) remote & local server in real-time (all relevant functional SDKs and APIs in English language is compulsory with Local/International support); (o) Business rules customization compliance;

		(p) Collection of all records required for the accounting and reporting purposes. 2. All supplied AFC items (including hardware, software, networking, fare media etc.) should be integrable/compatible with third party Mobile application both Android & IOS. 3. All relevant functional SDK's & API's, along with their documentation (complete in all aspects) in English must be provided for Android but not limited to DOT.NET/Android with Local/International support. 4. Provided hardware should have capability to work in decentralized/centralized mode. 5. the Driver Console should be capable of display messages and play voice recordings accordingly, to timely inform passengers of the next approaching station as well as to make any other critical announcements. The Driver Console should also be capable storing these other critical announcements of at least one (1) hour duration and playing some prescribed voice recordings through driver OBU interface. 6. The Driver Console must be capable of collecting, transmitting and reporting in a prescribed Format following data from Controller Area Network (CAN) Bus module. I. Acceleration and Deceleration II. Breaking (All kind of brakes) III. Battery Capacity Information IV. Motor RPM V. Bus Speed VI. Doors Control (Open/Close) Information VII. Bus Saloon Temperature VIII. Motor Temperature IX. Battery On/Off Status X. Auto rear view on reversing the Bus The DBC file or equivalent documentation for precise signal decoding Note: Equipment will be covered under one (1) year standard manufacturer's warranty.

		QTY: 1 in each Bus
9.19	UHF/VHF/Wifi Mesh System	Due to concerns over the reliability of mobile telephone networks, the vehicles will also be fitted with a communications system along with master controller based on UHF/VHF/Wifi Mesh radio bandwidth technology. Note: Equipment will be covered under two (2) years standard manufacturer's warranty. QTY: 1 in each Bus
9.20	Charging Management System	API for remote monitoring and data analytics ▪ Local Data Storage: 128MB onboard memory for offline data logging ▪ Scheduled Charging Configurable through remote management system ▪ Remote Firmware Updates: OTA support for software enhancements ▪ User Interaction: RFID, Mobile App, Web Portal, ▪ Live updates on charging status, duration, energy consumed ▪ Instant notifications for malfunctions ▪ CAN Bus interface for battery management system (BMS) integration.
9.21	Certifications and Approvals	Provision of all relevant documents / specifications or any other necessary requirement for certification and approvals from local authorities such as PTA etc. will be the responsibility of Concessionaire. The approval from the relevant authorities will be obtained by the Concessionaire.
9.22	Documentations and SDKs	All relevant functional SDK's & API's, along with their documentation (complete in all aspects) in English Language must be provided. Android with Local/International support.
9.23	Installation	All cables and peripherals must be properly installed within designated compartments and concealed from view.
9.24	Redundant Internet Provider	SIM Based industrial gated network router with Wifi and LAN interfaces must be provided as a redundant internet provider to all devices. It must be interfaceable with MDVR over LAN interface and automatically manage availability of internet. GUI and remote management must be provided.

SECTION 10: BUS PROTOTYPE TESTING		
10.1	Overview of Bus Prototype Test	A Prototype Bus will be produced after the approval of detailed design. Certain tests will be conducted with this Prototype Bus in order to ascertain the performance of Bus. A minimum list of these tests are given in the section below, however the manufacturer can proposed any additional tests deemed necessary. Also the Independent Engineer can ask for a few additional tests while finalizing these Prototype Testing.
10.2	Bus Basic Compliance Tests	The objective of this test is to go through the initial screening process to make sure that the Bus complies with all the basic requirements.
10.3	Bus Physical Inspection	The objective of this test is to carry out of physical inspection of the Bus both from external and internal sides to assess the overall condition of the Bus.
10.4	Safety Test – Double Lane Change (Obstacle Avoidance Test)	The objective of this test is to determine handling and stability of the Bus by measuring speed through a double lane change test.
10.5	Performance Tests	
10.5.1	Acceleration, Grade ability and Top Speed Test	The objective of this test is to determine the acceleration, gradeability, and top speed capabilities of the Bus. Best is to have instrumentation set to read acceleration directly and to trace a speed curve. Gradeability can then be calculated.
10.5.2	Bus Braking Performance Test	The objective of this test is to provide braking performance data.
10.6	Structural Integrity Tests	
10.6.1	Structural Shakedown Test	The objective of this test is to determine certain static characteristics (e.g., Bus floor deflection, permanent structural deformation, etc.) under static loading conditions.
10.6.2	Structural Distortion	The objective of this test is to observe the operation of the Bus subsystems when the Bus is placed in a longitudinal twist simulating operation over a curb or through a pothole.
10.6.3	Static Towing Test	The objective of this test is to determine the characteristics of the Bus towing mechanisms under static loading conditions.
10.6.4	Dynamic Towing Test	The objective of this test is to verify the integrity of the towing fixtures and determine the feasibility of towing the Bus under manufacturer specified procedures.

10.6.5	Jacking Test	The objective of this test is to inspect for damage due to the deflated tire and determine the feasibility of jacking the Bus with a portable hydraulic jack to a height sufficient to replace a deflated tire.
10.6.7	Hoisting Test	The objective of this test is to determine possible damage or deformation caused by the jack/stands.
10.6.8	Rollover Test	The objective of this test is to measure crashworthiness - the ability of the vehicle to protect its passengers in the event of a crash. Simulation based results for this test will be accepted.
10.7	Noise Tests	
10.7.1	Interior Noise and Vibration Test	The objective of these tests is to measure and record interior noise levels and check for audible vibration under various operating conditions.
10.7.2	Exterior Noise Test	The objective of this test is to measure and record exterior noise levels when a Bus is operated under various conditions.

EXHIBIT 2 - APPROVED ROUTE ALIGNMENTS AND INDICATIVE BUS STOP LISTS

This Exhibit sets out the approved route alignments and indicative Bus stop locations for the Project in the cities of Karachi and Hyderabad. The routes have been planned to complement existing and planned mass transit systems, including the operational BRT Green Line, Orange Line and other BRT projects under implementation in Karachi, and are intended to enhance connectivity between major residential, commercial and employment areas and the city centres.

The route alignments and Bus stop locations set out in this Exhibit are indicative in nature and are subject to modification, rationalisation or re-alignment by SMTA from time to time in accordance with operational requirements, traffic conditions, public interest considerations and Government directives. Any such modification shall not constitute a Change in Scope, nor give rise to any claim, compensation or relief by the Concessionaire.

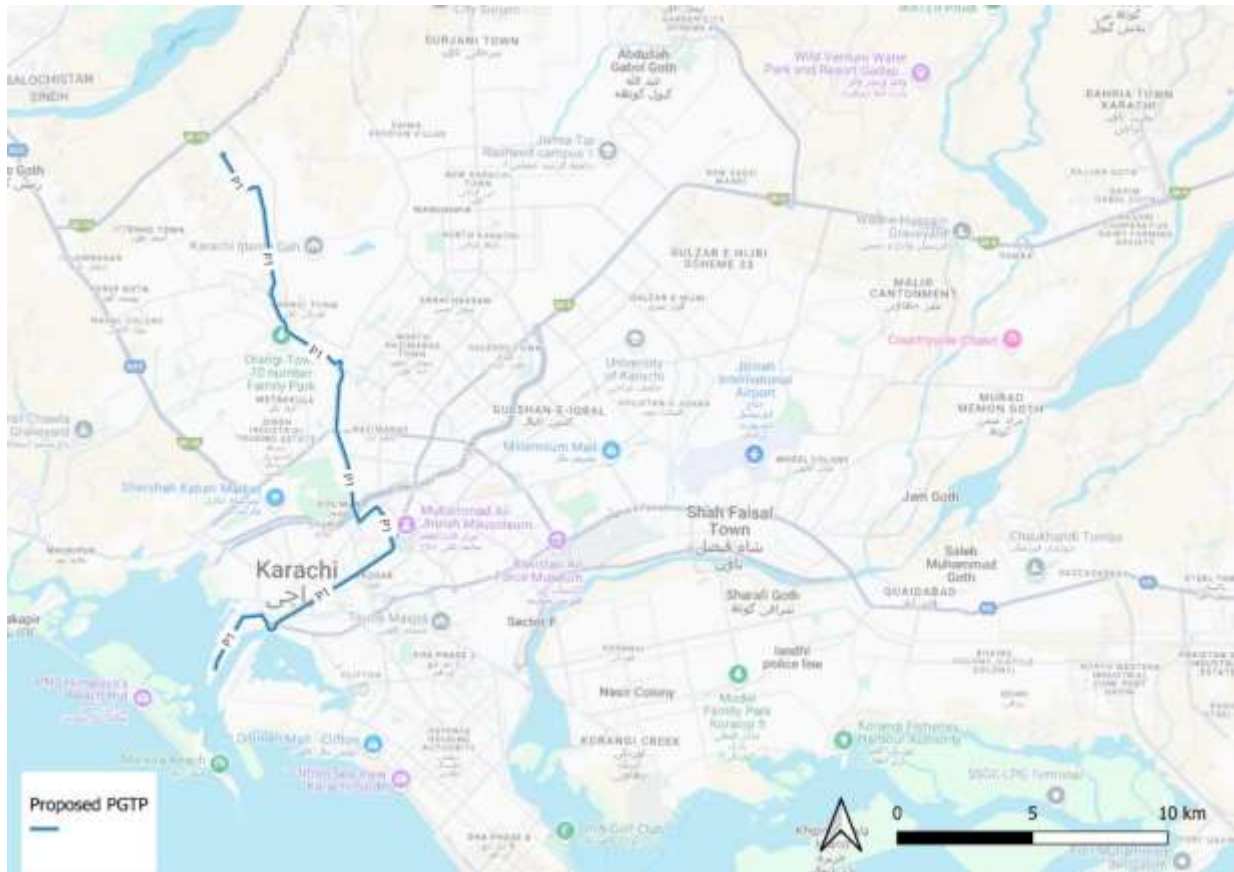
This Exhibit 2 forms an integral part of the **SCHEDULE A (*Technical Specifications*)** and sets out the approved route alignments and Bus stop details for the Project, as referenced in Section 1.5 of the Technical Specifications. The routes and Bus stops described herein shall be binding on the Concessionaire, subject to SMTA's rights to modify, amend or re-align routes in accordance with this Agreement.

TABLE 2.1: Approved Public Transport Routes in Karachi and Hyderabad

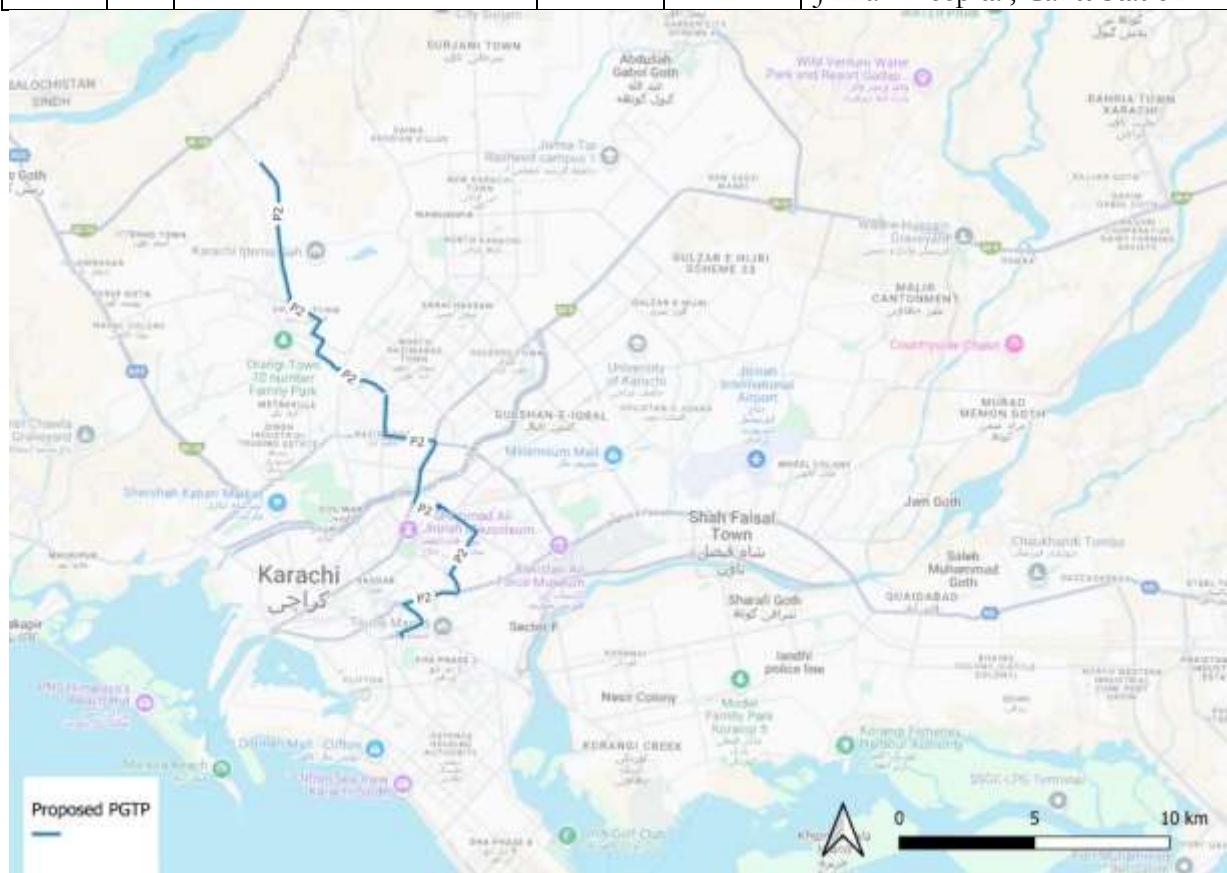
ROUTE ID	ROUTE ALIGNMENT	ROUTE LENGTH
KARACHI		
P-1	Altaf Nagar – Tower	28
P-2	Khairabad – Cantt Station	28
P-3	Rais Amrohi – Kiran Hospital	28
P-4	Port Qasim – Shershah	37
P-5	Baldia Stadium – Gulshan-e-Maymar	29
P-6	Nishan-e-Haider – Landhi	37
P-7	Malir -15 (Jama Milliyya Rd.) – Clock Tower	31
P-8	Scheme 33 – Tower	35
P-9	Phehlwan Goth – Tower	35
P-10	Landhi – Orangi	36
P-11	Gulshan-e-Bahar – Keamari	27
P-12	Tower – Data Nagar Orangi	20
P-13	Babar Market – Empress Market	20
P-14	Water Pump – Keamari	33
P-15	Ittehad Town – Cantt Station	26
P-16	Gulberg – Tower	16
P-17	Bhains Colony – New Sabzi Mandi	36
P-18	Orangi Town – Pehlwan Goth	30
P-19	Orangi Town – Khokhrapar	36
P-20	Bhains Colony – Qalandaria	45
P-21	AO Clinic – Bhains Colony	42
P-22	Coast Guard – Godhra	35
P-23	Qasba Colony – Qayyumabad	40
P-24	Scheme 33 – Tower	25
P-25	Coast Guard – Tower	26
HYDERABAD		
H-1	Qaim Khani Hostel – Regional Passport	19
H-2	Qaim Khani Hostel – Kohsar	15
H-3	Haider Chowk – Gulistan -e-Sajjad	09
H-4	Nasim Nagar – Hyderabad Jn. Railway Station	11
H-5	Liaquat University of Medical & Health Sciences Jamshoro - Fateh Chowk Hyderabad	19

KARACHI

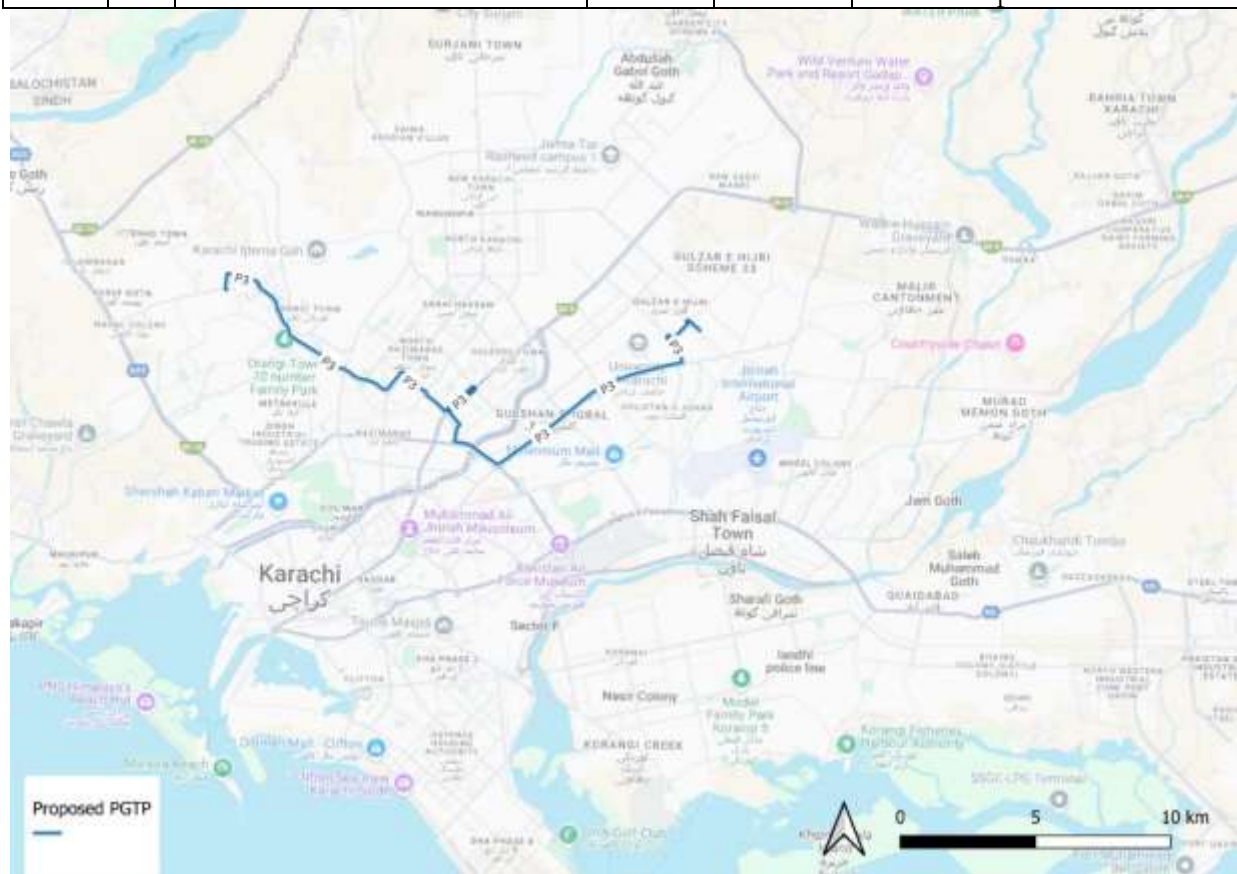
No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
1	P1	Altaf Nagar to Tower	28	109	Altaf Nagar CNG Terminal, Islam Chowk, 5 no. Chorangi Bus Stop, Metro Stop, Bacha Khan Chowk Mangopir Rd, Habib Bank Chowrangi Bus Stop, Naurus Chowrangi, Bismillah Hotel Pak Colony Bus Stop, Garden Chowk, Jamat Kahana Signal, Clayton Rd, Soldier Bazaar Stop, Numaish, Taj Medical Complex, Tibet Center, Aram Bagh Traffic Police, Light House KMC Building, Tower, Dockyard



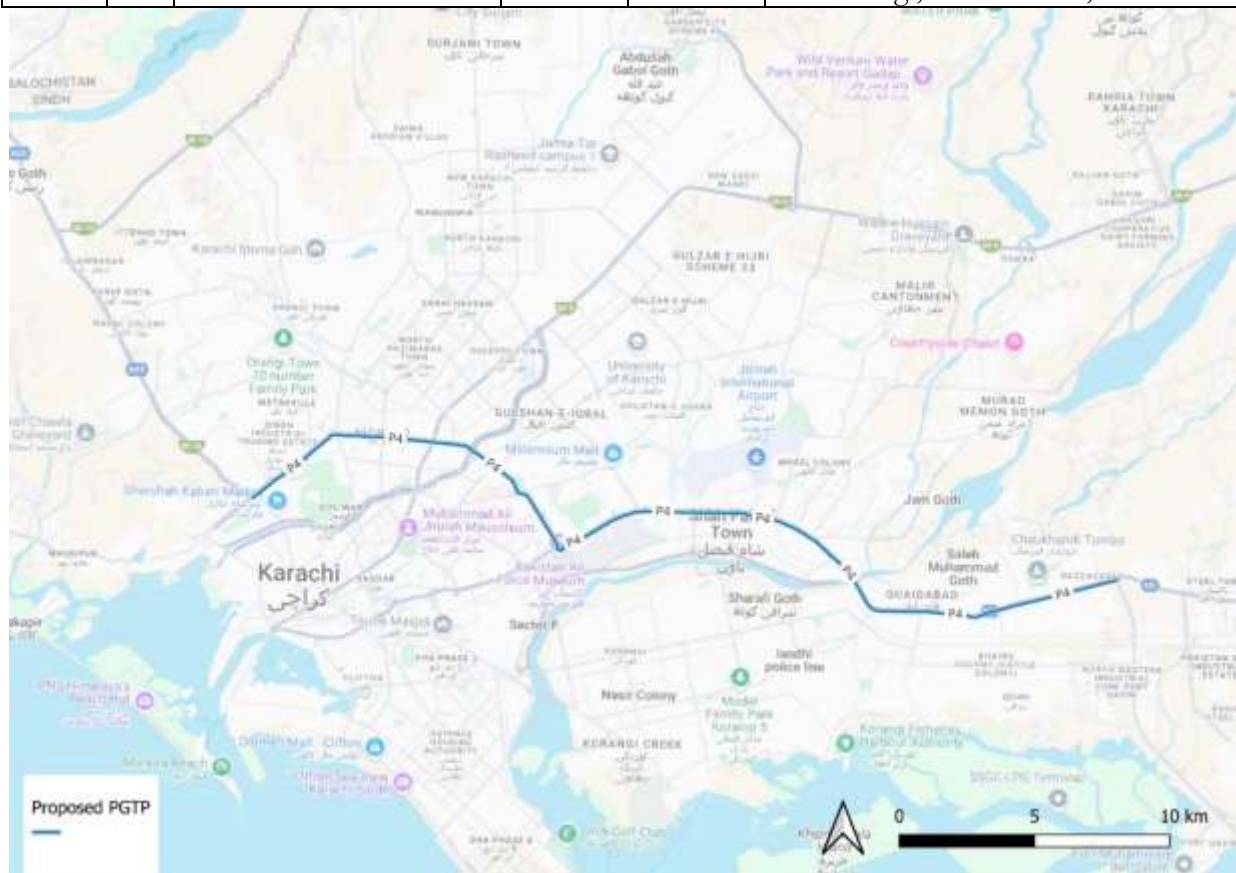
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
2	P2	Khairabad to Cantt Station	28	91	Khairabad, Disco Morr Stop, Sector 1/2 8, Post Office stop, National Hospital, Pune Panch Bus Stop, Abdullah College, Matric Board Office, Nazimabad License, Liaquatabad 10 no Stop, Teen Hatti, Jamshed Quarter, Yadgar Fish, Jail Chowrangi Flyover, Shaheed-e-Millat Rd, Shahrah -e-Qaideen, Shahra-e-Faisal, SIUT Shahra-e-Faisal, Jinnah Hospital, Cantt Station



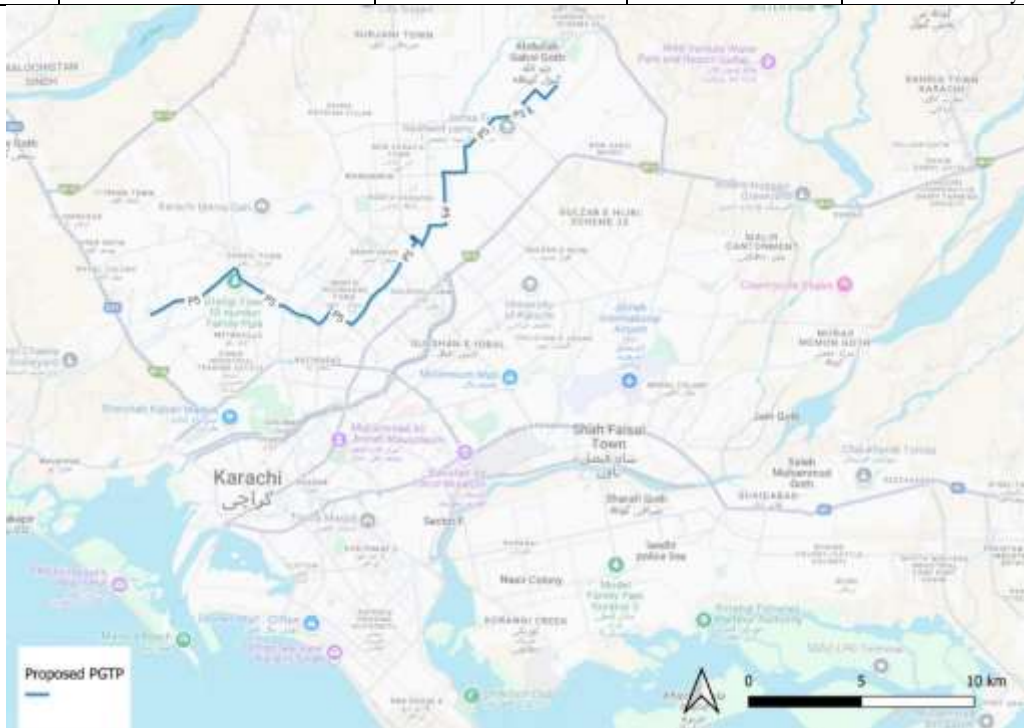
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
3	P3	Rais Amrohi to Kiran Hospital	28	92	Rais Amrohi, Chishti Nagar, Dabba More, Islam Chowk , Pone Panch Bus Stop, Abdullah College, Matric Board Office, KDA Chowrangi, Zia-ud-Din Nazimabad, Meena Bazar Karimabad, Hussainabad, Gharibabad, Hassan Square, University Rd, NIPA, Karachi University, Mosamiyat, DOW Hospital, Kiran Hospital



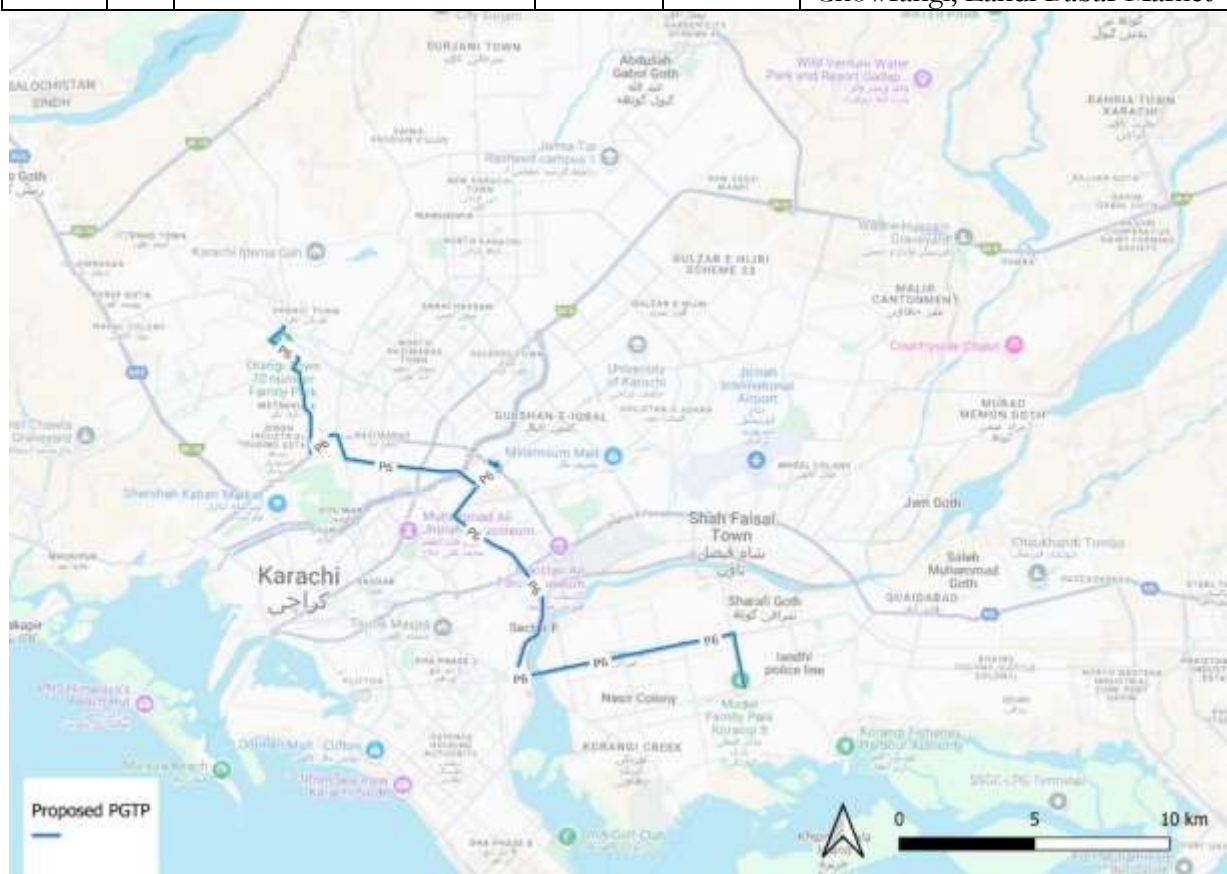
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
4	P4	Port Qasim to Shershah	37	80	Port Bin Qasim Mor Bus Stop, Bhains Colony Moor Bus Stop, Qaidabad, District and Sessions Court Malir Karachi, Malir 15, Malir Halt, Airport, Drigh Road, Karsaz Bus Stop, National Stadium, Hassan Square, Liaquatabad 10 no Stop, Eidgah Ground, Nazimabad Block 3, Habib Bank Chowrangi Bus Stop, Siemens Chowrangi, Ghani Chowrangi, S.I.T.E Area, Shershah



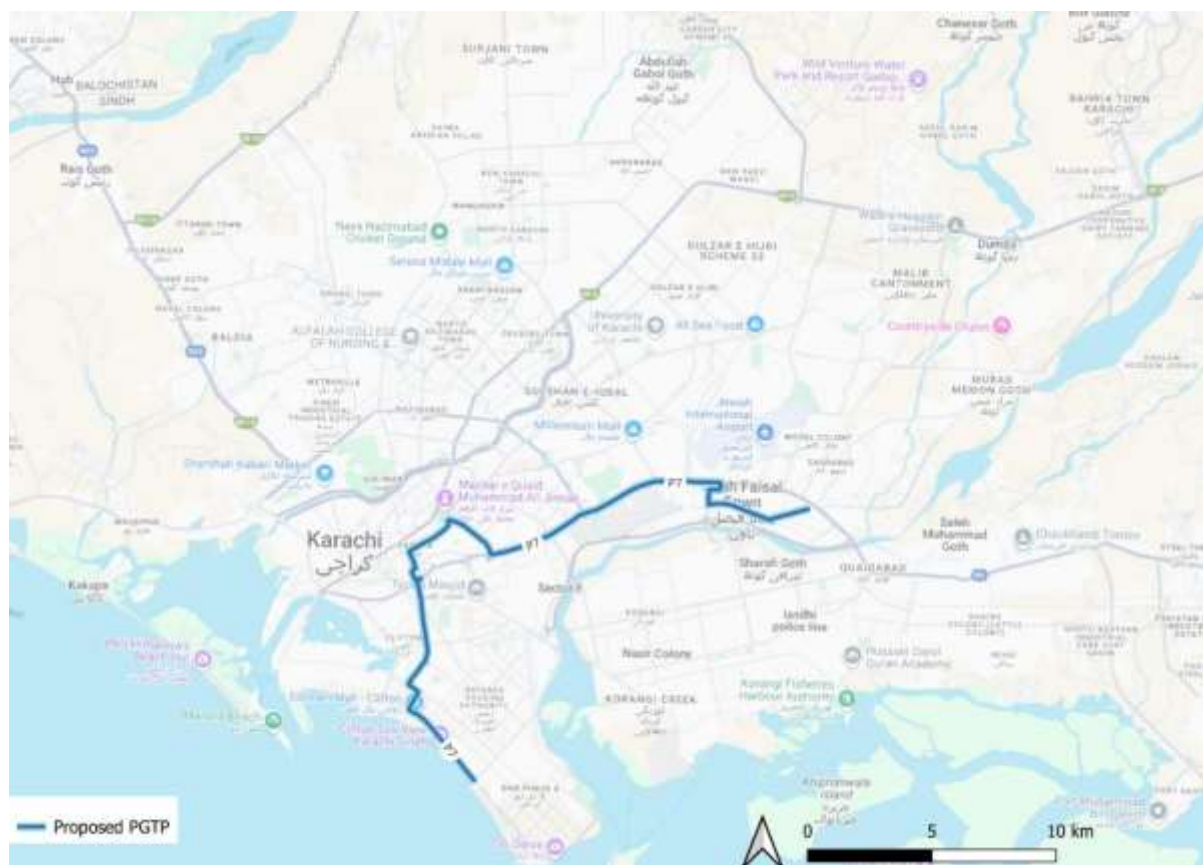
S.No .	I D	Route	Length (km)	Approx. Travel Time (min)	Stops
5	P5	Baldia Stadium to Gulshan e Maymar	29	113	Baldia Stadium, N 5 Bus Station, Farid Colony Road Bus Stop, Nishan-e-Haider Chowk, 5 no. Chorangi Bus Stop, Abdullah College, Metric Board Office, KDA Chowrangi, Zia-ud-Din, People Chowrangi, Shafiq More, Main Godhra Stop, Sindh Chowrangi, Sukhia Goth Bus Stop, Power plant More, Super Star Chowrangi, N3 Filling Station, Maymar Avenue, Gulshan Maymar



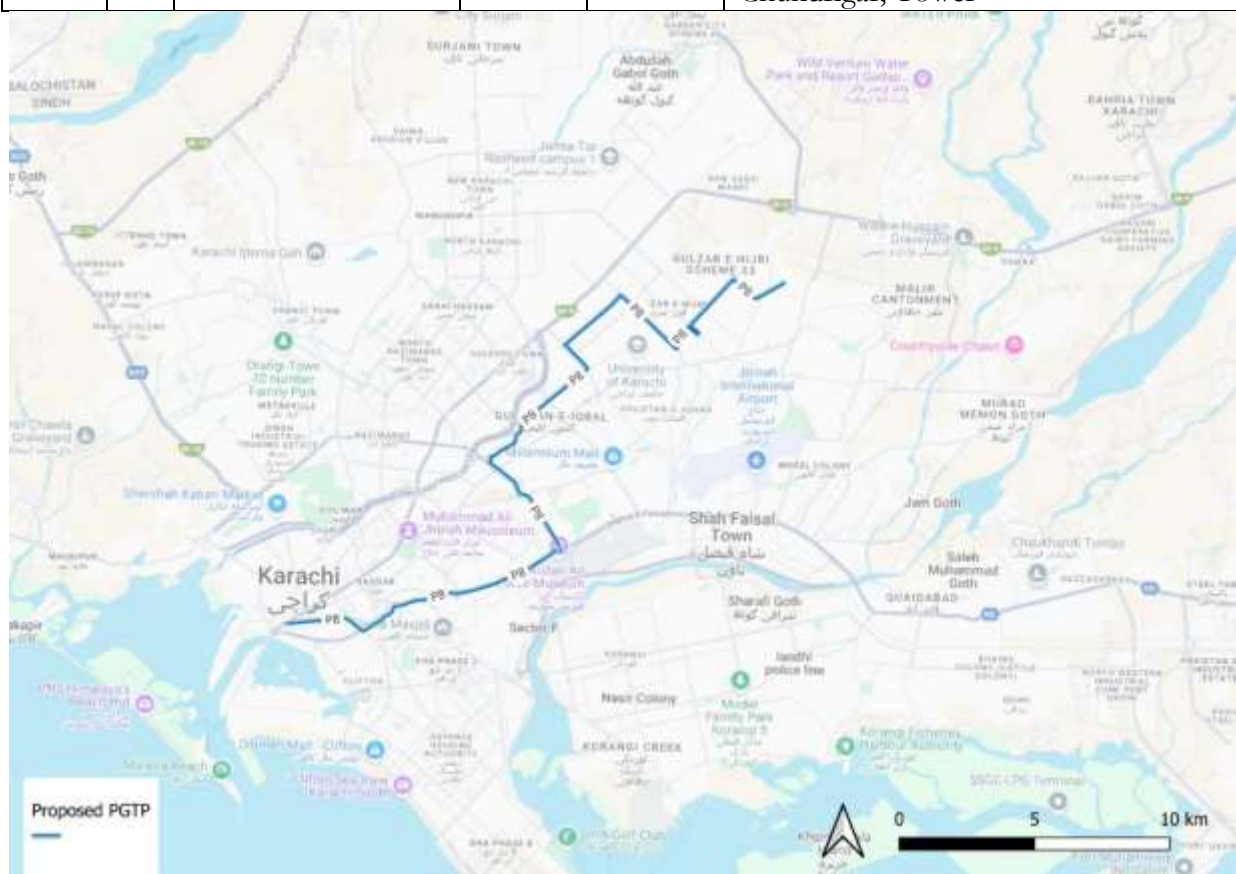
S.No.	ID	Route	One-way Transit Trip Length (km)	Approx. Travel Time (min)	Stops
6	P6	Nishan e Haider to Landhi	37	118	Nishan-e-Haider Chowk, Urdu Chowk, 4no Rd, Badar Chowk, Metroville Bus Stop, Habib Bank Chowrangi Bus Stop, Nuras Chowrangi, Rizvia Chowrangi, Daak Khana Bus Stop, Civic Center Stop, Jail Chowrangi Stop, Baloch Pull, Manzoor Colony Bus Stop, KPT Interchange, Brooks Chorangi Bus Stop, Indus Chowrangi, Landi Babar Market



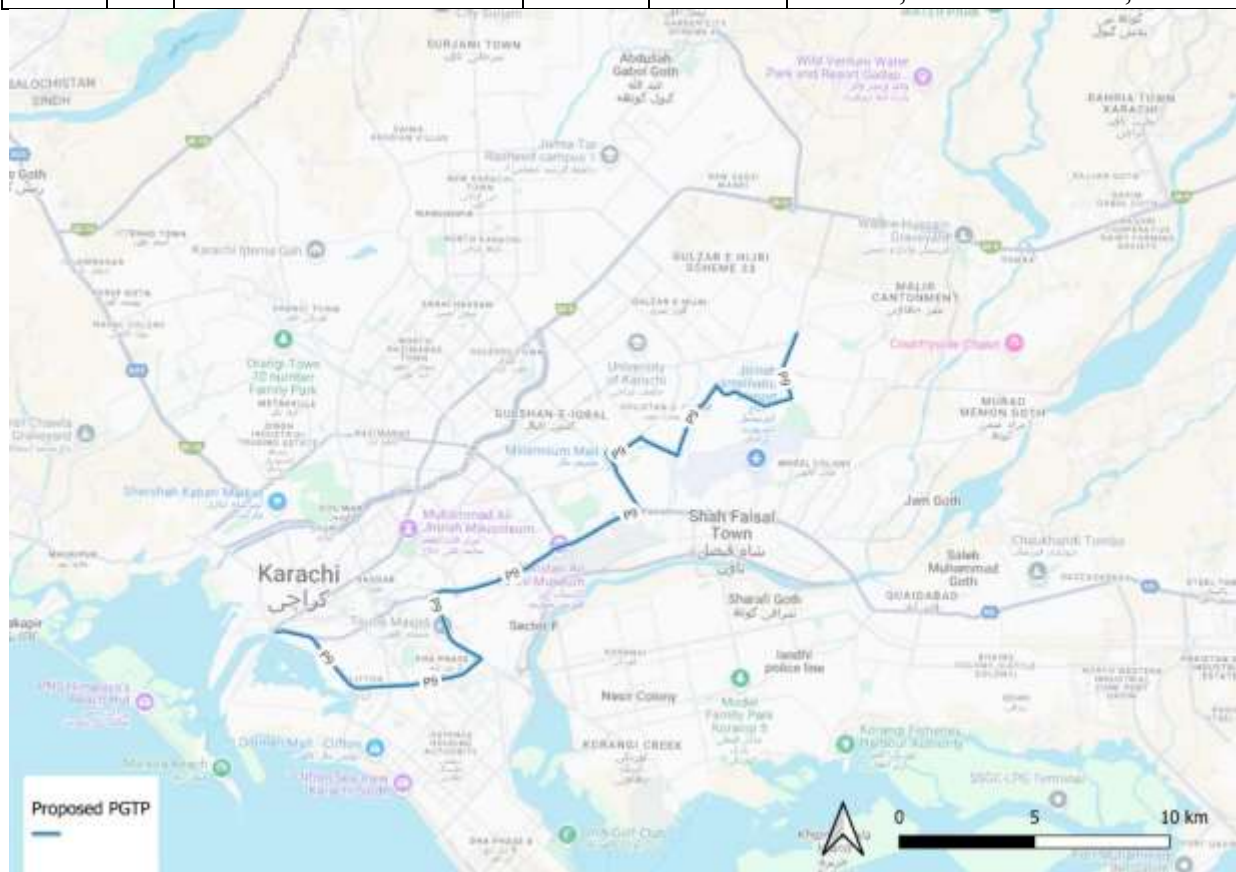
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
7	P7	Malir#15 (Jamia Milliyya Rd. To Clock Tower	31	120	Malir 15 Phatak, Jama Millia Rd, Azeem Pura, Shah Faisal Colony #2, Shama Shopping Centre, Colony Gate, Natha Khan, Drigh Rd. Station, PAF Faisal Base, Karsaz Intersection, Awami Markaz, Baloch Colony Bus Stop, Fine House, Lal Kothi, Nursery, Sh Quaideen, Tariq Rd. Intersection, Society Office, Mazar-e-Quaid, Numaish, KGA Ground, Aga khan Rd., Zaib-un-Nisa Street, Press Club, Club, Rd., Khayaban-e-Iqbal, Old Clifton Rd., Hatim Alvi Rd., Bagh Ibn-e-Qasim, Clock Tower



S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
8	P8	Scheme 33 to Tower	35	106	Scheme 33, Dr Abdul Salam Rd, Gulzar-e-Hijri New Rizvia Society, Dow Hospital, Suparco Rd, Fariya Chowk, Abul Hasan isphahni Rd, Maskan Chowranghi Bus Stop, Allama Shabbir Ahmed Flyover, Sehba Akhter Rd, Hassan Square Flyover, Stadium Flyover, karsaz, Shahar-e-Faisal, Club Rd, Uni Center, Dr Zia-ud-Din Rd, I.I Chundrigar, Tower



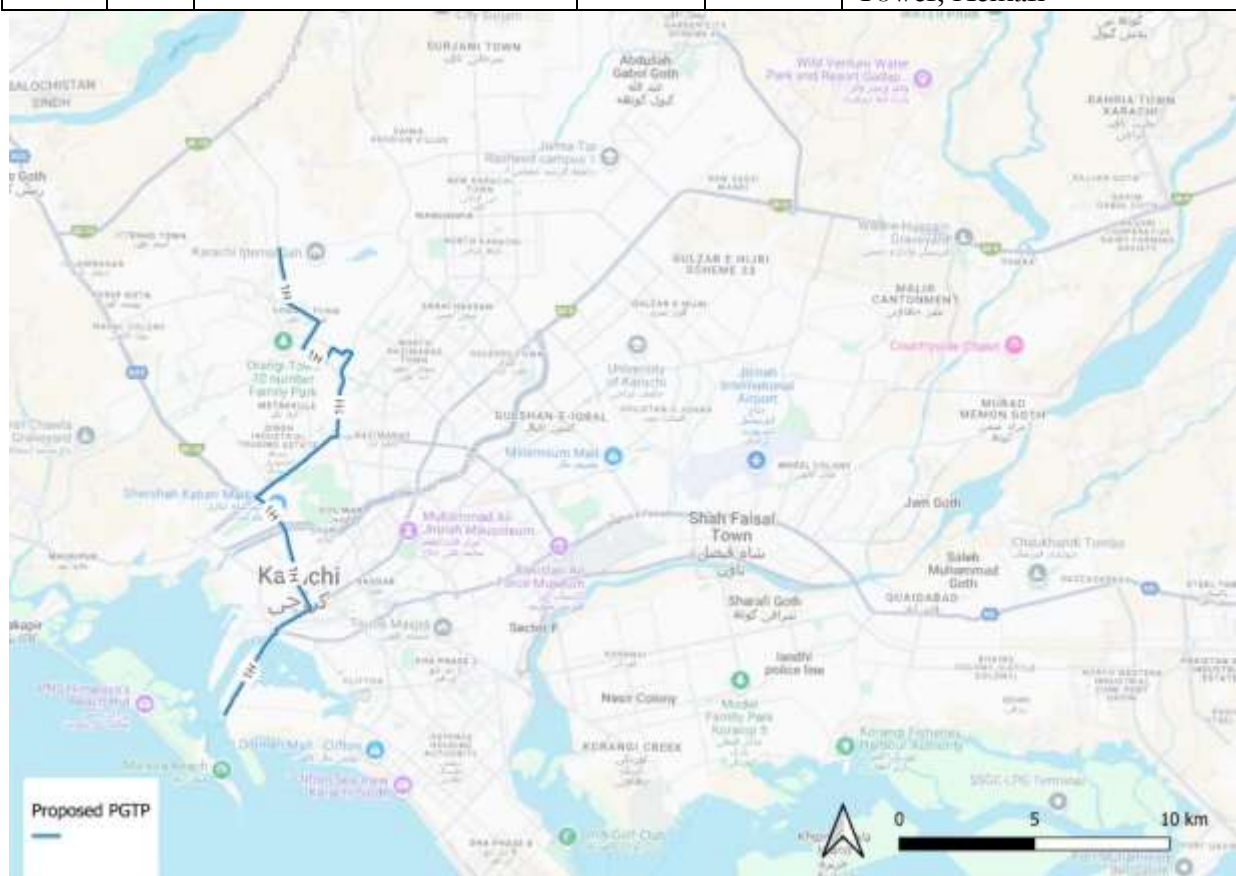
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
9	P9	Phehlwan Goth to Tower	35	90	Malir Check post no 5, Gulistan-e-jauhar-Malir Cantt Rd , G10 Bus Stop, Phehlwan Goth, Habib University, Johar More, Rashid Minhas Rd, Drigh Road, PAF Bus Stop, Baloch Colony, Nursery, FTC, Kalapull, Sunset Boulevard, Gizri, Punjab Chowrangi, KPT Underpass, Boat Basin, Mai Kolachi, M.T. Khan Road, Tower



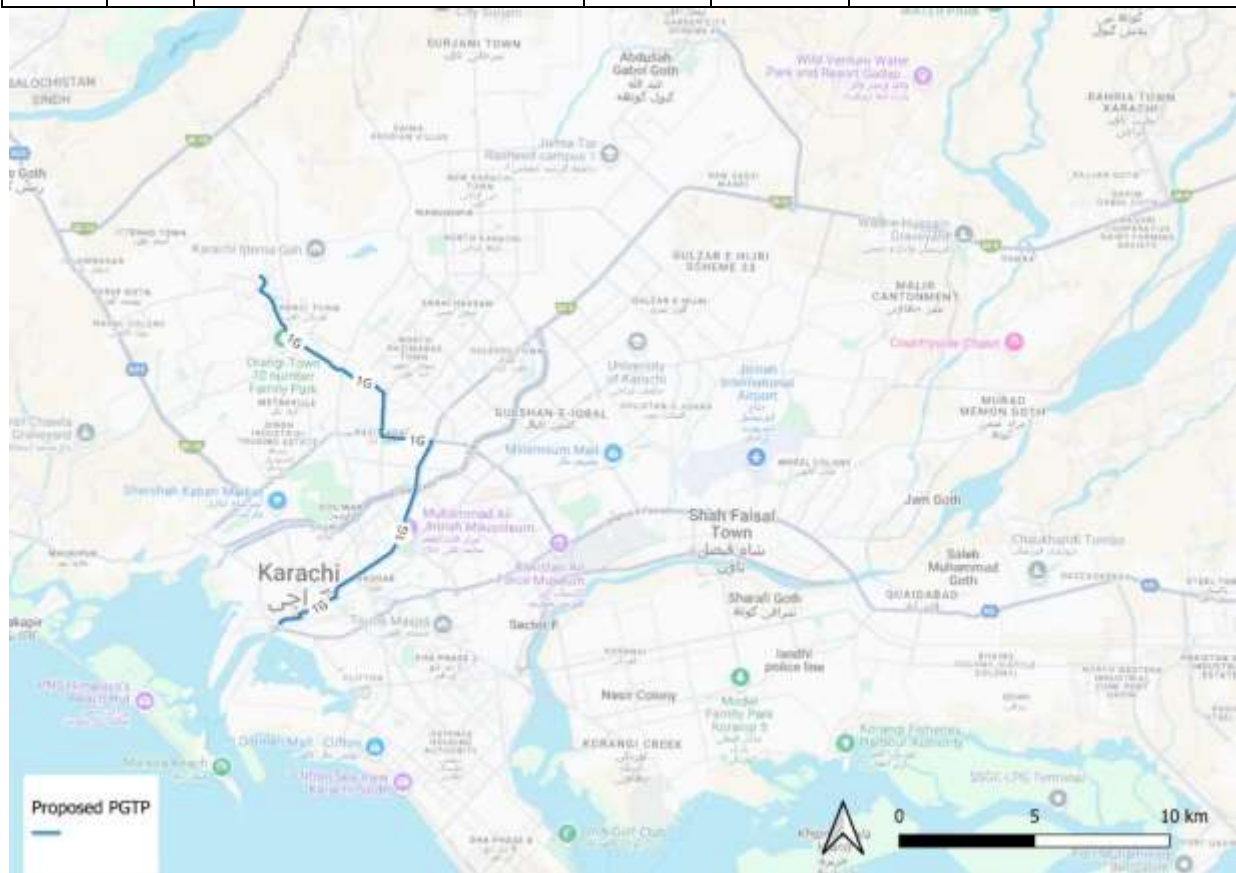
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
10	P10	Landhi to Orangi	36	97	Islam Chowk , Pone Panch Bus Stop, Abdullah College, Matric Board Office, KDA Chowrangi, Five Star, Sakhi Hasan, People Chowrangi, Gulberg Chowrangi, Water Pump, UBL Sports Complex, Gulshan Chowrangi, NIPA, Millinium, Drigh Road, Airport, Malir 15, Quaidabad, Dawood Chowrangi, Landhi Industrial Area



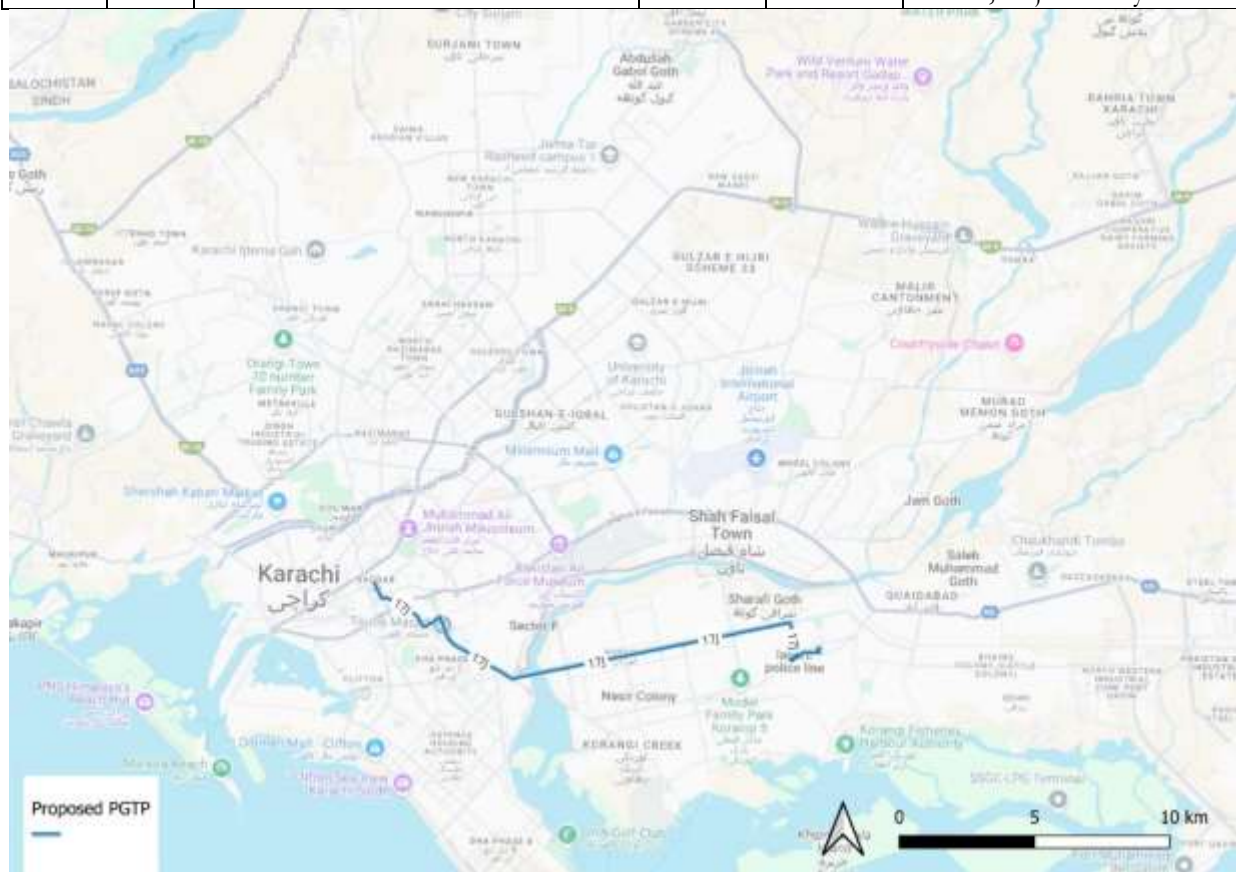
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
11	P-11	Gulshan e Bahar to Keamari	27	97	Gulshan-e-Bahar, Orangi Sector No. 14, Orangi Sector No. 13, Orangi Sector No. 7, Orangi Sector No. 5, Qadafi Chowk, Qasba Mour, Banaras Colony, Valika Hospital, Valika Mill, Habib Bank, S.I.T.E, Post Office, Maroon Mill, Laltain Factory, Ghani Chowk, Shershah, Miran Naka, Chakiwara, Lee Market, Kharadar, Jamat Khana, Tower, Kemari



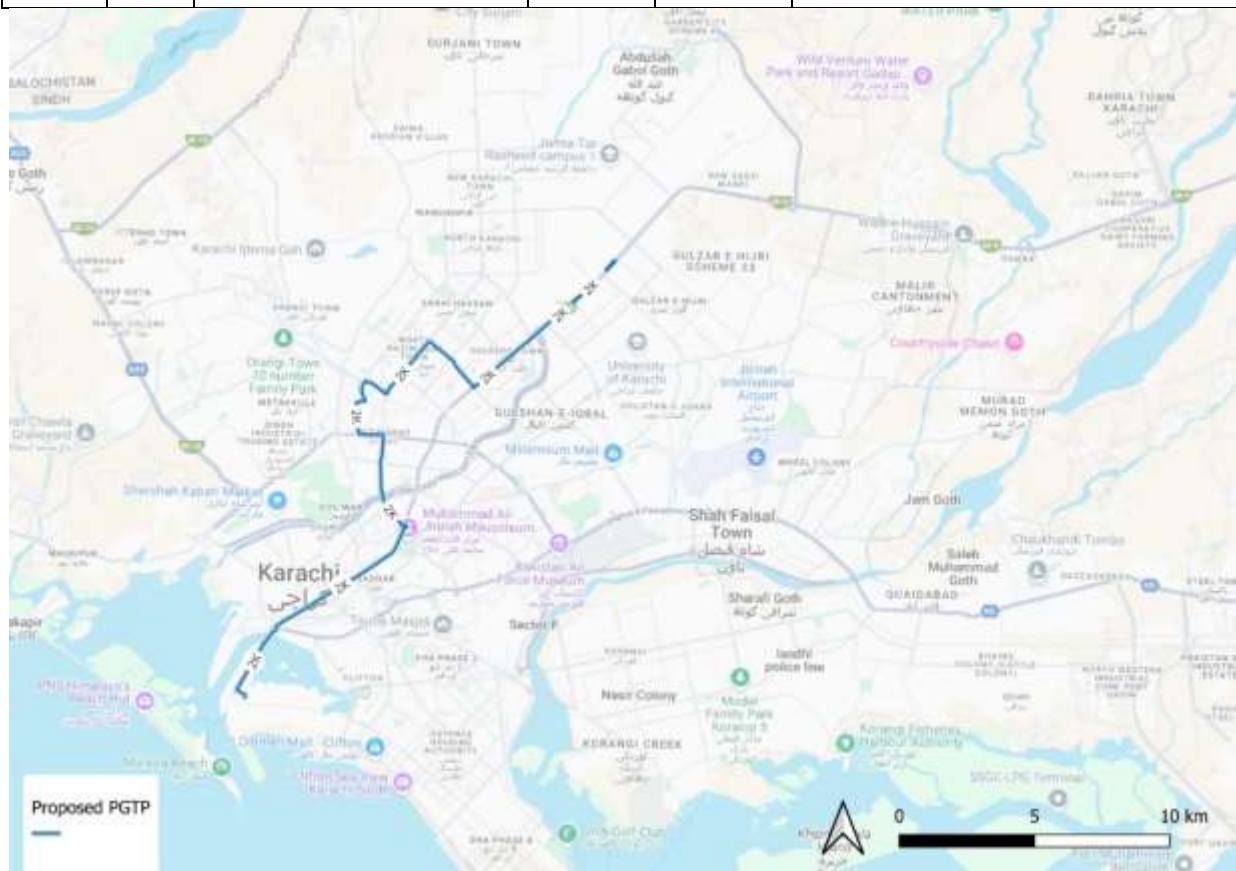
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
12	P-12	Tower to Data Nagar Orangi	20	67	M.W Tower, Frere Road, Sadar, Numaish, Goro Mandir, Teen Hatti, Liaquat No. 10, Petrol Pump, Nazimabad No. 2, Gandhi Chowk, Paposh Nagar, Abdullah College, Metro Cinema, Data Chowk Orangi Town



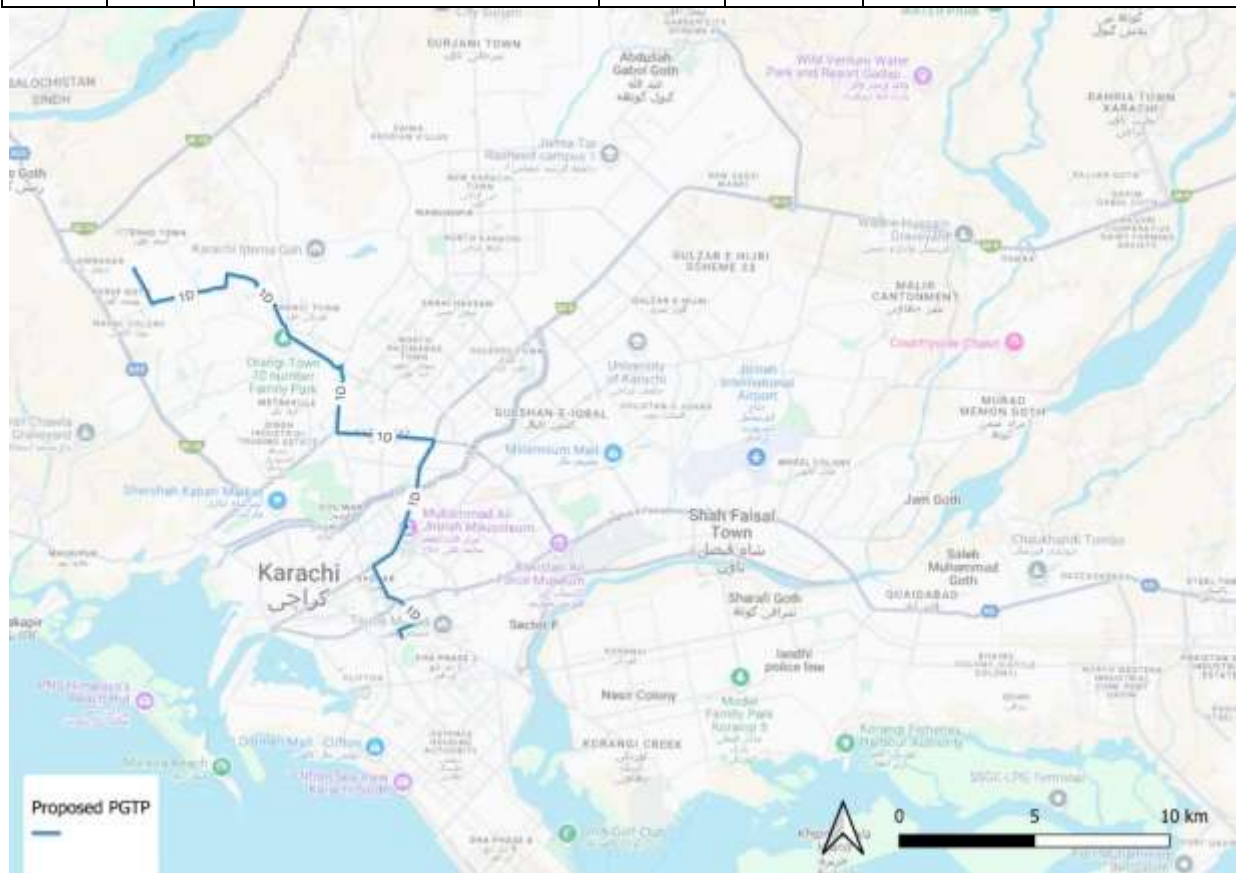
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
13	P-13	Babar Market to Empress Market	20	56	Babar Market, Landhi No. 3 1/2, Landhi No. 5, Korangi No. 6, Korangi No. 5, Korangi No. 3, Korangi No. 1, Korangi Crossing, Qayumabad, Akhtak Colony, Defence Society, Kala Pul, Jinnah Hospital, Luck Star Hotel, Hijaz Dairy Farm



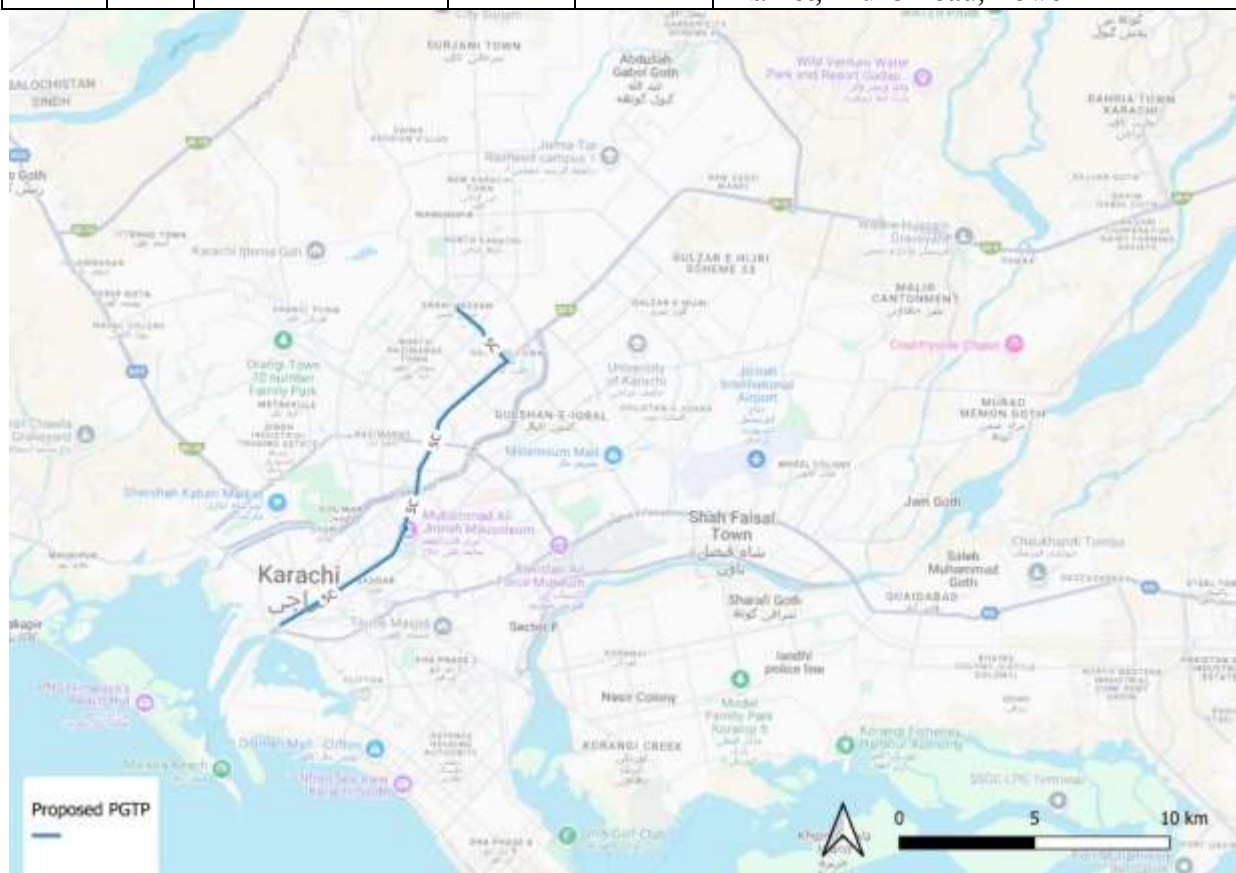
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
14	P-14	Water Pump to Keamari	33	104	Sakhi Hasan -Water Pump, Ayesha Manzil, Block M Nazimabad, Shahr-e Jahangir, Hyderi, Board Office, Paposh Nagar, Bara Maidan, Nazimabad No. 2, Petrol Pump, Guru Mandir, Saddar, Burns Road, Mereweather Tower, Keamari



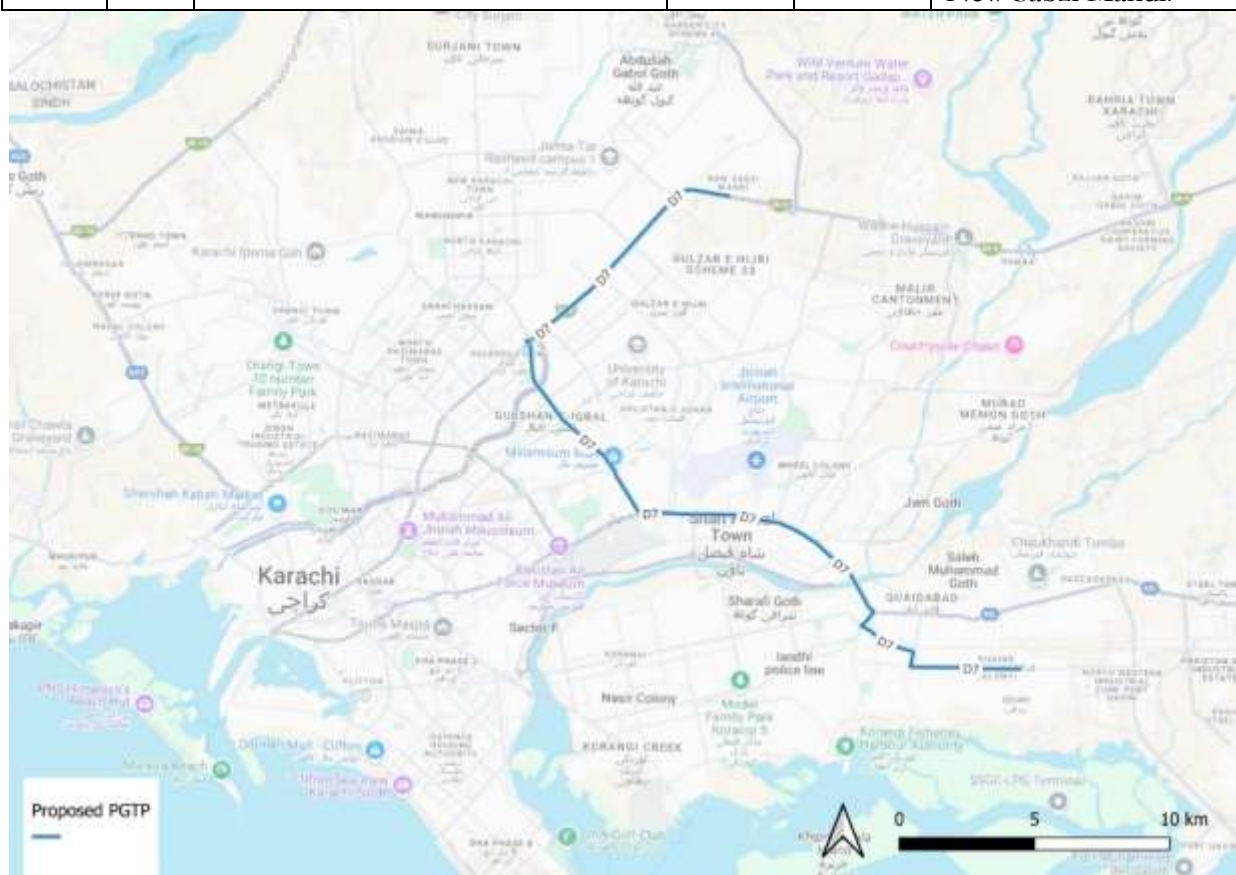
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
15	P-15	Ittehad Town to Cantt Station	26	95	Ittehad Town, Torri Chowk Sector II, Orangi Township, Banaras Colony, Pathan Colony, Petrol Pump, Liaquatabad No. 10, Liaquatabad, Post Office, Teen Hatti, Jehangir Road, Empress Market, Cantt Station



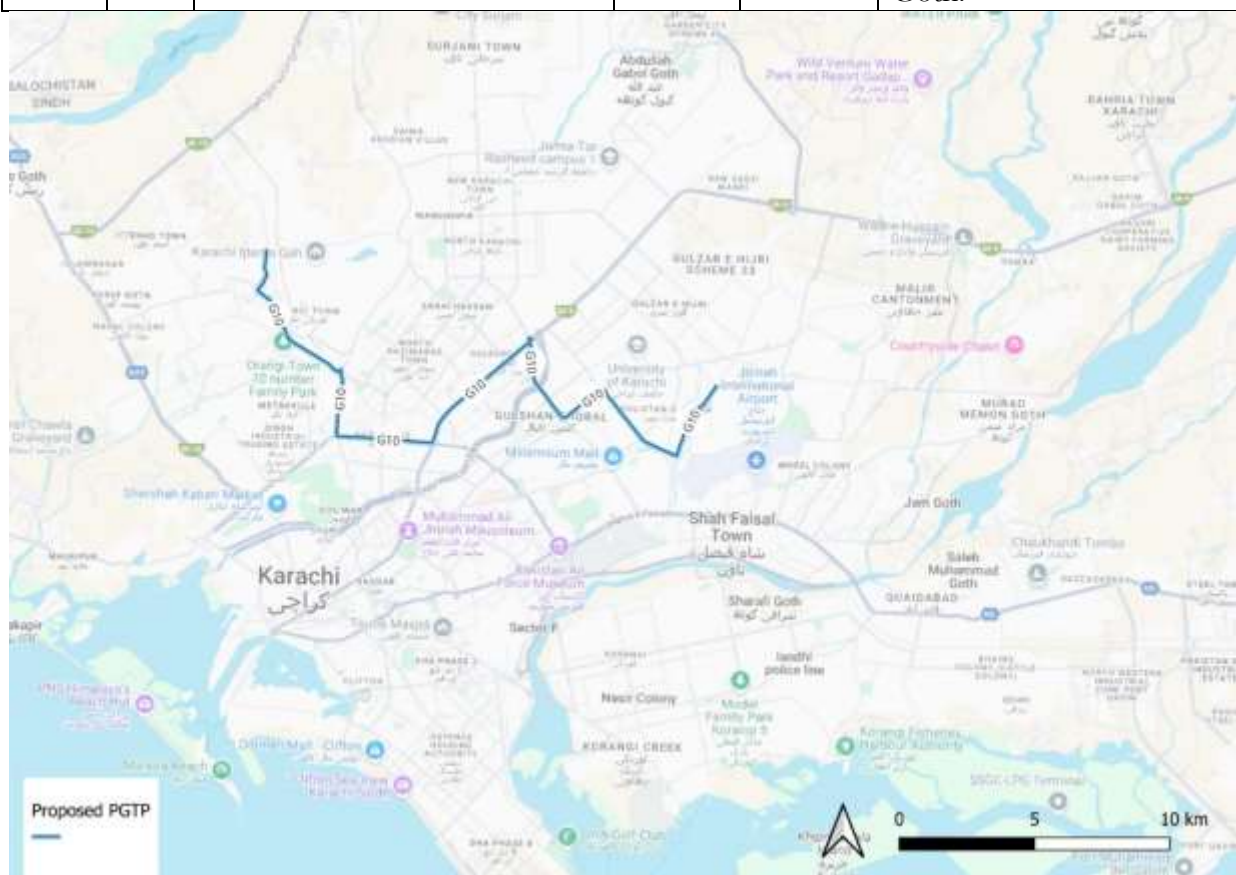
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
16	P-16	Gulberg to Tower	16	48	Gulberg Chowrangi, Rahimabad, K.D.A Pump House, Wahadat Colony, Saghirabad, Nasirabad, Dastagir Colony, Azizabad, Aisha Manzil, Karimabad, Liaquatabad, Teen Hatti, Goro Mandir, M.A. Jinnah Road, Saddar, Empress Market, Bruns Road, Tower



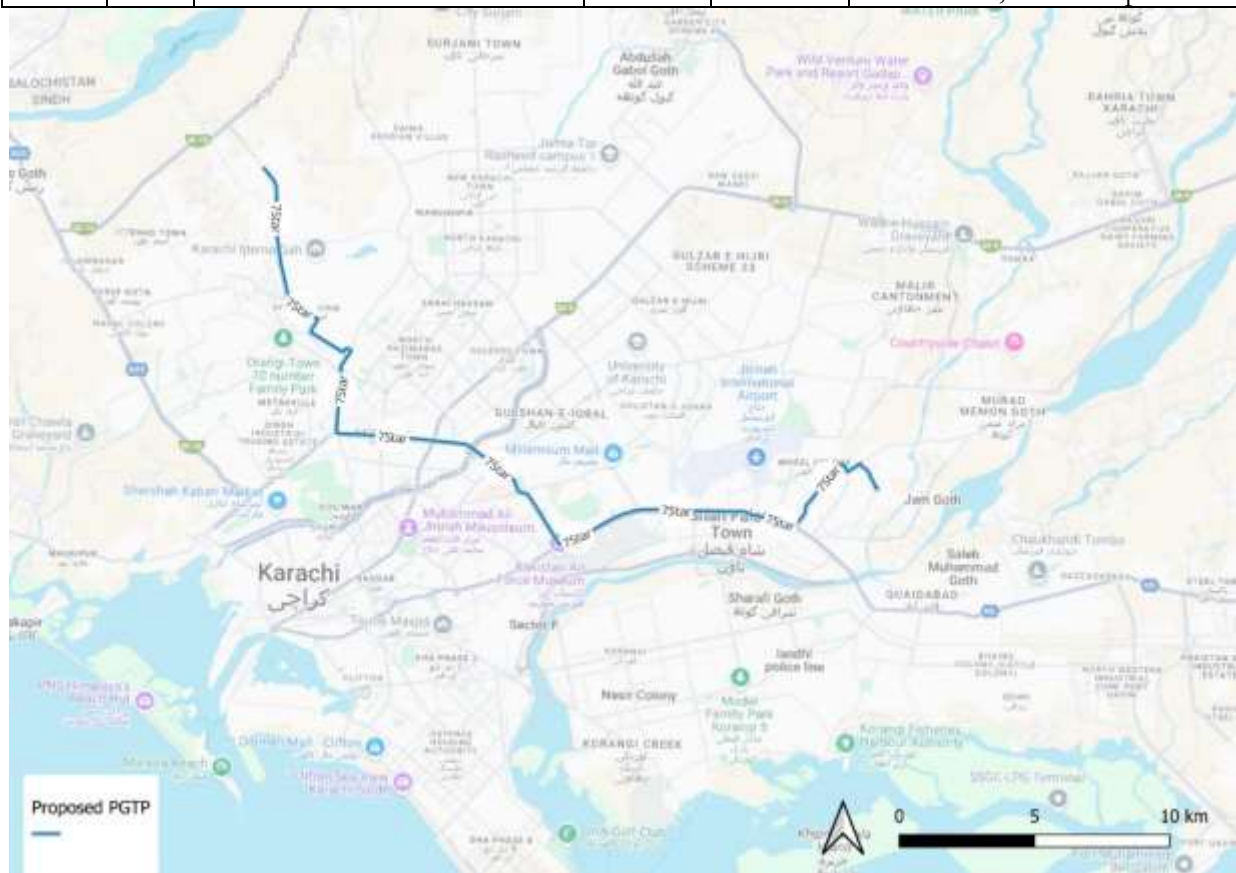
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
17	P-17	Bhains Colony to New Sabzi Mandi	36	85	Landhi Majeed Colony Number 2, Muzafarabad Colony, Social Security Hospital, Gul Ahmed Textile, Dawood Chorangi, Quid-e-Bad, Maleer 15, Kala Board, Maleer Halt, Airport, Star Gate, Colony Gate, Natha Khan, Drug Road, Labour Camp, Johar Mor, Ala Deen, Neepa Chorangi, Gulshan Chorangi, Fazal Mil, Sohrab Goth, Al-Asif Squire, Punjab Adah, New Sabzi Mandi.



S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
18	P-18	Orangi Town to Pehlwan Goth	30	91	Orangi Ghazi-abad, Zia Chowk, Iqbal Market, Orangi 11 1/2, Islam Chowk, Orangi Number 5, Banaras, Valika, Habib Bank, Nazimabad Number 2, Liaqatabad Number 4, Number 10, Karimabad, Ayesha Manzil, Water Pump, Sohrab Goth, Gulshan, NIPA, Safari Park, Rabia City, Pehlwan Goth.



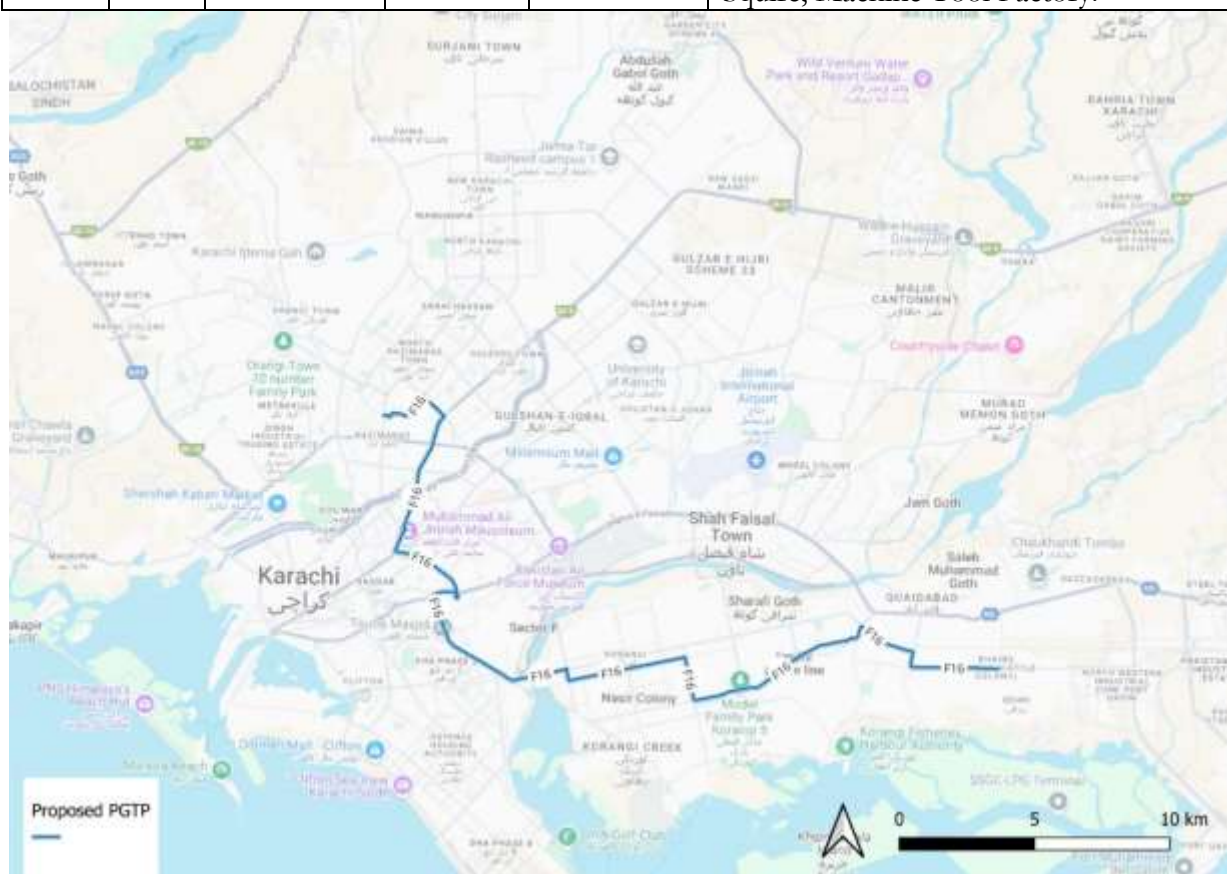
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
19	P-19	Orangi Town to Khokhrapar	36	98	Orangi Zahoore Chowk 11 1/2, Number 5, Banaras, Habib Bank, Nazimabad Number 2, Petro Pump, Liaqatabad Number 4, Number 10, Ghareebabad, Hasan Squire, National Stadium, Karsaz, Drug Road, Natha Khan, Airport, Kala Board, Lal Masjid, Tanki, Saoodabad, Khokhrapar.



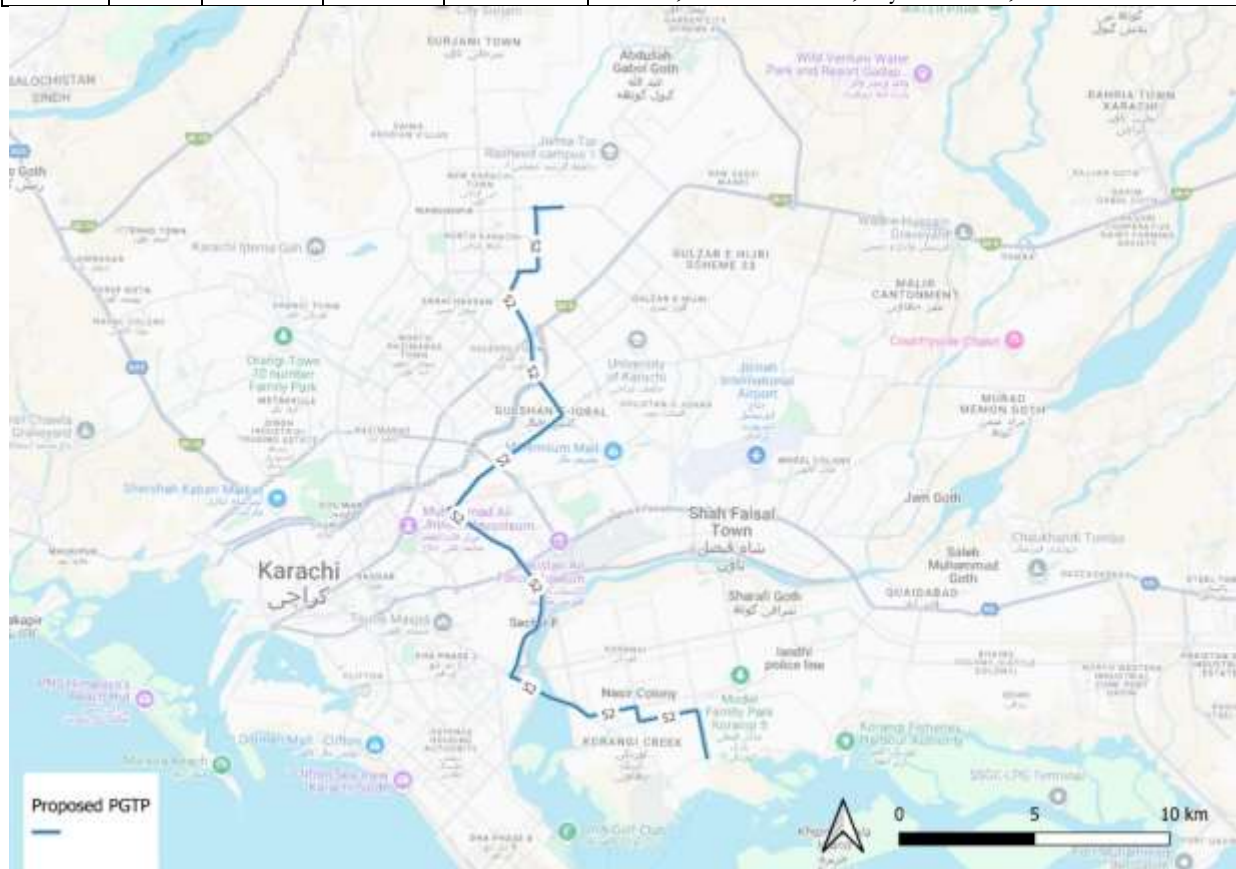
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
20	P-20	Bhains Colony to Qalandaria	45	139	Bhens Colony, Gul Ahmed, Dawood Chorangil Landhi Number 1, Korangi, Number 6, 5 1/2, 5, 3, Number 1, Crossing, Qayoomabad, Akhtar Colony, Defence Mor, Kala Pul, Gora Qabristan, Narsary, Tariq Road, Jail Chorangi, Askari Park, Hasan Squire, Urdu College, Neepa Chorangi, Gulshan Chorangi, Fazal Mil, KMC Hospital, Water Pump, Gulberg, Piyala Hotel, Peoples Chorangi, DC Office, Sakhi Hasan, Qalandaria Chowk, Mustafa Colony, Mianwali Colony.



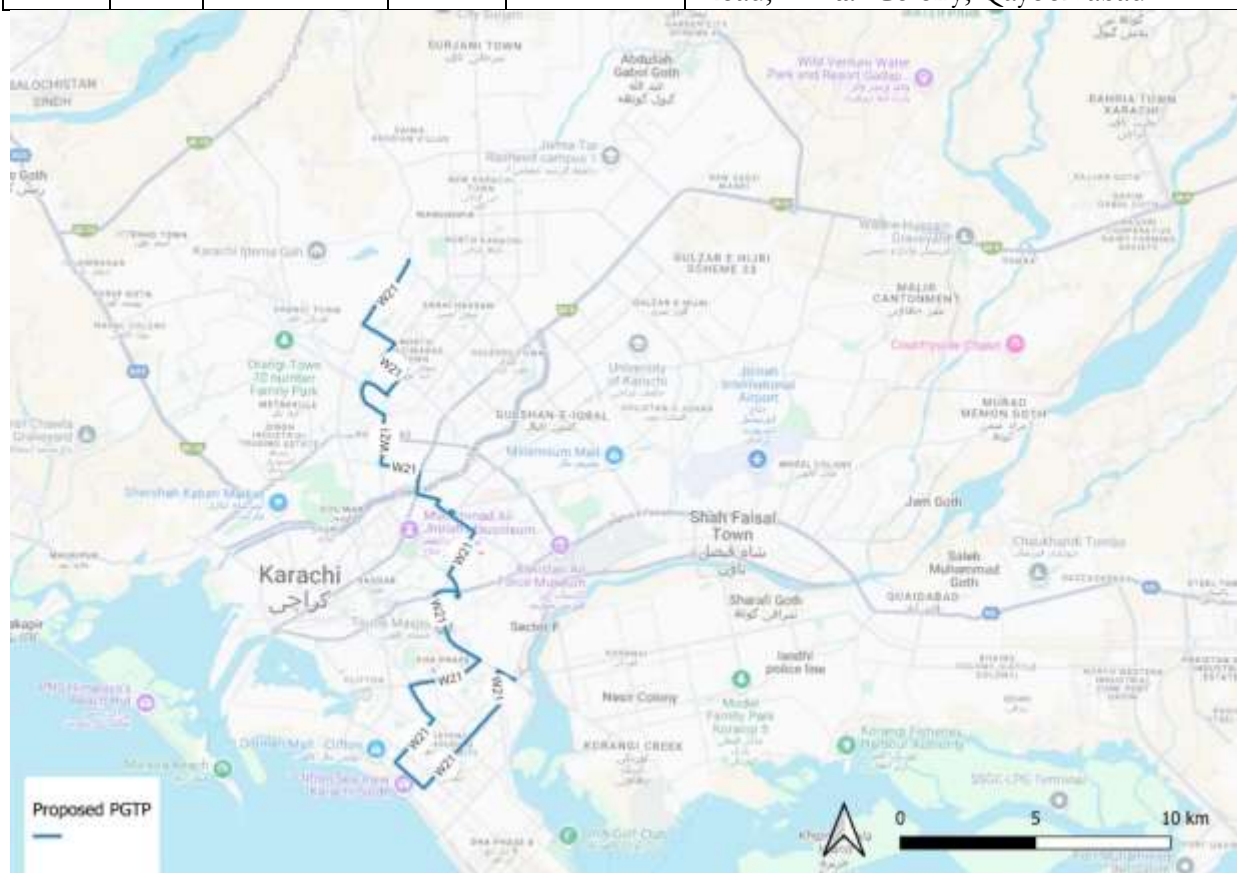
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
21	P-21	AO Clinic to Bhains Colony	42	129	AO Clinic, Khando Goth, Mujahid Colony, Wahid Colony, Ziauddin Hospital, Musa Colony, Karimabad, Lliaqatabad Number 10, Dakhana, 3 Hati, Guromandar, Mizar-e-Quid, Khudadad Colony, Narsary, Gora Qabrista, Kala Pul, Defence Mor, Akhtar Colony, Korangi, Number 1, Number 3, Number 5, Korangi Market 6, Degree College, Number 5 1/2, Landhi Number 6, Number 1, Dawood Chorangi, Gul Ahmed, Hospital Chorangi, Labour Squire, Machine Tool Factory.



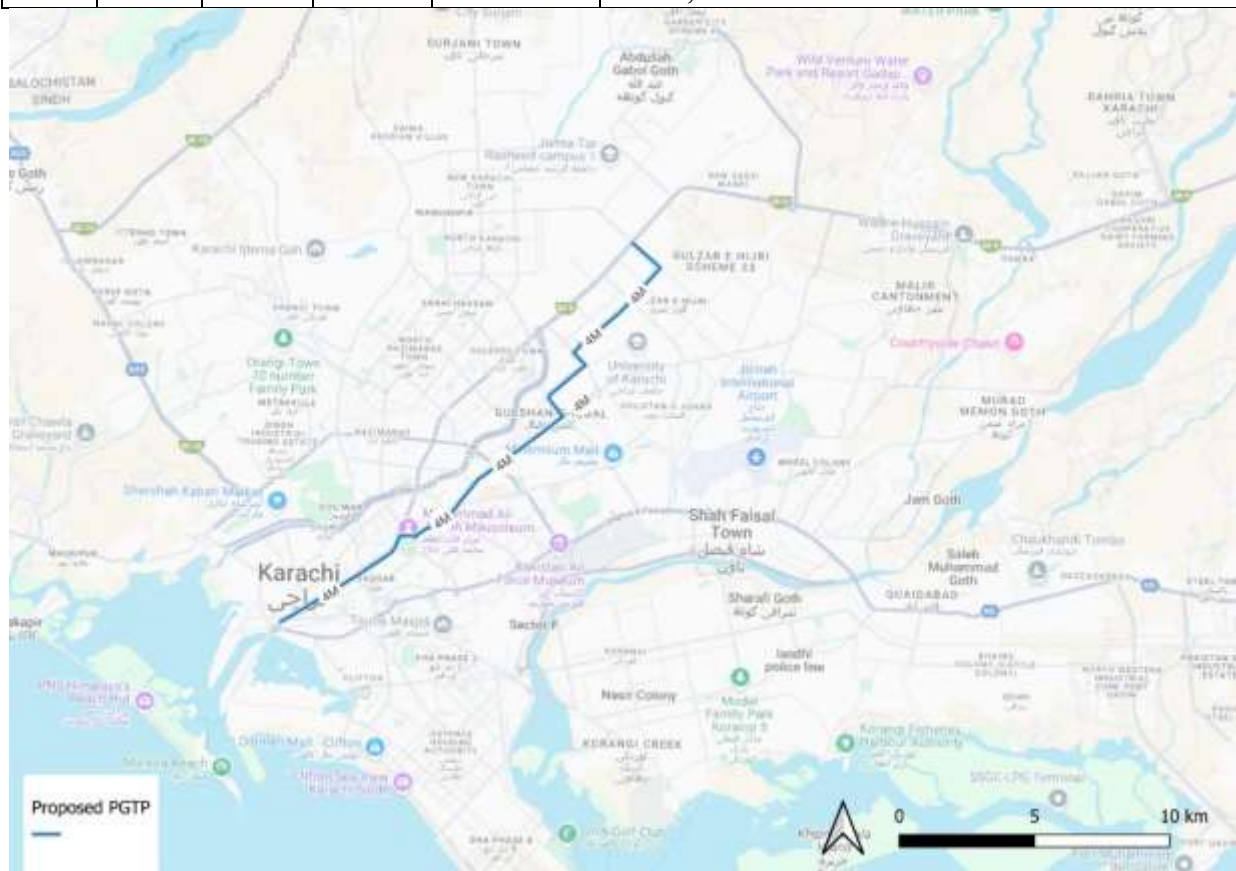
S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
22	P-22	Coast Guard to Godhra	35	97	Korangi 100 Quarter, Chongi Naka, Coast Guard, Korangi Number 2 1/2, 1, Crossing, Qayoomabad, Defence View, Baloch Colony, Hill Park, General Hospital, Tariq Chorangi, Jail Chorangi, New Town, Askari Park, Hasan Squire, Urdu College, Neepa, Gulshan, Moti Mehal, Fazal Mil, Sohrab Goth, Power House, Shafique Mor, Godhra, Gabol Town, Saba Cinema, Ayub Goth, Laasi Goth.



S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
23	P-23	Qasba Colony to Qayyumabad	40	130	Qasba Colony, Mianwali Colony, Kawari Colony, Nusrat Bhuto Colony, Ship Owner College, Pahar Ganj, Abdullah College, Paposh Nagar, Abasi Shaheed Hospital, Nazimabad 7, Petrol Pump, Liaqatabad 4, 10, Dakhana, 3 Hati, PIB Colony, Jail Chorangi, Tariq Road, Narsary, Mehmoodabad Signal, Azam Basti, Street 18, Kala Pul, Defence Mor, Sun Set Blueward, Gizri, Khayaban-e-Shamsheer, Saba Avenue, Khayaban, Bahria, Korangi Road, Akhtar Colony, Qayoomabad.



S.N o.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
24	P-24	Scheme 33 to Tower	25	78	Kaneez Fatima Society, Gulzar Hijri Police Station, Paradise, Scout Colony, Disco Bakeri, Gulshan Chorangi, NIPA Chorangi, Urdu College, Hasan Squire, Askari Park, New Town, Jail Chorangi, Islamia College, Guromandar, Mizar-e-Quid, Taj Complex, Sadar, Regal, Court Road, Brans Road, Jama Cloth, Civil Hospital, City Court, Boulton Market- Tower



S.No.	ID	Route	Length (km)	Approx. Travel Time (min)	Stops
25	P-25	Coast Guard to Tower	26	74	W-22 Last Bus Stop Sector 49 Korangi, Matkay Wali Puliya, Korangi#1, Nasir Jump, Darusslam Society, Korangi Crossing, Qaiyumabad, KPT Interchange, Iqra University, Manzoor Colony Bus Stop, Mehmoodabad Flyover, Balouch Colony, Shaheed-e-Millat Rd., Hill Park General Hospital, Shaheed-e-Millat Rd, Mariam Heights, Jail Chowrangi, New M. A. Jinnah Rd, Numaish BRT St. Eid Gah, City Court, Denso Hall/Boltan Mkt, Tower Bus Stop

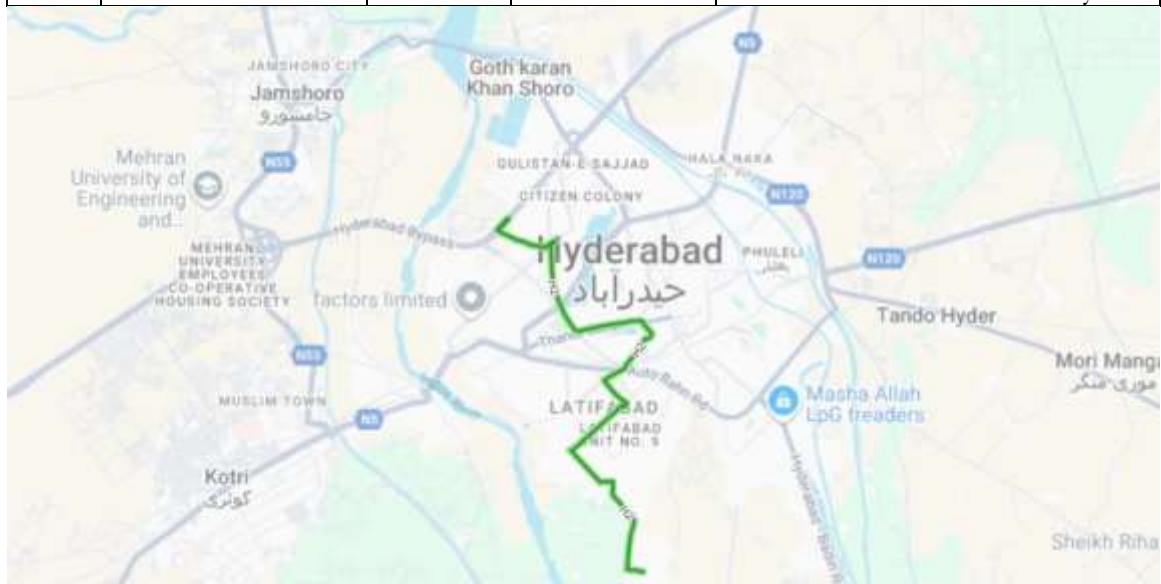


HYDERABAD

S.No.	Route	Length (km)	Approx. Travel Time (min)	Stops
1	H1 Qaim Khani Girls Hostel to Regional Passport Office	19	64	Qaim Khani Hostel - Naya Pull, Purani Sabzi Mandi, Badin Stop, Muhammadi Chowk, Bollywood Mall, Labour Colony, and SITE Area. Regional Passport.



S.No.	Route	Length (km)	Approx. Travel Time (min)	Stops
2	H2 Qaim Khani Hostel to Kohsar	15	52	Qaim Khani Hostel – Qazi Qayoom Road – Gul Center – Latifabad flyover – Labbaik chowk – Siddique Plaza – Khuda hafiz board – Kohsar – Ilillahi Ahmer Hospital – Bhitai Hospital – Birdie chowk – 10 number chowks Bismillah City.



S. No	Route	Length (km)	Approx. Travel Time (min)	Stops
3	H3 Haider Chowk to Gulistan e Sajjad	09	27	Haider Chowk – Thandi Sarak – Wadhu Wah Road – Nasim Nagar – Bypass Entry Gate – Gulistan-e-Sajjad.



S.No.	Route	Length (km)	Approx. Travel Time (min)	Stops
4	H4 Nasim Nagar to Hyderabad Railway Station	11	48	Nasim Nagar (Qasimabad) - Alamdar Chowk - Areej Tower - Marvi Town - Honda Palace Road - Agha Khan Maternal & Child Care Centre - Qasim Chowk Bus Stop - Heerabad - Civil Hospital - Haider Chowk - Hyderabad Jn (Railway Station)



S.No	Route	Length (km)	Approx. Travel Time (min)	Stops
5	H5 Liaquat University to Latifabad Unit 9	19	52	Fateh Chowk, Wadhu Wah Rd, Auto Bahn Rd, Auto Bahn Rd, Airport Rd/Kohsar - Airport Rd, Fateh Chowk near Akbari Masjid, Iqbal Colony Latifabad Unit 12



Disclaimer: Route maps included in this Exhibit are indicative and for reference purposes only and shall not be construed as survey-grade drawings or precise engineering alignments.

EXHIBIT 3 - MINIMUM SPARE PARTS, TOOLS AND CONSUMABLES TO BE PROVIDED BY THE CONCESSIONAIRE

The Concessionaire shall, at its own cost and risk, procure, maintain and make available at all times during the term of the Agreement all Spare Parts, tools, consumables and replacement items required for the operation, maintenance and servicing of the electric Bus fleet, charging infrastructure, Depot equipment and associated systems.

The Concessionaire shall ensure that no Bus is rendered unavailable for service, and no scheduled operation is disrupted, delayed or cancelled due to the non-availability, delayed procurement or inadequate stocking of Spare Parts, tools or consumables at any Bus Depot.

The Spare Parts, tools and consumables specified in this Exhibit constitute the *minimum mandatory inventory* to be maintained by the Concessionaire at all times during the Term. Compliance with this Exhibit shall be assessed by reference to actual fleet availability, operational performance and maintenance outcomes, and not merely by the presence of items listed herein.

The Concessionaire shall ensure that all Spare Parts and tools are genuine, compatible with the approved Bus models and systems, and suitable for continuous urban operations under the climatic, environmental and operating conditions prevailing in the Province of Sindh.

The Concessionaire shall ensure that all Spare Parts and tools are properly stored, catalogued, traceable and readily accessible at each Bus Depot, and shall maintain accurate inventory records capable of inspection and audit by the SMTA/GoS or its appointed Independent Expert.

TABLE 3.1: Minimum Spare Parts Package for 8.5 to 9 -Meter Full Electric City Buses

PART DESCRIPTION	QUANTITY TO BE PROVIDED AT END OF THE TERM
Full Battery Pack for Electric Propulsion System (Complete Set for Bus)	1
Complete brake assembly (excl. Axles)	5
Disc Brake Pads	15
Touch-Up Paint for All Colors Used on The Vehicle (Quantity in Litters)	15
Full Windscreen Assembly	3
Side Window Glass Unit (Complete Set for Bus)	3
Head Lamp Assembly, Including Globes (2 Lamps Per Set)	6
Rear Brake Light / Indicator Light Assembly, Including Globes (2 Assemblies Per Set, Left and Right)	6
Exterior Wing Mirrors (Arms and Mirrors, Left and Right Mirrors Per Set)	12
Wiper Blades (2 Per Set)	35
Interior Light Globes	15
Full Seat Assembly (Complete Set for Bus)	2
Back And Bottom Seat Cushion Set (Complete Set for Bus)	2

Floor Cover Material (Quantity in Square Meters)	6
Door Assembly (Including Doors, Valves, Switches)	2
Interior Partition Wall/Advertising Unit	3
Wheel Unit	3
Electric Motors (Complete Set for Bus)	3
Air Conditioning Unit (Complete Set for Bus Incl. Pipes, Compressor, Condenser Assembly, etc.)	4
Vehicle Logic Unit (VLU)	4
Driver Data Terminal (DDT)	4
Digital Video Recorder (DVR)	4
Door Opening and Closing Synchronization Unit	4
CCTV Cameras (6x AI, 6x Passenger count, 6x Dash cam, 6x Surveillance, 6x rear, 6x front)	15
Interior Variable Messaging Display Unit	4
Infotainment Display Unit	4
Spare Wheel	1 per Bus

TABLE 3.2: Minimum Depot-Level Tools and Diagnostic Equipment for 8.5-9 Meter Full Electric City Buses

*The quantities specified below represent the **minimum** tool sets to be maintained at each Bus Depot throughout the Term.*

DESCRIPTION	QUANTITY TO BE PROVIDED
Air chisel	1
Air drill	2
Air grinder	2
Air gauge kit – brake system	1
Air riveter	2
Battery charger	1
Battery load tester	1
Bench grinder	2
Bench vice	2
Bottle jacks	2
CO2-welder	1
Creepers	2
Drill press	1
Electric drill	1
Electric grinder	1
Electric shear	1
Electric steel cutter	1
Extension leads	2
Floor material welder	1
Gas welder	1

Headlight tester/adjuster	1
Heavy duty socket set (multiple sizes, as required)	1
Hydrometer	2
Impact screw driver	1
Impact wrench, large size	1
Impact wrench, medium size	1
Impact wrench, small size	2
King pin press	1
Lead lights	6
Magnetic base and gauge	1
Metal sheet bender	1
Micrometer set	1
Multimeter	2
Paint heat kit	1
Polisher	1
Portable arc welder	1
Portable gas welder	1
Power jack (60 ton)	2
Puller set	1
Radiator pressure tester	1
Refractometer – antifreeze tester	2
Sander	1
Spray gun	1
Torque wrench 0-60 Nm	1
Torque wrench 201-450 Nm	1
Torque wrench 451-800 Nm	2
Torque wrench 61-200 Nm	1
Transmission jack (1000 kg)	1
Tire hammer	1
Tire stripping and fitting kit (Tire Changing Machine)	1
Vernier set	1
Wheel stopper blocks	6
Wheel Alignment Machine	1
Diagnostic Equipment Set (As mentioned in Detailed Specifications above)	1

TABLE 3.3: Minimum Spare Parts Package for 12-Meter Full Electric City Buses

PART DESCRIPTION	QUANTITY TO BE PROVIDED
Full Battery Pack for Electric Propulsion System (Complete Set for Bus)	4
Complete brake assembly (excl. Axles)	20
Disc Brake Pads	50
Touch-Up Paint for All Colors Used on The Vehicle (Quantity in Litters)	50
Full Windscreen Assembly	10

Side Window Glass Unit (Complete Set for Bus)	10
Head Lamp Assembly, Including Globes (2 Lamps Per Set)	20
Rear Brake Light / Indicator Light Assembly, Including Globes (2 Assemblies Per Set, Left and Right)	20
Exterior Wing Mirrors (Arms and Mirrors, Left and Right Mirrors Per Set)	40
Wiper Blades (2 Per Set)	120
Interior Light Globes	60
Full Seat Assembly (Complete Set for Bus)	11
Back And Bottom Seat Cushion Set (Complete Set for Bus)	11
Floor Cover Material (Quantity in Square Meters)	20
Door Assembly (Including Doors, Valves, Switches)	8
Interior Partition Wall / Advertising Unit	8
Wheel Unit	8
Electric Motors (Complete Set for Bus)	8
Air Conditioning Unit (Complete Set for Bus Incl. Pipes, Compressor, Condenser Assembly, etc.)	8
Vehicle Logic Unit (VLU)	12
Driver Data Terminal (DDT)	12
Digital Video Recorder (DVR)	12
Door Opening and Closing Synchronization Unit	12
CCTV Cameras (6x AI, 6x Passenger count, 6x Dash cam, 6x Surveillance, 6x rear, 6x front)	60
Interior Variable Messaging Display Unit	12
Infotainment Display Unit	12
Spare Wheel	1 per Bus

TABLE 3.4: Minimum Depot-Level Tools and Diagnostic Equipment for 12-Meter Full Electric City Buses

DESCRIPTION	QUANTITY TO BE PROVIDED
Air chisel	2
Air drill	4
Air grinder	4
Air gauge kit – brake system	1
Air riveter	2
Battery charger	2
Battery load tester	2
Bench grinder	4
Bench vice	4
Bottle jacks	4
CO2-welder	1
Creepers	21
Drill press	1
Electric drill	2

DESCRIPTION	QUANTITY TO BE PROVIDED
Electric grinder	2
Electric shear	2
Electric steel cutter	2
Extension leads	4
Floor material welder	1
Gas welder	2
Headlight tester/adjuster	1
Heavy duty socket set (multiple sizes, as required)	2
Hydrometer	4
Impact screw driver	2
Impact wrench, large size	2
Impact wrench, medium size	2
Impact wrench, small size	4
King pin press	2
Lead lights	12
Magnetic base and gauge	2
Metal sheet bender	1
Micrometer set	2
Multimeter	4
Paint heat kit	2
Polisher	2
Portable arc welder	2
Portable gas welder	2
Power jack (60 ton)	4
Puller set	2
Radiator pressure tester	1
Refractometer – antifreeze tester	4
Sander	2
Spray gun	2
Torque wrench 0-60 Nm	2
Torque wrench 201-450 Nm	2
Torque wrench 451-800 Nm	4
Torque wrench 61-200 Nm	2
Transmission jack (1000 kg)	2
Tire hammer	2
Tire stripping and fitting kit (Tire Changing Machine)	2
Vernier set	2
Wheel stopper blocks	12
Wheel Alignment Machine	2
Diagnostic Equipment Set (As mentioned in Detailed Specifications above)	2

ADDITIONAL PROVISIONS APPLICABLE TO SPARE PARTS AND TOOLS

- The Spare Parts, tools and consumables specified in this Exhibit constitute the minimum requirements only and shall not be deemed exhaustive. The Concessionaire shall provide any additional Spare Parts, tools or consumables required to ensure continuous operations, fleet availability and compliance with performance standards under this Agreement, whether or not expressly listed herein.
- In the event that any spare part, component or tool specified in this Exhibit becomes obsolete, discontinued or unavailable due to technological changes, manufacturer decisions or supply chain constraints, the Concessionaire shall procure and maintain functionally equivalent or superior replacements fully compatible with the Buses and systems in operation, without any adjustment or claim against the GoS Parties.
- The Concessionaire shall identify critical Spare Parts whose non-availability may materially affect fleet availability or service continuity and shall maintain adequate buffer stock of such parts at each Bus Depot to ensure timely repairs and uninterrupted operations.
- The GoS or its appointed Independent Engineer may, upon reasonable notice, inspect Spare Parts inventories, storage conditions and stock records at any Bus Depot to verify compliance with this Exhibit.
- The costs associated with procuring, stocking, storing, replacing and replenishing Spare Parts, tools and consumables shall be deemed fully included in the Concessionaire's Bid Fare and financial model and shall not entitle the Concessionaire to any additional payment, compensation or adjustment.

EXHIBIT 4 - DEPOTS AND TRANSIT BUS SHELTERS (PURPOSE, SCOPE AND APPLICABILITY)

GENERAL

- This Exhibit 4 forms an integral part of the Technical Specifications. It sets out SMTA's requirements for the location, design, development, construction, commissioning, operation and maintenance of Bus Depots and Transit Bus Shelters for the Project.
- Bus Depot sites shall be provided by SMTA and/or the Government of Sindh in accordance with this Agreement. The Concessionaire shall be solely responsible, at its own cost and risk, for developing the Bus Depots and Transit Bus Shelters into fully functional facilities capable of supporting the operation, charging, maintenance and dispatch of the Project fleet.
- All Bus Depots shall, in aggregate, have adequate capacity to accommodate the full Project fleet and associated charging and maintenance infrastructure. The allocation and functional use of individual Depots shall be subject to approval by SMTA.
- All charging systems, electrical infrastructure and backup power facilities at Bus Depots shall be provided and governed in accordance with this Agreement.
- Transit Bus Shelters shall be designed and constructed to ensure passenger safety, accessibility, durability and operational integration, in accordance with Applicable Standards and SMTA's directions.
- All designs, drawings and specifications prepared under this Exhibit shall be subject to approval by SMTA or the Independent Engineer. Completion or approval of any facility shall not relieve the Concessionaire of its ongoing operation and maintenance obligations under the Agreement.

DEPOT LOCATIONS AND SITE DESCRIPTION

The following table identifies the Project Site proposed to be used for the development of Bus Depots for the Project. These Sites shall be utilized by the Concessionaire for the purposes of developing, operating and maintaining Bus Depots and associated facilities in accordance with this Agreement.

SR. No.	FACILITY NAMED	LOCATION	APPROX. MEASUREMENT
1	Model Depot and Adjacent CTTI, CWS & Central Stores Buildings (KTC)	D-1, SITE Manghopir Road - SITE.	Model Depot 3.67 Acre CTTI, CWS & Cn, C. Stores Buildings 4.3
2	Terminal @ 4K Cjowrangi	North Karachi	Wall-Bounded Terminal 4 Acre
3	Bus Terminal / Depot Sector 5-D	North Karachi	Wall-Bounded Terminal 4 Acre
4	Bus Terminal / Depot Sector 7-A	North Karachi	Wall-Bounded Terminal 4 Acre

[illegible]

FIGURE 4.2: The terminal site at 4K Chowrangi is located in Surjani Town, approximately 1 kilometre (approximately three minutes' drive) from 4K Chowrangi to the 4K Last Bus Stop in Sector 5-D, New Karachi Town.



FIGURE 4.4: The Bus Terminal / Depot in Sector 7-A / 7-B, North Karachi Town is located at the centre of a densely populated residential area, approximately 1.5 kilometres inside Sector 7-A / 7-B. The site occupies an area of approximately 4 acres and is intended to serve as a terminal-level Depot facility.



FIGURE 4.5: The Wahdat Colony Depot is located near Old Wahdat Colony, Hyderabad, and is intended to support Project operations within the Hyderabad service area.



SCOPE OF DEVELOPMENT ACTIVITIES - BUS DEPOTS AND TRANSIT BUS SHELTERS (TBSs)

1. GENERAL SCOPE

- 1.1 The Concessionaire shall be responsible for the design, development, construction, installation, testing and commissioning of Bus Depots and allied infrastructure, as well as Transit Bus Shelters, in Karachi and Hyderabad, in accordance with this Agreement, Schedule A, Applicable Laws and Applicable Standards.
- 1.2 The Concessionaire is required to construct/erect Transit Bus Shelters (TBS) at the locations designated by the SMTA, adhering to the approved prototype design and specified materials. These shelters must include seating arrangements to accommodate waiting passengers, including senior citizens. Furthermore, each TBS is to feature route maps indicating key stops, as well as contact information for passenger support services, prominently displayed on panels situated within the shelter.
- 1.3 The scope of works for each Bus Depot may vary depending on site conditions, size and operational role; however, each Bus Depot shall, at a minimum, comprise the components and systems described below.

2. BUS DEPOT BUILDINGS AND FACILITIES

- 2.1 The Concessionaire shall design and develop Bus Depots including, without limitation, the following permanent facilities:
 - parking sheds;
 - administration building;
 - drivers' building;
 - maintenance stores;
 - workshops;
 - toilet blocks;
 - guard rooms and watch towers; and
 - boundary wall with barbed/razor wire fencing.

3. DEPOT INFRASTRUCTURE AND UTILITIES

- 3.1 The Concessionaire shall design, construct and commission all necessary infrastructure works at each Bus Depot, including but not limited to:
 - firefighting systems, including pump rooms and underground water tanks of approved capacity;

- tube-wells, including associated rooms and installations;
- internal and external plumbing works;
- external water supply, sewerage and drainage systems;
- internal and external electrification works, including transformers, generators, rooms and pads;
- civil and electrical infrastructure for installation of slow and fast charging units and allied systems, in accordance with the approved charging proposal;
- automatic Bus washing bays;
- water recycling plants for Bus washing operations;
- CCTV surveillance systems;
- generator sets as backup electricity sources; and
- any other facility required for safe, efficient and continuous electric Bus Depot operations.

4. **PROJECT DESIGN PARAMETERS**

4.1 The Detailed Project Design and deliverables shall include:

- architectural designs and drawings;
- structural designs and drawings;
- mechanical, electrical and plumbing (MEP) designs and drawings;
- technical specifications;
- construction methodology;
- work schedules;
- detailed cost estimates; and
- technical design reports, including safety and security features.

4.2 The Concessionaire shall prepare and submit all drawings and documentation required to obtain building approvals and environmental permits from the relevant authorities.

4.3 All drawings shall comply with established drafting standards and Applicable Standards.

5. STRUCTURAL DESIGN REQUIREMENTS

- 5.1 Main buildings (including administration buildings) shall be designed as reinforced concrete frame structures, while ancillary buildings (including drivers' buildings, maintenance stores, electrical rooms and washing bays) may be designed as brick masonry structures, as appropriate.
- 5.2 The Concessionaire shall be responsible for carrying out comprehensive structural analysis and design for all buildings and structures forming part of the Bus Depots and associated facilities.
- 5.3 Structural analysis and design shall be performed using recognised and industry-accepted software, including ETABS, STAAD Pro and/or SAFE, as appropriate to the structure type.
- 5.4 The structural design shall comply with all applicable national and international codes and standards, including, without limitation:
 - (a) ACI Building Code 318-319;
 - (b) UBC-97;
 - (c) Pakistan Building Code 2007;
 - (d) relevant provisions of ASTM, ASCE 7-16, and other applicable standards.
- 5.5 The structural design shall account for all applicable loads, including:
 - (a) dead loads;
 - (b) live loads;
 - (c) collateral loads (including steel trusses and permanently attached equipment);
 - (d) wind loads;
 - (e) seismic (earthquake) loads; and
 - (f) temperature and other environmental loads,all in accordance with the applicable codes and accepted engineering practices.
- 5.6 Foundations for all structures shall be designed based on allowable bearing capacity determined through a site-specific soil investigation carried out by the Concessionaire, taking into account differential settlement considerations. The foundation design for each building shall provide for the structural capacity to support one additional floor for future vertical expansion.

- 5.7 Load combinations shall be developed and applied using the Ultimate Strength Design Method, as outlined in ACI 318-319.
- 5.8 The Concessionaire shall submit a comprehensive structural design report, which shall include, at a minimum:
- (a) design summary;
 - (b) applicable design criteria and assumptions;
 - (c) structural analysis models and outputs;
 - (d) detailed design calculations; and
 - (e) compliance statements with applicable codes and standards.
- 5.9 All structural drawings shall be prepared strictly in accordance with established drafting standards and shall be consistent with the approved design calculations and reports.
- 5.10 Material properties shall conform to the following minimum requirements:
- (a) Reinforcing steel shall conform to ASTM A615, with a minimum yield strength of 60,000 psi;
 - (b) Concrete shall conform to ACI 318-19;
 - (c) Structural steel shall conform to ASTM A572 Grade 60 or ASTM A36, as applicable.
- 5.11 All reinforced concrete components shall be designed using the Ultimate Strength Design Method in accordance with ACI 318-19. Liquid-retaining and sanitary engineering structures, including tanks, pits and other water-containment systems, shall be designed and detailed in accordance with ACI Committee 350R-01 guidelines.
- 5.12 All steel structures shall be designed in accordance with AISI, AISC Manual of Steel Construction, UBC-97, and the Building Code of Pakistan, as applicable.
- 5.13 Structural deflections shall remain within prescribed serviceability limits, and all steel structure components shall be capable of supporting design loads without:
- (a) permanent deformation;
 - (b) loss of water-tightness; or
 - (c) disengagement of any component of the installation.

6. WATER SUPPLY, SEWERAGE AND DRAINAGE WORKS

- 6.1 The Concessionaire shall be responsible for the design, construction, testing, commissioning, operation and maintenance of all tube-well, water supply, sewerage and drainage systems required for the Bus Depots and associated facilities.
- 6.2 The scope of works shall include, without limitation:
- (a) boring and installation of tube-wells of adequate capacity to meet domestic, operational, washing and firefighting requirements;
 - (b) construction of underground water storage tanks of sufficient capacity to meet firefighting and daily operational demand;
 - (c) design and construction of complete water supply distribution networks serving administration buildings, drivers' facilities and maintenance stores;
 - (d) design and construction of water supply systems for automatic washing bays;
 - (e) design and construction of complete sewerage and drainage networks; and
 - (f) provision of water availability for firefighting in accordance with Applicable Laws.
- 6.3 Water quality shall be tested and certified by a recognised laboratory such as PCSIR or an equivalent accredited laboratory and shall meet international drinking water standards, where potable water is required. Where necessary, appropriate water treatment solutions shall be proposed and implemented by the Concessionaire.
- 6.4 All tube-well, water supply, sewerage and drainage systems shall be designed and constructed in accordance with applicable standards, codes and engineering best practices.
- 6.5 Pipe laying requirements shall include, at a minimum:
- (a) minimum cover depth of not less than 3 feet from finished ground level;
 - (b) provision of a minimum 4-inch-thick coarse sand cushion below and 12-inch cushion above the pipes;
 - (c) where minimum cover cannot be achieved, provision of concrete protection as per site conditions and approved design.
- 6.6 Pipe material requirements shall include: HDPE pipes conforming to ISO 4427, DIN 8074/75, and PS 3580:1994, minimum PN-10, PE-100, or higher-pressure rating where required.
- 6.7 The sewerage system shall comprise:

- (a) precast RCC sewer pipes conforming to ASTM C14 and ASTM C76, minimum strength Class III, wall thickness B;
 - (b) brick masonry manholes (1:3 cement sand ratio) of minimum 4 feet depth, with drop manhole arrangements where the difference in invert levels exceeds 2 feet;
 - (c) gravity-based sewage conveyance to sewage treatment facilities and final disposal.
- 6.8 Adequate stormwater drainage shall be provided for efficient rainwater disposal. Drains shall be constructed in RCC as per approved design and covered with mild steel grating, precast RCC planks, or RCC slabs at road and walkway crossings.

7. ELECTRICAL WORKS

- 7.1 The Concessionaire shall be responsible for the design, supply, installation, testing and commissioning of all internal and external electrical works for Bus Depots and associated facilities.
- 7.2 Electrical and lighting systems shall be designed to:
- (a) control glare and minimise light trespass onto adjacent properties;
 - (b) minimise direct upward light emission;
 - (c) eliminate dark spots;
 - (d) enhance security; and
 - (e) ensure energy-efficient operations.
- 7.3 In designing the electrical systems, the Concessionaire shall ensure that:
- (a) each building is independently metered and provided with access to telecommunications infrastructure for internet connectivity;
 - (b) the electricity network is underground, conforms to LESCO or relevant DISCO standards, and is connected to the grid;
 - (c) lighting layouts reduce crime by eliminating poorly lit areas at entrances, exits, boundary walls and circulation zones;
 - (d) all lighting fixtures are energy-efficient and comply with relevant international standards;
 - (e) all PVC conduits, light poles, LT cables, distribution boards and earthing systems comply with applicable international standards and codes.
- 7.4 Electrical materials and installations shall include, at a minimum:

- (a) concealed wiring throughout buildings;
 - (b) power cables from Pakistan Cables, Newage Cables, Pioneer Cables, Fast Cables, or GoS Parties-approved equivalents;
 - (c) PVC/UPVC conduits conforming to BS-6099;
 - (d) switches and sockets conforming to BS-1363, BS-607 and BS-7671:2001;
 - (e) independent distribution boards for each building;
 - (f) adequate lighting, fans and power outlets in all rooms and offices.
- 7.5 Gas supply, where required, shall be provided through GI pipelines conforming to BS-1387, medium quality.
- 7.6 The Concessionaire shall also provide, install and commission the following systems in accordance with approved designs and standards:
- (a) diesel generators of approved capacity;
 - (b) fire-fighting systems with underground water tanks;
 - (c) solar photovoltaic systems;
 - (d) slow and fast charging units;
 - (e) automatic washing bays;
 - (f) water recycling plants; and
 - (g) CCTV surveillance systems.

8. LANDSCAPING AND HORTICULTURE WORKS

- 8.1 The Concessionaire shall be responsible for landscaping and horticulture works within the Bus Depots in accordance with approved plans and standards.
- 8.2 Landscaping works shall include, without limitation:
- (a) clearing and grubbing of the site;
 - (b) cutting of trees only where essential and disposal in accordance with SMTA instructions;
 - (c) grading and dressing of landscape areas as per approved layouts;

- (d) removal of existing topsoil to a depth of 12 inches and replacement with 12 inches of sweet earth mixed with manure in a one-third ratio;
- (e) planting of approved varieties of trees and plants.

9. PROJECT CONSTRUCTION PARAMETERS

- 9.1 The Concessionaire shall execute all construction works with due professional care and diligence, strictly in accordance with the approved scope, Detailed Designs and Drawings, Technical Specifications, Project Completion Schedule, and the provisions of the Concession Agreement.
- 9.2 No finishing materials, fixtures or architectural elements shall be ordered, supplied, installed or fixed without the prior written approval of the Independent Engineer.
- 9.3 Architectural finishes shall include, without limitation, flooring, doors, windows, paints, false ceilings, stair railings and all associated fixtures. All finishes shall be of approved quality, durability and workmanship and shall conform to the approved designs and specifications.
- 9.4 The Concessionaire shall construct all boundary walls, razor wire fencing, watch towers and guard rooms in accordance with the approved master plan, security requirements and applicable standards.
- 9.5 All water supply and plumbing works shall be designed, executed, tested and commissioned in accordance with the approved Technical Specifications and PC-I/PCI documents and shall be fully integrated with the overall water and sewerage systems of the Bus Depots.
- 9.6 All internal and external electrical works shall be carried out strictly in accordance with the approved Technical Specifications and PC-I / PCI, and shall comply with applicable codes and standards. Without limitation:
 - (a) all wiring shall be concealed;
 - (b) power cables shall be from Pakistan Cables, Newage Cables, Pioneer Cables, Fast Cables, or other SMTA-approved equivalent manufacturers;
 - (c) wiring conduits shall be PVC/UPVC, locally manufactured, conforming to BS-6099;
 - (d) all switches and sockets shall be locally manufactured and conform to BS-1363, BS-607 and BS-7671:2001;
 - (e) each building shall be provided with an independent distribution board; and
 - (f) each room and office shall be furnished with adequate lighting, fans and power sockets from approved manufacturers and distributors.

- 9.7 Gas supply within buildings, where required, shall be provided through GI pipelines conforming to BS-1387, medium quality, and installed in accordance with applicable safety standards.
- 9.8 The Concessionaire shall provide, install, test and commission the following systems and facilities in accordance with the approved master plan, Technical Specifications and applicable standards:
- (a) diesel generator sets of approved manufacture and capacity;
 - (b) fire-fighting systems and equipment, including underground water storage tanks;
 - (c) solar photovoltaic systems;
 - (d) slow and fast electric vehicle charging units;
 - (e) automatic washing bays;
 - (f) water recycling plants; and
 - (g) CCTV surveillance systems.
- 9.9 All such systems shall be fully integrated with Depot operations and maintained in serviceable condition throughout the Term.

10. CONSTRUCTION PERFORMANCE STANDARDS

The Concessionaire shall carry out all construction works in strict compliance with the following performance standards and covenants:

- 10.1 A detailed Project Completion Schedule shall be submitted to SMTA for approval prior to commencement of any construction activities. The approved schedule shall be binding on the Concessionaire and shall be updated periodically as required by the Independent Engineer.
- 10.2 Comprehensive construction safety plans shall be submitted to SMTA for approval prior to commencement of works. Appropriate safety signboards, warnings and information displays shall be installed and maintained at all construction sites in both English and Urdu to safeguard workers and the general public.
- 10.3 All construction materials shall be procured only from pre-approved sources and shall be supported by relevant quality certifications, test reports and compliance documentation.
- 10.4 All quality control tests, including laboratory testing of construction materials, shall be carried out in accordance with ACI, ASTM, AASHTO and other applicable international and local standards, in the presence of the Project Management Consultant (PMC), and entirely at the cost of the Concessionaire.

- 10.5 All tests required upon completion of construction works shall be conducted to the satisfaction of the Independent Engineer prior to issuance of any completion or acceptance certification.
- 10.6 Complete and accurate as-built drawings for all disciplines shall be submitted to SMTA on the Project Completion Date, reflecting the final constructed condition of the Works.
- 10.7 Upon commencement of the Operations and Maintenance Period, all construction sites shall be cleared of debris, surplus materials, construction equipment and machinery. The sites shall be handed over in a clean, safe and operational condition.

11. PROJECT GENERAL REQUIREMENTS

- 11.1 The Concessionaire shall fully comply with all measures, conditions and mitigation requirements set out in the approved Environmental Impact Assessment/Environmental Impact Report (if applicable), and shall implement all environmental management and mitigation strategies to the satisfaction of SMTA, the Independent Engineer, and all relevant regulatory authorities. No deviation from approved environmental measures shall be undertaken without prior written approval of SMTA and the relevant competent authority.
- 11.2 Any fabrication, procurement or execution of works carried out by the Concessionaire without prior approval of the Independent Engineer shall be undertaken strictly at the sole risk and cost of the Concessionaire.
- 11.3 If any such unapproved works are subsequently required to be modified, replaced or removed pursuant to the directions of the Independent Engineer, the Concessionaire shall bear all associated costs, delays and consequences, without entitlement to any extension of time or compensation.
- 11.4 All official project correspondence, submissions, approvals, instructions and records shall be maintained in written form, in a clear and auditable manner, in accordance with the document control procedures approved by SMTA and the Independent Engineer.
- 11.5 Upon completion of the Works, the Concessionaire shall prepare and submit complete and accurate as-built drawings for all disciplines, documenting the final design and construction status following installation and commissioning.
- 11.6 The as-built drawings shall:
- (a) reflect all modifications, variations and changes made during construction, installation and commissioning;
 - (b) incorporate the latest approved revisions to all design documents; and
 - (c) be consistent with the actual constructed condition of the Works.
- 11.7 The Concessionaire shall submit three (3) hard copies and electronic copies of the as-built drawings for all disciplines to Independent Engineer/SMTA within three (3) months of

issuance of the Taking-Over Certificate (TOC), or such other period as may be approved by the Independent Engineer.

- 11.8 All works relating to roads, pavements, buildings and associated civil infrastructure shall be executed in accordance with the National Highway Authority (NHA) Specifications, in addition to the Applicable Laws, approved Technical Specifications and standards referenced in this Schedule.

12. PERSONNEL REQUIREMENTS

12.1 DESIGN PHASE PERSONNEL

- 12.1.1 The Concessionaire shall deploy suitably qualified, experienced and competent personnel for the design, construction and commissioning of Bus Depots and associated infrastructure. All key personnel shall possess demonstrated experience in projects of similar nature, scale and complexity.
- 12.1.2 The deployment of personnel shall be subject to review by the Independent Engineer, and any replacement of key personnel shall require prior approval.
- 12.1.3 During the design phase, the Concessionaire shall engage a Part-Time Design Team, available for coordination, design development and occasional site visits as required to resolve design, constructability and compliance issues.
- 12.1.4 The Design Team shall include, at a minimum, the following professionals, each having not less than fifteen (15) years of relevant experience in similar works:
- (a) Architect
 - (b) Structural Engineer
 - (c) Building Services / Public Health Engineer
 - (d) HVAC / Mechanical Engineer
 - (e) Electrical Engineer
 - (f) Geotechnical Engineer
 - (g) Design Coordinator
- 12.1.5 The Design Coordinator shall be responsible for inter-disciplinary coordination, submission management, and ensuring consistency between architectural, structural and MEP designs.

12.2 CONSTRUCTION PHASE PERSONNEL (FOR EACH DEPOT)

- 12.2.1 For each Bus Depot under construction, the Concessionaire shall deploy the following minimum construction staff on a full-time basis:

SR No.	POSITION	MINIMUM EXPERIENCE IN SIMILAR WORK
1	Project Manager	20 Years
2	Construction Manager	15 Years

12.3 TRANSIT BUS SHELTERS CONCEPT DESIGN

- 12.3.1 The Company with the prior approval of Independent Engineer shall alter / change the proposed Bus Transit Shelter design.



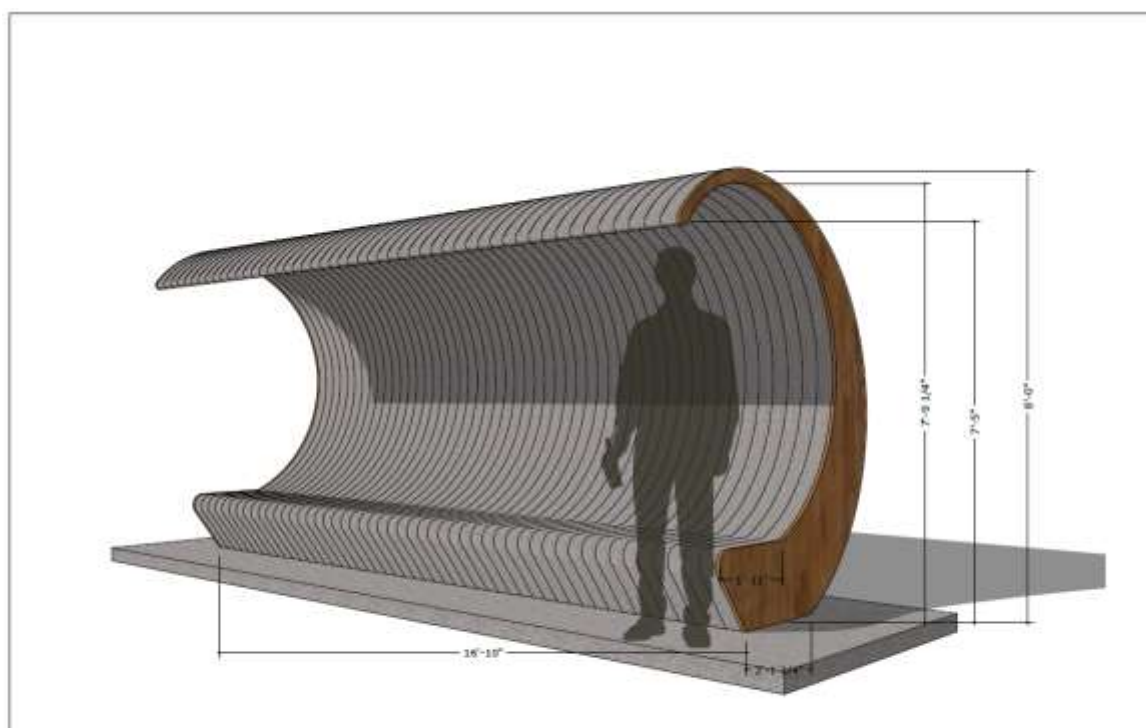
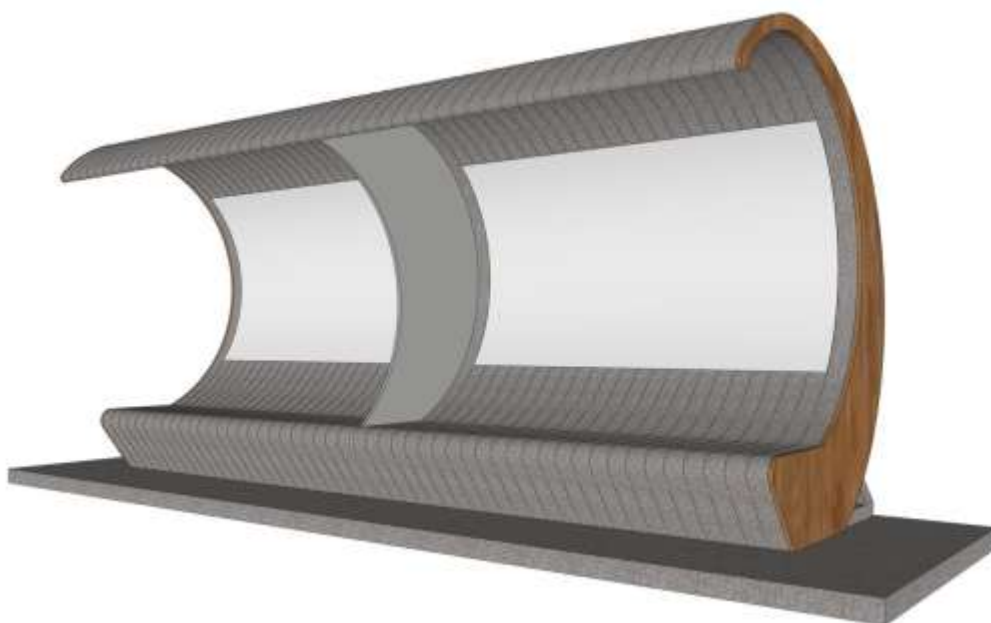


EXHIBIT 5 - WASHING PLANT SPECIFICATIONS

This Exhibit 5 forms an integral part of the **SCHEDULE A (*Technical Specifications*)** and shall be read together with Section 7.10. This Exhibit sets out SMTA's technical requirements for the design, development, installation, commissioning, operation and maintenance of the Bus Washing Plant forming part of the Project.

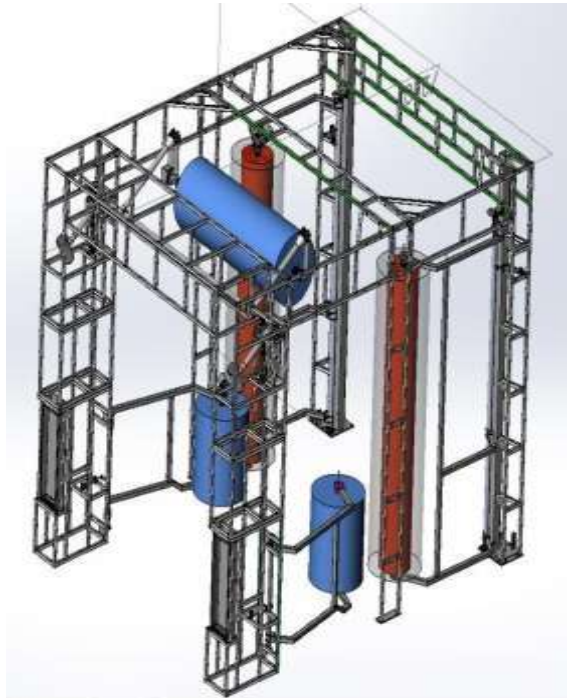
1. **DESCRIPTION: FULLY AUTOMATIC DRIVE-THROUGH BUS WASH MACHINE**

1.1 The Bus Washing Plant shall comprise a fully automatic drive-through washing system suitable for cleaning the Buses, and shall, at a minimum, incorporate the following features:

- (a) automatic start and stop functionality activated through photoelectric or equivalent sensors;
- (b) hot-dip galvanised structural frame designed to ensure structural stability, corrosion resistance and long service life;
- (c) a programmable logic controller (PLC)–based electronic control panel system enabling automated operation, monitoring and ease of maintenance;
- (d) multiple nylon brushes designed to ensure effective and uniform washing performance while minimising noise levels and preventing damage to the Buses;
- (e) high-quality pumps, motors and control components complying with Applicable Standards and suitable for continuous commercial operation;
- (f) top-mounted brush sensors or equivalent protective mechanisms to prevent damage to the Buses during washing operations;
- (g) electric motors with a minimum ingress protection rating of IP67, suitable for operation in wet and high-humidity conditions;
- (h) fully automatic and continuous washing capability for the exterior surfaces of the Buses; and
- (i) provision of on-site installation support and operational and maintenance training for personnel designated by the Concessionaire.

DESCRIPTION	(FIVE BRUSHES DRIVE-THROUGH BUS AND TRUCK WASH)
Machine size (L× W× H)	7200x5400x4050mm
Assembling range (L× W× H)	9500x5400x4850mm
Available size for Bus (W×H)	2700x3400mm
Power (KW)	3 PHASE 15KW
Water consumption	210-300L/vehicle
Wash speed	60 vehicle/hour

Front big brush (Nylon material brush)	2 sets
Back small brush (Nylon material brush)	2 sets
Top brush (Nylon material brush)	1 set





SINDH MASS TRANSIT AUTHORITY

REQUEST FOR PROPOSALS

FOR

AWARD OF CONCESSION

IN RESPECT OF

**THE CONCESSION TO DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND
TRANSFER**

THE PEOPLE'S GREEN TRANSPORT PROJECT

DECEMBER 29, 2025

LETTER OF INVITATION

*Capitalized terms used but not otherwise defined herein shall have the meaning given to them in **VOLUME I (TENDER PROCEDURE)** of the RFP.*

SMTA intends to engage a private party on a PPP basis to DBFOMT the E-Bus Assets in the cities of Karachi and Hyderabad, Pakistan. The Project represents a transformative step towards modernizing urban mobility in Sindh, promoting sustainable public transport, and reducing the province's carbon footprint. For details on the Project background, scope of work and specifications, please refer to **VOLUME II (TECHNICAL SPECIFICATIONS)** of the RFP.

SMTA hereby invites Interested Parties to participate in the Tender Procedure and to submit their Bids for the Project in accordance with the requirements of the Applicable Evaluation Documents.

Bidders shall submit only one (1) Bid, comprising one (1) Technical Proposal and one (1) Financial Proposal, along with all supporting documents (as applicable), as identified in the RFP, exclusively *via* SPPRA EPADS which can be accessed using the link provided in Section 9 (*Data Sheet*) of the Instructions to Bidders, no later than **12:00 hours PST** on the Bid Submission Deadline. Physical submission of Bids shall not be accepted except for the purpose of submitting the original Bid Security and any other documents specified in the RFP.

The Technical Proposals will be opened on the Bid Submission Deadline at **13:00 hours PST** in the presence of the representatives of the Bidders who may wish to attend. After completion of evaluation of the Technical Proposals, Bidders who have submitted responsive Technical Proposals in terms of the Applicable Evaluation Documents shall be invited to attend the opening of the Financial Proposals. The date, time and location of the opening of Financial Proposals shall be advised in writing to all technically qualified Bidders by SMTA.

All Bidders are required to furnish, as part of their Technical Proposals, the original Bid Security, equivalent to Pakistani Rupees Four Hundred and Twenty-Five Million only (PKR 425,000,000/-). The original Bid Security shall be furnished at the submission address indicated in the Data Sheet no later than **12:00 hours PST** on the Bid Submission Deadline either through mail or physically by hand (in a sealed envelope). The scanned copy of the Bid Security shall be uploaded by Bidders together with the Technical Proposal *via* SPPRA EPADS no later than **12:00 hours PST** on the Bid Submission Deadline. The Bid Security shall be submitted either in the form of a pay order, demand draft, deposit at call or an irrevocable, unconditional and on-demand bank guarantee in the form attached as Bidding Form T22 (*Form of Bid Security*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, issued in accordance with the requirements set out in the Instructions to Bidders.

It is mandatory for the Bids to be prepared using the standard formats for Technical Proposals and Financial Proposals, as provided in the RFP. Bids that are not prepared on the prescribed formats may not be considered for evaluation by SMTA. If any information required in the prescribed forms is found missing, or written elsewhere, no credit will be given during evaluation and may lead to rejection of the Bid.

SMTA may amend the RFP by issuing an addendum or a corrigendum (as applicable) as per the requirements specified in the RFP, at any time prior to the Bid Submission Deadline.

Subject to the provisions of the Applicable Evaluation Documents, SMTA reserves the right to cancel the Tender Procedure at any time.

SMTA/GoS reserves all rights (which are exercisable by SMTA/GoS in its sole and absolute discretion) to:

- (a) suspend, cancel, discontinue, modify, extend or reinitiate the Tender Procedure;
- (b) accept or reject any Bid or disqualify any or all Bidders;
- (c) modify all or any dates stated in the RFP; or
- (d) amend the RFP, scope of Project or make clarifications thereof,

at any time without any obligation to inform any Interested Party or the Bidder of the grounds, justification, or reason for such action and without liability, in accordance with the Applicable Evaluation Documents.

Interested Parties may acquire the RFP before the Bid Submission Deadline, either: (a) physically, by submitting a written application at the address provided below, specifying their full name, address and contact details; or (b) electronically, by downloading from SPPRA EPADS and/or the websites of SMTA and PPP Unit, and intimating SMTA in writing through a letter or via email, its full name, address and contact details.

Designation: MANAGING DIRECTOR, SMTA

Address: D43/1 Shahrah-e-Ghalib, Clifton Block 2, Karachi, Sindh, Pakistan

Phone No.: +92 21 99222193; +92 21 99332207

Fax No.: +92 21 99332206

Email: info.p3proc@gmail.com

Websites: SMTA - <https://smta.gos.pk>

PPP Unit - <https://www.pppunitsindh.gov.pk>

SPPRA EPADS - <https://portalsindh.eprocure.gov.pk>

Sincerely,

MANAGING DIRECTOR, SMTA
THE PEOPLE'S GREEN TRANSPORT PROJECT
SINDH MASS TRANSIT AUTHORITY

IMPORTANT NOTICE

*Capitalized terms used herein and not otherwise defined shall have the meaning given to them in **VOLUME I (TENDER PROCEDURE)** of the RFP.*

The RFP, together with all volumes, attachments, forms, annexures and appendices, attached thereto, is issued by SMTA and is provided to the recipients solely for use in preparing and submitting the Bids.

Bids submitted in response to the RFP by the Bidders shall be upon full understanding and agreement of all terms of the RFP and such submission shall be deemed as an acceptance to all the terms and conditions stated in the RFP.

No GoS Party makes any representations (express or implied) or warranties as to the accuracy or completeness of the information contained in the RFP, or in any other document or information made available to a person in connection with the Project (including the Tender Procedure); and the same shall have no liability for the RFP or for any other written or oral communication transmitted to the recipient in the course of the recipient's evaluation of the Project. No GoS Party shall be liable to reimburse or compensate any recipient for any costs, fees, damages or expenses incurred by the recipient in evaluating or acting upon the RFP or otherwise in connection with the Project.

The RFP shall neither constitute a solicitation to invest, or otherwise participate, in the Project (including the Tender Procedure), nor shall it constitute a guarantee or commitment of any manner on the part of any GoS Party that the Project will be awarded or will otherwise proceed. SMTA reserves the right, in its full discretion, to modify the RFP and/or the Project requirements at any time to the fullest extent permitted by applicable Laws and shall not be liable to reimburse or compensate the recipient for any costs, taxes, expenses or damages incurred by the recipient in such an event.

SMTA may amend the RFP by issuing an addendum or a corrigendum (as applicable) as per the requirements specified in the RFP, at any time prior to the Bid Submission Deadline.

Subject to the provisions of the Applicable Evaluation Documents, SMTA reserves the right to cancel the Tender Procedure at any time.

The interpretation of any aspect of the RFP will be made solely by SMTA/GoS and shall be final and binding on all the Interested Parties and the Bidders.

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- **VOLUME I - TENDER PROCEDURE**
- **VOLUME II - TECHNICAL SPECIFICATIONS**
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VOLUME I - TENDER PROCEDURE

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PART 1
INSTRUCTIONS TO BIDDERS

GLOSSARY

In the RFP (including the Schedules), unless the context otherwise requires, capitalized terms used herein and not otherwise defined shall have the meaning given to them in the Concession Agreement (as defined below). In addition, the following terms shall have the following meaning, unless the context otherwise requires:

TERM	DEFINITION
Acceptable Bank	Has the meaning given to it in the Concession Agreement.
Acceptance of Notification of Award	Has the meaning given to it in Section 7.3.3 of the Instructions to Bidders.
Affiliate	With respect to a person (being the Bidder or, where the Bidder is a Consortium, each Consortium Member), means: (a) any company or entity that directly or indirectly Controls or is Controlled by, or is under common Control with, such person; (b) any director, senior executive or manager either of such person or of any company or entity referred to in paragraph (a) above; (c) any consultant, agent or representative supporting such person in connection with the Project (including the Tender Procedure for the Project); and/or (d) any other person with an aggregate ultimate beneficial interest in at least five percent (5%) of the share capital or ownership interest in such person (howsoever held).
Apostille Convention	The Convention Abolishing the Requirement of Legalisation for Foreign Public Documents concluded on 5 October 1961.
Applicable Evaluation Documents	Collectively: (a) the Sindh PPP Act; (b) the SPPRA Act; (c) the SPPRA Rules; (d) the SPPRA Guidelines; (e) any applicable order, instruction, guideline, regulations or instrument issued under the Sindh PPP Act, the SPPRA Act and/or the SPPRA Rules; and (f) the RFP.
Best Evaluated Bid	A Bid which is determined to be the ‘ <i>best evaluated bid</i> ’ for the award of Concession in terms of the requirements of the Applicable Evaluation Documents.
Bid	The proposal (constituting the Technical Proposal and Financial Proposal) submitted by a Bidder in response to the RFP, which is prepared and submitted in accordance with this RFP.
Bid Sheet	The bid sheet in Microsoft Excel spreadsheet form, consistent with the Technical Proposal, setting out all the amounts in PKR and includes all the information required in terms of the Bidding Form F2-A (<i>Bid Sheet</i>) of Part 2 (<i>Bidding Forms</i>) of VOLUME I (TENDER PROCEDURE) of the RFP.
Bid Price	The price quoted by a Bidder in its Financial Proposal, calculated and set out in the Bid Sheet based on the principles set out in Part 2 (<i>Financial Evaluation Criteria</i>) of Annexure B (<i>Evaluation Criteria</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP.
Bid Security	Has the meaning given to it in Section 4.7.1 of the Instructions to Bidders.
Bid Submission Deadline	The last date for submission of Bids as specified in the Data Sheet, as may be extended by SMTA in accordance with the Applicable

	Evaluation Documents.
Bid Validity Period	The period of one hundred twenty (120) Days starting from the Bid Submission Deadline, as may be extended in accordance with the Applicable Evaluation Documents.
Bidder	The Interested Party that has submitted a Bid in response to the RFP, either as a single entity or as a Consortium.
Bidding Forms	The forms provided in Part 2 (<i>Bidding Forms</i>) of VOLUME I (TENDER PROCEDURE) of the RFP, that are required to be submitted with the Technical Proposals and the Financial Proposals.
Bus	Has the meaning given to it in the Concession Agreement.
Bus (Bid)	A motorized passenger vehicle designed and constructed for the carriage of passengers on a commercial, public transport, or contractual service basis, and which satisfies all of the following minimum characteristics: (a) the vehicle must have a seating and standing capacity of not less than twenty-five (25) passengers; (b) the vehicle shall be a single-unit vehicle (not a van or coaster-type minibus), purpose-built or factory-built for public transport operations, including (without limitation): (i) standard intra-city buses; (ii) inter-city buses; (iii) BRT buses; (iv) electric buses (battery electric buses); and (v) CNG, diesel, or hybrid buses; (c) Excludes: (i) vans or Hiace-type vehicles; (ii) minibuses or coasters with capacity below twenty-five (25) passengers; (iii) ride-hailing or shuttle vans; and (iv) non-commercial or privately used vehicles.
Bus Operator	The bus operator proposed by a Bidder in terms of Section 2.1.12 of the Instructions to Bidders, which will be evaluated by TFEC under this RFP; and may include a Bidder itself in case the Bidder intends to act as the Bus Operator for the Project.
Bus Operator Criteria	The criteria for the evaluation of the Bus Operator set out in Annexure A (<i>Basic Information Requirements</i>) of Part 4 (<i>Annexures</i>) and Part 1 (<i>Technical Evaluation Criteria</i>) of Annexure B (<i>Evaluation Criteria</i>) of Part 4 (<i>Annexures</i>), in each case, of VOLUME I (TENDER PROCEDURE) of the RFP.
Business Day	Has the meaning given to it in the Concession Agreement.
Capital Cost Recovery Payment	Has the meaning given to it in the Concession Agreement.
Capital Cost Recovery Payment Account (GoS)	Has the meaning given to it in the Concession Agreement.
Capital Cost Recovery	Has the meaning given to it in the Concession Agreement.

Payment Account (GoS) Funding Amount	
Capital Cost Recovery Payment Funding Date	Has the meaning given to it in the Concession Agreement.
Capital Cost Recovery Payment Rate (Bid)	The per KM Capital Cost Recovery Payment rate, quoted by a Bidder in its Financial Proposal, and calculated in accordance with Part 2 (<i>Financial Evaluation Criteria</i>) of Annexure B (<i>Evaluation Criteria</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP, as set out in the Bid Sheet (<i>Bidding Form F2-A</i>).
Carbon Credits	Has the meaning given to it in the Concession Agreement.
COD	Has the meaning given to it in the Concession Agreement.
Commencement Date	Has the meaning given to it in the Concession Agreement.
Commuter	Has the meaning given to it in the Concession Agreement.
Commuters (Committed)	The number of Commuters committed by the Successful Bidder in its Bid for each Month, based on four hundred and thirty (430) Commuters per Bus per Day, for purposes of determination of the Fare Revenue (GoS Share).
Concession	Has the meaning given to it in the Concession Agreement.
Concession Agreement	The agreement titled “ <i>CONCESSION AGREEMENT</i> ” attached in VOLUME III (CONCESSION AGREEMENT) of the RFP.
Concession Period	Has the meaning given to it in the Concession Agreement.
Concessionaire	The SPV to be established and incorporated under the Law of Pakistan by the Successful Bidder for the purposes of undertaking the Project.
Conditions Precedent	Has the meaning given to it in the Concession Agreement.
Consortium	A Bidder comprising two (2) or more Consortium Members, formed to submit the Bid, in accordance with the requirements of the Applicable Evaluation Documents; provided, that the maximum number of Consortium Members including the Lead Developer shall be three (3).
Consortium Authorized Representative	Has the meaning given to it in Section 2.1.2(f) of the Instructions to Bidders.
Consortium Member	Each member of a Consortium, including the Lead Developer.
Consortium Undertaking	Has the meaning given to it in Section 2.1.2(d) of the Instructions to Bidders.
Construction Contractor	Has the meaning given to it in the Concession Agreement.
Construction Contractor Criteria	Has the meaning given to it in the Concession Agreement.
Construction Works	Has the meaning given to it in the Concession Agreement.
Control	Has the meaning given to it in the Concession Agreement.
Data Sheet	The data sheet provided in Section 9 (<i>Data Sheet</i>) of the Instructions to Bidders.
Day	Has the meaning given to it in the Concession Agreement.
DBFOMT	Design, build, finance, operate, maintain and transfer.
Debt Principal Recovery Charge	Has the meaning given to it in the Concession Agreement.
Debt Interest Recovery Charge	Has the meaning given to it in the Concession Agreement.
Development Activities	Has the meaning given to it in the Concession Agreement.

Development Period	Has the meaning given to it in the Concession Agreement.
Development Period Performance Security	Has the meaning given to it in the Concession Agreement.
Development Period Performance Security Expiry Date	Has the meaning given to it in the Concession Agreement.
E-Buses Assets	Has the meaning given to it in the Concession Agreement.
Eligible Country	All countries with whom Islamic Republic of Pakistan has commercial/trade relations and those which are not Sanctioned Countries.
Eligible Project	Has the meaning given to it in the Annexure A (<i>Basic Information Requirements</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP.
Equity Recovery Charge	Has the meaning given to it in the Concession Agreement.
Estimated Project Cost	The cost specified by a Bidder in Bidding Form F1 (<i>Letter of Financial Proposal</i>) of Part 2 (<i>Financial Evaluation Criteria</i>) of Annexure B (<i>Evaluation Criteria</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP, submitted as part of the Financial Proposal.
Fare	Has the meaning given to it in the Concession Agreement.
Fare Rate (Notified)	The Fare rate(s) notified from time to time by SMTA in accordance with SCHEDULE N (Fare Structure) .
Fare Rate (O&M Costs)	The Fare rate per Commuter, quoted by a Bidder in its Financial Proposal, and calculated in accordance with Part 2 (<i>Financial Evaluation Criteria</i>) of Annexure B (<i>Evaluation Criteria</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP, as set out in the Bid Sheet (<i>Bidding Form F2-A</i>), which shall be subject to adjustment in accordance with the terms of SCHEDULE N (<i>Fare Structure</i>) of the Concession Agreement.
Fare Rate Escalation Date	Has the meaning given to it in the Concession Agreement.
Fare Revenue	Has the meaning given to it in the Concession Agreement.
Fare Revenue (Concessionaire Share)	Has the meaning given to it in the Concession Agreement.
Fare Revenue (GoS Share)	Has the meaning given to it in the Concession Agreement.
Fare Revenue (GoS) Share Period (First)	Has the meaning given to it in Part 2 (<i>Financial Evaluation Criteria</i>) of Annexure B (<i>Evaluation Criteria</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP.
Final Expiry Date	Has the meaning given to it in the Concession Agreement.
Financial Close	Has the meaning given to it in the Concession Agreement.
Financial Proposal	The financial proposal (including all forms, documents and information required in terms of the RFP and submitted therewith), submitted by a Bidder as part of its Bid pursuant to the RFP.
GoS	Has the meaning given to it in the Concession Agreement.
GoS Account One	Has the meaning given to it in the Concession Agreement.
GoS Parties	Collectively, SMTA, the Government of Sindh and the TFEC, together with their respective consultants, advisors, employees,

	personnel and agents, and, in the case of the Government of Sindh, also includes all any ministry, department (including attached departments), autonomous body of Government of Sindh, local government or any organization or corporation owned or controlled by the Government of Sindh.
GoS Project Document(s)	Has the meaning given to it in the Concession Agreement.
Guaranteed Annual Mileage	Has the meaning given to it in the Concession Agreement.
Guaranteed Availability	Has the meaning given to it in the Concession Agreement.
Handover Conditions	Has the meaning given to it in the Concession Agreement.
IFRS	International Financial Reporting Standards.
Independent Auditor	Has the meaning given to it in the Concession Agreement.
Independent Engineer	Has the meaning given to it in the Concession Agreement.
Insurance Cost	Has the meaning given to it in the Concession Agreement.
Instructions to Bidders	The Instructions to Bidders set out in Part 1 (<i>Instructions to Bidders</i>) of VOLUME I (TENDER PROCEDURE) of the RFP.
Integrity Pact	Has the meaning given to it in Section 8.3 (<i>Integrity Pact</i>) of the Instructions to Bidders.
Interested Party	A person (including a company, firm, body corporate or other legal entity, but not an individual), either as a single entity or a Consortium formed by two (2) or more persons, who has purchased the RFP from SMTA.
IZP	Has the meaning given to it in the Concession Agreement.
IZP Guarantee Charge	Has the meaning given to it in the Concession Agreement.
IZP Guarantee Instrument	Has the meaning given to it in the Concession Agreement.
KM	Kilometre.
Law	Has the meaning given to it in the Concession Agreement.
Lead Developer	The Bidder, as a single entity, or in case of a Consortium, the relevant Consortium Member, identified in the Technical Proposal, fulfilling the Lead Developer Criteria.
Lead Developer Criteria	The criteria for the evaluation of the Lead Developer set out in Annexure A (<i>Basic Information Requirements</i>) of Part 4 (<i>Annexures</i>) and Part 1 (<i>Technical Evaluation Criteria</i>) of Annexure B (<i>Evaluation Criteria</i>) of Part 4 (<i>Annexures</i>), in each case, of VOLUME I (TENDER PROCEDURE) of the RFP.
Long-Term Capital Financing Experience	Has the meaning given to it in the Annexure A (<i>Basic Information Requirements</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP.
Net Worth	Has the meaning given to it in Section 6.5.6(a) of the Instructions to Bidders.
Non-Fare Revenue	Has the meaning given to it in the Concession Agreement.
Non-Fare Revenue (Concessionaire Share)	Has the meaning given to it in the Concession Agreement.
Non-Fare Revenue (GoS Share)	Has the meaning given to it in the Concession Agreement.
Non-Power Component	Has the meaning given to it in the Concession Agreement.
Notification of Award	The notification of award to be issued by SMTA to the Successful Bidder as per Section 7.3.1 of the Instructions to Bidders.
O&M Activities	Has the meaning given to it in the Concession Agreement.

O&M Costs	Has the meaning given to it in the Concession Agreement.
Operations Period	Has the meaning given to it in the Concession Agreement.
Operator Margin	Has the meaning given to it in the Concession Agreement.
PDF	The portable document format used for submitting the Technical Proposal and Financial Proposal (and any other documents required by the RFP) electronically on the SPPRA EPADS in accordance with the Submission Guidelines.
PKR	Pakistani Rupees, the lawful currency of the Islamic Republic of Pakistan.
Power Component	Has the meaning given to it in the Concession Agreement.
PPP	Public-Private Partnership.
PPP Unit	The PPP Unit established under Section 6 (<i>Public-Private Partnership Unit</i>) of the Sindh PPP Act.
Pre-Bid Meeting	The meeting/conference relating to the queries raised and clarifications sought by the prospective Bidders held on the dates specified in the Data Sheet.
Project	Has the meaning given to it in the Concession Agreement.
Project Finance Experience	Has the meaning given to it in the Annexure A (<i>Basic Information Requirements</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP.
PST	Pakistan Standard Time.
Revaluation Surplus	Has the meaning given to it in Section 6.5.6(d) of the Instructions to Bidders.
RFP	The request for proposals document issued by SMTA in relation to the Project, containing the documents specified in Section 3.1.1 of the Instructions to Bidders, and includes any amendments and/or modifications thereto.
Sanctioned Country	Has the meaning given to it in the Concession Agreement.
SBP	The State Bank of Pakistan.
SBP Debit Authority	Has the meaning given to it in the Concession Agreement.
Sindh PPP Act	The Sindh Public Private Partnership Act, 2010.
SMTA	Sindh Mass Transit Authority, established under the SMTA Act.
SMTA Act	The Sindh Mass Transit Authority Act, 2014.
SOE	Has the meaning given to it in Section 2.1.5(a) of the Instructions to Bidders.
Sovereign	Has the meaning given to it in Section 2.1.5(a) of the Instructions to Bidders.
SPPRA	The Sindh Public Procurement Regulatory Authority, established under the SPPRA Act.
SPPRA Act	The Sindh Public Procurement Act, 2009.
SPPRA EPADS	The SPPRA Sindh e-Pak Acquisition & Disposal System (Public Procurement Regulatory Authority Sindh EPADS website), which can be accessed using the link provided in Section 9 (<i>Data Sheet</i>) of the Instructions to Bidders.
SPPRA Guidelines	The guidelines issued by SPPRA for procurement of works.
SPPRA Rules	The Sindh Public Procurement Rules, 2010.
SPV	Special purpose vehicle, being a company incorporated under the applicable Laws.
Success Fee	Has the meaning given to it in Section 7.7.1 of the Instructions to Bidders.
Submission Guidelines	The step-by-step instructions for electronically submitting the Bid

	through the SPPRA EPADS (file uploading e-submission method), as may be amended from time to time by the SPPRA; the link for the Submission Guidelines is provided in Section 9 (<i>Data Sheet</i>) of the Instructions to Bidders.
Successful Bidder	The Bidder whose Bid has been determined to be the Best Evaluated Bid.
Supplier	Has the meaning given to it in the Concession Agreement.
Supply	Has the meaning given to it in the Concession Agreement.
Supply Contract	Has the meaning given to it in the Concession Agreement.
TAs	Has the meaning given to it in Section 7.7.1 of the Instructions to Bidders.
Technical Proposal	The technical proposal (including all forms, documents and information required in terms of the RFP and submitted therewith), submitted by a Bidder as part of its Bid pursuant to the RFP.
Tender Procedure	The international competitive tender procedure being conducted pursuant to the Applicable Evaluation Documents, for the selection of the Successful Bidder for the award of the Concession for the Project.
Termination Payment Amount (Coverage)	Has the meaning given to it in the Concession Agreement.
TFEC	The technical and financial evaluation committee formed in accordance with the applicable Law for the purposes of the Project.
Third-Party EV Charging	Has the meaning given to it in the Concession Agreement.
Total Assets	Has the meaning given to it in Section 6.5.6(b) of the Instructions to Bidders.
Total Liabilities	Has the meaning given to it in Section 6.5.6(c) of the Instructions to Bidders.
USD	Has the meaning given to it in the Concession Agreement.

1. GENERAL

1.1 INTRODUCTION

BACKGROUND

SMTA intends to engage a private party on a PPP basis to DBFOMT the E-Bus Assets in the cities of Karachi and Hyderabad, Pakistan. The Project represents a transformative step towards modernizing urban mobility in Sindh, promoting sustainable public transport, and reducing the province's carbon footprint. For details on the Project background, scope of work and specifications, please refer to **VOLUME II (TECHNICAL SPECIFICATIONS)** of the RFP.

CONCESSION AGREEMENT

The Concession Agreement establishes the rights and obligations of SMTA, the GoS and the Concessionaire, and will be executed among SMTA, the GoS and the Concessionaire in accordance with this RFP.

CONCESSION PERIOD

The Concession Period shall commence on the Commencement Date (i.e. the date on which it is certified that the Conditions Precedent have been satisfied, deferred and/or waived in accordance with the Concession Agreement) and end on the Final Expiry Date.

IZP GUARANTEE

The Successful Bidder/Concessionaire shall be responsible for developing and implementing the financing structure for the Project (including all financing and commercial arrangements) in accordance with this RFP and the Concession Agreement. In addition, the Concessionaire shall use its best endeavours to procure the IZP Guarantee Instrument to secure the Termination Payment Amount (Coverage). In order to enable IZP to conduct its due diligence of the Bidders for purposes of issuance of the IZP Guarantee Instrument, the Successful Bidder and/or the Concessionaire shall provide the information required by IZP in terms of Annexure C (*IZP KYC Information*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP within such time period as stated in the Notification of Award; provided, that such information is preliminary only and further documents and information may be requested from time to time from the Successful Bidder and/or the Concessionaire for purposes of the aforesaid due diligence.

GoS SUPPORT

Subject to the requirements of the applicable GoS Project Documents, the GoS shall:

- (a) establish the Capital Cost Recovery Payment Account (GoS) and pre-fund the same with the Capital Cost Recovery Payment Account (GoS) Funding Amount on each Capital Cost Recovery Payment Funding Date, in accordance with the mechanism specified in the Concession Agreement; and
- (b) issue the SBP Debit Authority in relation to the GoS Account One, authorizing the SBP to debit the GoS Account One, but only if the IZP Guarantee Instrument is

not issued to secure the Termination Payment Amount (Coverage) and the GoS is resultantly obliged to issue the SBP Debit Authority in accordance with section 12.2.8 of the Concession Agreement.

Additional support available to the Successful Bidder/Concessionaire from the GoS Parties for the Project is specified in the GoS Project Documents.

CAPITAL COST RECOVERY PAYMENT

The GoS shall pay the Capital Cost Recovery Payment to the Concessionaire in accordance with the terms of the Concession Agreement. The Capital Cost Recovery Payment shall consist of the (a) Debt Principal Recovery Charge, (b) Debt Interest Recovery Charge, and (c) Equity Recovery Charge. The Capital Cost Recovery Payment shall be determined in accordance with **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)** of the Concession Agreement. The O&M Costs shall be recovered by the Concessionaire from the Fare Revenue (Concessionaire Share) in accordance with the terms of the Concession Agreement. The O&M Costs shall consist of the (a) Power Component, (b) Non-Power Component, (c) Operator Margin, and (d) Insurance Cost.

FARE REVENUE

The Fare shall be determined by SMTA and collected by the Concessionaire from Commuters in accordance with the terms of the Concession Agreement. The Fare Revenue generated through collection of Fares shall consist of the Fare Revenue (Concessionaire Share) and the Fare Revenue (GoS Share). The Fare Revenue (Concessionaire Share) shall be utilized by the Concessionaire for servicing of O&M Costs and for such other purposes as set out in the Concession Agreement and the Fare Revenue (GoS Share) shall be utilized by the GoS for such purposes as it may determine in its sole and absolute discretion.

NON-FARE REVENUE

The Non-Fare Revenue (Actual) shall be generated in connection with the Project and collected by the Concessionaire in accordance with the terms of the Concession Agreement. The Non-Fare Revenue generated through collection of Non-Fare Revenue shall consist of the Non-Fare Revenue (Concessionaire Share) and the Non-Fare Revenue (GoS Share). The Non-Fare Revenue (Concessionaire Share) shall be utilized by the Concessionaire and the Non-Fare Revenue (GoS Share) shall be utilized by the GoS, in each case, for such purposes as they may determine in their sole and absolute discretion.

CARBON CREDITS

The Concessionaire shall be solely responsible, at its own cost and risk, for identifying, pursuing, developing, registering, generating, verifying, certifying, marketing, selling and monetising any Carbon Credits arising from or in connection with the Project, in accordance with applicable Law and Good International Industry Practice. The GoS shall bear no obligation, liability or risk in relation to the eligibility, generation, registration, verification, certification, pricing, sale or monetisation of Carbon Credits, including any risk arising from Change in Law or market conditions.

Where Carbon Credits are successfully sold or otherwise monetised, the Concessionaire shall pay to the GoS fifty percent (50%) of the gross revenues received, with all costs, expenses, fees, taxes, levies, charges and disbursements associated with Carbon Credits to be borne exclusively by the Concessionaire. Revenues from Carbon Credits shall not form part of

Fare Revenue, Non-Fare Revenue or Third-Party EV Charging revenues.

THIRD-PARTY EV CHARGING AT BUS DEPOTS

Subject to compliance with the Concession Agreement and applicable Law, the Concessionaire may, with the prior written approval of the GoS Parties, permit the use of the Bus Depots and related Charging Infrastructure for the provision of Third-Party EV Charging. Any Third-Party EV Charging shall be undertaken entirely at the Concessionaire's cost and risk and shall not adversely affect the performance of the Project, including the Guaranteed Availability, compliance with the Applicable Standards, or the uninterrupted operation of the Buses.

Revenues generated from Third-Party EV Charging shall not form part of Fare Revenue, Non-Fare Revenue or Carbon Credit revenues and shall be subject to a separate revenue-sharing arrangement to be agreed in writing between the GoS and the Concessionaire prior to commencement. The GoS shall bear no obligation, liability or risk in relation to Third-Party EV Charging.

HANDBACK

At the end of the Concession Period, the Concessionaire will be responsible for handing over the Project (including the E-Buses Assets) to SMTA in the condition and with the Handover Conditions specified in the Concession Agreement, without any further compensation, to the Concessionaire at the time of or in lieu of such transfer. The transfer of the Project shall be subject to an inspection and correction process in order to ensure that the Project is handed over in accordance with the terms and conditions set out in the Concession Agreement.

DISCLAIMER

All risks and obligations of SMTA, the GoS and the Successful Bidder/Concessionaire shall be in accordance with the RFP (including the GoS Project Documents) and the Bidders shall be deemed to have full and complete understanding of the risks relating to the Project and their allocation, as set out in the RFP (including the GoS Project Documents).

By submitting the Bid, the Bidder acknowledges the acceptance of all tax related obligations. For the sake of clarity, the Concessionaire shall be required to pay all the taxes, duties, levies, stamp duties, rents, and other charges payable to any local government, provincial or federal government (as applicable) without any grossing-up obligation or liability on part of the GoS/SMTA.

Before submitting the Bids, the Bidders should carefully examine all the information provided in the RFP (including the GoS Project Documents).

1.2 OVERVIEW OF THE TENDER PROCEDURE

The Tender Procedure in relation to the Project is being conducted pursuant to the Applicable Evaluation Documents and comprises the following:

- ***Competitive Bidding***

SMTA has issued the RFP for conducting the Tender Procedure for the selection of a

Successful Bidder for the award of the Concession, in accordance with the requirements of the Applicable Evaluation Documents.

In terms of the Applicable Evaluation Documents, the “*single stage two envelope*” tender procedure has been adopted. A Bidder whose Bid is determined to be the Best Evaluated Bid, shall be awarded the Concession.

The Successful Bidder shall be required to incorporate the Concessionaire for the purposes of undertaking the Project.

1.3 **INDICATIVE SCHEDULE**

The indicative timelines in relation to the Tender Procedure for the Project (as may be amended by SMTA in its discretion) are as follows:

ACTIVITY	DATE (<i>TENTATIVE</i>)
Issuance of RFP	December 29, 2025
First Pre-Bid Meeting	January 5, 2026
Site Visit	January 7, 2026
Second Pre-Bid Meeting	January 12, 2026
Bid Submission Deadline and Opening of Technical Proposals	February 12, 2026
Opening of Financial Proposals	April 9, 2026
Announcement of Bid Evaluation Results	April 24, 2026
Award of Project to Successful Bidder	May 21, 2026
Signing of the Concession Agreement	June 22, 2026

* In the event of any public holiday occurring on the above-mentioned dates, the immediately succeeding Business Day will be considered as the Day on which the respective milestone shall take place.

2. ELIGIBLE BIDDERS

2.1 GENERAL REQUIREMENTS

2.1.1 Any person who is eligible to submit a proposal to undertake a project under the Sindh PPP Act may Bid for the Project. A Bid may be submitted by a single entity or a Consortium. In order to demonstrate their eligibility to participate in the Tender Procedure, Bidders are required to submit all information/documentation required as per the provisions of the RFP.

2.1.2 In case a Bid is submitted by a Consortium:

- (a) such Bidder shall submit details of the Consortium Member who will be the Lead Developer, fulfilling the Lead Developer Criteria;
- (b) the Lead Developer shall hold a minimum of fifty-one percent (51%) equity/ownership interest in the Concessionaire in accordance with the Concession Agreement;
- (c) each Consortium Member other than the Lead Developer will be required to hold a minimum of ten percent (10%) equity/ownership interest in the Concessionaire in accordance with the Concession Agreement;
- (d) such Bidder shall submit an undertaking as part of its Technical Proposal, in the form and substance attached as Bidding Form T5 (*Form of Consortium Undertaking and Requirements for Consortium*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP (the **Consortium Undertaking**) to be executed by each Consortium Member through its authorized representative;
- (e) a power of attorney of the Consortium Member, in the form and substance attached as Part A (*Power of Attorney to Authorize a Person to Sign the Documents*) of Bidding Form T3 (*Form of Power of Attorney*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, vesting authority in its authorized representative to sign and submit the relevant documents to be submitted as part of the Bid (and any other document required in terms of the RFP) on behalf of itself, along with a copy of authorization (such as in the form of a board resolution) in favour of the person issuing the power of attorney; and
- (f) each Consortium Member (through its authorised representative) shall authorize the Lead Developer to act as the authorized representative of the Consortium (the **Consortium Authorized Representative**) to represent and irrevocably bind the Consortium Members in all matters in connection with the Tender Procedure, and in case the Consortium is awarded the Project, finalize the GoS Project Documents. Such authority shall be in the form of a power of attorney executed by its authorised representative, in the form and substance attached as Part B (*Power of Attorney to Authorize the Consortium Authorized Representative*) of Bidding Form T3 (*Form of Power of Attorney*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, appointing the Consortium Authorized Representative and vesting authority in the Consortium Authorized Representative to sign and submit the Bid (and any other document required in terms of the RFP) on behalf of each Consortium Member.

2.1.3 In case a Bid is submitted by a single entity, such Bidder shall be:

- (a) deemed to be the Lead Developer and the Bus Operator, and shall be required to fulfil the Lead Developer Criteria and the Bus Operator Criteria, respectively; and
 - (b) appoint its authorized representative pursuant to a power of attorney (in the form and substance attached as Part A (*Power of Attorney to Authorize a Person to Sign the Documents*) of Bidding Form T3 (*Form of Power of Attorney*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, vesting authority in the authorized representative to sign and submit the Bid (and any other document or information required in terms of the RFP) on behalf of the Bidder, along with a copy of authorization (such as in the form of a board resolution) in favour of the person issuing the power of attorney.
- 2.1.4 A Bidder (including a Consortium Member) shall not have a conflict of interest as per the requirements of the RFP. All Bidders (including any Consortium Members) found to have a conflict of interest shall be disqualified. SMTA will take appropriate actions to manage such conflicts of interest, which may include rejecting the Bid if it determines that a conflict of interest may affect the integrity of the Tender Procedure.
- 2.1.5 A Bidder (including a Consortium Member) may be considered to be in a conflict of interest with one or more Bidders, if such Bidder/Consortium Member, including its subsidiaries, participates in more than one (1) Bid, either individually or as a Consortium Member. This will result in the disqualification of all Bids in which the Bidder (including a Consortium Member) is involved. A Bidder (including a Consortium Member) shall not be considered to be in a conflict of interest with another Bidder, if such Bidders (including Consortium Members) are the subsidiaries of a common parent company or one Bidder (including a Consortium Member) is the parent company of the other Bidder (including a Consortium Member); provided, that the following conditions are satisfied:
- (a) such parent company is a sovereign state (**Sovereign**) or a sovereign state-owned enterprise (**SOE**);
 - (b) the Sovereign, SOE and the relevant subsidiaries of the Sovereign and/or SOE participating in the Tender Procedure conduct their business operations on an independent basis, are independent legal persons, have independent management and boards and are free from each other's financial obligations including independent auditing and accounting; and
 - (c) such Bidder (including a Consortium Member) has provided a legal opinion duly issued by a reputable, qualified legal counsel in its jurisdiction of incorporation confirming (a) and (b) above.
- 2.1.6 The circumstances provided above which may constitute a conflict of interest are not exhaustive, and SMTA shall be the sole determinant of when a conflict of interest shall arise.
- 2.1.7 A Bidder (or a Consortium Member) which has been declared ineligible or blacklisted by any of its employers, any Federal or Provincial governmental or non-governmental department/agency in Pakistan, or any other provincial government/governments of any foreign countries or their governmental bodies and/or international organizations (e.g. World Bank, Asian Development Bank, United Nations, International Monetary Fund etc.) at the Bid Submission Deadline, shall not be considered.
- 2.1.8 In order to demonstrate their compliance with the requirements set out in the RFP and for

participation in the Tender Procedure, all Bidders (including each Consortium Member) shall submit an undertaking in the form and substance attached as Bidding Form T4 (*Form of Undertaking*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)**.

- 2.1.9 Each Bidder (including a Consortium Member) shall indemnify the GoS Parties, fully in respect of any damage, cost, penalty or expense of any kind incurred by such person arising from a Bidder's or its representative's (including a Consortium Member's or its representative's) breach of its obligations under the RFP.
- 2.1.10 The Successful Bidder shall be required to comply with the requirements regarding shareholding matters including share transfer restrictions as set out in the Concession Agreement.
- 2.1.11 A Bidder may undertake the works and/or services for the Project as contemplated in the RFP (including the GoS Project Documents), either itself or through sub-contracting in accordance with the requirements set out in the RFP (including the GoS Project Documents).
- 2.1.12 For any part of the O&M Activities for the Project, which the Bidder intends to sub-contract, the Bidder shall give details of the name and nationality of the Bus Operator. The Bidder shall include in its Bid, information establishing compliance of the Bus Operator with the Bus Operator Criteria. Bidders are allowed to list one (1) Bus Operator only.
- 2.1.13 The Bidder shall be responsible for ensuring that any Bus Operator (including its representative(s)) complies with the requirements of the RFP (including the applicable GoS Project Documents) and the Laws. The engagement of the Bus Operator for the Project shall not absolve a Bidder (including the Concessionaire) from its obligations under the RFP (including the applicable GoS Project Documents) and the Laws.
- 2.1.14 A Bus Operator shall not be part of more than one (1) Bid.
- 2.1.15 A Bidder is not allowed to participate as a Bus Operator for another Bidder. Each Bidder shall be responsible for ensuring that the information relating to its Bid is kept confidential prior to its submission.
- 2.1.16 The Concessionaire shall ensure that the Construction Contractor to whom it sub-contracts the Construction Works meets the Construction Contractor Criteria and is engaged in accordance with the terms of the Concession Agreement.
- 2.1.17 The Concessionaire shall ensure that the Supplier to whom it sub-contracts the Supply is engaged in accordance with the terms of the Concession Agreement.

3. RFP DOCUMENT

3.1 CONTENTS OF THE RFP

- 3.1.1 The RFP comprises the documents stated below and should be read in conjunction with any addendum and/or corrigendum issued in accordance with Section 3.4 (*Amendment of RFP*) of the Instructions to Bidders.

(A) VOLUME I - TENDER PROCEDURE

- (a) Part 1 - Instructions to Bidders.
- (b) Part 2 - Bidding Forms.
- (c) Part 3 - Bidding Documentary Requirements.
- (d) Part 4 - Annexures.

(B) VOLUME II - TECHNICAL SPECIFICATIONS

(C) VOLUME III - CONCESSION AGREEMENT

- 3.1.2 The Bidding Forms comprise the forms stated below and should be read in conjunction with any addendum or corrigendum to the RFP issued in accordance with Section 3.4 (*Amendment of RFP*) of the Instructions to Bidders:

(A) For the Technical Proposal:

- (a) Bidding Form T1 (*Letter of Technical Proposal*);
- (b) Bidding Form T2 (*Form of Integrity Pact*);
- (c) Bidding Form T3 (*Form of Power of Attorney*);
- (d) Bidding Form T4 (*Form of Undertaking*);
- (e) Bidding Form T5 (*Form of Consortium Undertaking and Requirements for Consortium*);
- (f) Bidding Form T6 (*Form of Affidavit*);
- (g) Bidding Form T7 (*Technical Project Methodology/ Approach*);
- (h) Bidding Form T8 (*Operation & Maintenance Plan and Procedures*);
- (i) Bidding Form T9 (*Implementation Schedule*);
- (j) Bidding Form T10 (*Bus Specifications*);
- (k) Bidding Form T11 (*Format of Curriculum Vitae (CV)*);
- (l) Bidding Form T12 (*Organization & Staffing*);
- (m) Bidding Form T13 (*Quality Control Practices & Procedures*);
- (n) Bidding Form T14 (*Health & Safety Plan and Procedures*);
- (o) Bidding Form T15 (*Methodology/ Approach for the Environmental & Social Management Plan and Procedures*);
- (p) Bidding Form T16 (*Other Technical Data Submission*);
- (q) Bidding Form T17 (*Lead Developer Technical Criteria Evidence Sheet*);
- (r) Bidding Form T18 (*Bidders Financial Criteria Evidence Sheet*);
- (s) Bidding Form T19 (*Bus Operator Technical Criteria Evidence Sheet*);
- (t) Bidding Form T20 (*Bus Operator Financial Criteria Evidence Sheet*);
- (u) Bidding Form T21 (*Litigation History*); and
- (v) Bidding Form T22 (*Form of Bid Security*).

(B) For the Financial Proposal:

- (a) Bidding Form F1 (*Letter of Financial Proposal*); and
- (b) Bidding Form F2 (*Financial Forms*).

3.2 COMPLETENESS OF RFP

- 3.2.1 No GoS Party shall be responsible for the completeness of the documents comprising the RFP and its addenda/corrigenda, if a Bidder has not obtained the same directly from the source(s) stated by SMTA in the Letter of Invitation.
- 3.2.2 Bidders are expected to carefully examine all instructions, forms and terms in the RFP and to furnish all information or documentation required pursuant to the RFP. Failure to comply with the requirements of Bid submission set out in the RFP will be at the Bidders' own risk and may result in the rejection of the Bid. Pursuant to Section 6.4 (*Determination of Responsiveness of Bids*) of the Instructions to Bidders, Bids which are not responsive to the requirements of the RFP shall be rejected.

3.3 CLARIFICATIONS OF RFP

- 3.3.1 A Bidder requiring any clarification pertaining to the RFP shall do so in writing *via* the SPPRA EPADS and shall also contact SMTA in writing, at the address or through email provided in the Data Sheet or raise its enquiries during the Pre-Bid Meetings. SMTA will respond in writing to any request for clarification provided that such request is received no later than five (5) calendar Days prior to the Bid Submission Deadline. The response shall be uploaded on SPPRA EPADS and/or the websites of SMTA and PPP Unit including a description of the inquiry but without identifying its source. Should SMTA deem it necessary to amend the RFP as a result of a request for clarification, it shall do so following the procedure specified in Section 3.4 (*Amendment of RFP*) of the Instructions to Bidders. No markup of the RFP (including the GoS Project Documents and/or other documents/instruments attached to the RFP) shall be accepted. Bidders may submit comments or seek clarifications on the RFP, which may be considered by SMTA/TFEC.
- 3.3.2 The Bidder's designated representative shall be invited to attend the Pre-Bid Meetings at the date, time and venue indicated in the Data Sheet. The Pre-Bid Meetings may be conducted virtually via the web link provided by SMTA to all Bidders. The purpose of the Pre-Bid Meetings will be to clarify issues and to answer questions of the Bidders on any matter relating to the RFP. Queries to be discussed during the Pre-Bid Meeting should be submitted seven (7) Days prior to the date of each Pre-Bid Meetings. In addition to the queries discussed during the Pre-Bid Meetings, Bidders may submit additional queries to SMTA within the time period as specified in Section 3.3.1 of the Instructions to Bidders and SMTA shall respond to such queries in writing as specified in Section 3.3.1 of the Instructions to Bidders. Non-attendance at the Pre-Bid Meetings will not be a cause for disqualification of a Bidder. In addition to the Pre-Bid Meetings, on the written request of any Bidder, provided that the same is submitted at least fifteen (15) calendar Days prior to Bid Submission Deadline, SMTA may hold discussions on the RFP separately with such Bidder on such questions and clarifications submitted in writing to SMTA. Any proposed changes or responses to such clarifications and questions shall be provided to all Bidders.
- 3.3.3 Interested Parties are advised to visit and examine the site(s) where the works and services in relation to the Project are to be performed and undertaken and its surroundings and obtain for themselves at their own expense and responsibility all information that may be necessary for preparing the Bid and entering into the GoS Project Documents and other relevant instruments as per the RFP. The costs and permission(s) (if any) for the purposes

of visiting such site(s) shall be at the Interested Party's own expense and liability. Interested Parties shall be required to seek prior written permission of SMTA for visiting such site(s); provided, that such permission is sought one (1) week from the planned visit date.

SMTA may invite the Interested Parties for a site visit to be conducted by SMTA at a date and time as may be communicated during the first (1st) Pre-Bid Meeting by SMTA.

Site visit(s) shall be conducted only upon the express condition that the Interested Party, its personnel and agents will release and indemnify the GoS Parties (including SMTA) from and against all liabilities in respect thereof, and will be responsible for injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such visit.

3.4 AMENDMENT OF RFP

- 3.4.1 At any time prior to the Bid Submission Deadline, SMTA may amend the RFP by issuing an addendum/corrigendum.
- 3.4.2 Any addendum/corrigendum issued shall be considered part of the RFP. Such addendum/corrigendum shall be communicated to the potential Bidders and shall be published on SPPRA EPADS and/or the respective websites of SMTA and PPP Unit.
- 3.4.3 SMTA may, at its discretion, extend the Bid Submission Deadline in accordance with Section 5.2.4 of the Instructions to Bidders, if it considers that as a result of issuance of any addendum/corrigendum, additional time will be required by the Interested Parties for preparation of their Bids.

4. PREPARATION OF BIDS

4.1 COSTS FOR BIDS

Bidders shall bear all costs associated with the preparation and submission of their Bids, including (without limitation) all costs and expenses relating to preparation of responses to any clarifications sought by SMTA in accordance with Section 6.1.1 of the Instructions to Bidders. SMTA shall in no case be responsible or liable for such costs, regardless of the conduct or outcome of the Tender Procedure.

4.2 LANGUAGE OF THE BIDS

The Bid and all correspondence and documents related to the Bid and the Tender Procedure between the Bidder and SMTA shall be written in the English language. In case any document/information furnished by the Bidder is in a language other than English, it will need to be accompanied by an English translation (duly notarized by notary public and (a) attested by Pakistan Embassy/Consulate and, once brought into Pakistan, should be attested by Ministry of Foreign Affairs, Pakistan, or (b) subject to applicable laws of the country where English translation is issued, authenticated by an apostille under the Apostille Convention) of its pertinent passages for the purposes of interpretation of the Bid. In case of any discrepancy, the English translation shall prevail.

4.3 DOCUMENTS COMPRISING THE BID

4.3.1 The Bid shall comprise a Technical Proposal, containing the documents listed in Section 4.4 (*Technical Proposal*) of the Instructions to Bidders, and a Financial Proposal, containing the documents listed in Section 4.5 (*Financial Proposal*) of the Instructions to Bidders, each submitted simultaneously through SPPRA EPADS in the manner prescribed in the Submission Guidelines.

4.3.2 Bidders are expected to carefully examine the RFP when preparing their Bids and use only the Bidding Forms specified in Section 3.1.2 of the Instructions to Bidders. Bidding Forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested. Any material deviations/omissions/reservations from the formats provided in the RFP shall not be accepted and may form basis for the rejection of the Bid. Material deficiencies, in the sole opinion of SMTA, in providing the information requested may result in rejection of a Bid.

4.3.3 In case a document required to be submitted as part of the Technical Proposal, is submitted with the Financial Proposal, or a document required to be submitted with the Financial Proposal, is submitted with the Technical Proposal, it shall not be considered for evaluation and such document shall be considered as not submitted by the Bidder.

4.4 TECHNICAL PROPOSAL

4.4.1 The Technical Proposal shall demonstrate the Bidder's unconditional acceptance of the complete scope of works and services under the RFP. Any material omission, reservation, deviation or condition attached in the Technical Proposal may cause the Bid to be rejected by SMTA as non-responsive. Under no circumstances will SMTA consider/accept a conditional Technical Proposal.

4.4.2 The Technical Proposal submitted by the Bidder shall include the following information:

- (a) signed and filled out '*Letter of Technical Proposal*', as set out in Bidding Form T1 (*Letter of Technical Proposal*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP;
- (b) Integrity Pact, as set out in Bidding Form T2 (*Form of Integrity Pact*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, in accordance with Section 8.3 (*Integrity Pact*) of the Instructions to Bidders;
- (c) authorization in the form of a power of attorney on behalf of the Bidder, and in case of a Consortium, each Consortium Member, authorizing its representative to sign the relevant documents as per the requirements of the RFP, on its behalf, in the format attached as Part A (*Power of Attorney to Authorize a Person to Sign the Documents*) of Bidding Form T3 (*Form of Power of Attorney*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP;
- (d) in case the Bidder is a Consortium, a power of attorney, to be executed by the authorized representatives of the Consortium Members, in favour of the Consortium Authorized Representative, to authorize it to represent and bind all Consortium Members, as set out in the form attached as Part B (*Power of Attorney to Authorize the Consortium Authorized Representative*) of Bidding Form T3 (*Form of Power of Attorney*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP;
- (e) an undertaking from the Bidder (in case of Consortium, each Consortium Member), in the form and substance as set out in Bidding Form T4 (*Form of Undertaking*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP;
- (f) Consortium Undertaking, to be issued by the authorized representatives of the Consortium Members, in the form and substance as set out in Bidding Form T5 (*Form of Consortium Undertaking and Requirements for Consortium*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP;
- (g) details of the Bus Operator in accordance with Section 2.1.12 of the Instructions to Bidders, along with the following documents/information evidencing compliance with the Bus Operator Criteria. For the Bus Operator or a Bidder (including a Consortium Member), in case the Bidder (or the relevant Consortium Member) intends to undertake the relevant O&M Activities for the Project itself:
 - (i) certificates, or relevant evidence issued by an employer or a relevant third-party which engaged the Bus Operator (or a Bidder (including a Consortium Member), as applicable) for the relevant works/project, indicating that the relevant operations/project undertaken by the Bus Operator (or a Bidder (including a Consortium Member), as applicable) have been undertaken and continue to be in operations, and with respect to each of such operations/projects, the information in the format provided in Bidding Form T19 (*Bus Operator Technical Criteria Evidence Sheet*) set out in Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, clearly indicating the name of the Bus Operator (or a Bidder (including a Consortium Member), as applicable), scope of operations undertaken by such Bus Operator, and the value of the operations undertaken by the Bus Operator, in each case, evidencing compliance with Part 1 (*Technical*

Evaluation Criteria) of Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP; and

- (ii) for the Bus Operator (or a Bidder (including a Consortium Member), as applicable) (A) audited financial statements, duly certified by an independent certified public accountant or auditor, for the three (3) most recent full financial years for which audited financial statements are available as at the Bid Submission Deadline; or (B) if: (I) the relevant Bus Operator is incorporated in a jurisdiction which does not require the auditing of financial statements; and/or (II) such Bus Operator has not in fact had its financial statements audited, on such Bus Operator's non-audited consolidated financial statements, accompanied by a written opinion issued by an independent certified public accountant or auditor certifying the relevant Bus Operator's Net Worth for the three (3) most recent full financial years for which such financial statements are available as at the Bid Submission Deadline; provided, that the non-audited financial statements submitted by an entity, which by applicable law is required to prepare audited financial statements, shall not be accepted for the purposes of evaluation;
- (iii) a detailed description of the Bus Operator containing:
 - (A) legal name;
 - (B) complete head office contact information, including mailing address, telephone and fax numbers, and an e-mail address; and
 - (C) incorporation details, including corporate charter and articles of incorporation. If the Bus Operator is an unincorporated legal entity, then the proof of that legal entity's existence must be provided;
- (iv) the Bus Operator shall be required to provide:
 - (A) for the Bus Operator, other than to whom Section (g)(ii)(A) above, applies, audited consolidated financial statements, including a consolidated balance sheet, income statement, statement of cash flows and accompanying notes, for the three (3) most recent full financial years for which such statements are available as at the Bid Submission Deadline, duly certified by a certified public accountant or auditor; or
 - (B) for the Bus Operator to whom Section (g)(ii)(B) above, applies, non-audited consolidated financial statements, including a consolidated balance sheet, income statement, statement of cash flows and accompanying notes, for the three (3) most recent full financial years for which such statements are available as at the Bid Submission Deadline, accompanied by a written opinion issued by an independent certified public accountant or auditor, certifying the relevant entity's Net Worth for the three (3) most recent full financial years for which such financial statements are available as at the Bid Submission Deadline; and
 - (C) information as per as per Bidding Form T19 (*Bus Operator Technical Criteria Evidence Sheet*) of Part 2 (*Bidding Forms*) of **VOLUME I**

(TENDER PROCEDURE) of the RFP, specifying the Net Worth of the Bus Operator;

- (h) affidavits from the Bidders and the Bus Operator in the form and substance attached as Bidding Form T6 (*Form of Affidavit*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP; and
- (i) letters by the Bus Operator, setting out: (i) the intention of the Bidder and the Bus Operator to undertake the Project as per the requirements of the RFP, in case of award; and (ii) authorization in favour of the Bidder to submit the Bus Operator's information and documentation required in terms of the RFP as part of its Bid.

4.4.3 Bidders shall ensure that person signing the documents for and on behalf of the Bus Operator as required in terms of the RFP, have valid authorizations from the relevant Bus Operator and the said documents are issued by such persons as per the requirements of the applicable Laws. SMTA shall not be held liable, in the event it is determined by any forum or entity, that a document of the Bus Operator submitted by the Bidder as part of its Bid, is without valid legal authority and such document shall not be accepted for evaluation;

- (a) following Bidding Forms, specified in Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, each prepared as per the requirements specified therein:
 - (i) Bidding Form T7 (*Technical Project Methodology/ Approach*);
 - (ii) Bidding Form T8 (*Operation & Maintenance Plan and Procedures*);
 - (iii) Bidding Form T9 (*Implementation Schedule*);
 - (iv) Bidding Form T10 (*Bus Specifications*);
 - (v) Bidding Form T11 (*Format of Curriculum Vitae (CV)*);
 - (vi) Bidding Form T12 (*Organization & Staffing*);
 - (vii) Bidding Form T13 (*Quality Control Practices & Procedures*);
 - (viii) Bidding Form T14 (*Health & Safety Plan and Procedures*);
 - (ix) Bidding Form T15 (*Methodology/ Approach for the Environmental & Social Management Plan and Procedures*);
 - (x) Bidding Form T16 (*Other Technical Data Submission*);
 - (xi) Bidding Form T17 (*Lead Developer Technical Criteria Evidence Sheet*);
 - (xii) Bidding Form T18 (*Bidders Financial Criteria Evidence Sheet*);
 - (xiii) Bidding Form T19 (*Bus Operator Technical Criteria Evidence Sheet*);
 - (xiv) Bidding Form T20 (*Bus Operator Financial Criteria Evidence Sheet*);
 - (xv) Bidding Form T21 (*Litigation History*); and
 - (xvi) Bidding Form T22 (*Form of Bid Security*); and
- (b) any other documents required under the RFP.

4.5 FINANCIAL PROPOSAL

4.5.1 In preparing the Financial Proposals, Bidders are expected to fully understand the requirements and conditions set out in the RFP, including all contractual obligations of SMTA, the Concessionaire, the Successful Bidder and the GoS under the GoS Project Documents (as applicable) and the scope of works and services to be performed by the Concessionaire (as the concessionaire) in relation to the Project.

4.5.2 Any material omission, reservation, deviation or any condition included in the Financial Proposal to the contrary shall cause the Bid to be rejected by SMTA as non-responsive as per the Applicable Evaluation Documents. Under no circumstances shall SMTA

consider/accept a conditional Financial Proposal.

4.5.3 The Financial Proposal submitted by the Bidder shall comprise the following:

- (a) signed and filled out Letter of Financial Proposal, as set out in Bidding Form F1 (*Letter of Financial Proposal*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP;
- (b) information as required in the relevant forms as set out in Bidding Form F2 (*Financial Forms*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP. Relevant forms in Bidding Form F2 (*Financial Forms*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP can be downloaded from the SPPRA EPADS and/or any of the websites of SMTA and PPP Unit. Bidders are required to use and fill in the forms available at the aforementioned websites. Once filled, the Bidder shall make the relevant Microsoft Excel file accessible to SMTA *via* the link shared by a Bidder in its Letter of Financial Proposal. The Bidders are additionally required to export the relevant Microsoft Excel file in PDF and submit it with the Financial Proposal *via* the SPPRA EPADS; provided, that in case of any discrepancies between the Microsoft Excel file and the PDF of the Financial Model, the latter shall prevail;
- (c) following information/documentation evidencing the Bidder's ability to finance one hundred percent (100%) of the Estimated Project Cost through a combination of debt and equity:
 - (i) in the case of Bidders intending to enter into financing arrangements with financial institutions in respect of the Project, a letter of intent issued and signed by the financial institution in the format attached as Bidding Form F2-B (*Letter of Intent*) of Bidding Form F2 (*Financial Forms*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, prepared in accordance with the requirements of the RFP and the GoS Project Documents; and
- (d) any other document required in the RFP.

4.6 CURRENCIES OF BID AND PAYMENT

4.6.1 All Bids and other supporting documents shall state all monetary amounts in Pakistani Rupees (PKR).

4.7 BID SECURITY

4.7.1 The Bidder shall furnish, as part of the Technical Proposal, a Bid Security equivalent to Pakistani Rupees Four Hundred and Twenty-Five Million only (PKR 425,000,000/-) (the **Bid Security**).

4.7.2 The Bid Security shall be submitted either in the form of a pay order, demand draft, deposit at call, or an irrevocable, unconditional and on-demand bank guarantee in the form attached as Bidding Form T22 (*Form of Bid Security*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP.

4.7.3 The Bid Security shall be issued and maintained in PKR by an Acceptable Bank.

- 4.7.4 The Bid Security shall be valid until twenty-eight (28) Days following the Bid Validity Period, as may be extended in accordance with Section 4.8.2 of the Instructions to Bidders. If the Development Period Performance Security has not been issued by the Successful Bidder twenty-one (21) Days prior to the expiry of the Bid Security, then the Successful Bidder shall extend the Bid Security until such date as notified by SMTA.
- 4.7.5 Any Bid not accompanied by a compliant Bid Security (as exclusively determined by SMTA), shall be rejected as non-responsive and the Bidder shall not be allowed to submit Bid Security at a later stage. The Bid Security issued by a foreign bank and not counter-guaranteed/confirmed from a local bank in Pakistan shall result in the rejection of the Bid.
- 4.7.6 Bidders are required to submit with their Technical Proposal a scanned copy of the original Bid Security. Bidders are also required to submit the original Bid Security in hard copy through mail or physically by hand in a sealed envelope indicating the Bid Security as original clearly marked as 'ORIGINAL-BID SECURITY (DO NOT OPEN, EXCEPT IN PRESENCE OF TFEC)'. This envelope shall additionally bear the address for submission thereof indicated in the Data Sheet. In case of any discrepancies between the scanned and the original versions of the Bid Security, the latter shall prevail. A Bid may be rejected if a photocopy of original Bid Security is submitted through mail or physically by hand and such Bid shall not be further evaluated.
- 4.7.7 The Bid Security of the unsuccessful Bidders shall be returned on the earlier of: (a) the expiry of the Bid Validity Period; or (b) once the Successful Bidder furnishes the Development Period Performance Security pursuant to Section 7.5 (*Development Period Performance Security*) of the Instructions to Bidder.
- 4.7.8 The Bid Security of the Successful Bidder shall be returned as soon as reasonably possible once the Successful Bidder has furnished the required Development Period Performance Security and the Concessionaire has signed the Concession Agreement.
- 4.7.9 The Bid Security shall be forfeited:
- (a) if a Bidder:
 - (i) withdraws its Bid during the Bid Validity Period;
 - (ii) is found to be engaged in any corrupt, fraudulent, collusive, coercive, or obstructive practices;
 - (iii) has made false declarations in its Bid;
 - (iv) does not accept the arithmetical corrections of its Bid in accordance with Section 6.3.4 of the Instructions to Bidders; and/or
 - (v) fails to fulfil its obligations under the RFP in terms thereof.
 - (b) if the Successful Bidder or the Concessionaire, as applicable:
 - (i) fails to sign the Concession Agreement in accordance with Section 7.6 (*Signing of the Concession Agreement*) of the Instructions to Bidders;

(ii) fails to furnish Development Period Performance Security pursuant to Section 7.5 (*Development Period Performance Security*) of the Instructions to Bidders; and/or

(iii) fails to comply with the requirements set out in the Notification of Award.

4.7.10 The Bid Security is required to protect SMTA and the GoS against the risk of Bidder's conduct which would warrant the Bid Security's forfeiture, pursuant to Section 4.7.9 of the Instructions to Bidders.

4.8 BID VALIDITY

4.8.1 Bids shall remain valid for the Bid Validity Period, as may be extended by SMTA in accordance with Section 4.8.2 of the Instructions to Bidders. A Bid valid for a shorter period shall be rejected by SMTA as non-compliant in accordance with the Applicable Evaluation Documents.

4.8.2 In exceptional circumstances, prior to the expiration of the Bid Validity Period, SMTA may request all Bidders to extend the period of validity of their Bids. Any such request by SMTA with respect to the extension of the Bid Validity Period and the response by the Bidders, shall be in writing. The Bid Security requested in accordance with Section 4.7 (*Bid Security*) of the Instructions to Bidders, shall also be extended accordingly for a corresponding further period not exceeding the original Bid Validity Period. Extension of Bid Security may be requested upon the extension of the Bid Validity Period; provided, that, the process for submitting such extended Bid Security shall be as set out in Section 4.7.6 of the Instructions to Bidders. A Bidder may refuse the request following which such Bidder's Bid will be disqualified and its Bid Security returned without forfeiture. A Bidder accepting the request shall not be required or permitted to modify its Bid.

4.9 MANNER OF SIGNING OF BID

4.9.1 The Bidder shall prepare one (1) Technical Proposal and one (1) Financial Proposal comprising the Bid as described in Section 4.3 (*Documents Comprising the Bid*) of the Instructions to Bidders and submit PDF versions of the Technical Proposal and Financial Proposal clearly entitled as "*TECHNICAL PROPOSAL*" and "*FINANCIAL PROPOSAL*" respectively. The Bidder shall merge all documents as applicable in terms of the Technical Proposal and Financial Proposal, each uploaded separately as a PDF on the SPPRA EPADS, ensuring compliance with the permitted file size and the Submission Guidelines.

4.9.2 The Bid shall be typed or written in indelible ink and shall be signed by a person duly authorised to sign on behalf of the Bidder. This authorization shall consist of a written power of attorney, as set out in Bidding Form T3 (*Form of Power of Attorney*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, as per the requirements set out in the Instructions to Bidders. This authorization must contain the name and position held by each person signing the authorization and name and position of the authorised signatory.

4.9.3 Bids submitted in response to the RFP by the Bidders shall be upon full understanding and agreement of all instructions prescribed in the Submission Guidelines and such submission shall be deemed as an acceptance to all the terms and conditions stated in the RFP. Bidders are to ensure that their Bids are submitted in compliance with the Submission Guidelines and SMTA shall not be held responsible for any non-compliance thereof. All pages of the Bid must be signed and stamped in original by the Bidder's authorized representative. All the pages must be numbered starting from the first page to the last. Any Bid not substantially

adhering to these requirements may be rejected by SMTA.

- 4.9.4 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the authorized representative signing the Bid.
- 4.9.5 SMTA reserves the right to reject a Bid which does not meet the requirements in this Section 4.9 (*Manner of Signing of Bid*) of the Instructions to Bidders.

5. SUBMISSION AND OPENING OF BIDS

5.1 SUBMISSION OF BIDS

- 5.1.1 The Bidder (or in case of a Consortium, any Consortium Member) shall register itself as a ‘*SUPPLIER*’ on the SPPRA EPADS by creating a dedicated account. The Bidder (or in case of a Consortium, any Consortium Member) is responsible for ensuring its compliance with this requirement prior to the submission of its Bid. The submission of Bid shall be in accordance with any instructions set out for ‘*single stage two envelope*’ procedure in the Submission Guidelines.
- 5.1.2 In accordance with Section 4.9.1 of the Instructions to Bidders, the Technical Proposal shall be in PDF clearly entitled “*TECHNICAL PROPOSAL*” and the Financial Proposal shall also be in a PDF clearly entitled “*FINANCIAL PROPOSAL*”.
- 5.1.3 Any Bidder (including a Consortium Member) who submits or participates in more than one (1) Bid shall be disqualified.
- 5.1.4 All Bidding Forms forming part of the Technical Proposal and the Financial Proposal, as specified in the RFP are to be properly completed and signed. No alteration is to be made in the Letter of Financial Proposal, Letter of Technical Proposal or in the Bidding Forms, except in filling up the blanks as directed. If any alteration is made or if these instructions have not been fully complied with, the Bid may be rejected.
- 5.1.5 Bids shall be submitted electronically by the Bidders *via* the SPPRA EPADS, except for the original Bid Security which shall be submitted: (a) through courier/express mail; or (b) by hand on or before the Bid Submission Deadline at the address indicated in the Data Sheet.

5.2 DEADLINE FOR SUBMISSION

- 5.2.1 Bids must be uploaded to the SPPRA EPADS no later than the Bid Submission Deadline in accordance with this RFP.
- 5.2.2 No arrangements shall be made by SMTA with Bidders for collection of the Bids from any delivery point. Bidders shall bear all expenses incurred in the preparation and delivery or submission of Bids. No claims for refund of any expense shall be entertained.
- 5.2.3 Where delivery of the Bid Security is by courier/express mail and Bidder wishes to receive an acknowledgment of receipt of such Bid Security, such Bidder shall make a request for such acknowledgement in a separate letter accompanying the envelope containing the Bid Security. Delays in the mail, delays of person(s) in transit, or delivery of the Bid Security to an incorrect location, shall not be accepted as an excuse for failure to deliver the Bid Security at the proper place and time. It shall be the Bidder’s responsibility to determine the manner in which to deliver its Bid Security in a timely manner.
- 5.2.4 SMTA may, in its discretion, extend the Bid Submission Deadline by issuing an addendum in accordance with Section 3.4 (*Amendment of RFP*) of the Instructions to Bidders, in which case all rights and obligations of SMTA and the Bidders previously subject to the earlier Bid Submission Deadline shall thereafter be subject to the extended Bid Submission Deadline.
- 5.2.5 SMTA shall not consider any Bid that is submitted after the Bid Submission Deadline. Any Bid

or any document received by SMTA after the Bid Submission Deadline shall be declared late and be rejected.

- 5.2.6 Any delays in submitting the Bid on the SPPRA EPADS by a Bidder shall not be accepted as an excuse for failure to upload its Bid at the proper place and time. It shall be the Bidder's responsibility to ensure timely submission of its Bid.

5.3 MODIFICATION, SUBSTITUTION AND WITHDRAWAL OF BIDS

- 5.3.1 Any Bidder may modify, substitute, or withdraw its Bid after submission and prior to the Bid Submission Deadline in accordance with the requirements of the SPPRA EPADS and the Submission Guidelines.
- 5.3.2 A Bidder may withdraw its Bid after the Bid Submission Deadline by submitting a written notice of withdrawal to SMTA at the address specified in the Data Sheet; provided, that, such a notice is received no later than the expiration of the Bid Validity Period.
- 5.3.3 Withdrawal of a Bid during the interval between the Bid Submission Deadline and the expiration of the Bid Validity Period (or any extension thereof) shall result in forfeiture of the Bid Security pursuant to Section 4.7.9 of the Instructions to Bidders and shall lead to blacklisting of the Bidder in accordance with applicable Law.
- 5.3.4 Bids requested to be withdrawn in accordance with Section 5.3.2 of the Instructions to Bidders shall be disregarded by SMTA.
- 5.3.5 After the Bid Submission Deadline, no changes to the GoS Project Documents shall be permitted other than those requested by SMTA and agreed to by the Bidder and inclusion of details of the Successful Bidder (to whom the Concession is awarded) and any other information that was incomplete prior to the Bid Submission Deadline.
- 5.3.6 Bids submitted in response to the RFP by the Bidders shall be upon full understanding and agreement of all terms of the RFP (including the GoS Project Documents) and such submission shall be deemed as an acceptance to all the terms and conditions stated in the RFP (including the GoS Project Documents).

5.4 OPENING OF BIDS

- 5.4.1 TFEC shall conduct the opening of Technical Proposals on the same Day as the Bid Submission Deadline at **13:00 hours PST** at the address provided in the Data Sheet, in the presence of Bidders' designated representatives who choose to attend.
- 5.4.2 If the Technical Proposal and the Financial Proposal are submitted together in one PDF, other than as specified in the Instructions to Bidders, the entire Bid may be rejected. If any document, required to be submitted with Technical Proposal, is submitted with the Financial Proposal, or if any document required to be submitted with the Financial Proposal is submitted with the Technical Proposal, such document shall not be considered for evaluation and may also form the basis of rejection of a Bid.
- 5.4.3 The Financial Proposals shall remain secured/unopened on the SPPRA EPADS until the specified date and time of their opening, as communicated in advance by SMTA to the Bidders.
- 5.4.4 The Technical Proposals shall be opened on the Bid Submission Deadline at **13:00 hours**

PST, and the following information shall be read out and recorded:

- (a) the name of the Bidder;
- (b) the presence and value of the Bid Security; and
- (c) any other details as SMTA/TFEC may consider appropriate.

5.4.5 Only Technical Proposals read out and recorded during the Bid opening shall be considered for evaluation as per the requirements of the RFP. No Bid shall be rejected at the opening of Technical Proposals except for late Bids, in accordance with Section 5.2.5 of the Instructions to Bidders.

5.4.6 TFEC shall prepare a record of the Bid opening that shall include, as a minimum: the name of the Bidder and presence or absence and value of the Bid Security. The Bidders' representatives who are present shall be requested to sign the attendance sheet. The omission of a Bidder's signature on the attendance sheet shall not invalidate the contents and effect of the record.

5.4.7 At the end of the evaluation of the Technical Proposals, SMTA shall invite Bidders who have submitted responsive Technical Proposals pursuant to the requirements of the RFP and who have been determined as technically qualified for award of Concession to attend the opening of the Financial Proposals. The date, time, and location of the opening of Financial Proposals shall be advised in writing by SMTA.

5.4.8 SMTA shall notify in writing at any time prior to the opening of the Financial Proposals, the Bidders who have been rejected on the grounds of their Technical Proposals not being responsive to the requirements of the RFP. Such Financial Proposal shall remain unopened by SMTA.

5.4.9 TFEC shall conduct the opening of Financial Proposals of all Bidders who have technically qualified, in the presence of Bidders' representatives who choose to attend at the address, date and time specified by SMTA. The Bidders' representatives who are present shall be requested to sign an attendance sheet evidencing their attendance.

5.4.10 Financial Proposals of the Bidders shall be opened one at a time and the following read out and recorded:

- (a) the name of the Bidder;
- (b) the Bid Price; and
- (c) any other details as SMTA/TFEC may consider appropriate.

5.4.11 Only the Financial Proposals read out and recorded during the opening of Financial Proposals shall be considered for evaluation. No Financial Proposal shall be rejected at the time of opening of Financial Proposals.

5.4.12 TFEC shall prepare a record of the opening of Financial Proposals that shall include, as a minimum: the name of the Bidder, and the Bid Price. The Bidders' representatives who are present shall be requested to sign the attendance sheet. The omission of a Bidder's signature on the attendance sheet shall not invalidate the contents and effect of the record.

6. CLARIFICATION AND EVALUATION OF BIDS

6.1 CLARIFICATION OF BIDS

- 6.1.1 To assist in the examination, evaluation and comparison of the Technical Proposals and/or Financial Proposals, SMTA/TFEC may, at its discretion, ask the Bidders for any clarification, additional information or supporting documentation in respect of any matter associated with the documentation submitted by the Bidders in their Bids. Any such request and the response shall be through the SPPRA EPADS. Subject to Section 6.1.3, no change in the price in the Financial Proposals or substance of the Bid shall be sought, offered or permitted except to confirm the correction of arithmetic errors discovered during the evaluation of the Bids, in accordance with Section 6.3.4 of the Instructions to Bidders.
- 6.1.2 If a Bidder does not provide clarifications of the information requested by the date and time set in SMTA's/TFEC's request for clarification, its Bid may be rejected.
- 6.1.3 As a result of clarification sought from a Bidder, if applicable, the prices/amounts quoted by such Bidder in the Financial Proposal will be adjusted from the prices/amounts quoted in the Financial Proposals.

6.2 EVALUATION OF BIDS

- 6.2.1 During the evaluation of Bids, the following definitions apply:
- (a) “*Deviation*” is a departure from the requirements specified in the RFP;
 - (b) “*Reservation*” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the RFP; and
 - (c) “*Omission*” is the failure to submit part, or all of the information or documentation required in the RFP.

6.3 PRELIMINARY EXAMINATION OF BIDS

- 6.3.1 Prior to the detailed evaluation of Bids pursuant to Section 6.4 (*Determination of Responsiveness of Bids*) of the Instructions to Bidders, each Bid shall be examined to determine whether:
- (a) the Bid is complete and does not deviate from the scope of works and services to be performed in relation to the Project;
 - (b) any computational errors have been made;
 - (c) the Bid Security has been furnished;
 - (d) documents have been properly signed;
 - (e) valid authorization(s) is/are present; and
 - (f) the Bid is valid till the Bid Validity Period.

6.3.2 Prior to conducting detailed evaluation of Bids pursuant to Section 6.4 (*Determination of Responsiveness of Bids*) of the Instructions to Bidders, each Bid shall be examined as follows, and a Bid may not be considered acceptable if:

- (a) it is unsigned; or
- (b) its validity is less than the Bid Validity Period.

6.3.3 Prior to the detailed evaluation of Bids pursuant to Section 6.4 (*Determination of Responsiveness of Bids*) of the Instructions to Bidders, each Bid shall be examined as follows, and a Bid shall not be considered acceptable if:

- (a) it is not accompanied by a Bid Security;
- (b) it is received after the Bid Submission Deadline;
- (c) it is submitted through any mode other than SPPRA EPADS, except the Bid Security which shall be submitted physically in the manner set out in the RFP;
- (d) the Bidder refuses to accept arithmetic correction(s); or
- (e) it materially deviates from the requirements of the RFP.

6.3.4 SMTA/TFEC shall require arithmetical errors to be rectified. If there is a discrepancy between:

- (a) the relevant input amount and the output (i.e., total) amount in any Bidding Form, due to any error in calculation, the relevant input amount shall prevail, and the output (i.e., total) amount shall be corrected;
- (b) the words and figures, the amount in words shall prevail.

6.3.5 If the Bidder does not accept the corrected amount of the Bid, its Bid shall be rejected, and its Bid Security shall be forfeited.

6.4 DETERMINATION OF RESPONSIVENESS OF BIDS

6.4.1 SMTA/TFEC shall determine the responsiveness of each Bid to the RFP. The Technical Proposals that conform to all the terms and conditions of the RFP without material deviations, reservations or omissions shall be declared responsive. A material deviation, reservation or omission is one that:

- (a) if accepted, would:
 - (i) affect in any substantial way the scope, quality, or performance of the works and services in relation to the Project as specified in the RFP; or
 - (ii) limit in any substantial way SMTA's or GoS' rights or the Bidder's or the Concessionaire's obligations under the RFP; or
- (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Technical Proposals.

- 6.4.2 SMTA/TFEC's determination of a Bid's responsiveness may be based on the contents of the Bid itself without recourse to extrinsic evidence.
- 6.4.3 Any minor non-conformity or irregularity in a Technical Proposal that does not constitute a material deviation, reservation or omission may be waived by SMTA or required by SMTA to be rectified, provided such waiver or rectification does not prejudice or affect unfairly the competitive position of other responsive Technical Proposals.
- 6.4.4 Provided that a Bid is substantially responsive, SMTA/TFEC may request that the Bidder submit the necessary information or documentation *via* the SPPRA EPADS, within a reasonable period of time, to rectify non-material non-conformities in the Bid related to documentation requirements. Requesting information or documentation on such non-conformities shall not be related to any aspect of the Financial Proposal. Failure of the Bidder to comply with the request may result in the rejection of its Bid.
- 6.4.5 If a Bid is not substantially responsive to the requirements of the RFP, it shall be rejected and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.
- 6.4.6 A responsive Financial Proposal is one which meets the requirements of the RFP without any deviation, reservation or omission. No change in the Financial Proposals shall be allowed and shall be evaluated as per the information provided by the Bidders. A non-responsive Financial Proposal may not subsequently be made responsive by correction of the deviation, reservation, or omission.
- 6.4.7 If a Financial Proposal, in the opinion of SMTA/TFEC, is seriously unbalanced or is seen to unfairly exploit the evaluation mechanism, SMTA/TFEC may require the relevant Bidder to produce detailed price analysis for any or all items of the Bid, to demonstrate the internal consistency of those prices. After evaluation of the price analysis, taking into consideration the terms of payments, SMTA/TFEC may require the Bidder to rationalize the costs and/or terms of payments.

6.5 EVALUATION CRITERIA

- 6.5.1 Bids of only those Bidders shall be considered who meet the basic eligibility criteria set forth in Annexure A (*Basic Information Requirements*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP.
- 6.5.2 In addition, and subject to the requirements set out in Section 6.3 (*Preliminary Examination of Bids*) and Section 6.4 (*Determination of Responsiveness of Bids*) of the Instructions to Bidders, the Bidders shall be evaluated against the evaluation criteria for the Technical Proposals and the Financial Proposals set out in Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP.
- 6.5.3 The Agency/TFEC shall attribute a technical score to responsive Technical Proposals. The marks allocated to each category of the criteria are as follows:

SR No.	CATEGORY	MARKS
1.	Financial Capability	40 marks
2.	Technical Capability	60 marks
	Total	100 marks

NOTE: For technical qualification, a Bidder must score at least fifty percent (50%) in each category listed above and must score at least seventy percent (70%) in aggregate to qualify for opening of the Financial Proposals.

In case of a Bidder who is a Consortium, only such members of the Consortium that are proposed to be shareholders as per the Consortium Undertaking shall be considered for the evaluation.

- 6.5.4 The Bid Price shall be calculated as per the methodology set out in Part 1 (*Financial Evaluation Criteria*) of Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP. The Bid Price shall be clearly stated as a single figure, denominated in PKR, and shall not include any provision for amendment or adjustment (whether for inflation, foreign exchange movements or otherwise).
- 6.5.5 Any Bid that fails to meet the evaluation criteria for the Technical Proposals and the Financial Proposals set out in Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP, shall be rejected.
- 6.5.6 The capabilities of the Bidders proposed in a Bid will be evaluated for acceptability in accordance with Annexure A (*Basic Information Requirements*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP. The Net Worth requirements applicable to the Bidders as set out in Part 1 (*Technical Evaluation Criteria*) of Annexure B (*Evaluation Criteria*), shall be calculated on the following parameters, based on the latest audited financial statements:
- Net Worth** shall be calculated as the relevant Bidder (or in case of Consortium, each Consortium Member's) Total Assets plus its Revaluation Surplus (or similar entry) minus its Total Liabilities; and on a consolidated basis;
 - Total Assets** shall be calculated as the total consolidated assets of such entity measured in accordance with either IFRS or any other similar accounting or public accounting standard which is permissible in the jurisdiction in which the relevant Bidder (or in case of Consortium, each Consortium Member) is incorporated;
 - Total Liabilities** shall be calculated as the total consolidated liabilities of such entity measured in accordance with either IFRS or any other similar accounting or public accounting standard which is permissible in the jurisdiction in which the relevant Bidder (or in case of Consortium, each Consortium Member) is incorporated;
 - Revaluation Surplus (or similar entry)** shall be calculated as the total consolidated figure for any upward changes in the value of the capital/fixed assets of such entity measured in accordance with either IFRS or any other similar accounting or public accounting standard which is permissible in the jurisdiction in which the relevant Bidder (or in case of Consortium, each Consortium Member) is incorporated. It is typically under the 'Equity' line item in balance sheet; and

- (e) Calculations shall be made based:
 - (i) on the relevant Bidder's (or in case of Consortium, each Consortium Member's) audited consolidated financial statements, duly certified by an independent certified public accountant or auditor, for the three (3) most recent full financial years for which audited financial statements are available as at the Bid Submission Deadline; or
 - (ii) if: (A) the relevant Bidder (or in case of Consortium, the relevant Consortium Member) is incorporated in a jurisdiction which does not require the auditing of financial statements; and/or (B) such Bidder (or in case of Consortium, the Consortium Member) has not in fact had its financial statements audited, on such Bidder's (or in case of Consortium, each Consortium Member's) non-audited consolidated financial statements, accompanied by a written opinion issued by an independent certified public accountant or auditor certifying the relevant Bidder (or in case of Consortium, each Consortium Member's) Net Worth for the three (3) most recent full financial years for which such financial statements are available as at the Bid Submission Deadline.

Provided that the non-audited financial statements submitted by an entity, which by applicable law is required to prepare audited financial statements, shall not be accepted for the purposes of evaluation.

6.5.7 The Bidder shall provide for itself or, in case of a Consortium, for each Consortium Member:

- (a) for Consortium Members other than to whom Section 6.5.6(e)(i) applies, audited consolidated financial statements, including a consolidated balance sheet, income statement, statement of cash flows and accompanying notes, for the three (3) most recent full financial years for which such statements are available as at the Bid Submission Deadline, duly certified by a certified public accountant or auditor; or
- (b) for Consortium Members to whom Section 6.5.6(e)(ii) applies, non-audited consolidated financial statements, including a consolidated balance sheet, income statement, statement of cash flows and accompanying notes, for the three (3) most recent full financial years for which such statements are available as at the Bid Submission Deadline, accompanied by a written opinion issued by an independent certified public accountant or auditor, certifying the relevant Consortium Member's Net Worth for the three (3) most recent full financial years for which such financial statements are available as at the Bid Submission Deadline; and
- (c) a completed Financial Qualification Criteria of Bidders table, as per Bidding Form T18 (*Bidders Financial Criteria Evidence Sheet*).

6.5.8 The capabilities of the Bus Operator proposed in a Bid will be evaluated for acceptability in accordance with Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP. The Net Worth requirements applicable to the Bus Operator as set out in Part 1 (*Technical Evaluation Criteria*) of Annexure B (*Evaluation Criteria*), shall be calculated on the following parameters, based on the latest audited financial statements:

- (a) **Net Worth** shall be calculated as the relevant Bus Operator's Total Assets plus its Revaluation Surplus (or similar entry) minus its Total Liabilities; and on a

consolidated basis;

- (b) **Total Assets** shall be calculated as the total consolidated assets of such entity measured in accordance with either IFRS or any other similar accounting or public accounting standard which is permissible in the jurisdiction in which the relevant Bus Operator is incorporated;
 - (c) **Total Liabilities** shall be calculated as the total consolidated liabilities of such entity measured in accordance with either IFRS or any other similar accounting or public accounting standard which is permissible in the jurisdiction in which the relevant Bus Operator is incorporated; and
 - (d) **Revaluation Surplus** (or similar entry) shall be calculated as the total consolidated figure for any upward changes in the value of the capital/fixed assets of such entity measured in accordance with either IFRS or any other similar accounting or public accounting standard which is permissible in the jurisdiction in which the relevant Bus Operator's is incorporated. It is typically under the '*Equity*' line item in balance sheet.
- 6.5.9 Should the Bus Operator be determined to be non-compliant with the requirements set out in the RFP, the respective Bid shall be rejected.

6.6 SUCCESSFUL BIDDER

- 6.6.1 A Bidder whose Bid has been determined the Best Evaluated Bid in terms of lowest Bid Price shall be declared the Successful Bidder.
- 6.6.2 In the event it is determined that two (2) or more Bidders have quoted the same lowest Bid Price, SMTA/TFEC may require such Bidders to re-submit the revised Financial Proposals, subject to the terms and conditions as may be specified by SMTA/TFEC.

6.7 SMTA'S RIGHT TO VERIFY DOCUMENTS

- 6.7.1 SMTA/TFEC retains the right to verify particulars regarding any information, statements and/or documents furnished with a Bid. Any Bidder found to be misrepresenting information may be disqualified at any stage of the Tender Procedure and their Bid Security shall be forfeited.

7. AWARD OF CONCESSION

7.1 AWARD CRITERIA

- 7.1.1 Subject to Section 7.2 (*SMTA's Right to Accept/Reject Bids*), SMTA shall award the Concession to the Bidder whose Bid has been determined to be the Best Evaluated Bid in terms of the requirements of the Applicable Evaluation Documents and subject to the approval of the PPP Policy Board established under the Sindh PPP Act; provided, that such Bidder continues to be eligible in accordance with the requirements set out in the RFP.

7.2 SMTA'S RIGHT TO ACCEPT/REJECT BIDS

- 7.2.1 No Bid shall be considered to have been accepted, unless such acceptance is confirmed in writing and notified to the Successful Bidder by SMTA.
- 7.2.2 SMTA reserves the right to annul the Tender Procedure and reject all Bids at any time prior to the issuance of the Notification of Award, without thereby incurring any liability to Bidders or providing any reason for rejection of the Bids. In case of such annulment, all Bid Securities shall be promptly returned to the Bidders. The decision of SMTA shall be final and binding.
- 7.2.3 SMTA shall not be responsible for, or pay for, any expenses or losses which may be incurred by any Bidder in the preparation of, or in connection with, its Bid.
- 7.2.4 Each Bidder fully waives any and all rights to claim in respect of such expenses or losses and agrees to indemnify SMTA, its affiliates and their advisors fully in respect of any direct or indirect losses, damages, costs or expenses of any kind incurred by any of them.

7.3 NOTIFICATION OF AWARD

- 7.3.1 Prior to expiration of the Bid Validity Period, SMTA shall notify the Successful Bidder through the Notification of Award that its Bid has been accepted.
- 7.3.2 SMTA shall, at least three (3) Business Days prior to the issuance of the Notification of Award, publish on the websites of SMTA, PPP Unit and SPPRA, the results of the Tender Procedure in the form of a report. The report shall also be communicated to all the Bidders in accordance with the terms of the Applicable Evaluation Documents.
- 7.3.3 The Successful Bidder shall acknowledge and return the Notification of Award with its acceptance (the **Acceptance of Notification of Award**) within seven (7) Days of the issuance of Notification of Award, failure of which may constitute sufficient grounds for the annulment of the award and forfeiture of its Bid Security.

7.4 FORMATION OF SPV BY THE SUCCESSFUL BIDDER

- 7.4.1 The Successful Bidder shall incorporate a wholly owned SPV (i.e. the Concessionaire) that shall be a registered company incorporated in accordance with the Laws of Pakistan exclusively for the implementation of the Project.
- 7.4.2 The Successful Bidder/Concessionaire shall be obligated to submit the Development Period Performance Security as per the requirements set out in Section 7.5.1 of the Instructions to

Bidders.

7.5 DEVELOPMENT PERIOD PERFORMANCE SECURITY

- 7.5.1 The Successful Bidder/Concessionaire shall, within twenty-eight (28) Days of issuance of the Notification of Award, furnish to the GoS the Development Period Performance Security and shall maintain the same in full force and effect until the Development Period Performance Security Expiry Date, in accordance with the requirements of the Concession Agreement and the RFP.
- 7.5.2 Failure of the Successful Bidder to comply with the requirements of Section 7.5.1 of the Instructions to Bidders shall constitute sufficient grounds for the annulment of the award and forfeiture of its Bid Security. Prior to execution of the Concession Agreement, the Development Period Performance Security may be encashed by GoS for the same reasons as the Bid Security and for such other purpose as specified in the RFP. Following execution of the Concession Agreement, the Development Period Performance Security shall be encashed in terms of the Concession Agreement.

7.6 SIGNING OF THE CONCESSION AGREEMENT

- 7.6.1 The Concession Agreement shall be executed between, SMTA, the GoS and the Concessionaire (as the concessionaire), within thirty (30) Days of issuance of the Notification of Award or within such extended timeline as determined by SMTA in its sole discretion, failing which the Bid Security or the Development Period Performance Security (as applicable) shall be forfeited and the award shall be cancelled, if such failure is due to reasons attributable to the Successful Bidder, in the sole determination of SMTA and/or GoS.

7.7 SUCCESS FEE

- 7.7.1 The Successful Bidder shall pay a success-based Financial Close fee (the **Success Fee**) to the financial and legal transaction advisors (the **TAs**) appointed by SMTA. The Success Fee shall be payable solely upon achievement of Financial Close for the Project and shall not constitute a bidding cost or an evaluated component of the Bid.
- 7.7.2 The Success Fee shall be a fixed amount of Pakistani Rupees Thirty Million only (PKR 30,000,000/-), and shall be treated as a standard cost of the PPP transaction to be incurred by the Successful Bidder for services rendered.
- 7.7.3 The Success Fee shall become due and payable upon the Independent Auditor's written confirmation that the Concessionaire has achieved Financial Close.
- 7.7.4 The Success Fee shall cover all advisory services rendered by the TAs from issuance of the Letter of Award up to Financial Close, including (without limitation), general advisory inputs, coordination support, and facilitation assistance made available to SMTA in relation to financing discussions and documentation.
- 7.7.5 For the avoidance of doubt, nothing contained in this RFP or in the payment of the Success Fee shall be construed as (a) an obligation, representation, warranty, or assurance by the TAs to cause achievement of or procure Financial Close, (b) a confirmation as to the availability of financing or satisfaction of any conditions precedent, or (c) the creation of any duty of care or professional obligation owed by the TAs to the Successful Bidder, any Financing Party, or any third party.

8. OTHER CONSIDERATIONS

8.1 CONFIDENTIALITY

- 8.1.1 Subject to Section 8.1.3 of the Instructions to Bidders and Section 3.3 (*Clarifications of RFP*), no Bidder shall contact any GoS Party on any matter relating to its Bid from the time of Bid Submission Deadline.
- 8.1.2 Any attempt by a Bidder to influence any GoS Party in relation to the Tender Procedure may result in the rejection of its Bid and encashment of its Bid Security.
- 8.1.3 Notwithstanding Section 8.1.2 of the Instructions to Bidders, from the time of Bid opening to the time of award of the Concession, if any Bidder wishes to contact SMTA/TFEC on any matter related to the Tender Procedure (including for the matters set out in Section 3.3 (*Clarifications of RFP*)), it should do so in writing via the modes specified in the Data Sheet.
- 8.1.4 Information relating to the examination, clarification, evaluation and recommendation for the Bidder shall not be disclosed to any person who is not officially concerned with the Tender Procedure or is not a retained professional advisor advising SMTA and/or the GoS in relation to, or matters arising out of, or concerning the Tender Procedure. SMTA will endeavour to treat all information, submitted as part of the Bid, in confidence and will require all those who have access to such material to treat the same in confidence. SMTA may not divulge any such information, unless it is directed to do so by any statutory entity that has the power under law to require its disclosure, is required under the applicable Laws in Pakistan, or it is to enforce or assert any right or privilege of SMTA, a statutory entity and/or the GoS.
- 8.1.5 All information supplied by SMTA and GoS (through SMTA) in connection with this RFP, shall be treated as confidential and the Bidders shall not, without the prior written consent of SMTA, at any time make use of such information for their own purposes or disclose such information to any person (except as may be required by applicable Law). Subject to the provisions of this RFP, the RFP shall remain the property of SMTA and is issued solely for the purpose of preparation and submission of the Bid in accordance herewith.
- 8.1.6 The RFP and every part of it and all other information provided by or on behalf of SMTA must be treated as private and confidential. Bidders shall not disclose the fact that they have been invited to submit a Bid or release details of the RFP other than on a strictly confidential basis to those parties whom they need to consult for the purposes of preparing the Bids.
- 8.1.7 Bidders shall not at any time release any information concerning the RFP and/or their Bid and/or any related documents and/or any discussion with SMTA in this connection for publication in the press or on radio, television, screen or any other medium without the prior written approval of SMTA.
- 8.1.8 Each Bidder undertakes to indemnify SMTA and the GoS and to keep SMTA and the GoS indemnified against all actions, claims, demands, liability, proceedings, damages, costs, charges and expenses whatsoever arising out of or in connection with any breach of the provisions of this Section 8.1 (*Confidentiality*).
- 8.1.9 Any Bid submitted in response to the RFP is submitted upon a full understanding and agreement of terms of this Section 8.1 (*Confidentiality*) and therefore the submission of the

Bid in response to the RFP would be deemed as an acceptance to the said terms.

8.2 CORRUPT AND FRAUDULENT PRACTICES

8.2.1 SMTA/TFEC will reject a Bid if it determines that a Bidder (including its Affiliate) or a Bus Operator has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the Tender Procedure and/or shall declare such Bidder or a Bus Operator ineligible to engage with the GoS Parties in accordance with the Applicable Evaluation Documents.

8.2.2 **Corrupt and fraudulent practice** means either one or any combination of the practices with respect to the Tender Procedure and/or the Project given below:

- (a) **coercive practice** means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;
- (b) **collusive practice** means any arrangement between two or more parties to the procurement process or contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, non-competitive levels for any wrongful gain;
- (c) **corrupt practice** means the offering giving, receiving or soliciting directly or indirectly of anything of value to influence the acts of another party for wrongful gain;
- (d) **fraudulent practice** means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (e) **obstructive practice** means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the Tender Procedure, or affect the execution of a contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; 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 acts intended to materially impede the exercise of inspection and audit rights.

8.3 INTEGRITY PACT

8.3.1 Each Bidder (and in case of a Consortium, each Consortium Member) shall sign and stamp Bidding Form T2 (*Form of Integrity Pact*) of Part 2 (*Bidding Forms*) of the RFP (the **Integrity Pact**). Failure to provide such Integrity Pact may cause the Bid to be rejected as non-responsive.

8.4 GRIEVANCE REDRESSAL

8.4.1 Any Bidder being aggrieved by any act or decision of SMTA/TFEC, may after the issuance of the RFP, lodge a written complaint to the “complaint redressal committee” constituted by SMTA in accordance with the Applicable Evaluation Documents. The mechanism for redressal of grievances of Bidders shall be as per the Applicable Evaluation Documents.

8.5 FEES, DUTIES AND TAXES

- 8.5.1 The Concessionaire shall be responsible for payment of any stamp duty and other fees, duties and/or taxes that may be applicable with respect to the execution of the relevant documents (including the GoS Project Documents) in relation to the Project.

9. DATA SHEET

The following specific data shall supplement the provisions in the Instructions to Bidders.

1.	Address for Seeking Clarifications on the RFP	Designation: Managing Director, Sindh Mass Transit Authority Address: D43/1 Shahrah-e-Ghalib, Clifton Block 2, Karachi, Sindh, Pakistan Phone No.: +92 21 99222193; +92 21 99332207 Pursuant to Section 3.3.1 of the Instructions to Bidders, requests for clarifications are to be sent to the following email addresses: info.p3proc@gmail.com Subject of email to be Att. [] - RFP ([Name of Bidder]).
2.	First Pre-Bid Meeting	Date: January 5, 2026 Time: 14:30 hours PST Venue: D43/1 Shahrah-e-Ghalib, Clifton Block 2, Karachi, Sindh, Pakistan <i>Virtual attendance in the first (1st) Pre-Bid Meeting shall be permitted. Link for the virtual meeting shall be shared with the Interested Parties prior to the date of the first (1st) Pre-Bid Meeting, upon request submitted via email at info.p3proc@gmail.com.</i>
3.	Second Pre-Bid Meeting	Date: January 12, 2026 Time: 14:30 hours PST Venue: D43/1 Shahrah-e-Ghalib, Clifton Block 2, Karachi, Sindh, Pakistan <i>Virtual attendance in the second (2nd) Pre-Bid Meeting shall be permitted. Link for the virtual meeting shall be shared with the Interested Parties prior to the date of the second (2nd) Pre-Bid Meeting, upon request submitted via email at info.p3proc@gmail.com.</i>

3.	Address for Submission of Bid Security	Designation: Director Compliance, PPP Unit, Finance Department Address: A.K. Lodhi Block, Sindh Secretariat Building No. 6, Shahrah-e-Kamal Ataturk, Karachi, Pakistan. Phone No.: +92 21 99222193; +92 21 99332207
4.	Address for Opening of Bids	Committee Room of the Planning & Development Board, 2 nd Floor, Tughlaq House, Sindh Secretariat, Shahrah-e-Kamal Atta-Turk Road, Karachi, Pakistan
5.	Bid Submission Deadline	February 12, 2026
6.	Link to SPPRA EPADS	https://portalsindh.eprocure.gov.pk
7.	Link to VDR and Submission Guidelines	https://tinyurl.com/PGTPPP

PART 2
BIDDING FORMS

1. **BIDDING FORMS**

1.1 The Bidding Forms comprise the forms stated below and each relevant form is required to be submitted with the Technical Proposal and the Financial Proposal, as applicable.

1.2 In case a document/Bidding Form required to be submitted as part of the Technical Proposal, is submitted with Financial Proposal; or a document/Bidding Form required to be submitted with Financial Proposal, is submitted with Technical Proposal, it shall not be considered for evaluation and such document/Bidding Form shall be considered as not submitted by the Bidder and may also form the basis of rejection of a Bid.

(A) For the Technical Proposal:

- (a) Bidding Form T1 (*Letter of Technical Proposal*);
- (b) Bidding Form T2 (*Form of Integrity Pact*);
- (c) Bidding Form T3 (*Form of Power of Attorney*);
- (d) Bidding Form T4 (*Form of Undertaking*);
- (e) Bidding Form T5 (*Form of Consortium Undertaking and Requirements for Consortium*);
- (f) Bidding Form T6 (*Form of Affidavit*);
- (g) Bidding Form T7 (*Technical Project Methodology/ Approach*);
- (h) Bidding Form T8 (*Operation & Maintenance Plan and Procedures*);
- (i) Bidding Form T9 (*Implementation Schedule*);
- (j) Bidding Form T10 (*Bus Specifications*);
- (k) Bidding Form T11 (*Format of Curriculum Vitae (CV)*);
- (l) Bidding Form T12 (*Organization & Staffing*);
- (m) Bidding Form T13 (*Quality Control Practices & Procedures*);
- (n) Bidding Form T14 (*Health & Safety Plan and Procedures*);
- (o) Bidding Form T15 (*Methodology/ Approach for the Environmental & Social Management Plan and Procedures*);
- (p) Bidding Form T16 (*Other Technical Data Submission*);
- (q) Bidding Form T17 (*Lead Developer Technical Criteria Evidence Sheet*);
- (r) Bidding Form T18 (*Bidders Financial Criteria Evidence Sheet*);
- (s) Bidding Form T19 (*Bus Operator Technical Criteria Evidence Sheet*);
- (t) Bidding Form T20 (*Bus Operator Financial Criteria Evidence Sheet*);
- (u) Bidding Form T21 (*Litigation History*); and
- (v) Bidding Form T22 (*Form of Bid Security*).

(B) For the Financial Proposal:

- (a) Form F1 (*Letter of Financial Proposal*); and
- (b) Form F2 (*Financial Forms*).

A. TECHNICAL PROPOSAL BIDDING FORMS

BIDDING FORM T1 - LETTER OF TECHNICAL PROPOSAL

[Date]

To: Sindh Mass Transit Authority
[●]

Re: THE PEOPLE'S GREEN TRANSPORT PROJECT - DESIGN, BUILD, FINANCE, OPERATE,
MAINTAIN AND TRANSFER OF THE E-BUSES ASSETS (THE PROJECT)

Reference the Request for Proposals document issued on [●] (the **RFP**) by Sindh Mass Transit Authority (**SMTA**) in relation to the Project.

Dear [Sir/Madam]:

We, [Name of the Bidder] hereby submit our Technical Proposal in conformity with the requirements of the RFP.

All capitalized terms unless defined herein shall bear the meaning as ascribed thereto in the RFP.

We, agree, confirm, undertake and declare that:

- (a) We have examined and have no reservations to the RFP, including Addenda No(s) [●]/Corrigenda No(s) [●];
- (b) We, [including all Consortium Members,] fully and completely understand and accept the terms of the RFP and hereby undertake to comply with the requirements specified therein;
- (c) We offer to perform and undertake the works and services in respect of the Project in conformity with the RFP (including the GoS Project Documents) without any omission, reservation and deviation; and we accept and undertake to comply with all requirements in the RFP, including the appendices/annexures attached to the RFP;
- (d) We, [including all Consortium Members,] and the Bus Operator, as per the requirements of the RFP, respectively:
 - (i) have nationalities of Eligible Countries;
 - (ii) do not have any conflict of interest; and
 - (iii) have not been declared ineligible/blacklisted by any employer, by any Federal or Provincial governmental or non-governmental department/agency in Pakistan, or any other provincial government/governments of any foreign countries or their governmental bodies and/or International Organizations (e.g., World Bank, Asian Development Bank, United Nations, International Monetary Fund etc.), as at the Bid Submission Deadline;
- (e) Neither we, [including all Consortium Members], any Affiliate nor the Bus Operator:
 - (i) are included as a debarred person pursuant to the public sanctions list of any multilateral development bank that is party to the Agreement on Mutual Enforcement of Debarment Decisions of 9 April 2010 (www.crossdebarment.org);

or

- (ii) are included on any sanctions lists promulgated by the UN Security Council or its Committees, or any other recognised international sanctions list;
- (f) Our Bid consisting of the Technical Proposal and the Financial Proposal shall be valid for a period of one hundred and twenty (120) Days from the date fixed for the Bid Submission Deadline in accordance with the RFP, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (g) As security for due performance of the undertakings and obligations of this Bid, we submit unconditionally herewith a Bid Security equivalent to Pakistani Rupees Four Hundred and Twenty-Five Million only (PKR 425,000,000/-) drawn in your favour or made payable to you and valid for a period of twenty-eight (28) Days beyond the period of validity of Bid. We confirm that the Bid Security has been issued and maintained in accordance with the requirements of the RFP;
- (h) We have reviewed and accepted the form of the Concession Agreement along with the appendices attached thereto (attached as **VOLUME III (CONCESSION AGREEMENT)** to the RFP), and undertake to execute the same within the time period stipulated in Notification of Award;
- (i) We acknowledge that SMTA (and the GoS) will be relying on the information provided in our Bid and the documents accompanying them to determine the Successful Bidder. We certify that all information provided in our Bid is true and correct and that nothing has been omitted which renders such information misleading;
- (j) We certify that in the last three (3) years, we have neither failed to perform on any contract, as evidenced by imposition of a penalty by any arbitral or judicial authority or a judicial pronouncement or arbitration award, nor been expelled from any project or contract by any public authority, nor had any contract terminated by any public authority for breach by us or, if we are a Consortium, by any of our Consortium Members;
- (k) We satisfy and meet all the requirements specified in the RFP, including the qualifications requirements set out in the RFP and there has been no material event relating to us or, if we are a Consortium, to any of our Consortium Members, which would require disclosure to SMTA (and the GoS) or which might cause us to fail to become a Successful Bidder;
- (l) We understand that this Bid, together with your written acceptance thereof included in your Notification of Award, shall constitute a binding contract between us, until the Concession Agreement (attached as **VOLUME III (CONCESSION AGREEMENT)** to the RFP) is executed;
- (m) We are not participating [nor is any of our Consortium Members] (nor any of our Affiliates), as a Bidder in more than one Bid in this Tender Procedure in accordance with the requirements of the RFP;
- (n) We understand that SMTA may cancel the Tender Procedure at any time and that SMTA is also not bound to accept any Bid that it may receive, without incurring any liability to the Bidders;
- (o) We agree to permit SMTA, the GoS and any persons, representatives or auditors appointed and authorized by SMTA and/or the GoS to inspect and audit our accounts, records and other documents relating to our Bid;

- (p) All the information submitted along with our Bid, including the enclosed forms and documents, is accurate in all respects;
- (q) We accept the right of SMTA to: (i) request additional information reasonably required to assess the Bid; (ii) amend the procedures and requirements or make clarifications thereof; and (iii) extend or amend the timelines as stipulated in the RFP;
- (r) All information, representations and other matters of fact communicated (whether in writing or otherwise) to SMTA by us or on our behalf, in connection with or arising out of the Bid are true, complete and accurate in all respects;
- (s) We hereby declare that all the information and statements made in this Bid are true and accept that any misrepresentation contained in it shall lead to our disqualification, forfeiture of the Bid Security and/or our blacklisting by the SMTA;
- (t) We, [including all Consortium Members], have made our own investigations and research and have satisfied ourselves in respect of all matters (whether actual or contingent) relating to the Bid and the Project;
- (u) We undertake, if our Bid is accepted, to furnish the Development Period Performance Security as per the requirements of the RFP;
- (v) We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other person or persons making a Bid for the Project; and
- (w) We understand that the RFP has been issued by SMTA for the Project; and undertake and confirm that if our Bid is accepted, we and the SPV (to be incorporated by us, in case the Project is awarded to us), as applicable, shall execute the Concession Agreement (including other GoS Project Documents) (attached as **VOLUME III (CONCESSION AGREEMENT)** to the RFP and all other instruments as may be required to be executed in relation to the Project as per the requirements of the RFP.

Name

In the capacity of

Signed

..... (Seal)

Duly authorized to sign the Bid for and on behalf of: *(Insert Name of the Bidder/ names of all Consortium Members)*

Date

WITNESSES

WITNESS 1:

WITNESS 2:

Signature: _____

Signature: _____

Name: _____

Name: _____

Designation: _____

Designation: _____

Date: _____

Date: _____

CNIC/Passport No.: _____

CNIC/Passport No.: _____

BIDDING FORM T2 - FORM OF INTEGRITY PACT

Dated _____

[*name of Bidder*] (the **Bidder**) hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Sindh Mass Transit Authority, and Government of Sindh, any administrative subdivision or agency thereof or any other entity owned or controlled by Government of Sindh (collectively, the **GoS**) through any corrupt business practice.

Without limiting the generality of the foregoing, [*name of Bidder*] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoS, except that which has been expressly declared pursuant hereto.

[*name of Bidder*] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoS and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[*name of Bidder*] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoS under any law, contract or other instrument, be voidable at the option of GoS.

Notwithstanding any rights and remedies exercised by GoS in this regard, [*name of Bidder*] agrees to indemnify GoS for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoS in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [*name of Bidder*] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoS.

Name of Employer: Sindh Mass Transit Authority

Signature:

[Seal]

Name of Bidder: _____

Signature:

[Seal]

BIDDING FORM T3 - FORM OF POWER OF ATTORNEY

A. POWER OF ATTORNEY TO AUTHORIZE A PERSON TO SIGN THE DOCUMENTS

NOTES FOR EXECUTION OF POWER OF ATTORNEY

- *To be executed by each Bidder and in case the Bidder is a Consortium, by each Consortium Member, authorizing the relevant attorney to, inter alia, sign the required documents on its behalf in relation to the RFP.*
- *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s).*
- *This Power of Attorney shall be on stamp paper and notarised with the notary public.*
- *The Power of Attorney executed and issued overseas will have to be:*
 - (a) *attested by the Pakistani Embassy/ Consulate in the country where the Power of Attorney is executed. In case an individual in Pakistan is being appointed as an attorney pursuant to the Power of Attorney, the Power of Attorney, once brought into Pakistan, will also be required to be attested by Ministry of Foreign Affairs, Pakistan; or*
 - (b) *subject to applicable laws of the country where Power of Attorney is executed, authenticated by an apostille under the Apostille Convention.*
- *This Power of Attorney shall be witnessed by two (2) male witnesses or one (1) male and two (2) female witnesses.*
- *See Bidding Documentary Requirements set out in Part 3 (Bidding Documentary Requirements) of **VOLUME I (TENDER PROCEDURE)** of the RFP.*

KNOW ALL BY THESE PRESENTS, WE, [(name of the entity and address of the registered office)] do hereby irrevocably constitute, nominate, appoint and authorise Mr./Ms. [(Name)], son/daughter/wife of [(Name)] holding [CNIC/Passport] Number [insert number] and presently residing at [insert current residence details], who is presently employed with us and holding the position of [insert position], as our true and lawful attorney (hereinafter referred to as the **Attorney**) (with power to sub-delegate) to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to the requirements of the request for proposals document issued on [●] (the **RFP**) by Sindh Mass Transit Authority (**SMTA**) in relation to the **PEOPLE'S GREEN TRANSPORT PROJECT** to design, build, finance, operate, maintain and transfer the E-Buses Assets (the **Project**), including but not limited to signing and submission of all documents and providing information/responses to SMTA in respect of the RFP, representing us in all matters before SMTA, and generally dealing with SMTA (and the GoS), and/or any other governmental agencies or any person, in all matters in connection with or relating to or arising out of our Bid and its acceptance by SMTA and for the Project.

We hereby ratify all prior and future acts, deeds and things lawfully done by the Attorney in relation to the Project (including with respect to the submission of our Bid in response to the RFP) pursuant to this Power of Attorney and we hereby agree that all prior and/or future acts, deeds and things done by the Attorney in relation to the Project (including with respect to the submission of our Bid in response to the RFP) shall, and shall always be, deemed to have been done by us.

IN WITNESS WHEREOF WE, _____, HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS _____ DAY OF _____, 20____.

For & On Behalf of:

_____ (*insert name of the entity*)

By Its Duly Authorized Signatory

.....
(*Signature*)

Name: _____ [*insert name of the person issuing this Power of Attorney who is authorized to issue this Power of Attorney on behalf of the entity*]

Title/Designation: _____ [*insert designation of the person issuing this Power of Attorney*]

Address: _____ [*insert address of the person issuing this Power of Attorney*]

WITNESSES:

WITNESS 1:

WITNESS 2:

.....
NAME:
CNIC/PASSPORT NUMBER:
ADDRESS:

.....
NAME:
CNIC/PASSPORT NUMBER:
ADDRESS:

SIGNATURE OF ATTORNEY

.....

Name of Attorney: _____

CNIC/Passport Number of Attorney: _____

Title/Designation of Attorney: _____

Address of Attorney: _____

B. POWER OF ATTORNEY TO AUTHORIZE THE CONSORTIUM AUTHORIZED REPRESENTATIVE

NOTES FOR EXECUTION OF POWER OF ATTORNEY

- *This Power of Attorney for the appointment of Consortium Authorized Representative, is to be executed by the authorized representative of each Consortium Member (appointed pursuant to the power of attorney in Form A (Power of Attorney to Authorize a person to Sign the Documents)).*
- *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s).*
- *This Power of Attorney shall be on a stamp paper and notarised with the notary public.*
- *The Power of Attorney executed and issued overseas will have to be:*
 - (a) *attested by the Pakistani Embassy/ Consulate in the country where the Power of Attorney is executed. In case an individual in Pakistan is being appointed as an attorney pursuant to the Power of Attorney, the Power of Attorney, once brought into Pakistan, will also be required to be attested by Ministry of Foreign Affairs, Pakistan; or*
 - (b) *subject to applicable laws of the country where Power of Attorney is executed, authenticated by an apostille under the Apostille Convention.*
- *This Power of Attorney shall be witnessed by two (2) male witnesses or one (1) male and two (2) female witnesses.*
- *See Bidding Documentary Requirements set out in Part 3 (Bidding Documentary Requirements) of **VOLUME I (TENDER PROCEDURE)** of the RFP.*

WHEREAS, the Sindh Mass Transit Authority (**SMTA**) has invited bids for the ‘**PEOPLE’S GREEN TRANSPORT PROJECT**’ (the **Project**) pursuant to the request for proposals document issued on [●] by SMTA (as amended from time to time) (the **RFP**);

WHEREAS, _____, _____ and _____ (each hereinafter referred to individually as a **Consortium Member** and collectively as **Consortium Members**) have formed a consortium (the **Consortium**) in accordance with the requirements of the RFP and have issued a Consortium Undertaking as per the requirements of the RFP;

AND WHEREAS, it is necessary for the Consortium Members to designate [●], the Lead Developer as the ‘**Consortium Authorized Representative**’ with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Project and its execution;

AND WHEREAS, the Consortium Members issue this Power of Attorney for the appointment of the ‘**Consortium Authorized Representative**’ with all necessary powers and authority to represent and irrevocably bind all the Consortium Members in all matters connected with the Tender Procedure and during execution of the relevant agreements in relation to the Project, in case the Consortium is awarded the Project.

KNOW ALL MEN BY THESE PRESENTS

WE, _____, having our registered office at _____, M/s. _____, having our registered office at _____, and M/s. _____, having our registered office at _____, do hereby irrevocably designate, nominate, constitute, appoint and authorise M/s _____, having its registered office at _____, being one of the Consortium Members and the Lead Developer, as the Consortium Authorized Representative and true and lawful attorney of the Consortium (hereinafter referred to as the **Attorney**) and hereby irrevocably authorise the Attorney (with power to sub-delegate) to conduct all business for and on behalf of the Consortium and any one of us during the Tender Procedure being conducted by SMTA pursuant to the RFP and to do on our behalf and on behalf of the Consortium, all or any of such acts, deeds or things as are necessary or required or incidental to the Project, including but not limited to signing and submission of our Bid, all applications and other documents and writings, participate in conferences/meetings, respond to queries, submit information/documents, sign and execute contracts and undertakings including the Acceptance of Notification of Award, as applicable (if awarded the Project) and generally to represent the Consortium in all its dealings with SMTA (and the GoS), and/or any other governmental agencies or any person, in all matters in connection with or relating to or arising out of the Consortium's Bid and its acceptance by SMTA.

We hereby ratify all prior and future acts, deeds and things lawfully done by the Attorney in relation to the Project (including with respect to the submission of our Bid in response to the RFP) pursuant to this Power of Attorney and we hereby agree that all prior and/or future acts, deeds and things done by the Attorney in relation to the Project (including with respect to the submission of our Bid in response to the RFP) shall, and shall always be, deemed to have been done by us.

IN WITNESS WHEREOF WE THE ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS _____ DAY OF _____ 20____.

For: _____ [*insert name of Consortium Member*]
(Signature)

Name: _____ [*Insert name of the person executing this Power of Attorney on behalf of the Consortium Member*]

Title/Designation: _____ [*Insert title/designation of the person executing this Power of Attorney on behalf of the Consortium Member*]

Address: [*Insert address of the person executing this Power of Attorney on behalf of the Consortium Member*]

For: _____ [*insert name of Consortium Member*]
(Signature)

Name: _____ [*Insert name of the person executing this Power of Attorney on behalf of the Consortium Member*]

Title/Designation: _____ [*Insert title/designation of the person executing this Power of Attorney on behalf of the Consortium Member*]

Address: [*Insert address of the person executing this Power of Attorney on behalf of the Consortium Member*]

For: _____ [*insert name of Consortium Member*]
(Signature)

Name: _____ [*Insert name of the person executing this Power of Attorney on behalf of the Consortium Member*]

Title/Designation: _____ [*Insert title/ designation of the person executing this Power of Attorney on behalf of the Consortium Member*]

Address: [*Insert address of the person executing this Power of Attorney on behalf of the Consortium Member*]

WITNESSES:

WITNESS 1:

WITNESS 2:

.....

NAME:

CNIC/PASSPORT NUMBER:

ADDRESS:

.....

NAME:

CNIC/PASSPORT NUMBER:

ADDRESS:

(Executants)

(To be executed by all the Consortium Members in favour of Consortium Authorized Representative)

BIDDING FORM T4 - FORM OF UNDERTAKING

*Note: See Bidding Documentary Requirements set out in Part 3 (Bidding Documentary Requirements) of **VOLUME I (TENDER PROCEDURE)** of the RFP.*

This Undertaking shall be witnessed by two (2) male witnesses or one (1) male and two (2) female witnesses.

[Date]

RE: THE PEOPLE'S GREEN TRANSPORT PROJECT - DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER OF THE E-BUSES ASSETS (THE PROJECT)

Reference the Request for Proposals document issued on [●] (the **RFP**) by Sindh Mass Transit Authority (**SMTA**) in relation to the Project.

UNDERTAKING **(THIS UNDERTAKING)**

We, [insert name], registered under incorporation/registration number [●] under the laws of [●], do hereby solemnly represent, declare, covenant, undertake and submit that:

- (a) as at the date hereof, the representations, declarations, covenants and undertakings in our Bid are correct, true and valid [including the information representations, declarations, covenants and undertakings provided by [insert name of new entity, in case new entity is proposed as shareholder in terms of Section 2.1.2 of the Instructions to Bidders]];
- (b) as at the date hereof, all submissions, documents, forms and other information provided in our Bid are true, correct and valid;
- (c) we shall notify SMTA immediately, in writing, of any change in the structure, formation, personnel or qualifications reflected in our Bid that could affect our eligibility and qualification under the RFP and we acknowledge that such notification shall not render us eligible and qualified under the RFP;
- (d) we acknowledge and accept that failure to notify SMTA of such changes in a timely manner may result in our disqualification [(including the disqualification of the Consortium)] at any point in time at the discretion of SMTA;
- (e) [we confirm that we do not have any Pakistani shareholders (whether individual or corporate entity) with more than five percent (5%) shareholding (directly, indirectly, legally or beneficially)];¹
- (f) in case the representations, declarations, covenants, undertakings and submissions contained in this Undertaking are found to be incorrect, untrue and/or invalid, we shall indemnify and hold harmless SMTA and the GoS against any loss, damage or action/claim which may arise due to:
 - (i) any representation, declaration, covenant, undertaking and submission being found incorrect, untrue and/or invalid; and/or

¹ Applicable in case of foreign entities.

- (ii) our disqualification from the Tender Procedure; and/or
- (iii) cancellation of the award of Concession for the Project to us (in case the Concession has been so awarded at that time); and
- (g) for the purposes of the Project, the shareholding of the SPV shall be as follows:

ROLE ²	NAME OF ENTITY	EQUITY SHARE/PERCENTAGE INTEREST IN THE SPV
Lead Developer		
Bus Operator		
Consortium Member (If applicable)		
Name of the entity (Lead Developer) with the power to direct the management, policies and decisions of the SPV.		

Capitalized terms used herein and not otherwise defined shall bear the meaning ascribed thereto in the RFP.

IN WITNESS WHEREOF, we have signed this Undertaking at _____ on this _____ Day of _____ 20____.

Yours sincerely,

_____ [Insert name of the Bidder/ Consortium Member]

_____ [insert name of authorized signatory, authorized to execute this Undertaking for and on behalf of the Bidder/ Consortium Member]

_____ [signature of authorized signatory, executing this Undertaking]

WITNESSES

WITNESS 1:

.....

NAME:
CNIC/PASSPORT NUMBER:
ADDRESS:

WITNESS 2:

.....

NAME:
CNIC/PASSPORT NUMBER:
ADDRESS:

² Bidders to note that in case the Bidder is a single entity, such Bidder shall be the Lead Developer and the Bus Operator for purposes of the Project.

**BIDDING FORM T5 - FORM OF CONSORTIUM UNDERTAKING AND
REQUIREMENTS FOR CONSORTIUM**

PART 1 - FORM OF CONSTRUCTION UNDERTAKING

Note: See Bidding Documentary Requirements set out in Part 3 (Bidding Documentary Requirements) of **VOLUME I (TENDER PROCEDURE)** of the RFP.

This Undertaking shall be witnessed by two (2) male witnesses or one (1) male and two (2) female witnesses.

[Date]

RE: THE PEOPLE'S GREEN TRANSPORT PROJECT - DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER OF THE E-BUSES ASSETS (THE PROJECT)

Reference the Request for Proposals document issued on [●] (the **RFP**) by Sindh Mass Transit Authority (**SMTA**) in relation to the Project.

CONSORTIUM UNDERTAKING³
(this Undertaking)

We, _____, _____ and _____ (each hereinafter referred to individually as a **Consortium Member** and collectively as **Consortium Members**) have formed a consortium (the **Consortium**) in accordance with the requirements of the RFP and hereby issue this Undertaking as per the requirements of the RFP.

We, the Consortium Members, do hereby solemnly represent, declare, covenant, undertake and submit that:

- (a) the Lead Developer i.e. [*insert name of the Lead Developer*]:
 - (i) shall hold minimum [●] percent ([●]%) equity/shareholding stake in the SPV;
 - (ii) meets the minimum Net Worth requirements set out in Part 1 (*Technical Evaluation Criteria*) of Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP; and
 - (iii) shall be liable in respect of the obligations of the Consortium Members in relation to the Project;
- (b) the Lead Developer i.e. [*insert name of the Lead Developer*] meets the requirements set out in Part 1 (*Technical Evaluation Criteria*) of Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP;
- (c) the Consortium Authorized Representative i.e. the Lead Developer, shall have the authority to conduct all business for and on behalf of the Consortium during the Tender Procedure, and in the event the Consortium is awarded the Concession for the Project, during signing of the GoS Project Documents;
- (d) we have read the GoS Project Documents and shall execute the same as per the requirements of the RFP;

³ Authorized representative of each Consortium Member is required to sign this Undertaking.

- (e) we shall incorporate a SPV for the purposes of execution of the relevant agreements and for undertaking the Project, as per the requirements of the RFP and the applicable Laws;
- (f) [the Lead Developer] shall have the power to direct the management, policies and decisions, in each case, of the SPV;
- (g) each Consortium Member, other than the Lead Developer, shall hold the minimum Net Worth, as follows:

[list the Net Worth of each Consortium Member]

- (h) for the purposes of the Project, the shareholding of the SPV shall be as follows:

ROLE	NAME OF ENTITY	EQUITY SHARE/PERCENTAGE INTEREST IN THE SPV
Lead Developer/Consortium Authorized Representative		
Consortium Member (If applicable)		
Name of the entity (Lead Developer) with the power to direct the management, policies and decisions of the SPV		

Capitalized terms used herein and not otherwise defined shall bear the meaning ascribed thereto in the RFP.

IN WITNESS WHEREOF, we, the Consortium Members, have signed this Undertaking on this _____ Day of _____ 20____

For: _____ [insert name of Consortium Member]
(Signature)

Name: _____ [Insert name of the person executing this Undertaking on behalf of the Consortium Member]

Name: _____ [Insert name of the person executing this Undertaking on behalf of the Consortium Member]

Title/Designation: _____ [Insert title/designation of the person executing this Undertaking on behalf of the Consortium Member]

Address: [Insert address of the person executing this Undertaking on behalf of the Consortium Member]

For: _____ [insert name of Consortium Member]
(Signature)

Name: _____ [Insert name of the person executing this Undertaking on behalf of the Consortium Member]

Title/Designation: _____ [*Insert title/designation of the person executing this Undertaking on behalf of the Consortium Member*]

Address: [*Insert address of the person executing this Undertaking on behalf of the Consortium Member*]

For: _____ [*insert name of Consortium Member*]
(Signature)

Title/Designation: _____ [*Insert title/designation of the person executing this Undertaking on behalf of the Consortium Member*]

Address: [*Insert address of the person executing this Undertaking on behalf of the Consortium Member*]

WITNESSES:

WITNESS 1:

WITNESS 2:

.....

NAME:

CNIC/PASSPORT NUMBER:

ADDRESS:

.....

NAME:

CNIC/PASSPORT NUMBER:

ADDRESS:

(*To be executed by the authorized representatives of all the Consortium Members*)

PART 2 - REQUIREMENTS FOR CONSORTIUM

[to be submitted by each Consortium Member on its letterhead]

Subject to the requirements set out in Section 2.1.1 of the RFP, each Consortium Member, through its authorized representative, is required to submit letter of intent, specifying:

- (a) its intention to form a consortium with other Consortium Members;
- (b) the Consortium Authorized Representative, with the authority to conduct all business for and on behalf of the Consortium Member during the Tender Procedure to be conducted for the Project, and in the event the Consortium is awarded the contract for the Project, during signing of the Concession Agreement;
- (c) its intent to enter into a formal consortium agreement with the Consortium Members during the Tender Procedure as per the requirements of the RFP. The consortium agreement shall contain at least the following information:
 - each Consortium Member's binding commitment to the Consortium and to the GoS Parties in regard to the performance of the Concession Agreement;
 - the proposed shareholding of each Consortium Member in the Concessionaire;
 - identification of the Consortium Member that will assume the role of Lead Developer;
 - irrevocable power for the Lead Developer to represent the Consortium and bind all Consortium Members in connection with the Tender Procedure, the Bid and the signing of the Concession Agreement;
 - brief description of the obligations of each of the Consortium Members for performance of the Concession Agreement;
 - a statement that the Consortium Members shall be bound by the shareholding change restrictions set out in the Concession Agreement;
 - a statement that the Leader Developer shall be liable in respect of the obligations of the Consortium Members in relation to the Project; and
 - their intent to incorporate the Concessionaire for the purposes of execution of the Concession Agreement and for undertaking the Project.

BIDDING FORM T6 - FORM OF AFFIDAVIT

PART 1 - FORM OF AFFIDAVIT BY BIDDER

Notes for Execution of Affidavit

- *The mode of execution of the Affidavit should be in accordance with the procedure, if any, laid down under applicable laws and the same should be under common seal affixed in accordance with the required procedure.*
- *The Affidavit is to be executed on a stamp paper of PKR 100/- (Pakistani Rupee One Hundred only).*
- *Also, the Bidder/ each Consortium Member should submit for verification a resolution/power of attorney in favour of the person executing this Affidavit for and on behalf of the Bidder/ each Consortium Member.*
- *If executed in Pakistan, the Affidavit shall be notarized by the notary public and certified by the Oath Commissioner.*
- *For an Affidavit executed and issued overseas, the same will have to be notarized by notary public and:*
 - (a) *attested by the Pakistani Embassy/ Consulate in the country where the Affidavit is executed; or*
 - (b) *subject to applicable laws of the country where the Affidavit is executed, authenticated by an apostille under the Apostille Convention.*
- *To be submitted by each Bidder/ each Consortium Member.*
- *This Affidavit shall be witnessed by two (2) male witnesses or one (1) male and two (2) female witnesses.*

Please find below the form and substance of the Affidavit.

Date: _____

[●]
[●]
[Address]

RE: THE PEOPLE'S GREEN TRANSPORT PROJECT - DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER OF THE E-BUSES ASSETS (THE PROJECT)

Reference the Request for Proposals document issued on [●] (the **RFP**) by Sindh Mass Transit Authority (**SMTA**) in relation to the Project.

AFFIDAVIT
(THIS **AFFIDAVIT**)

1. I, *[in case of company, insert name of the authorized person and its designation]* of *[insert name of company]* / *[in case of sole proprietor, insert name of sole proprietor and its CNIC or Passport No.]* of *[insert name of sole proprietorship, if any]* / *[in case of partnership, insert name of authorized person and its CNIC or Passport No.]* of *[insert name of partnership, if any]* (the **Entity**), a *[in case of company/partnership, insert nature of company/partnership (if any)]* duly organised and existing under the laws of *[Pakistan]* *[insert country of incorporation]* with its registered office located at *[insert registered address]*, do hereby solemnly affirm, declare and state that:
 - (a) the Entity is not ineligible/blacklisted to participate in the Tender Procedure or undertake any contract or project (including the Project) through any form of public tender (due to reasons, including but not limited to corrupt practices and poor performance) by any Federal or Provincial governmental or non-governmental department/agency in Pakistan, [or any other provincial government/governments of any foreign countries or their governmental bodies and/or International Organizations (e.g. World Bank, Asian Development Bank, United Nations, International Monetary Fund etc.)] at the date of submission of this Affidavit;
 - (b) neither the Entity nor any Affiliate:
 - (i) is included as a debarred person pursuant to the public sanctions list of any multilateral development bank that is party to the Agreement on Mutual Enforcement of Debarment Decisions of 9 April 2010 (www.crossdebarment.org); or
 - (ii) is included on any sanctions lists promulgated by the UN Security Council or its Committees, or any other recognised international sanctions list;
 - (c) no action, suit or other legal proceeding or governmental investigation is pending against the Entity or any of its respective officers, directors or employees, or that any of the foregoing has received any notice thereof, which questions the validity and execution of this Affidavit or the representations provided in this Affidavit;
 - (d) the Entity has no tax liabilities or liabilities in respect of judgments awarded by any court or similar proceedings in the period of three (3) years prior to the date of this Affidavit, save in each case to the extent that it has made suitable accounting provision for such liabilities in accordance with applicable accounting regulations;

- (e) the Entity has not directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the award of any contract, project or transaction in the period of five (5) years prior to the date of this Affidavit;
- (f) the Entity (including the Affiliate) is not in bankruptcy or liquidation proceedings or receivership, or wound up, or its affairs are not being administered by a court or a judicial officer, or its business activities have not been suspended or it is not the subject of legal proceedings of any of the foregoing and has a reasonable expectation of being able to discharge all financial liabilities as they fall due;
- (g) the Entity has not failed to sign a contract with any procuring authority following award;
- (h) there is no conflict of interest or potential conflict of interest arising from prior or existing contracts or relationships which could materially affect potential involvement of the Entity in the Project and to comply with the obligations set out in the RFP or with respect to the Project;
- (i) [the Entity is legally and financially autonomous and operates under commercial law][†]; and
- (j) neither the Entity, nor I have concealed any information that might hinder the Tender Procedure being conducted for the Project.

2. That whatever stated above is true and correct to the best of my knowledge and belief and nothing has been concealed thereto.

All capitalized terms unless defined herein shall bear the meaning as ascribed thereto in the RFP.

Deponent

Verified on oath at _____ on this ____ Day of _____, 20____ that the contents of the above Affidavit are true and correct to the best of my knowledge and belief.

Deponent

WITNESSES:

WITNESS 1:

1. _____
 Name: _____
 Address: _____

 CNIC No.: _____

WITNESS 2:

2. _____
 Name: _____
 Address: _____

 CNIC No.: _____

[†] Only relevant for the government owned enterprise or institution.

PART 2 - FORM OF AFFIDAVIT BY THE BUS OPERATOR

NOTES FOR EXECUTION OF AFFIDAVIT

- *Mode of execution of the Affidavit should be in accordance with the procedure, if any, laid down under applicable laws and the same should be under common seal affixed in accordance with the required procedure.*
- *The Affidavit is to be executed on a stamp paper of PKR 100/- (Pakistani Rupees One Hundred only); or if executed overseas, to adequately adhesive stamped when brought into Pakistan with a stamp duty of PKR 100/- (Pakistani Rupees One Hundred only).*
- *If executed in Pakistan, the Affidavit shall be notarized by the notary public and certified by the Oath Commissioner.*
- *For an Affidavit executed and issued overseas, the same will have to be notarized by notary public and:*
 - (a) attested by the Pakistani Embassy/ Consulate in the country where the Affidavit is executed; or*
 - (b) subject to applicable laws of the country where the Affidavit is executed, authenticated by an apostille under the Apostille Convention;*
- *To be submitted by the Bus Operator.*
- *This Affidavit shall be witnessed by two (2) male witnesses or one (1) male and two (2) female witnesses.*
- *See Bidding Documentary Requirements set out in Part 3 (Bidding Documentary Requirements) of **VOLUME I (TENDER PROCEDURE)** of the RFP.*
- *Bidders are required to ensure that the person issuing this affidavit on behalf of a Bus Operator has valid legal authority to execute the Affidavit on behalf of the Bus Operator.*

Please find below the form and substance of the Affidavit.

Date: _____

RE: THE PEOPLE’S GREEN TRANSPORT PROJECT - DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER OF THE E-BUS FLEET (THE PROJECT)

Reference the Request for Proposals document issued on [●] (the **RFP**) by Sindh Mass Transit Authority (**SMTA**) in relation to the Project.

AFFIDAVIT
(THIS **AFFIDAVIT**)

1. I, *[in case of company, insert name of the authorized person and its designation]* of *[insert name of company]* / *[in case of sole proprietor, insert name of sole proprietor and its CNIC or Passport No.]* of *[insert name of sole proprietorship, if any]* / *[in case of partnership, insert name of authorized person and its CNIC or Passport No.]* of *[insert name of partnership, if any]* (the **Entity**), a *[in case of company/partnership, insert nature of company/partnership (if any)]* duly organised and existing under the laws of *[Pakistan]* *[insert country of incorporation]* with its registered office located at *[insert registered address]*, do hereby solemnly affirm, declare and state that:
 - (a) the Entity is not ineligible/blacklisted (due to reasons, including but not limited to corrupt practices and poor performance) by any Federal or Provincial governmental or non-governmental department/agency in Pakistan, or any other provincial government/governments of any foreign countries or their governmental bodies and/or International Organizations (e.g. World Bank, Asian Development Bank, United Nations, International Monetary Fund etc.) at the date of submission of this Affidavit;
 - (b) the Entity is not included:
 - (i) as a debarred person pursuant to the public sanctions list of any multilateral development bank that is party to the Agreement on Mutual Enforcement of Debarment Decisions of 9 April 2010 (www.crossdebarment.org); or
 - (ii) on any sanctions lists promulgated by the UN Security Council or its Committees, or any other recognised international sanctions list;
 - (c) no action, suit or other legal proceeding or governmental investigation is pending against the Entity or any of its respective officers, directors or employees, or that any of the foregoing has received any notice thereof, which questions the validity and execution of this Affidavit or the representations provided in this Affidavit;
 - (d) the Entity has no tax liabilities or liabilities in respect of judgments awarded by any court or similar proceedings in the period of three (3) years prior to the date of this Affidavit, save in each case to the extent that it has made suitable accounting provision for such liabilities in accordance with applicable accounting regulations;
 - (e) the Entity has not directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the award of any contract, project or transaction;
 - (f) the Entity is not in bankruptcy or liquidation proceedings or receivership, or wound up, or its affairs are not being administered by a court or a judicial officer, or its business activities have not been suspended or it is not the subject of legal

proceedings of any of the foregoing and has a reasonable expectation of being able to discharge all financial liabilities as they fall due;

- (g) in case the Entity has been nominated as the Bus Operator in terms of the RFP, the Entity shall execute all instruments as may be required to be executed by the Entity in relation to the Project as per the requirements of the RFP; and
- (h) there is no conflict of interest or potential conflict of interest arising from prior or existing contracts or relationships which could materially affect potential involvement of the Entity in the Project and to comply with the obligations set out in the RFP or with respect to the Project.

2. That whatever stated above is true and correct to the best of my knowledge and belief and nothing has been concealed thereto.

All capitalized terms unless defined herein shall bear the meaning as ascribed thereto in the RFP.

[Deponent

Verified on oath at _____ on this ____ Day of _____, 20____ that the contents of the above Affidavit are true and correct to the best of my knowledge and belief.]

Deponent

WITNESSES:

WITNESS 1:

WITNESS 2:

1. _____

2. _____

Name: _____

Name: _____

Address: _____

Address: _____

CNIC No.: _____

CNIC No.: _____

Bidders to note that in case this Affidavit is executed outside Pakistan, such verification will not be required.

BIDDING FORM T7 - TECHNICAL PROJECT METHODOLOGY/APPROACH

This form must respond to the entire scope of work for the Project described in **VOLUME II (TECHNICAL SPECIFICATIONS)** of the RFP. This Form shall be completed in strict alignment with the Technical Project Methodology/Approach evaluation criteria set out in the RFP.

The Bidder shall structure its submission using the same headings and sequence as the evaluation criteria, and each section of this Form shall directly address the corresponding evaluation sub-criterion. Any deviation from this structure may result in loss of marks.

The Bidder shall set out its proposed technical project methodology and approach covering the design, development, testing, commissioning, operations and maintenance of all Project components during the Development Period and Operations Period, in accordance with the requirements of the RFP.

The submission shall clearly articulate at a minimum, the Bidder's overall technical approach and implementation philosophy; the manner in which the Bidder proposes to achieve compliance with the requirements of the RFP (including **VOLUME II (TECHNICAL SPECIFICATIONS)**); and the Project-specific added value the Bidder proposes to deliver in achieving the stated objectives of the Project.

The Bidder must demonstrate a clear understanding of the objectives and requirements of the Project, identify key technical, operational and integration issues typically associated with electric bus systems, and explain the methodologies, systems and technologies proposed to address such issues. The submission shall confirm that only proven, reliable and commercially deployed technologies are proposed to be used for the implementation of the Project, and that such technologies are compatible with the proposed methodology and implementation plan.

The methodology shall further indicate:

- the Bidder's approach to risk identification and mitigation, including risks associated with electric bus deployment, charging systems, power availability, systems integration and operational readiness; and
- the Bidder's contribution, if any, to value engineering, optimisation and efficient lifecycle management of the Project, consistent with the RFP requirements.

The Bidder shall submit its technical methodology/approach as Bidding Form T7 (*Technical Project Methodology/ Approach*). The submission shall not exceed twenty-five (25) pages.

BIDDING FORM T8 - OPERATION & MAINTENANCE PLAN AND PROCEDURES

This Form is to be read in conjunction with Bidding Form T7 (Technical Project Methodology/ Approach) and does not constitute a standalone evaluation item.

Bidders are required to develop a Management, Operation & Maintenance (MOM) Plan which is specific to the Project and details the approach and procedures to be implemented as part of the Project to ensure overall efficient operations and maintenance of the Project, after commissioning, during the Operations Period, as well as define adequate management structures to ensure compliance with best practices.

A MOM Plan should include, at a minimum, the Bidder's approach towards overall asset management, monitoring and maintenance which should be integrated with an outline control philosophy for the infrastructure which considers interfaces with supporting utilities and intelligent solutions to optimize efficiencies where possible.

Such a plan should also detail the daily and monthly reports and communication protocols which will be provided to SMTA in terms of performance specification compliance as well as operational and maintenance monitoring reporting in compliance with the requirements specified in **VOLUME II (TECHNICAL SPECIFICATIONS)** of the RFP.

The Bidder must attach its outline of the MOM Plan as Bidding Form T8 (*Operation & Maintenance Plan and Procedure*). The MOM plan should not be longer than fifteen (15) pages.

BIDDING FORM T9 - IMPLEMENTATION SCHEDULE

This Form is to be read in conjunction with Bidding Form T7 (Technical Project Methodology/ Approach) and does not constitute a standalone evaluation item.

The Bidders are required to submit a detailed estimated implementation schedule of the proposed works to be attached as Bidding Form T9 (*Implementation Schedule*). The implementation schedule should detail, as minimum, the main planning and delivery components of the Project from inception up to the construction completion, operation and maintenance, plus the final handover to SMTA, considering all aspects of the Project including long lead time items, time related to approvals, etc. each in accordance with the requirements of the RFP (including the Concession Agreement). The implementation schedule should also clearly indicate the Project's critical path. Compliance with the timelines set out in **SCHEDULE C (IMPLEMENTATION SCHEDULE)** to the Concession Agreement shall be required to be ensured while preparing this Bidding Form T9 (*Implementation Schedule*).

Name of Bidder: _____

Signature:

[Seal]

BIDDING FORM T10 - BUS SPECIFICATIONS

This Form is to be read in conjunction with Bidding Form T7 (Technical Project Methodology/ Approach) and does not constitute a standalone evaluation item.

The Bidder hereby confirms its compliance with the bus specifications set out in the Technical Specifications under **VOLUME II (TECHNICAL SPECIFICATIONS)** of the RFP. The details of compliance are provided below.

Specification Reference (Volume II / Section / Clause):

Specification Requirement as per RFP:

Specification of Bus Offered by the Bidder:

Compliance Status (Compliant/Non-Compliant/Deviation):

Supporting Technical Documents Submitted (if any):

(Repeat the above for each applicable Bus (Bid) specification)

DECLARATION

We hereby declare that the Buses (Bid) offered by us comply with the requirements of the RFP, except to the extent of any deviations expressly disclosed above. We acknowledge that any misrepresentation or omission may result in rejection of the Bid.

Name of Bidder: _____

Authorized Signatory: _____

Name & Designation: _____

Signature: _____

Date: _____

[Seal]

All equipment proposed by the Bidders shall be brand new.

BIDDING FORM T11 - FORMAT OF CURRICULUM VITAE (CV)

1. PROPOSED POSITION: _____
2. NAME OF FIRM: _____
3. NAME OF STAFF: _____
4. PROFESSION: _____
5. DATE OF BIRTH: _____
6. YEARS WITH FIRM: _____
7. NATIONALITY: _____
8. MEMBERSHIP IN PROFESSIONAL SOCIETY: _____
9. DETAILED TASKS ASSIGNED ON THE PROJECT: _____
10. KEY QUALIFICATION:
(Give an outline of staff member's experience and training most pertinent to assigned tasks. Describe degree of responsibility held by staff members in relevant previous assignments and give dates and locations. Use up to one page.)
11. EDUCATION:
(Summarize college/university and other specialized education of staff member, giving names of institutions, dates attended and degrees/diplomas obtained.)
12. EMPLOYMENT RECORD:
(Starting with present position, list in reverse order every employment held.)
13. LANGUAGES:
(Indicate proficiency in speaking, reading and writing of each language: excellent, good, fair or poor.)
14. CERTIFICATION:

I, the undersigned, certify to the best of my knowledge and belief that:

- (a) This CV correctly describes my qualifications and experience;
- (b) I am not a current employee of the executing or the implementing agency/the Agency;
- (c) I was not part of the team who wrote the terms of reference for this consulting services assignment; and
- (d) I certify that I have been informed by the firm that it is including my CV in the Bid for the People's Green Transport Project. I confirm that I will be available to carry out the assignment for which my CV has been submitted in accordance with the implementation arrangements and schedule set out in the Proposal.

If the CV is signed by the firm's authorized representative, insert:

I, as the authorized representative of the firm submitting this Proposal for the People's Green Transport Project certify that I have obtained the consent of the named expert to submit his/her CV, and that s/he will be available to carry out the assignment in accordance with the implementation arrangements and schedule set out in the Proposal, and confirm his/her compliance with paragraphs (a) to (d) above.

Signature of staff member

Date: _____
Day/Month/Year

Signature of authorized representative of firm

Date: _____
Day/Month/Year

BIDDING FORM T12 - ORGANIZATION & STAFFING

The Bidders should propose the structure and composition of their team i.e., the main disciplines involved, the key staff member/expert responsible for each discipline, and the proposed managerial, technical and support staff and site staff. The roles and responsibilities of each key staff member/expert should be set out as job descriptions. In the case of an association/joint venture/consortium, it should, indicate how the duties and responsibilities are to be shared.

The Bidder shall list in the table below the key personnel to be engaged for the Project and include any relevant document required to demonstrate the suitable level of experience and qualifications for each role and project responsibilities.

ROLE	PROJECT RESPONSIBILITY	NAME	NATIONALITY	QUALIFICATIONS	WORKING YEARS IN THE ENTITY	YEARS OF RELEVANT EXPERIENCE

Name of Bidder: _____

Signature:

[Seal]

BIDDING FORM T13 - QUALITY CONTROL PRACTICES & PROCEDURES

The quality control practices and procedures which will ensure compliance with the Project requirements and international best practices, should be attached as Bidding Form T13 (*Quality Control Practices & Procedures*).

Bidders should briefly outline their procedures in relation to the Project and attach any relevant documentation such as ISO 9001 certification, etc.

The quality control practices and procedures paper should not be longer than five (5) pages.

BIDDING FORM T14 - HEALTH & SAFETY PLAN AND PROCEDURES

Bidders are required to develop an outline health and safety plan which is specific to the Project and details the approach and procedures to be implemented as part of the Project to ensure the overall health and safety compliance with international best practices and other applicable laws, including the Environmental and Social Standards (as specified in the Concession Agreement) applied throughout the Project lifecycle.

The health and safety plan should also include an outline methodology of risk assessments, health and safety audits, safety check lists and confirmation that all necessary allowances have been made for these procedures and the required personal protective and other equipment, training, inductions and control, etc.

Bidders should briefly outline their procedures in relation to the Project and attach any relevant documentation such as OSHAS 18001 certification, etc.

The Bidder must attach details regarding health and safety plan and procedure as Bidding Form T14 (*Health & Safety Plan and Procedures*), which should not be longer than five (5) pages.

**BIDDING FORM T15 - METHODOLOGY/APPROACH FOR THE ENVIRONMENTAL & SOCIAL
MANAGEMENT SYSTEM AND PROCEDURES**

Bidders are required to develop an outline Environmental and Social Management Plan (ESMP) which is specific to the Project and sets out the approach and procedures to be implemented as part of the Project to ensure protection of the environment and community as well as compliance with relevant international best practices and the Laws. Bidders should review the requirements set out in **VOLUME II (TECHNICAL SPECIFICATIONS)**, **SCHEDULE J (ENVIRONMENT, HEALTH AND SAFETY REQUIREMENTS)** and **SCHEDULE K (KPIs SDG)** of the Concession Agreement while preparing this form.

The ESM System should include the approach to develop the ESIA, ESMP, SDGs and an indication of how this plan will be developed and audited to ensure compliance. Confirmation should be provided that all necessary allowances have been made for these procedures.

Bidders should briefly outline their procedures in relation to the project and attach any relevant documentation such as ISO 14001 certification, etc.

The Bidder must attach relevant details as Bidding Form T15 (*Methodology Approach for the Environmental & Social Management Plan and Procedures*), which should not be longer than fifteen (15) pages.

BIDDING FORM T16 - OTHER TECHNICAL DATA SUBMISSION

Bidders shall attach any additional relevant technical data including process descriptions, design calculations, drawings, specifications, data sheets and similar documents. Such information should be summarized, clearly presented and logically grouped according to the relevant sections of the proposed works for ease of evaluation, in each case as per the requirements of the RFP.

The Bidder must submit the relevant details as Bidding Form T16 (*Other Technical Data Submission*), which should not be longer than ten (10) pages.

BIDDING FORM T17 - LEAD DEVELOPER TECHNICAL CRITERIA EVIDENCE SHEET

Name of Applicant			
Name of Lead Developer			

Technical Criterion	[Yes/No]	[Name of the Lead Developer satisfying the criteria]	[Percentage of shareholding of Lead Developer in the Concessionaire]	[In this column, Bidders must detail their compliance with the requirements set out under ' Long-Term Capital Financing Experience/Project Finance Experience ' of Annexure A (Basic Information Requirements) of Part 4 (Annexures) of VOLUME I (TENDER PROCEDURE) and under ' Long-Term Capital Financing Experience/Project Finance Experience ' of Part 1 (Technical Evaluation Criteria) of Annexure B (Evaluation Criteria) of Part 4 (Annexures) of VOLUME I (TENDER PROCEDURE) , in each case, of the RFP.]

NAME OF PROJECT	LOCATION AND COUNTRY OF PROJECT	DESCRIPTION (OVERVIEW) OF THE PROJECT ALONG WITH PROJECT COMPONENTS	SCOPE OF WORK UNDERTAKEN BY THE APPLICANT/ LEAD DEVELOPER	DATE OF PROJECT COMMERCIAL OPERATION	OWNERSHIP IN PROJECT
[one line per project]					

DIRECT OR INDIRECT OWNERSHIP IN THE RELEVANT PROJECT	TERM OF OWNERSHIP (DEVELOPMENT PERIOD AND NUMBER OF OPERATING YEARS)	GOVERNMENT COUNTERPARTY, ORGANIZATION AND INDIVIDUAL FOR REFERENCE. ADDRESS/ TELEPHONE/ EMAIL:	CAPACITY OF PROJECT	PROJECT COST (USD) ⁷
[one line per project]				

The Bidder, or the Lead Developer in case of a Consortium, shall provide a clear statement of relevant technical criteria (set out under ‘**Long-Term Capital Financing Experience/Project Finance Experience**’ of Annexure A (*Basic Information Requirements*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** and under ‘**Long-Term Capital Financing Experience/Project Finance Experience**’ of Part 1 (*Technical Evaluation Criteria*) of Annexure B (*Evaluation Criteria*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)**, in each case, of the RFP) for which it aims to qualify, in accordance with Bidding Form T17 (*Lead Developer Technical Criteria Evidence Sheet*), along with a summary of the supporting evidence. For each project submitted by the Bidder, or the Lead Developer in case of a Consortium, as evidence of meeting a technical criterion, the Bidder shall provide:

- (a) as per Bidding Form T17 (*Lead Developer Technical Criteria Evidence Sheet*), details regarding the project: (i) name; (ii) location; (iii) description along with capacity and project components; (iv) commercial operations date; and (v) direct or indirect shareholding in the relevant project with the name of the special purpose vehicle and its ultimate parent company or companies; and
- (b) verifiable and independently and objectively produced documentary evidence confirming the information in section (a) above, which should include, without limitation:
 - (i) work order or certificate clearly indicating: (A) name of the project and Bidder/Lead Developer (in case of a Consortium); (B) role and scope of the work; (C) shareholding

⁷ **Note:** Exchange rate to be based on the rate published by Reuters on [insert link] at close of business UK time, on the date of issuance of the RFP.

percentage and shareholding term (construction and operations period); and (D) project construction cost. Such evidence (containing information mentioned in (A) to (D) above) to be provided through: (AA) certificate issued by the relevant governmental counterparty; (BB) a letter issued by the project company supported by relevant project agreements signed with government counterparty such as contract or work order; or (CC) other credible documentary evidence that substantiates compliance with such requirements; and

- (ii) either: (A) evidence of the required direct or indirect shareholding, a statement from an auditor confirming the Bidder's/the Lead Developer's (in case of a Consortium) shareholding in the project; or (B) project company's audited financial statements covering the construction and operating period reflecting such direct or indirect shareholding of the Bidder/the Lead Developer (in case of a Consortium) in the project company.

BIDDING FORM T18 - BIDDERS FINANCIAL CRITERIA EVIDENCE SHEET

NET WORTH FOR THE PREVIOUS THREE (3) FINANCIAL YEARS						
	2025		2024		2023	
Currency	In currency of the financial statements [insert name of currency] Million	In PKR Million	In currency of the financial statements [insert name of currency] Million	In PKR Million	In currency of the financial statements [insert name of currency] Million	In PKR Million
Exchange rate (in comparison to financial statements currency)		[Financial statement currency to PKR]		[Financial statement currency to PKR]		[Financial statement currency to PKR]
Total Assets (for three (3) most recent full financial years)						
Total Liabilities (for three (3) most recent full financial years)						
Revaluation Surplus (or similar entry)						
Net Worth						

Each Bidder, or in the case of a Consortium, each Consortium Member must fill in this form (if applicable).

⁸ For financial statements in currencies other than PKR, the financial statements in PKR, for the purposes of completing this form, will be calculated either using the December month-end or June month-end (depending on financial year ending month) exchange rate for the relevant year as specified in the relevant 'Month-End Ex Rates in PKR' tab in the file uploaded by State Bank of Pakistan which can be accessed using the following link *[insert link]*. For currencies not mentioned in the file, Bidders are advised to contact GoS/SMTA and relevant conversion rates shall be provided.

AVERAGE ANNUAL TURNOVER FOR THE PREVIOUS THREE (3) FINANCIAL YEARS				
	Year 1	Year 2	Year 3	Average annual turnover of the previous three (3) financial years In PKR Million
Total				

Proof of average annual turnover must be provided by the Bidder, or, in case of a Consortium, by each Consortium Member. Such proof shall include balance sheets, income statements, statements of cash flows, and accompanying notes, duly certified by an independent certified public accountant or auditor, for the three (3) most recent full financial years, together with the income tax returns for the same period, for which such statements and returns are available as at the Bid Submission Deadline.

BIDDING FORM T19 - BUS OPERATOR TECHNICAL CRITERIA EVIDENCE SHEET

NATURE OF OPERATIONS	FLEET SIZE UNDER DIRECT OPERATIONAL CONTROL, MANUFACTURING YEAR AND ROADWORTHINESS STATUS	PERIOD OF CONTINUOUS OPERATIONS RELIED UPON	SCOPE OF WORK UNDERTAKEN BY THE BUS OPERATOR (<i>TICK ALL APPLICABLE</i>)	DATE OF PROJECT COMMERCIAL OPERATIONS
[Inter-city/Intra-city]	Manufacturing Year Range (earliest–latest): _____ Fitness/Roadworthiness Certificate: ☐ Valid ☐ Not Applicable (Issuing Authority: _____ Valid Until: _____)		☐ Day-to-day operations ☐ Deployment/routing/scheduling ☐ Routine maintenance ☐ Periodic maintenance ☐ Corrective maintenance	
ELECTRIC BUS EXPERIENCE				
Electric buses involved in the project(s)	☐ Yes ☐ No			
Number of electric buses				
Nature of experience	☐ Procurement ☐ O&M ☐ Both			
Period of electric bus operation and maintenance experience	From: _____ To: _____			
WORKSHOP/MAINTENANCE FACILITY CAPABILITY				
Type of facility	☐ Owned ☐ Long-Term Lease ☐ Third-Party (SLA) ☐ Employer-Provided Depot			
Location of facility				
Used for routine maintenance (Yes/No)				
Used for periodic maintenance (Yes/No)				
Used for corrective maintenance (Yes/No)				
Functional maintenance bays and equipment				
Certified diagnostic capability				
Spare parts inventory management system				
OEM-trained/certified technical personnel				

The Bidder shall attach documentary evidence for each project reference, which may include (without limitation) operating contracts or concessions; route permits or deployment records; vehicle registration, ownership or lease documentation; fleet maintenance logs or OEM maintenance records; KPIs or performance reports; employer or government certifications; workshop ownership/lease documents or SLAs; and any other documentation acceptable to SMTA.

BIDDING FORM T20 - BUS OPERATOR FINANCIAL CRITERIA EVIDENCE SHEET

NET WORTH FOR THE PREVIOUS THREE (3) FINANCIAL YEARS						
	2025		2024		2023	
Currency	In currency of the financial statements [insert name of currency] Million	In PKR Million	In currency of the financial statements [insert name of currency] Million	In PKR Million	In currency of the financial statements [insert name of currency] Million	In PKR Million
Exchange rate (in comparison to financial statements currency)		[Financial statement currency to PKR]		[Financial statement currency to PKR]		[Financial statement currency to PKR]
Total Assets (for three (3) most recent full financial years)						
Total Liabilities (for three (3) most recent full financial years)						
Revaluation Surplus (or similar entry)						
Net Worth						

The Bus Operator must fill in this form.

BIDDING FORM T21 - LITIGATION HISTORY

PENDING LITIGATION			
Pending litigation - All pending litigation shall in total not represent more than fifty percent (50%) of the Bidder's/Consortium Member's Net Worth and shall be treated as resolved against the Bidder/Consortium Member.			
YEAR	OUTCOME AS PERCENT OF TOTAL ASSETS	OUTCOME AS PERCENT OF TOTAL ASSETS	TOTAL CONTRACT AMOUNT (USD)⁹
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute:	

⁹ For conversion of values in USD, the exchange rate will be calculated using the December month-end exchange rates for the year of project completion as specified in the 'Month-End Ex for the relevant year of the project commercial operations. Rates in 'US \$' tab in the file uploaded by State Bank of Pakistan which can be accessed using the following link https://www.sbp.org.pk/ecodata/IBF_Arch.xls. For currencies not mentioned in the file, Bidders are advised to contact GoS/SMTA and relevant conversion rates shall be provided.

BIDDING FORM T22 - FORM OF BID SECURITY

BANK GUARANTEE

Guarantee No. _____

(hereinafter referred to as the **Bank Guarantee**)

Executed on _____

Expiry date _____

Name of Guarantor (Bank) with address: _____

[Name of Principal (Bidder) with address:]¹⁰ _____

Guaranteed Amount (express in words and figures): _____

Date of Bid _____

The above premised, we (the **Guarantor Bank**) hereby undertake irrevocably and unconditionally on first demand to pay the Sindh Mass Transit Authority (**SMTA**), without any notice, reference or recourse to the Bidder or to any other entity or without any recourse or reference to any document, agreement, instrument or deed, any sum or sums (or any part thereof) equivalent in aggregate up to but not exceeding a maximum amount of:

[●] [●]/- ([●][●])
(the **Guaranteed Amount**)

at sight and immediately upon the receipt of the SMTA's first written demand (the **Demand**) at the Guarantor Bank's offices located at [●] or through SWIFT instructions transmitted by SMTA's bank on behalf of SMTA, to the Guarantor Bank, or through fax sent by SMTA at the Guarantor Bank's fax number i.e., [●], such Demand stating:

- (i) that the Bidder is in breach of its obligations towards SMTA; and
- (ii) the total amounts demanded.

A Demand shall only be honoured by us:

- (i) in the case of a written Demand, if it is made by and bears the signature of an authorised officer or representative of SMTA; or
- (ii) in the case of a Demand transmitted through SWIFT, if it is transmitted through authenticated SWIFT instructions by SMTA's bank on behalf of SMTA; or
- (iii) in the case of a Demand made through fax, it is made by and bears the signature of an authorised officer or representative of SMTA.

We, the Guarantor Bank, shall unconditionally honour a Demand hereunder made in compliance with this Bank Guarantee at sight and immediately on the date of receipt of the Demand, as stated earlier, and shall transfer the amount specified in the Demand to the bank account as notified in the

¹⁰ Bidders to note that the Bid Security may be issued by any Consortium Member.

Demand, in immediately available and freely transferable funds in the currency of this Bank Guarantee, free and clear of and without any set-off or deduction for or on account of any present or future taxes, levies, imposts, duties, charges, fees, deductions or withholdings of any nature whatsoever and by whomsoever imposed.

This Guarantee shall come into force and shall become automatically effective upon its issuance.

Such demand must be received by us on or before the [●] (the **Expiry Date**), when this Bank Guarantee shall expire and shall thereafter be returned to us.

Upon expiry, this Bank Guarantee shall be returned to the Bidder without undue delay. Multiple Demands may be made by SMTA under this Bank Guarantee, but our aggregate liability shall not exceed the Guaranteed Amount.

We hereby agree that any amendment, renewal, extension, modification, compromise, release or discharge by mutual agreement by SMTA, the Bidder or any other entity of any document, agreement, instrument or deed shall not in any way impair or affect our liabilities hereunder and may be undertaken without notice to us and without the necessity for any additional endorsement, consent or guarantee by us.

This Bank Guarantee shall not, during its validity period, be affected in any manner by any change in our constitution or of the Bidder's constitution or of their successors or permitted assignees and this Bank Guarantee shall be legally valid, enforceable and binding on each of their successors and permitted assignees.

All references to any contract, agreement, deed or other instruments or documents are by way of reference only and shall not affect our obligations to make payment under the terms of this Bank Guarantee.

If one or more of the provisions of this Bank Guarantee are held or found to be invalid, illegal, or unenforceable for any reason whatsoever, in any respect, any such invalidity, illegality, or unenforceability of any provision shall not affect the validity of the remaining provisions of this Bank Guarantee.

The Guarantor Bank hereby declares and confirms that under its constitution and applicable laws and regulations, it has the necessary power and authority, and all necessary authorizations, approvals and consents thereunder to enter into, execute, deliver and perform the obligations it has undertaken under this Bank Guarantee, which obligations are valid and legally binding on and enforceable against the Guarantor Bank under the laws of Pakistan.

Further, the Guarantor Bank hereby declares and confirms that the signatory(ies) to this Guarantee is/are its duly authorized officer(s) to execute this Guarantee.

This Bank Guarantee and all rights and obligations arising from this Bank Guarantee shall be governed and construed in all respects in accordance with the laws of Pakistan. The courts in Pakistan shall have exclusive jurisdiction in respect of any dispute relating to any matter contained herein.

The issuance of this Bank Guarantee is permitted under the laws of Pakistan and the laws of the jurisdiction where this Bank Guarantee is issued.

This Bank Guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No.758. To the extent that there is any inconsistency between the terms of this Bank Guarantee and

the Uniform Rules for Demand Guarantees, ICC Publication No. 758, the terms of this Bank Guarantee shall prevail.

Name:

Designation:

B. FINANCIAL PROPOSAL BIDDING FORMS

BIDDING FORM F1 - LETTER OF FINANCIAL PROPOSAL

[Date]

To: Sindh Mass Transit Authority
[●]

RE: PEOPLE'S GREEN TRANSPORT PROJECT - DESIGN, BUILD, FINANCE, OPERATE,
MAINTAIN AND TRANSFER OF THE E-BUSES ASSETS (THE PROJECT)

Reference the Request for Proposals document issued on [●] (the **RFP**) by Sindh Mass Transit Authority (**SMTA**) in relation to the Project.

Dear [Sir/Madam],

We, [Name of the Bidder] hereby submit our Financial Proposal in conformity with the requirements of the RFP.

All capitalized terms unless defined herein shall bear the meaning as ascribed thereto in the RFP.

We, agree, confirm, undertake and declare that:

- (a) We have examined and have no reservations to the RFP, including Addenda No(s) [●]/Corrigenda No(s) [●].
- (b) We, [including all Consortium Members,] fully and completely understand and accept the terms of the RFP and hereby undertake to comply with the requirements specified therein.
- (c) [Our Bid Price, comprising [●], is **Pakistani Rupees [insert amount in words] only (PKR [insert amount in figures]/-).**]
- (d) [The Estimated Project Cost based in our Financial Proposal (read with our Technical Proposal) is **Pakistani Rupees [insert amount in words] only (PKR [insert amount in figures]/-).**]
- (e) [We have submitted our Financial Model in PDF on SPPRA EPADS and our Financial Model in Microsoft Excel file is available at link **[insert weblink to Financial Model in Microsoft Excel format]**¹. We confirm that the weblink shall remain unrestricted and accessible to SMTA for viewing and downloading of the Financial Model in Microsoft Excel format during the Financial Proposal opening date and time. We agree that in the case of any discrepancies between the Microsoft Excel file and the PDF of the Financial Model, the latter shall prevail.]
- (f) We offer to perform and undertake the works and services in respect of the Project in conformity with the RFP, including the GoS Project Documents, without any omission, reservation or deviation; and we accept and undertake to comply with all requirements in the RFP including the appendices/annexures attached to the RFP.

¹ Bidder shall create an unrestricted weblink using a cloud-based storage service (e.g., Google Drive, One Drive, iCloud, Mega, pCloud, Sync, Icedrive, Koofr, MediaFire, etc.) as available to store and provide SMTA with online access to the Financial Model in Microsoft Excel format.

- (g) We, [including all Consortium Members,] and the Bus Operator, as per the requirements of the RFP, respectively:
- (i) have nationalities of Eligible Countries;
 - (ii) do not have any conflict of interest; and
 - (iii) have not been declared ineligible/blacklisted by any employers, by any Federal or Provincial governmental or non-governmental department/agency in Pakistan, [or any other provincial government/governments of any foreign countries or their governmental bodies and/or International Organizations (e.g., World Bank, Asian Development Bank, United Nations, International Monetary Fund etc.)], as at the Bid Submission Deadline.
- (h) Neither we, [including all Consortium Members], any Affiliate, nor the Bus Operator:
- (i) are included as a debarred person pursuant to the public sanctions list of any multilateral development bank that is party to the Agreement on Mutual Enforcement of Debarment Decisions of 9 April 2010 (www.crossdebarment.org); or
 - (ii) are included on any sanctions lists promulgated by the UN Security Council or its Committees, or any other recognised international sanctions list,
- (i) Our Bid consisting of the Technical Proposal and the Financial Proposal shall be valid for a period of one hundred and twenty (120) Days from the Bid Submission Deadline in accordance with the RFP, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (j) We understand that all volumes, appendices/annexures attached to the RFP are integral parts of the RFP.
- (k) We have reviewed and accepted the form of the Concession Agreement along with the Schedules attached thereto (attached as **VOLUME III (CONCESSION AGREEMENT)** to the RFP) and undertake to execute the same within the time period stipulated in Notification of Award.
- (l) We acknowledge that SMTA (and the GoS) will be relying on the information provided in our Bid and the documents accompanying them to determine the Successful Bidder. We certify that all information provided in our Bid is true and correct and that nothing has been omitted that would render such information misleading.
- (m) We satisfy and meet all the requirements specified in the RFP, including the qualifications requirements set out in the RFP and there has been no material event relating to us or, if we are a Consortium, to any of our Consortium Members, which would require disclosure to SMTA (and the GoS) or which might cause us to fail to become a Bidder.
- (n) We understand that this Bid, together with your written acceptance thereof included in your Notification of Award, shall constitute a binding contract between us, until the Concession Agreement (attached as **VOLUME III (CONCESSION AGREEMENT)** to the RFP) is executed.

- (o) We are not participating, as a Bidder in more than one Bid in this Tender Procedure in accordance with the requirements of the RFP.
- (p) We understand that SMTA may cancel the Tender Procedure at any time and that SMTA is not bound either to accept any Bid that it may receive, without incurring any liability to the Bidders.
- (q) We agree to permit SMTA, the GoS and any persons, representatives or auditors appointed and authorized by SMTA and/or the GoS to inspect and audit our accounts, records and other documents relating to our Bid.
- (r) All the information submitted along with our Bid, including the enclosed forms and documents, is accurate in all respects.
- (s) We accept the right of SMTA to: (i) request additional information reasonably required to assess the Bid; (ii) amend the procedures and requirements or issue clarifications; and (iii) extend or amend the timelines as stipulated in the RFP.
- (t) All information, representations and other matters of fact communicated (whether in writing or otherwise) to SMTA by us or on our behalf, in connection with or arising out of the Bid are true, complete and accurate in all respects.
- (u) We hereby declare that all the information and statements made in this Bid are true and accept that any misrepresentation contained in it shall lead to our disqualification, forfeiture of the Bid Security and/or our blacklisting by the SMTA.
- (v) We, [including all Consortium Members,] have made our own investigations and research and have satisfied ourselves in respect of all matters (whether actual or contingent) relating to the Bid and the Project.
- (w) We undertake, if our Bid is accepted, to furnish the Development Period Performance Security as per the requirements of the RFP.
- (x) We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other person or persons making a Bid for the Project.
- (y) We understand that the RFP has been issued by SMTA for the Project; and undertake and confirm that if our Bid is accepted, we and the SPV (to be incorporated by us, in case the Project is awarded to us), as applicable, shall execute the Concession Agreement (including other applicable GoS Project Documents) (attached as **VOLUME III (CONCESSION AGREEMENT)**) to the RFP and all other instruments as may be required to be executed in relation to the Project as per the requirements of the RFP.

Name

In the capacity of

Signed

..... (Seal)

Duly authorized to sign the Bid for and on behalf of: *(Insert Name of the Bidder/ names of all Consortium Members)*

Date

WITNESSES

WITNESS 1:

Signature: _____

Name: _____

Designation: _____

Date: _____

CNIC/Passport No.: _____

WITNESS 2:

Signature: _____

Name: _____

Designation: _____

Date: _____

CNIC/Passport No.: _____

BIDDING FORM F2 - FINANCIAL FORMS

Bidding Form F2 (*Financial Forms*) comprises the following forms:

- Bidding Form F2-A - Bid Sheet in Microsoft Excel format
- Bidding Form F2-B - Letter of Intent

Notes for filling in the forms in Bidding Form F2 (Financial Forms):

Capitalized terms (including the abbreviations) used in the aforesaid forms, shall have the meaning given to them in Concession Agreement.

Bidders are required to fill in Bidding Form F2-A available at the following websites:

PPP Unit - <https://www.pppunitsindh.gov.pk>

SMTA - <https://smta.gos.pk>

SPPRA EPADS - <https://portalsindh.eprocure.gov.pk>

- *Bidders are also required to follow the procedure mentioned in Section 4.5.3(b) of the Instruction to Bidders for submission of Bidding Form F2-A - Bid Sheet in Microsoft Excel format.*

BIDDING FORM F2-A - BID SHEET

Bidding Form F2-A available at the following websites:

PPP Unit - <https://www.pppunitsindh.gov.pk>

SMTA - <https://smta.gos.pk>

SPPRA EPADS - <https://portalsindh.eprocure.gov.pk>

BIDDING FORM F2-B - LETTER OF INTENT¹²

BORROWER/CUSTOMER	
PROJECT SPONSORS	
SHAREHOLDERS	
TRANSACTION/PROJECT	
PROJECT COST	
FACILITY AMOUNT	
CURRENCY OF THE FACILITY	
PRICING ON FACILITY (FIXED OR FLOATING, INCLUDING FLOATING BASE RATE AND MARGIN)	
TENOR	
FACILITY EFFECTIVE DATE	
AVAILABILITY PERIOD	
REPAYMENT OF FACILITY (PERIOD AND FREQUENCY OF REPAYMENT)	
SECURITY/COLLATERAL	
ARRANGEMENT/COMMITMENT FEE	
VALIDITY	

Signatory for and on behalf of
[insert name of the financial institution]

Name:
Designation:

Signatory for and on behalf of
[insert name of the relevant Bidder]

Name:
Designation:

¹² This format of the letter of intent is indicative only. Bidders may provide the letter of intent on standard formats of the relevant financial institutions.

PART 3
BIDDING DOCUMENTARY REQUIREMENTS

BIDDING DOCUMENTARY REQUIREMENTS

No.	DOCUMENT	REQUIREMENTS ¹³	
		LOCAL ENTITY	FOREIGN ENTITY
1.	LETTER OF TECHNICAL PROPOSAL AND LETTER OF FINANCIAL PROPOSAL	To be dated, signed by the authorized representative and duly stamped with the company's stamp and witnessed by two (2) male witnesses or one (1) male and two (2) female witnesses.	To be dated, signed by the authorized representative and to be duly stamped with the company's stamp and witnessed by two (2) male witnesses or one (1) male and two (2) female witnesses.
2.	FORM OF BID SECURITY	To be issued by Acceptable Bank; and dated, signed by an authorized representative of the relevant bank and duly stamped (PKR 500/-).	To be issued by Acceptable Bank; and dated, signed by an authorized representative of the relevant bank and duly stamped (PKR 500/-). The Bid Security issued by a foreign bank should be counter-guaranteed/confirmed from a local bank in Pakistan.
3.	POWER OF ATTORNEY	To be dated; witnessed; notarized by notary public; duly stamped (PKR 200/-); signed by an authorized representative; and in the language as required under the Instructions to Bidders.	To be dated; witnessed; signed by an authorized representative and adequately adhesive stamped when brought into Pakistan with a stamp duty of PKR 200/-. The Power of Attorney executed and issued overseas will have to be notarized by notary public and; (i) attested by the Pakistani Embassy/Consulate in the country where the Power of Attorney is executed. In case a person in Pakistan is being appointed as an attorney pursuant to the Power of Attorney, the Power of Attorney, once brought into Pakistan, will also be required

¹³ Under the Laws of Pakistan (Qanun-e-Shahadat Order, 1984), the minimum witnessing requirement mandates the presence of either two (2) males, or one (1) male and two (2) females to witness.

			to be attested by Ministry of Foreign Affairs, Pakistan; or (ii) subject to applicable laws of the country where Power of Attorney is executed, authenticated by an apostille under the Apostille Convention.
4.	UNDERTAKING	To be dated; signed by the authorized signatory; witnessed; duly stamped (PKR 100/-); and in the language as required under the Instructions to Bidders.	To be in the English language and in compliance with the requirements under the Instructions to Bidders, dated, signed by the authorized signatory, witnessed, and adequately adhesive stamped when brought into Pakistan with a stamp duty of PKR 100/-. For an Undertaking issued overseas, the same will have to be notarized by notary public and: (i) attested by the Pakistani Embassy/Consulate in the country where the Undertaking is issued; or (ii) subject to applicable laws of the country where the Undertaking is executed, authenticated by an apostille under the Apostille Convention.
5.	INTEGRITY PACT	To be dated and signed by the authorized representative.	To be dated and signed by the authorized representative.
6.	AFFIDAVIT	To be dated; notarized by notary public and verified by Oath Commissioner, signed by the authorized signatory; witnessed; duly stamped (PKR 100/-); and in the format as required under the Instructions to Bidders.	To be in the English language and in compliance with the requirements under the Instructions to Bidders, dated; signed by the authorized signatory; witnessed; and adequately adhesive stamped when brought into Pakistan with a stamp duty of PKR 100/-.

			For an Affidavit executed and issued overseas, the same will have to be notarized by notary public and: (i) attested by the Pakistani Embassy/Consulate in the country where the Affidavit is executed; or (ii) subject to applicable laws of the country where Affidavit is executed, authenticated by an apostille under the Apostille Convention.

PART 4
ANNEXURES

ANNEXURE A - BASIC INFORMATION REQUIREMENTS

A Technical Proposal received from a Bidder shall only be considered if all the following information/ components have been provided and the requirements herein are satisfied:

In case any document/ information furnished is in a language other than English, it will need to be accompanied by an English translation (duly notarized by notary public and: (a) attested by Pakistan Embassy/ Consulate and, once brought into Pakistan, should be attested by Ministry of Foreign Affairs, Pakistan; or (b) subject to applicable laws of the country where English translation is issued, authenticated by an apostille under the Apostille Convention. In case of any discrepancy, the English translation shall prevail.

➤ **CONSTITUTIVE DOCUMENTS**

A detailed description of the Bidder (including each Consortium Member) containing:

- legal name;
- complete head office contact information, including mailing address, telephone and fax numbers, and an e-mail address; and
- incorporation details, including corporate charter, articles of incorporation, and proof of legal authorization to operate in Pakistan. If a Bidder (including a Consortium Member) is an unincorporated legal entity, then the proof of that legal entity's existence must be provided (e.g. partnership deed and registration certificate).

Foreign entities participating in the Tender Procedure shall submit certified true copies of their constitutive documents.

➤ **REGISTRATION WITH TAX AUTHORITIES**

The Bidder (including each Consortium Member) must possess a valid registration certificate from the income tax authority (i.e. the NTN certificate) and relevant sales tax authority, if applicable. Valid NTN certificate(s) and tax returns filed for last three (3) years are to be attached and relevant sales tax certificate, if applicable.

Foreign entities participating in the Tender Procedure should submit a tax certificate of their country and tax returns filed for last three (3) financial years (if applicable).

➤ **AFFIDAVIT FOR GOVERNMENT OWNED LEGAL ENTITIES**

In case a Bidder (including a Consortium Member) is a government owned legal enterprise or institution, such entity, must establish that it is legally and financially autonomous and operating under commercial law.

A Bidder (or a Consortium Member) that is a government owned legal enterprise or institution shall submit an affidavit as set out in Bidding Form T6 (*Form of Affidavit*) of Part 2 (*Bidding Forms*) of **VOLUME I (TENDER PROCEDURE)** confirming that they are legally and financially autonomous and operating under commercial law.

➤ **NO CONFLICT OF INTEREST**

Bidders (including Consortium Members) may be considered to be in a conflict of interest if they, *inter alia*, participated as a consultant in the preparation of the design or technical/commercial/financial/legal specifications for the works and/or services for the Project, that are the subject of the Tender Procedure, or is an affiliate of SMTA or any of its advisors.

A Bidder (including a Consortium Member) may be considered to be in a conflict of interest if it (including a Consortium Member) participated in more than one Bid in the Tender Procedure, either individually or as a partner in a Consortium. This will result in the disqualification of all Bids in which it is involved.

The circumstances provided above which may constitute a conflict of interest are not exhaustive, and the SMTA and TFEC shall be the sole determinant of whether a conflict-of-interest situation has arisen.

In case there is no conflict, the Bidder (in case of a Consortium, each Consortium Member) shall provide evidence in the form of an affidavit set out as Bidding Form T6 (*Form of Affidavit*).

➤ **NON-BLACKLISTING**

Each Bidder (including each Consortium Member) shall provide evidence, in the form of an affidavit set out as Bidding Form T6 (*Form of Affidavit*), of its non-blacklisting by its employers, by any Federal or Provincial governmental or non-governmental department/agency in Pakistan, or any other provincial government/governments of any foreign countries or their governmental bodies and/or International Organizations (e.g. World Bank, Asian Development Bank, United Nations, International Monetary Fund etc.) as at the Bid Submission Deadline.

➤ **LITIGATION HISTORY**

All pending litigation against the Bidder (including each Consortium Member) shall in total not represent more than fifty percent (50%) of the Bidder's (including each Consortium Member) Net Worth as per the audited financial statements for the financial year 2025, nor shall there be any litigation that prevents or materially impedes the Bidder (including a Consortium Member) from its obligations in respect of the Project.

The Bidder (including each Consortium Member) shall provide details of the litigation in the format attached as Bidding Form T21 (*Litigation History*) or in case of no litigation, submit an affidavit in the format set out in Bidding Form T6 (*Form of Affidavit*).

➤ **BID SECURITY**

*The Bidder shall provide the Bid Security as an irrevocable, unconditional and on-demand bank guarantee in the form attached as Bidding Form T22 (Form of Bid Security) of Part 2 (Bidding Forms) of **VOLUME I (TENDER PROCEDURE)** of the RFP.*

➤ **ELIGIBLE COUNTRIES**

A Bidder, including all Consortium Members, shall be incorporated in/have nationality of an Eligible Country. A Bidder, including all Consortium Members, shall be deemed to have the nationality of an Eligible Country, if the Bidder (including all Consortium Members) is a national of that country; or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of that country.

➤ **FINANCIAL SITUATION/HISTORICAL FINANCIAL PERFORMANCE**

- ***Net Worth***

The Bidder shall have a minimum Net Worth of PKR 8,000,000,000/- (Pakistani Rupees Eight Billion only).

In case of a Consortium, the Lead Developer shall have a minimum Net Worth of PKR 6,000,000,000/- (Pakistani Rupees Six Billion only), and the aggregate Net Worth of all Consortium Members shall be at least PKR 8,000,000,000/- (Pakistani Rupees Eight Billion only). The Bus Operator shall have a minimum Net Worth of PKR 500,000,000/- (Pakistani Rupees Five Hundred Million only).

The Bidder, each Consortium Member and the Bus Operator shall submit audited financial statements for the last three (3) financial years. For the avoidance of doubt, Net Worth shall be assessed solely on the basis of the latest audited financial year.

- ***Average Annual Turnover***

The Bidder shall have an average annual turnover of at least PKR 10,000,000,000/- (Pakistani Rupees Ten Billion only) for the last three (3) financial years.

In case of a Consortium, the Lead Developer shall have an average annual turnover of at least PKR 8,000,000,000/- (Pakistani Rupees Eight Billion only), and the aggregate average annual turnover of all Consortium Members shall be at least PKR 10,000,000,000/- (Pakistani Rupees Ten Billion only), in each case, for the last three (3) financial years.

The Bidder and each Consortium Member shall submit audited financial statements for the last three (3) years evidencing compliance with the above average annual turnover requirements.

- ***Long-Term Capital Financing Experience/Project Finance Experience***

The Bidder, or in the case of a Consortium, the Lead Developer, must demonstrate that within the last ten (10) years immediately prior to the Bid Submission Deadline, it has successfully secured either (a) long-term capital financing from banks, financial institutions, or accredited leasing companies, obtained through a structured credit appraisal process and applied toward capital expenditure or long-term asset development (the **Long-Term Capital Financing Experience**), or (b) project financing, being structured limited-recourse or non-recourse financing raised for the development of an Eligible Project, whether through an SPV or the corporate entity, and where lenders undertook a structured project-level credit appraisal based substantially on project cashflows (the **Project Finance Experience**).

A. Long-Term Capital Financing Experience

To qualify as Long-Term Capital Financing Experience, the Bidder must have secured multiple long-term financing facilities, each having an original principal amount of not less than PKR 1,000,000,000/- (Pakistani Rupees One Billion only), and which collectively amount to not less than PKR 4,000,000,000/- (Pakistani Rupees Four Billion only).

Furthermore, such Long-Term Financing must:

- (i) have an original maturity of not less than three (3) years, including long-term lease/ijarah tenures;
- (ii) have been used solely for capital expenditure or long-term project/asset development; and
- (iii) expressly exclude short-term working-capital facilities, revolving credit lines, overdrafts, invoice/trade financing, bridge financing, restructuring/refinancing or short-term operating leases except if an integral part of the long-term facility.

B. Project Finance Experience

For purposes of Project Finance Experience, an Eligible Project means a project that complies with all of the following requirements:

- (i) the Bidder/Lead Developer held at least fifty-one percent (51%) equity (directly or indirectly, including through an SPV) in the project at the time the project financing was secured;
- (ii) the Eligible Project is operational as of the Bid Submission Deadline; and
- (iii) the total project financing raised for the Eligible Project is at least PKR 3,000,000,000/- (Pakistani Rupees Three Billion only).

Evidence of compliance with the above requirements shall include Financial Close certificates or lender confirmations, auditor-verified financing summaries, financing agreements and disbursement evidence, SPV ownership documentation, details of the type, amount, tenor, lender(s), and the Bidder's role (e.g., borrower, sponsor, lead developer, equity partner) and/or any other evidence acceptable to SMTA (the **Financing Experience Evidence**) that establishes compliance with the '*Long-Term Capital Financing Experience/Project Finance Experience*' requirements set out above.

➤ **BUS OPERATOR MINIMUM ELIGIBILITY REQUIREMENTS**

Where the Bidder proposes to undertake the bus operations itself, or proposes a Bus Operator as a Consortium Member, such Bus Operator shall meet the following minimum eligibility requirements:

- ***Minimum Fleet Size***

The Bus Operator must demonstrate experience in operating and maintaining, under its direct operational control, a bus fleet meeting the following minimum thresholds, as applicable:

- A. in case of experience in intra-city operations, a fleet of minimum twenty (20) Buses (Bid); or
- B. in case of inter-city operations, a fleet of minimum fifty (50) Buses (Bid).

- ***Minimum Operational Experience***

The Bus Operator must satisfy at least one (1) of the following experience criteria, immediately prior to the Bid Submission Deadline:

- A. **Intra-city Operations**

A minimum of two (2) years of continuous experience in operating an intra-city bus fleet comprising not less than twenty (20) Buses (Bid); or

- B. **Inter-city Operations**

A minimum of five (5) years of continuous experience in operating an inter-city bus fleet comprising not less than fifty (50) Buses (Bid).

- ***Eligible Bus Models***

All Buses (Bid) relied upon by the Bus Operator to demonstrate compliance with the above eligibility requirements shall:

- A. have a manufacturing year of 2012 or later; and
- B. be supported by a valid Fitness Certificate and/or Roadworthiness Certificate, issued by the relevant competent authority.

- ***Scope of Bus Operations***

For the period relied upon to satisfy the minimum operational experience requirements, the Bus Operator must have been responsible, at a minimum, for the following functions:

- day-to-day operations of the bus fleet;
- deployment, routing and scheduling of Buses (Bid); and
- routine, periodic, and corrective maintenance of the fleet.

Compliance with this requirement shall be demonstrated through any combination of operating contracts or concessions, route permits or deployment records, vehicle

registration and/or ownership/lease documentation, fleet maintenance logs or OEM maintenance records, KPIs or performance reports, employer or government certifications, or any other documentation reasonably acceptable to SMTA.

Evidence of compliance with the requirements set out in this Annexure A (*Basic Information Requirements*) of Part 4 (*Annexures*) of **VOLUME I (TENDER PROCEDURE)** of the RFP shall be submitted through the following forms (as applicable):

- Bidding Form T17 (*Lead Developer Technical Criteria Evidence Sheet*);
- Bidding Form T18 (*Bidder's Financial Criteria Evidence Sheet*);
- Bidding Form T19 (*Bus Operator Technical Criteria Evidence Sheet*); and
- Bidding Form T20 (*Bus Operator Financial Criteria Evidence Sheet*).

ANNEXURE B - EVALUATION CRITERIA

PART 1 - TECHNICAL EVALUATION CRITERIA

Along with the requirements set out in the Instructions to Bidders and the information required pursuant thereto, this section will be used to determine whether a Bid is technically compliant with the requirements of the RFP.

FINANCIAL CAPABILITY	MAXIMUM MARKS - 40
NET WORTH Only Bidders meeting the minimum Net Worth requirement under Annexure A (<i>Basic Information Requirements</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP shall be scored under this criterion. Marks shall be awarded solely for Net Worth demonstrated in excess of the minimum eligibility threshold, on a sliding-scale basis, in accordance with the scoring bands set out in the opposite column.	Maximum Marks - 15 Aggregate Net Worth of PKR 12,000,000,000/- (Pakistani Rupees Twelve Billion) or above 15 marks Aggregate Net Worth of PKR 9,500,000,000/- (Pakistani Rupees Nine Billion and Five Hundred Million only) or above but less than PKR 12,000,000,000/- (Pakistani Rupees Twelve Billion only) 13 marks Aggregate Net Worth of PKR 8,500,000,000/- (Pakistani Rupees Eight Billion and Five Hundred Million only) or above but less than PKR 9,500,000,000/- (Pakistani Rupees Nine Billion and Five Hundred Million only) 9 marks Aggregate Net Worth of PKR 8,000,000,000/- (Pakistani Rupees Eight Billion) or above but less than PKR 8,500,000,000/- (Pakistani Rupees Eight Billion and Five Hundred Million only) 4 marks
AVERAGE ANNUAL TURNOVER Only Bidders meeting the minimum average annual turnover requirement under Annexure A (<i>Basic Information Requirements</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP shall be scored under this criterion. Marks shall be awarded solely for turnover demonstrated in excess of the minimum eligibility threshold, on a sliding-scale basis, in accordance with the scoring bands set out in the opposite column.	Maximum Marks - 15 Average annual turnover of PKR 13,000,000,000/- (Pakistani Rupees Thirteen Billion only) or above 15 marks Average annual turnover of PKR 12,000,000,000/- (Pakistani Rupees Twelve Billion only) or above but less than PKR 13,000,000,000/- (Pakistani Rupees Thirteen Billion only) 13 marks

	Average annual turnover of PKR 11,000,000,000/- (Pakistani Rupees Eleven Billion only) or above but less than PKR 12,000,000,000/- (Pakistani Rupees Twelve Billion only) 9 marks Average annual turnover of PKR 10,000,000,000/- (Pakistani Rupees Ten Billion only) or above but less than PKR 11,000,000,000/- (Pakistani Rupees Eleven Billion only) 4 marks
Long-Term Capital Financing Experience/Project Finance Experience Only Bidders meeting the minimum Financing Experience requirement under Annexure A (<i>Basic Information Requirements</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP, (whether through Long-Term Capital Financing Experience or Project Finance Experience) shall be scored under this criterion. Marks shall be awarded solely for financing demonstrated in excess of the minimum eligibility threshold, on a sliding-scale basis, in accordance with the scoring bands set out in the opposite column.	<u>LONG-TERM CAPITAL FINANCING EXPERIENCE</u> Maximum Marks - 10 Total Long-Term Capital Financing secured is PKR 6,000,000,000/- (Pakistani Rupees Six Billion) or above 10 marks Total Long-Term Capital Financing secured is PKR 5,000,000,000/- (Pakistani Rupees Five Billion) or above but less than PKR 6,000,000,000/- (Pakistani Rupees Six Billion) 8 marks Total Long-Term Capital Financing secured is PKR 4,000,000,000/- (Pakistani Rupees Four Billion) or above but less than PKR 5,000,000,000/- (Pakistani Rupees Five Billion) 4 marks Or <u>PROJECT FINANCE EXPERIENCE</u> Maximum Marks - 10 (8+2) 1. <u>Project Finance Amount</u> Maximum Marks - 8 Total project finance raised is PKR 5,000,000,000/- (Pakistani Rupees Five Billion) or above 8 marks

	Total project finance raised is PKR 4,000,000,000/- (Pakistani Rupees Four Billion) or above but less than PKR 5,000,000,000/- (Pakistani Rupees Five Billion) 6 marks Total project finance raised is PKR 3,000,000,000/- (Pakistani Rupees Three Billion) or above but less than PKR 4,000,000,000/- (Pakistani Rupees Four Billion) 2 marks 2. <u>Project Finance Structuring</u> Maximum Marks - 2 Where the Bidder demonstrates a complete limited-recourse or non-recourse project finance structure (including an SPV or ring-fenced project structure, lender reliance primarily on project cashflows, project security package, debt service reserve arrangements, and lender-driven due diligence and covenants) 2 marks Where the Bidder demonstrates partial project finance characteristics 1 mark
TECHNICAL CAPABILITY	MAXIMUM MARKS - 60
Each Technical Evaluation criterion shall be assessed solely on the basis of the corresponding Bidding Forms expressly referenced against such criterion (including, without limitation, Bidding Form T11 (<i>Format of Curriculum Vitae (CV)</i>) for Key Personnel and Bidding Form T12 (<i>Organization & Staffing</i>) for Organization Structure). RELEVANT EXPERIENCE OF THE BUS OPERATOR Only those Bidders whose Bus Operator satisfies the minimum eligibility requirement under Annexure A (<i>Basic Information Requirements</i>) of Part 4 (<i>Annexures</i>) of VOLUME I (TENDER PROCEDURE) of the RFP shall be considered eligible for scoring under Criteria A through Criteria D below.	Maximum Marks - 30 <u>CRITERIA A</u> Maximum Marks - 12 One hundred and one (101) Buses (Bid) or more 12 marks Seventy-six (76) to one hundred (100) Buses (Bid) 11 marks Fifty-one (51) to seventy-five (75) Buses (Bid) 8 marks Twenty (20) to fifty (50) buses 4 marks

Marks under each criterion shall be awarded solely for experience demonstrated in excess of the minimum eligibility thresholds, in accordance with the scoring bands set out in the opposite column. A. Fleet Size and O&M Experience The Bus Operator demonstrates experience, in excess of the minimum eligibility requirement, in the operation and maintenance of a bus fleet under its direct operational control, comprising: Intra-City Operations: Bus fleets exceeding twenty (20) Buses (Bid); and/or Inter-City Operations: Bus fleets exceeding fifty (50) Buses (Bid). For the experience relied upon under this criterion, the Bus Operator must have been responsible, at a minimum, for: • day-to-day operational management of the fleet; • deployment, routing, and scheduling of Buses (Bid); and • routine, periodic, and corrective maintenance of the fleet. (Criteria A) B. Route-Based Public Transport Operations Experience The Bus Operator demonstrates experience, in operating Buses (Bid) on one (1) or more intra-city and/or inter-city public transport routes, subject to the following minimum parameters: • a minimum of five (5) Buses (Bid) per route; and • responsibility for route operations, scheduling, and service delivery performance. (Criteria B)	<u>CRITERIA B</u> Maximum Marks - 10 Operational on eight (8) or more routes 10 marks Operational on five (5) to seven (7) routes 9 marks Operational on two (2) to four (4) routes 7 marks Operational on one (1) route 2 marks <u>CRITERIA C</u> Maximum Marks - 3 The Bus Operator demonstrates either: • procurement experience of at least five (5) electric buses; or • At least one (1) year of operations and management experience with electric buses. 3 marks <u>CRITERIA D</u> Maximum Marks - 5 Three (3) or more workshop facilities 5 marks Two (2) workshop facilities 4 marks One (1) workshop facility 3 marks

<i>C. Electric Bus Experience</i> The Bus Operator demonstrates either: • procurement experience involving at least five (5) electric buses; and/or • a minimum of one (1) year of operations and maintenance experience in respect of electric buses, whether operated directly by the Bus Operator or through a special purpose vehicle or employer-provided fleet deployment, provided that such fleet comprises not less than five (5) electric buses. (Criteria C) <i>D. Workshop/Maintenance Facility Capability</i> The Bus Operator demonstrates access to one (1) or more workshop or maintenance facility(ies) (whether owned or held on long-term lease or accessed through a binding arrangement with a third-party workshop, or operated within an employer provided depot), appropriate for routine, periodic, and corrective maintenance of a bus fleet. Such facility must include at minimum: • functional maintenance bays and equipment; • certified diagnostic capability; • spare parts inventory management systems; and • qualified technical personnel trained and/or certified by relevant original equipment manufacturers (OEMs). (Criteria D) Documentary evidence shall include any combination of past contract agreements, Service Level Agreement(s) with third-party workshops, employer certifications, fleet maintenance records, KPIs or performance reports, lists of tools and equipment, and staffing competency records.	

ORGANIZATION STRUCTURE AND TEAM COMPOSITION Organization Structure The Bidder shall submit its organization structure and supporting documentation strictly in accordance with Bidding Form T12 (<i>Organization Structure Form</i>). Only information provided in Bidding Form T12 (<i>Organization Structure Form</i>), duly completed and signed, shall be considered for evaluation and scoring under this criterion. The Bidder (and, where applicable, the Bus Operator) shall have a current, functional and clearly defined organization structure, with a well-defined departmental set-up, including, at a minimum, finance, accounts, operations, MIS/IT, human resources/administration, and quality management. The Bidder/each Consortium Member shall provide documentary evidence in the form of an organizational chart/organogram, signed by the authorized representative of such entity. The organizational structure component shall carry a total of five (5) marks. Bidders shall be awarded marks in accordance with the scoring rubric set out in the opposite column. Key Personnel Requirements The Bus Operator shall designate each of the following personnel: A. Operations manager An operations manager who: - holds a Master's or Bachelor's degree in engineering, transportation, logistics or a related field; - has minimum ten (10) years of post-qualification experience in public transport operations; and	Maximum Marks - 15 (5 + 10) Organisation Structure Maximum Marks - 5 Organization structure is fully defined, functional, includes all required departments, and documentation is complete and signed 5 marks Organization structure is partially defined but functionally adequate and documentation substantially complete 4 marks Organization structure is minimal, unclear, or documentation incomplete 2 marks Key Personnel Requirements Maximum Marks - 10 (Maximum 2 marks for each position) A. Operations manager More than ten (10) years of required experience 2 marks Ten (10) years of required experience 1 mark B. Maintenance manager More than ten (10) years of required experience 2 marks Ten (10) years of required experience 1 mark C. Bus depot infrastructure development specialist More than eight (8) years of required experience 2 marks Eight (8) years of required experience 1 mark D. Charging infrastructure specialist

• has been employed by or contractually associated with the Bus Operator for at least two (2) years prior to the Bid Submission Deadline. <i>B. Maintenance manager</i> A maintenance manager who: • holds a Master’s or Bachelor’s degree in mechanical, automotive, electrical engineering or a related field; • has minimum ten (10) years of post-qualification experience in maintenance of urban transport fleets; and • has been employed by or contractually associated with the Bus Operator for at least two (2) years prior to the Bid Submission Deadline. <i>C. Bus depot infrastructure development specialist</i> A depot development specialist who: • holds a Master’s or Bachelor’s degree in civil engineering, transportation engineering, infrastructure planning, or a related field; and • has minimum eight (8) years of post-qualification experience in development of bus depots or transport infrastructure or building infrastructure. <i>D. Charging infrastructure specialist</i> A charging infrastructure specialist who: • holds a Master’s or Bachelor’s degree in electrical engineering, renewable energy, or a related field; and • has minimum two (2) years of post-qualification experience in development of EV charging systems (DC Chargers) or experience in high-voltage safety, load scheduling and grid integration. <i>E. ITS specialist</i>	More than two (2) years of required experience 2 marks Two (2) years of required experience 1 mark <i>E. ITS specialist</i> More than five (5) years of required experience 2 marks Five (5) years of required experience 1 mark For the purposes of scoring under this matrix, professional experience shall be calculated in completed whole years as of the Bid Submission Deadline; partial years, months, or fractions thereof shall not be considered in determining eligibility for, or allocation of, marks

An ITS specialist who: - holds a Master's or Bachelor's degree in electrical engineering, computer sciences, IT, system engineering, electronics engineering or a related field; and - has minimum five (5) years of relevant experience in Intelligent Transport Systems for public transport including (without limitation) AFC, BSS, PIS, telematics, or system integrations etc. CVs for each of the five (5) positions above shall be submitted in the manner and form provided in Bidding Form T11 (<i>Format of Curriculum Vitae (CV)</i>) The Bidder/Lead Developer shall provide a detailed staff list including designation and contact details, along with EOBI/social security records (where applicable) or evidence of contractual/outsourced staffing arrangements. All documents must be signed by an authorized representative. The five (5) key personnel positions collectively carry a total of fifteen (10) marks, with each position allocated a maximum of two (2) marks. Bidders designating all five personnel who meet the minimum qualification and experience thresholds shall be scored in accordance with the qualification bands set out in the opposite column.	
SUITABLE TECHNICAL PROJECT METHODOLOGY/ APPROACH The Bidder shall submit a comprehensive, project-specific <i>Technical Methodology and Work Plan</i>, in the manner and format prescribed in Bidding Form T7 (<i>Technical Project Methodology/ Approach</i>). The Methodology shall demonstrate, in an integrated manner, the Bidder's capability to plan, procure, develop, install, commission, operate, and maintain all components of the Project on a turnkey basis, including bus procurement, depot development, charging infrastructure, ITS/AFC/BSS/PIS deployment, command and control room establishment, operations, maintenance,	Maximum Marks - 15 <u>Turnkey Integration & Technical Coherence</u> Maximum Marks - 2 Fully integrated, project-specific methodology with demonstrated feasibility across all turnkey elements 2 marks Strong integration with clear sequencing and dependencies 1 mark

environmental management, risk mitigation, and alignment with applicable Sustainable Development Goals (SDGs). The methodology submitted at Bid stage shall form the binding basis for the Concessionaire's technical obligations under the Concession Agreement, and the Concessionaire shall not materially deviate from its submitted methodology, implementation schedules or resource allocations without the prior written approval of the Authority. The Technical Project Methodology/Approach shall be evaluated on a sliding-scale basis, in accordance with the scoring framework set out in the opposite column. A. Executive Summary of Methodology The Bidder shall provide an executive summary of its proposed turnkey methodology, offering a concise but comprehensive overview of the approach to bus procurement, depot development and readiness, charging system deployment, ITS/AFC/BSS/PIS systems, command and control room establishment, operations and maintenance, safety management, environmental compliance and SDG alignment. B. Detailed Methodology for Each Component The Bidder shall provide a detailed methodology for each technical component of the Project, including: • <u>Depot development and readiness:</u> design concept, civil works methodology, utility integration, safety interfaces, phasing and commissioning. • <u>Charging infrastructure:</u> electrical design, load scheduling and management, high-voltage safety protocols, charger installation sequencing, energisation procedures and redundancy planning. • <u>ITS/AFC/BSS/PIS Systems:</u> system architecture, data integration, cybersecurity, installation methodology, testing and	Basic coverage; limited integration between components 0.5 mark <u>Depot Development & Charging Infrastructure Methodology</u> Maximum Marks - 2 Evidence-based, technically robust methodology including load scheduling, redundancy, energisation and high-voltage (HV) safety integration 2 marks Detailed depot and charging methodology, including layout, electrical design and basic safety planning 1 mark High-level information lacking technical depth 0.5 mark <u>ITS/AFC/Control Systems Integration</u> Maximum Marks - 3 Comprehensive, project-specific ITS architecture, cybersecurity measures, integration across subsystems (ITS-charging-fleet-depot), and complete testing/commissioning approach 3 marks Solid ITS architecture and integration plan with clear data and system linkages 2 marks Basic ITS concept with limited integration detail 1 mark <u>Work Plan & Implementation Schedule</u> Maximum Marks - 2 Detailed, realistic work plan with critical path, milestones and interdependencies 2 marks Basic sequencing; limited critical path clarity 1 mark Work plan missing or non-compliant 0 marks

commissioning, and integration with depot and command and control operations. • <u>Command and control room:</u> system configuration, integration with fleet and charging systems, monitoring tools, data linkages, dispatch protocols and staffing plans. • <u>Fleet operations and maintenance:</u> operational philosophy, service planning, dispatching, preventive and predictive maintenance regimes, fleet availability strategy, breakdown response and spare-ratio planning. <i>C. Work Plan and Activity Schedule</i> The Bidder shall submit a detailed Work Plan, including a Gantt chart, activity sequencing, interdependency mapping, key milestones, critical-path identification, mobilisation timelines and an interface plan linking civil works, electrical works, fleet procurement, ITS deployment and O&M activities. <i>D. Resource Deployment and Management Plan</i> The Bidder shall provide a resource deployment and management plan covering the organizational structure for implementation, staffing schedules and responsibilities, deployment of construction and installation equipment, high-voltage safety resources and the linkage between resources and the Work Plan. <i>E. Risk Management Plan</i> The Bidder shall submit a comprehensive Risk Register covering depot works, charging infrastructure, bus delivery, ITS integration, testing and commissioning, operational readiness and early operations, including likelihood, impact, mitigation measures, responsible parties and timelines. <i>F. Quality Control, Safety and Environmental Management</i> The Bidder shall detail its QA/QC procedures, high-voltage safety measures, PPE protocols, fire	<u>Operations, Maintenance & Safety Strategy</u> Maximum Marks - 3 Fully developed, EV-specific O&M strategy including dispatching, safety governance, HV safety, emergency response, integration with depot/charging operations, and KPIs for availability and reliability 3 marks Strong O&M readiness plan, preventive/predictive maintenance, fleet availability planning and breakdown processes 2 marks Basic or generic O&M framework lacking operational depth 1 mark <u>Environmental Management & SDG Alignment</u> Maximum Marks - 3 Project-specific, quantified environmental and SDG framework, identifying relevant SDGs, with clear KPIs/targets and an explicit compliance and monitoring strategy 2 marks Project-specific but largely qualitative environmental and SDG actions, identifying relevant SDGs but without measurable targets or KPIs, and with only general reference to compliance 1.5 marks

suppression and emergency response strategies, environmental compliance measures, waste and battery-handling procedures, and alignment with applicable environmental and safety standards.

G. SDG Alignment Plan

The Bidder shall identify relevant SDGs and demonstrate measurable and realistic sustainability commitments, including specific environmental performance indicators, expected outcomes and monitoring mechanisms.

H. Confirmation of Binding Commitment

The Bidder shall provide a written confirmation that the Technical Project Methodology and Work Plan submitted with its Bid constitute a binding commitment, and shall form part of the Concessionaire's contractual obligations upon award.

The Technical Project Methodology / Approach shall be submitted strictly in accordance with Bidding Form T7 (*Technical Project Methodology/ Approach*).

Bidders shall structure their submission under Bidding Form T7 (*Technical Project Methodology/ Approach*) to correspond section-by-section with the evaluation sub-criteria set out herein, and evaluators shall assess each sub-criterion solely on the basis of the corresponding section of Bidding Form T7 (*Technical Project Methodology/ Approach*).

PART 2 - FINANCIAL EVALUATION CRITERIA

SMTA/TFEC shall evaluate the presence and completeness of all the supporting Bidding Forms and other documentation/information required to be submitted by a Bidder with the Financial Proposal, as per the requirements set out in the Instructions to Bidders.

A Bidder whose Bid has been determined the Best Evaluated Bid in terms of lowest Bid Price shall be declared the Successful Bidder.

COMPONENTS OF THE FINANCIAL EVALUATION

The financial evaluation shall be based on the following two (2) parameters:

(a) **Capital Cost Recovery Payment Rate (Bid)**

- The Capital Cost Recovery Payment Rate (Bid) shall be evaluated on the basis of PKR per KM.
- The Capital Cost Recovery Payment Rate (Bid) shall be subject to a maximum cap of Pakistani Rupees Two Hundred and Thirty-Five only (PKR 235/-) per KM.
- The Capital Cost Recovery Payment Rate (Bid) shall be calculated assuming sixty thousand (60,000) KM Guaranteed Annual Mileage per Bus (neither more nor less).

The Bidder offering the lowest Capital Cost Recovery Payment Rate (Bid) (per KM) shall receive the highest score for this component.

(b) **Fare Rate (O&M Costs)**

- The Fare Rate (O&M Costs) represents the Fare per Commuter proposed by the Bidder.
- The Fare Rate (O&M Costs) shall be subject to a maximum cap of Pakistani Rupees One Hundred and Ten only (PKR 110/-) per Commuter.

The Bidder offering the lowest Fare Rate (O&M Costs) shall receive the highest score for this component.

EVALUATION WEIGHTAGE

For purposes of determining the Best Evaluated Bid, the following weightage shall be applied:

- Eighty-five percent (85%) - Capital Cost Recovery Payment Rate (Bid)
- Fifteen percent (15%) - Fare Rate (O&M Costs)

BID PRICE CALCULATION

The Bid Price shall be calculated as follows:

Bid Price = (Weighted Capital Cost Recovery Payment Rate (Bid)) + (Weighted Fare Rate (O&M Costs))

The Bid Price is calculated solely for the purpose of the evaluation and comparison of Bids and does not represent the actual payments that will be made by the GoS to the Concessionaire in terms of the Concession Agreement.

Note: *Capitalized terms (including the abbreviations) used herein, shall have the meaning given to them in the Concession Agreement (including SCHEDULE M (Capital Cost Recovery Payment Calculation) of the Concession Agreement).*

METHODOLOGY FOR CALCULATION OF CAPITAL COST RECOVERY PAYMENT RATE (BID) AND FARE RATE (O&M COSTS)

1.1 METHODOLOGY

The Capital Cost Recovery Payment Rate (Bid) and Fare Rate (O&M Costs) shall be calculated in accordance with the formulae set out in Section 1.2 (*Assumptions for Calculations of Required Values*) below.

To standardize the calculation of the Bid Price, the Bidders are required to complete the Bid Sheet; using the underlying assumptions as set out in Section 1.2 (*Assumptions for Calculations of Required Values*) below.

1.2 ASSUMPTIONS FOR CALCULATION OF REQUIRED VALUES

1.2.1 CAPITAL COST RECOVERY PAYMENT RATE (BID)

The first component of the Bid Price relates to the (a) Debt Principal Recovery Charge, (b) Debt Interest Recovery Charge, and (c) Equity Recovery Charge. For the purposes of Bid evaluation, the following assumptions shall apply:

(a) Capital Structure

The Sponsor Equity contribution shall be not less than thirty percent (30%) of the Estimated Project Cost, and debt financing shall not exceed seventy percent (70%) of the Estimated Project Cost.

(b) Equity Recovery

No return shall be payable on the Sponsor Equity. The Sponsor Equity contribution shall be fully recoverable through twenty (20) equal instalments over a period of ten (10) years.

All such inputs shall be used solely for the preparation of the equity redemption schedule, for Bid evaluation purposes.

(c) Debt Financing Assumptions

Debt servicing shall be structured on the basis of twenty (20) equal instalments over a financing tenor of ten (10) years, at a mark-up rate equal to KIBOR plus a maximum permitted spread of three percent (3%) per annum. For evaluation

purposes only, KIBOR shall be assumed at twelve percent (12%) per annum.

All such inputs shall be used solely for the preparation of the bank loan amortisation schedule, for Bid evaluation purposes.

(d) **Derivation of Capital Cost Recovery Payment Rate (Bid)**

The aggregate of the scheduled equity recovery amounts and debt service payments shall be divided by the total assumed operational distance, fixed at sixty thousand (60,000) KM per Bus, to derive a per-KM, per-Bus Capital Cost Recovery Rate (Bid).

This per-KM rate shall be used for the purposes of Bid Price calculation and comparison.

For illustration and evaluation methodology, reference may be made to the Bid Sheet.

A screenshot setting out the assumptions required for computation of the Capital Cost Recovery Payment Rate (Bid) is provided below.

Bidders are required to complete only the fields highlighted in yellow, in accordance with the assumptions set out above.

Bid Price – Component 1 (Capital Cost Recovery Payment Rate)					
Total Numbers of Buses	#	Fixed		500	
Guaranteed Per Bus Kms	Kms / Year	Fixed		60,000	
Capital Cost Payment Tenor	Years	Fixed		10	
Capital Cost Payment Tenor	Semi-Annual Periods	Fixed		20	
Financing Structure				100%	
Equity	%	Minimum 30%			<<< Enter Percentage
Debt	%			100%	
Financing Rate				12%	
KIBOR	%	Fixed		12%	
Spread	%	Maximum 3%			<<< Enter Percentage

Project Cost Breakup		No. of Units	Per Unit Cost	Total Cost	
Bus Cost - 12 Meter Bus	PKR	300		-	<<< Enter Values
Bus Cost - 8 Meter Bus	PKR	200		-	<<< Enter Values
Chargers Cost - Fast 240 KW	PKR	90		-	<<< Enter Values
Chargers Cost - Medium 160 KW	PKR	35		-	<<< Enter Values
AFC & ITS Cost	PKR	500		-	<<< Enter Values
Depot Development Cost	PKR	5		-	<<< Enter Values
Transit Bus Shelter Cost	PKR	850		-	<<< Enter Values
Other EPC Cost	PKR				<<< Enter Values
Non-EPC Cost	PKR				<<< Enter Values
Total Project Cost	PKR			-	

1.2.2 FARE RATE (O&M COSTS)

The second component of the Bid Price relates to the Fare Rate (O&M Costs), being the per-Commuter Fare derived from the O&M Costs.

For the purposes of Bid evaluation, the Bidder shall compute the total monthly O&M Costs per Bus (Bid), comprising both fixed and variable O&M Costs, in accordance with the Bid Sheet.

For calculation purposes, the following assumptions shall apply:

(a) **Power Cost Assumption**

Power Component shall be computed at a fixed rate of Pakistani Rupees Thirty-Nine Point Seven only (PKR 39.7) per kWh, as specified in the Bid Sheet.

(b) Fixed Parameters for Bid Evaluation Purposes

For evaluation purposes only, the following assumptions shall be applied uniformly to all Bids:

- Operating Days: Three Hundred and Forty-Two (342 Days) per annum;
and
- Average Ridership: Four Hundred and Thirty (430) Commuters per Bus per Day.

(c) Derivation of Fare Rate (O&M Costs)

The total monthly O&M Cost per Bus shall be divided by the total number of Commuters per Bus per month to derive the Fare Rate (O&M Costs) per Commuter.

The Fare Rate (O&M Costs) so derived shall not exceed Pakistani Rupees One Hundred and Ten only (PKR 110/-) per Commuter.

FARE REVENUE (GoS SHARE)

Bidders shall calculate the Fare Revenue (GoS Share) in the Financial Proposal in accordance with the following formula, with effect from the COD (First Segment) till expiry of the one (1) year from the COD (Second Segment) (the **Fare Revenue (GoS) Share Period (First)**):

$$X: A \times (B-C)$$

Where:

X: Fare Revenue (GoS Share)

A: Commuters (Committed)

B: Fare Rate (Notified) at the rate of Pakistani Rupees One Hundred and Twenty only (PKR 120)

C: Fare Rate (O&M Costs) set out in the Financial Proposal

For the avoidance of doubt, such Fare Revenue (GoS Share) for the Fare Revenue (GoS) Share Period (First) shall be a fixed guaranteed amount that shall be paid by the Concessionaire to the GoS in terms of the Concession Agreement. Any variation in the Fare Rate (Notified) and/or the Fare Rate (O&M Costs) on and after the Fare Rate Escalation Date shall be undertaken in accordance with SCHEDULE N (*Fare Structure*) of the Concession Agreement.

INDEXATION AND PASS-THROUGH ASSUMPTIONS

For the purposes of indexation and pass-through cost determination:

- the Power Component shall be deemed to constitute twenty-five percent (25%) of the Fare Rate (O&M Costs);
- the Non-Power Component shall be the residual amount after deducting the Power Component, the Operator Margin and the Insurance Cost from the Fare Rate (O&M Costs);
- the Insurance Cost shall be as determined in the Bid Sheet submitted by the Bidder; and
- the Non-Power Component, the Insurance Cost and the Operator Margin shall constitute seventy-five percent (75%) of the Fare Rate (O&M Costs) and is subject to indexation.

Any escalation or indexation of the Fare Rate (O&M Costs) or its components shall be applied strictly in accordance with the adjustment mechanisms set out in SCHEDULE M (*Capital Cost Recovery Payment Calculation*) and SCHEDULE N (*Fare Structure*) of the Concession Agreement.

APPLICABILITY

The Fare Rate (O&M Costs), as computed in accordance with the above methodology, shall apply for the purposes of bid evaluation and shall remain applicable during the Concession Period, subject only to adjustment in accordance with SCHEDULE M (*Capital Cost Recovery Payment Calculation*) and SCHEDULE N (*Fare Structure*) of the Concession Agreement.

A screenshot setting out the assumptions required for computation of the Fare Rate (O&M Costs) is provided below.

Bidders are required to complete only the fields highlighted in yellow, in accordance with the assumptions set out above.

Bid Price – Component 2 (Fare Rate)			
Operating Days in Year	Days	Fixed	342
Passengers per Bus per Day	#	Fixed	430
Passengers per Bus per Month	#	Fixed	12,255
Passengers per Bus per Annum	#	Fixed	147,060
Electricity Cost	PKR / KW	Rate as per EV Policy	39.7
Variable Monthly O&M Expense	PKR / Bus		<<< Enter Values
Fixed Monthly O&M Expense	PKR / Bus		<<< Enter Values
Total Monthly O&M Expense excl. Bus Insurance	PKR / Bus		-
Monthly Bus Insurance	% of Bus Cost per Annum / Bus		<<< Enter Values
Monthly Operator Margin	PKR / Bus		<<< Enter Values

1.3 BID SHEET - INPUT INSTRUCTIONS:

Bidders will be required to work out Bid Price in accordance with the instructions outlined in the Bid Sheet and as set out below:

- (a) Bid Price Calculation: The Bid Sheet is designed to automatically calculate the Bid Price based on the values entered in the input cells. Please ensure that all required

Input Cells (highlighted in yellow under the input sheet tab) are filled accurately to avoid any discrepancies in the Bid Price calculation;

- (b) Input Cells: The Bid Sheet contains designated input cells under the input sheet tab where Bidders are required to enter the details of their Bid. These cells are clearly marked in yellow and are the only editable fields in the Bid Sheet;
- (c) Input Sheet tab, Cell F11: Financing Structure: Equity Injection % (capped at minimum thirty percent (30%));
- (d) Input Sheet tab, Cell F15: Financing Rate: Spread % (Capped at Maximum three percent (3%));
- (e) Input Sheet tab, Cell E19: 12-meter Bus cost per unit;
- (f) Input Sheet tab, Cell E20: 8-meter Bus cost per unit;
- (g) Input Sheet tab, Cell E21: 240 KW fast charger cost per unit;
- (h) Input Sheet tab, Cell E22: 160 KW medium charger cost per unit;
- (i) Input Sheet tab, Cell E23: AFC & ITS cost per unit;
- (j) Input Sheet tab, Cell E24: Depot Development cost per unit;
- (k) Input Sheet tab, Cell E25: Transit Bus Shelter cost per unit;
- (l) Input Sheet tab, Cell F26: Total other EPC cost;
- (m) Input Sheet tab, Cell F27: Total Non-EPC cost;
- (n) Input Sheet tab, Cell F38: Variable Monthly O&M Cost exclusive of Bus Insurance;
- (o) Input Sheet tab, Cell F39: Fixed Monthly O&M Cost exclusive of Bus Insurance;
- (p) Input Sheet tab, Cell E41: Bus Insurance %;
- (q) Input Sheet tab, Cell F42: Monthly Operator Margin;
- (r) Editable Cells: Only the cell highlighted in yellow in the Microsoft Excel Sheet are to be populated by the Bidders;
- (s) **Pass-Through Items:** Please note that the following items are considered pass-through and will be actualized. These items will be adjusted based on actual rates from time to time. For clarity, the Bidders are advised not to assume the rates of the following pass-through items:
 - (i) KIBOR.

- (t) Any variation in the Electricity Price (over or under) the special EV charging tariff of PKR 39.7/kW as notified by NEPRA (Power Component of the Fare Rate (O&M Costs));
- (u) Indexation of charge rates and the relevant costs will be calculated in accordance with the mechanism detailed in **SCHEDULE M (*Capital Cost Recovery Payment Calculation*)** of the Concession Agreement.

Submission: Once all input fields are filled, save the Microsoft Excel Sheet and insert the result tab data as per the tables provided in financial forms.

ANNEXURE C - IZP KYC INFORMATION

DOCUMENTS/INFORMATION REQUIRED (EITHER ORIGINAL OR DULY CERTIFIED COPY)	ATTACHED (Y/N)	REMARKS/COMMENTS IF NOT PROVIDED
CONCESSIONAIRE/BORROWER		
Latest Organizational Structure Chart		
Shareholding Structure (Form 34 also to be provided where applicable)		
Filled and Signed BBFS/KYC Form (not to be dated older than one (1) month)		
Source of Corporate assets/Wealth ((if applicable) last three (3) years' annual audited accounts along with tax filed statement)		
Certificate of incorporation/certificate of change of name		
Constitution/memorandum and articles of association		
Corporate Profile		
Register of Directors		
Register of Shareholders		
Proof of registered office		
Proof of place of business		
List of authorized signatories with their specimen signatures		
Certified copy of latest Form A/Form II/Form B/Form C		
Certified copy of latest Form 29		
Certified copy of latest Form 45		
Please confirm are there any previous/ongoing AML/Tax Evasion/Bribery/Corruption allegation against the company. If yes, please provide details/documents and if they have been resolved.		
PROPOSED DIRECTORS/SPONSORS OF THE CONCESSIONAIRE		
Valid NIC copies of all the proposed directors/individual Sponsors of the Concessionaire		

Valid passport copies of all the foreign proposed directors/individual Sponsors showing signature, clear photograph and date of expiry		
Latest tax returns filed of all the proposed directors/Sponsors proposed to have more than ten percent (10%) equity stake in the Concessionaire		
Proof of residential address (preferably in form of utility bill) of all the proposed directors/individual Sponsors dated less than three (3) months (Note: P.O Box address is not acceptable)		
Please confirm whether any proposed director/individual Sponsor is a politically exposed person (PEP) or closely associated with PEP		
Please confirm if there are any previous/ongoing AML/Tax Evasion/Bribery/Corruption allegation against any of the proposed directors/Sponsors. If yes, please provide details/documents and if they have been resolved.		
ULTIMATE BENEFICIARY OWNERS UBO (APPLICABLE IN CASE OF MULTI LAYERED OWNERSHIP STRUCTURE)		
Complete breakdown of shareholders of the Ultimate Beneficiary Owners (UBO) (required for all entities in the chain up to the UBO)		
Identification documents required for all individual shareholders with ten percent (10%) or more shareholding of the UBO: • Valid passport showing the signature, date of expiry and a clear photograph • Valid NIC copies		
Source of corporate assets/wealth of the UBO: • Latest audited financial statements • Latest tax return statement (for individuals)		

Certificate of incorporation/certificate of change of name		
Certified copy of latest Form 45		
Register of UBO		
Please confirm are there any previous/ongoing AML/Tax Evasion/Bribery/Corruption allegation against any of the company/directors/shareholders of the UBO. If yes, please provide details/documents and if they have been resolved.		



SINDH MASS TRANSIT AUTHORITY TRANSPORT & MASS TRANSIT DEPARTMENT GOVERNMENT OF SINDH



INVITATION FOR BIDS

DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER OF

PEOPLE'S GREEN TRANSPORT PROJECT UNDER PUBLIC-PRIVATE PARTNERSHIP MODE

Country: Islamic Republic of Pakistan

Executing Agency: Sindh Mass Transit Authority, Transport & Mass Transit Department, Government of Sindh

RFP Ref. No.: SMTA-TMTD/PROC-PGTP/2025-26 dated 21st December 2025

PROJECT BRIEF

The Sindh Mass Transit Authority, Government of Sindh (SMTA) received an Unadvised Proposal under the SPPRA Rules for the design, build, finance, operate, maintain and transfer of the People's Green Transport Project (the Project) on a Public-Private Partnership (PPP) basis, and now intends to conduct a competitive bidding process to engage the Concessionaire for implementation of the Project in accordance with the Law.

The Project envisages deployment of five hundred (500) electric buses (four hundred and fifty (450) in Karachi and fifty (50) in Hyderabad) together with associated charging infrastructure, depots, transit bus shelters, integrated Intelligent Transport Systems (ITS), including Automated Fare Collection (AFC), Bus Scheduling System (BSS), Depot Management System (DMS), Charging Management System (CMS), and Operations Control Centre (OCC) to strengthen sustainable urban public transport services.

Capitalized terms used herein and not otherwise defined shall have the meaning given to them in the RFP.

PROJECT SCOPE

The Project's scope of work shall include, inter alia, the following:

- procurement, financing, operation and maintenance of five hundred (500) electric buses;
- development, installation, operation and maintenance of electric vehicle charging infrastructure, including substations;
- design, construction, operation and maintenance of five (5) bus depots and eight hundred and fifty (850) transit bus shelters;
- deployment and operation of ITS, including AFC, BSS, DMS, CMS and OCC;
- route operations, service performance and fleet availability in accordance with the Concession Agreement; and
- transfer of the E-Buses Assets to the Government of Sindh upon expiry or earlier termination of the Concession.

CONCESSION PERIOD

The Project's Concession Period shall be twelve (12) years, comprising a one (1) year Development Period and an eleven (11) year Operations Period, with bus procurement undertaken in two (2) biannual phases of two hundred and fifty (250) buses each, in accordance with phasing and implementation framework set out in the RFP and the Concession.

ELIGIBLE BIDDERS

SMTA hereby invites Interested Parties, either as a single entity or as a Consortium formed by two (2) or more Consortium Members, subject to the requirements of the RFP, to participate in the Tender Procedure and to submit their Bids for the Project in accordance with the Applicable Evaluation Documents.

TRANSACTION ADVISORS



INF-KRY 4449/25
1 WORK FOR SINDH
www.iwork4sindh.com
JOB PORTAL BY INFORMATION DEPARTMENT

Managing Director - Sindh Mass Transit Authority
Transport & Mass Transit Department, Government of Sindh
Address: D43/1, Shahre-e-Ghalib, Clifton Block 2, Karachi - Sindh, Pakistan.

Phone: +92 21 99222133 - 99332207 Fax: +92 21 99332206 Email: info.ppp@smta.gov.pk

Website: VDR - <https://tinyurl.com/PGTPPP>; SMTA - <https://smta.gov.pk>; SPPRA EPADS - <https://portal.sindh.eprocure.gov.pk>; PPP Unit - <https://www.pppunitsindh.gov.pk/>

PRE-BID MEETINGS SCHEDULE*

First Pre-Bid Meeting: January 5, 2026

Second Pre-Bid Meeting: January 12, 2026

*For further details, refer to the RFP Section 9 (Data Sheet of Part 1 (Instructions to Bidders)).

BIDDING PROCEDURE

The Project's procurement shall be conducted through an international open competitive bidding process using a single-stage two-envelope procedure, as per the Applicable Evaluation Documents and is open to all eligible Interested Parties.

Bidders are required to submit only one (1) B4, comprising one (1) Technical Proposal and one (1) Financial Proposal and other supporting documents (as applicable), as identified in the RFP, using the Sindh PPRA e-Pak Acquisition & Disposal System (SPPRA EPADS), no later than 12:00 hours PST on February 12, 2026 (the Bid Submission Deadline). Physical submission of Bids shall not be accepted, except for the purpose of submitting the original Bid Security and any other documents expressly required to be submitted in original form under the RFP.

The Technical Proposals will be opened on the Bid Submission Deadline at 13:00 hours PST in the presence of the Bidders' representatives, who opt to attend, at the Committee Room of the Planning & Development Board, 2nd Floor, Tughlaq House, Sindh Secretariat, Shahrah-e-Kamal Atta-Turk Road, Karachi. After completion of evaluation of Technical Proposals, Bidders who have submitted responsive Technical Proposals in terms of the Applicable Evaluation Documents shall be invited to attend the opening of the Financial Proposals.

All Bids shall, as part of the Technical Proposal, be accompanied by a scanned copy of the Bid Security equal to PKR 425,000,000/- (Pakistani Rupees Four Hundred and Twenty-Five Million). The Bid Security shall be submitted in original form at the address specified in the RFP Data Sheet, either through mail or by hand (in a sealed envelope), no later than such time on the Bid Submission Deadline as may be specified in the RFP. The Bid Security shall be submitted either in the form of a pay order, demand draft, deposit at call, or an irrevocable, unconditional and on-demand bank guarantee in the form specified in the RFP, issued in accordance with Instructions to Bidders.

Bidders are required to prepare their Technical Proposals and Financial Proposals strictly in accordance with the standard formats prescribed in the RFP. Any Bid not prepared in the prescribed formats may be rejected and shall not be considered for evaluation.

Interested Parties may acquire the electronic copy of the RFP with effect from December 29, 2025 to February 11, 2026, either: (a) physically, by submitting a written application at the address provided below, specifying their full name, address and contact details; or (b) electronically, by downloading from the websites of SMTA, SPPRA EPADS, PPP Unit, or Project's Virtual Data Room (VDR) link and intimating SMTA in writing through a letter or via email, its full name, address and contact details.

SMTA reserves all rights to: (a) suspend, cancel, discontinue, modify, extend or reinstate the Tender Procedure; (b) accept or reject any Bid or disqualify any or all Bidders; (c) modify all or any dates stated in the RFP; or (d) amend the RFP, Project's scope or make clarifications thereof, at any time without any obligation to inform any Interested Party or Bidder of the grounds, justification, or reason for such action and without liability, in accordance with the Applicable Evaluation Documents.

The address for issuance of the RFP is as under:



جوائن واٹس ایپ چینل



**SINDH MASS TRANSIT AUTHORITY
TRANSPORT & MASS TRANSIT DEPARTMENT
GOVERNMENT OF SINDH**



INVITATION FOR BIDS

**DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER OF
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The Project envisages deployment of five hundred (500) electric buses (four hundred and fifty (450) in Karachi and fifty (50) in Hyderabad) together with associated charging infrastructure, depots, transit bus shelters, Integrated Intelligent Transport Systems (IITS), including Automated Fare Collection (AFC), Bus Scheduling System (BSS), Depot Management System (DMS), Charging Management System (CMS), and Operations Control Centre (OCC) to strengthen sustainable urban public transport services.

Capitalized terms used herein and not otherwise defined shall have the meaning given to them in the RFP.

PROJECT SCOPE

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- procurement, financing, operation and maintenance of five hundred (500) electric buses;
- development, installation, operation and maintenance of electric vehicle charging infrastructure, including substations;
- design, construction, operation and maintenance of five (5) bus depots and eight hundred and fifty (850) transit bus shelters;
- deployment and operation of IITS, including AFC, BSS, DMS, CMS and OCC;
- route operations, service performance and fleet availability in accordance with the Concession Agreement; and
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TRANSACTION ADVISORS



**Managing Director – Sindh Mass Transit Authority
Transport & Mass Transit Department, Government of Sindh**

Address: D43/1 Shakra-e-Ghalib, Clifton Block 2, Karachi – Sindh, Pakistan.

Phone: +92 21 99222193 - 99332207 **Fax:** +92 21 99332206 **Email:** info.p3proc@gmail.com

Website: VDR - <https://tinyurl.com/PGTPPP>; SMTA - <https://smta.gos.pk>; SPPIRA EPADS - <https://portalsindh.eprocure.gov.pk>; PPP Unit - <https://www.pppunitsindh.gov.pk/>

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First Pre-Bid Meeting: January 5, 2026

Second Pre-Bid Meeting: January 12, 2026

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SINDH MASS TRANSIT AUTHORITY
TRANSPORT & MASS TRANSIT DEPARTMENT
GOVERNMENT OF SINDH

INVITATION FOR BIDS

DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER OF

PEOPLE'S GREEN TRANSPORT PROJECT UNDER PUBLIC-PRIVATE PARTNERSHIP MODE



Country: Islamic Republic of Pakistan
Executing Agency: Sindh Mass Transit Authority, Transport & Mass Transit Department, Government of Sindh
RFP Ref. No.: SMTA-TMTD/PROC-PGTR/2025-26 dated 21st December 2025

PROJECT BRIEF

The Sindh Mass Transit Authority, Government of Sindh (SMTA) received an Unsolicited Proposal under the SPPRA Rules for the design, build, finance, operate, maintain and transfer of the People's Green Transport Project (the **Project**) on a Public-Private Partnership (PPP) basis, and now intends to conduct a competitive bidding process to engage the Concessionaire for implementation of the Project in accordance with the Law.

The Project envisages deployment of five hundred (500) electric buses (four hundred and fifty (450) in Karachi and fifty (50) in Hyderabad) together with associated charging infrastructure, depots, transit bus shelters, Integrated Intelligent Transport Systems (IITS), including Automated Fare Collection (AFC), Bus Scheduling System (BSS), Depot Management System (DMS), Charging Management System (CMS), and Operations Control Centre (OCC) to strengthen sustainable urban public transport services.

Capitalized terms used herein and not otherwise defined shall have the meaning given to them in the RFP.

PROJECT SCOPE

The Project's scope of work shall include, inter alia, the following:

- procurement, financing, operation and maintenance of five hundred (500) electric buses;
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Transport & Mass Transit Department, Government of Sindh
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Prayer Timings

FAJR	SHURUQ	ZUHR
05:41	7:00	12:24
ASR	MAGHRIB	ISHA
15:21	17:43	19:02

Add four minutes for Abu Dhabi / Deduct four minutes for Ras Al Khaimah and six minutes for Fujairah.



Check on the go

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bit.ly/UAEPrayerTime

Job security is biggest worry for employees as AI shapes careers

From page 1

Recruiters and HR leaders in the UAE highlight that these numbers reflect a deeper change in mindset, shaped by global uncertainty, restructuring and the rapid pace of technological change.

Nisha Nair, recruitment manager at Innovations Group, said the hesitation around pay conversations is less about a lack of ambition and more about realism.

"Job security becoming the top priority reflects a realistic response to global uncertainty, restructuring, and rapid technological change. People are still ambitious, but uncertainty in global markets and regional economic shifts has made them more selective and the focus is increasingly on sustainable employment rather than rapid career leaps."

Nair said many employees are deliberately holding back, worried that being overly assertive about salary could make them appear expendable in an unpredictable labour market increasingly influenced by automation and AI. "There is also a cultural shift towards prioritising long-term stability over short-term gains. While some employees are satisfied with their current compensation, a significant portion is simply waiting for the right moment to discuss increments; they are choosing to demonstrate value quietly through performance, reliability and skill development, rather than through salary negotiations."



Employees are willing to accept slower progression in exchange for a stable work environment, say experts.

HR professionals across the country emphasise that this cautious approach is visible in day-to-day conversations. Employees are showing greater patience with promotions and are even open to lateral moves if a role offers security, learning opportunities and a supportive culture.

Nair added: "There is a clear trade-off emerging: employees are willing to accept slower progression in exchange for a stable work environment, comprehensive benefits, and a supportive organisational cul-

ture. Upskilling and gaining relevant experience are still high priorities, but the pace of career advancement is being balanced against risk mitigation.

From an employer's perspective, experts say this creates both a challenge and an opportunity. Randa Bahsoon, partner at PwC Middle East, said security and support now sit alongside innovation as key retention tools. "As employees confidently embrace change, build new capabilities and show remarkable

adaptability with AI, they also want to feel secure and supported.

"Organisations that provide clarity on how roles will evolve, expand access to learning and protect well-being will be the ones that retain talent and get ahead in a fast-changing labour market," Randa said.

For many UAE-based professionals, the shift is deeply personal. Shabeel Ummer, head of human resources at Dubai-based V Group International, said the decline in salary demands should not be mis-

taken for disengagement.

Ummer said: "When employees stop asking for more pay, it doesn't mean they've stopped wanting more. It means they're watching more closely how the organisation shows commitment to them. Motivation has shifted from the 'money first' priority to meaning and momentum. In several performance discussions, employees told me they didn't need an immediate pay increase, but they did want acknowledgment."

Ummer added that he has seen candidates and employees make decisions rooted in predictability and trust, often with families and long-term security in mind.

"I've personally had candidates tell me they turned down offers with higher pay because the role felt uncertain or the organisation couldn't clearly explain its long-term plans."

"At the same time, I've seen employees choose to stay in roles they are comfortable with, even if growth is slower, because they value predictability and trust in their employer. That tells me people are not disengaged; they are protecting themselves and their families."

Career coaches in Dubai say the muted demand for salary hikes is also closely linked to anxiety about relevance in an AI-driven workplace. Hemant Jain, executive and career transformation coach, believes restraint — not satisfaction — is driving the trend. "This muted demand for salary hike is definitely not satisfaction; it is fear and restraint. Most professionals are also figuring out how to stay relevant."

UAE issues federal decree law on national education curriculum

Salma El Omia
salmaahmed@khaleejtimes.com

The UAE has issued a federal decree law on the governance of the National Educational Curriculum, establishing for the first time a comprehensive legislative framework regulating its design, approval, implementation and review.

The decree law applies to all public and private educational institutions, from kindergarten through Grade 12, including private schools that do not apply the national curriculum but teach approved compulsory subjects.

The National Education Charter will serve as the "supreme reference document". It will define the national objectives of education, graduate attributes, national identity, values and targeted competencies and guide the design and development of the national educational curriculum. It defines key components of the curriculum, including learning standards and outcomes, teaching methodologies, educational pathways, the language and duration of learning, and the prescribed subjects and their educational content.

It also clearly defines the roles and responsibilities of federal and local education authorities and educational institutions. In addition, it regulates the mechanisms for the design, approval, implementation, and review of the national educational curriculum, and classifies amendments.

The decree law serves as a means to ensure consistency and stability of the national educational curriculum, while maintaining the flexibility required for future updates in line with the needs of the labour market.



SINDH MASS TRANSIT AUTHORITY TRANSPORT & MASS TRANSIT DEPARTMENT GOVERNMENT OF SINDH

INVITATION FOR BIDS

DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER OF PEOPLE'S GREEN TRANSPORT PROJECT UNDER PUBLIC-PRIVATE PARTNERSHIP MODE

Country: Islamic Republic of Pakistan
Executing Agency: Sindh Mass Transit Authority, Transport & Mass Transit Department, Government of Sindh
RFP Ref. No.: SMTA-TMTD/PROC-PGTP/2025-26 dated 21st December 2025

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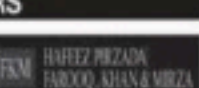
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The address for issuance of the RFP is as under:

TRANSACTION ADVISORS





INF/KRY/4449/25
I WORK FOR SINDH
 HEADQUARTERS, INFORMATION DEPARTMENT

Managing Director - Sindh Mass Transit Authority
 Transport & Mass Transit Department, Government of Sindh
 Address: D43/1 Shahr-e-Ghalib, Clifton Block 2, Karachi - Sindh, Pakistan.
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**SINDH MASS TRANSIT AUTHORITY
TRANSPORT & MASS TRANSIT DEPARTMENT
GOVERNMENT OF SINDH**



ANNUAL PROCUREMENT PLAN
(WORKS, GOODS & SERVICES)

Financial Year: 2025-26

Sr. No.	Description of Procurement	Quantity (where applicable)	Estimated unit cost (where applicable)	Estimated project cost (PKR in Million)	Funds allocated (Million)	Source of funds (ADP/ Non-ADP)	Proposed procurement method	Timing of procurements				Remarks
								1 st	2 nd	3 rd	4 th	
1.	Design, Build, Finance, Operate, Maintain and Transfer of People's Green Transport Project under Public-Private Partnership Mode	N/A	N/A	PKR 40,277/-	-	Non-ADP	International Competitive Bidding – Single Stage Two Envelope Bidding		✓		✓	

**MANAGING DIRECTOR
SINDH MASS TRANSIT AUTHORITY**