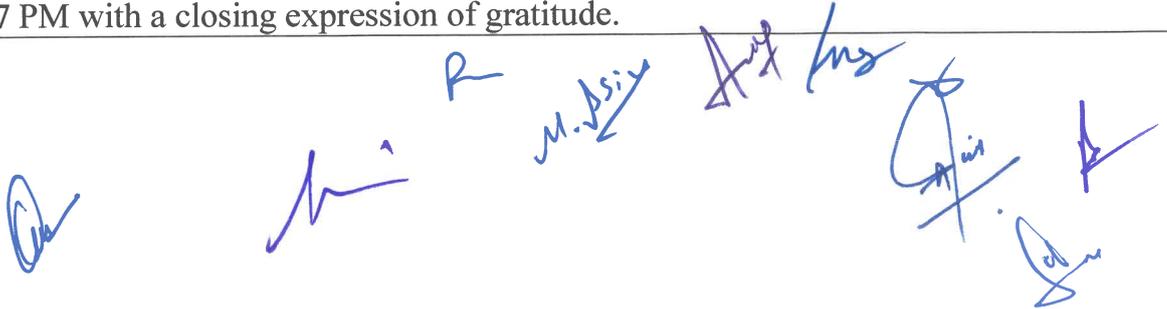
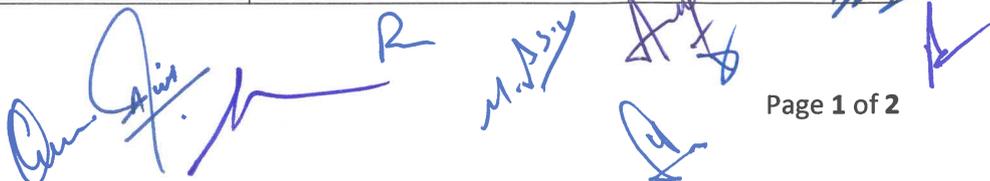


Punjab Masstransit Authority			
Minutes of Clarification Meeting			
Subject:	CLARIFICATION MEETING OF TENDER FOR DEVELOPMENT, IMPLEMENTATION, OPERATIONS AND LONG - TERM MAINTENANCE OF PROVEN AUTOMATED FARE COLLECTION & BUS SCHEDULING SYSTEM (AFC-BSS) FOR LAHORE METROBUS SYSTEM (LMBS) AND INTEGRATED FEEDER ROUTES		
Date:	November 29, 2024	Time:	12:00 PM
Venue:	Committee Room, Punjab Masstransit Authority Lahore	Chair:	Mr. Ozair Shah, General Manager (Operations), PMA
Participants:	<p>List of present TEC Members:</p> <ol style="list-style-type: none"> 1. Mr. Muhammad Abid, Secretary, PMA 2. Mr. Raheel Qutab, Manager IT, PMA 3. Mr. Rehman Afzal, Manager (Finance), PMA 4. Mr. Mohsin Raza, IT Expert (Surveillance & Networking), PMA 5. Mr. Muhammad Asim, Assistant Manager IT, Lahore, PMA 6. Mr. Danish Ahmed, Joint Director, PITB 7. Ms. Asma Naz, SO NTS, Transport & Masstransit Department (Through Zoom) <p>List of invited Participants:</p> <ol style="list-style-type: none"> 8. Mr. Usman Malik, Manager Operations (Technical) OLMT, PMA (Through Zoom) 9. Mr. Mao Quyuan, L2SP1 (Through Zoom) 10. Mr. Mohaimin Danish, L2SP1 (Through Zoom) 11. Mr. Wang, CSSWeb (Through Zoom) 12. Mr. Danish, CSSWeb (Through Zoom) 13. Mr. Zaheer Maqbool, L2SP2 14. Mr. Awais Arshad, Senior Programme Manager, PITB 		
<p>The meeting started at 12:30 PM with the recitation of the Holy Quran. Mr. Muhammad Ozair Shah, General Manager (Operations), PMA, formally welcomed the participants & presented an overview of the general scope of works of Tender Document. A question & answer session was also held subsequently. Detailed minutes of the meeting are enclosed as Annex-A, and the list of participants is provided in Annex-B. The meeting concluded at 2:47 PM with a closing expression of gratitude.</p>			

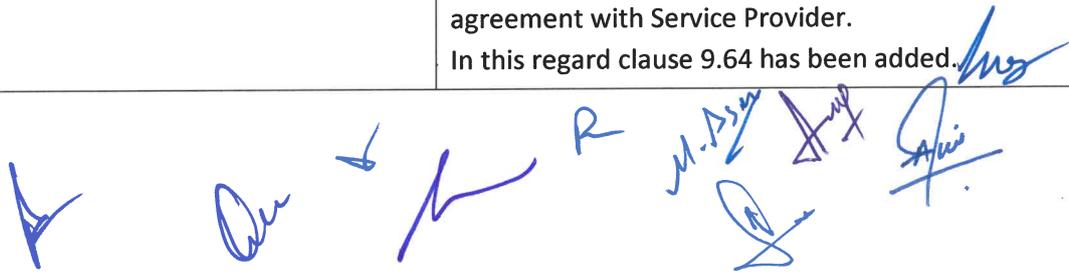


ANNEX-A

RESPONSE TO THE BIDDER'S QUERIES		
Sr#	QUERIES/COMMENTS	PMA RESPONSE
1	Meezan Bank Limited inquired regarding requirement of provisioning of AGM or Validator for EMV compliant single channel on OLMT entry and exit points. Meezan Bank Limited recommended provisioning of complete AGM along with validator on OLMT entry and exit points.	TEC deliberated on this matter with representatives of AFC manufacturer of OLMT i.e. CSSWeb Technologies, L2SP1, L2SP2, PITB and prospective bidders. Accordingly, it was decided to add the provision of 70 AGMs each of single channel on OLMT.
2	The representative of bidders requested to grant extension in bid submission time.	The bid submission time is extended from 12-11-2024 1400 hours to 18-11-2024 at 1400 hours. Accordingly, the bid opening time is also changed from 12-11-2024 1430 hours to 18-11-2024 at 1430 hours
3	Meezan Bank Limited and M/s GCS Pvt Ltd. requested clarification that whether tripod based or flap barrier type of turnstiles/AGM are required at LMBS and OLMT.	It is clarified that on LMBS tripod based turnstiles are required whereas on OLMT flap barriers based AGMs are required.
4	M/s GCS Pvt Ltd. Inquired about the additional 5KVA UPS at LMBS.	Refer to clause 74 Sr# 1; it is clarified that for LMBS stations UPS with Power Backup of atleast 4 hours of backup time is required to support all AFC-BSS related equipment and components, station network, communication devices along with additional load of 5KVA for other systems. It is clarified that 4 hours backup time s also required for additional load of 5KVA.
5	M/s Infotech Pvt Ltd and M/s GCS Pvt Ltd inquired about utilization of fiber optic network of OLMT. Moreover, clarification was requested regarding establishing connectivity of OLMT optic fiber network with LMBS optic fiber network and maintenance of such connectivity.	Refer to clause 9.62; it is clarified that the SP will utilize the existing primary optic fiber network connecting OLMT stations for this purpose. The SP will also integrate OLMT primary optic fiber network at Anarkali station and LMBS primary optic fiber network at MAO station at its own cost and maintain it throughout the period of the Contract.
6	M/s GCS Pvt Ltd. inquired about the maintenance responsibility of LMBS optic fiber cable network and allied communication devices.	Refer to clause 13.14; it is clarified that the primary medium for connectivity for LMBS stations is GPON based Fiber optic network aggregating at ASTP Lahore that is to be maintained by the SP for the period of the Contract. It is also clarified that any required upgradation of existing fiber optic cable and allied communication devices is responsibility of the SP throughout the period of the contract.


Page 1 of 2

7	Case of addition of new buses with pre-installed validators and OBUs by the purchaser.	It is clarified that in case the purchaser decides to add new buses with pre-installed validators and OBUs, the Service Provider shall provide L3 certifications of such equipment (if other than those quoted by the SP), to enable smooth payments under open loop systems, at the same rate as charged by the payment scheme, applicable in Pakistan, to the acquirer bank. In this regard clause 9.63 has been added.
8	PITB highlighted planned induction of 27 new EMV buses of Punjab Transport Company (PTC) in Lahore that are equipped with pre-installed validators and OBUs.	It is clarified that 27 new EMV buses of Punjab Transport Company (PTC) equipped with pre-installed validators and OBUs are set to arrive in Lahore in the near future. The service provider shall extend the services mentioned in clause 9.63 also to PTC for which PTC will enter into a separate agreement with Service Provider. In this regard clause 9.64 has been added.


 A series of handwritten signatures in blue ink, including a large stylized signature, a signature that appears to be 'Qar', a signature that appears to be 'R', and several other illegible signatures.

Tender Evaluation Committee Attendance Sheet					
TENDER FOR DEVELOPMENT, IMPLEMENTATION, OPERATIONS AND LONG - TERM MAINTENANCE OF PROVEN AUTOMATED FARE COLLECTION & BUS SCHEDULING SYSTEM (AFC-BSS) FOR LAHORE METROBUS SYSTEM (LMBS) AND INTEGRATED FEEDER ROUTES					
Place:		29/10/2024		12:00 PM	
Committee Room, PMA, 5 th floor, Arfa Software Technology Park, LHR					
Sr. No.	Committee Member	Signature	Email Address	Contact No.	
1	Mr. Ozair Shah, General Manager (Operations), PMA- Chairperson TEC				
2	Mr. Muhammad Abid, Secretary, PMA				
3	Mr. Muhammad Rehman Afzal, Manager (Finance), PMA				
4	Mr. Raheel Qutab, Manager IT, PMA				
5	Mr. Mohsin Raza, IT Expert (Surveillance & Networking), PMA				
6	Mr. Muhammad Asim, Assistant Manager IT, Lahore, PMA				
7	Mr.				
8	Mr. Ms. Ajima Naez				03005569203
9	Mr. Danish Ahmed - JD				

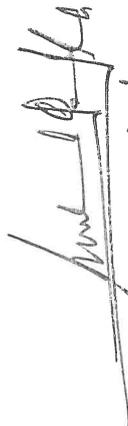
PRE-BID MEETING - ATTENDANCE SHEET
TENDER FOR DEVELOPMENT, IMPLEMENTATION, OPERATIONS AND LONG - TERM MAINTENANCE OF PROVEN AUTOMATED FARE COLLECTION & BUS SCHEDULING SYSTEM (AFC-BSS)
FOR LAHORE METROBUS SYSTEM (LMBS) AND INTEGRATED FEEDER ROUTES

Place: Committee Room, PMA Office, 5th floor,
 Arfa Software Technology Park, Lhr

Date: 29/10/2024

Time: 12:00 PM

Sr. No.	Name of Organization	Name of JV Partner (if any)	Representative's Name & Designation	Contact No.	Email Address	Signature
1	SMART TEC		AMIR AU			
2	Meezan Bank	AJCL	Nasir Waleed	0304-0928007	waleed.zabe@meezanbank.com	
3	Meezan Bank BOP / GCS	BOP	Majid Shabir	03168887636	majid.shabir@gapit.com	
4	INFOTECH Pvt. Ltd	-	ZAMEER MAABOOL	03181871491	zameer.maabool@infotechgroup.com	
5	INFOTECH Pvt. Ltd	-	ABDUL MANNAN	03006329450	abdul.mannan@infotechgroup.com	
6	Infotech Pvt Ltd	-	Waseem Aman	0308-1752131	waleem.aman@infotechgroup.com	
7	GCS	-	Jahanzeb Bajwa	0323-3922023	jahanzeb@gsa.com	
8	AJCL	-	Nasir Abbasi	03028248605	nasir.abbasi@ajcl.net	
9	BOP	-	Muhammad Hussain	0300-885311	Muhammad.Hussain@bop.com.pk	
10						


 29/10/24

ADDENDUM NO. 01 TO THE TENDER DOCUMENT

DEVELOPMENT, IMPLEMENTATION, OPERATIONS AND LONG - TERM
MAINTENANCE OF PROVEN AUTOMATED FARE COLLECTION & BUS
SCHEDULING SYSTEM (AFC-BSS) FOR LAHORE METROBUS SYSTEM
(LMBS) AND INTEGRATED FEEDER ROUTES



**THE PUNJAB MASSTRANSIT AUTHORITY
GOVERNMENT OF THE PUNJAB**

5th Floor, Arfa Software Technology Park (ASTP)
346-B, Main Ferozpur Road, Lahore, Pakistan.
Phone: +92 42 99028000 Fax: +92 42 99232541
URL: www.pma.punjab.gov.pk



Addendum No. 1 to the Tender Document

The following addendum is hereby issued; which shall form part and parcel of the original document titled

“DEVELOPMENT, IMPLEMENTATION, OPERATIONS AND LONG - TERM MAINTENANCE OF PROVEN AUTOMATED FARE COLLECTION & BUS SCHEDULING SYSTEM (AFC-BSS) FOR LAHORE METROBUS SYSTEM (LMBS) AND INTEGRATED FEEDER ROUTES)”

issued and uploaded on October 22, 2024. The contents of this addendum shall supersede/replace pages 04, 05, 09, 11,13, 32, 39, 69, 77, 78 and 103 of the original RFP document, and shall be read as part of the RFP document uploaded on the following websites:

<https://www.pma.punjab.gov.pk>

<https://punjab.eprocure.gov.pk>

<https://www.ppra.punjab.gov.pk>

Important Note

Banks and Joint ventures complying with criteria and requirements (in all respects) given in this document are eligible for this tender, hereafter referred to as Bidders.

Following is a synopsis of the services required from Bidder:

- 1. Supply all necessary AFC-BSS services (including furnishing, installing and operating all hardware, networking, fare media etc. at its own cost), and configure, customize, deploy, integrate and maintain the entire AFC-BSS solution for Metrobus System and integrated Feeder Routes in Lahore. Additionally, the SP shall establish EMV based open loop payment systems on OLMT by initially installing 70 validators and 70 AGMs at OLMT stations such that validators are deployed at one (01) entry and one (01) exit turnstile (AGM) on all 35 entry and 35 exit points at 26 stations of Orange line in Lahore. In addition, one (01) TVM shall also be furnished, installed, configured and commissioned on OLMT**
- 2. All the Hardware at stations, Green line, Orange Line and feeder buses should have capability to work in decentralized/centralized mode in order to ensure maximum operations uptime.**
- 3. Manage ticketing operations at PMA stations and on feeder routes by fully utilizing the deployed AFC-BSS solution. This includes bank transactions, ticket sales, refunds, smart card sales & recharge, and customer facilitation at turnstiles and feeder buses etc. as per defined scope of services. The Purchaser envisions that the Bidder shall also ensure sale and recharge of Mobile Wallet on the feeder routes.**
- 4. PMA has already developed an indigenous transport Eco system that will integrate with 3rd parties public & private sector mobility systems. Therefore, the provided equipment shall be Integrate-able with AFC-BSS software and mobile application developed by PITB.**

For a more elaborate list of roles and responsibilities in each case above, please refer to Clause 9 (“Services Required”) in this document.

Purchaser reserves exclusive rights to cancel/annul or reject proposal submitted at any time without giving any reason thereof.

Bidders must ensure that they submit all the required documents indicated in the RFP documents without fail. Proposal received without, undertakings, valid documentary evidence, supporting documents and various requirements mentioned in the RFP documents or test certificates are liable to be rejected at the initial stage itself. The data sheets, valid documentary evidences for the critical components as detailed hereinafter should be submitted by the SP for scrutiny. It is intimated that no objection/revisions/supplement shall be entertained regarding the terms and conditions of the RFP document submitted by the bidder.

Applicability of Punjab Procurement Rules, 2014

This Bidding Process will be governed under Punjab Procurement Rules, 2014 read with State

Bank of Pakistan Circular No. 05 of 2021 dated. 15th October 2021, as amended from time to time and instructions of the Government of the Punjab received during the completion of the project.

Important Dates

Clarification meeting on: 29th October 2024 at 1200 Hours.

Committee Room, Punjab Masstransit Authority, 5th Floor Arfa Software Technology Park, Ferozpur Road, Lahore.

Last Date of Bid Submission on e-PADS: 12 18th November 2024 at 1400 Hours.

Bid Opening on e-PADS: 12 18th November 2024 at 1430 Hours .

Committee Room, Punjab Masstransit Authority, 5th Floor Arfa Software Technology Park, Ferozpur Road, Lahore.

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at a time, date and venue announced and communicated to the bidders in advance. The Financial Proposal of bids found technically non-responsive shall be returned un-opened to the respective bidders.

- vii) The technically qualified bidder with lowest evaluated Financial Bid will be the successful bidder, subject to approval of the Competent Authority.

3. Bidding Details (Instruction to Bidder)

- 3.1 All bids must be accompanied by bid security as part of e-bid in favor of “**PUNJAB MASSTRANSIT AUTHORITY**” (As per provisions of Bid Security Clause 22 of this document).
- 3.2 All interested bidders are required to register themselves by visiting the following link established by PPRA and become a register supplier under e-procurement system.
- <https://punjab.eprocure.gov.pk>
- 3.3 After registering on e-procurement system, the potential bidders are required to familiarize themselves with e-PADS which will be the only portal for submission of e-bids.
- 3.4 All bidders are encouraged to carefully study the e-procurement notification No. MMD(PPRA)50-BOM/2024 dated 6th March, 2024 to successfully submit their e-bids by uploading PDF Files in e-PADS against the subject tender of PMA.
- 3.5 The e-bids (complete in all respects) must be submitted on e-PADS latest by **1400 Hours on 12 18th November 2024** Physical Bids received through courier service or delivered by the bidder, shall not be accepted. **The bidder must submit original Bid Security Instrument, Tender Forms, Affidavits, etc. in an envelope** clearly marked with the Tender Name, Bidder Name, Bidder Address and Bidder Phone Number in the office of the Punjab Masstransit Authority located at 5th floor, Arfa Software Technology Park, 346-B, Ferozpur Road, Lahore, Pakistan, **on or before 1400 hours on 12 18th November 2024**, in addition to the soft copy uploaded on the e-PADS.
- 3.6 e-Bids will not be accepted on the e-PADS, after closing time. However, if any e-bid is submitted on the system after closing time due to some technical glitch in the e-PADS, in that case bid shall be declared late, rejected returned unopened to the Bidder.
- 3.7 The Technical Proposals of e-bids will be opened on the e-PADS in the Committee Room of the Punjab Masstransit Authority, 5th Floor, Arfa Software Technology Park (ASTP), at **1430 hours on 12 18th November 2024**. The Financial Proposals will remain unopened on the e-PADS until the specified time of their opening.
- 3.8 Any aforementioned bid documents (need to be submitted in original hard form) received by the Purchaser after the abovementioned deadline for submission of Bids shall be returned unopened to such Bidder. Delays in the mail, delays of person in transit, or delivery of these bid documents to the wrong office shall not be accepted as an excuse for failure to deliver at the proper place and time. It shall be the Bidder’s responsibility to determine the manner in which timely delivery of these bid documents will be accomplished either in person, by messenger, courier service or by mail.
- 3.9 The Punjab Masstransit Authority shall hold a **Clarification meeting at 1200 hours on 29th October 2024**; in the Committee Room, Punjab Masstransit Authority, 5th Floor, Arfa Software Technology Park (ASTP), Lahore, PAKISTAN. The bidders in case of any queries for seeking clarifications may send their queries in writing on e-PADS or via e-mail at the above contact detail or at the office of Punjab Masstransit Authority, 5th Floor, Arfa Software Technology Park (ASTP), Main Ferozpur Road, Lahore, PAKISTAN till

6. Scope of Works/Services

Note: PITB has developed indigenous Centralized AFC Software along with Mobile Application. This Software will enable commuters to pay their fare through Mobile App (QR Code), POS generated QR Code ticket, any bank card and centralized smart card on digital payment mechanism with open loop banking system. PITB shall be responsible for the maintenance of AFC software and mobile application. PITB shall also be responsible for the data center services. In addition, PITB is also developing a robust Bus Scheduling System (BSS), for deployment in all mass transit systems in Punjab, which is nearing completion.

The General Scope of Works/Services includes but not limited to the following: -

- 6.1 Punjab Masstransit Authority (PMA), Government of the Punjab (The Purchaser), invites/requests Proposal for the Development, Implementation, Operations, and Long-Term Maintenance (on turnkey basis) of proven Automated Fare Collection & Bus Scheduling System (AFC-BSS).
- 6.2 Key role of the bidder shall be to furnish, install, commission, operate and maintain equipment for transactions, through open loop and closed loop payment system, for ticketing at Lahore Metrobus System and integrated feeder routes operated by PMA in Lahore. In addition, key role of the bidder shall include establishing EMV based open loop payment systems on OLMT by initially installing 70 validators and 70 AGMs at OLMT stations such that validators are deployed at one (01) entry and one (01) exit turnstile (AGM) on all 35 entry and 35 exit points at 26 stations of Orange line in Lahore. In addition, one (01) TVM shall also be furnished, installed, configured and commissioned on OLMT.
- 6.3 Furthermore, the bidder shall also furnish, install, commission, operate and maintain equipment for scheduling of buses, vehicle location system and passenger information system (henceforth called BSS) where required in LMBS and Feeder Routes
- 6.4 The prescribed open loop and closed loop payment system shall be deployed such that it is fully integrated with indigenous AFC software already developed by PITB for PMA. Accordingly, there shall be no equipment commissioned under the Contract that is of proprietary nature and all such equipment whether for transactions or BSS shall be able to fully hand shake with aforementioned AFC-BSS software.
- 6.5 The bidder shall ensure smooth running of Metrobus System and integrated feeder routes under open loop and closed loop payment system including furnishing, installing, configuring, deploying, thoroughly testing, operating & maintaining all hardware and administering all components of transactions such as Point of Sale machines, Validators and KIOSKs, network connectivity, fare media etc.
- 6.6 Manage ticketing operations by deploying adequate human resource at PMA stations and feeder buses by fully utilizing the PITB AFC-BSS software. This includes bank transactions, debit/credit cards transactions for open loop, ticket sales, refunds, smart card sales & recharge, cash collection, cash deposit in the PMA designated bank account, customer facilitation at metrobus stations, turnstiles and feeder buses etc. as per defined scope of services.
- 6.7 Coordinate with PITB to provide technical support for integration of AFC-BSS equipment with PITB Centralized AFC-BSS Software such as Web & Mobile Platform for Android & iOS, EMV L1, L2

Eventually, the system may be rolled out for other routes as well.

- 6.10 Similarly, AFC-BSS solution needs to be rolled out for 200 feeder buses including 162 standard and 38 mini-buses which are operating on integrated feeder routes having onboard ticketing currently. As a policy, one (01) validator shall be provided in Mini buses and two (02) in standard buses. In Phase I, only 200 feeder buses with 362 validators and 200 driver consoles having GPS trackers will be operated on the feeder routes. The BSP will also be required to ensure sale of cards and recharge of card on the feeder routes in the city, either by setting up their own offices/shops or through collaboration with already established offices/shops or combination thereof. The SP is also required to provision and maintain fifteen (15) handheld ticket validators for spot checking, to facilitate PMA assigned ticket inspectors.
- 6.11 The Purchaser may add additional feeder routes and ply feeder buses on the same terms and conditions and unit prices agreed in the Contract. In such an eventuality, the Contract may be extended for an agreed timeframe with mutual consent of both parties. The SP upon receiving a written order from the Purchaser shall incorporate the additional services into the existing system on the same terms and conditions. Payments for the additional services shall be made against quoted rates on prorated basis from the date of commissioning for the remainder of the contract. However, during such extension(s) of the Contract the payment shall be made at quoted rates on prorated basis.
- 6.12 The AFC-BSS solution comprises of the following core components and its associated equipment and services which should be Integrate-able with PMA Web & Mobile Application for Android & IOS, EMV L1/L2/L3 compliant Contactless Cards and any other third-party software/system via secure API & SDK:
- a) Automated Fare Collection System
 - b) Bus Scheduling and Vehicle Location System
 - c) Passenger Information System
- Note: All the Hardware at stations and feeder buses should have capability to work offline in case of disconnection with main server in order to ensure 0% downtime in ticketing operations.
- 6.13 High-level requirements for these systems are outlined in relevant sections of this document. It is mandatory that bidder propose only reliable, proven solutions, incorporating industry best practices.

Scope of work for Orange Line

Similarly, AFC solution needs to be rolled out for OLMT to enable open loop payment systems on OLMT by initially installing 70 EMV enabled validators and 70 AGMs at OLMT stations such that these validators are deployed at one (01) entry and one (01) exit turnstile (AGM) at all 35 entry and 35 exit points at 26 stations of OLMT. The other OLMT turnstiles (AGM) will continue to support already deployed closed loop payment systems of OLMT.

Each EMV channel shall be equipped with AGMs along with controllers and validators which must be furnished, installed, configured and commissioned to operate in a manner such that the channel is integrated with PITB AFC software. In addition, one (01) TVM shall also be furnished, installed, configured, commissioned and maintained on OLMT.

such as accidents, fire, theft, etc.

e. conduct a washing service of the vehicle once a week.

9.60.4 Fueling Details

The Service Provider shall furnish to the Purchaser, a PSO fuel card of monthly prescribed limit of no less than 300 liters, renewable at the start of every month for which all changes are to be managed and paid by Service Provider.

9.61 The SP shall also provision and facilitate the use of closed-loop cards of OLMT on the AFC system of LMBS and LFR.

9.62 The SP will enable EMV based open loop payment systems on OLMT by initially installing 70 validators and 70 AGMs at OLMT stations such that validators are deployed at one (01) entry and one (01) exit turnstile (AGM) on all 35 entry and 35 exit points at 26 stations of OLMT. The other OLMT turnstiles (AGM) will continue to support already deployed closed loop payment systems of OLMT. Moreover, it is clarified that SP will deploy necessary network equipment at OLMT stations and transfer the open loop transaction data of OLMT stations to centralized AFC servers deployed at PITB data center. The SP will utilize the existing primary optic fiber network connecting OLMT stations for this purpose. The SP will also integrate OLMT primary optic fiber network at Anarkali station and LMBS primary optic fiber network at MAO station at its own cost and maintain it throughout the period of the Contract.

9.63 In case the purchaser decides to add new buses with pre-installed validators and OBUs, the Service Provider shall provide L3 certifications of such equipment (if other than quoted by the SP), to enable smooth payments under open loop systems, at the same rate as charged by the payment scheme, applicable in Pakistan, to the acquirer bank.

9.64 It is clarified that 27 new EMV buses of Punjab Transport Company (PTC) equipped with pre-installed validators and OBUs are set to arrive in Lahore in the near future. The service provider shall extend the services mentioned in clause 9.63 also to PTC for which PTC will enter into a separate agreement with Service Provider.

9.65 Clarifications Related to Services Required:

It is clarified that: -

- i) Cables which need replacement on stations will be provided and replaced by the Contractor at its own cost. Furthermore, in case new path / conduit is required for the cabling due to any infrastructural issue the conduit / duct will be provided by the Contractor. Moreover, the Contractor shall be responsible for the maintenance of the ducts/conduits throughout the Contract period.
- ii) In case of extreme emergencies like fire, short circuiting, rain water infestation etc., SP will be allowed to turn off any equipment, with intimation to the Purchaser, that can be damaged or cause damage to personnel due to any infrastructure issues to be handled by the Purchaser at stations. No deductions will be imposed on SP under such circumstances. It is however clarified that prior approval of PMA shall be obtained by the SP before shutting down equipment except in case of emergencies in which human lives are at risk.
- iii) There will be a dedicated security operator for LMBS, on 24/7/365 basis, who will be responsible for the security of equipment after operations hours. However, security of equipment locked by the SP shall be to the extent of protection of breakage of locks and theft thereafter.

10. Key Service Level Parameters

Any breach of defined service levels in “SLA A” will entail penalties which shall not exceed more than 10% of the monthly payments to the Service Provider. Service level parameters are outlined in **Annexure- J.**

13.19 PMA Control Center

PMA has set-up a central control center for authorized PMA staff allocated to the AFC-BSS project in Lahore.

All data collected via AFC-BSS components (including audit data, statistical, and operational information) shall be made accessible via secure, online interface to authorized PMA staff on real-time basis, by the Service Provider.

Bus Scheduling, bus tracking, and bus alert-management, as well as Passenger Information System shall be managed / monitored via the Control Center.

The Service Provider is responsible to provide adequate AFC-BSS support staff at the PMA Control Center. The support staff / representative will act as a liaison for coordination between PMA and SP for effective monitoring and control of AFC-BSS operations.

ORANGE LINE METRO TRAIN LAHORE (OLMT)

The details of Station Level Equipment (SLE) AFC equipment installed at metro station is attached at Annexure-N.

13.20 Automatic Gate Machines (AGM)

All PMA OLMT stations have guarded entry and exit enforced via Automatic gate machines (AGM).

AGMs have been deployed on every OLMT station, on boundary of paid area and un-paid area, which makes the total of 279 operational AGMs at any given time. Each OLMT station have four different types of AGMs that are entry (AGE), exit (AGX), reversible (RAG) and bidirectional-wide (Bi-WAG). The AGE and AGX are dedicated for entry and exit only. RAG and Bi-WAG are both reversible and bidirectional; however, Bi-WAG is a Wide AGM. All the AGMs are equipped with validator(s) i.e. fare media readers / writers.

Sr No	Component	Quantity	Manufacturer	Model
1	Automatic Gate - Entry (AGE)	107	China National Software & Service Co. Ltd.	CS-AG-TS280-En
2	Automatic Gate - Exit (AGX)	95		CS-AG-TS280-Ex
3	Automatic Gate - Reversible (RAG)	42		CS-AG-TS280-R
4	Automatic Gate (Wide) – Bidirectional (Bi-WAG))	35		CS-AG-TS280-Dx

In-order to ensure there are no ticketless travelers within the OLMT, the existing L2SP2 manpower at AGMs will be utilized.

The SP will enable EMV based open loop payment systems on OLMT by initially installing 70 validators and 70 AGMs at OLMT stations such that validators are deployed at one (01) entry and one (01) exit turnstile (AGM) on all 35 entry and 35 exit points at 26 stations of OLMT. The other OLMT turnstiles (AGM) will continue to support already deployed closed loop payment systems of OLMT.

13.21 Automated Fare Collection and Fare Policy

Passengers will be charged distance based fare as per prevailing fare policy. However, AFC-BSS is able to handle fare policies based on flat rate, zones/stages/time, as well as distance travelled. AFC-BSS is also able to handle the full fare, concessional fare and free fare policies. AFC-BSS also caters to on-board as well as off-board ticketing modes and is able to handle transfers across on-board and off-board ticketing modes.

74. Technical Evaluation Criteria

A point system will be used for technical qualifying for the bidders.

PASS MARKS: An eligible bidder, based on conditions listed in Section below, not meeting the 65% pass mark limit will be rejected in Technical evaluation, and its Financial Proposal will not be opened on e-PADS. All bidder(s) scoring greater than or equal to 65% of the total marks will be accepted in technical proposal, and their respective financial bids will be opened on e-PADS as per rules and regulations. In case of JV, marks shall be evaluated jointly for all members unless stated otherwise.

The Purchaser reserves exclusive rights to reject all the proposals submitted at any time.

According to the Technical Evaluation Criteria, the Technical proposal will be rated as follows. Bidders may fill in the below evaluation sheet and do their own evaluation for submission, but the evaluation done by the Purchaser/ Evaluator shall be the valid evaluation and shall hold:

For each component listed below, provide detailed specifications with relevant materials including information on standards compliance.

COMPLIANCE SHEET FOR BID

Sr. No	Component	Estimated Quantity	Requirements Met
1	Power Backup (with atleast 4 hours of backup time) to support all AFC-BSS related equipment and components as well as station (2 Platforms) network and communication devices, also include additional provisioning of 5KVA per the requirements of existing systems.	27	
2	Provisioning and installation of Ticket Office Machines for Metrobus Stations	88	
3	Provisioning of Handheld Ticketing Machines (POS) for Feeder Buses	200*	
4	Turnstiles for Stations (For 27 stations, 120 one-way turnstiles, 120 two-way turnstiles)	240	
4-A	AGMs for OLMT Stations (For 26 stations, 35 one-way entry AGMs and 35 one-way exit AGMs)	70**	
5	Validators for Station Turnstiles and Feeder Buses	360 + 362*+70**	
6	Passenger Information System - On Station Sign Boards (2 Screens per station, each with dual side display)	52	
7	Driver Consoles, including GPS Trackers for Buses	64+200*	

CPI_n is the value of consumer price index (CPI) on the last date of the previous fiscal year as published by Pakistan Bureau of Statistics, i.e. 30th June 2025 for invoices submitted for the period of 1st July 2025 and onwards and 30th June 2026 for invoices submitted for the period 1st July 2026 and so on.

CPI_o is the value of consumer price index on the date of bid submission.

*Represents 52 Sundays in a year

**Represents other leaves and relievers, if any.

vi. New stations and/or on-board bus modules may be added at any time during the contract period at the same average monthly service charge (per Station, per bus, as the case may be) as mentioned above in Price Table.

vii. In case the purchaser decides to add new buses with pre-installed validators and OBUs, the Service Provider shall provide L3 certifications of such equipment (if other than quoted by the SP), to enable smooth payments under open loop systems, at the same rate as charged by the payment scheme, applicable in Pakistan, to the acquirer bank.

viii. It is clarified that 27 new EMV buses of Punjab Transport Company (PTC) equipped with pre-installed validators and OBUs are set to arrive in Lahore in the near future. The service provider shall extend the services mentioned in clause 9.63 also to PTC for which PTC will enter into a separate agreement with Service Provider.

Date _____

Place _____

Signature of authorized person

Name:

(Company Seal)

In the capacity of Duly authorized by

Note: No cutting or overwriting is allowed. Any cutting or overwriting will lead to rejection of the financial bid.

76. Equipment Cost

MUST BE SUBMITTED AS AN ANNEXURE WITH THE FINANCIAL PROPOSAL ALONGWITH PRICE SCHEDULE/BID PRICE/FORM OF BID

(Will be used for the purposes of estimating and analyzing solution costs)

EQUIPMENT COST		COL- A	COL-B	COL-C= COL-A * COL-B
Sr. No.	Components	Estimated Quantity	Unit Price (Inc. Taxes)	Total Price (Inc. Taxes)
1	Uninterruptable Power Supply (UPS) (with at least 4 hours of backup time)	27		
2	Ticket Office Machines (at metrobus stations)	88		
3	Handheld Ticketing Machines (POS) for feeder buses	200*		
4	Turnstiles for Stations (For 27 stations, 120 one-way turnstiles, 120 two-way turnstiles)	240		
4-A	AGMs for OLMT Stations (For 26 stations, 35 one-way entry AGMs and 35 one-way exit AGMs)	70**		
5	Validators for LMBS Turnstile (Nos. 360) and Feeder Buses (Nos. 362) and OLMT Turnstile/AGM (Nos. 70)	$792 = 360 + 362* + 70**$		
6	Driver Console, including GPS Trackers for Buses (Nos. 64 for Metro Buses and Nos. 200 for Feeder Buses)	$264 = 64+200*$		
7	Fare Media; EMV Cards / Smart Cards, QR paper tickets (Inclusive of all types of fare media to be supplied for the period of support i.e. 10 years)	Based on anticipated ridership volumes given in section 7		
8	Provisioning of reliable data computing and network equipment at each station – including servers, switches, routers, wiring at station and all other components necessary to provision and operate AFC- BSS components efficiently. Please list all components.	$27+26**$		
9	Provisioning of secure data/internet connectivity to each station through secondary medium that could be any and integration with the primary medium, Fiber optic network provisioned by the Purchaser.	27 LMBS Stations + 26 OLMT Stations		
10	Provisioning of reliable data computing and network equipment including switches, routers, wiring at buses and all other components necessary to provision and operate AFC- BSS components efficiently. Please list all components.at each bus	$264 = 64+200*$		

Turnstile			Compliance (to be filled by Bidder)	
Sr. #	ITEM	DESCRIPTION	Yes	No
1	In/Out	Bi-directional Tripod Arms/ Flap Barriers Turnstiles for LMBS and Flap Barriers AGM for OLMT, must be suitable for outdoor usage		
2	Operational Temperature	-10C to + 70C		
	Environmental Protection	Equipment should be capable to resist extreme temperature, water, dust, wind and UV rays to ensure working in harsh weather conditions		
3	Passage Warning	Visible warning sign		
4	Speakers	Equipped with Speakers for alarms		
5	Accessories	Standard		
	Controller for interfacing	Should be interfaceable with fare validator and turnstile drive Emergency Control, status of turnstile, minimum 2 IOs, If solution consist of separate turnstile controller than, Specialized controller with at least 4 input and 4 output is required SDKs or APIs shall be provided if required for interfacing		
6	Quality/Standard	ASTM standards as set forth by the materials industry		
		Interchangeable parts made out of high quality stainless steel materials		
		All parts capable of sustaining wear and tear		
		All relevant components hardened and surface treated to ensure long life and reliable service		
		Self-centring mechanism should be used in order to automatically return arms to the basic position regardless of force used to pass through the turnstile		
		Rotation mechanism is cushioned through shock dampening		
		The modular mechanism design to be mounted on a thick steel plate so as to allow rapid maintenance		
		Environmentally friendlier and biologically safer through e-coated surfaces		
		The outer cabinet should be constructed from thick steel with stainless steel finish		
		The hub should have openings for three arms 120 degrees apart		