

BIDDING DOCUMENTS
FOR
SHORT-TERM IT-ENABLED CONSULTANCY SERVICES FOR ENGAGEMENT OF A
CONSULTANT FIRM FOR ESTABLISHMENT OF A REAL-TIME MONITORING
DASHBOARD (RTMD) FOR PUBLIC-PRIVATE PARTNERSHIP (PPP) PROJECTS IN
THE ROAD SECTOR, PUNJAB

RFQ No.: PM/P3NODE/RFQ-ITC-1

Procuring Agency: P3 Node, Communication & Works Department, Government of the Punjab

Selection method: Firm of consultants in a short consultancy, on qualification and experience – Rule 46-A, Punjab Procurement Rules 2014 (as amended)

Type of contract: Lump sum – Rule 48(1)(e)(i)

Duration: Six (06) months from the Commencement Date

Issued on:	[01-10-2026]
Deadline for submission:	[October 15, 2026] at [11:00] hours
Opening of Technical Quotations:	Same date as the deadline, at [11:30] hours, at the address at ITC 17.1
Procurement Process:	Single Stage Two Envelop
Selection Method:	Quality Base Selection
Passing Score:	65%
Technical & Financial Weightage:	100% : 0%

Table of Contents

PART I – SELECTION PROCEDURE AND REQUIREMENTS.....	5
SECTION I. LETTER OF INVITATION	5
SECTION II. INSTRUCTIONS TO CONSULTANTS (ITC)	6
A. General.....	6
B. Preparation of Quotations	8
C. Submission, Opening and Evaluation.....	9
D. Award of Contract	11
SECTION III. DATA SHEET.....	12
SECTION IV. EVALUATION CRITERIA AND MARKING METHOD.....	14
1. Stage 1 – Eligibility and responsiveness (pass / fail)	14
2. Stage 2 – Technical evaluation, 100 marks	14
3. Stage 3 – Ranking and award	17
SECTION V. TECHNICAL QUOTATION FORMS.....	18
FORM TECH-1: Form of Quotation	19
FORM TECH-2: Firm’s Organisation and Experience	20
FORM TECH-3: Approach, Methodology, Work Plan and Staffing.....	21
FORM TECH-4: Curriculum Vitae of a Key Expert.....	23
FORM TECH-5: Availability Undertaking of a Key Expert.....	24
FORM TECH-6: Affidavit – Non-Blacklisting and No Conflict of Interest.....	25
FORM TECH-7: Power of Attorney / Authorisation of the Signatory.....	26
FORM TECH-8: Joint Venture Undertaking	27
SECTION VI. FINANCIAL QUOTATION FORMS.....	28
FORM FIN-1: Financial Quotation Submission Form.....	28
FORM FIN-2: Total Quoted Price.....	29
FORM FIN-3: Cost Breakdown	30
PART II – CONDITIONS OF CONTRACT AND CONTRACT FORMS	31
SECTION VII. FORM OF CONTRACT AGREEMENT	31
SECTION VIII. GENERAL CONDITIONS OF CONTRACT (GCC)	33
A. General.....	33
B. Commencement, duration and performance	33
C. Deliverables, price and payment.....	35

D. Integrity, confidentiality and intellectual property	36
E. Service levels, liability and risk	37
F. Suspension, termination and completion.....	38
G. Disputes and miscellaneous.....	40
APPENDIX-A – PARTICULAR CONDITIONS OF CONTRACT.....	41
Part A-1 – Contract Data	41
Part A-2 – Particular Conditions amending the General Conditions.....	42
APPENDIX-B – DESCRIPTION OF SERVICES (TERMS OF REFERENCE)	44
1. Background and Client Requirement	44
2. Stakeholders	45
3. Objective.....	45
4. Scope of Work.....	46
5. Methodology.....	50
6. Facilities Provided by the Client	50
7. Deliverables.....	50
8. Timing and Inputs.....	51
9. Reports and Deliverable Timelines	51
APPENDIX-C – DELIVERABLES, REPORTING SCHEDULE AND SERVICE LEVELS.....	53
Part C-1 – Deliverables	53
Part C-2 – Reporting schedule.....	53
Part C-3 – Service levels	54
APPENDIX-D – KEY PERSONNEL AND SUB-CONSULTANTS.....	55
D-1. Key Personnel	55
D-2. Field monitoring teams and other non-key personnel	55
APPENDIX-E – CONTRACT PRICE AND PAYMENT SCHEDULE	56
APPENDIX-F – FORM OF PERFORMANCE SECURITY	57
APPENDIX-G – NOTICE OF AWARD AND NOTICE TO PROCEED.....	58
Form G-1. Notice of Award – ITC 23.1	58
Form G-2. Notice to Proceed – ITC 23.3, GCC 5.2	59
APPENDIX-H – INTEGRITY PACT	60
APPENDIX-I – ACCEPTANCE, PERFORMANCE AND COMPLETION CERTIFICATES ...	61
Form I-1. Deliverable Acceptance Certificate – GCC 11.3.....	61
Form I-2. Performance Certificate – GCC 28.5	62
Form I-3. Completion Certificate – GCC 28.6.....	63
Form I-4. Source Code, Data and Credentials Handover Certificate	64
APPENDIX-J – CONFIDENTIALITY AND DATA PROTECTION UNDERTAKING	65

PART I – SELECTION PROCEDURE AND REQUIREMENTS

SECTION I. LETTER OF INVITATION

RFQ No. PM/P3NODE/RFQ-ITC-1 · Date: [date]

To: _____

Subject: Request for Quotation – Short-Term IT-Enabled Consultancy Services for Establishment of a Real-Time Monitoring Dashboard (RTMD) for PPP Projects in the Road Sector, Punjab

Dear Sir / Madam,

1. The P3 Node, Communication & Works Department, Government of the Punjab (the "Client" or "Procuring Agency") invites Quotations from eligible and appropriately qualified consulting firms registered and operating in Pakistan, and from joint ventures, where permitted by the Data Sheet at ITC 12.1, for the Services described at Appendix-B.
2. This is the selection of a firm in a short consultancy under Rule 46-A of the Punjab Procurement Rules 2014 (as amended): at least three quotations are considered from renowned, registered and well-reputed firms on the basis of qualification and experience; the firm selected must be the best qualified and fully capable; and interviews may be conducted. The rule applied, and the threshold and duration within which this procurement falls, are as specified in the Data Sheet at ITC 1.1, 13.1 and 14.1.
3. The assignment covers the complete six (06) month scope of the Terms of Reference at Appendix-B, Parts I to VI of the Scope of Work, under a lump-sum contract – Rule 48(1)(e)(i).
4. A firm shall submit a Technical Quotation and a Financial Quotation prepared in accordance with Section II as completed by the Data Sheet at Section III, using the Forms at Sections V and VI. The address and deadline for submission are as specified in the Data Sheet at ITC 17.1, and the time, date and place of opening are as specified in the Data Sheet at ITC 18.1. A late Quotation will be rejected and returned unopened – Rule 30(4).
5. The complete bidding documents may be obtained free of charge from the Procuring Agency. No fee is payable.
6. The Procuring Agency may reject any or all Quotations and annul the process at any time before acceptance under Rule 35, without liability.

Yours faithfully,

Programme Manager
P3 Node, Communication & Works Department,
Government of the Punjab

SECTION II. INSTRUCTIONS TO CONSULTANTS (ITC)

These Instructions are of general application and are completed by the Data Sheet at Section III, whose entries are keyed to the clause numbers below. Where the Data Sheet conflicts with this Section, the Data Sheet prevails; where either conflicts with the Rules, the Rules prevail.

A. General

1. Scope

- 1.1 The Procuring Agency invites Quotations for the consultancy services described at Appendix-B (the "Services"). The assignment, its reference number, the selection method, the type of contract and the Contract Price ceiling are as specified in the Data Sheet.
- 1.2 "Consultant" means the firm or joint venture submitting a Quotation; "Rules" means the Punjab Procurement Rules 2014 as amended; "day" means a calendar day unless stated to be a working day.

2. Source of funds

- 2.1 The source of funds is as specified in the Data Sheet. Payment will be made only to the Consultant and only under the Contract.

3. Corrupt and fraudulent practices

- 3.1 A Consultant shall not engage, directly or through an agent, in any corrupt, fraudulent, coercive, collusive or obstructive practice.
- 3.2 On such a finding the Procuring Agency may reject the Quotation, terminate the Contract and debar the Consultant under Rule 21 and the Schedule to the Rules.
- 3.3 Where the Data Sheet so requires, the Consultant shall execute the Integrity Pact at Appendix-H – Rule 7.

4. Eligibility

- 4.1 A Consultant must satisfy each of the following at the date of submission and submit the evidence stated:

#	Requirement	Evidence
(a)	Legally registered entity in Pakistan – SECP or Registrar of Firms. Either Partnership or sole proprietorship	Certificate of incorporation or registration; partnership deed; Form-A / Form-29 or equivalent
(b)	In case of Joint Venture (JV)	JV Partnership deed duly Registered in Court.
(c)	Established, well-reputed firm in active operation with the organisational, technical and financial capability for the assignment	Firm's legal form and date of establishment; ownership and management; the office serving similar assignment; permanent technical staff by discipline; and any quality or information-to demonstrate the reputation and well establishment. (max one page)
(d)	Valid NTN and PRA Registration	NTN and PRA / STRN certificates; active taxpayer status
(e)	Not blacklisted, debarred or suspended by any public procuring agency in Pakistan	Form TECH-6, verified against the debarment list at ppra.punjab.gov.pk

#	Requirement	Evidence
(e)	Registration with relevant Council / Board	Valid Certificate of Registration
(f)	No conflict of interest under ITC 5	Declaration within Form TECH-6

4.2 Minimum qualification and experience. A Consultant will be considered for the evaluation process only if it possesses the minimum qualifications and experience prescribed in the Data Sheet at ITC 4.2, both for the firm and for each Key Expert.

4.3 Under Rule 18 the Procuring Agency may require further information on competence, and under Rule 19 shall disqualify a Consultant that has provided false, fabricated or materially incorrect information.

5. Conflict of interest

5.1 The Consultant shall give professional, objective and impartial advice and hold the Client's interests paramount without regard to future work.

5.2 Because Part IV of the Scope of Work at Appendix-B makes the Consultant an independent third-party validator of the reports of the Independent Engineer and the Private Partner, neither the Consultant, nor any affiliate, nor any proposed Key Expert shall during the term be engaged by, associated with, or hold any financial or beneficial interest in, any Private Partner, Special Purpose Vehicle, EPC contractor, toll operator, ETTMS vendor or Independent Engineer engaged on any PPP road project of the C&W Department.

5.3 A firm is ineligible where it or an affiliate has a business or family relationship with a member of the Client's staff involved in preparing this document, in the evaluation, or in signing or supervising the Contract.

5.4 Any actual, potential or perceived conflict must be disclosed in the Technical Quotation; an undisclosed or unresolved conflict entitles the Procuring Agency to reject the Quotation or terminate the Contract.

6. One Quotation only

6.1 Under Rule 36-A a person may submit only one Quotation; if more than one is submitted, all are rejected. Each member of a joint venture is deemed to have submitted that Quotation and may not participate in any other.

7. Cost of the Quotation, and language

7.1 The Consultant bears all costs of preparing and submitting its Quotation and of attending any clarification meeting, interview or negotiation.

7.2 The Quotation and all communications shall be in English – Rule 6; a supporting document in another language shall carry an English translation, the original on record prevailing in case of conflict – Rule 6(3).

8. Amendment of the bidding documents

8.1 The Procuring Agency may amend the documents before the deadline by written addendum, which forms part of them. An essential change will be made in a manner similar to the original advertisement – Rule 25(4) – and the deadline may be extended – Rule 29.

B. Preparation of Quotations

9. Contents of the Quotation

- 9.1 The Quotation comprises two separately sealed envelopes marked "TECHNICAL QUOTATION" and "FINANCIAL QUOTATION", placed inside one outer sealed envelope.
- 9.2 The Technical Quotation shall be paginated (page numbered), indexed and contain, in this order: Form TECH-1; Form TECH-7; the eligibility evidence at ITC 4.1; Form TECH-2; Form TECH-3; Form TECH-4 for each of the five Key Personnel; Form TECH-5 for each; Form TECH-6; Form TECH-8 where the Data Sheet at ITC 12.1 permits joint ventures; and the Integrity Pact at Appendix-H where the Data Sheet at ITC 3.3 requires it. The documents that are mandatory for responsiveness are as specified in the Data Sheet at ITC 9.2.
- 9.3 The Financial Quotation shall contain Forms FIN-1 and FIN-2 and, where the Data Sheet so requires, Form FIN-3.
- 9.4 The Technical Quotation shall contain no indication of price, failing which it may be declared non-responsive.

10. Approach and methodology

- 10.1 Form TECH-3 shall address, concisely, every matter listed in that Form, which follows Parts I to VI of the Scope of Work at Appendix-B. The page limit specified in the Data Sheet will be enforced, and material beyond it will not be read.

11. Key Personnel

- 11.1 The Consultant shall propose a minimum Key Personnel and the minimum qualification and experience for each position as specified in the Data Sheet at ITC 4.2. The positions and with the desired qualification and experience Section iv. Evaluation criteria and marking method.
- 11.2 The minima at Data Sheet ITC 4.2 apply to each expert. A curriculum vitae not meeting them scores **zero** for that position, and the Quotation may be declared non-responsive.
- 11.3 The Consultant shall additionally propose the non-key personnel needed, including the field monitoring teams required by Part IV of the Scope of Work at Appendix-B. These are not scored, but their adequacy for weekly visits to every ongoing PPP contract will be assessed.

12. Joint ventures

- 12.1 Association as a joint venture or by sub-contract is permitted only as specified in the Data Sheet and, under Rule 51(1), only with the Procuring Agency's permission.
- 12.2 In case of a Joint Venture (JV), JV deed duly registered with Court / Registrar will be provided clearly indicating lead member and Percentage of share holding.
- 12.3 Where a joint venture is formed, every member shall individually sign the Contract and all members shall be jointly and severally liable for the entire assignment – Rule 51(2). The Quotation shall identify the lead member and annex Form TECH-8; the composition shall not change after submission without the Client's written consent.

13. Duration and phasing

- 13.1 The duration is as specified in Bid Data Sheet from the Commencement Date, being the date of the Notice to Proceed at Appendix-G: Design and Development, 3 months (Design Phase Progress Reports 1 to 3, at the end of months 1, 2 and 3); Commissioning, O&M and Monitoring, 2 months (Reports 1 and 2, at the end of months 4 and 5); and Completion and Handover, 1 month (Final Project Completion

Report, end of month 6). An Inception Report, draft and final, is due as provided in the reporting schedule at Appendix-C, Part C-2, the draft being due one week from the Commencement Date.

13.2 The three-month Design Phase is a preferred ceiling. If a successful design is not completed within it and there is no default by the Client, no financial extension will be granted, and the Consultant shall complete the design at its own cost in extended period.

13.3 An extension attributable to the Client's default will be considered case by case, carries no automatic entitlement to cost and takes effect only by written amendment. No extension of time is allowed for delay attributable to the Consultant, and no additional cost shall be allowed in any case.

14. Financial Quotation and taxes

14.1 The Financial Quotation shall state a single, fixed, all-inclusive lump-sum price in Pakistan Rupees not exceeding the Contract Price ceiling specified in the Data Sheet. A Quotation above the ceiling is non-responsive.

14.2 The price is deemed to include everything needed to complete the Services: remuneration of key and non-key personnel and of the field monitoring teams under Part IV of the Scope of Work at Appendix-B; travel, transport and field deployment; GPS survey and benchmarks; development and commissioning of APIs at all toll stations; hosting, backup and data security for the whole period; software licences; stakeholder consultation; training workshops and manuals; report production and communications; and all taxes, duties and statutory levies, including income tax and sales tax on services levied by the Punjab Revenue Authority. Tax will be deducted at source at the prescribed rates and a deduction certificate issued.

14.3 No escalation or price adjustment shall be allowed.

14.4 Any provisional sum specified in the Data Sheet is not part of the lump sum and is reimbursed at actual cost against documentary evidence and prior written approval – GCC 13.

15. Validity of Quotations

15.1 A Quotation shall remain valid for the period specified in the Data Sheet, reckoned from the deadline for submission.

15.2 Under Rule 28(3) an extension may be sought in exceptional circumstances, for reasons recorded in writing, from all Consultants, and shall not exceed the original validity period or 180 days, whichever is more; a Consultant agreeing may not change the substance of its Quotation.

16. Clarifications

16.1 A firm may request clarification in writing, including by e-mail, by the deadline and at the address specified in the Data Sheet. The query, without identifying its author, and the response will be circulated to every firm that has obtained the document – Rule 25(3).

C. Submission, Opening and Evaluation

17. Submission, sealing and marking

17.1 The Quotation shall be delivered to the address and by the deadline specified in the Data Sheet.

17.2 The outer envelope and each inner envelope shall bear the name and address of the Procuring Agency, the title of the assignment, the RFQ number, the Consultant's name and address, and the words "DO NOT OPEN BEFORE" followed by the date and time of opening specified in the Data Sheet at ITC 18.1.

17.3 The number of originals and copies is as specified in the Data Sheet; each copy shall be marked "COPY"; in case of discrepancy the original prevails.

17.4 Every page shall be initialled by the authorised signatory, any erasure or overwriting being valid only if so initialled, and the Quotation sealed so that its contents cannot be known until opened – Rule 24(1).

17.5 A Quotation received after the deadline shall be rejected and returned unopened – Rule 30(4).

17.6 Submission is in hard copy only unless the Data Sheet states that e-Procurement under Rule 3A applies.

18. Opening

18.1 Technical Quotations will be opened publicly at the time, date and place specified in the Data Sheet, in the presence of the representatives who choose to attend; the date of opening is the same as the deadline at ITC 17.1 and opening is not less than thirty minutes after it – Rule 30(1).

18.2 Those attending shall sign an attendance sheet – Rule 30(3); each Consultant's name will be read out and minutes recorded.

18.3 Financial Quotations remain sealed in the Procuring Agency's custody until the technical evaluation is complete and approved.

19. Confidentiality of evaluation

19.1 Evaluation information is confidential until the evaluation report is announced – Rule 58; the report is announced in accordance with Rule 37.

20. Evaluation

20.1 Stage 1 – eligibility and responsiveness. Each Quotation is examined against ITC 4.1 and 4.2, and against the documents identified as mandatory in the Data Sheet at ITC 9.2; a Quotation failing any mandatory requirement is non-responsive and proceeds no further.

20.2 Stage 2 – technical evaluation on qualification and experience, 100 marks, consistent with Rule 46-A, comprising the firm (30 marks, being 10 for total experience and 20 for the number of relevant projects) and the Key Personnel (70 marks). The criteria, sub-criteria, marks and method of marking are set out in full at Section IV and are not repeated here; the positions and weightages of the Key Personnel are those at ITC 11.1.

20.3 Interviews. Whether interviews will be held under Rule 46-A(c) is as specified in the Data Sheet. Where held, every Consultant meeting the qualifying score is invited on equal terms before the same panel and on the same questions, and the outcome is recorded in the evaluation report.

20.4 Stage 3 – financial opening, ranking and award. The Financial Quotations of the technically qualified Consultants are opened. Because selection under Rule 46-A is on qualification and experience, qualified Consultants are ranked in descending order of technical score and the Contract is awarded to the highest-ranked Consultant whose Total Quoted Price is within the ceiling specified in the Data Sheet at ITC 14.1. Price is not scored and is not combined with the technical score.

20.5 Where the highest-ranked Consultant's price exceeds the ceiling, or negotiations with it fail, the Procuring Agency may proceed to the next highest-ranked Consultant – Rule 53(2).

20.6 On any discrepancy between figures and words, the amount in words will prevail.

21. Negotiations

- 21.1 The Procuring Agency may negotiate with the highest-ranked Consultant on methodology, work plan, staffing, contract price and special conditions; negotiation shall be by a committee, not a single person – Rule 53(3).

D. Award of Contract

22. Right to reject and to re-bid

- 22.1 The Procuring Agency may reject all Quotations before acceptance under Rule 35(1) without liability, communicating the grounds on request but not being required to justify them – Rule 35(2); may restart from any prior stage for reasons recorded in writing – Rule 35(5); or may re-bid under Rule 36.

23. Notification, signature and Performance Security

- 23.1 The successful Consultant will be notified by a Notice of Award in the form at Appendix-G, Form G-1.
- 23.2 The Consultant shall sign the Contract in the form at Section VII, and furnish the Performance Security if required, within the period specified in the Data Sheet, reckoned from the Notice of Award.
- 23.3 The Contract comes into force when both Parties' signatures are affixed – Rule 63(b); the Services commence on the Commencement Date, being the date of the Notice to Proceed at Appendix-G, Form G-2.
- 23.4 Failure to sign, or to furnish the Performance Security, within that period entitles the Procuring Agency to annul the award, forfeit any security and proceed to the next-ranked Consultant, without prejudice to action under Rule 21.
- 23.5 Whether a Performance Security is required, and if so its amount and validity, is as specified in the Data Sheet; the form is at Appendix-F. Under Rule 56 it shall not exceed ten per cent of the Contract Price.

24. Publication, record, grievances and debarment

- 24.1 On award, all documents relating to the evaluation and to the award are made public under Rule 66(1).
- 24.2 A Grievance Redressal Committee of odd membership has been constituted under Rule 67(1); its convener and address are as specified in the Data Sheet.

SECTION III. DATA SHEET

The Data Sheet is the single source of every particular of this procurement. Its entries are keyed to the clause numbers of Section II and are adopted into the Contract, without repetition, by Appendix-A. Where the Data Sheet conflicts with Section II, the Data Sheet prevails. Complete every entry shown as []; entries marked † are explained in the note at the end of this Section.

ITC ref.	Item	Entry
1.1	Procuring Agency	P3 Node, Communication & Works Department, Government of the Punjab
1.1	Assignment	Short-Term IT-Enabled Consultancy Services for Establishment of a Real-Time Monitoring Dashboard (RTMD) for PPP Projects in the Road Sector, Punjab
1.1	Reference number	PM/P3NODE/RFQ-ITC-1
1.1	Selection method	Firm of consultants in a short consultancy, on qualification and experience – Rule 46-A
1.1	Type of contract	Lump sum – Rule 48(1)(e)(i)
2.1	Source of funds	[Grant 41, against the approved PC-I for establishment of the PPP Mode ...]
3.3	Integrity Pact at Appendix-H required?	[Yes]
4.2	Minimum qualification and experience	Firm: not less than one (01) relevant project of the nature described at ITC 4.1(e). Key Personnel: Min Qualification: Master's degree Min Experience: Five (05) years' Min Projects Relevant: Two (02) Relevant projects. These minima apply to each expert. A curriculum vitae not meeting them scores zero for that position, and the Quotation may be declared non-responsive.
9.2	Documents mandatory for responsiveness	Forms TECH-1, TECH-4 (five curricula vitae), TECH-5, TECH-6 and TECH-7; and the evidence at ITC 4.1(a), (c) and (e)
9.3	Form FIN-3 (cost breakdown) required?	Yes – for negotiation and for assessing the reasonableness of the price; it does not alter the fixed lump-sum character of the price
10.1	Page limit for Form TECH-3	[04] pages, excluding the work plan chart and the staffing schedule
11.1	Key Personnel	The Consultant shall propose five (05) Key Personnel: Team Leader, Mobile Application Developer, GIS Developer, Dashboard / Software Developer and Database Developer.

ITC ref.	Item	Entry
		The minimum qualification and experience for each position are as specified in the Data Sheet at ITC 4.2. The weightage carried by each position and the marks awarded are at Section IV, Part B.
12.1	Joint ventures permitted?	yes: maximum [3] members. In case of 2 members JV the lead member shall hold not less than [51] % and shall satisfy ITC 4.1(e) in its own right In case of 3 member JV the lead member shall hold not less than 40% and shall satisfy ITC 4.1(e) in its own right and no other JV members shall have shares more than 40%
13.1	Duration	Six (06) months
14.1	Contract Price ceiling	Rs. 10,000,000 (Rupees Ten Million only),
14.4	Provisional sum	Not applicable
15.1	Validity of Quotations	[120] days from the deadline for submission
16.1	Clarifications – deadline and address	Not later than [03] days before the deadline, to the Programme Manager, P3 Node, C&W Department, at [official departmental e-mail address]
17.1	Address for submission	Programme Manager, P3 Node, Communication & Works Department, adjacent to the Office of the Superintending Engineer, Highway Circle, Canal Bank Road, near University of the Punjab New Campus, Lahore
17.1	Deadline for submission	[October 15, 2026] at [11:00] hours
17.3	Originals and copies	Technical Quotation: one (01) original and two (02) copies. Financial Quotation: one (01) original
17.6	e-Procurement under Rule 3A applies?	No – hard copy only
18.1	Opening of Technical Quotations	Same date as the deadline, at [11:30] hours, at the address at ITC 17.1
20.3	Interviews under Rule 46-A(c)	[Will / Will not] be held. Where held they are confirmatory of the written evaluation and carry no separate marks
23.2	Period to sign the Contract and furnish the Performance Security	[07] days from the Notice of Award; Performance Security is not applicable
23.5	Performance Security – requirement, amount and validity	Not required
24.2	Grievance Redressal Committee	[designation and address of the convener of the Committee constituted under Rule 67(1)]
General	Bid security	Not required for this consultancy

SECTION IV. EVALUATION CRITERIA AND MARKING METHOD

This Section is an integral part of the bidding documents, as Rule 31(1) requires; failure to give unambiguous criteria is mis-procurement under Rule 31(2).

1. Stage 1 – Eligibility and responsiveness (pass / fail)

A Quotation is examined against, and fails if it does not satisfy, each of the following: receipt on time, sealed and marked (ITC 17); two separate envelopes with no price in the Technical Quotation (ITC 9.1 and 9.4); Form TECH-1 signed by an authorised signatory, with Form TECH-7 (ITC 9.2); the eligibility requirements and evidence at ITC 4.1(a) to (g) and the minima at ITC 4.2, including the affidavit at Form TECH-6 checked against the debarment list; five curricula vitae on Form TECH-4 meeting the minima specified in the Data Sheet at ITC 4.2, each with Form TECH-5 (ITC 11); and the absence of any conflict of interest (ITC 5). A failure against any of these renders the Quotation non-responsive, and it proceeds no further.

2. Stage 2 – Technical evaluation, 100 marks

A. Firm – 30 marks

Ref.	Criterion	Marks	Scoring																
A.1	Total experience of the firm – years since incorporation or registration	10.00	10 years or more – 10.00; 7 to under 10 – 8.00; 5 to under 7 – 6.00; 3 to under 5 – 4.00; under 3 – 2.00																
A.2	Relevant projects undertaken by the firm – evidenced under ITC 4.1(e); a project counts once, against its most relevant category Project Relevancy: Substantially completed projects of similar nature such as i) web dashboard, ii) GIS-based monitoring system, iv) mobile application for progress & performance and v) revenue monitoring 100% relevancy (Strong): meet all above five parameters; 80 % relevancy (Medium): meet four above out of five parameters; 50 % relevancy (Weak): meet three above out of five parameters;	20.00	10 marks for a minimum 01 Relevant Projects and 10 marks for each additional project (2.5 marks will be given for each additional relevant Project) For 05 Relevant Project – 20.00 Marks; Relevance Matrix <table border="1"> <tr> <th>Amt/ Rel</th><th>10M or more</th><th>Upto 7M</th><th>Upto 5M</th></tr> <tr> <td>Strong</td><td>1</td><td>0.75</td><td>0.50</td></tr> <tr> <td>Medium</td><td>0.75</td><td>0.5</td><td>0.30</td></tr> <tr> <td>Weak</td><td>0.50</td><td>0.30</td><td>0.20</td></tr> </table>	Amt/ Rel	10M or more	Upto 7M	Upto 5M	Strong	1	0.75	0.50	Medium	0.75	0.5	0.30	Weak	0.50	0.30	0.20
Amt/ Rel	10M or more	Upto 7M	Upto 5M																
Strong	1	0.75	0.50																
Medium	0.75	0.5	0.30																
Weak	0.50	0.30	0.20																
Total – Firm		30.00																	

Where the Data Sheet at ITC 12.1 permits joint ventures, the lead member's experience counts in full and each other member's at its stated share; a project on which two or more members worked together counts once.

B. Key Personnel – 70 marks

How the marks are built up. Each of the five positions is scored out of 100 against the three sub-criteria at B-2. The position score is multiplied by the position weightage at B-1, the five weighted scores are added, and the total is multiplied by 0.70 to give the Key Personnel marks out of 70.

Position score = (Education × 30%) + (Experience × 30%) + (Relevant projects × 40%)

Key Personnel marks (out of 70) = [sum of (Position score × Position weightage)] × 0.70

The minimum qualification, experience and projects for every position are those at Data Sheet ITC 4.2 - a Master's degree, five (05) years' experience and seven (07) relevant projects.

B-1. The five positions, the max. qualification and max. experience, and the weightage:

The qualification and experience below are **max.**, and attract the higher marks at B-2; they are not eligibility requirements.

#	Position	Qualification (min.)	Experience scored up to	Projects (min.)	Weight
1	Team Leader	MS/ 18 year Education in Computer Science, Software Engineering, IT, GIS / Geomatics or a related field	8 years	10	40%
2	Mobile Application Developer	BS 16 year Education in Computer Science, Software Engineering or a related field	6 years	7	15%
3	GIS Developer	BS 16 year Education in GIS, Geomatics, Computer Science or a related field	5 years	7	15%
4	Dashboard / Software Developer	BS 16 year Education in Computer Science, Software Engineering or a related field	6 years	7	15%
5	Database Developer	MS/ 18 year Education in Computer Science, or a related field	5 years	7	15%
	Total				100%

Note: A Master's degree in the field stated for the position satisfies the minimum at Data Sheet ITC 4.2 and scores 80 for education; Key Expert holding PhD or above in that field. qualification will be awarded a scores of 100. A qualification below a Master's degree scores zero and the position will remain unscored.

B-2. Scoring of the three sub-criteria. Each sub-criterion is scored out of 100 and carries the share shown.

Sub-criterion	Share	Score	Standard to be met
Education	30%	100	PhD in the field stated for the position at B-1 - <i>desired</i>
		80	Master's degree in that field - <i>the minimum at Data Sheet ITC 4.2</i>
		0	Below a Master's degree - the position is unscored
Experience — total and relevant	30%	100	10 years or more – <i>desired or max.</i>
		85	8 years to under 10 years
		70	6 years to under 8 years
		55	5 years to under 6 years - <i>the minimum at Data Sheet ITC 4.2</i>
		0	Under 5 years - the position is unscored
Relevant projects undertaken	40%	100	12 or more - <i>desired; projects are counted to a maximum of 12</i>
		85	10 to 11 projects
		70	8 to 9 projects
		55	7 projects - <i>the minimum at Data Sheet ITC 4.2</i>
		0	Less than 7 projects - the position is unscored

B-3. Rules applying to every position

1. A sub-criterion scored zero makes the whole position unscored, and the Quotation may be declared non-responsive - Data Sheet ITC 4.2 and ITC 11.2.
2. Relevant projects are counted to a maximum of twelve; a project counts once, against its single most relevant category, and must be listed and evidenced at Form TECH-4.
3. A curriculum vitae shall be on Form TECH-4, signed by the expert and countersigned for the firm, with attested degrees attached and Form TECH-5 enclosed. An unsigned CV, or one without an availability undertaking, is not scored.
4. No individual may be proposed for more than one position.
5. Degrees are assessed on Higher Education Commission nomenclature: a Bachelor's Degree means sixteen (16) years, a Master's degree means eighteen (18) years' education; a PhD is above it.

B-4. Worked example - Team Leader

Sub-criterion	Evidence submitted	Score	Share	Contribution
Education	PhD in Computer Science	100	30%	30.00
Experience	9 years	85	30%	25.50
Relevant projects	11	85	40%	34.00
	Position score			89.50
	Weightage for the position			× 40%

Sub-criterion	Evidence submitted	Score	Share	Contribution
	Weighted contribution			35.80

The same calculation is made for each of the remaining four positions; the five weighted contributions are added and the total multiplied by 0.70. A firm whose five positions all score 100 receives the full 70.00 marks.

C. Record of evaluation

The Procurement / Evaluation Committee shall record the marks against each sub-criterion with a one-line justification and sign the marking sheet. The consolidated evaluation report is announced under ITC 19.1, read with Rule 37.

3. Stage 3 – Ranking and award

Qualified Consultants are ranked in descending order of technical score and the Contract is awarded under ITC 20.4. Price is not scored; it operates only as the ceiling condition specified in the Data Sheet at ITC 14.1.

SECTION V. TECHNICAL QUOTATION FORMS

These Forms are to be completed and placed in the sealed envelope marked "TECHNICAL QUOTATION", in the order at ITC 9.2. No price may appear in any of them – ITC 9.4.

FORM TECH-1: Form of Quotation

[On the firm's letterhead]

To: Programme Manager, P3 Node, Communication & Works Department, Government of the Punjab

Subject: Quotation for RFQ No. PM/P3NODE/RFQ-ITC-1 – Establishment of a Real-Time Monitoring Dashboard (RTMD) for PPP Projects in the Road Sector, Punjab

Dear Sir / Madam,

1. We offer to provide the consultancy services described at Appendix-B in accordance with these bidding documents, and declare that all information in this Quotation is true.
2. If accepted, we will commence and complete within six (06) months of the Notice to Proceed, in the phases at ITC 13.1, for a price not exceeding the ceiling specified in the Data Sheet at ITC 14.1.
3. We have proposed the five (05) Key Personnel required at ITC 11.1, each meeting the minimum qualification and experience specified in the Data Sheet at ITC 4.2.
4. We will deploy not fewer than two dedicated field monitoring teams visiting each ongoing PPP contract at least once every week, Field monitoring – adequacy of the proposed monitoring arrangements, including team composition, deployment, equipment, visit frequency and coverage by corridor, and reconciliation of independent evidence with IE and Private Partner reports as Part IV of the Scope of Work at Appendix-B requires, and have costed them within our lump-sum price.
5. We are not blacklisted or debarred and have no conflict of interest under ITC 5.
6. We accept that all intellectual property in the System vests exclusively in the P3 Node, C&W Department and the Government of the Punjab, and undertake to deliver the complete unencrypted source code, database schema and scripts, documentation and administrative credentials at handover, and to make the deposits required by Appendix-A, A-2.17.
7. Our Quotation is valid for the period specified in the Data Sheet at ITC 15.1. We understand that you are not bound to accept any Quotation.

Authorised signature _____ · Name and title _____

Firm _____ · Address, telephone, e-mail _____

Date _____

FORM TECH-2: Firm's Organisation and Experience

A. Organisation (maximum one page) – legal form and date of establishment; ownership and management; the office serving this assignment; permanent technical staff by discipline; and any quality or information-security certification with number and validity.

B. Summary

Item	Entry
Date of incorporation / registration	
Total years in operation (scored at Section IV, A.1)	
Years of relevant experience (scored at Section IV, A.2)	
Number of relevant projects (scored at Section IV, A.3)	
Permanent technical staff	
Turnover, last financial year	

C. Relevant projects – one row per project, most relevant first, with the client certificate, completion certificate or contract reference attached.

#	Project	Client and reference contact	Value and period	Role – prime / JV (share) / sub	Relevance to the Scope of Work at Appendix-B	Evidence at page
1						
2						
3						

FORM TECH-3: Approach, Methodology, Work Plan and Staffing

Page limit: as specified in the Data Sheet at ITC 10.1. This is a short consultancy. Address each row below in one or two short paragraphs; no narrative beyond the page limit will be read, and length attracts no marks. The Part references are to the Parts of the Scope of Work at Appendix-B.

§	Matter to be addressed	Part of Appendix-B
1	Understanding of the assignment and of the stakeholder roles at Section 2 of Appendix-B	–
2	Geographic demarcation, unique identifiers, Filed demarcation through mobile application and at least two permanent benchmarks per corridor by D-GPS or RTK.	I
3	Toll station API integration and revenue data quality control – handshake with the Private Party’s toll systems; polling of classified traffic, revenue and overload fines; automated cross-verification of reported figures against raw ETTMS and ANPR data, and the flagging of discrepancies and downtime	I
4	System design and the RTMD Dashboard – data sources, spatial visualisation, colour-coded thresholds and heat maps, dynamic reporting and automated circulation, the separate Construction and O&M tabs including the daily Escrow Account log, and the approval cycle for mock-ups	I
5	Hosting, databases and back-end – architecture, how 99% availability will be achieved and measured, backup and restore, data security and audit logging	I
6	Functional workflows – Private Partner submittals; SSEMP and SSHSMP compliance; IE inspection and SPV planned-versus-actual progress; resource tracking	I
7	Mobile applications – Construction and O&M modules, offline operation and sync, geo-tagging and DGPS elevation, drone integration, the time-stamped Check Request workflow, OPM defect logging	II
8	Training and capacity building, and the structure of the training manual	III
9	Field monitoring – composition, basing and equipment of the two or more teams; the weekly visit schedule by corridor; reconciliation of independent evidence against IE and Private Partner reports. Field monitoring – adequacy of the proposed monitoring arrangements, including team composition, deployment, equipment, visit frequency and coverage by corridor, and reconciliation of independent evidence with IE and Private Partner reports	IV
10	O&M monitoring against OPM-1 to OPM-10 and MPM-1 to MPM-14	V
11	Completion, migration and handover – source code, database, documentation, credentials, third-party components; joint operation and knowledge transfer	VI
12	Quality assurance, principal risks and mitigation	–

Work plan – a bar chart by week over the six months showing every activity in Parts I to VI of the Scope of Work at Appendix-B, the critical path, and each deliverable listed at Appendix-C.

Staffing schedule – input in person-months, with an organogram of one page:

#	Position	M1	M2	M3	M4	M5	M6
1	Team Leader						
2	Mobile Application Developer						
3	GIS Developer						
4	Dashboard / Software Developer						
5	Database Developer						
6	Field monitoring teams (non-key)						
7	Other non-key personnel						

FORM TECH-4: Curriculum Vitae of a Key Expert

One Form per expert, with attested degrees attached. A CV not meeting the minima specified in the Data Sheet at ITC 4.2 scores zero for the position.

#	Field	Entry
1	Proposed position – one of the five at ITC 11.1	
2	Name of expert; name of firm	
3	Date of birth and nationality	
4	Education – institution, degree, year (attested copies attached)	
5	Professional memberships, other training, languages	
6	Total years of professional experience	
7	Total years of relevant experience	
8	Total number of relevant projects, with the value and duration of each. the seven (07) relevant projects required by Data Sheet ITC 4.2, projects being counted to a maximum of twelve (12) under Section IV Part B	
9	Employment record – employer, position, dates and duties, in reverse chronological order	

10. Relevant assignments – list so as to demonstrate the minimum number of relevant projects specified in the Data Sheet at ITC 4.2, each mapped to an area of work described at Appendix-B. Add rows as needed.

#	Assignment	Client	Dates	Role	Relevance
1					
2					
3					
4					
5					
6					
7					

11. Certification. I certify that this curriculum vitae correctly describes my qualifications and experience, confirm my availability for the input shown at Form TECH-3, and understand that a wilful misstatement may lead to my disqualification and to rejection of the firm's Quotation.

Signature of the expert _____ · Date _____

Countersigned for the firm _____ · Date _____

FORM TECH-5: Availability Undertaking of a Key Expert

[On the firm's letterhead, one per expert]

I, _____, CNIC No. _____, proposed by _____ for the position of _____ on RFQ No. PM/P3NODE/RFQ-ITC-1, confirm:

- (a) that I am available for and will undertake the input of _____ person-months shown at Form TECH-3, over the period _____ to _____;
- (b) that I am not proposed by any other firm for this assignment and have not authorised the use of my curriculum vitae by any other firm for it;
- (c) that I hold no engagement and no financial or beneficial interest in any Private Partner, Special Purpose Vehicle, EPC contractor, toll operator, ETTMS vendor or Independent Engineer engaged on any PPP road project of the C&W Department; and
- (d) that I may not be substituted without the Client's prior written approval, and then only by a person of equal or better qualification and experience – GCC 10 and Appendix-A, A-2.10.

Signature of the expert _____ · Date _____

Countersigned for the firm _____ · Date _____

FORM TECH-6: Affidavit – Non-Blacklisting and No Conflict of Interest

[On non-judicial stamp paper of the value required by law, notarised]

I / We, _____, son / daughter of _____, CNIC No. _____,
in my / our capacity as _____ of _____ (the firm), solemnly affirm and
declare:

- (a) that the firm is not blacklisted, debarred or suspended by any Federal or Provincial department, autonomous body, the PPRA or any other public procuring agency in Pakistan as at the date of this affidavit;
- (b) that the firm, its owners, directors and proposed Key Personnel have no conflict of interest within the meaning of ITC 5, and that neither the firm nor any affiliate or proposed Key Expert is engaged by, associated with, or holds any financial or beneficial interest in, any Private Partner, Special Purpose Vehicle, EPC contractor, toll operator, ETTMS vendor or Independent Engineer engaged on any PPP road project of the C&W Department;
- (c) that the firm has not engaged, directly or through an agent, in any corrupt, fraudulent, coercive, collusive or obstructive practice in connection with this procurement;
- (d) that the firm has submitted only one Quotation, whether alone or as a member of a joint venture, and is aware of Rule 36-A and ITC 6.1;
- (e) that all information and documents in the firm's Quotation are true and correct; and
- (f) that a false declaration may lead to disqualification, termination, forfeiture of any security and debarment under Rule 21 and the Schedule to the Rules.

Deponent – signature _____ · name _____

Designation _____ · Date _____

Verified at _____ on _____ that the contents are true and that nothing material has been concealed.

FORM TECH-7: Power of Attorney / Authorisation of the Signatory

[On non-judicial stamp paper, or by certified extract of the board resolution]

_____(the firm), of _____, hereby appoints Mr. / Ms. _____, CNIC No. _____, holding the office of _____, as its attorney to sign and submit the Quotation for RFQ No. PM/P3NODE/RFQ-ITC-1, to attend the opening and any negotiation, to sign every document forming part of the Quotation, and to sign the Contract if awarded; and ratifies all acts lawfully done under this authority.

For the firm _____ · Name and designation _____

Date and place _____ · Specimen signature of the attorney _____

Witnesses (name, CNIC, signature): 1. _____ 2. _____

FORM TECH-8: Joint Venture Undertaking

Only where the Data Sheet at ITC 12.1 permits joint ventures.

The firms listed below, having formed or agreed to form a joint venture for RFQ No. PM/P3NODE/RFQ-ITC-1, jointly and severally undertake:

- (a) that _____ is the lead member, authorised to bind every member, holding
_____ %;
- (b) that each member will individually sign the Contract and that all members are jointly and severally liable for the entire assignment, under Rule 51(2) and ITC 12.2;
- (c) that the composition will not change after submission without the Client's prior written consent; and
- (d) that no member participates in any other Quotation for this procurement – Rule 36-A and ITC 6.1.

#	Member	Registered office	Share %	Scope within the assignment
1	(Lead)			
2				
3				

Signed for each member by its authorised signatory, with the joint venture agreement, or an undertaking to execute one within seven days of the Notice of Award, attached.

SECTION VI. FINANCIAL QUOTATION FORMS

To be placed in a separate sealed envelope marked "FINANCIAL QUOTATION". No price may appear anywhere in the Technical Quotation – ITC 9.4.

FORM FIN-1: Financial Quotation Submission Form

[On the firm's letterhead]

To: Programme Manager, P3 Node, Communication & Works Department, Government of the Punjab

Subject: Financial Quotation – RFQ No. PM/P3NODE/RFQ-ITC-1

1. We offer to provide the Services described at Appendix-B for the fixed, all-inclusive lump-sum price at Form FIN-2, which is inclusive of all taxes, duties, levies and statutory charges and of every item at ITC 14.2.
2. The price does not exceed the ceiling specified in the Data Sheet at ITC 14.1, is fixed for the whole six-month period, and we claim no escalation or adjustment – ITC 14.3.
3. We accept that payment will be made against the milestones at Appendix-E, subject to the Client's written acceptance of the corresponding Deliverables and to deduction of tax at source.
4. Our Financial Quotation is valid for the period specified in the Data Sheet at ITC 15.1.

Signature and stamp _____ · Name and title _____ · Date _____

FORM FIN-2: Total Quoted Price

Sr.	Description	In figures (PKR)	In words (PKR)
1	Total Contract Price, inclusive of all applicable taxes, duties and statutory levies		

On any discrepancy, the amount in words prevails – ITC 20.6. Any provisional sum specified in the Data Sheet at ITC 14.4 is excluded from the above and is reimbursed under GCC 13.

Signature and stamp of the authorised representative _____ · Date _____

FORM FIN-3: Cost Breakdown

Required where the Data Sheet at ITC 9.3 so provides. Submitted for negotiation and for assessing the reasonableness of the price; it does not alter the fixed lump-sum character of the Contract Price.

#	Item	Unit / person-months	Rate (PKR)	Amount (PKR)
1	Key Personnel – the five positions at ITC 11.1, one line each			
2	Field monitoring teams under Part IV of the Scope of Work at Appendix-B (state composition)			
3	Other non-key personnel			
4	Travel, transport and field deployment			
5	D-GPS / RTK survey and permanent benchmarks DGPS to be provided by PPP Partner			
6	APIs at toll stations – development, installation, commissioning	per station		
7	Server, hosting, backup and data security – six months			
8	Software licences			
9	Drone and photographic coverage			
10	Training workshops and manuals			
11	Meetings, communications and report production			
12	Any other cost (specify)			
Sub-total				
Taxes, duties and statutory levies				
TOTAL – must equal Form FIN-2				

PART II – CONDITIONS OF CONTRACT AND CONTRACT FORMS

SECTION VII. FORM OF CONTRACT AGREEMENT

CONSULTANCY SERVICES AGREEMENT

This Agreement is made on the _____ day of _____, 20____

BETWEEN the Governor of the Punjab, acting through the Programme Manager, P3 Node, Communication & Works Department, Government of the Punjab, of the address at Appendix-A, A-1.4 (the "Client"), of the one part;

AND _____, registered under the laws of Pakistan under registration number _____, of _____ (the "Consultant"), of the other part.

[Where the Consultant is a joint venture, name every member and add: "acting jointly and severally as a joint venture, each member of which is a party to and signatory of this Agreement and is jointly and severally liable for the entire assignment under Rule 51(2) of the Punjab Procurement Rules 2014."]

WHEREAS (A) the Client requires the consultancy services described at Appendix-B; (B) the Client invited Quotations under RFQ No. PM/P3NODE/RFQ-ITC-1 and selected a firm in a short consultancy on qualification and experience under Rule 46-A, the particulars of the procurement being those specified in the Data Sheet at Section III; and (C) the Consultant, evaluated as the best qualified and fully capable firm, was awarded the Contract by Notice of Award dated _____;

NOW THEREFORE THE PARTIES AGREE:

1. The following documents constitute the Contract, are to be read as one instrument, and in case of inconsistency take precedence in this order:

Order	Document
(a)	This Form of Contract Agreement, with any signed minutes of negotiation
(b)	Appendix-A – Particular Conditions of Contract
(c)	Section VIII – General Conditions of Contract
(d)	The Notice of Award and the Notice to Proceed – Appendix-G
(e)	Appendix-B – Description of Services (Terms of Reference)
(f)	Appendix-C – Deliverables, Reporting Schedule and Service Levels
(g)	Appendix-D – Key Personnel and Sub-consultants
(h)	Appendix-E – Contract Price and Payment Schedule
(i)	Appendix-H – Integrity Pact, where executed
(j)	The Consultant's Technical Quotation, as clarified
(k)	The Consultant's Financial Quotation
(l)	The remaining Appendices

2. The Contract Price is Rs. _____ (Rupees _____ only), fixed and inclusive of all taxes, duties and statutory levies, as recorded at Appendix-A, A-1.6.
3. The duration is six (06) months from the Commencement Date, as recorded at Appendix-A, A-1.10.

4. In consideration of the payments to be made under Appendix-E, the Consultant shall perform the Services in conformity with the Contract.

IN WITNESS WHEREOF the Parties have executed this Agreement on the date first written above.

For the CLIENT	For the CONSULTANT
Signature _____	Signature _____
Name _____	Name _____
Designation _____	Designation _____
Date _____	Date _____
Witnesses (name, CNIC, signature) 1. _____ 2. _____	Witnesses (name, CNIC, signature) 1. _____ 2. _____

SECTION VIII. GENERAL CONDITIONS OF CONTRACT (GCC)

These General Conditions apply except as amended or supplemented by Appendix-A. Where Appendix-A conflicts with this Section, Appendix-A prevails; where either conflicts with the Punjab Procurement Rules 2014, the Rules prevail.

A. General

GCC 1. Definitions

1.1 In the Contract: "Client" means the P3 Node, Communication & Works Department, Government of the Punjab; "Commencement Date" means the date of the Notice to Proceed at Appendix-G, Form G-2, from which the six months run; "Consultant" means the firm or joint venture party to the Contract; "Contract Price" means the lump sum recorded at Appendix-A, A-1.6; "Deliverable" means any output required by Appendix-B or Appendix-C; "Key Personnel" means the five experts listed at Appendix-D, D-1; "Project Manager" means the person named at Appendix-A, A-1.3; "Rules" means the Punjab Procurement Rules 2014 as amended; "Services" means the services described at Appendix-B and Appendix-C; "System" means collectively the RTMD Dashboard, the Construction Phase and O&M Phase mobile applications, the toll station API modules, the public-facing website, the databases, the back-end services and all associated documentation and source code; and "day" means a calendar day unless stated to be a working day.

GCC 2. Contract documents, law and language

- 2.1 The documents forming the Contract and their order of precedence are at Clause 1 of the Form of Contract Agreement at Section VII.
- 2.2 The Contract is the entire agreement between the Parties.
- 2.3 The Contract and all communications are in English, and the Contract is governed by the law recorded at Appendix-A, A-1.9.

GCC 3. Notices and representatives

- 3.1 Notices shall be in writing, delivered by hand against receipt, by courier, by registered post or by e-mail to the addresses at Appendix-A, A-1.4; e-mail takes effect on the next working day unless acknowledged earlier.
- 3.2 The Client acts through the Project Manager and the Consultant through the representative named at Appendix-D, D-1; either may change its representative by written notice, but the Consultant may not change its Team Leader except under GCC 10.

GCC 4. Taxes

- 4.1 The Contract Price is inclusive of all taxes, duties, levies and statutory charges; the Client shall deduct tax at source at the rates prescribed at the time of each payment and issue a deduction certificate.
- 4.2 A change in any tax rate after the date of the Contract is to the Consultant's account and gives rise to no adjustment, except as Appendix-A, A-2.4 provides.

B. Commencement, duration and performance

GCC 5. Commencement and duration

- 5.1 The Contract comes into force when both Parties' signatures are affixed – Rule 63(b).
- 5.2 The Consultant shall commence on the Commencement Date and complete within six (06) months, in the phases at ITC 13.1 and Appendix-C.

5.3 Key Personnel shall be mobilised promptly on the Notice to Proceed and remain continuously available for their scheduled input.

GCC 6. Scope and standard of performance

6.1 The Consultant shall perform the Services at Appendix-B and Appendix-C in their entirety, comprising Parts I to VI of the Scope of Work at Appendix-B.

6.2 It shall perform with the skill, care and diligence of a competent professional consultancy experienced in assignments of similar nature and complexity, act as a faithful adviser, and bear full responsibility for every Deliverable.

GCC 7. Consultant's obligations

7.1 The Consultant shall:

- (a) provide all personnel, equipment, software, licences, hosting, transport and materials required, none chargeable separately;
- (b) maintain the 99% availability commitment, complete backup and data security throughout – GCC 20;
- (c) liaise continuously with the P3 Node and the wider C&W Department, and ensure that its leadership attends every monthly progress review meeting;
- (d) deploy not fewer than two dedicated field monitoring teams, visiting each ongoing PPP contract at least once every week, as Part IV of the Scope of Work at Appendix-B requires, and record their visits on the System;
- (e) provide on-site troubleshooting to users of the mobile applications, and cover special events, accidents and QA/QC evidence as directed;
- (f) submit every Deliverable on time and address the Client's comments within the periods at Appendix-A, A-2.11; and
- (g) notify the Client in writing of any circumstance likely to affect timely or satisfactory completion.

GCC 8. Client's obligations

8.1 The Client shall nominate a focal person and review Deliverables within the periods at Appendix-A, A-2.11; provide such existing data, reports and formats as are available; arrange access and introductions to the stakeholders identified at Appendix-B, including facilitation of access to the toll stations for installation and commissioning of the APIs under Part I of the Scope of Work at Appendix-B; assign staff for the joint operation under GCC 28; make payments under Appendix-E; and give timely decisions and approvals.

8.2 Review, comment or approval by the Client relieves the Consultant of no responsibility.

GCC 9. Sub-contracting and assignment

9.1 The Consultant shall not assign the Contract nor sub-contract any substantial part of the Services without the Client's prior written consent; consent relieves it of no obligation or liability.

GCC 10. Key Personnel

10.1 The Consultant shall employ the Key Personnel listed at Appendix-D, D-1; there shall be no substitution without the Client's prior written approval.

10.2 An approved replacement shall be of equal or better qualification and experience, assessed against Section IV, at no additional cost, and shall be proposed within the period at Appendix-A, A-2.10.

10.3 The Client may by written notice giving reasons require the removal of any person whose conduct, competence or diligence is unsatisfactory; removal shall be within seven days and replacement under GCC 10.2.

10.4 Unapproved substitution is a material breach and attracts the deduction at Appendix-A, A-2.10 in addition to any other remedy.

C. Deliverables, price and payment

GCC 11. Deliverables and acceptance

11.1 Deliverables shall be submitted at the times, in the numbers and in the formats at Appendix-C; report formats are subject to final agreement with the P3 Node.

11.2 The Client shall accept in writing or comment within the periods at Appendix-A, A-2.11, and the Consultant shall address comments and resubmit within those periods.

11.3 A Deliverable is accepted only by written acceptance by the Project Manager on Appendix-I, Form I-1; acceptance is not implied by silence, by payment or by use of the System.

11.4 Software Deliverables are accepted only after the Client has verified by test against Appendix-B that the functionality operates in the production environment.

GCC 12. Contract Price and payment

12.1 The Contract Price is a fixed lump sum, inclusive of everything at ITC 14.2, not subject to escalation or adjustment, the Consultant being deemed to have allowed for all risks and contingencies.

12.2 Payment is made against the milestones at Appendix-E, in each case on the Client's written acceptance of the corresponding Deliverables, within the period at Appendix-A, A-1.7, subject to deduction of tax at source and of any amount due to the Client.

12.3 The final payment statement may be submitted only after the Performance Certificate under GCC 28.5 has issued.

12.4 The Client may withhold or reduce payment where a Deliverable is not accepted, where a Key Expert has been substituted without approval, where the availability commitment has not been met, or on any other breach, having given written notice and a reasonable opportunity to remedy.

12.5 Retention money. An amount of each invoice, at the percentage specified at Appendix-A, A-2.12, shall be retained by the Client as Retention Money. The retained amount shall be released to the Consultant after written approval by the Client or its nominee of the successful completion of all Deliverables, the acceptance of the final report and the clearance of all obligations under the Contract. Retention Money serves as a performance security and may be forfeited in case of non-performance, default or breach of the Contract conditions by the Consultant.

GCC 13. Provisional sums

13.1 A provisional sum recorded at Appendix-A, A-1.8 is not part of the lump sum. It is expended only on the Client's prior written approval, is reimbursed at actual cost against documentary evidence, and carries no mark-up or profit; any unexpended balance lapses. Goods procured from it are the Client's property from purchase and shall be handed over under GCC 28.3.

GCC 14. Variations and extension of time

14.1 The Client may vary the Services within their general scope by written variation order. Where a variation materially alters the scope, an adjustment to price or time shall be agreed in writing before

implementation, provided that no variation shall take the Contract Price above the ceiling specified in the Data Sheet at ITC 14.1 and no variation is valid except by written amendment under GCC 31.1.

14.2 Additional requirements identified during commissioning and O&M that are of the same nature and scale as those at Appendix-B are within the general scope and attract no adjustment.

14.3 An extension attributable to the Client's default will be considered case by case, carries no automatic entitlement to cost and takes effect only by written amendment.

14.4 No extension of time or cost is allowed for delay attributable to the Consultant.

14.5 The three-month Design Phase is an absolute ceiling: where a successful design is not completed within it and there is no default by the Client, no further person-months and no financial extension shall be granted – ITC 13.2.

D. Integrity, confidentiality and intellectual property

GCC 15. Conflict of interest

15.1 The Consultant shall give professional, objective and impartial advice, hold the Client's interests paramount and accept no conflicting engagement.

15.2 Throughout the term, neither the Consultant nor any affiliate nor any Key Expert shall be engaged by, associated with, or hold any financial or beneficial interest in, any Private Partner, Special Purpose Vehicle, EPC contractor, toll operator, ETTMS vendor or Independent Engineer engaged on any PPP road project of the C&W Department; any such circumstance shall be notified in writing within seven days.

15.3 Breach entitles the Client to terminate under GCC 26.2(e).

GCC 16. Confidentiality

16.1 All data, records, reports and information provided by the Client, or generated or collected in the course of the Services, including project data, GIS and spatial data, toll revenue and classified traffic data, escrow account data, and system and user data, is strictly confidential and shall not be disclosed without the Client's prior written consent, except as required by law.

16.2 Every person the Consultant engages shall execute the undertaking at Appendix-J before being given access to Client data, and the executed undertakings shall be furnished to the Client.

16.3 This Clause survives without limit of time.

GCC 17. Intellectual property and source code

17.1 Under Rule 52(1), and as Part VI of the Scope of Work at Appendix-B requires, all intellectual property in the System, including the source code, database design and schema, documentation, mock-ups and wireframes, vests exclusively and irrevocably in the P3 Node, C&W Department and the Government of the Punjab upon creation, and in any event upon payment.

17.2 All data collected or generated under the Contract, and all outputs, remain the Client's exclusive property.

17.3 At handover the Consultant shall deliver the complete, unencrypted source code, the database schema and scripts, all documentation and all administrative credentials, enabling the Client to operate, maintain and further develop the System without dependency on the Consultant's proprietary tools, platforms or continuing involvement, save for a specifically identified third-party or commercial component disclosed to and agreed with the Client in advance, for which the Consultant shall procure appropriate licensing.

17.4 Progressive escrow deposit. The Consultant shall deposit the then-current source code, build scripts, schema and documentation into a Client-controlled repository at the frequency and in the manner at Appendix-A, A-2.17; each deposit is a condition of the corresponding payment milestone at Appendix-E.

17.5 The Consultant shall retain no copy and shall make no other use of any part of the System, subject to the restriction at Appendix-A, A-2.17 made under Rule 52(2).

17.6 The Consultant warrants that the System infringes no third-party intellectual property right and shall indemnify the Client against any such claim.

GCC 18. Data protection, hosting and security

18.1 The Consultant shall maintain technical and organisational measures appropriate to the sensitivity of the data, including least-privilege access control, encryption in transit and at rest, audit logging of administrative actions, and a tested backup and restore regime.

18.2 All Client data shall be hosted in the location at Appendix-A, A-2.18 and shall not be transferred, mirrored or replicated elsewhere without the Client's prior written consent.

18.3 The Consultant shall notify the Client of any actual or suspected data breach, unauthorised access or loss of data within twenty-four hours of becoming aware of it, and shall cooperate fully in remediation.

GCC 19. Records, audit and ethics

19.1 The Consultant shall maintain complete records and permit the Client, the Auditor-General of Pakistan, the Director-General Audit Punjab and any person authorised by the Client to audit them, during the term and for five years afterwards – Rule 65.

19.2 The Consultant, its personnel and agents shall engage in no corrupt, fraudulent, coercive, collusive or obstructive practice; breach entitles the Client to terminate, to forfeit any Performance Security, to recover all losses and to initiate debarment under Rule 21 and the Schedule to the Rules. Where an Integrity Pact has been executed at Appendix-H, its terms apply in addition.

E. Service levels, liability and risk

GCC 20. Service levels

20.1 Availability of the System shall be not less than 99% measured monthly, excluding maintenance windows notified to and approved by the Client not less than forty-eight hours in advance.

20.2 The consequence of a shortfall, and the response and resolution times for defects, are at Appendix-A, A-2.20 and Appendix-C, Part C-3.

GCC 21. Liquidated damages

21.1 Where the Consultant fails to submit a Deliverable or to achieve a phase by the date at Appendix-C, Part C-2, otherwise than by reason of the Client's default or force majeure, the Client is entitled to liquidated damages at the rate and up to the cap at Appendix-A, A-2.21, deductible from any payment or from the Performance Security.

21.2 They are a genuine pre-estimate of loss, not a penalty, and payment does not relieve the Consultant of its obligation to complete.

21.3 Where the cap is reached the Client may terminate under GCC 26.2(b).

GCC 22. Professional liability

- 22.1 Under Rule 54 the Consultant is liable for the consequences of any error or omission on its part and for all loss or damage suffered by the Client on account of any misconduct in performing the Services.
- 22.2 The extent of that liability is as stated at Appendix-A, A-2.22; under Rule 54(2) it shall not be less than the remuneration and shall not exceed twice the remuneration payable under the Contract.
- 22.3 The limit does not apply to liability for death or personal injury, for fraud or wilful misconduct, for breach of GCC 16, GCC 17 or GCC 18, or to any liability that cannot lawfully be limited.

GCC 23. Insurance

- 23.1 The Consultant shall effect and maintain the insurances, in the amounts and for the periods, at Appendix-A, A-2.23, and furnish certified copies of the policies. The cost is borne by the Consultant – Rule 54(3).

GCC 24. Force majeure

- 24.1 Neither Party is liable for failure to perform caused by an event beyond its reasonable control which it could not have foreseen or avoided, including natural calamity, war, civil disturbance and action of government not attributable to the affected Party. The affected Party shall notify within seven days, mitigate and resume as soon as possible. Where the event continues beyond sixty days either Party may terminate on written notice, and the Client shall pay for Services satisfactorily performed to that date.

F. Suspension, termination and completion

GCC 25. Suspension

- 25.1 The Client may by written notice suspend all or part of the Services where the Consultant fails to perform an obligation or where suspension is necessary in the public interest; the notice shall state the reason and, where the reason is the Consultant's failure, the remedy required and the period allowed.

GCC 26. Termination

- 26.1 Either Party may terminate on the ground of prolonged force majeure under GCC 24.1.
- 26.2 The Client may terminate in whole or in part on fifteen days' written notice, or immediately in the cases at (c) to (f), where the Consultant:
- (a) fails to remedy a failure within the period allowed under GCC 25.1;
 - (b) is in delay such that the liquidated damages cap at Appendix-A, A-2.21 is reached;
 - (c) substitutes a Key Expert without approval and fails to remedy within fourteen days of notice;
 - (d) engages in a corrupt, fraudulent, coercive, collusive or obstructive practice, or is blacklisted or debarred;
 - (e) is in breach of GCC 15, GCC 16, GCC 17 or GCC 18; or
 - (f) becomes insolvent, enters liquidation or has a receiver appointed.
- 26.3 The Client may terminate for convenience on thirty days' written notice, whereupon the Consultant shall be paid for Services satisfactorily performed and accepted to that date and the documented cost of demobilisation, but shall have no claim for loss of profit or consequential loss.

GCC 27. Consequences of termination – exit obligations

- 27.1 On termination or expiry, for whatever cause, the Consultant shall immediately:

- (a) deliver the complete, unencrypted source code, database, schema, scripts, documentation and all administrative credentials in their then-current state;
- (b) migrate all Client data to the destination nominated by the Client in a documented, non-proprietary, machine-readable format;
- (c) deliver every Deliverable, complete or in progress, and all working papers;
- (d) hand over all goods procured from any provisional sum;
- (e) certify in writing the destruction of every remaining copy of Client data; and
- (f) on request, provide reasonable transitional assistance for up to thirty days at no additional cost.

27.2 The Client may withhold any payment otherwise due until these obligations are discharged and may call the Performance Security, where one has been furnished under ITC 23.5.

27.3 On termination under GCC 26.2 the Client may recover the additional cost of completing the Services through another party, together with all resulting loss, subject to the limit at GCC 22.2.

GCC 28. Completion, handover and certificates

28.1 The Consultant shall, for the period at Appendix-A, A-2.28 ending on the contract close date, jointly operate the dashboard and portal alongside the C&W staff assigned by the Project Manager, so as to effect a full transfer of operational knowledge.

28.2 It shall migrate the complete software, including the live dashboard and the active mobile applications, to the Client's designated servers and complete the handover at GCC 17.3, certified on Appendix-I, Form I-4.

28.3 All hardware purchased from any provisional sum shall be handed over not less than fifteen days before the contract close date, against a signed inventory.

28.4 The Consultant shall conduct not fewer than two training sessions and deliver the training manuals before submitting the Final Project Completion Report.

28.5 On satisfactory completion of all handover requirements the Client shall issue a Performance Certificate on Appendix-I, Form I-2, not later than fifteen days before the contract close date, whereupon the final payment statement may be submitted.

28.6 The assignment is complete on the Client's acceptance of Deliverables A to E listed at Appendix-C, Part C-1 and of all handover requirements under Part VI of the Scope of Work at Appendix-B, whereupon the Client shall issue a Completion Certificate on Appendix-I, Form I-3 within thirty days of final receipt of the Deliverables – Rule 64(1).

28.7 Issue of the Completion Certificate creates no obligation to award any subsequent, extended or follow-on contract; any such requirement is the subject of a separate procurement under the Rules.

GCC 29. Defects liability

29.1 The Consultant shall at its own cost correct any defect in the System notified by the Client within the defects liability period at Appendix-A, A-2.29, running from the date of the Completion Certificate, within the response and resolution times at Appendix-A, A-2.20. Where a Performance Security has been furnished under ITC 23.5, the obligation is secured by the validity of that security.

G. Disputes and miscellaneous

GCC 30. Settlement of disputes

- 30.1 Under Rule 68, a dispute arising after the Contract comes into force shall be settled through mediation or arbitration.
- 30.2 The Parties shall first refer the dispute to their nominated representatives, who shall meet within fourteen days of a written notice of dispute and endeavour in good faith to resolve it within thirty days.
- 30.3 Failing that, either Party may refer the dispute to a mediator agreed between them or, failing agreement within fourteen days, appointed as at Appendix-A, A-2.30.
- 30.4 Failing mediation, the dispute shall be finally settled by arbitration under the law, seat and procedure at Appendix-A, A-2.30; the award is final and binding.
- 30.5 The Consultant shall continue to perform during any dispute unless the Client directs otherwise, and the Client shall continue to pay any amount not in dispute.

GCC 31. Miscellaneous

- 31.1 Amendment – no amendment, and no variation to scope, price or time, is valid unless in writing and signed by the authorised representatives of both Parties.
- 31.2 Waiver and severability – a failure or delay in exercising a right is not a waiver; if any provision is held invalid the remainder continues.
- 31.3 Third parties – the Contract confers no right on any person who is not a Party.
- 31.4 Blacklisting – nothing in the Contract limits the Client's power under Rule 21 to debar the Consultant, following the procedure in the Schedule to the Rules.
- 31.5 Survival – GCC 16, 17, 18, 19, 22, 27 and 30 survive expiry or termination.

APPENDIX-A – PARTICULAR CONDITIONS OF CONTRACT

Part A-1 – Contract Data

Ref.	Item	Entry
A-1.1	Client	The Governor of the Punjab, acting through the Programme Manager, P3 Node, Communication & Works Department
A-1.2	Consultant	[name, legal form, registration number, registered office]
A-1.3	Project Manager – GCC 1.1, 3.2	Programme Manager, P3 Node, C&W Department, or such other officer as the Client notifies in writing
A-1.4	Addresses for notices – GCC 3.1	Client: the address specified in the Data Sheet at ITC 17.1; e-mail as specified in the Data Sheet at ITC 16.1. Consultant: [address, attention, e-mail]
A-1.5	Performance Security – ITC 23.5, GCC 27.2	As specified in the Data Sheet at ITC 23.5, in the form at Appendix-F
A-1.6	Contract Price – GCC 12.1	Rs. [] (Rupees [] only), fixed lump sum inclusive of all taxes, being within the ceiling specified in the Data Sheet at ITC 14.1
A-1.7	Period for payment – GCC 12.2	[30] days from the Client's written acceptance of the relevant Deliverable, subject to invoice, supporting documentation and deduction of tax at source
A-1.8	Provisional sum – GCC 13	As specified in the Data Sheet at ITC 14.4. Where that entry reads "None", the references to a provisional sum at Appendix-B are of no effect
A-1.9	Governing law, currency and seat – GCC 2.3, 30.4	The laws of Pakistan. Pakistan Rupees. Seat: Lahore, Punjab
A-1.10	Commencement Date and duration – GCC 5.2	The date of the Notice to Proceed at Appendix-G, Form G-2. Duration six (06) months, in the phases at ITC 13.1 and Appendix-C

Part A-2 – Particular Conditions amending the General Conditions

Ref.	Particular Condition
A-2.4 – GCC 4.2	No exception is made to the tax-inclusive character of the Contract Price. Where the Punjab Revenue Authority notifies a reduced rate for IT-enabled services, the benefit shall pass to the Client by a corresponding reduction in the amount invoiced
A-2.10 – GCC 10	A replacement Key Expert shall be proposed within fourteen (14) days. Substitution without prior written approval attracts deduction of [0.5] % of the Contract Price for each substitution, in addition to any other remedy. Where a Key Expert is absent for more than fifteen consecutive days without an approved replacement, the Client may withhold the next payment milestone until the position is filled
A-2.11 – GCC 11	The Client shall accept or comment within [10] working days of receipt; the Consultant shall resubmit within [07] working days; and the Client shall respond to a resubmission within [05] working days. Time taken by the Client beyond these periods is not counted against the Consultant for the purposes of GCC 21
A-2.12 – GCC 12.5	Retention Money: [10] % of each invoice, retained and released as provided at GCC 12.5. It serves as a performance security and may be forfeited in case of non-performance, default or breach of the Contract conditions by the Consultant
A-2.17 – GCC 17.4, 17.5	Escrow deposit: the Consultant shall deposit the then-current source code, build scripts, database schema, migration scripts and technical documentation into a Client-controlled version-control repository, in a form from which a working build can be produced, not later than the last working day of each month beginning with month 1. A certificate on Appendix-I, Form I-4 shall accompany each payment claim, and no milestone payment shall be released without it. Restriction on future use (Rule 52(2)): the Consultant shall not use, reproduce, adapt, license or offer to any third party the whole or any part of the System, the source code, the database design, the documentation, the wireframes or the mock-ups, modified or not, without the Client's prior written consent. It may state the fact of the assignment in its credentials, and may reuse its own pre-existing general know-how, tools and libraries that embody no Client data, design or requirement, provided it discloses those components under GCC 17.3
A-2.18 – GCC 18.2	All Client data, including toll revenue, classified traffic and escrow account data, and all backups, shall be hosted within the territory of Pakistan, on infrastructure whose location is disclosed to and approved by the Client in the Inception Report. There shall be no transfer, mirroring or replication outside Pakistan without the Client's prior written consent. The Consultant shall give the Client read-only administrative visibility of the hosting environment throughout the term, and full administrative control at handover
A-2.20 – GCC 20	Availability: not less than 99% in any calendar month. Shortfall: deduct [0.25] % of the Contract Price for each full percentage point of shortfall in that month, capped at [2] % in aggregate. Defect response: critical – response [02] hours, resolution [08] hours; major – response [04] hours, resolution [02] working days; minor – resolution [05] working days. Availability and defect statistics shall be reported in each monthly report. Toll API integrity: interruption of the feed from any toll station for more than [24] consecutive hours, for a reason within the Consultant's control, counts as unavailability of the System for that station

Ref.	Particular Condition
A-2.21 – GCC 21	[0.05] % of the Contract Price for each day of delay in a Deliverable or phase, calculated from the date at Appendix-C, Part C-2, capped in aggregate at [10] % of the Contract Price, deductible from any payment or from the Performance Security. Delay attributable to the Client or to force majeure is excluded
A-2.22 – GCC 22.2	Under Rule 54(2) the Consultant's aggregate liability is limited to [two times] the Contract Price, and shall in no event be less than the Contract Price. The limit does not apply to the excepted matters at GCC 22.3
A-2.23 – GCC 23	Not applicable in case of Short term consultancy
A-2.28 – GCC 28.1	Part VI of the Scope of Work at Appendix-B provides for joint operation "minimum six months prior to the contract close date", which cannot operate in a six-month contract. It is varied as follows: the Consultant shall jointly operate the dashboard and portal alongside the assigned C&W staff for a continuous period of not less than [45] days prior to the ending on the contract close date, recorded in a log signed weekly by both. Every other requirement of Part VI, including the fifteen-day periods at GCC 28.3 and 28.5, is unaffected
A-2.29 – GCC 29	Defects liability period: [06] months from the date of the Completion Certificate. Where a Performance Security/ retention money has been furnished, it shall remain valid throughout that period and for [30] days after it
A-2.30 – GCC 30.3, 30.4	Mediation: failing agreement on a mediator within fourteen days, the mediator shall be appointed by [the Special Secretary, C&W Department, Punjab]. Arbitration: by a sole arbitrator appointed by agreement or, failing agreement within thirty days, by the competent court at Lahore, under the Arbitration Act 1940 and any law substituted for it. Seat and venue: Lahore, Punjab; language English

APPENDIX-B – DESCRIPTION OF SERVICES (TERMS OF REFERENCE)

The Description of Services is the Terms of Reference reproduced below in its entirety, comprising Sections 1 to 9 including the Scope of Work at Section 4, Parts I to VI. The Terms of Reference are annexed to and form part of the Contract. No change is made to the Terms of Reference or to any substantive requirement. The following readings correct internal references and manifest errors only, and are to be read into the document below:

- (a) references to "Part I" to "Part VI" are references to the correspondingly numbered Parts of the Scope of Work at Section 4 below;
- (b) at Section 4, Part I, the incomplete sentence under "Geographic Demarcation and Unique Identifiers" is read as requiring the demarcation of the geographical boundaries of the PPP project roads and the assignment of unique identifiers, in close coordination with the C&W and Independent Engineer teams; no additional requirement is implied;
- (c) at Section 3, the incomplete sentence at item 3 is read as limited to the functionality of the Construction Phase mobile application described at Section 4, Part II;
- (d) at Section 4, Part IV, "the C&W and P4A" is read as "the C&W Department and the Punjab PPP Authority";
- (e) at Section 4, Part VI, the requirement for joint operation "minimum six months prior to the contract close date" is varied by Appendix-A, A-2.28, the Contract being of six (06) months' duration;
- (f) at Section 4, Part VI, the provisional sum for hardware and equipment is governed by the Data Sheet at ITC 14.4, by Appendix-A, A-1.8 and by GCC 13;
- (g) at Section 9, the Inception Report stated to be due "1 week after the agreement" is due one week from the Commencement Date, and the formats, numbers and timing of all reports are as set out at Appendix-C, Part C-2, which prevails over any general statement below;
- (h) at Section 9, the Performance Certificate stated to be obtained "15 days prior to the close date" is read with GCC 28.5 and certified on Appendix-I, Form I-2; and
- (i) defined terms bear the meanings given at GCC 1.1.

Where the Terms of Reference conflict with the General Conditions or with Appendix-A, the order of precedence at Clause 1 of the Form of Contract Agreement applies.

TERMS OF REFERENCE

Consultancy Services for Establishment of a Real-Time Monitoring Dashboard (RTMD) for Public-Private Partnership (PPP) Projects in the Road Sector, Punjab

Communication and Works Department, Government of Punjab

1. Background and Client Requirement

The Communication and Works Department (C&W), Government of Punjab, is undertaking a significant transformation in how it procures, monitors, and maintains road infrastructure through Public-Private Partnership (PPP) models. The Department has awarded, and continues to award, contracts for road projects under various modalities, including Build-Operate-Transfer (BOT), Rehabilitate-Operate-Transfer (ROT), and Operation & Maintenance (O&M) arrangements. Under these contractual frameworks, the Private Partners (concessionaire or Special Purpose Vehicles) are responsible for the construction, rehabilitation, and long-term maintenance of the designated road corridors. A critical component of these agreements

involves the installation of toll plazas by the Concessionaire, where toll revenue is collected. A predefined portion of this collected revenue is required to be shared with the Department.

Historically, monitoring the physical progress of construction, verifying the quality of maintenance, and ensuring the accurate reporting of toll revenues have relied on manual processes and periodic reporting. This traditional approach presents challenges in real-time transparency, data verifiability, and the timely identification of underreporting or quality deviations. To address these challenges, the C&W Department is seeking a consulting firm to design, develop, and maintain a comprehensive, technology-driven monitoring ecosystem.

The primary objective of this assignment is to establish a web-based Real-Time Monitoring Dashboard (RTMD) accompanied by specialized mobile applications. This integrated solution will facilitate the rigorous physical, financial, and quality monitoring of the PPP portfolio. Furthermore, a critical component of this assignment is the automated integration of toll station data to ensure absolute transparency in revenue sharing and traffic classification. The monitoring reports generated through this system will be required for each road contract on a regular, predefined basis, ensuring that the Department, the Punjab PPP Authority (P&DD), and other relevant stakeholders have an unimpeachable, real-time view of project performance.

2. Stakeholders

The successful implementation and utilization of the RTMD ecosystem will involve multiple stakeholders, each with distinct roles, access levels, and responsibilities. The system must be architected to accommodate the specific workflows and data requirements of the following entities:

- **Communication & Works Department (the Implementing Agency):** Acting as the Implementing Agency (IA), the C&W Department is the primary client and beneficiary of the system. Executive and field staff will utilize the dashboard and mobile applications to monitor overall portfolio health, approve critical submittals, and issue directives.
- **PPP Node, C&W Department:** The PPP Node will serve as the central administrative hub for the dashboard. It will oversee the day-to-day utilization of the system, manage user access, and utilize the portal for archiving standards, documents, and general communications.
- **Punjab PPP Authority:** The Authority will have visibility into the dashboard to monitor the overall health of the PPP portfolio, ensuring that the projects align with the provincial government's broader economic and infrastructure objectives.
- **The relevant Private Partner:** The Private Partner will use the system to upload progress reports, financial statements, submittals, and rectification reports. They will also be subject to the automated API integrations that monitor their toll collection and traffic data.
- **Independent Engineer (IE) / Supervisory Consultant:** The IE will utilize the mobile applications and dashboard to conduct field inspections, verify concessionaire claims, approve level of service, and upload independent inspection reports and quality assurance data.

3. Objective

The overarching objective is to procure RTM services to develop and maintain an integrated, multi-tiered solution that enables enhanced reporting, spatial analysis, and data visualization for managing the road sector PPP portfolio. The solution is designed to transition the Department from reactive, document-based monitoring to proactive, data-driven oversight.

The integrated solution comprises several core components, specifically tailored to address the distinct phases of a PPP project lifecycle:

1. **Toll Station API Integration and Revenue Quality Control:** To install Application Programming Interfaces (APIs) at all toll stations to collect real-time data related to revenue and traffic. Crucially,

the system will run automated quality control checks on this data to ensure that the Private Partner is reporting true information, preventing the underreporting of traffic or the manipulation of revenue figures.

2. **Real-Time Activity Dashboard:** A centralized, web-based platform providing pictorial evidence, geo-tagged quality testing, and comprehensive progress monitoring.
3. **Construction Phase Mobile Application:** A dedicated application for technical staff stationed at the site to report and geo-tag physical field activities, record, and manage the
4. **O&M Phase Quality Monitoring Mobile Application:** A separate, specialized application designed to monitor the quality of repair, routine maintenance, and operational performance after the roads are developed and functional.
5. **Financial:** A system to manage the financial progress of the development project and an online "Check Request" workflow, initiated by the concessionaire and tracked through to approval with strict time-stamping.
6. **EHS and Compliance Monitoring:** A dedicated module to manage and monitor the implementation status of Site-Specific Environmental Management Plans (SSEMP) and Site-Specific Health and Safety Management Plans (SSHSMMP).

The RTMD Dashboard will be visible to the C&W, P&DD, and other authorized stakeholders for the time-to-time updating of project activities. Additionally, it will function as a public-facing website for the P3 Node, allowing the public to view advertisements, relevant news, and event coverage.

4. Scope of Work

The consulting firm is expected to perform a comprehensive range of activities, divided into distinct phases and parts, to ensure the successful design, deployment, and long-term maintenance of the RTMD ecosystem.

Part I: Software Design, Development, and API Integration

Geographic Demarcation and Unique Identifiers The firm shall commence by demarcating the geographical boundaries of the PPP project roads across the relevant divisions of Punjab. In close coordination with the C&W and IE teams, the

Toll Station API Integration and Revenue Data Quality Control A paramount requirement of this assignment is the establishment of an IP-based handshake protocol with the Private Party's toll station systems. The Consultant shall develop and install APIs at all toll stations to poll real-time data regarding classified traffic volumes, Toll and Non-Toll revenues, and overload vehicle fines. To ensure the integrity of this data, the Consultant must implement a robust, automated Quality Control (QC) mechanism within the central database. This QC system will cross-verify the revenue and traffic data reported by the concessionaire against the raw data polled directly from the Electronic Toll Transaction Management System (ETTMS) and Automatic Number Plate Recognition (ANPR) cameras. The system must automatically flag any discrepancies, system downtimes, or anomalies that may indicate the concessionaire is underreporting traffic volumes or manipulating revenue figures to retain an unfair financial advantage. The dashboard will provide a clear, real-time view of these metrics to the PPP Node, highlighting any downtime or data manipulation attempts by the Private Party.

Requirements Analysis and System Design The firm will conduct a thorough needs assessment, involving detailed stakeholder consultations, system reviews, and an analysis of existing reporting practices. This phase will map process flows, define data requirements, and establish the common performance and management measures specific to each contract type. The output of this phase will be a comprehensive scope document that translates these findings into precise system requirements. This document must include

application wireframes, system flows, data entry forms, report templates, and high-fidelity dashboard mock-ups for the Client's approval.

RTMD Dashboard Features and Architecture Drawing upon the requirements analysis, the firm will develop a highly interactive, web-based dashboard. The dashboard will integrate multiple data sources, including project profiles (with unique IDs, milestones, and risks), physical and financial progress updates from the Supervisory Team, in-field monitoring data from the mobile apps, and the automated API feeds from the toll stations.

The dashboard will feature spatial data visualization utilizing grids, charts, and gauges, integrated with Google Maps to display location-based data details. It will employ rule-based visualization indices, creating color-coded thresholds (e.g., Red for below X%, Yellow for below Y%, Green for above Z%) and heat maps based on applied data rules. Users will have the ability to filter data across all fields, dynamically generate report columns, and aggregate data over customizable time windows. The system will also feature automated email functionality to generate and distribute PDF reports to defined circulation lists.

The dashboard will be structured with a separate tab for each project, divided into two primary phases:

- **Construction Phase Dashboard:** This will record the daily progress of each road component, financial progress and expenditure implications, and maintain a daily log of the Escrow Account.
- **Operation & Maintenance Phase Dashboard:** This will record monthly inspection reports against the Operational and Management Performance Measures (detailed in Part V), alongside the Private Partner's rectification reports and the IE's verification.

Servers, Databases, and Back-end Services The firm shall set up and deploy the back-end architecture, including web services and databases, to receive, store, sort, and archive data. The infrastructure must ensure 99% uptime, complete data backup, and stringent data security features. The service provider will be responsible for hosting all data during the assignment.

Functional Workflows within the Dashboard The system will manage complex, multi-tier workflows:

- **SSEMP and SSHSMP Implementation:** Concessionaire will upload evidence of environmental and safety compliance. The Supervisory Consultant and C&W will review this evidence and flag any non-conformance in real-time.
- **IE Inspection and SPV Progress:** The IE will upload site visit records and instructions regarding substandard work. The SPV will upload its work program and monthly progress, allowing the system to automatically analyze actual versus planned progress, prompting the IE to advise on corrective actions.
- **Resource Deployment Tracking:** The system will track the deployment of the Private Partner's plants, equipment, and manpower against the approved work program, as well as monitor the attendance and achievements of the IE's stationed staff.

Part II: Mobile Application Development

The firm will develop a suite of Android mobile applications, available from downloadable links. Recognizing that field connectivity is often limited, the applications must be fully capable of operating in offline mode, synchronizing data once a connection is re-established. The suite will feature distinct modules tailored to the specific needs of the Construction and O&M phases.

Construction Phase Mobile Application This application is designed for the technical staff, field monitors, and concessionaire during the physical development of the road. Key functionalities include:

- Capturing high-resolution photographs and video footage, including integration with drone feeds.
- Recording precise geo-location, latitude, longitude, and date/time stamps for all field activities.

- Managing the online "Check Request" process. This involves a GIS-based construction activities plan showing the Right of Way (ROW) width, layer-wise activities, and chainage (RDs), with hyperlinked results, test sheets, and pictures.
- Enabling the concessionaire to initiate check requests and the IE/C&W staff to approve or reject them digitally, with full audit trails.

O&M Phase Quality and Maintenance Mobile Application Once the road is functional, the focus shifts to maintenance. This dedicated application will be used by field staff to monitor the quality of repair and maintenance. It will allow users to log specific pavement defects (potholes, rutting, cracking), drainage issues, and vegetation control requirements. The app will directly map these field observations to the Operational Performance Measures (OPM), enabling the rapid logging of emergency incidents and the subsequent verification of the Private Partner's rectification work.

Part III: Training and Capacity Building

The technological solution will only be as effective as the personnel utilizing it. Therefore, the firm is required to conduct comprehensive training and capacity-building programs. This will comprise workshops and hands-on training sessions for all stakeholders, including the C&W PPP Node office staff, Independent Engineer staff, and SPV staff.

The training will specifically focus on the practical usage of the mobile applications for geo-tagging activities, and the executive use of the dashboard for entering and updating project information. Furthermore, the firm must develop a comprehensive, user-friendly training manual. This manual will contain step-by-step descriptions and system screenshots, serving as a permanent reference guide for current staff and facilitating the onboarding of new personnel in the future.

Part IV: Construction Phase – Software Maintenance and Real-Time Monitoring

Following the successful development and deployment of the dashboard and mobile applications, the firm will transition into a dual role of software maintainer and independent third-party validator.

Software Maintenance The firm shall provide complete, ongoing support and troubleshooting for the deployed applications, servers, and dashboards. This includes the immediate resolution of any bugs, ensuring system stability, and maintaining the 99% uptime guarantee throughout the entire contract period.

Real-Time Monitoring and Third-Party Validation To ensure transparency and accountability, the **PPP's field teams** will act as an independent monitoring entity. The Consultant is expected to formulate at least two dedicated site-visit teams. These teams will visit each ongoing PPP contract at least once a week. During these visits, the field teams will independently verify the real-time progress, assess the quality of construction, and check Environmental, Health, and Safety (EHS) compliance.

The field teams will upload independent evidence, including drone video clips and photographic footage, directly to the portal. This independent data will allow the C&W and P4A to cross-verify and reconcile the progress reports submitted by the Independent Engineer and the Private Partner. The field teams will also provide on-site troubleshooting support to all users of the mobile application and cover special events, accidents, or specific QA/QC evidence as directed by the Client.

Part V: Operation & Maintenance (O&M) Phase Monitoring Support

Upon the completion of civil works and the transition to the operational phase, the RTMD system will continue to serve as the central repository for O&M performance. The software will record and monitor monthly inspection reports against a stringent set of Operational Performance Measures (OPM) and Management Performance Measures (MPM).

Operational Performance Measures (OPM): The system will track the physical condition and usability of the road through the following metrics:

1. **OPM-1:** Usability (Availability of each lane-km for use by traffic).
2. **OPM-2:** Pavement defects (potholes, rutting, ravelling, cracking, edge break, etc.).
3. **OPM-3:** Pavement Roughness.
4. **OPM-4:** Shoulder and Verge Maintenance.
5. **OPM-5:** Drainage systems functionality.
6. **OPM-6:** Condition of Bridges, Structures, and Embankments.
7. **OPM-7:** Incident Response and Emergency Works efficiency.
8. **OPM-8:** Road signs, line-markings, and road furniture.
9. **OPM-9:** Vegetation control.
10. **OPM-10:** Performance of the Concessionaire's Self-Control Unit (SCU).

Management Performance Measures (MPM): The system will also monitor the administrative and managerial compliance of the Private Partner through the following metrics:

1. **MPM-1:** Quality Assurance Plan (QAP) and its supplements.
2. **MPM-2:** Adherence to the O&M Manual.
3. **MPM-3:** Programme of Performance.
4. **MPM-4:** Works Completion Reports.
5. **MPM-5 & 6:** Daily and Weekly Reports.
6. **MPM-7:** Classified Traffic Count and Reporting System.
7. **MPM-8:** Asset Inventory Reports and updates.
8. **MPM-9:** Submission of Designs.
9. **MPM-10:** Monthly Compliance Tables for Maintenance Services.
10. **MPM-11:** Monthly Progress Report for O&M.
11. **MPM-12:** Road Asset Damage and Emergency Incident reports.
12. **MPM-13:** Compliance with Environment, Social, Health and Safety, and Traffic Management Plans.
13. **MPM-14:** Grievance Redressal System functionality.

The dashboard will record the Private Partner's rectification or response reports on the portal, alongside the verification reports provided by the Independent Engineer, ensuring complete visibility for all stakeholders.

Part VI: Completion Report and Handover

As the contract nears its conclusion, a structured handover process must be executed. The intellectual property rights of the developed software, including all source code and documentation, will vest completely with the C&W-PPP Node and the Government of Punjab.

Minimum six months prior to the contract close date, the firm shall jointly operate the dashboard and portal alongside the C&W staff assigned by the Project Manager, ensuring a seamless transfer of operational knowledge. The firm will migrate the complete software, including the live dashboard and active mobile applications, to the Client's designated servers. All hardware and equipment purchased using the provisional sum will be handed over to the C&W at least 15 days prior to the contract close.

Upon the successful completion of all these activities, the firm will submit a Final Completion Report to the full satisfaction of the Client. The firm will obtain a satisfactory Performance Certificate 15 days prior to the close date, which will subsequently allow for the submission of the final payment statement.

5. Methodology

The firm is expected to work in close, continuous liaison with the C&W-PPP Node and the broader C&W Department. This collaboration is essential to fully understand the nuanced requirements of the Department, discuss proposed technical solutions, and carry out extensive quality assurance for all deliverables. The Consultant must make frequent visits to the respective C&W offices to conduct meetings and discussions, ensuring the high-quality production of the software, dashboards, and mobile applications. Following deployment, the firm's leadership must participate in every monthly progress review meeting.

To execute the real-time monitoring mandate, the firm will formulate dedicated field teams for site visits. It is a strict expectation that the firm will visit each ongoing PPP contract at least once a week. This high frequency of physical visits is required to enable the Implementing Agency to appraise the real-time progress, verify the quality of construction work, and ensure strict EHS compliance. The data and evidence gathered by the RTMD field teams will serve as the foundational third-party validation, allowing the C&W to critically check and reconcile the progress reports provided by the Independent Engineer and the Private Partner.

The objective is to develop RTMD and maintain an integrated solution for enhanced reporting, analysis and visualization in support of managing Annual Development Plan road-sector projects. The private partners have installed the toll stations on all the roads which they have developed under their public private partnership agreement(s). The solution comprises:

- Develop an Application Programming Interface (API) that will be installed at sites of private partners and will collect the toll data from the toll stations. This data is central to calculate the revenue which is being collected at the toll station.
- The collected toll stations data will be pooled into a web based activity dashboard with information including the pictorial evidence.
- A mobile application for all technical project staff to report and geo-tag field activity, record and report overall work progress
- A mobile application for work quality/quantity verification and geo-tagged field testing
- A system to manage and monitor the financial progress of the development project
- An online "Check Request" workflow – initiation through approval, time-stamped, and initiated by the concessionaire
- A system to manage and monitor SSEMP and SSHSMP implementation status

The RTMD Dashboard will be visible to C&W, P&DD and other stakeholders for ongoing updates, and to the public – as the P3 Node website – for advertisements, news and event coverage.

6. Facilities Provided by the Client

During their field deployments, the RTMD field team will be stationed at the project site and will be accommodated in the Independent Engineer's (IE) site office.

7. Deliverables

The deliverables from this assignment are comprehensive and span the entire lifecycle of the project. The detailed requirements for each are set out in the corresponding Scope of Work sections.

- **Deliverable A: Software Design & Development.** This includes the system design document, constituency/boundary digitization, dynamic online maps, database design, development and Play Store publication of the mobile applications (Construction and O&M), the web-based RTMD Dashboard, the public-facing C&W website, generation of official C&W staff email accounts, and the deployment of the server and back-end architecture. *(Corresponds to Part I & II)*
- **Deliverable B: Training and Capacity Building.** This encompasses the execution of staff training on the Android application and the dashboard, the provision of continuous mentoring and on-the-job training for all stakeholders, and the delivery of comprehensive training manuals. *(Corresponds to Part III)*
- **Deliverable C: Monthly Monitoring Reports.** The system shall be enabled to produce daily/weekly/Monthly reports confirming the successful completion of software maintenance tasks, troubleshooting support, and the real-time monitoring of civil works, including the independent field validation and API data quality checks. *(Corresponds to Part IV)*
- **Deliverable D: Monthly O&M Phase Reports.** The system shall be enabled to produce daily/weekly/Monthly inspection reports detailing the Operational Performance Measures (OPM) and Management Performance Measures (MPM), alongside the tracking of the Private Partner's rectification reports. *(Corresponds to Part V)*
- **Deliverable E: Completion Report and Handover.** The final handover of the software to the Client's server with a live dashboard and active app, the transfer of all source code documentation, knowledge transfer to the C&W IT team, and the submission of the Final Completion Report. *(Corresponds to Part VI)*

8. Timing and Inputs

The total duration of this contract shall be **6 months** from the date of commencement. The expected start of the project is September 2026, with the understanding that the formal commencement letter for the O&M Phase will be issued separately.

The timeline is strictly structured as follows:

1. **Design and Development Phase:** 3 Months. (Monthly Report)
2. **Commissioning of the Software, Operation & Maintenance (O&M) and Monitoring Phase:** 2 Months.
3. **Completion Report and Handover:** 1 Months.

Strict Note on the Design Phase: The 3-month duration for the Design Phase is an absolute ceiling. If a successful design is not completed within this stated 3-month period, and there is no default on the part of the Client, no further person-months or financial extensions will be granted. The RTM Consultant shall be obligated to complete the design without additional cost and at its own expense.

9. Reports and Deliverable Timelines

All report formats are subject to final agreement with the C&W-PPP Node. The Consultant shall adhere to the following submission timelines and content requirements:

Inception Report (Draft and Final) {1 week after the agreement} *Content:* This report will contain a detailed description of the updated work methods proposed for carrying out the services in accordance with the ToR. List of essential hardware required in the PPP node to run the newly developed software systems in a sustainable manner.

Month 1: Design Phase Progress Report *Content:* this report will summarize the deliverables of the design phase. It must track stakeholder consultations, development of mock-ups, document finalization, map collection, boundary digitization, database and app development, and the status of alpha/beta testing.

Month 2: Design Phase Progress Report 2: this report will summarize the progress of deliverables of the design phase. Alpha and Beta version of the mobile application and the dashboard. The Consultant shall enlist all requirements envisaged in Part I and II of the ToR and provide formal confirmation that each requirement has been met to the satisfaction of the Client. The consultant will provide the API module Alpha and Beta version that will be installed at the private partners sites to tune performance of the system.

Month 3 Design Phase Progress Report 3 : At this time the mobile application and the dashboards are fully functional, this report will also include the system usage data. A formal presentation will be held at with the client to demonstrate the functions of the system and the mobile application.

Month 4: Commissioning of the Software, Operation & Maintenance (O&M) and Monitoring Phase Report 1: Based on the system usage the reported problem will be trouble shooted, and the issues if any reported in the system will be fixed. If any new requirements related to the system design comes ups they will be added in the system system. At the end of the month this month will be submitted.

Month 5: Commissioning of the Software, Operation & Maintenance (O&M) and Monitoring Phase Report 2: Based on the system usage the reported problem will be trouble shooted, and the issues if any reported in the system will be fixed. If any new requirements related to the system design comes ups they will be added in the system system. At the end of the 5th month this report will be submitted.

Month 6: Final Project Completion Report and system Training/handing over *Content:* The final report will confirm that all requirements provided in Part VI (Handover) of the ToR have been successfully met to the satisfaction of the Client. It will provide a comprehensive achievement summary, detail any final challenges and solutions, and include the final consultant performance rating. *At least 2 traning sessions will be held before this report is submitted. The developed software along with its data, including all source code and documentation, will be handed over to the client.*

APPENDIX-C – DELIVERABLES, REPORTING SCHEDULE AND SERVICE LEVELS

Part C-1 – Deliverables

The Deliverables are those required by Appendix-B and are identified, but not restated, here:

#	Deliverable	Part of the Scope of Work at Appendix-B
A	Software Design and Development – dashboard, both mobile applications, toll station API module, website, database and back-end	I and II
B	Training and Capacity Building, with manuals	III
C	Monthly Monitoring Reports – maintenance, real-time monitoring, field validation, API data quality	IV
D	Monthly O&M Phase Reports against OPM-1 to OPM-10 and MPM-1 to MPM-14	V
E	Completion Report and Handover – migration, source code, documentation, knowledge transfer	VI

Part C-2 – Reporting schedule

#	Report	Due	Copies
1	Inception Report – draft	Week 1 from the Commencement Date	[03] hard + soft
2	Inception Report – final	[07] days after the Client's comments	[03] hard + soft
3	Design Phase Progress Report 1	End of month 1	[03] hard + soft
4	Design Phase Progress Report 2 – alpha and beta of the applications, dashboard and API module	End of month 2	[03] hard + soft
5	Design Phase Progress Report 3 – fully functional system, formal demonstration	End of month 3	[03] hard + soft
6	Commissioning / O&M and Monitoring Report 1	End of month 4	[03] hard + soft
7	Commissioning / O&M and Monitoring Report 2	End of month 5	[03] hard + soft
8	Final Project Completion Report	End of month 6	[05] hard + soft
9	Source-code deposit certificate on Appendix-I, Form I-4 – Appendix-A, A-2.17	Last working day of each month	1 signed original
10	Availability and defect statistics – Appendix-A, A-2.20	With each monthly report	Within the report
11	Weekly field monitoring records for every ongoing PPP contract – GCC 7.1(d)	Continuously, on the portal	On the System

The Inception Report shall set out the updated work methods proposed and the list of essential hardware required at the P3 Node. All report formats are subject to final agreement with the P3 Node – GCC 11.1.

Part C-3 – Service levels

Availability of not less than 99% per calendar month, the consequence of any shortfall, the response and resolution times for critical, major and minor defects, and the treatment of an interrupted toll station API feed are as specified at Appendix-A, A-2.20, read with GCC 20. Backup is daily with a documented monthly restore test – GCC 18.1; a data breach is notified within twenty-four hours – GCC 18.3; not fewer than two field teams visit every ongoing PPP contract at least weekly – GCC 7.1(d); and the Consultant's leadership attends every monthly progress review – GCC 7.1(c). Availability and defect statistics are reported in each monthly report.

APPENDIX-D – KEY PERSONNEL AND SUB-CONSULTANTS

D-1. Key Personnel

Positions as at ITC 11.1; minimum qualification and experience as specified in the Data Sheet at ITC 4.2.

#	Position	Name	Person-months	Period of input
1	Team Leader			
2	Mobile Application Developer			
3	GIS Developer			
4	Dashboard / Software Developer			
5	Database Developer			

The Consultant's authorised representative for GCC 3.2: _____

D-2. Field monitoring teams and other non-key personnel

Required by GCC 7.1(d) and by Part IV of the Scope of Work at Appendix-B.

#	Team, person or sub-consultant	Composition or role	Corridors covered / scope	Basing
1	Field monitoring team 1			
2	Field monitoring team 2			
3				

No sub-consultant may be engaged without the Client's prior written consent – GCC 9.1 – and no Key Expert substituted without its prior written approval – GCC 10.

APPENDIX-E – CONTRACT PRICE AND PAYMENT SCHEDULE

Contract Price: as recorded at Appendix-A, A-1.6.

#	Milestone	Basis of payment	%	Timing
1	Inception and Survey	Acceptance of the Final Inception Report, including the hardware list, and completion of the demarcation, unique-identifier and benchmark survey under Part I of the Scope of Work at Appendix-B	20%	Month 1
2	Completion of the Design Phase	Acceptance of Design Phase Progress Reports 1 to 3; alpha and beta testing; delivery of the functional RTMD Dashboard, both mobile applications and the toll station API module; formal demonstration (Deliverable A)	30%	End of month 3
3	Commissioning, O&M and Monitoring	Acceptance of Commissioning / O&M and Monitoring Reports 1 and 2 – maintenance, troubleshooting, real-time monitoring, field validation and API data quality checks (Deliverables C and D)	20%	End of month 5
4	Completion and Handover	Acceptance of the Final Project Completion Report; two training sessions and the manuals (Deliverable B); migration and handover under Part VI of the Scope of Work at Appendix-B (Deliverable E); Performance Certificate under GCC 28.5	30%	End of month 6
Total			100%	

Conditions applying to every milestone:

- payment is made only on written acceptance under GCC 11.3, within the period at Appendix-A, A-1.7, subject to deduction of tax at source and of Retention Money under GCC 12.5 and Appendix-A, A-2.12;
- no milestone is released without the source-code deposit certificate on Appendix-I, Form I-4 for each month in the milestone period – Appendix-A, A-2.17;
- deductions under Appendix-A, A-2.10, A-2.20 and A-2.21 are made from the payment next falling due;
- the final payment statement may be submitted only after the Performance Certificate has issued – GCC 12.3; and
- any provisional sum recorded at Appendix-A, A-1.8 is additional to the percentages above and is reimbursed under GCC 13.

APPENDIX-F – FORM OF PERFORMANCE SECURITY

[On the letterhead of a scheduled bank in Pakistan. Required only where the Data Sheet at ITC 23.5 so provides.]

To: The Programme Manager, P3 Node, Communication & Works Department, Government of the Punjab, Lahore

Guarantee No. _____ · Date _____

WHEREAS _____ (the "Consultant") has entered into a Contract dated _____ with you for the Establishment of a Real-Time Monitoring Dashboard (RTMD) for PPP Projects in the Road Sector, Punjab (RFQ No. PM/P3NODE/RFQ-ITC-1), which requires a performance guarantee;

NOW THEREFORE we, _____ (the "Bank"), of _____, unconditionally and irrevocably guarantee and undertake to pay you, on your first written demand and without cavil, argument, protest or reference to the Consultant, any sum not exceeding in aggregate Rs. _____ (Rupees _____ only), being the percentage of the Contract Price specified in the Data Sheet at ITC 23.5.

We further agree:

- (a) that your written demand stating that the Consultant has failed to perform an obligation shall be conclusive evidence of the amount due;
- (b) that no change, addition, variation or extension of time under the Contract, and no forbearance on your part, shall release us, and we waive notice of any such matter;
- (c) that this guarantee remains in force until the date determined under the Data Sheet at ITC 23.5, read with Appendix-A, A-2.29, that is until _____, and that any demand received on or before that date shall be honoured notwithstanding its expiry; and
- (d) that this guarantee is not assignable and that any dispute concerning it is subject to the jurisdiction of the courts at Lahore.

For the Bank _____ · Authorised officer _____

Branch, address and telephone _____ · Date _____

APPENDIX-G – NOTICE OF AWARD AND NOTICE TO PROCEED

Form G-1. Notice of Award – ITC 23.1

No. _____ · Dated _____ · To: _____

Subject: Notice of Award – RFQ No. PM/P3NODE/RFQ-ITC-1

1. Following evaluation under Rule 46-A and announcement of the evaluation report on _____ in accordance with ITC 19.1 and Rule 37, your firm has been evaluated as the best qualified and fully capable firm for the assignment.
2. Your Quotation, at a Total Quoted Price of Rs. _____ (Rupees _____ only) inclusive of all taxes, is accepted.
3. You shall, within the period specified in the Data Sheet at ITC 23.2, (a) sign the Contract in the form at Section VII and (b) furnish the Performance Security in the form at Appendix-F, if required by the Data Sheet at ITC 23.5.
4. Failure to comply with paragraph 3 entitles the Client to annul this award and proceed to the next-ranked firm under ITC 23.4.

Programme Manager, P3 Node, C&W Department

Acknowledged and accepted for _____ *on* _____ *by* _____
(signature, name, designation).

Form G-2. Notice to Proceed – ITC 23.3, GCC 5.2

No. _____ · Dated _____ · To: _____

1. The Contract dated _____ having come into force, you are directed to commence the Services with effect from _____ (the Commencement Date).
2. The six (06) month duration runs from that date; the contract close date is accordingly _____.
3. The draft Inception Report is due one week from the Commencement Date – Appendix-C, Part C-2.
4. The Project Manager for the Contract is _____ – Appendix-A, A-1.3.

Programme Manager, P3 Node, C&W Department

APPENDIX-H – INTEGRITY PACT

To be executed where the Data Sheet at ITC 3.3 so requires, under Rule 7.

DECLARATION OF FEES, COMMISSIONS AND BROKERAGE PAYABLE BY CONSULTANTS OF CONSULTANCY SERVICES

Contract No. PM/P3NODE/RFQ-ITC-1 · Contract value Rs. _____ · Title: Establishment of a Real-Time Monitoring Dashboard (RTMD) for PPP Projects in the Road Sector, Punjab

_____ (the "Consultant") declares that it has not obtained and will not obtain the above Contract from the P3 Node, Communication & Works Department, Government of the Punjab (the "Client") through any corrupt practice.

The Consultant represents and warrants that it has fully declared the brokerage, commission, fees and all other remuneration paid or payable to any person, within or outside Pakistan, in connection with obtaining or inducing the award of this Contract; that it has not given, promised or offered, and will not give, promise or offer, directly or indirectly, any commission, gratification, bribe, finder's fee, kickback or consideration of any kind to any officer, employee or representative of the Client or of the Government of the Punjab; and that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of the transaction, and has taken no action to circumvent this declaration.

The Consultant accepts full responsibility and strict liability for this declaration and agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured through any corrupt practice, whether before or after signature, shall be void ab initio so far as the Client is concerned.

Without prejudice to any other remedy, on breach the Consultant shall be liable to:

- (a) repay the amount equivalent to any commission, gratification, bribe, finder's fee or kickback given to obtain or induce the award;
- (b) forfeit the Performance Security and any other security, including Retention Money under GCC 12.5;
- (c) compensate the Client for any loss or damage sustained, whether arising before or after completion; and
- (d) debarment under Rule 21.

For the CONSULTANT	For the CLIENT
Signature _____	Signature _____
Name and designation _____	Name and designation _____
Date _____	Date _____

APPENDIX-I – ACCEPTANCE, PERFORMANCE AND COMPLETION CERTIFICATES

Form I-1. Deliverable Acceptance Certificate – GCC 11.3

No. _____ · Dated _____

Contract: RFQ No. PM/P3NODE/RFQ-ITC-1 · Consultant: _____

Field	Entry
Deliverable and its reference at Appendix-C, Part C-1 or C-2	
Date due / date received	
Date comments issued / date of resubmission	
Days of delay attributable to the Consultant	
Liquidated damages applicable – Appendix-A, A-2.21	
Source-code deposit certificate for the period received? – Appendix-A, A-2.17	Yes / No
Availability in the period, and any deduction – Appendix-A, A-2.20	

I certify that the Deliverable named above [is accepted / is accepted subject to the observations attached / is not accepted, for the reasons attached].

Project Manager, P3 Node, C&W Department – signature, name, date

Form I-2. Performance Certificate – GCC 28.5

Issued not later than fifteen days before the contract close date.

No. _____ · Dated _____

This certifies that _____ has performed the Services under Contract No. PM/P3NODE/Rfq-ITC-1 dated _____ to the Client's satisfaction, and in particular has:

#	Requirement	Reference	Confirmed
1	Delivered Deliverables A to E	Appendix-C, Part C-1	☐
2	Conducted not fewer than two training sessions and delivered the manuals	GCC 28.4	☐
3	Jointly operated the dashboard and portal with the assigned C&W staff	GCC 28.1; Appendix-A, A-2.28	☐
4	Migrated the complete software, live dashboard and active applications to the Client's servers	GCC 28.2	☐
5	Delivered the complete unencrypted source code, schema, documentation and credentials, certified on Form I-4 of this Appendix	GCC 17.3	☐
6	Handed over all hardware bought from the provisional sum, against inventory	GCC 28.3	☐
7	Maintained availability of not less than 99%, or accepted the deductions	GCC 20; Appendix-A, A-2.20	☐
8	Certified destruction of all remaining copies of Client data	GCC 27.1(e)	☐

The final payment statement may accordingly be submitted – GCC 12.3.

Project Manager, P3 Node, C&W Department – signature, name, date

Form I-3. Completion Certificate – GCC 28.6

No. _____ · Dated _____

This certifies that the assignment under Contract No. PM/P3NODE/RFQ-ITC-1 dated _____ was completed on _____ to the Client's satisfaction, that all Deliverables have been accepted, and that all handover requirements under Part VI of the Scope of Work at Appendix-B have been discharged.

The defects liability period at Appendix-A, A-2.29 runs from the date of this certificate, and any Performance Security shall remain valid throughout it and for the further period there stated. Issue of this certificate creates no obligation to award any subsequent, extended or follow-on contract – GCC 28.7.

Project Manager, P3 Node, C&W Department – signature, name, date

Form I-4. Source Code, Data and Credentials Handover Certificate

Used both for the monthly deposit required by Appendix-A, A-2.17 and, with Part 2 completed, for the final handover under GCC 17.3 and GCC 28.2.

Contract: RFQ No. PM/P3NODE/RFQ-ITC-1 · Consultant: _____ · Period or date: _____

Part 1 – Deposit (tick, and give the repository and commit reference for each)

#	Item	Deposited	Repository and commit
1	Source code – RTMD Dashboard; Construction Phase and O&M Phase mobile applications; toll station API module; public-facing website	☐	
2	Database schema, migration and seed scripts	☐	
3	Build, deployment and configuration scripts	☐	
4	Technical documentation, data dictionary and API specification	☐	
5	Wireframes, mock-ups and design assets	☐	
6	Third-party or commercial components, with licence and evidence that each is disclosed, agreed and transferred to the Client – GCC 17.3	☐	

Part 2 – Final handover only

#	Item	Handed over
1	Complete unencrypted source code from which a working build has been produced and verified by the Client	☐
2	Full production database export in a documented, non-proprietary, machine-readable format	☐
3	All administrative credentials, keys, certificates and domain control	☐
4	Hosting environment transferred to, or replicated on, the Client's designated servers	☐
5	Play Store publisher account, or transfer of the published applications	☐
6	Certificate of destruction of all remaining copies of Client data	☐

Declaration. We certify that the items above have been deposited or handed over in full; that the source code is complete and unencrypted; that a working build has been produced from it; that no undisclosed dependency on our proprietary tools, platforms or continuing involvement remains; and that we have retained no copy of the source code, database or documentation.

For the CONSULTANT _____ (signature, name, designation, date)

Received and verified for the CLIENT _____ (signature, name, designation, date)

APPENDIX-J – CONFIDENTIALITY AND DATA PROTECTION UNDERTAKING

To be executed by every person the Consultant engages, before that person is given access to Client data – GCC 16.2.

I, _____, CNIC No. _____, engaged by _____ (the "Consultant") as _____ under Contract No. PM/P3NODE/RFQ-ITC-1, undertake:

- (a) to treat as strictly confidential all data, records, reports and information provided by the P3 Node, Communication & Works Department (the "Client"), or generated or collected in the course of the Services, including project and stakeholder data, GIS and spatial data, toll revenue and classified traffic data, escrow account data, and system and user data; not to disclose any of it outside the assignment team; and not to copy, remove, transmit or store any of it other than on devices or services approved by the Consultant and the Client;
- (b) not to access any data beyond what my tasks require, and to accept that my access is logged and auditable;
- (c) that I hold no engagement and no financial or beneficial interest in any Private Partner, Special Purpose Vehicle, EPC contractor, toll operator, ETTMS vendor or Independent Engineer engaged on any PPP road project of the C&W Department, and will disclose immediately any circumstance that might give rise to one;
- (d) to report any actual or suspected data breach, unauthorised access or loss of data within twelve hours of becoming aware of it, so that the Consultant can meet its obligation under GCC 18.3;
- (e) on conclusion of my engagement, to return or destroy every copy of Client data in my possession and confirm in writing that I have done so; and
- (f) that these obligations continue without limit of time.

Signature _____ · Name _____ · Date _____

Countersigned for the Consultant _____