

Form 1



REQUEST FOR PROPOSAL (RFP)
FOR
OPERATIONS AND MAINTENANCE
OF
MURIDKE – NAROWAL & NAROWAL – SHAKKARGARH ROAD
(GRPUP-1)
ON A
MANAGEMENT CONTRACT BASIS
[DECEMBER] 2025

DISCLAIMER

This request for proposal (the **RFP**) has been prepared by the Communications and Works Department, Government of Punjab (the **Implementing Agency**). This invitation constitutes no form of commitment on the part of the Implementing Agency to enter into any arrangements with any person/entity. The Implementing Agency reserves the right to withdraw from the process or any part thereof or to vary any of its terms at any time without giving any reason whatsoever. No financial or other obligation whatsoever shall accrue to the Implementing Agency in any such event. The information contained in this RFP and attached volumes or subsequently provided to Bidders, whether verbally or in documentary or any other form by or on behalf of the Implementing Agency or any of its employees or advisors is provided to Bidder(s) on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

The evaluation criteria were determined by Steering Committee, with the technical assistance of the Communication & Works Department, Government of Punjab and the RMU Unit in the Finance Department, Government of Punjab. Neither any of these entities, nor their consultants, advisors (including the transaction advisor), employees, personnel, agents, make any representation (expressed or implied) or warranties as to the accuracy or completeness of the information contained herein, or in any other document made available to a person in connection with the tender process for the Project and the same shall have no liability for this RFP or for any other written or oral communication transmitted to the recipient in the course of the recipient's evaluation of the Project. Neither any of these entities, nor their employees, personnel, agents, consultants, advisors and contractors etc. will be liable to reimburse or compensate the recipient for any costs, fees, damages or expenses incurred by the recipient in evaluating or acting upon this Invitation for Bids or otherwise in connection with the Project as contemplated herein.

This RFP is not an agreement; its sole purpose is to provide interested parties with information that may be useful to them in making their offers (bids/proposals) pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the Implementing Agency in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This RFP may not be appropriate for all persons, and it is not possible for the Implementing Agency, its employees or advisors to consider the investment objectives, financial situation and particular needs of each party which reads or uses this RFP.

The assumptions, assessments, statements and information contained in the RFP, may not be complete, accurate, adequate or correct for the purposes of Bidders. The Implementing Agency has no liability for any statements, opinions or information provided in the RFP. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this RFP. The Bidders are required to undertake their independent assessment and to seek independent professional advice on any or all aspects of the RFP. No decision should be based solely on the basis of the information provided by the RFP.

The Implementing Agency expressly disavow any obligation or duty (whether in contract, tort or otherwise) to any Bidder. No Bidder is entitled to rely on the Implementing Agency's involvement in the preparation of this RFP or in the solicitation process as a basis for preparing the Bid or developing the Project,

All information submitted in response to the RFP becomes the property of the Implementing Agency and the Implementing Agency does not accept any responsibility for maintaining the confidentiality of the material including any trade secrets or proprietary data submitted to the Implementing Agency (including from its employees, personnel, agents, consultants, advisors and contractors etc.)

In submitting a Proposal in response to this RFP, each Bidder certifies that it understands, accepts and agrees to the disclaimers set forth above. Nothing contained in any other provision of the RFP nor any statements made orally or

in writing by any person or party shall have the effect of negating or suspending any of the disclaimers set forth in this disclaimer.

Abbreviations

BOEC	Bid Opening and Evaluation Committee
CV	Curriculum Vitae
GoPb	Government of the Punjab
PEC	Pakistan Engineering Council
PKR	Pakistan Rupees
ROW	Right of Way
RFP	Request for Proposal
SBP	State Bank of Pakistan
SPV	Special Purpose Vehicle

Definitions

BID	a bid submitted by a Bidder in response to this RFP and containing the Pre-qualification Technical and Financial Proposals.
BID BOND	means the security deposit that a Bidder must provide, in the form of a financial guarantee issued by a scheduled commercial bank operating in Pakistan acceptable to the Implementing Agency (with a minimum long term credit rating of 'AA-' according to the PACRA rating scale for financial institutions), in form and substance as attached hereto as FORM 2 FORMAT OF BID BOND and in the amounts and conditions specified in Section 4.4 (Bid Security) of SECTION A , it being clarified that the Bid Bond shall not be in the form of an insurance or corporate guarantee.
BID VALIDITY PERIOD	means the period of one hundred and twenty (120) days starting from the Bid Submission Deadline.
BIDDER	an entity, firm, joint venture or consortium that has submitted a Bid for the Project based on this RFP and its criteria.
BIDDING PROCESS	shall mean the entire process commencing from issuance of RFP until signing of Concession Agreement as elaborated more in Section 1.1 of this RFP.
BID SUBMISSION DATE	the date on or before which the Bid can be submitted as described in the Letter of Invitation.
CONCESSION	the concession granted to the Concessionaire by the Implementing Agency in accordance with Section 3.7 of this RFP.
CONCESSION AGREEMENT	the formal agreement governing the proposed relationship between the Implementing Agency and the Concessionaire that is substantially based on the attached draft contained Volume II – Draft Concession Agreement.
CONCESSIONAIRE	means the project company after signing of the Concession Agreement in accordance with Section 7.5.1.
ESTIMATED TIMETABLE	means the estimated timetable set out in Section

	2.1.
FINANCIAL PROPOSAL	means the financial proposal submitted in accordance with Section 4.5.3 of this RFP.
GROUP	Means either one of the road groups mentioned in Section 1.1.
IFIs	International Financial Institutions.
PREQUALIFICATION PROPOSAL	means the prequalification proposal submitted in accordance with Section 4.5.1 of this RFP.
PROJECT	the installation of toll plazas, weighbridges, and Electronic Toll and Traffic Management Systems (ETTM) (including an e-tag system), along with the operation and maintenance of the five selected roads in Punjab, Pakistan, as further detailed in Section 3.5 of this RFP
PROJECT HIGHWAY	means the length of the road as more particularly described in Section 1.1.
PPP ACT	means the Punjab Public Private Partnership Act 2025.
RESERVE PRICE	means the minimum percentage amount that a Bidder must quote in its Financial Proposal in order to have the same evaluated as per Section 6.5
SUCCESSFUL BIDDER	means the Bidder whose Financial Bid is the lowest in conformity with Section 6.5.
TECHNICAL PROPOSAL	means the technical proposal submitted in accordance with Section 4.5.1 of this RFP.

Interpretations

In this RFP, unless the context otherwise requires:

- (a) Any reference to a statutory provision shall include such provision as is from time to time modified or re-enacted or consolidated so far as such modification or re-enactment or consolidation applies or is capable of applying to any transactions entered into hereunder;
- (b) the words importing singular shall include plural and vice versa. and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associations, organizations or other entities (whether or not having a separate legal entity);
- (c) the headings are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this RFP;
- (d) the words "include" and "including" are to be construed without limitation;
- (e) references to “installation” include investigation, design, engineering, procurement, delivery, transportation, processing, fabrication, testing, commissioning and other activities incidental to the installation;
- (f) any reference to any period of time shall mean a reference to that according to Pakistan Standard Time;
- (g) any reference to day shall mean a reference to a calendar day;
- (h) any reference to month shall mean a reference to a calendar month;
- (i) any reference to GoPb shall mean Government of the Punjab;
- (j) any reference to Bidder shall mean an entity submitting the proposal or a group of entities submitting the proposal as a Joint venture (JV) or consortium, and any reference to the Concessionaire shall mean selected Bidder with whom Concession Agreement has been signed;
- (k) the attached volumes of this RFP or any Addendum issued later on to clarify the Bidders, if any, form an integral part of this RFP and will be in full force and effect as though they were expressly set out in the body of this RFP jointly referred as Bidding Documents;
- (l) unless otherwise stated, any reference to any period commencing “from” a specified day or date and “till” or “until” a specified day or date shall include both such days or dates: and
- (m) any reference to Bidding Process shall mean the entire process commencing from issuance of RFP until signing of Concession Agreement with the Concessionaire.

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1. LETTER OF INVITATION

1.1. INTRODUCTION

The Implementing Agency hereby invites international and local parties to submit Bids for operations and maintenance of and the installation of toll plazas, weighbridges and Electronic Toll and Traffic Management Systems (ETTMs) on the followings roads:

Group	Road & Length (kilometre)	Rehabilitation Work Status
Group -1	I. Muridke – Narowal (80 KM)	Rehabilitation Work expected to be completed by 30.06.2026
	II. Narowal – Shakkar Garh (33 KM)	Completed

The Implementing Agency is seeking to award a Public Private Partnership Project through a fair and transparent competitive bidding process (the “**Bidding Process**”). A Bidder may place a Bid for either one, multiple or all of the abovementioned Groups through the Bidding Process. All of the aforementioned Groups shall have the relevant roads handed over to the Successful Bidder after having all rehabilitation work completed on them. For the purposes of clarification, if a Bidder makes a Bid for a Group then it must take over all the roads contained in that Group.

This RFP is being issued by the Implementing Agency, in consultation with the Risk Management Unit, Finance Department, Government of Punjab to the prospective Bidders.

The Communication and Works Department of the Government of Punjab, through its Road Assets Management System (RAMS), has published a report on the rehabilitation work on the abovementioned Groups, which is provided for in Volume III of this Bid Document. It is recommended that the Bidders read this report before preparing their respective Bids. Please note that the Implementing Agency expects each Bidder to do its own due diligence in respect of the rehabilitation works for each Group prior to making a Bid pursuant to this Bid Document. The Implementing Agency will not be held responsible in the event that a Successful Bidder claims that the rehabilitation work status of a Group does not correspond to its expectations.

1.2. CONTENTS OF RFP

Please find the enclosed the RFP on the basis of which Bids are to be prepared and submitted. This RFP contains the following three (3) volumes and their respective appendices:

Volume I— Request for Proposal (RFP)

Containing:

- a. Information to Bidders
- b. Evaluation and Award
- c. Bid Forms

Volume II - Draft Concession Agreement

Volume III — Detailed Project Report

Containing:

- a. Traffic Study Report

(Volume I, Volume II and Volume III are collectively referred to as the Bidding Documents)

1.3. BID SUBMISSION DATE

Bids shall be submitted by 16.02.2026 on or before 11:00 am (“**Bid Submission Date**”) addressed to Deputy Secretary (PC), Communication & Works Department at the address mentioned below:

SECRETARY

Communication & Works Department,
Old Anarkali,
Lahore

PHONE: +92-42-992 13716

1.4. BIDDER’S REQUEST FOR CLARIFICATION, COMMENTS AND MARK-UP OF THE BIDDING DOCUMENTS

A Bidder requiring any clarification on the Bidding Documents may send an electronic request for clarification to the Implementing Agency with a copy to the consultants. Bidders may also propose amendments/comments to the Bidding Documents to be made directly in the Bidding Documents in track change made with a separate note explaining the rationale behind any suggested amendment or modification. and such comments shall be sent by e-mail to the Implementing Agency, with a copy to the consultants.

Any such clarification request/comments or mark-up as specified in this Section shall be addressed before 14:00 (Pakistan time) on the Clarification /Comments Request Deadline. The Implementing Agency shall provide response to such queries as soon as possible.

Electronic copies of the response, including an explanation of the query but not identification of its source (the "Response to Questions Document"), shall be sent to all Bidders. If similar or repeated queries are made by Bidders, those queries may be listed as one query and the Implementing Agency may respond to such query only once. The Implementing Agency reserves the right not to consider such comments or amendments of the Bidding Documents. Any substantial changes that affect the structure of Bidding Documents or the Project shall in no case be taken into consideration.

1.5. PRE-BID MEETING

The Implementing Agency will organize one (1) pre-bid conference (general and/or individual meetings) on the dates specified in the Estimated Timetable in order to discuss any further comments the Bidders might have with respect to the Project and the Bidding Documents. The Bidders will be given the opportunity to discuss their comments and suggested changes to the Concession Agreement in the Pre-Bid Conferences.

The Implementing Agency, however, reserves the right to call any additional pre-bid conferences if it desires to.

1.6. PUBLIC PRIVATE PARTNERSHIP

The Project is to be established within the purview of the PPP Act (as amended from time to time). Bids are solicited under a single stage three envelope competitive bidding process in accordance with the PPP Act and each Bid is required to contain a separately sealed Prequalification Proposal, Technical Proposal and Financial Proposal within an outer sealed envelope.

1.7. BID BOND

Bidders are required to provide a bid bond of PKR **10.00 Million (PKR TEN Million)** with Bids in the form of a of call deposit, demand draft and bank guarantee issued by a scheduled bank in Pakistan in the format provided in **Form 2 (Format of Bid Bond)** which shall remain valid until the date of expiry of the Bid Security Validity Period. The Implementing Agency shall get the bid bond verified from the issuing bank. For the purposes of clarification, please note that if the Bidder wishes to submit for a Bid for multiple Groups, then a separate bid bond must be submitted in relation to each Bid for each Group.

1.8. COST OF BID PREPARATION

Each Bidder shall bear all costs associated with the preparation and submission of its Bid(s) and the Bidder's participation in the Bidding Process (the "**Bid Costs**") including, without limitation, all costs and expenses related to, participation in pre-bid conference, preparation and submission of the bidding documents, the provision of any additional information, conducting due diligence of the Project, visits to the Project site, engagement of consultants, advisors and contractors etc. and in discussion with the Implementing Agency shall be, in each case, borne by the Bidder (including all consortium members as applicable) the provision of any additional information, preparation of questions or requests for clarification to the Implementing Agency preparation of Bidders' questions or requests for clarification to the Implementing Agency preparation of Bidders' questions during the clarification process and discussions on the Concession Agreement.

The Implementing Agency shall not be responsible or liable to pay any Bid Costs of any Bidder regardless of the conduct or outcome of the Bidding Process.

1.9. CONSORTIUM OF BIDDERS

In case a Bid is submitted as a consortium or a JV, all members thereof are required to furnish a memorandum of understanding legally binding all members, jointly and severally using the format defined in **Form 7 Format of Consortium Or JV**, and a power of attorney in favour of the lead member using the format defined in **Form 8 Format of Authorization Of Lead Member**.

1.10. BIDDERS DUE DILIGENCE

Each Bidder is solely responsible for conducting its own independent research, due diligence, and any other work or investigations and for seeking any other independent advice necessary for the preparation of Bids, negotiation of agreements. and the subsequent delivery of all services to be provided by the Successful Bidder.

Each Bidder is also solely responsible for conducting its own independent research, due diligence, and any other work or investigations to ensure that the rehabilitation works for the Group they are bidding for has been completed to their satisfaction before placing a Bid for that particular Group.

No representation or warranty, express or implied, is made and no responsibility of any kind is accepted by the Implementing Agency or its advisors, employees, consultants or agents, for the completeness or accuracy of any information contained in the Bidding Documents or the Response to Questions Document or provided during the Bidding Process or during the term of the Concession Agreement. The Implementing Agency and its advisors, employees, consultants and agents shall not be liable to any person or entity as a result of the use of any information contained in the Bidding Documents or the Response to Questions Document or provided during the Bidding Process or during the term of the Concession Agreement.

Bidders shall not rely on any oral or written statements made by the Implementing Agency or its advisors, employees, consultants or agents.

All Bidders shall, prior to submitting their Bid, review all requirements with respect to corporate registration and all other requirements that apply to companies that wish to conduct business in the Implementing Agency's country. The Bidders are solely responsible for all matters relating to their legal capacity to operate in the jurisdiction to which this Bidding Process applies. Any Bids submitted in response to this RFP will be submitted upon a full understanding and agreement of terms of this RFP and, therefore, the submission of Bids in response to this RFP would be deemed as acceptance to the said terms.

Yours truly,

DEPUTY SECRETARY (PC)
Communication & Works Department,
Old Anarkali,
Lahore
PHONE: +92-42-99210453

SECTION A: INFORMATION TO BIDDERS

2. PROJECT BIDDING AND EXECUTION SCHEDULE

2.1 The Estimated Timetable for the Bidding Process is as follows:

Activity	Date
1. Bidding Documents Issuance	15.12.2025
2. Pre-Bid Conference/ Bidders Meetings	29.12.2025
3. Response to Bidders Queries Document Issuance	1 Week after Pre-Bid Conference
5. Bids Submission Deadline	16.02.2026
6. Opening of Prequalification Documents	16.02.2026
7. Evaluation of Prequalification Documents and Opening of Technical Proposals of Prequalified Bidders	To be Notified
8. Evaluation of Proposals and Opening of Financial Proposals of Technically qualified Bidders	To be Notified
9. Evaluation of Financial Proposals	To be Notified
10. Publication/Communication to Bidders of the Evaluation Report for each Group	To be Notified
11. Notifications of Awards	To be Notified
12. Anticipated execution of the Concession Agreements with Successful Bidder(s)	To be Notified

The Implementing Agency may, in its sole discretion (subject to applicable laws) and without prior notice to Bidders, amend the Estimated Timetable. Bidders shall not rely in any manner whatsoever on the Estimated Timetable and the Implementing Agency shall not incur any liability whatsoever arising out of amendments to the Estimated Timetable.

3. INTRODUCTION AND BACKGROUND OF PROJECT

3.1 Overview

The Implementing Agency has floated this RFP to seek a private partner (“**Concessionaire**”) for the installation of toll plazas, weighbridges and Electronic Toll and Traffic Management Systems (ETTM) (which would include e-tag systems) on and the operation and maintenance of each of the Group roads (the “**Project Highway**”) on a management contract (**MC**) basis. The ETTMs systems would be developed and operated by a financial institution with which the Concessionaire shall enter into a contract with.

3.2 Project Highway

In relation to all the Group roads mentioned in Section 1.1 hereinabove, the Implementing Agency intends to operate and maintain and install toll plaza, weighbridges, and ETTMs on each of the Project Highways. For this purpose, preliminary design reports for the installation of toll plazas, weighbridges and other ancillary facilities and traffic survey reports have already been carried out by Implementing Agency which shall be shared with the prospective bidders.

The main objective of the Project is to

- **Enhanced Performance:** Private sector involvement often results in higher performance standards due to competition and profit incentives
- **Innovation:** Private developers may introduce innovative solutions and technologies, improving service delivery.
- **Financial Efficiency:** Management contracts can lead to more efficient use of resources, potentially reducing public expenditure.

It is anticipated that with the efficient operation and maintenance of the existing road, and the installation of toll plazas, weighbridges and ETTMs, the quality of the Project Highway will be maintained and through regulation of Toll Plazas, ETTMs, e-tags and weighbridges, the traffic will be regulated. The total length of the Project Highways are mentioned in Section 1.1. The Project Highway will mostly follow the existing road centreline.

The scope of the Project includes:

- (a) the operation and maintenance of the Project Highway.
- (b) the installation of toll plazas, weighbridges, ETTMs and other ancillary facilities on the Project Highway.

3.3 Scope of Work

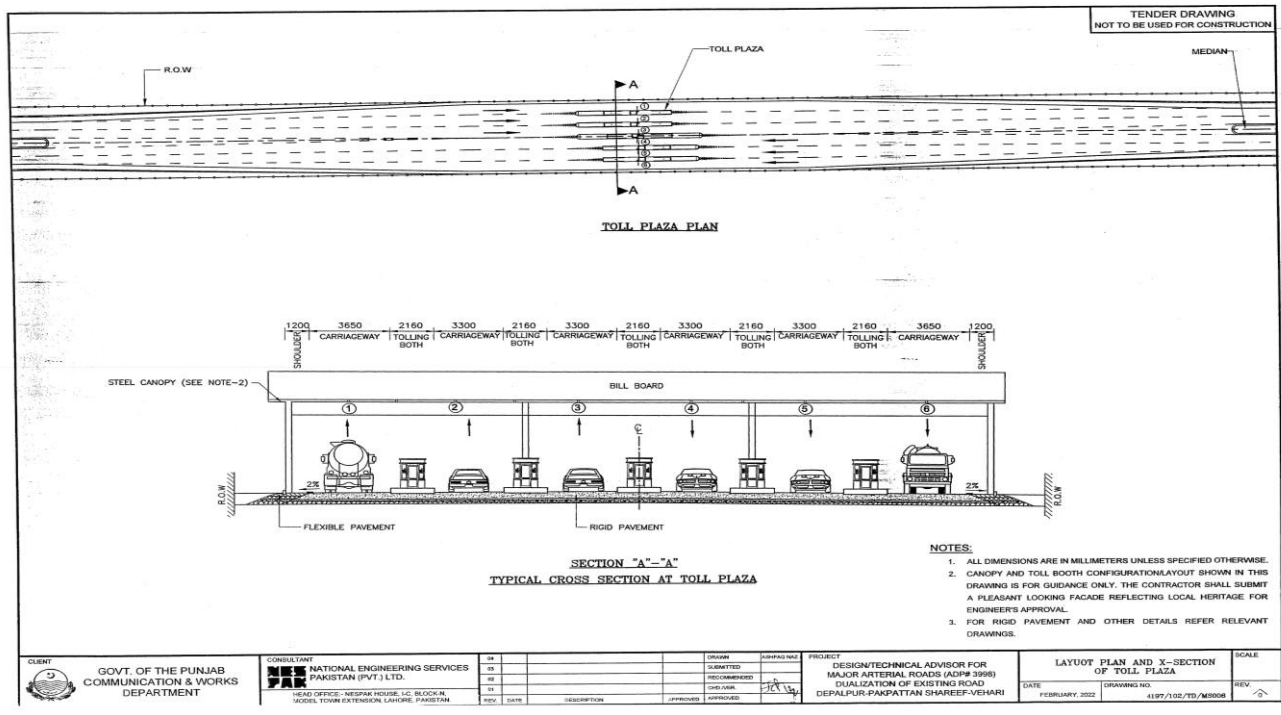
The Concessionaire shall be responsible for the overall implementation of the Project, including but not limited to the surveys, investigation, study, installation works, upgradation, operations and maintenance of the Project in line with the terms and conditions set out in the Bidding Documents.

The Concessionaire shall be responsible for operating and maintaining the Project Highway along with installing and maintaining ancillary structures including bridges, culverts, walls, drains, intersections, weighbridges, toll plazas, ETTMS (electronic toll and ticketing management system, which would include e-tag systems), as more particularly specified in the Bidding Documents.

Toll Plaza (Muridke – Narowal)

2-Nos New Toll Plaza purposed for Dual Carriageway Road of Muridke – Narowal

Toll Plaza Design Dual Carriageway



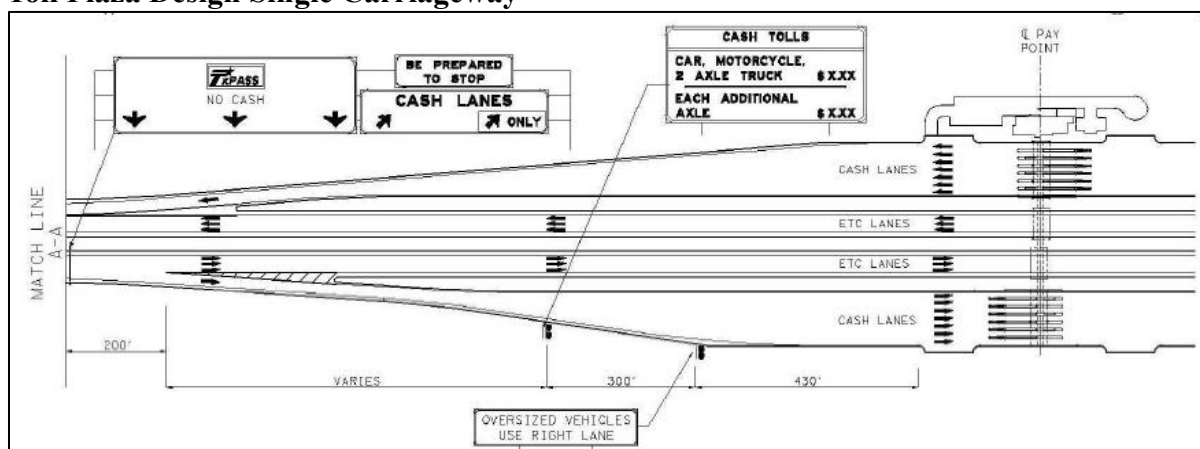
Side View of Toll Plaza



Toll Plaza (Narowal – Shakkar Garh)

1-No New Toll Plaza purposed for Single Carriageway Road of Narowal – Shakkar Garh

Toll Plaza Design Single Carriageway



The scope of work of these Bidding Documents shall not include the responsibility to carry out Major Maintenance (as defined in the Concession Agreement) on the relevant Project Highway. If Major Maintenance is required during the Concession Period and the same continues for a period of more than six (6) months, the operations of the Project Highway may be suspended or reduced. In such an event, the Concession Period may be extended for a duration equivalent to the suspension or reduction of the operations of the Project Highway.

The following are the details of the expected Major Maintenance work that is to be carried out in relation to each Group:

Group	Road & Length (kilometre)	Expected commencement date of Major Maintenance	Expected duration of Major Maintenance
Group -1	I. Muridke – Narowal (80 KM)	10-Year	6-Month
	II. Narowal – Shakkar Garh (33 KM)		

Please note that the abovementioned time periods are estimates and the Implementing Agency does not make any guarantees in relation to them. This information is being provided to the Bidders solely to aid them in better understanding the expected timelines in relation to the Major Maintenance works in relation to each Group.

3.4 Concession

Subject to and in accordance with the terms and conditions set forth in the Concession Agreement, the Implementing Agency shall grant to the Concessionaire the right to investigate, study, operate, maintain and transfer the Project and to exercise and/or enjoy the rights, powers, privileges, authorizations and entitlements as set forth in the Bidding Documents (collectively “**the Concession**”).

The Concessionaire may undertake the Project through a Special Purpose Vehicle (SPV) incorporated under the laws of Pakistan as a corporate entity, provided that such company shareholding is the same as indicated in the Bid.

The Concession shall be granted for a period of seven (7) years, which shall be extendable for a further period of three (3) years subject to the satisfaction of certain requirements which are provided in more detail in the Concession Agreement.

3.5 Performance Security

The Concessionaire shall, for due and punctual performance of its obligations under the Bidding Documents, deliver to the Implementing Agency, simultaneously with the execution of the Bidding Documents, an irrevocable bank guarantee (“**Performance Security**”) acceptable to Implementing Agency of an amount equal to the estimated revenue collection calculated by the Bidder as part of its Financial Proposal (but not less than 12 million). Such Performance Security shall be valid in accordance with the terms of the Concession Agreement.

3.6 Not Used.

3.7 Project Monitoring

The Implementing Agency and Concessionaire shall jointly appoint an Independent Engineer & Independent Auditor jointly for overseeing the Concessionaire’s activities including but not limited to assessing various performance metrics such as quality of the work done. The remuneration, cost and expenses of the Independent Engineer and Independent Auditor shall be borne by the Concessionaire.

3.8 Maintenance and Operation

The Concessionaire shall be responsible to operate and maintain the Project that includes:

- i. Maintenance (which does not include Major Maintenance as per the Concession Agreement) and Operation of the Concession Assets;
- ii. Toll Operations on the Project Highway;
- iii. Installation, upgradation and/or maintenance of toll plazas, weighbridges and other ancillary facilities on the Project Highway;
- iv. Installation and maintenance of Electronic Toll and Traffic Management Systems (ETTMS) (including e-tag systems) on the Project Highway, which will be done through a financial institution with which the Concessionaire shall enter into a contract with; and
- v. And all other obligations set-out in the Concession Agreement and its Schedules.

4. BID PREPARATION AND SUBMISSION

4.1 Single Bid

Bidders shall be allowed to submit only one Bid for each Group, either by itself, or as a member in a consortium or JV, and shall not, in relation to the Bidding Process for each Group:

- a. have common controlling shareholders with any other Bidder (or any constituent thereof); or
- b. be a member of another Bidder; or
- c. receive or have received any direct or indirect subsidy from any other Bidder, or have provided any such subsidy to any other Bidder; or
- d. have the same legal representative for purposes of this Bid as any other Bidder; or
- e. have a relationship with another Bidder, directly or through common third parties, that puts it in a position to have access to each other's information about, or to influence the Bid of either Bidder; or
- f. have participated as a consultant to the Implementing Agency in the preparation of any documents, design or technical specifications of the Project.

Any Bidder found in violation of these terms shall be disqualified. and the Implementing Agency shall be entitled to encash the Bid Bond, as the case may be.

4.2 Language

All Bids shall be submitted in English language for the ease of comprehension and comparability. Any supporting documentation or published material that is in another language must be accompanied by English translation(s). Unless specified otherwise, all currencies are to be represented as **Pakistani Rupees**. For foreign currencies, original figures in the foreign currency and the exchange rate used to calculate the Pakistani Rupees equivalent shall be provided.

4.3 Bid Validity

Bids shall be valid for a period of one hundred and Eighty (180) days from the date of submission. In exceptional circumstances, prior to expiry of the original Bid Validity Period, the Implementing Agency may request Bidders to grant a specified extension in the period of validity. This request and the response thereto shall be made in writing or through fax or email. A Bidder may refuse the request without forfeiting its Bid Bond. A Bidder agreeing to the request shall extend the validity of the Bid Bond correspondingly.

4.4 Bid Bond

Each Bidder shall submit a Bid Bond, in respect of each Group, with the Bid in the amount of Rupees **10.00 Million (PKR Ten Million)** that shall remain valid for duration of the Bid. The Bid Bond shall be in the form of a of call deposit, demand draft and irrevocable bank guarantee issued by a scheduled bank in Pakistan in the format provided in **Form 2 (Format of Bid Bond)** which shall remain valid until the date of expiry of the Bid Security Validity Period. The Implementing Agency shall get the bid bond verified from the issuing bank. For the purposes of clarification,

please note that if the Bidder wishes to submit for a Bid for multiple Groups, then a separate bid bond must be submitted in relation to each Bid for each Group. Any Bid not accompanied by a Bid Bond in the requisite amount shall be rejected by the Implementing Agency. Bid Bonds of unsuccessful Bidders shall be released within one (1) month of issuance of Letter of Award.

It is further clarified that no Bid Bond in the form of insurance guarantee shall be entertained. The Bidder shall ensure that the Bid Bond remains valid for a period of twenty eight (28) days after the end of the original Bid Validity Period and twenty eight (28) days after any extension of the Bid Validity Period subsequently requested by the Implementing Agency in accordance with Section 4.3 (the "**Bid Bond Validity Period**"). In the event the Bid Bond expires prior to the Bid Bond Validity Period, the Bidder shall procure an extension of the Bid Bond, at least fifteen (15) days prior to its expiry so that it remains fully valid and effective until the Bid Bond Bid Bond Validity Period. In event of failure by the Bidder to extend the Bid Bond, at least fifteen (15) days prior to its expiry the Implementing Agency shall be entitled to draw down in full the Bid Bond up to its full outstanding value

The Implementing Agency reserves the right to appropriate the Bid Bond if a Bidder withdraws the Bid during the Bid Validity Period or is found to have violated any of the fair practice clauses of this RFP, or refuses to sign the Concession Agreement if the Bid is accepted.

4.5 Bid Contents

In accordance with the stipulations of the single stage three envelope competitive bidding process, Bidders shall be required to submit a single sealed Bid containing the following three sealed proposals: Prequalification Proposal, Technical Proposal, and Financial Proposal.

4.5.1 Prequalification Proposal

The Prequalification Proposal shall be made in the format provided in **Form 3 (Format of Prequalification Proposal)** and shall include all supporting documentation necessary to evaluate the proposal in accordance with the criteria described in **Section B**.

4.5.2 Technical Proposal

The Technical Proposal shall contain a complete description and explanation of the Project and the methodology for the operations and maintenance of the Project, and the installation of toll plazas, weighbridges and ETTMS on the Project Highway. Additionally, the Bidder shall provide names and qualifications of key staff to be allocated to the Project and a description of any other resources that the Bidder intends to utilize for undertaking the Project. The Technical Proposal shall be prepared using the format attached in **Form 9 Format Of Technical Proposal** and shall include all supporting information necessary to evaluate the proposal in accordance with the criteria described in **Section B**.

4.5.3 Financial Proposal

The Financial Proposal shall be provided in the format attached as **Form 10 Format of Financial Proposal** on the day before the Bid Submission Date.

Under no circumstances shall Implementing Agency consider a conditional Bid.

The Financial Proposal shall also include a fully functional, non-restricted, dynamically linked Financial Model in Excel spreadsheet form stored on a non-rewritable USB.

The amount quoted in the Financial Proposal by the Bidder shall not include the costs of carrying out the Major Maintenance (as defined in the Concession Agreement) which shall have a separate bidding process.

4.6 Bid Preparation

The Financial Proposal shall also include a fully functional, non-restricted, dynamically linked Financial Model in Excel spreadsheet form stored on a non-rewritable USB. Bidders are expected to submit their respective Bids after visiting the Project Site and ascertaining for themselves the site conditions, traffic, location, surroundings, climate, weather data, availability of power, water and other utilities for construction, handling and storage of materials, applicable laws and regulations, and any other matter considered relevant to undertaking the Project.

By submitting the Bid, the Bidder shall be deemed to have:

- a. Made a complete and careful examination of this RFP and attached volumes;
- b. Received all relevant information requested from the Implementing Agency;
- c. Satisfied itself about all matters, things and information including matters hereinabove necessary and required for submitting an informed Bid, execution of the Project in accordance with the RFP and Draft Concession Agreement, and performance of all of its obligations thereunder;
- d. acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in the RFP or ignorance of any of the matters hereinabove shall not be a basis for any claim for compensation, damages, extension of time for performance of its obligations, and loss of profits etc. from the Implementing Agency, or a ground for termination of the Concession Agreement by the Concessionaire;
- e. acknowledged that it does not have a conflict of interest: and
- f. agreed to be bound by the undertakings provided by it under and in terms hereof.

4.7 Bid Signing and Cover Letter

The Prequalification, Technical and Financial Proposals shall be signed by a duly authorized representative of the Bidder. The Prequalification Proposal shall include a Power of Attorney substantially in the format provided in **Form 4 (Format of Authorization Of Representative)** duly stamped and notarized, indicating that the person(s) signing the Bid are authorized to sign the Prequalification, Technical and Financial Proposals to the Implementing Agency on behalf of Bidder and thus that the Bid is binding upon the Bidder during the full period of its validity.

4.8 Bid Submission

For a Bid in relation to each Group, Bidders shall submit one original Prequalification Proposal, one original Technical Proposal and one original Financial Proposal and two (2) hard copies and one (1) soft copy of the Prequalification and Technical proposals. For the purposes of clarification, there must be a separate set of the abovementioned Bid documents for each Group Bid.

The Prequalification Proposal shall include a cover letter in the format provided in **FORM 1 (FORMAT OF COVERING LETTER)**.

Each proposal shall be in a separate envelope indicating original or copy, as appropriate. The Prequalification, Technical and Financial Proposals shall be placed in sealed envelope clearly marked "Prequalification Proposal", "Technical Proposal" and "Financial Proposal" separately. These three envelopes, in turn, shall be placed along with the Bid Bond in a sealed outer envelope bearing the address and information indicated in this Letter of Invitation and the Group road for which the Bid is in relation to. The envelope shall be clearly marked. *"DO NOT OPEN, EXCEPT IN PRESENCE OF THE BID OPENING COMMITTEE"*.

Bids sent through fax or email shall not be considered.

4.9 Bid Modification

Bidders may modify, substitute or withdraw Bids submitted before the Bid Submission Date, provided that, written notice of the modification, substitution or withdrawal is received by the Implementing Agency prior to the Bid Submission Date. No Bid may be modified, substituted or withdrawn on or after the Bid Submission Date.

4.10 Amendments to RFP

At any time prior to the Bid Submission Date, the Implementing Agency may, for any reason, whether at its own initiative or in response to a query by a Bidder, modify the RFP by the issuance of addenda. Any addendum issued hereunder shall be in writing and shall be sent to all parties that have registered with the Implementing Agency for such correspondence. In order to allow the Bidders a reasonable time for taking an addendum into account, or for any other reason, the Implementing Agency may, at its sole discretion, extend the Bid Submission Date in a manner similar to the original public notice.

No other communications of any kind whatsoever, including, without limitation, the Response to Questions Document, shall modify the Bidding Documents.

4.11 Clarifications

A Bidder requiring any clarification on the Bidding Documents may send a written request (or by e-mail dsppccwd@gmail.com with copy to consultant PPP at nayvar286@gmail.com for clarification to the Implementing Agency. Bidders may also propose amendments/comments to the Bidding Documents to be made directly in the Bidding Documents in track change mode with a separate note explaining the rationale behind any suggested amendment or modification. Any such comments shall be sent by e-mail to the Implementing Agency, with a copy to the consultants.

Any such clarification request /comments or mark-up as specified in this Section shall be addressed before 14:00 (Pakistan time) on the Clarification / Comments Request Deadline. The Implementing Agency shall provide response to such queries as soon as possible.

Electronic copies of the response, including an explanation of the query but not identification of its source (the **"Response to Questions Document"**), shall be sent to all Bidders. If similar or repeated queries are made by Bidders, those queries may be listed as one query and the Implementing Agency may respond to such query only once. The Implementing Agency reserves the right not to consider such comments or amendments of the Bidding Documents. Any

substantial changes that affect the structure of Bidding Documents or the Project shall in no case be taken into consideration.

4.12 Taxation

By submitting a Bid, the Bidder shall be deemed to have accepted these obligations. Subsequently, the Bidder shall show in the Financial Model the extent and timing of its tax provisions and the proposed tax depreciation policy that will be adopted for each category of asset.

The amount quoted by the Bidder in the Financial Proposal must be the figure which is exclusive of all applicable taxes.

4.13 Consortium or Joint Venture

Bidders may submit a Bid in a consortium or JV of two or more enterprises, provided such Bid shall be signed by all members in the consortium or JV so as to legally bind all members, jointly and severally.

The lead member of the consortium or JV shall also commit to hold a minimum equity stake equal to at least fifty percent (50%) of the total paid up equity capital of the Concessionaire.

A valid legal instrument in the manner specified in **Form 7 Format of Consortium JV** providing such commitments shall be submitted with the Bid.

4.14 Confidentiality

Information relating to the examination, clarification, evaluation and recommendation of Bids shall not be disclosed to any person who is not officially concerned with the Bidding Process or retained professional advisor advising the Implementing Agency in relation to, or matters arising out of, or concerning the Bidding Process. The Implementing Agency will treat all information, submitted as part of the Bid in confidence and will require all those who have access to such material to treat the same in confidence. The Implementing Agency may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or the Implementing Agency or as may be required by law or in connection with any legal process.

4.15 Fraud and Corrupt Practices

The Bidders and their respective officers, employees, agents and advisers are required to observe the highest standard of ethics during the Bidding Process and during the subsistence of the Concession Agreement. Notwithstanding anything to the contrary contained herein, or in the Draft Concession Agreement, the Implementing Agency shall reject a Bid, or terminate the Concession Agreement without being liable in any manner whatsoever to the Bidder or Concessionaire, as the case may be, if it determines that the Bidder or Concessionaire, as the case may be, has, directly or indirectly or through an agent, engaged in corrupt, fraudulent, coercive, undesirable or restrictive practices in the Bidding Process. In such an event, the Implementing Agency shall appropriate in full the Bid Bond or Performance Security, as the case may be.

Following terms shall have the meaning hereinafter respectively assigned to them:

- a. **“corrupt practice”** means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bidding Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the Implementing Agency who is or has been associated in any manner, directly or indirectly with the Bidding Process or has dealt with matters concerning the Concession Agreement or arising there from, before or after the execution thereof at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Implementing Agency, shall be deemed to constitute influencing the actions of a person connected with the Bidding Process); or (ii) engaging in any manner whatsoever, whether during the Bidding Process or after the execution of the Concession Agreement, as the case may be, any person in respect of any matter relating to the Project or the Concession Agreement, who at any time has been or is a legal, financial or technical advisor of the Implementing Agency in relation to any matter concerning the Project;
- b. **“fraudulent practice”** means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts in order to influence the Bidding Process;
- c. **“coercive practice”** means impairing or harming or threatening to impair or harm, directly or indirectly, any person or property to influence any person's participation or action in the Bidding Process;
- d. **“undesirable practice”** means (i) establishing contact with any person connected with or employed or engaged by the Implementing Agency with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a conflict of interest; and
- e. **“restrictive practice”** means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Bidding Process.

SECTION B: EVALUATION AND AWARD

5. BID OPENING

5.1 Bid Opening and Evaluation Committee

The Implementing Agency shall notify a Bid Opening and Evaluation Committee (BOEC) that shall open the Bids and analyse and evaluate the Bids according to the criteria contained in this RFP for recommendation to the competent authority.

The BOEC does not have an obligation, responsibility, commitment, or legal liability toward any Bidder or any Bidder's collaborators arising from this RFP or any Bid submitted in response to it, or from the Bidding Process.

5.1 Procedure

The BOEC shall open the Bids, in the presence of Bidders, or their authorized representatives, who choose to attend the Bid opening on the date and time provided in **Section 2 - Letter of Invitation** of this RFP. The Bidders' representatives who are present shall sign a register in evidence of their attendance.

The BOEC shall examine the Bids to determine whether they are complete and responsive, whether the requisite Bid Bonds have been furnished, whether the documents have been properly signed and whether the Bids are generally in order.

Any errors or omissions in a Bid will not result in its automatic rejection. The BOEC reserves the right to ask Bidders to correct any errors or omissions in their Bids to the BOEC's satisfaction. However, under no circumstances can a Bidder amend the information quoted in **Form 13 Required Financial Information For Bid Evaluation** as the result of clarifying or rectifying a Bid.

Bidders' names, bid withdrawals (if any), the presence of the requisite Bid Bond and such other details as the BOEC at its discretion, may consider appropriate, will be announced at the Bid opening.

The BOEC shall prepare detailed minutes of the Bid opening for transparency and its own record.

6. BID EVALUATION

6.1 Responsiveness

Prior to and during evaluation of Bids, the BOEC shall determine whether each Bid is responsive to the requirements of this RFP, in accordance to the following:

- a. it is accompanied by a Bid Bond in the format prescribed in **Form 2 (Format of Bid Bond)**;
- b. it is duly signed, and each page is initialled by the Bidder;
- c. it is received as per the formats provided in **Section C**;
- d. it is received by the Bid Submission Date including any extension thereof;
- e. it is signed, sealed, bound together in hard cover and marked as stipulated in the above clauses;
- f. it is accompanied by the power of attorney authorizing a representative in accordance with **Form 4 Format of Authorization Of Representative**;
- g. it is accompanied by an affidavit in accordance with **Form 5 Format of Affidavit**;
- h. it is accompanied by a cover letter in accordance with **Form 1 Format of Cover Letter**;
- i. it is accompanied by a duly signed and witnessed integrity pact in accordance with **Form 6 Format of Integrity Pact**;
- j. in case of a consortium or JV it is accompanied by a joint venture agreement in accordance with **Form 7 Format of Consortium Or JV** and a power of attorney authorizing a lead member in accordance with **Form 8 Format of Authorization of Lead Member**;
- k. it contains all the information (complete in all respects) as requested in this RFP; and
- l. it does not contain any condition or qualification.

BOEC reserves the right to reject any Bid which is recommended by the BOEC as non-responsive and no request for alteration, modification, substitution or withdrawal shall be entertained in respect thereof provided further BOEC may for reasons to be recorded in writing reject a speculative or unrealistic bid as non-responsive but such rejection of a bid shall not lead to the termination of the bidding process.

6.2 Procedure

The BOEC shall open responsive Prequalification Proposals in the presence of Bidders or their authorized representatives who choose to attend and evaluate them according to the evaluation criteria prescribed in Section 6.3.

After completion of the prequalification, the BOEC shall announce Bidders who have prequalified and open Technical Proposals of prequalified Bidders in the presence of prequalified Bidders or their authorized representatives who choose to attend. Technical and Financial Proposals submitted by Bidders that do not meet the prequalification criteria shall not be opened and shall be returned unopened after the completion of the Bidding Process. The BOEC shall evaluate Technical Proposals according to the evaluation criteria prescribed in **Section 6.4**.

After completion of the technical evaluation, the BOEC shall announce Bidders who have technically qualified and open Financial Proposals of technically qualified Bidders in the presence of technically qualified Bidders or their authorized representatives who choose to attend. Financial Proposals of Bidders that do not meet the technical evaluation criteria shall not be opened and shall be returned unopened after the completion of the Bidding Process. The BOEC shall evaluate Financial Proposals according to the evaluation criteria prescribed in **Section 6.5**.

6.3 Prequalification Evaluation Criteria

As a part of the basic eligibility criteria the Bidder or its JV/partner/consortium member shall be required to meet the following criteria:

Mandatory Provisions/ Eligibility

Bidder Information
The Bidder must provide the information required in Form 3A (Bidder Information Form) Relevant Form: Form 3A — Bidder Information Form
Registration with PEC
The Bidder must possess valid registration certificate of PEC in the Category CB or above (Attach valid PEC registration certificate) (Foreign firms if participating in the bidding process may follow the provisions stipulated in PEC bye laws for participating in Bidding process).
Conflict of Interest
The Bidder shall not have the Conflict of Interest. The “Conflict of Interest” means: (a) where a contractor, supplier or consultant provides or could provide, or could be perceived as providing biased professional advice to a procuring agency to obtain an undue benefit for himself or those affiliated with him; (b) receiving or giving any remuneration directly or indirectly in connection with the assignment except as provided in the contract; (c) any engagement in consulting or other procurement activities of a contractor, consultant or service provider that conflicts with his role or relationship with the procuring agency under the contract; (d) where an official of the procuring agency engaged in the procurement process has a financial or economic interest in the outcome of the process of procurement, in a direct or an indirect manner. (Attach Affidavit on Rs. 100 Stamp paper attested by Notary Public, while foreign bidder's Affidavit should be attested by Consulate of their country).
Blacklisting
The Bidder is not blacklisted. Blacklisting means:

“Barring a bidder, contractor, consultant, or supplier from participating in any future procurement proceedings by the Pakistan Engineering Council/PPRA/any government, semi government, autonomous body”

Relevant Form:

Form 3B – Historical Contract Non-Performance, Blacklisting and Pending Litigation

Litigation History

All pending litigation shall in total not represent more than fifty (50)% of the Bidder's net worth and shall be treated as resolved against the Bidder. (Provide details or attach Affidavit in case of not applicable on a stamp paper, of appropriate value, attested by Notary Public, while foreign bidder's Affidavit should be attested by Consulate of their country).

Relevant Form:

Form 3B – Historical Contract Non-Performance, Blacklisting and Pending Litigation

History of Non-Performing Contracts

All non-performance of a contract did not occur within the last 5-Years prior to the deadline for bid submission based on all information on fully settled disputes or litigation, A fully settled dispute, or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract and where all appeal instances available to the applicant have been exhausted. (Provide details or attach Affidavit in case of not applicable on a stamp paper of appropriate value attested by Notary Public, while foreign bidder's Affidavit should be attested by Consulate of their country).

The past performance of the applicant on all completed and ongoing projects may also be checked in coordination with other government departments.

Relevant Form:

Form 3B – Historical Contract Non-Performance, Blacklisting and Pending Litigation

Quality Policy

The Bidder shall submit copy of Quality Policy of the company.

Health & Safety Policy

The Bidder shall submit copy of Health & Safety Policy of the company.

Financial Situation

Minimum Net Worth of at-least PKR 350 Million (excluding any surplus on revaluation) as reflected in the annual audited financial statements for the last

financial 3-year. Average Annual Turnover of at-least PKR 1000 Million for last 3-Years (Minimum average annual turnover as mentioned above, calculated as total certified payments received for contracts in progress or completed, within the last 3-years, Submit Audited Financial Reports) Relevant Form: Form 3C – Financial Situation
Current Contract Commitments
Provide details of the current commitments of the Bidder. Relevant Form: Form 3D – Current Contract Commitments/ Works in Progress
Work Experience
Similar Work with cost and complexity (one similar project, experience in operations and maintenance of other road projects and current work commitments along with evidence of satisfactory completion from the client and satisfactory execution of the work in progress), completed in the past 5 years (submit completion certificate(s)). (Foreign firms if participating in the bidding process may follow the provisions stipulated in PEC by laws for participating in bidding process) Relevant Form: Form 3E – Details of Contracts of Similar Nature and Complexity completed over the last 5-years
Shareholding structure of its proposed SPV

(If any Bidder fails in any one or more of the Mandatory Provision/Eligibility Criteria, its Prequalification Proposal shall be regarded as “Not Prequalified” and will not be considered for further evaluation).

6.4 Technical Evaluation Criteria

The Technical Proposal of only those Bidders shall be opened who qualify the Prequalification Evaluation Criteria set forth in evaluation of Section 6.3 above.

The BOEC shall attribute a technical score (TS) to responsive Technical Proposals.

Technical Proposals scoring less than seventy (70) points shall be rejected. TS shall be calculated as follows:

Technical Evaluation/ Qualification Criteria.

Weightages/Marks

Serial No.	Criteria	Weightage/Marks
1.	Financial Soundness	30
2.	Work Experience	40
3.	Work Programme	05
4.	Work Methodology	05
5.	Key Personnel	10
6.	Plant and Equipment	10
	Total	100

Please note that the Technical Evaluation Criteria marking will depend on which Group(s) the Bidder is bidding for. The Technical Evaluation Criteria marks for each Group are mentioned in the Technical Evaluation table herein below.

For technical qualification, a bidder must score 70 or more marks.

Financial Soundness		
Criteria		Maximum Score Awarded
Average Annual Turnover for last 03 years (as latest Audited accounts)		15 Marks
Group – 1	For Annual Turnover of Rs. 1000 Million (10 Marks) For each increment of Rs. 50 Million (1 Mark upto 5 mark)	
Minimum Net Worth		15 Marks
Group – 1	For minimum net worth of Rs. 350 Million (10 Marks) For each increment of Rs. 50 Million (1 Mark upto 5 mark)	

Work Experience		
Criteria	Maximum Awarded	Score
General Operation and Maintenance Experience For each Group, the Bidder shall be in the business of operation and maintenance at least for the number of years as specified below.		20 Marks
Group – 1	For 5 years' experience (10 Marks) Experience under operation and maintenance contracts in the role of contractor, subcontractor, or management contractor for at least the last 7 years prior to the bid submission deadline and with activity in at least 6- months in each year. For each increment of 1-year' experience (2 Mark upto 10 Marks)	
Specific Operation and Maintenance Experience		20 Marks
Group – 1	Similar Work with cost and complexity (one similar project, experience in operations and maintenance of other road projects and current work commitments along with evidence of satisfactory completion from the client and satisfactory execution of the work in progress e.g., NHA tolling contract), completed/ under progress in the past 5years (submit completion certificate(s)). For one similar project of value of Rs.500 Million (15 Marks) For each increment of Rs. 100 million (1 mark upto 5 mark)	

Work Programme		
Criteria	Maximum Awarded	Score
Detailed and Project Specific (05 Marks) Substantially Detailed (05 Marks) Sketchy (02 Marks)	05 Marks	

Work Methodology		
Criteria	Maximum Awarded	Score
Detailed and Project Specific (05 Marks) Substantially Detailed (05 Marks) Sketchy (02 Marks)	05 Marks	

Key Personnel Qualification and Experience		
The Bidder must demonstrate that it has the personnel for the key positions that meet the following requirements (All engineers must be registered with PEC, it is mandatory) (For all Engineers, the Bidders are required to submit PEC registration certificate and the signed CVs of personnel be attached as per Form 9B – CVs of Proposed Experts provided hereunder). (List of Key Personnel to be attached as per Form 9A – List of Key Personnel)		
Criteria	Maximum Score Awarded	
Transportation Engineer(s) (At least 2) (MSc Transportation Engineering, 20 years experience, 10 years relevant experience) 20 or more years' experience. (02 Marks) <20> 15 years' experience (1.5 Marks) < 15> 10 years' experience (1.0 Marks) Less than 10 years' Experience Mark) (0 Mark)	02 Marks	
Bridge and Structures Engineer(s) (MSc Structures, 10 years experience, 6 years relevant experience) 10 or more years' experience. (01 Marks) <10> 08 years' experience (0.75 Marks) < 08> 05 years' experience (0.50 Marks) Less than 05 years experience (0 Mark)	02 Mark	

Financial Specialist (CA/ACCA/MBA/MSc (Preferably Major in Finance)/or equivalent), 10 years experience, 8 years relevant experience) 10 or more years experience (01 Marks) <10> 08 years' experience (0.75 Marks) < 08> 05 years' experience (0.50 Marks) Less than 05 years experience (0 Mark)	01 Mark
Legal Specialist (LLB, 10 years' experience, 5 years relevant experience) 10 or more years' experience (01 Marks) <10> 08 years' experience (0.75 Marks) < 08> 05 years' experience (0.50 Marks) Less than 05 years experience (0 Mark)	01 Mark
Operation and Maintenance Engineer (BSc Civil Engineering, 10 years experience, 8 years relevant experience) 10 or more years experience (01 Marks) <10> 08 years' experience (0.75 Marks) < 08> 05 years' experience (0.50 Marks) Less than 05 years experience (0 Mark)	02 Mark
Project Manager (BSc Civil Engineering, 20 years experience, 10 years relevant experience) 20 or more years experience (02 Marks) <20> 15 years' experience (1.5 Marks) < 15 years' experience (1 Mark) Less than 10 years experience (0 Mark)	02 Mark

Plant and Equipment

The Bidder must demonstrate that it has the key equipment listed hereafter. It is

mandatory that all equipment should not more than 10-years old (**in accordance with the format provided in Form 9C Plant and Equipment**).

Sr No	Name of Machinery	Req. No
1	Front End Loader 1.5m3	1
2	Dumper	3
3	Grader 140 HP	1
4	Combination Roller	1
5	Water Tank Tow Type inc Tractor	3
6	Static Tandem Roller	1
7	PTR 9 wheeler	1
8	Tractor	2
9	Concrete Mixer	1
10	Excavator Track / wheel type	1

Note:

1. The marks mentioned in above table are for owned equipment.
2. Total equipment available with the bidder is to be listed along with its current mobilization on on-going projects. The Bidder shall provide further details of proposed items of equipment using the relevant Form provided hereunder.
3. The bidder must submit ownership documents for equipment own by it.
4. For Leased/Rental equipment, the bidder must submit lease/rental agreement(s).
5. For leased/rental equipment bidder will get 50% marks.

6.5 Financial Evaluation Criteria

The Financial Proposals of only those Bidders shall be opened who will qualify by scoring minimum 70 point, out of total 100 points, in share in revenues for technical evaluation.

Prior opening the Financial Proposals, the Implementing Agency shall announce the Reserve Price for each Group. Following the opening of the Financial Proposals, the procedure set out below shall apply to determine the Successful Bidder for each Group:

- (i) If the Reserve Price is met or exceeded, the highest Bidder shall be declared the Successful Bidder; however, if the Reserve Price is not, the provisions of (ii) to (iv) below shall apply.
- (ii) If no Bidder meets the Reserve Price, the Implementing Agency shall request all technically qualified Bidders to submit revised financial offers for the Group (the "**Revised Offer**") by a stipulated deadline. All Revised Offers obtained from Bidders must (a) be in writing and made within such time period as specified by the Implementing Agency; (b) be irrevocable and unconditional; (c) not be less in value than the value of the previous Financial Proposal of the Bidder; and (d) be valid for a period of [●] days from the date that the Revised Offer is made. All original offers will remain valid unless superseded by a compliant Revised Offer.
- (iii) Following the receipt of Revised Offers, if the highest revised Bid equals or exceeds the Reserve Price, will be awarded the Bid for that Group.

- (iv) If following receipt of the Revised Offers, the Reserve Price is still not achieved, Implementing Agency reserves the right to either require Bidders to submit further Revised Offers or to grant the Group concession at the highest offer less than the Reserve Price.

The evaluation of the financial proposal for each Group would be computed using the following metrics:

Evaluation Factor	Max. Score
Share in Revenues	100 Marks

These criteria are further elaborated as under:

Share in Revenues: The Bidder quoting the highest First Operating Year Revenue Share (as defined below) shall be awarded one hundred (100) marks. The Bidder quoting the second highest First Operating Year Revenue Shared (as defined below) would see their score reduced proportionately.

Where:

First Operating Year Revenue Share: ‘Percentage Revenue Shared’ X (multiplied by) “Expected Revenue” of the Project for first operating year.

Minimum Revenue Shared = The higher of [●]% of the First Operating Year Revenue Share, or [●]% of the actual revenue collected after the First Operating Year.

Percentage Revenue Shared shall mean:

- (a) the uniform percentage of total revenue offered to be shared by the Bidder with the Implementing Agency during each year starting from the Commercial Operations Date till the [●] Operating Year; and
- (b) the uniform percentage of total revenue offered to be shared by the Bidder with the Implementing Agency starting from the [●] Operating Year (as the case maybe).

Expected Revenue shall mean the amount reflected as revenue (toll and non-toll revenue) in the Bidder’s Financial Model based on the Bidder’s estimate of traffic and other variables during operating period.

7. AWARD

7.1 Announcement

Prior to the expiration of the Bid Validity Period, the Implementing Agency shall notify the Successful Bidder in writing that its Bid has been accepted by the Implementing Agency (the "Notification of Award").

The results of the Bidding Process shall be published on the Implementing Agency’s official website at least ten (10) days prior to Notification of Award and/or in accordance with the applicable laws.

7.2 Negotiation

The Implementing Agency may conduct contract negotiations with the selected Bidder in accordance with the provision of the PPP Act. The negotiations shall focus on the terms and conditions not specified in this RFP and the Draft Concession Agreement but no post-bid changes in the terms and conditions mentioned hereto as binding and which formed part of the Bid evaluation shall be allowed as a consequence of contract negotiations.

7.3 Termination of Bidding Process

The Implementing Agency reserves the right to terminate the Bidding Process at any time till such time that the Concession Agreement is signed. The Implementing Agency shall, upon request of any of the Bidders, communicate to such Bidder, grounds for the cancellation of the Bidding Process, but is not required to justify such grounds.

In the event the Implementing Agency terminates the Bidding Process, the Implementing Agency reserves the right to proceed with all or any part of the Project, including the use of some or all of a Bidder's ideas and concepts, based on the approach that the Implementing Agency considers to be most suitable which does not exclude the involvement of one or more of the Bidder's collaborators.

7.4 The Implementing Agency's Right to Accept or Reject

The Implementing Agency may, in its sole discretion:

- (a) accept any Bid;
- (b) reject any Bid;
- (c) annul the Bidding Process and reject all Bids;
- (d) annul the Bidding Process and commence anew process; or
- (e) waive irregularities, minor informalities, or minor non-conformities which do not constitute material deviations in the submitted Bids from the Bidding Documents.
- (f) at any time prior to the award of the Concession Agreement without incurring any liability to the affected Bidder or Bidders and without any obligation to inform the affected Bidder or Bidders of the grounds for the Implementing Agency's actions.

7.5 Failure to sign the Concession Agreement

If the Successful Bidder fails to comply with the provisions of this Section, this failure shall constitute sufficient grounds for annulment of the award and forfeiture of the Bid Security and such other remedies as the Implementing Agency may take under the applicable law, and the Implementing Agency may, in its discretion, award the Concession Agreement to the second ranking bidder. In such event, the Implementing Agency shall notify the second ranking bidder of its election by written notice (a "Substitute Selection Notice"). The second ranking bidder shall, from and after the date of receipt of the substitute selection notice, assume the status of the Successful Bidder hereunder and shall meet the requirements of this Section.

SECTION C: BID FORMS

Form 2 FORMAT OF COVERING LETTER

No: _____
Date: _____

Deputy Secretary (PC)
Communications and Works Department,
Government of Punjab
[Address and Telephone Number]
The undersigned,

Name: _____
Title/Position: _____
Company: _____

Re: Operations And Maintenance of the [●] Road Project

1. DEFINITIONS

Unless the context indicates otherwise, all capitalized terms and expressions used herein and in our Bids have the meaning given to them in the document entitled 'Invitation for Bids' dated [●] (as amended and/or supplemented from time to time) (the **RFP**).

2. GENERAL

We, the undersigned, acknowledge, confirm and agree that:

- A) we have carefully examined, read and understood and agreed to the terms of the Concession Agreement (including the annexes), the Bidding Documents, including the Annexes;
- B) we have satisfied ourselves that we have full and complete understanding of the nature and location of the Project and services referenced above and the general and local conditions to be encountered in the performance thereof; and
- C) we, the undersigned, offer to carry out all services and obligations of the Operator as defined in the Concession Agreement in conformity with our Bid and the Bidding Documents.

3. PRICING

We understand that you are not bound to accept the lowest Financial Bid or any Bid you may receive.

4. BID PRICE

The total price of our bid, excluding any discounts offered, is as below:

Description	Amount (in numbers)
(a) Operation and Maintenance Services in an amount of [amount in words] [name of currency].	
(b) Toll Plaza, Weighbridges and ETTMS Installation Works in an amount of [amount in words] [name of currency].	

A. SUB-TOTAL = (a) + (b)	
(d) Emergency Works in an amount of <i>[amount in words]</i> <i>[name of currency]</i> .	
B. TOTAL = A + (d)	

Combined Price: We hereby confirm that our combined price for Operations and Maintenance does not exceed the threshold which is *[insert first operating year amount and percentage of revenue share]*.

Bid Price: The total price, excluding any discounts offered, below is:

Description	Amount (in numbers and words)		
	Lot 1	Lot 2	Lot 3
(a) Operation and Maintenance Services <i>[amount in numbers, name of currency]</i>			
<i>[amount in words]</i>			
(b) Toll plazas, weighbridges and ETTMS Installation Works <i>[amount in numbers, name of currency]</i>			
<i>[amount in words]</i>			
A. SUB-TOTAL = (a) + (b) <i>[amount in numbers, name of currency]</i>			
<i>[amount in words]</i>			
(c) Emergency Works <i>[amount in numbers, name of currency]</i>			
B. TOTAL = A + (c) <i>[amount in numbers, name of currency]</i>			
<i>[amount in words]</i>			

Combined Price: We hereby confirm that our combined price for Operation and Maintenance Works does not exceed the threshold which is *[Insert first operating year amount and percentage of revenue share]*.

Discounts: The discounts offered and the methodology for their application are:

(i) The discounts offered are: *[Specify in detail each discount offered.]*

(ii) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts]*;

5. GUARANTEES REQUIRED BY THE LENDERS AND PERFORMANCE SECURITY

We declare that we will be able to provide the guarantees required by the lenders for the Project. In addition, if our Bid is accepted, we also undertake to provide the Performance Security (as defined in the Concession Agreement) in the form, in the amount and within the times specified in the Concession Agreement.

6. PROPOSAL COMPLIANT WITH SUBMISSION REQUIREMENT

We declare and confirm that our Bid satisfies and complies with the submission requirements indicated in the RFP. We also undertake that no circumstances have arisen that would materially and adversely affect our ability to satisfactorily perform the Installation Works and the Operation and Maintenance of the Project, as defined in the Concession Agreement if our Bid is accepted.

7. FIRM AND IRREVOCABLE PROPOSAL

We agree to abide by this Bid, which consists of our Prequalification Bid the Technical Bid and Financial Bid (each as defined in the Bidding Documents), for a period of one hundred and twenty (120) days from the Bids Submission Deadline as set forth in the Bidding Documents, and that it is irrevocable and shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

8. FUTURE WARRANTIES

We hereby represent and warrant that all information, data and materials of any nature whatsoever provided by us in the Bid is true and accurate and not misleading in any nature. We have made a complete and careful examination of the Invitation for Bids and have received all the relevant information from the Implementing Agency, as required for the purposes of submission of the Bid. We further warrant that we have verified and understand all the information received from the Implementing Agency in connection with the RFP.

To the extent that any provision in our Bid conflicts with the terms and conditions of the Bidding Documents, such provision is hereby withdrawn.

9. CONFIDENTIALITY

In connection with the transaction contemplated by the Invitation for Bids, the Bidder has been (or will be) given access to information regarding the Project, including, but not limited to, financial data, agreements, business plans, software, reports, data, records, forms and other information, as well as information regarding the Implementing Agency or provided by the Implementing Agency (all such information being referred to as "**Confidential Information**").

The Bidder hereby agrees and warrants that to the extent it receives Confidential Information, the Bidder and its affiliates, controlling and related persons and agents (collectively, the "**Recipient**"), the Recipient shall:

(a) keep and maintain the Confidential Information strictly confidential;

- (b) disclose such Confidential Information (if at all) only to its controlling persons, its attorneys and professional advisors, and to such employees who have a reasonable need to know such Confidential Information (subject in each case to such person's agreement to make no further disclosure), or as may be required by law;
- (c) use such Confidential Information solely for the purpose of determining whether to enter into the transaction contemplated hereby; and (d) promptly upon request of the Implementing Agency disclosing Confidential Information following the abandonment of the transaction contemplated by the Invitation for Bids, return such Confidential Information (and all copies thereof) to the Implementing Agency.

10. ADDITIONAL DOCUMENTS

In addition to the covering letter the Bidder shall submit the information identified in **SCHEDULE 1 (ADDITIONAL DOCUMENTS)** to this Bid Form together with the Bid Form.

We acknowledge and agree that the Implementing Agency will not be responsible for any errors or omissions on our part in preparing this Bid, and we shall indemnify the Implementing Agency fully in connection therewith.

[signature]
In the capacity of
[position]
Authorized to sign this Bid Form of
[name of Bidder]

Form 3 FORMAT OF BID SECURITY

[To be stamped in accordance with the Stamp Act, 1899]

IRREVOCABLE AND UNCONDITIONAL BID SECURITY GUARANTEE

BANK GUARANTEE No:

DATE:

[To be inserted prior to bidding].

Dear Sir,

Ref: Bid for Operations And Maintenance of the [●] Road, Punjab, Pakistan on a Management Contract (MC) basis

WHEREAS [name and legal status of the Bidder] (hereinafter referred to as the “**Bidder**”) has submitted his/its bid dated _____ for granting of a Concession for the **Operations And Maintenance of the [●] Road** (hereinafter referred to as the “**Bid**”), a requirement of which is that the Bidder submit a bid security in the amount of [*Insert Amount*].

AND WHEREAS to satisfy the afore stated requirement, this Deed of Bid Security Guarantee (hereinafter referred to as the “**Guarantee**”) is made on this ____ day of ____, 202- by [name of the bank] a banking company lawfully undertaking business in the Islamic Republic of Pakistan, having its registered office at _____ (hereinafter referred to as the “**Bank**” which expression shall, wherever the context so admit, include its executors, administrators and successors-in interest) in favor of the Communications and Works Department, Government of Punjab (**Implementing Agency**).

NOW THEREFORE in consideration of Implementing Agency accepting the Bank’s obligations contained in the following paragraphs for the due discharge of the Bidder’s obligation to provide a bid security, THE BANK, by THIS GUARANTEE AGREES TO THE FOLLOWING:

1. The Bank hereby undertakes and guarantees that it shall, on the first written demand of the Implementing Agency, without any caveat, demur, protest or contest and without reference or recourse to the Bidder or any other person, organization or authority, pay the Implementing Agency within three (3) working days, in clear funds, without any deduction or withholding on any account whatsoever, a sum of (*Insert Amount*).
2. The obligation of the Bank to the Implementing Agency to pay the sum specified in paragraph 1 above within the time and in the manner specified therein shall be that of principal debtor in the first instance without the Implementing Agency proceeding against the Bidder and notwithstanding any security or other guarantee the Implementing Agency may have in relation to the Bidder’s liabilities.
3. Any demand specified in paragraph 1 above, made by the Implementing Agency on the Bank, will be conclusive and binding between the Implementing Agency and the Bank notwithstanding any dispute or difference between the Implementing Agency and the Bidder or any dispute pending before any court, tribunal, arbitrator or any other judicial, quasi-judicial or other authority. The Bank hereby affirms that it shall pay the Implementing Agency the amount specified in paragraph 1 above within the time and in the manner specified therein, without the Implementing Agency needing to prove or show grounds or reasons for the Implementing Agency’s demand.

4. Any payments made to the Implementing Agency shall be net and free of and without any present or future deductions such as for the payment of any taxes, executions, duties, expenses, fees, deductions or retentions regardless of the nature thereof or the authority levying the same.
5. The Bank hereby waives, to the fullest extent possible by law, any defense whether in law or equity, that may be raised to prevent or delay the Implementing Agency from making a demand specified in paragraph 1 above or being paid the sum specified therein.
6. The Implementing Agency shall be at liberty, without affecting the Bank's obligations to the Implementing Agency contained in this Guarantee, to postpone for any time or from time to time, the enforcement of any rights accruing to the Implementing Agency against the Bank or the Bidder and to enforce the same at any time and in any manner and to enforce or forbear to enforce any remedies available to the Implementing Agency against the Bank or the Bidder. The Bank accepts that it shall not be released of its obligations to the Implementing Agency contained in this Guarantee by any exercise by the Implementing Agency of its liberty in relation to the aforesaid matters or any of them or by time or other indulgence including the granting of any waiver to either the Bank or the Bidder or by any variation in this Guarantee or by any other act or omission whatsoever which, under law or equity, but for this provision would have the effect of releasing the Bank of its obligations under this Guarantee notwithstanding that any such postponement, forbearance, extension of time or other indulgence, waiver, variation or any other thing was granted, made, given or happened without the consent or knowledge of the Bank.
7. The Bank hereby undertakes not to revoke this Guarantee during its currency without the prior written approval of the Implementing Agency and agrees that the obligations of the Bank under this Guarantee are continuous obligations and shall remain in full force and effect and be enforceable against the Bank notwithstanding any change in the constitution, legal status or organization of the Bank, the Bidder or the Implementing Agency until all dues of the Implementing Agency under or by virtue of this Guarantee have been paid by the Bank in full or until the Implementing Agency discharges this Guarantee in writing.
8. The Bank hereby affirms that it has the power and authority under its Memorandum and Articles of Association and all necessary consents and authorizations, including without limitation, those required from its board of directors, regulator or other relevant governmental body, to enter into, execute, deliver and perform the Bank's obligations under this Guarantee in favor of the Implementing Agency and that the signatory(ies) hereto has/have the capacity and power to sign and bind the Bank to the Bank's obligations contained herein under [Power of Attorney/Board Resolution] dated _____.
9. The Bank hereby confirms that notwithstanding any dispute which may arise with regard to this Guarantee or otherwise upon receiving the demand in writing as specified herein it shall pay the demanded amount without any objection;
10. Notwithstanding anything contained in paragraphs 1 to 8 above, the Bank's liability to the Implementing Agency under this Guarantee is restricted to and shall remain in force up to and including __ day of _____ 20 __ and shall be extended for such period as may be desired by the Concessionaire.
11. The Bank's obligations as set out in this Guarantee shall be continuing obligations and shall not be modified or impaired upon the happening, from time to time, without the Bank's assent or otherwise, if any act or omission, or any circumstance or events which would otherwise discharge,

impact or otherwise affect any of the Bank's obligations contained in this Guarantee.

12. No set off, counterclaim or reduction or diminution of any obligation that the Bank has or may have against the Implementing Agency shall be available to it against the Implementing Agency in connection with any of its obligations to the Implementing Agency under this Guarantee.
13. The Bank hereby declares and confirms that under its constitution and applicable laws and regulations, it has the necessary power and authority, and all necessary authorizations, approvals and consents there under to enter into, execute, deliver and perform the obligations it has undertaken under this Guarantee, which obligations are valid and legally binding on and enforceable against the Bank under the laws of Pakistan. Further that the signatories to this Guarantee are the Bank's duly authorized officers.
14. This Guarantee is limited to the sum of (*Insert Amount*) and shall be valid up till _____.
15. This Guarantee shall be governed by and construed in accordance with the laws of the Islamic Republic of Pakistan.

IN WITNESS WHEREOF the Bank, through duly and lawfully authorized representative(s), has executed this Guarantee on the date first written above in the presence of the witnesses mentioned below.

Signature of Authorized Signatory _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

WITNESSES:

1. Signature of witness - 1 _____

2. Name and Title of witness _____

3. Address: _____

4. CNIC _____

1. Signature of witness - 2 _____

2. Name and Title of witness _____

3. Address: _____

4. CNIC _____

Form 4 FORMAT OF PREQUALIFICATION PROPOSAL

**FORM 3A
BIDDER INFORMATION FORM**

Company Profile

All individual firms and each partner of a joint venture submitting bid are requested to complete the information in this form.

1.	Name of firm (legal): (In case of Joint Venture (JV), legal name of each member)	
2.	Nature of Business: (Whether the firm is a Corporation, Partnership, Trust etc.) (In case of Consortium; whether the Lead Consortium Member is a Corporation, Partnership, Trust etc.)	
3.	Head Office address:	
4.	Telephone : Fax Number: E-mail address:	
5.	Place of Incorporation/Registration: Year of Incorporation/Registration:	
6.	Applicant's authorized representative: Telephone Fax numbers: E-mail address:	
7.	NATIONALITY OF OWNERS	
	Name:	Country:

FORM 3B
HISTORICAL CONTRACT NON-PERFORMANCE, BLACKLISTING AND PENDING LITIGATION

Each Bidder or each member of a JV must fill in this form

Non-Performing Contracts

- ☐ **Contract non-performance did not occur** within the last [●] years prior to the deadline for bid submission based on all information on fully settled disputes or litigation **(An affidavit to be provided on a stamp paper of appropriate value attested by Notary Public)**
- ☐ **Contract non-performance during the stipulated period:**

Year	Outcome as Percent of Total Assets	Contract Identification	Total Contract Amount (current value, PKR)
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute:	

Black Listing

- ☐ **Bidder shall not be black listed by government/semi government/autonomous/private organizations (an affidavit to be provided on a stamp paper of appropriate value attested by Notary Public)**

Pending Litigation			
☐ No pending litigation (A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted) (An affidavit to be provided on a stamp paper of appropriate value attested by Notary Public)			
☐ Pending litigation (All pending litigation shall in total not represent more than [●]% of the Bidder's net worth and shall be treated as resolved against the Bidder)			
Year	Outcome as Percent of Total Assets	Outcome as Percent of Total Assets	Total Contract Amount (PKR)
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute:	

FORM 3C
FINANCIAL SITUATION

Each Bidder or each member of a JV must fill in this form

Financial Data for Previous [●] Years

Information from Audited Financial Statements

	Year 2024-25	Year 2023-24	Year 2022-23
Total Assets			
Total Liabilities			
Net worth			
Average Annual Turnover			
Profits After Taxes			

- ☐ Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last three years, as indicated above, complying with the following conditions.
- All such documents reflect the financial situation of the Bidder or partner to a JV, and not sister or parent companies.
 - Historic financial statements must be audited by a certified accountant.
 - Historic financial statements must be complete, including all notes to the financial statements.
 - Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).
 - NTN certificate must be attached
 - Foreign firms if participating in the bidding process should submit NTN Certificate of their country duly attested by Consulate of their country.

FORM 3D
CURRENT CONTRACT COMMITMENTS / WORKS IN PROGRESS

Bidders and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments					
No.	Name of Contract	Employer's Contact Address, Tel, Fax	Value of Outstanding Work [PKR]	Estimated Completion Date	Average Monthly Invoicing Over Last [●] Months [PKR/month]
1					
2					
3					
4					
5					

FORM 3E**DETAILS OF CONTRACTS OF SIMILAR NATURE AND COMPLEXITY COMPLETED OVER THE
LAST 5-YEARS**

Sr. No.	1	2	3	4	5
NAME OF CONTRACTOR:					
COUNTRY:					
NAME OF PROCURING AGENCY WITH ADDRESS, TELE, FAX:					
NATURE OF WORKS AND SPECIAL FEATURES RELEVANT TO THE CONTRACT FOR WHICH APPLIED:					
CONTRACT ROLE (MENTION: SOLE, SUB CONTACTOR OR PARTNER IN A JOINT VENTURE):					
VALUE OF THE TOTAL CONTRACT IN PAK/RS:					
DATE OF AWARD:					
DATE OF COMPLETION:					

Form 5 FORMAT OF AUTHORIZATION OF REPRESENTATIVE

[To be stamped in accordance with the Stamp Act, 1899]

POWER OF ATTORNEY

Know all men by these presents, we _____ name and address of the registered office) do hereby constitute, appoint and authorize Mr./ Ms. _____ name and residential address) who is presently employed with _____ and holding the position of _____ as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Bid for the Project envisaging **Operations And Maintenance of the [●] Road, Punjab, Pakistan on a Management Contract (MC) basis** in Punjab (**“the Project”**), including signing and submission of all documents and providing information / responses to the Communications and Works Department, Government of Punjab (**Implementing Agency**), representing us in all matters before the Implementing Agency, and generally dealing with the Implementing Agency in all matters in connection with our bid for the said Project. We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Signature of Authorized Attorney

Name and Title of Attorney:

Name of Firm:

Address:

Note: To be executed by all members in case of a consortium or JV. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

Form 6 FORMAT OF AFFIDAVIT

Date: _____

[●]

[●]

[Address]

We, [*insert name of Bidder*] hereby represent and warrant that, as of the date of this letter [*name of Bidder/lead member of consortium/JV*], and each member of our consortium/JV (if applicable):

- a. is not in bankruptcy or liquidation proceedings;
- b. is not blacklisted by any governmental or non/governmental department/agency;
- c. has not been convicted of, fraud, corruption, collusion or money laundering; and
- d. is not aware of any conflict of interest or potential conflict of interest arising from prior or existing contracts or relationships which could materially affect its capability to comply with the obligations under the Concession Agreement

We have also attached proof of registration of each member, if applicable, from the relevant statutory authority.

Yours sincerely,

Signature of Authorized Signatory

Name and Title of Signatory:

Name of Firm:

Address:

Form 7 FORMAT OF INTEGRITY PACT

[To be stamped in accordance with the Stamp Act, 1899]

**DECLARATION OF FEES, COMMISSIONS AND BROKERAGE, ETC. PAYABLE BY THE
CONCESSIONAIRES OF GOODS, SERVICES & WORKS**

[Insert Name of the Concessionaire] (the “**Concessionaire**”) hereby declares its intention not to obtain or induce the procurement of any contract, right, interest, privilege or other obligation or benefit through any corrupt business practice from the Government of Pakistan, the Government of Punjab, any local government, any administrative subdivision or agency of any of the foregoing or any other entity owned or controlled by any of the foregoing (each a “**Government Agency**”).

Without limiting the generality of the foregoing, the Concessionaire represents, warrants and covenants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including the Concessionaire’s affiliates, agents, associates, brokers, consultants, directors, promoters, shareholders, sponsors or subsidiaries, any commission, gratification, bribe, finder’s fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or including the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from any Government Agency, except that which has been expressly declared pursuant by the Concessionaire beforehand.

The Concessionaire certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to any transaction with any Government Agency and has not taken any action or will not take any action to circumvent the above declaration, representation, or warranty or covenant.

The Concessionaire accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation, warranty and covenant. The Concessionaire agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to any Government Agency under any law, contract or other instrument, be voidable at the option of the relevant Government Agency and/or the Government of Punjab.

Notwithstanding any rights and remedies exercised by any Government Agency in this regard, the Concessionaire agrees to indemnify the relevant Government Agency and the Government of Punjab and the Communications and Works Department, Government of Punjab for any loss or damage incurred by it on account of the Concessionaire’s corrupt business practices and further to pay compensation to the relevant Government Agency and /or the Government of Punjab in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder’s fee or kickback given by the Concessionaire as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from any Government Agency.

For and on behalf of the Concessionaire:

Signature of Authorized Signatory: _____
Name and Title of Signatory: _____
Name of Firm: _____
Address: _____

Witness 1:

Signature: _____
Name: _____
Address: _____
CNIC/Passport No.: _____

Witness 2:

Signature: _____
Name: _____
Address: _____
CNIC/Passport No.: _____

Form 8 FORMAT OF CONSORTIUM OR JV

[To be stamped in accordance with the Stamp Act, 1899]

JOINT VENTURE AGREEMENT

THIS JOINT VENTURE AGREEMENT (this “**Agreement**”) is made and entered into at Lahore, Pakistan on this [*insert date*], 2021 (the “**Signing Date**”) by and between:

1. [*INSERT NAME*] (“**PARTY A**”, which expression shall, where the context so permits, include its successors-in-interest and permitted assigns) **OF THE FIRST PART**;

AND

2. [*INSERT NAME*] (“**PARTY B**”, which expression shall, where the context so permits, include its successors-in-interest and permitted assigns) **OF THE SECOND PART**;

AND

3. [*INSERT NAME*] (“**PARTY C**”, which expression shall, where the context so permits, include its successors-in-interest and permitted assigns) **OF THE THIRD PART**;

AND

4. [*INSERT NAME*] (“**PARTY D**”, which expression shall, where the context so permits, include its successors-in-interest and permitted assigns) **OF THE FOURTH PART**.

(Party A, Party B, Party C and Party D shall hereinafter individually be referred to as the “**Member**” and collectively as the “**Members**”)

RECITALS

WHEREAS:

- A. Communication and Works Department, Government of Punjab (the “**Client**”) has invited through *[insert name of invitation document]* published in daily the *[insert newspaper]* dated *[insert date]* to submit proposal for **Operations And Maintenance of the [●] Road, Punjab, Pakistan on a Management Contract (MC) basis** in the country of Pakistan (the “**Project**”);
- B. the Members hereby intend to join hands to form an unincorporated association for the sole purpose of preparation and submission of joint Proposal as required to be submitted to the Client for undertaking the Project. In case of acceptance of the Proposal by the Client, the Members shall undertake the Project as shall be agreed through this Agreement and the concession agreement (the “**Concession Agreement**”) to be entered between the Client and the special purpose vehicle established by the Joint Venture (the “**Concessionaire**”).

Now, THEREFORE, the Members confirm their understanding as follows:

1. DEFINITIONS AND INTERPRETATION

1.1 DEFINITIONS

The following words and expressions shall have the meanings assigned to them, except where the context otherwise requires:

“**Association**” means the understanding formed between the Members in accordance with this MOU;

“**Client**” means the Punjab Public Private Partnership Authority, the company named as client in the Consortium/Joint Venture Agreement and none other, except its legal successors and permitted assigns;

“**Contract**” means, in case the Proposal of the Consortium/Joint Venture is successful, the Contract to be entered into between the Client and the Special Purpose Company created by the Consortium/Joint Venture for the provisions of services for the Project;

“**Invitation**” means the invitation of the Client to submit a proposal for the provision of services for the Project;

In case of Consortium Agreement:

“**Consortium**” means the consortium to be formed between the Members for the purposes of the execution of the Project;

“**Consortium Agreement**” means the formal agreement to be entered between the Consortium Members, upon acceptance of proposal for the Project;

In case of Joint Venture Agreement:

“**Joint Venture**” means the Joint Venture to be formed between the Members for the Project;

“Joint Venture Agreement” means the formal agreement to be entered between the Members;

"Proposal" means the proposal to be prepared and submitted by the Members in response to the Invitation by the Client;

“Development Activities” means the all activities required to complete the Project including procuring, constructing and any other activity relating to the same;

“Representative” means the person nominated by the Member(s) of the Consortium/Joint Venture through Power of Attorney to sign the Proposal. The signature of Representative shall bind each Member in respect of all obligations and liabilities it assumes under the Proposal.

“Lead Member” means the Member which will take the lead in the management of the Association’s affairs under this MOU and which will provide the Association’s Representative for liaison with the Client.

1.2 **INTERPRETATION**

- 1.2.1 Words importing the singular also include the plural and the masculine includes the feminine and vice-versa where the context requires.
- 1.2.2 The headings in this Agreement shall not be taken into consideration in its interpretation. Unless otherwise stated, all references to clauses/sub-clauses are references to clauses/sub-clauses numbered in the conditions and terms of this Agreement and not to those in any other document attached or incorporated by them.

2. **ASSOCIATION AND UNDERSTANDING**

- 2.1 The Members hereby intend to join hands to form an unincorporated association for the purpose of:
 - (a) preparing and submitting the Proposal to the Client;
 - (b) providing any further information, the Client may require or negotiating with the Client on any matters requiring negotiation in connection with the Proposal;
 - (c) entering into the Concession Agreement through the Concessionaire; and
 - (d) performing all the Development Activities to be undertaken for the Project by the Joint Venture through the Concessionaire under this Agreement.
- 2.2 The Members hereby appoint Party A as the Lead Member and, pursuant to Clause 3.2, the representative of the Association.

The Lead Member commits to hold a minimum equity stake equal to at least [fifty-one percent (51%) of the total paid up equity capital of the Concessionaire, subject to the terms of the Concession Agreement
- 2.3 The participating interests of each Member and its role(s) shall be as follows:

Member	Participating Interest (%)	Role(s)
Lead Member		[insert details]
Party A		[insert details]
Party B		[insert details]
Party C		[insert details]

3. PROPOSAL SUBMISSION

- 3.1 Prior to the execution of this Agreement, each of the Members shall grant a power of attorney in favour of a person nominated by it as its Representative. Under the power of attorney granted to him, the Representative of a Member shall thereby have authority to sign the Proposal and this Agreement on behalf of and in the name of that Member. The signature of its Representative shall bind each Member in respect of all obligations and liabilities it assumes under this Agreement.
- 3.2 The Representative of the Lead Member shall be the representative of the Association for the purpose of correspondence and discussion with the Client on matters involving the interpretation of the Proposal and alterations to it and to the Development Activities to be performed.

4. LANGUAGE AND LAW

- 4.1 This Agreement shall be written and interpreted in English Language and the law which is to be applied to this Agreement shall be the law of Islamic Republic of Pakistan.

5. ASSIGNMENT AND THIRD PARTY

- 5.1 No Member shall assign, sell, transfer or in any way encumber its interest under this Agreement, or its interests in any sums payable by the Client, without first obtaining the consent in writing of other Member.

6. SEVERABILITY

- 6.1 If any part of the provisions of this Agreement is found in any way to be void or not applicable, such part of the provisions shall be deemed to be deleted and remainder provisions of this Agreement shall continue in force and effect.

7. MEMBER IN DEFAULT

- 7.1 In the event of insolvency of a Member, the other Members are hereby irrevocably constituted and appointed attorney-in-fact for such insolvent Member to act for it in all matters affecting performance of this Agreement and the Concession Agreement.

8. LIABILITY

- 8.1 All Members shall be jointly and severally liable for all obligations and responsibilities under this Agreement, the Concession Agreement and all ancillary documents.

.....
IMPLEMENTING AGENCY INITIALS
CONCESSIONAIRE INITIALS

.....

SIGNATURE PAGES

IN WITNESS WHEREOF the Parties have executed this Agreement through their attorney/authorized representatives in two (2) originals on the Signing Date.

AS PARTY A

For and on behalf [*INSERT NAME*] through
its authorized signatory }

SIGNATURE

Name:
Designation:
CNIC No.:

in the presence of:
signature of **WITNESSES**

SIGNATURE

1. Name:
Address:
CNIC or Passport No.:

2. Name:
Address:
CNIC or Passport No.:

.....
IMPLEMENTING AGENCY INITIALS
CONCESSIONAIRE INITIALS

.....

AS PARTY B

For and on behalf [*INSERT NAME*],
through its authorized signatory

}

SIGNATURE

Name:

Designation:

CNIC or Passport No.:

in the presence of:

signature of **WITNESSES**

SIGNATURE

1. Name:
Address:
CNIC or Passport No.:

2. Name:
Address:
CNIC or Passport No.:

.....
IMPLEMENTING AGENCY INITIALS
CONCESSIONAIRE INITIALS

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AS PARTY C

For and on behalf [*INSERT NAME*],
through its authorized signatory

}

SIGNATURE

Name:

Designation:

CNIC or Passport No.:

in the presence of:

signature of **WITNESSES**

SIGNATURE

1. Name:
Address:
CNIC or Passport No.:

2. Name:
Address:
CNIC or Passport No.:

.....
IMPLEMENTING AGENCY INITIALS
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AS PARTY D

For and on behalf [*INSERT NAME*],
through its authorized signatory

}

SIGNATURE

Name:

Designation:

CNIC or Passport No.:

in the presence of:

signature of **WITNESSES**

SIGNATURE

1. Name:
Address:
CNIC or Passport No.:

2. Name:
Address:
CNIC or Passport No.:

.....
IMPLEMENTING AGENCY INITIALS
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Form 9 FORMAT OF AUTHORIZATION OF LEAD MEMBER

[To be stamped in accordance with the Stamp Act, 1899]

POWER OF ATTORNEY

WHEREAS, the Communications and Works Department, Government of Punjab (the Implementing Agency) has invited proposals from interested parties for the **Operations and Maintenance of the [●] Road, Punjab, Pakistan on a Management Contract (MC) basis** in Punjab Pakistan (**“the Project”**). Whereas, the members of the [consortium/JV] named _____ are interested in bidding for the Project and implementing the Project in accordance with the terms and conditions of the Request for Proposal Document, Draft Concession Agreement and other attached volumes in respect of the Project.

AND WHEREAS, it is necessary under the RFP for the members of the [consortium/JV] to designate one of them as the lead member with all necessary power and authority to do for and on behalf of the [consortium/JV], all acts, deeds and things as may be necessary in connection with the [consortium/JV's] bid for the Project

NOW THIS POWER OF ATTORNEY WITNESSETH THAT we, M/s _____ M/s _____ and M/s _____ (the respective names and addresses of the registered office) do hereby designate M/s _____ being one of the members of the [consortium/JV], as the Lead Member of the [consortium/JV], to do on behalf of the [consortium/JV], all or any of the acts, deeds or things necessary or incidental to the [consortium/JV's] bid for the Project, including submission of application / proposal, participating in conferences, responding to queries, submission of information / documents and generally to represent the [consortium/JV] in all its dealings with the Implementing Agency, any other Government entity or any person, in connection with the Project until culmination of the process of bidding and thereafter till the execution of relevant Project documents with the Implementing Agency as mandated by the RFP. We hereby agree to ratify all acts, deeds and things lawfully done by the Lead Member pursuant to this Power of Attorney and that all acts deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by the [consortium/JV].

Dated this the _____ Day of _____ 202____

(Executants)

Signature of Authorized Attorney _____
Name and Title of Attorney: _____
Name of Firm: _____
Address: _____

.....
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.....

(To be executed by all the members of the consortium or JV, using the terminology that is applicable to the arrangement)

Note: The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, lay down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

Form 10 FORMAT OF TECHNICAL PROPOSAL

Date: _____

[•]

Communications and Works Department, Government of Punjab

[Address]

(the **Implementing Agency**)

Subject: Technical Proposal – Operations And Maintenance of the [•] Road, Punjab, Pakistan

Dear Sir,

We, *[insert name of Bidder]* hereby submit our Technical Proposal in response to your Request for Proposal (RFP) dated *[-]* issued for the above-cited project (“**the Project**”). We hereby unconditionally offer to undertake and complete the Project through performance of all works and services in accordance with the Draft Concession Agreement.

We understand and accept that the Implementing Agency may require us under the applicable laws to clarify or modify our Technical Proposal in conformity with its requirements leading to finalization of terms of services.

We hereby declare that all the information and statements made in this Technical Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification/rejection of bid.

We undertake to initiate work on the Project, in the event of acceptance of our proposal, in accordance with the Concession Agreement to be signed between the parties.

Yours sincerely

Signature of Authorized Signatory

Name and Title of Signatory:

Name of Firm:

Address:

.....
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INFORMATION TO BE ENCLOSED IN TECHNICAL PROPOSAL

The Technical Proposal shall provide information on how the Bidder intends to approach the Operations and Maintenance of the [●] Road, Punjab, Pakistan.

The Technical Proposal should have two sections: (i) work plan and methodology; and (ii) competence and qualification of core team members for this specific project as set out in the RFP.

.....
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FORM 9A
LIST OF KEY PERSONNEL

Bidder should provide the names of suitably qualified personnel to meet the specified requirements stated in Evaluation and Qualification Criteria

SR. NO.	TITLE OF POSITION	NAME
1		
2		
3		
4		
5		

.....
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FORM 9B
CURRICULUM VITAE (CV) FOR PROPOSED EXPERTS

1. **Proposed Position:** _____
2. **Name of Expert** _____
3. **Name of Firm:** _____
4. **Current Residential address:** _____
5. **Telephone No:** _____
6. **Fax No:** _____
7. **E-Mail Address:** _____
8. **Date of Birth:** _____ **Citizenship:** _____
9. **Qualification:** _____
10. **Work Experience:** Summarize professional experience in reverse chronological order.
Indicate particular technical and managerial experience relevant to the project.

FROM	TO	COMPANY/PROJECT/POSITION/RELEVANT TECHNICAL AND MANAGEMENT EXPERIENCE

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes my qualifications, my experience, and myself. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

*I certify that I have been informed by the Bidder that it is including my CV in the Proposal for the [insert name of project and contract]. I confirm that I will be available to carry out the assignment for which my CV has been submitted in accordance with the implementation arrangements and schedule set out in the Proposal.

Signature of the Candidate:

Place:

Date:

.....
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**If the undersigned is not a present employee of the Bidder, then this paragraph is to form part of the CV:*

**FORM 9C
PLANT & EQUIPMENT**

Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment whether owned/ leased/ rented listed Evaluation and Qualification Criteria.

A. Equipment Capabilities (owned by the contractor/firm)

Sr. No	NAME OF EQUIPMENT	NAME OF MANUFACTURER	MODEL AND POWER RATING	CAPACITY	YEAR OF MANUFACTURE	CURRENT LOCATION
1						
2						
3						
4						
5						
6						

Note: Provide copies of ownership of equipment.

B. Equipment Capabilities (leased/rented by the contractor/firm)

Sr. No	NAME OF EQUIPMENT	MENTION WHETHER LEASED OR RENTED	NAME OF OWNER	ADDRESS OF OWNER	CONTACT NAME AND TITLE WITH TELEPHONE FAX & EMAIL OF THE OWNER	AGREEMENTS DETAILS OF RENTAL/ LEASE/ MANUFACTURE AGREEMENTS SPECIFIC TO THE PROJECT
1						
2						
3						
4						

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.....

5						
6						

Note: Provide copies of Lease Agreement/ Rent Agreement

.....
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TENTATIVE PROGRAM OF PERFORMANCE

To demonstrate a clear understanding of the requirements of the Contract, Bidders shall provide the following:

i) a bar chart sub-divided into sections for each road showing the major activities to be carried out for Operation and Maintenance Services and toll plaza, weighbridge and ETTMS Installation Works. The activities shall be shown against time, with linkages shown between related/sequential activities as far as possible and appropriate.

ii) a bar chart or schedule showing the usage of major plant, including those listed in Schedule D (Contractor's Equipment).

.....
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Form 11 FORMAT OF FINANCIAL PROPOSAL

Date: _____

[Name of Contact Person]
Communications and Works Department,
Government of Punjab
[Address and Telephone Number]
(the **Implementing Agency**)

We, [*insert name of Bidder*] hereby submit our Financial Proposal in response to your Request for Proposal dated [-].

Based on the terms and conditions of this RFP dated [●].

We affirm that (i) the information submitted as part of our Bid is complete and accurate and (ii) we accept the documents, terms and conditions of the RFP and Draft Concession Agreement and are bound to undertake this Project in accordance with this RFP and Draft Concession Agreement.

Our Financial Proposal shall be binding upon us up to expiration of the validity period of the Bid, i.e. one hundred and twenty (120) days.

Signature of Authorized Signatory _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

.....
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SUMMARY OF FINANCIAL MODEL (Form 10a)

1. Key Financial Indicators

Year (after Project completion)	1	2	...	10
Expected Revenue				
Expected Revenue Share with C&W				
Operations and Maintenance costs				
Taxes				
Expected Dividends				

2. Project Cost Breakup

Item	Total
Installation cost including taxes	
• Toll plaza	In PKR
• ETTM	In PKR
• Weighbridge	In PKR
Insurance Cost (PKR)	In PKR
Other project costs	In PKR
<i>Total cost before contingency</i>	In PKR
Contingency	In PKR
Pre Estimated Project Cost	In PKR

3. [not used]

4. [not used]

5. Return

Equity IRR %	In %

Signature of Authorized Signatory

.....
 IMPLEMENTING AGENCY INITIALS
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.....

Name and Title of Signatory:

Name of Firm:

Address:

.....
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VOLUME - II



VOLUME - II

DRAFT CONCESSION AGREEMENT

BY & BETWEEN

GOVERNOR OF PUNJAB
(THROUGH THE SECRETARY, COMMUNICATION & WORKS DEPARTMENT)

AND

[SPV INCORPORATED BY THE SUCCESSFUL BIDDER]
(AS THE CONCESSIONAIRE)

DATED AS OF [●], 2025

IN RESPECT OF

THE CONCESSION FOR MAINTENANCE, OPERATION AND MANAGEMENT
OF
MURIDKE – NAROWAL & NAROWAL – SHAKKARGARH ROAD
(GRPUP-1)

.....
IMPLEMENTING AGENCY INITIALS
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CONCESSIONAIRE

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CONCESSIONAIRE

CONCESSION AGREEMENT

This CONCESSION AGREEMENT (this Agreement) is entered into on this [●] day of [●], 2025 at _____, Pakistan:

BY AND BETWEEN

THE GOVERNOR OF PUNJAB (THROUGH SECRETARY, COMMUNICATION AND WORKS DEPARTMENT) having its offices at Old, Anarkali, Lahore for and on behalf of THE GOVERNMENT OF PUNJAB (the Implementing Agency);

AND

[INSERT SPV NAME], a company incorporated under the Applicable Laws of Pakistan, having its registered office located at [●], Pakistan (the Concessionaire, which expression shall, where the context so permits, be deemed to mean and include its, successors in interest, administrators and permitted assigns);

(the Implementing Agency and the Concessionaire are hereinafter collectively referred to as the Parties and each individually as a Party).

RECITALS

- a. To cater to the vehicular traffic to pass between [●], Province of Punjab, Pakistan and [●], Province of Punjab, Pakistan, the GoPb has decided to operate and maintain the road, through Public Private Partnership on a management contract (the “MC”) basis, the road connecting the aforementioned location, and install toll plazas, Electronic Toll and Traffic Management Systems (“ETTMS”) and weighbridges on this road, in accordance with this Agreement.

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Draft Concession Agreement for Clean Road Project

- b.** On [●], 2025 a Request for Proposals (the “**RFP**”) was published by the GoPb for the prospective bidders and subsequently a consortium comprising of, *inter alia*, the Sponsors (the “**Consortium**”) was selected by the GoPb for purposes of grant of the Concession and implementation of the Project in reliance upon the Applicable Laws (including the Procurement Rules and other Government Rules, Policies & Acts). The Letter of Intent was issued to the Consortium by the GoPb on [●], 2025.
- c.** The Concessionaire was incorporated by the Sponsors, in accordance with the provisions of Applicable Law: (i) in order to enable the Parties to enter into this Agreement and for the Concessionaire to seek and avail the grant of the Concession and for the GoPb to grant the Concession; and (ii) for the specific purpose of implementing the Project on a MC Basis, in each case, in accordance with the terms of this Agreement.
- d.** The Concessionaire, subject to the terms of this Agreement, acknowledges and confirms that it has, based on the RFP provided by the GoPb, undertaken a due diligence audit of the Project, including technical and financial viability, legal due diligence, and on the basis of its independent satisfaction is entering into this Agreement for the purpose of accepting the Concession and for the implementation of the Project, in each case, in accordance with the terms and conditions of this Agreement.
- e.** The Parties are now entering into this Agreement to set out the terms and conditions applicable to the Concession and the relationship of the GoPb and the Concessionaire.

NOW THIS AGREEMENT WITNESSETH and it is hereby agreed and declared by the Parties as under:

.....
IMPLEMENTING AGENCY INITIALS
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CONCESSIONAIRE

1. DEFINITIONS & INTERPRETATION

1.1 DEFINITIONS

In this Agreement (including the recitals), unless the context shall otherwise require:

AASHTO Standards means the standards applicable to roads and highways published in the relevant publication of the American Association of State Highway and Transportation Officials;

Abandonment or Abandon means the voluntary cessation of the Operation and Maintenance of the Concession Assets by the Concessionaire and / or the withdrawal of all, or substantially all, personnel by Concessionaire from the Project Site for reasons other than a Permitted Event;

Accounting Year means in respect of each Party, the financial year commencing from 1st day of July of any calendar year and ending on 30th day of June of the next calendar year;

Act means the Punjab Public Private Partnership Act, 2025, as amended from time to time and shall include all future enactments in replacement thereof;

Actual Project Revenues shall mean the total revenues of the Project for each Operational Year following Commercial Operations Date as determined by the Independent Auditor.

Additional Cost means the additional capital expenditure and / or the additional operating cost and / or, any adverse financial impact on the Concessionaire and/or additional taxes and/or all of the above as the case may be, which the Concessionaire has or would be required to incur and which has / have arisen as a consequence of Change of Scope; provided, that the Additional Costs shall be paid directly to the Concessionaire by the Implementing Agency in terms of this Agreement and shall not form part of Total Project Cost;

Affected Party shall have the meaning ascribed thereto in Section 21.1 (*Force Majeure Event*);

Additional Facilities means the facilities including, but not limited to, service stations, motels, hotels, restaurants, shopping areas, amusement parks and other facilities provided or procured to be provided for the benefit of the Users, and that are in addition to (and not part of) the Concession Assets, and are situated along the right of way;

Agreement means this ‘Concession Agreement’ including the Main Body and all Schedules attached hereto;

Alternative Route means any non-tolled road, established and/or planned or materially improved by or on behalf of Implementing Agency or a Public Sector Entity, eighty percent (80%) of which falls within 10 km radius of Project Highway connecting same origin and destination as of Project Highway providing:

- same or better functional classification
- same or better components of typical cross-section
- same or better level of service and facilities

which will divert the traffic from the Project Highway leading to loss of Toll Revenues

Alternative Route Event shall have the meaning ascribed thereto in Section 17.7.2;

Applicable Laws means all applicable laws, promulgated or brought into force and effect by the GoPB, Implementing Agency or the Government of Pakistan, as the case may be, including regulations and rules made thereunder, and judgments, decrees, injunctions, writs and orders of any court of record, as may be in force and effect during the subsistence of this Agreement;

Applicable Permits means the Concessionaire Permits and all such approvals, consents, authorizations, notifications, concessions, acknowledgements, licenses, permits, decisions or similar items that relate to the Project and its implementation;

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Draft Concession Agreement for Clean Road Project

Applicable Specifications means the standards, specifications, requirements, criterion and timelines (as applicable) set out in relation to and applicable to:

- (a) the Project Works;
- (b) the Project and its implementation;
- (c) the Concession Assets; and
- (d) the performance by the Concessionaire and the Sponsor (as applicable) of their respective obligations under the Implementing Agency Agreements;

in each case above, as contained and set out in (as applicable):

- (i) this Agreement (including all Schedules attached hereto);
- (ii) the Implementing Agency Agreements;
- (iii) Applicable Laws;
- (iv) Applicable Permits;
- (v) Environmental Standards;
- (vi) Specific Requirements; and
- (vii) any other standards, requirements, criterion and timelines (as applicable), mutually agreed between the Parties from time to time,

provided, however, that in the event of any discrepancy in the standards, requirements, criterion and timelines (as applicable) set out in the abovementioned, the most stringent standards, requirements, criterion and timelines (as applicable), as contained in any of the above-mentioned, shall apply (unless otherwise mutually agreed between the Parties);

Approved Detailed Programme of Performance means the Detailed Programme of Performance approved by the Independent Engineer (in consultation with the Implementing Agency) in accordance with the Applicable Specifications (including Section 12.5.2 of this Agreement);

Arbitration Act means the Arbitration Act, 1940 and shall include modifications to or any re-enactment thereof as in force from time to time;

Associate or Affiliate means, in relation to either Party and/or the Sponsor, a Person who controls, is controlled by, or is under the common control with such Party and/or the Sponsor (as used in this definition, the expression “**control**” means, with respect to a Person which is a company or corporation, the ownership, directly or indirectly, of more than 50% (fifty per cent) of the voting shares of such person and the power to direct the management and policies of such Person, whether by operation of law or by contract or otherwise), and with respect to a Person which is not a company or corporation, the power to direct the management and policies of such Person, whether by operation of law or by contract or otherwise);

Authority means the Punjab Public Private Partnership Authority, its respective departments and its administrators, successors and permitted assigns;

Award shall have the meaning ascribed thereto in Section 30.3.4;

Base Case Equity IRR shall mean post tax internal rate of return (expressed as percentage) on the Equity of Shares, as expressly set out in the Base Case Financial Model;

Base Case Financial Model means the financial model attached herewith as **SCHEDULE U (Financial Model)**;

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Draft Concession Agreement for Clean Road Project

Base Case means the projections of cash flows contained in the Base Case Financial Model that are used to compute the Base Case Equity IRR;

Bid shall mean the technical and financial proposal of the Sponsor with respect to the Project submitted to the Implementing Agency on [●], 2025;

Bidding Process shall have the meaning ascribed thereto in Recitals above;

Bid Security means the bank guarantee and or call deposit receipt (CDR) submitted by the Sponsor pursuant to the RFP in connection with its Bid for the Concession rights which shall remain valid and in effect until the Bid Security Expiry Date;

Bid Security Expiry Date shall have the meaning ascribed thereto in Section 11.1.4;

Bid Submission Date means [●], 2025;

Big Four Accounting Firms means:

- (a) A. F. Ferguson & Co. (a member firm of PricewaterhouseCoopers network);
- (b) EY Ford Rhodes (a member firm of Ernst & Young Global Limited);
- (c) KPMG Taseer Hadi & Co.;
- (d) M. Yousuf Adil Saleem & Co. (a member firm of Deloitte Touche Tohmatsu);

and/or any other successor chartered accountancy firm categorized as one of the Big Four Accounting Firms;

Board of Arbitrators shall have the meaning ascribed thereto in Section 30.3.1;

Board Resolution means a resolution passed by the board of directors of the Concessionaire authorizing the Concessionaire to, *inter alia*, enter into this Agreement;

Certified Impediment Notice shall have the meaning ascribed thereto in Section 4.15.2;

Change in Complete Control means any issuance, sale, transfer, conveyance, disposal or any event, transaction, arrangement, Encumbrance or agreement of any nature that results in or may result in:

- (a) the issuance of any Share to any Person other than the Sponsor; or
- (b) the transfer of direct and / or indirect, legal and/or beneficial ownership of any shares, or securities convertible into shares, that causes or may cause the sale, transfer, conveyance or disposal of the Sponsor’s legal and/or beneficial ownership, direct or indirect, in the total (or any part thereof) paid up and outstanding Shares of the Concessionaire; and
- (c) the Sponsor, as a result of (a) or (b) above, divesting 100% of the Shares and/or holding less than 100% of the shares and / or losing the power to direct the management, policies, control and/or decisions, in each case, of the Concessionaire;

Change in Control means any issuance, sale, transfer, conveyance, disposal or any event, transaction, arrangement, Encumbrance or agreement of any nature that results in or may result in:

- (a) the issuance of any Share to any Person other than the Sponsor; or
- (b) the transfer of direct and / or indirect, legal and/or beneficial ownership of any shares, or securities convertible into shares, that causes or may cause the sale, transfer, conveyance or disposal of the Sponsor’s legal and/or beneficial ownership, direct or indirect, in the total (or any part thereof) paid up and outstanding Shares of the Concessionaire; and

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Draft Concession Agreement for Clean Road Project

- (c) the Sponsor, as a result of (a) or (b) above, divests more than or equal to 51% of the Shares and/or holds less than 51% of the Shares and / or loses the power to direct the management, policies and decisions, in each case, of the Concessionaire;

Change in Law means the occurrence of any of the following events on or after the Bid Submission Date:

- (a) the enactment of any new federal, provincial or local government law, as applicable in the Province of Punjab;
- (b) the repeal, modification or re-enactment of any existing federal, provincial or local government law, as applicable in the Province of Punjab;
- (c) the commencement of any federal, provincial or local government law, which has not entered into effect until the date of this Agreement;
- (d) a change in the interpretation or application of any Applicable Law (as applicable in the Province of Punjab) by a court of record as compared to such interpretation or application by a court of record prior to the date of this Agreement;
- (e) the imposition by the Authority of any additional Concessionaire Permit;

provided, that any:

- (i) coming into effect, on or after the Bid Submission Date, of any provision of a statute which is already gazetted in accordance with the Applicable Laws prior to the Bid Submission Date; or
- (ii) any new Applicable Law or any change in the existing Applicable Law under the active consideration of or in the contemplation of the Implementing Agency the Authority, or the Government of Pakistan as of the Bid Submission Date, which is already gazetted in accordance with the Applicable Laws prior the Bid Submission Date,

shall not constitute a ‘Change in Law’;

Change in Law Termination Amount shall have the meaning ascribed thereto in **SCHEDULE T (TERMINATION PAYMENT)**;

Change in Shareholding means any issuance, sale, transfer, conveyance, disposal or any event, transaction, arrangement, Encumbrance or agreement of any nature that results in or may result in:

- (a) the issuance of any Share to any Person other than the Sponsor; or
- (b) the transfer of direct and / or indirect, legal and/or beneficial ownership of any shares, or securities convertible into shares, that causes or may cause the sale, transfer, conveyance or disposal of the Sponsor’s legal and/or beneficial ownership, direct or indirect, in the total (or any part thereof) paid up and outstanding Shares of the Concessionaire; and
- (c) the Sponsor, by virtue of (a) or (b) above, divests up to 49% of the Shares, does not hold up to 49% of Shares and/or does not lose the power to direct the management, policies and decisions of the Concessionaire;

Change of Scope Notice shall have the meaning ascribed thereto in Section 16.2 (*Change of Scope Notice*);

Change of Scope shall have the meaning ascribed thereto in Section 16.1 (*Change of Scope*);

Civil Work Contract(s) means the agreement entered or to be entered into between the Concessionaire and the Civil Work Contractor(s) in accordance with this Agreement, for, *inter alia*, the installation of the toll plazas, ETTMS and weighbridges and the maintenance of the

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same on the Project Highway as per Schedule C, as such agreement may be amended by the parties thereto from time to time;

Civil Work Contractor(s) means the contractor(s) engaged by the Concessionaire in for the purposes of performance of Installation Works;

Commencement Certificate means a certificate to be jointly issued in writing by the Independent Engineer and the Independent Auditor, to the Concessionaire and copied to the Implementing Agency in accordance with Section 3.4 (*Commencement Certificate & Commencement Date*);

Commencement Date means the date set out in the Commencement Certificate jointly by the Independent Engineer and the Independent Auditor in accordance with Section 3.4 (*Commencement Certificate & Commencement Date*) of this Agreement, being the date on which each of the Conditions Precedent stand satisfied, waived and/or deferred;

Commercial Operations Date means the date on which the Operations Period shall commence and the Project Highway is available for Users, such period commencing on the day immediately succeeding the Final Installation Completion Date;

Competing Route means any road with lower or equal toll rates as that of Project Highway, established and/or planned or materially improved by or on behalf of Implementing Agency or a Public Sector Entity, eighty percent (80%) of which falls within 10 km radius of Project Highway connecting same origin and destination as of Project Highway providing:

- same or better functional classification
- same or better components of typical cross-section
- same or better level of service and facilities

which will divert the traffic from Project Highway leading to loss of Toll Revenue.

Competing Route Event shall have the meaning ascribed thereto in Section 17.6.2;

Competing Route Relief Event shall have the meaning ascribed thereto in Section 17.6.2;

Completion Tests means the tests required to be conducted for completion of the Installation Works, as listed in **SCHEDULE G (*List of Tests & Completion Tests*)**;

Completion Tests Date Notice shall have the meaning ascribed thereto in Section 14.1.1;

Concession shall have the meaning ascribed thereto in Section 2.1.1;

Concessionaire shall have the meaning ascribed thereto in the Preamble;

Concession Assets means and includes all tangible and intangible assets of the Project Site, the Project Highway, and the Project Facilities and all rights, title, benefits, facilities and easements, whether directly and / or indirectly related thereto, relating to and forming part of the Project including (only to the extent of the Project Highway, the Project Site and the Project Facilities) but not limited to (a) rights over the Project Site in the form of Licence, right of way or otherwise, (b) tangible assets such as civil works including foundations, embankments, pavements, road surface, bridges, approaches to bridges, roads, drainage works, lighting facilities, traffic signals, sign boards, milestones, equipment relating to regulation of traffic, road furniture, electrical works for lighting on the intersections and toll plazas, toll plaza, toll control building, toll gates, weighbridges, the Project Facilities and / or the Project Site, telephone and other communication systems and communication equipment for the Project, wayside amenities, administration maintenance facilities,, equipment, vehicles etc. on the Project Highway and the Project Facilities (c) Project Facilities situated on the Project Site;

Concession Period means, in respect of the Concession and the Concession Assets, the period commencing on the Commencement Date and ending on the Trigger Date;

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Concessionaire Advertising Plan shall have the meaning ascribed thereto in Section 29.1 (*Advertising & Advertising Revenues*);

Concessionaire Authorized Representative shall have the meaning ascribed thereto in Section 7.4.1;

Concessionaire Conditions Precedent shall have the meaning ascribed thereto in Section 3.1.2 (*Conditions Precedent*);

Concessionaire Default Termination Amount shall have the meaning ascribed thereto in SCHEDULE T (*Termination Payment*);

Concessionaire Self Control Unit means the unit within the Concessionaire organization that contains the Concessionaire’s representatives (including the Concessionaire Authorized Representative and the Concessionaire Project Engineer), agents, executives, employees, and other personnel, in each case, that are engaged, hired, appointed, contracted (directly or indirectly) by the Concessionaire for the performance of Project Works or any part thereof;

Concessionaire Event of Default shall have the meaning ascribed thereto in Section 22.1 (*Concessionaire Event of Default*);

Concessionaire Indemnified Persons shall have the meaning ascribed thereto in Section 9.1.2;

Concessionaire Preliminary Notice shall have the meaning ascribed thereto in Section 23.2 (*Termination for Implementing Agency Event of Default*);

Concessionaire Project Engineer shall have the meaning ascribed thereto in Section 7.4.1;

Concessionaire’s Ownership And Management Control means, with respect to the Concessionaire, the ownership, directly or indirectly, legal or beneficial, of 100% (one hundred per cent) of the Shares; and the power to direct the management, policies and all decisions, in each case, of the Concessionaire, whether by operation of law or by contract or otherwise;

Concessionaire Permits means all such approvals, consents, authorizations, notifications, concessions, acknowledgements, Licences, permits, decisions or similar items which is or are issued by the Implementing Agency and which the Concessionaire is or its Contractors are required to obtain from the any Governmental Authority and thereafter to maintain to fulfil its obligations under the Implementing Agency Agreements, including the Specified Concessionaire Permits; provided, however, that in no event shall the Concessionaire Permits include any concessions or exemptions from the Applicable Laws unless they are expressly granted pursuant to the terms of the Implementing Agency Agreements;

Condition(s) Precedent means the conditions precedent to the achievement of Commencement Date, as listed in Sections 3.1.2, 3.1.3 and 3.1.4 of Section 3.1 (*Conditions Precedent*);

Condition(s) Subsequent means the conditions subsequent listed in Section 3.2 (*Conditions Subsequent*);

Conditions means the Conditions Precedent and the Conditions Subsequent set out in Article 3 (*Conditions*);

Contractor(s) means any of the Concessionaire’s direct contractors and any of their direct sub-contractors integrally involved in the Project for the performance of Project Works (or any part thereof);

Corporate Documents means the constitutional documents and the corporate authorizations set out in SCHEDULE K (*Corporate Documents*);

Corrupt Act means:

(a) offering, giving or agreeing to give to the Implementing Agency, a Government Authority or to any Person employed by or on behalf of the Implementing Agency and/or

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a Government Authority any gift or consideration of any kind as an inducement or reward:

- (i) for doing or not doing (or for having done or not having done) any act in relation to the obtaining or performance of this Agreement or any other contract relating to this Agreement with the Implementing Agency and/or a Government Authority; or
 - (ii) for showing or not showing favour or disfavour to any Person in relation to this Agreement or any other contract relating to this Agreement with the Implementing Agency and/or a Government Authority;
- (b) entering into this Agreement or any other contract relating to this Agreement with the Implementing Agency and/or a Government Authority in connection with which commission / discount has been paid / received (as the case may be) or has been agreed to be paid or received by the Concessionaire or on its behalf, or to its knowledge, unless before the relevant contract is entered into particulars of any such commission and the terms and conditions of any such contract for the payment of such commission / discount have been disclosed in writing to the Implementing Agency;
- (c) committing any offence:
- (i) under any law, in respect of fraudulent acts in relation to this Agreement, from time to time dealing with bribery, corruption or extortion;
 - (ii) under any law, in respect of fraudulent acts in relation to this Agreement, creating offences in respect of fraudulent acts; or
 - (iii) in respect of fraudulent acts in relation to this Agreement;
- (d) in respect of fraudulent acts in relation to this Agreement, defrauding or attempting to defraud or conspiring to defraud the Implementing Agency, the Authority or any other public body;

Corrupt Act Termination Amount shall have the meaning ascribed thereto in **SCHEDULE T (Termination Payments)**;

Cure shall mean curing of breach or default of this Agreement by the Party responsible for such breach or default;

Cure Period means:

- (a) in respect of a Concessionaire Event of Default, the period commencing on the date of receipt by the Concessionaire of the Implementing Agency Preliminary Notice and expiring on the date falling ninety (90) days thereafter; and
- (b) in respect of an Implementing Agency Event of Default, the period commencing on the date of receipt by the Implementing Agency of the Concessionaire Preliminary Notice and expiring on the date falling forty-five (45) days thereafter;

Decommissioned Project Area shall have the meaning ascribed thereto in Section 7.13 (*Emergency Decommissioning*);

Defects & Deficiencies means:

- (a) in respect of Project Works, any Project Works (or any part thereof) that fail to conform to the Applicable Specifications in any manner (including (without limitation) in provision of services, operational performance parameters, management performance parameters, materials, design, execution, engineering, operations and maintenance and/or workmanship);

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- (b) in respect of the Concession Assets, any Concession Asset (or any part thereof) that fail to conform to the Applicable Specifications;
- (c) Non compliance of operational parameters and management parameters as provided under this Agreement.

Delayed Payment Rate means the six (6) month Karachi Interbank Offered Rate plus [●] percent ([●]%), compounded semi-annually, calculated for the actual number of days which the relevant amount remains unpaid on the basis of a three hundred and sixty five (365) day year;

Detailed Programme of Performance means the detailed programme of performance / plan for the Project Highway prepared by the Concessionaire in accordance with Applicable Specifications;

Design Requirements means the design requirements of the Concession Assets, as set out in SCHEDULE B (*Design Requirements*);

Development Rights means such additional rights, property or assets that are not part of and are not anticipated to be part of the Project as on the Effective Date but are available to the Implementing Agency in accordance with Section 29.2 (*Commercial Rights & Additional Facilities*) and may include, without in any manner limited to, provision of additional facilities;

Dispute shall have the meaning ascribed thereto in Section 30.1.1;

Dispute Resolution Procedure means the procedure for resolution of Disputes as set out in Article 30 (*Dispute Resolution*);

Divestment Requirements shall have the meaning ascribed thereto in Section 24.1 (*Requirements for Divestment*);

Easementary Rights means all easements, reservations, rights-of-way, utilities and other similar purposes, or zoning or other restrictions relating to the Project Site and to the use of real property relating to the Project Site, which are necessary or appropriate for the conduct of activities of the Concessionaire related to the Concession Assets;

Effective Date means the date on which this Agreement is duly executed by each of the Parties;

EIA Approval shall have the meaning ascribed thereto in Section 3.1.2(e);

Emergency Decommissioning shall have the meaning ascribed thereto in Section 7.13.1;

Emergency Event means any Emergency occurrence that may necessitate the execution of Emergency Works pursuant to the provisions of Section 19.3 (*Emergency Works*);

Emergency means a condition or situation that is likely to endanger the security of the individuals on or about the Project Site including Users thereof or which poses an immediate threat of material damage to any of the Concession Assets and/or the Project Site;

Emergency Works shall have the meaning ascribed thereto in Section 19.3.1;

Emergency Works Account shall have the meaning ascribed thereto in 19.3.2;

Emergency Works Request means a written request made by the Concessionaire for execution of the Emergency Works and submitted in accordance with the procedure set forth in Section 19.3 (*Emergency Works*);

Encumbrance means any encumbrance on an asset, including but not restricted to mortgage, charge, pledge, lien, hypothecation and / or any security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include without limitation any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Concession Assets and / or any part or portion thereof and physical encumbrances and encroachments thereon;

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Environmental Standards means collectively, the applicable environmental guidelines and occupational health and safety standards established by the “Pakistan Environmental Protection Agency” and the Punjab Environmental Protection Agency;

Equity means the share capital of the Concessionaire, represented in PKR, subscribed to by any of the Concessionaire’s shareholders for meeting the equity component of the Total Project Cost;

Escrow Account means the account established by the Concessionaire with the Escrow Agent;

Escrow Agent means the bank selected by the parties to the Escrow Agreement to manage the toll revenues, compensation and expenditures of the Concessionaire;

Escrow Agreement means the agreement entered into between the Implementing Agency, the Escrow Agent and the Concessionaire requiring all revenues of Tolls to be deposited in an Escrow Account managed by the Escrow Agent and allocating such funds to pay operation & maintenance expenses, financing service, reserves and dividends payments in accordance with an agreed order of priority;

ETTMS means “electronic toll and ticketing management system” as further identified in **SCHEDULE Q (Requirements Of Electronic Toll And Ticketing Management System - ETTMS)**.

Exempted Vehicles shall mean the following vehicles exempted from Toll:

- (a) ambulances;
- (b) defence vehicles, including vehicles of armed forces;
- (c) flag cars;
- (d) fire fighting vehicles;
- (e) funeral vans;
- (f) official vehicles of the Implementing Agency or the Concessionaire;
- (g) Police vehicles;
- (h) Vehicles bearing the plates of:
 - 1. Presidency;
 - 2. Prime Minister Secretariat;
 - 3. Governor House;
 - 4. Chief Minister Secretariat;
 - 5. A Foreign dignitary on State visit to Pakistan;
- i) Vehicles deputed for essential services like cleaning, maintenance of green areas etc;

Excess Toll Revenues shall bear the meaning ascribed thereto in Section 17.4.2;

Exit Implementation Period means:

- (a) in case of Termination of this Agreement, the period commencing on the Termination Date and expiring on the Transfer Date;
- (b) in case of expiry of this Agreement on the Final Expiry Date, the period commencing thirty (30) days prior to the Final Expiry Date and expiring on the Final Expiry Date;

Expected Revenue Share shall bear the meaning ascribed thereto in Section 17.4.1;

Final Expiry Date means the date falling on the seventh (7th) yearly anniversary of the Installation Completion Date; provided, however, the Implementing Agency and the

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Concessionaire may agree to extend the Final Expiry Date (and, as a result, the Concession and the Concession Period) with mutual written consent in accordance with Section 2.3.1;

Final Installation Completion Certificate shall have the meaning ascribed thereto in Section 14.6 (*Final Installation Completion Certificate*);

Financial Model means the Base Case Financial Model, as revised from time to time by the Independent Auditor (including as updated on or prior to the Commencement Date);

First Day Deduction shall have the meaning ascribed thereto in Section 19.4.1;

First IA List shall have the meaning ascribed thereto in Section 6.1 (*Selection*);

First IE List shall have the meaning ascribed thereto in Section 5.1 (*Independent Engineer Selection*);

Force Majeure Costs means all such costs that are directly attributable to, arise from and are a direct result of, in each case, a Force Majeure Event; any additional capital expenditures; any additional installation costs; and any additional operating costs; provided, however, for the purposes of determining such costs, information contained in the Financial Model shall be relied upon;

Force Majeure Event means the occurrence of any or all of the Non Political Events and/or the Political Events;

Force Majeure Notice shall have the meaning ascribed thereto in Section 21.2 (*Obligation to Notify*);

Force Majeure Period means, as determined by the Independent Engineer, the period commencing from the date of occurrence of a Force Majeure Event and ending on (a) the date on which the Affected Party resumes or should have resumed (as determined by the Independent Engineer) such of its obligations the performance of which it was excused in terms of Section 21.8 (*Excuse from Performance of Obligations*); or (b) the Termination Date; as applicable;

Good Industry Practice means those practices, methods, techniques, standards, skills, diligence and prudence which are generally and reasonably expected from a reasonably skilled and experienced operator engaged in the same type of undertaking as envisaged in respect of the Concessionaire under this Agreement and acting generally in accordance with the provisions of the Applicable Laws, and would mean good engineering practices in the installation of toll plazas, ETTMS and weighbridges and project management and which would be expected to result in the performance of its obligations by the Concessionaire and in the operation and maintenance of the Project in accordance with the Applicable Specifications. “Good Industry Practices” are not limited to optimum practices, methods, techniques, standards, skills, diligence, prudence or acts to the exclusion of all others, but rather are a spectrum of possible practices, methods, techniques, standards, skills, diligence, prudence or acts which could have been expected to accomplish the desired result at reasonable cost consistent with reliability and safety;

GoPB means the Government of Punjab, its respective departments or any other authorities, agencies and instrumentalities functioning under the direction or control of the Government of Punjab, and its administrators, successors and permitted assigns;

Government Authority(ies) means the Government of Pakistan, the Government of Punjab, the Authority, any governmental department, commission, board, body, bureau, agency, Implementing Agency, instrumentality, court or other judicial or administrative body having jurisdiction over the Concessionaire, the Project, Project Site, the Concession Assets or any part thereof, or the performance of all or any of the services or obligations of the Concessionaire under or pursuant to this Agreement;

Grace Period shall have the meaning ascribed thereto in Section 19.4.2;

Handover List shall have the meaning ascribed thereto in Section 25.1 (*Liability for defects during Exit Implementation Period*);

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Implementing Agency means the Communication and Works Department of the Government of Punjab, its respective departments or any other authorities, agencies and instrumentalities functioning under the direction or control of the Communication and Works Department of the Government of Punjab, and its administrators, successors and permitted assigns;

Implementing Agency Agreements means:

- (a) this Agreement;
- (b) the Project Site Licence Agreement;
- (c) the Escrow Agreement; and
- (d) any other agreement entered into in respect of the Project between the:
 - (i) Implementing Agency; and
 - (ii) Concessionaire and/or the Sponsor in respect of the Project and designated as a “*Implementing Agency Agreement*” with the written consent of the Implementing Agency;

Implementing Agency Conditions Precedent shall have the meaning ascribed thereto in Section 3.1 (*Conditions Precedent*);

Implementing Agency Default Termination Amount shall have the meaning ascribed thereto in SCHEDULE T (*Termination Payments*);

Implementing Agency Event of Default shall have the meaning ascribed thereto in Section 22.2.1 (*Implementing Agency Event of Default*);

Implementing Agency Indemnified Persons shall have the meaning ascribed thereto in Section 9.1 (*General Indemnity*);

Implementing Agency Overriding Power Event shall have the meaning ascribed thereto in Section 8.9 (*Implementing Agency Overriding Powers*);

Implementing Agency Payment Account means the account to be established by the Implementing Agency and Notified to the Concessionaire as an Implementing Agency Condition Subsequent;

Implementing Agency Payment Account Bank shall mean the bank mutually agreed between the Concessionaire and the Implementing Agency for the purposes of establishing the Implementing Agency Payment Account;

Implementing Agency Payment Account Standing Instructions shall have the meaning ascribed thereto in Section 19.14(b);

Implementing Agency Remedy Amount shall have the meaning ascribed thereto in Section 18.2.3;

Implementing Agency Remedy Invoice shall have the meaning ascribed thereto in Section 18.2.3;

Implementing Agency Representative means the representative of the Implementing Agency appointed by the Implementing Agency for purposes of this Agreement in accordance with Section 8.8 (*Implementing Agency Representative*);

Implementing Agency Windfall shall bear the meaning ascribed thereto 17.4.3;

Indemnified Party shall have the meaning ascribed thereto in Section 9.3 (*Notice and Contest of Claims*);

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Indemnifying Party shall have the meaning ascribed thereto in Section 9.3 (*Notice and Contest of Claims*);

Independent Auditor means the auditor appointed in respect of the Project in accordance with Article 5 (*Independent Engineer & Independent Auditor*) and in terms of the Independent Auditor Contract;

Independent Auditor Appointment Term shall have the meaning ascribed thereto in Section 5.7 (*Term of Appointment of the Independent Auditor*);

Independent Auditor Contract means the contract to be entered into between the Implementing Agency, the Concessionaire, the Independent Auditor and any other Person agreed by the Parties in accordance with Article 5 (*Independent Engineer & Independent Auditor*);

Independent Auditor Payments shall have the meaning ascribed thereto in Section 5.10 (*Independent Auditor Remuneration*);

Independent Engineer means the engineer appointed in respect of the Project in accordance Article 5 (*Independent Engineer & Independent Auditor*) and in terms of the Independent Engineer Contract;

Independent Engineer Appointment Term shall have the meaning ascribed thereto in Section 5.2 (*Term of Appointment of the Independent Engineer*);

Independent Engineer Contract means the contract to be entered into between the Implementing Agency, the Concessionaire, the Independent Engineer and any other Person agreed by the Parties, in accordance with Article 5 (*Independent Engineer & Independent Auditor*);

Independent Engineer Payments shall bear the meaning ascribed thereto in Section 5.5 (*Independent Engineer Remuneration*);

Indicative Independent Engineer Terms of Reference means the duties, functions and the scope of work to be performed by the Independent Engineer, as indicatively attached herewith as **SCHEDULE N (*Indicative Independent Engineer Terms of Reference*)**; provided, however, upon execution of the Independent Engineer Contract, the scope of work of the Independent Engineer set out therein shall be deemed to replace **SCHEDULE N (*Indicative Independent Engineer Terms of Reference*)**;

Initial Forecasted Revenue shall mean the total revenue expected to be generated from the Project for the first Operational Year following Commercial Operations Date, as set out in the Base Case Financial Model.

Installation Completion shall have the meaning ascribed thereto in Section 14.7.1;

Installation Completion Check List shall have the meaning ascribed thereto in Section 14.3.2;

Installation Completion Check List Items shall have the meaning ascribed thereto in Section 14.4.1;

Installation Completion Date shall have the meaning ascribed thereto in Section 14.7.1;

Installation Completion Schedule means the schedule attached herewith as **SCHEDULE E (*Installation Completion Schedule*)** setting out the Scheduled Installation Completion Date.

Installation Inspection Report has the meaning ascribed thereto in Section 13.6.2;

Installation Period Insurances means the Insurances procured and / or obtained by the Concessionaire pursuant to the provisions of and in accordance with Section 20.1 (*Installation Period Insurances*) and **PART I (*Installation Period Insurances*) OF SCHEDULE I (*Insurances*)**;

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Installation Period means the period commencing on the Commencement Date and ending on the Installation Completion Date;

Installation Requirements means the relevant standards, requirements, criterion and timelines (as applicable) that are set out in relation to and are applicable to the Installation Works as set out in **SCHEDULE C (Installation Works)**, provided, however, in the event of any discrepancy in the standards, requirements, criterion and timelines (as applicable) set out in the abovementioned, the most stringent standards, requirements, criterion and timelines (as applicable), as contained in any of the above-mentioned, shall apply (unless otherwise mutually agreed between the Parties);

Installation Time For Completion shall mean the time permitted herein for performance and completion of Installation Works and all other obligations to be performed by the Concessionaire until issuance of the Final Installation Completion Certificate, as set out in and contemplated by the Applicable Specifications and the Installation Programme, including the completion of Installation Works on or prior to the Installation Completion Date;

Installation Works means all obligations, works, services and duties undertaken and/or performed and/or to be undertaken and/or performed by the Concessionaire in relation to the installation of toll plazas, weighbridges and the ETTMS on the Project Highway until the Installation Completion Date pursuant to the Applicable Specifications including, *inter alia*, the obligations, works, services and duties undertaken and/or performed and/or to be undertaken and/or performed by the Concessionaire in respect of the activities consisting of, and for achievement of, the Installation Works on or prior to the Installation Completion Date;

Insurances means all insurances, reinsurance, agreements of insurance and reinsurance and / or arrangement for insurance and / or reinsurance in relation to the Project, the Concession Assets, the Installation Works and / or any part or portion thereof procured or to be procured by the Concessionaire, including but not restricted to the Installation Period Insurances and the Operations Period Insurances;

Invested Equity means the aggregate of funds invested by the Sponsors and shareholders of Concessionaire for funding of the Sponsor Base Equity Amount in accordance with this Agreement;

Lapse of Consent means any Concessionaire Permit:

- (a) ceasing to remain in full force and effect and not being renewed or replaced within the time period prescribed by the Applicable Laws for the renewal or replacement of such Concessionaire Permit or, where a time period is not prescribed by the Applicable Laws, within sixty (60) days of such Concessionaire Permit ceasing to be in full force and effect, or
- (b) (other than a Specified Concessionaire Permit) not being issued upon application having been properly and timely made and diligently pursued within the time period prescribed by the Applicable Laws or where a time period is not prescribed by the Applicable Laws, within sixty (60) days of proper application being made for such Concessionaire Permit; or
- (c) being made subject, upon renewal, or otherwise, to any terms or conditions that materially and adversely affect the Concessionaire’s (or a Contractor’s) ability to perform its obligations under any document included within Implementing Agency Agreements and/or the Project Agreements,

in each of the above instances despite such party’s compliance with the applicable procedural and substantive requirements as applied in a “*non-discriminatory*” (as explained in Section 8.3.2) manner;

Licence shall have the meaning ascribed thereto in Section 4.1 (*Licence*);

Losses means any loss, damage, liability, payment and obligation (excluding any indirect or consequential loss, damage, liability, payment or obligation), and all expenses (including, without limitation, reasonable legal fees);

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Loss of Toll Revenues means the loss of Toll Revenues (as certified by the Independent Auditor and the Independent Engineer) from a relevant Relief Event including and a Competing Route Relief Event, Alternative Route Relief Event and a Toll Notification Relief Event which shall be the lower of:

- (a) the difference between (i) the Toll Revenues for the abovementioned relevant Relief Event period in the Financial Model and (ii) the actual toll revenues collected by the Concessionaire during such period; or
- (b) the difference between (i) the average of 2 years (immediately preceding the abovementioned Relief Event) of traffic data for each vehicle category multiplied by the traffic growth (calculated based on (a) if available, the actual traffic growth rate on the Project Highway in the last 24 months Date or (b) if actual traffic growth rate is not available because less than 2 years have lapsed since Commercial Operations Date, then the traffic growth rate projected in the Financial Model and the applicable toll rates; and (ii) the actual toll revenues collected by the Concessionaire during such period;

Main Body means this Agreement *excluding* the Schedules;

Maintenance Requirements means maintenance requirements for the maintenance of the Project, as prescribed by the Applicable Specifications;

Major Maintenance shall mean any non-routine maintenance activities required to restore, rehabilitate or replace, in whole or in part, the Project Highway or its appurtenant assets in order to meet the required standards set by the Implementing Agency;

MC shall mean a Management Contract;

Management Performance Measures shall have the meaning ascribed thereto in Section 6 (*Management Performance Measures*) of **SCHEDULE H (O&M Requirements)**;

Material Adverse Effect means, in the opinion of the Independent Engineer (in respect of technical matters) and/or in the opinion of the Independent Auditor (in respect of financial matters), there has occurred or could reasonably be expected to occur an effect, event, matter or circumstance or a change in the circumstances which materially and adversely impairs:

- (a) the business, operations, property, assets, present or future condition (financial or otherwise) or prospects of any Project Party in respect of the Project;
- (b) the ability or probability (financial or otherwise) of any Project Party to perform and observe its respective obligations under the Project Agreements;
- (c) the legality, validity or enforceability of, or the rights, obligations or remedies of, the Implementing Agency under this Agreement; and/or
- (d) the Concessionaire’s ability to install toll plazas, weighbridges and ETTMS as per Schedule C, and operate and maintain the Project in accordance with the terms of the Project Agreements;

Material Adverse Impediment shall have the meaning ascribed to it in Section 4.15.1;

Material Breach means breach by either Party or Sponsor of any of its /their obligations under the Implementing Agency Agreements which has/is likely to have a Material Adverse Effect on the Project and which such breaching Party shall have failed to cure by the date falling forty-five (45) days following the date of receipt of a notice issued by the non-breaching Party to the breaching Party to cure such breach;

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Material Breach of O&M Requirements shall have the meaning ascribed to it in Section 19.4.1;

Material Impediment Removal Period shall have the meaning ascribed to it in Section 4.15.2;

Minimum Indemnification Amount means the amount equal to PKR [●]/- (Pakistani Rupees [●] only) that a Party's claims for indemnification pursuant to Article 9 (*Indemnities & Limitation of Liabilities*) must exceed in the aggregate before that Party will be entitled to indemnification;

New IA List shall have the meaning ascribed thereto in Section 6.2.3;

New IE List shall have the meaning ascribed thereto in Section 5.2.3;

New Performance Security shall have the meaning ascribed to it in Section 11.3.8;

New Operational Year shall have the meaning ascribed to it in Section 11.3.8;

Non Political Event shall bear the meaning ascribed thereto in Section 21.1.1(b);

Non Political Event Termination Amounts shall have the meaning ascribed thereto in SCHEDULE T (*Termination Payments*);

Notice, Notify, Notification and its grammatical variations shall mean as notified in writing;

Notice of Remedy shall have the meaning ascribed thereto in Section 18.2.1;

O&M Component means the component of Toll Revenues that relates to the operations and maintenance expenses, as set out in the Financial Model and as adjusted from time to time for inflation in accordance with the Financial Model;

O&M Contract means the contract entered into or that may be entered into by the Concessionaire in accordance with this Agreement for the provision of the Operation and Maintenance in accordance with O&M Requirements and the O&M Manual;

O&M Contractor means the Person of good repute with whom the Concessionaire has entered into or may enter into the O&M Contract;

O&M Documents means all such reports, records, surveys, plans, analyses, calculations, manuals, operating procedures, guides and manuals, updated 'as built' drawings and documentation of any nature prepared, updated and submitted by the Concessionaire in connection with the Operations and Maintenance to the Implementing Agency, the Independent Engineer and/or the Independent Auditor pursuant to the Applicable Specifications and pursuant to any requests made in accordance with the Applicable Specifications by the Implementing Agency, the Independent Engineer and or the Independent Auditor from time to time;

O&M Inspection Report has the meaning ascribed thereto in Section 19.22.2;

O&M Manual shall have the meaning ascribed thereto in Section 19.7 (*O&M Manual*);

O&M Quarterly Status Report shall have the meaning ascribed thereto in Section 19.21.1;

O&M Programme shall have the meaning ascribed thereto in Section 18.8.2;

O&M Requirements means the relevant standards, requirements, criterion and timelines (as applicable) that are set out in relation to and are applicable to the Operation and Maintenance, as set out in:

- (a) the Main Body;
- (b) the Scope of the Project;
- (c) the SCHEDULE H (*O&M Requirements*);

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- (d) the O&M Manual;
- (e) the Safety Requirements;
- (f) the AASHTO Standards (to the extent adopted by the National Highway Authority in the “NHA General Specifications of 1998”), being the requirements applicable in respect of matters relating to the Concession Assets;
- (g) the **SCHEDULE G (*List of Tests & Completion Tests*)**;
- (h) in respect of each Operational Year following Installation Completion Date, the O&M Programme prepared for such Operational Year in accordance with Section 18.8 (*O&M Programme*); and
- (i) any other standards, requirements, criterion and timelines (as applicable), mutually agreed between the Parties from time to time,

provided, however, in the event of any discrepancy in the standards, requirements, criterion and timelines (as applicable) set out in the abovementioned, the most stringent standards, requirements, criterion and timelines (as applicable), as contained in any of the above-mentioned, shall apply (unless otherwise agreed between the Parties);

O&M Tests shall have the meaning ascribed thereto in Section 19.23 (*O&M Tests*);

O&M Time For Completion means the time permitted herein for performance and completion of Operations and Maintenance and all other obligations to be performed by the Concessionaire during the Operations Period, as set out in and contemplated by the Applicable Specifications and each O&M Programme, including, performance and completion of each Project O&M Milestone on or prior to its Project O&M Milestone Date;

Operation and Maintenance or Operate and Maintain means all obligations, works, services and duties undertaken and/or performed and/or to be undertaken and/or performed by the Concessionaire during the Operations Period pursuant to the Applicable Specifications including (a) the preparation, completion and delivery of all O&M Documents; (b) the operation and maintenance of the Concession Assets during the Operations Period; (c) functions of operations, maintenance, traffic movement, safety measurements etc. and performance of other services and obligations incidental thereto; and (d) achievement of Project O&M Milestones;

Operational Performance Measures shall have the meaning ascribed thereto in Section 5 (*Operational Performance Measures*) of **SCHEDULE H (*O&M Requirements*)**;

Operational Year means a period of one (1) year commencing on each consecutive anniversary of the Commercial Operations Date and ending as of the end of the day preceding the next anniversary of the Commercial Operations Date, except for the first (1st) Operational Year which shall start on the Commercial Operations Date;

Operations Period means the period commencing on the Commercial Operations Date and ending on the Trigger Date;

Operations Period Insurances means the Insurances procured and / or obtained by the Concessionaire pursuant to the provisions of and in accordance with Section 20.2 (*Operations Period Insurances*) and **PART I (*Operations Period Insurances*) OF SCHEDULE I (*Insurances*)**;

Parties shall have the meaning ascribed thereto in the Preamble;

Performance Security means a first demand irrevocable and unconditional guarantee, issued by a scheduled bank in Pakistan (with a minimum credit rating of at least ‘AA-’ as rated by JCR VIS or an equivalent rating by PACRA) acceptable to the Implementing Agency in the form of a demand guarantee or a standby letter of credit (being in an amount equal to the aggregate of the first two months of the Expected Revenue Share payable for the Operational Year to which it pertains) that is furnished from time to time by the Concessionaire to the Implementing Agency

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in accordance with Section 11.3 (*Performance Security*), in the form of the instrument attached herewith as **SCHEDULE M (*Form of Performance Security*)**;

Performance Security Expiry Date shall have the meaning ascribed thereto in Section 11.3.7;

Permitted Events means:

- (a) Force Majeure Events;
- (b) Implementing Agency Events of Default;
- (c) Emergency Decommissioning, to the extent the same does not result from reasons attributable to the Concessionaire;
- (d) Material Adverse Impediment, to the extent the same does not result from reasons attributable to the Concessionaire;
- (e) [not used]
- (f) the occurrence of the circumstances set out in Section 4.9 (*Geological and Archaeological Finds*) causing a delay in the performance of the Concessionaire’s obligations under this Agreement; and
- (g) the occurrence of the Implementing Agency Overriding Power Event, to the extent the same does not result from reasons attributable to the Concessionaire;

Persistent Breach of O&M Requirements shall have the meaning ascribed to it in Section 19.4.1(e);

Person means any individual, firm, company, corporation, society, partnership (whether or not having a separate legal personality), joint venture, trust, unincorporated organization, government state, association or Government Authority or any other legal entity and shall include successors and assigns;

Political Event shall have the meaning ascribed thereto in Section 21.1.1(a);

Political Event Termination Amounts shall have the meaning ascribed thereto in **SCHEDULE T (*Termination Payments*)**;

“PPP Board” means the Punjab Public Private Partnership Policy and Monitoring Board of the Authority set up pursuant to Section 4 of the Act;

Pre Estimated Project Cost means the estimated cost of the Project, as specified in the Base Case Financial Model and being funded through the Sponsor Base Equity Amount;

Preservation Costs shall have the meaning ascribed thereto in Section 18.3.4;

Project means each of the following activities, as performed (in each case) in accordance with this Agreement:

- (a) the ownership and possession of the Concession Assets;
- (b) the financing, installation, permitting, testing and commissioning of, in each case, the Concession Assets;
- (c) the procurement and contracting for goods, equipment and services for the Concession Assets;
- (d) the insuring and Operation and Maintenance of the Concession Assets;
- (e) the making available, on a continuous basis, of the Concession Assets for the Users;

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Draft Concession Agreement for Clean Road Project

- (f) payments by the Parties of amounts due and payable under this Agreement;
- (g) the recruitment, employment and training of staff for the Concession Assets;
- (h) the transfer of the Concession Assets to the Implementing Agency on the Transfer Date;
- (i) all activities incidental or related to any of the above.

Project Agreements means:

- (a) this Agreement;
- (b) the O&M Contract;
- (c) the Civil Work Contract;
- (d) any other material contract entered into or to be entered into by the Concessionaire at any time after the Effective Date in connection with the Project and designated as a “Project Agreement” with the consent of the Implementing Agency.

Project Facilities means the facilities to be constructed, built, installed, erected and / or provided by the Concessionaire on the Project Site, as detailed in **SCHEDULE D (Project Facilities)**;

Project Highway means the approximately 113-km long highway for which the start point is Muridke and the end point is Narowal and Second Road start point is Narowal end point is Shakkargarh as more particularly described and indicated in the **SCHEDULE F (Project Site)** including bridges, culverts and other appurtenances thereto, which shall form part of the Concession Assets and shall be developed in accordance with the Applicable Specifications, provided further that the exact length of the Project Highway shall be determined following the completion of detailed design;

Project Manager means the project manager of the Project Management/Implementation Unit, appointed by the Implementing Agency for purposes of this Agreement;

Project Management/Implementation Unit means the project management/implementation unit established by the Implementing Agency in accordance with the Applicable Laws for the purpose of overseeing the day to day implementation of the Project in accordance with the terms of this Agreement and Applicable Laws, and shall be headed by the Project Manager;

Project Milestone mean, in respect of the Operations and Maintenance, the Project O&M Milestones;

Project Milestone Date shall mean, in respect of a Project O&M Milestone, the respective Project O&M Milestone Date for such Project O&M Milestone;

Project O&M Milestones means the progressive milestones relating to the performance and completion of Operation and Maintenance that are to be achieved by the Concessionaire pursuant to the Applicable Specifications during an Operational Year of the Operation Period, as set out in:

- (a) the Applicable Specifications and specifications;
- (b) the O&M Programme for such Operational Year;

Project O&M Milestone Date means the date permitted herein for achievement of each Project O&M Milestone, as set out and contemplated (in respect of each Project O&M Milestone) in:

- (a) the Applicable Specifications; and
- (b) the O&M Programme

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Project Party means the Concessionaire, the Sponsor and / or any Contractor, as the case may be;

Project Requirements means the Design Requirements, the Installation Requirements and the O&M Requirements, as applicable;

Project Site means the site on which the Project is to be implemented comprising of the immovable property including the right of way on which the Project Facilities and the Project Highway are to be operated, maintained, installed, erected and / or provided by the Concessionaire, in accordance with the terms of this Agreement, as demarcated in the map attached hereto in **SCHEDULE F (Project Site)**;

Project Site Conditions shall have the meaning ascribed to it in Section 4.4.1;

Project Site Licence Agreement means the agreement of Licence (in the form agreed between the Parties) to be entered into between the Implementing Agency and the Concessionaire pursuant to which the Implementing Agency shall Licence the land comprising the Project Site to the Concessionaire;

Project Works means all obligations, works, services and duties undertaken and/or performed and/or to be undertaken and/or performed by the Concessionaire pursuant to the Applicable Specifications and shall include:

- (a) the Installation Works and all obligations, works, services and duties undertaken and/or performed and/or to be undertaken and/or performed by the Concessionaire until the Installation Completion Date;
- (b) the Operations and Maintenance and all obligations, works, services and duties undertaken and/or performed and/or to be undertaken and/or performed by the Concessionaire during the Operations Period;

PKR or Pak Rupees means the lawful currency of the Islamic Republic of Pakistan;

Proportionate Basis shall mean the revenue shared in accordance with percentage set-out in the Base Case Financial Model;

Proposed Completion Tests Date shall have the meaning ascribed thereto in Section 14.1.1;

Proposed Detailed Programme of Performance shall have the meaning ascribed thereto in Section 12.5.3;

Proposed O&M Programme shall have the meaning ascribed to it in Section 19.8.1;

Protected Assets shall have the meaning ascribed thereto in Section 8.10.1(b);

Public-Private Partnership means public-private partnership as ascribed in the Act;

Public Sector Entity means the Implementing Agency, the Authority, or any federal, provincial, district or local government, ministry, department, commission, board, body, bureau, agency, authority, instrumentality, Court or other statutory, regulatory, judicial or administrative body, having jurisdiction over the Concessionaire, the Concession Assets, the Project Site, or any portion thereof, or the performance of all or any of the services or obligations of the Concessionaire under or pursuant to this Agreement;

Punjab Highway Patrol means the police set up by the Government of Punjab to provide security on the highways located in the Province of Punjab;

Quality Assurance Plan shall have the meaning ascribed thereto in Section 3.1.2(m);

Relief Costs means the increase in such capital expenditures and costs and/or the operating costs, in each case, that are set out in the Financial Model and which directly result from a Relief Event (excluding such Relief Events that are set out in Section 15.2.1 (f) and (g)), as determined by the

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Independent Engineer and the Independent Auditor pursuant to Article 15 (*Relief Orders*) and which are set out in the Relief Order; provided, however, for the purposes of determining such costs, information contained in the Financial Model shall be relied upon by the Independent Engineer and the Independent Auditor;

Relief Event(s) shall have the meaning ascribed thereto in Section 15.2.1;

Relief Order means a written order jointly issued by the Independent Auditor and the Independent Engineer to the Parties pursuant to Article 15 (*Relief Orders*) authorizing an extension of Time For Completion and/or payment of Relief Costs in accordance with Article 15 (*Relief Extensions & Relief Compensations*);

Relief Order Proposal shall have the meaning ascribed thereto in Section 15.4.1;

Relief Order Request shall have the meaning ascribed thereto in Section 15.2.1;

Remedy Event shall have the meaning ascribed thereto in Section 18.2.1;

Remedy Time Period shall have the meaning ascribed thereto in Section 18.2.1;

Revenue Sharing Period shall mean the period commencing on the Commercial Operations Date and ending on the Toll Collection End Date;

RFP shall have the meaning ascribed to in Recital B above;

Safety Requirements means the arrangements and procedures for conducting safety related measures in respect of the Concession Assets, as set out in the O&M Manual;

SBP means the State Bank of Pakistan, established under the State Bank of Pakistan Act, 1956 (Act No. XXXII of 1956);

Scheduled Commencement Date means the date falling [●] ([●]) days after the Effective Date, as may be extended from time to time in accordance with this Agreement;

Scheduled Installation Completion Date shall have the meaning ascribed thereto in Section 14.4.2;

Scope of the Project means the scope of the Project, as set out in **SCHEDULE A (*Scope of the Project*)**;

SCU Monthly Compliance Table shall have the meaning ascribed thereto in Section 19.25.1;

Service Levels shall have the meaning ascribed thereto in Section 19.10.1;

Service Levels Defect shall have the meaning ascribed thereto in Section 19.10.1;

Service Life means the period during which the Project Highway can deliver its intended level of service, functionality, and safety to Users, in accordance with the Service Levels, before requiring substantial maintenance, rehabilitation, or reconstruction;

Share(s) means share capital issued to the shareholders of the Concessionaire (excluding the Implementing Agency) from time to time and shall be the main recipient of Base Case Equity IRR in accordance with this Agreement. Moreover, these shares shall be recipients of the Termination Payment (if applicable in terms of this Agreement) as well; provided, however, for purposes of calculating the Termination Payment, the term “**Equity**” shall exclude all amounts comprising injections to the Equity effected after Installation Completion Date; provided, that such amounts shall constitute Equity to the extent the same are part of the Pre Estimated Project Cost and determined by the Independent Auditor to be part of the Total Project Cost;

Specific Requirements means:

- (a) in respect of Installation Works, the Installation Requirements; and

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(b) in respect of Operations and Maintenance, the O&M Requirements;

Specified Concessionaire Permits means the Concessionaire Permits set out in **SCHEDULE J** (*Specified Concessionaire Permits*);

Sponsor means [*to be finalized after bidding*], being the shareholder of the Concessionaire that is required, together with its Associates (if any), subject to the terms of this Agreement, to hold (directly and/or indirectly) one hundred percent (100%) of the total Equity of Shares;

Sponsor Base Equity Amount means the amount set out in the Financial Model;

Suspension shall have the meaning ascribed thereto in Section 18.3.1;

Temporary Works means all temporary works of every kind (other than the Concessionaire or its Contractor’s equipment) required at the Project Site for the execution and completion of the permanent Installation Works and the remedying of the Defects & Deficiencies;

Termination means the termination of this Agreement and the Concession hereunder upon the issuance of a Termination Notice in accordance with the terms hereof;

Termination Date means the date of issuance of the Termination Notice and this will be the date on which the actual Termination occurs following the Cure Period;

Termination Dividend Amount means the aggregate return on Equity for Shares for each of the [●] Accounting Years of the Concessionaire falling immediately after the Termination Date, the same being an amount equal to the aggregate of Termination Equity IRR applied to the Equity for each of the [●] Accounting Years falling after the Termination Date; provided however, that in case the time period between the Termination Date and Final Expiry Date is less than [●] Accounting Years, the Termination Dividend Amount shall be the aggregate of Termination Equity IRR applied to the Equity for each of the Accounting Years falling after the Termination Date;

Termination Equity means, as of the Transfer Date occurring due to Termination, the aggregate of the Invested Equity reduced on a straight-line basis from the Installation Completion Date through the term of this Agreement to [*to be finalized prior to bidding*] of the Invested Equity;

Termination Equity IRR means the post-tax internal rate of return, the same being [●]%, on the Equity;

Termination Notice means a notice to be issued in writing by a Party notifying the other Party of the Termination of this Agreement in accordance with the applicable provisions of this Agreement;

Termination Payment means:

- (a) in respect of Termination due to a Concessionaire Event of Default, the Concessionaire Default Termination Amount;
- (b) in respect of Termination due to a Corrupt Act, the Corrupt Act Termination Amount;
- (c) in respect of Termination due to a Implementing Agency Event of Default, the Implementing Agency Default Termination Amount;
- (d) in respect of Termination due to a Political Event, the Political Event Termination Amount; and
- (e) in respect of Termination due to a Non Political Event, the Non Political Event Termination Amount;

Termination Payment Date means the date falling ninety (90) days following the Termination Date;

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Time For Completion means (as applicable):

- (a) in respect of Installation Works, the Installation Time For Completion; and
- (b) in respect of Operations & Maintenance, the O&M Time For Completion

Toll(s) means the amount of money determined, levied, imposed, demanded, charged, collected, retained and appropriated by the Concessionaire and/or to be determined, levied, demanded, charged, collected, retained and appropriated by the Concessionaire, from the Users of the Concession Assets (except the Exempted Vehicles) (including for any weigh bridges, or other commercial rights and advertisement rights) or part thereof as the fee for the use of the Concession Assets or part thereof, commencing from the Commercial Operations Date (unless otherwise mutually agreed between the Parties) until the Toll Collection End Date. The words “Toll”, “Tolling”, “Tolled” and other grammatical variations of the word “Tolls” shall be construed accordingly;

Toll Collection End Date shall mean the date on which the Concessionaire’s right to collect Toll in terms of this Agreement shall stand cancelled and shall cease to exist, such date being:

- (a) In case this Agreement is not terminated prior to the Final Expiry Date, the Final Expiry Date;
- (b) In case this Agreement is terminated prior to the Final Expiry Date, the Transfer Date;
- (c) In case this Agreement is terminated prior to the Final Expiry Date, the Toll Collection End Date shall be: (i) in case the Concession Agreement is terminated due to Implementing Agency Event of Default, the Transfer Date; or (ii) in case the Concession Agreement is terminated due to Concessionaire Event of Default, Force Majeure or Corrupt Act, the Termination Date.

Toll Concession shall means all concessions and rights granted to the Concessionaire hereunder and under the Implementing Agency Agreements in relation to Toll and all matters relating to the same including determination, levying, imposing, demanding, charging, collection, retention and appropriation of the same by the Concessionaire from the Commercial Operations Date until the Trigger Date.

Toll Notification Structure means the structure for imposition and adjustments in the Toll and the list of exempted vehicles, as specifically contemplated by **SCHEDULE P (Toll Notification Structure)**;

Toll Notification has the meaning ascribed thereto in Section 17.5.1;

Toll Notification Relief Event shall bear the meaning ascribed thereto in Section 16.5.2;

Toll Operations Manual has the meaning ascribed thereto in Section 16.2.2;

Toll Revenues means all income derived by the Concessionaire from the Project from collection of the Tolls;

Toll Progress Report shall bear the meaning ascribed thereto in Section 17.3;

Total Project Cost means the actual capital cost of the Project upon completion of the Project, as certified by the Independent Auditor; provided, that the same shall not include (unless otherwise agreed with the Implementing Agency) the Additional Cost;

Transfer Date means:

- (i) in case of early Termination of this Agreement prior to the Final Expiry Date, the Termination Payment Date subject to the Implementing Agency making payment of the

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relevant Termination Payment to the Concessionaire on or prior to such date or the date on which the Termination Payment is actually made;

- (ii) in case of achievement of Final Expiry Date pursuant to this Agreement, the Final Expiry Date;

Trigger Date means and includes, the Final Expiry Date and / or the Termination Date, as the case may be;

Unpaid Implementing Agency Amount shall have the meaning ascribed thereto in Section 17.4.4;

Unpaid Termination Equity Amount shall have the meaning ascribed thereto in Section 23.5.2;

Unpaid Termination Payment Amount shall have the meaning ascribed thereto in Section 17.7.1;

User means the Person who traverses or travels over or on the Concession Assets or any portion thereof;

Utilities Affected Assets shall have the meaning ascribed thereto in Section 4.12.2;

Utility Proceeds shall have the meaning ascribed to it Section 4.12.3;

Vacant Possession means delivery to the Concessionaire by the Implementing Agency of possession of the Project Site in accordance with this Agreement and in accordance with Applicable Laws, free from all encroachments, and the grant of all Easementary Rights and all other rights appurtenant thereto, so that the Concessionaire enjoys complete uninterrupted and quiet possession and control of the Project Site throughout the Concession Period; and

Vesting Certificate shall have the meaning ascribed thereto in Section 24.4 (*Vesting Certificate*).

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1.2 CONSTRUCTION

1.2.1 In this Agreement, unless the context otherwise requires:

- (a) references to any legislation or any provision thereof shall include amendment or re-enactment or consolidation of such legislation or any provision thereof so far as such amendment or re-enactment or consolidation applies or is capable of applying to any transaction entered into hereunder;
- (b) references to laws of Pakistan or Pakistan law or regulation having the force of law shall include the laws, acts, ordinances, rules, regulations, bye laws or notifications which have the force of law in the territory of Pakistan and as from time to time may be amended, modified, supplemented, extended or re-enacted;
- (c) the table of contents, headings or sub-headings in this Agreement are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;
- (d) the words “**include**” and “**including**” are to be construed without limitation and shall be deemed to be followed by “**without limitation**” or “**but not limited to**” whether or not they are followed by such phrases;
- (e) references to “**installation**” include, unless the context otherwise requires, investigation, design, developing, engineering, procurement, delivery, transportation, installation, processing, fabrication, testing, commissioning and other activities incidental to the installation, and “**install**” shall be construed accordingly;
- (f) references to “**development**” include, unless the context otherwise requires, construction, renovation, refurbishing, augmentation, up-gradation and other activities incidental thereto, and “**develop**” shall be construed accordingly;
- (g) any reference to any period of time shall mean a reference to that according to Pakistan Standard Time;
- (h) any reference to day shall mean a reference to a calendar day as per the Gregorian Calendar;
- (i) references to a “**business day**” shall be construed as a reference to a day (other than a Sunday) on which banks in Pakistan are generally open for business;
- (j) any reference to month shall mean a reference to a calendar month as per the Gregorian calendar;
- (k) references to any date, period or Project Milestone shall mean and include such date, period or Project Milestone as may be extended pursuant to Relief Order;
- (l) any reference to any period commencing “**from**” a specified day or date and “**till**” or “**until**” a specified day or date shall include both such days or dates; provided, that if the last day of

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any period computed under this Agreement is not a business day, then the period shall run until the end of the next business day;

- (m) the words importing singular shall include plural and vice versa;
- (n) references to any gender shall include the other and the neutral gender;
- (o) “**indebtedness**” shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;
- (p) references to the “**winding-up**”, “**dissolution**”, “**insolvency**”, or “**reorganization**” of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganization, dissolution, arrangement, protection or relief of debtors;
- (q) save and except as otherwise provided in this Agreement, any reference, at any time, to any agreement, deed, instrument, Licence or document of any description shall be construed as reference to that agreement, deed, instrument, Licence or other document as amended, varied, supplemented, modified or suspended at the time of such reference; provided, that this subsection shall not operate so as to increase liabilities or obligations of the Implementing Agency hereunder or pursuant hereto in any manner whatsoever;
- (r) any agreement, consent, approval, authorization, notice, communication, information or report required under or pursuant to this Agreement from or by any Party, the Independent Engineer or the Independent Auditor shall be valid and effective only if it is in writing under the hand of a duly authorized representative of such Party, the Independent Engineer or the Independent Auditor, as the case may be, in this behalf and not otherwise;
- (s) the Schedules and Recitals to this Agreement form an integral part of this Agreement and will be in full force and effect as though they were expressly set out in the body of this Agreement;
- (t) references to Recitals, Articles, Sections, or Schedules in this Agreement shall, except where the context otherwise requires, mean references to Recitals, Articles, Sections, and Schedules of or to this Agreement, and references to a Paragraph shall, subject to any contrary indication, be construed as a reference to a Paragraph of this Agreement or of the Schedule in which such reference appears;
- (u) the damages payable by either Party to the other of them, as set forth in this Agreement, whether on per diem basis or otherwise, are mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by the Party entitled to receive the same and are not by way of penalty; and
- (v) time shall be of the essence in the performance of the Parties’ respective obligations. If any time period specified herein is extended, such extended time shall also be of the essence.

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- 1.2.2 The rule of construction, if any, that a contract should be interpreted against the parties responsible for the drafting and preparation thereof, shall not apply.
- 1.2.3 Any word or expression used in this Agreement shall, unless otherwise defined or construed in this Agreement, bear its ordinary English meaning and, for these purposes, the General Clauses Act 1897 shall not apply.

1.3 COSTS FOR DOCUMENTS

- 1.3.1 Unless expressly provided otherwise in this Agreement, any documentation required to be provided or furnished by the Concessionaire to the Implementing Agency, the Independent Engineer and/or the Independent Auditor or any other relevant person so appointed or nominated by the Implementing Agency, or any other person legally so required shall be provided free of cost and in three (3) copies, and if the Implementing Agency, the Independent Engineer and/or the Independent Auditor is required to return any such documentation with their comments and/or approval, they shall be entitled to retain two (2) copies thereof.

1.4 MEASUREMENTS AND ARITHMETIC CONVENTIONS

- 1.4.1 All measurements and calculations shall be in the metric system and calculations done to two (2) decimal places, with the third digit of five (5) or above being rounded up and below five (5) being rounded down.

1.5 PRIORITY OF AGREEMENTS, ARTICLES, SECTIONS AND SCHEDULES

- 1.5.1 This Agreement, and all other agreements and documents forming part of this agreement are to be taken as mutually explanatory and, unless otherwise expressly provided elsewhere in this Agreement, the priority of this Agreement and the other Implementing Agency Agreement and other documents and agreements forming part thereof or referred to therein shall, in the event of any conflict between them, be in the following order (unless otherwise agreed between the Parties):

- (a) this Agreement;
- (b) the Implementing Agency Agreements (other than this Agreement).

- 1.5.2 Subject to the provisions of Section 1.5.1, in the event of any ambiguity and / or discrepancies with regard to this Agreement, the following shall apply:

- (a) between two or more Articles and / or Section of this Agreement, the provisions of a specific Article relevant to the issue under consideration shall prevail over those in other Article and / or Section;
- (b) between the Article and / or Section of this Agreement and the Schedules, the Article and / or Section shall prevail unless the issue in question /matter is specifically provided for in the Schedule and only referred to in the Article and / or Section, as the case may be;
- (c) between any two Schedules, the Schedule relevant to the issue shall prevail;

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- (d) between the written description on the O&M Documents and the O&M Requirements, the latter shall prevail;
- (e) between the dimension scaled from the O&M Documents and its specific written dimension, the latter shall prevail; and
- (f) between any value written in numerals and that in words, the latter shall prevail.

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2. CONCESSION

2.1 GRANT OF CONCESSION

2.1.1 In consideration of the Concessionaire's obligations contained in this Agreement and relying on the Concessionaire's representations, warranties and covenants contained herein, the Implementing Agency, subject to the terms of this Agreement, hereby grants to the Concessionaire and authorizes it, for the duration of the Concession Period, to install toll plazas, weighbridges and ETTMS on the Project Site; to operate, maintain and implement the Project on a management contract basis, and to exercise and enjoy the rights, powers, benefits, privileges, collect Toll, authorizations and entitlements as set forth in this Agreement (the **Concession**).

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

2.2 CONCESSION PERIOD

2.2.1 The Concession hereby is granted and shall be effective for the Concession Period.

2.3 NOT USED.

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3. CONDITIONS

3.1 CONDITIONS PRECEDENT

- 3.1.1 Save and except as expressly provided herein, the respective obligations of the Parties shall be subject to the satisfaction (waiver and/or deferral, in accordance with the terms herein) in full of the conditions precedent specified in Section 3.1.2, Section 3.1.3 and Section 3.1.4 (the **Conditions Precedent**) on or prior to the Scheduled Commencement Date.
- 3.1.2 The Concessionaire shall satisfy the following Conditions Precedent to the satisfaction of the Implementing Agency, the Independent Engineer and the Independent Auditor prior to the Scheduled Commencement Date (the **Concessionaire Conditions Precedent**):
- (a) the Concessionaire has provided copies of its Corporate Documents to the Implementing Agency (with copies delivered to the Independent Engineer and the Independent Auditor), duly certified as true copies by the company secretary or director of the Concessionaire;
 - (b) the Concessionaire has provided to the Implementing Agency copies (with copies delivered to the Independent Engineer and Independent Auditor) of its Board Resolution that duly authorizes:
 - (i) the Concessionaire to enter into this Agreement and to undertake the obligations, liabilities, as set out in this Agreement, and the transactions as contemplated by this Agreement;
 - (ii) a specified Person or Persons to:
 - (aa) execute this Agreement on behalf of the Concessionaire; and
 - (bb) undertake all other acts specifically relating to this Agreement, as contemplated by this Agreement;
 - (c) the Concessionaire has provided the Performance Security to the Implementing Agency that remains effective and valid till the Performance Security Expiry Date;
 - (d) each of the Specified Concessionaire Permits have been procured by the Concessionaire and the same are effective and valid and have not been cancelled and / or rescinded and the Concessionaire has provided copies of the same to the Implementing Agency (with copies delivered to the Independent Engineer and the Independent Auditor);
 - (e) [not used];
 - (f) [not used];
 - (g) the Implementing Agency has received the following legal opinions:
 - (i) a legal opinion from the legal counsel of the Concessionaire confirming that the Concessionaire has been duly organized and is validly existing under the Applicable Laws and has the requisite power and authority to enter into the

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Implementing Agency Agreements and to undertake the transactions as contemplated by the Implementing Agency Agreements and to assume the obligations as contained herein and the enforceability of the same against the Concessionaire;

- (ii) a legal opinion from the legal counsel of the Sponsor confirming that such Sponsor is validly existing under the applicable laws and that such Sponsor has the requisite Implementing Agency and power to enter into the Implementing Agency Agreement(s) and the Project Agreement(s) to which such Sponsor is a party and to assume the obligations as contained therein and the enforceability of the same against the Sponsor;
- (h) the Concessionaire has entered into the Project Site Licence Agreement with the Implementing Agency for Licence of the Project Site to the Concessionaire in accordance with Article 4 (*Project Site*);
- (i) the Concessionaire has entered into the Independent Engineer Contract for the appointment of the Independent Engineer with the counterparties to such contract;
- (j) the Concessionaire has entered into the Independent Auditor Contract for the appointment of the Independent Auditor with the counterparties to such contract;
- (k) presentation of evidence that the Escrow Account has been established with a reputable bank, having at least AA+ credit rating by the Pakistan Credit Rating Agency (PACRA), approved by the Implementing Agency and that the Escrow Agreement has been executed;
- (l) the Concessionaire's Approved Detailed Programme of Performance of the Project stands approved by the Independent Engineer and the Implementing Agency in accordance with Section 12.5;
- (m) the Concessionaire has submitted to the Implementing Agency, a **Quality Assurance Plan** that will set out and define work methods and procedures (including in relation to the tests listed in Schedule G) to be adopted by the Concessionaire to ensure that the same complies with all its obligations under this Agreement;
- (n) Concessionaire has established the Concessionaire Self Control Unit (SCU) and names of members are disclosed; and
- (o) the Concessionaire has submitted copies of documents evidencing satisfaction of each of the Concessionaire Conditions Precedent to the Independent Engineer and the Independent Auditor.

3.1.3 [Not Used]

3.1.4 The Implementing Agency shall satisfy the following Conditions Precedent to the satisfaction of the Concessionaire, the Independent Auditor and the Independent Engineer prior to the Scheduled Commencement Date (the **Implementing Agency Conditions Precedent**):

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- (a) the Implementing Agency has Licenced the Project Site to the Concessionaire in accordance with Article 4 (*Project Site*) and the Project Site Licence Agreement;
- (b) subject to section 12.5, the Implementing Agency has handed over Vacant Possession of the Project Site to the Concessionaire in accordance with Article 4 (*Project Site*);
- (c) [Not used];
- (d) the Implementing Agency has entered into the Independent Engineer Contract for the appointment of the Independent Engineer with the other counterparties to such contract;
- (e) the Implementing Agency has entered into the Independent Auditor Contract for the appointment of the Independent Auditor with the other counterparties to such contract;
- (f) the Implementing Agency has entered into the Implementing Agency Agreements;
- (g) [the Implementing Agency has acquired all the necessary approvals for which the Implementing Agency is responsible for in relation to the Project and this Agreement];
- (h) the Concessionaire has received a legal opinion from the legal counsel of the Concessionaire confirming that the Implementing Agency has the requisite power and authority to enter into the Implementing Agency Agreements and to undertake the transactions as contemplated by the Implementing Agency Agreements and to assume the obligations as contained herein and the enforceability of the same against the Implementing Agency;
- (i) the Implementing Agency has submitted copies of documents evidencing satisfaction of each of the Implementing Agency Conditions Precedent to the Independent Engineer and the Independent Auditor;
- (j) [not used]

3.2 CONDITIONS SUBSEQUENT

3.2.1 The Concessionaire undertakes to fulfil the following Conditions Subsequent to the entire satisfaction of the Implementing Agency:

- (a) [●] ([●]) days prior to the Scheduled Installation Completion Date, the Concessionaire shall provide the Implementing Agency (with copies to the Independent Engineer and the Independent Auditor) with evidence of appointment of the O&M Contractor.

3.2.2 The Implementing Agency undertakes to fulfil the following Conditions Subsequent to the satisfaction of the Concessionaire:

- (a) On the issuance of the Commencement Certificate by the Independent Engineer (in consultation with the Implementing Agency), the Implementing Agency shall issue the Toll Notification in accordance with Section 17 authorizing the Concessionaire to begin charging the Toll set forth in **Schedule P (*Toll Notification Structure*)**;

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- (b) [●] ([●]) days prior to the Scheduled Installation Completion Date, the Implementing Agency shall provide evidence that the Implementing Agency Payment Account has been established.

3.3 WAIVER AND/OR DEFERRAL OF CONDITIONS AND EXTENSION OF SCHEDULED COMMENCEMENT DATE

3.3.1 The:

- (a) Implementing Agency may (at its discretion) waive and/or defer any of the Concessionaire Conditions Precedent set forth in Section 3.1.2 of Section 3.1 (*Conditions Precedent*) and/or the Conditions Subsequent set out in Section 3.2 (*Conditions Subsequent*). For the avoidance of doubt, the Implementing Agency may, at its sole discretion, grant any waiver and/or deferral hereunder with such conditions as it may deem fit;
- (b) Concessionaire may (at its discretion) waive and/or defer any of the Implementing Agency Conditions Precedent set forth in Section 3.1.4 of Section 3.1 (*Conditions Precedent*). For the avoidance of doubt, the Concessionaire may, at its sole discretion, grant any waiver and/or deferral hereunder with such conditions as it may deem fit;

3.3.2 Notwithstanding anything contained herein, the Scheduled Commencement Date may be extended from time to time with the mutual consent of the Parties.

3.3.3 Any deferral and/or waiver of a Condition Precedent and/or Condition Subsequent in terms of this Section 3.3 (*Waiver and/or Deferral or Conditions and Extension of Scheduled Commencement Date*) shall be notified in writing to the Independent Engineer and the Independent Auditor by the Party granting such deferral and/or waiver of such condition in accordance with this Agreement.

3.4 COMMENCEMENT CERTIFICATE & COMMENCEMENT DATE

3.4.1 The Conditions Precedent shall be satisfied, waived and/or deferred by the Scheduled Commencement Date in accordance with this Agreement. Each Party shall promptly inform the other Party in writing (together with a copies delivered to the Independent Engineer and the Independent Auditor) when the Conditions Precedent for which it is responsible have been satisfied.

3.4.2 The Parties agree that:

- (a) within thirty (30) days of the Implementing Agency's receipt from the Concessionaire, (through the Independent Engineer and the Independent Auditor), evidence of satisfaction of a Concessionaire Condition Precedent, the Implementing Agency shall (through the Project Manager) notify the Independent Engineer and the Independent Auditor in writing (with a copy to the Concessionaire) whether it has any objections on the satisfaction of such Concessionaire Condition Precedent. In the event the Implementing Agency (through the Project Manager) does not raise any objection in writing on the satisfaction of a Concessionaire Condition Precedent within the thirty (30) day period set out herein, such Concessionaire Condition Precedent shall be deemed to be

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not objected to by the Implementing Agency. In the event the Implementing Agency raises any objections on the satisfaction of a Concessionaire Condition Precedent and notifies the same to the Independent Engineer and the Independent Auditor (with a copy to the Concessionaire) within the thirty (30) day period set out herein, the Concessionaire shall address such objections and re-submit to the Independent Engineer and the Independent Auditor (with a copy to Implementing Agency) evidence of satisfaction of such Concessionaire Condition Precedent and the process in this Section 3.4.2(a) shall be repeated until such time that the Implementing Agency has not objected to or is deemed to have not objected to the satisfaction of such Concessionaire Condition Precedent. The provisions of this Section 3.4.2(a) shall apply to each Concessionaire Condition Precedent for which evidence of satisfaction is submitted by the Concessionaire to the Independent Engineer and the Independent Auditor (with a copy to the Implementing Agency) from time to time;

- (b) within thirty (30) days of the Concessionaire's receipt from the Implementing Agency, through the Independent Engineer and the Independent Auditor, evidence of satisfaction of an Implementing Agency Condition Precedent, the Concessionaire shall notify the Independent Engineer and the Independent Auditor in writing (with a copy to the Implementing Agency) whether it has any objections on the satisfaction of such Implementing Agency Condition Precedent. In the event the Concessionaire does not raise any objection in writing on the satisfaction of a Implementing Agency Condition Precedent within the thirty (30) day period set out herein, such Implementing Agency Condition Precedent shall be deemed to be not objected to by the Concessionaire. In the event the Concessionaire raises any objections on the satisfaction of a Implementing Agency Condition Precedent and notifies the same to the Independent Engineer and the Independent Auditor (with a copy to Implementing Agency) within the thirty (30) day period set out herein, the Implementing Agency shall address such objections and re-submit to the Independent Engineer and the Independent Auditor (with a copy to the Concessionaire) evidence of satisfaction of such Implementing Agency Condition Precedent and the process in this Section 3.4.2(b) shall be repeated until such time that the Concessionaire has not objected to or is deemed to have not objected to the satisfaction of such Implementing Agency Condition Precedent. The provisions of this Section 3.4.2(b) shall apply to each Implementing Agency Condition Precedent for which evidence of satisfaction is submitted by the Implementing Agency to the Independent Engineer and the Independent Auditor (with a copy to Concessionaire) from time to time.

3.4.3 The Parties hereby jointly undertake to procure that the Independent Engineer and the Independent Auditor jointly issue the Commencement Certificate within three (3) days of the date on which the Independent Engineer and the Independent Auditor are satisfied that each of the:

- (a) Concessionaire Conditions Precedent stand satisfied (and/or waived or deferred by the Implementing Agency in accordance with Section 3.3.1(a));
- (b) Concessionaire Conditions Precedent are not objected to or deemed not to have been objected to by the Implementing Agency (acting through the Project Manager) in accordance with Section 3.4.2(a) and if any Concessionaire Condition Precedent is objected to by the Implementing Agency in accordance with Section 3.4.2(a), the Concessionaire has addressed such objections and re-submitted evidence of satisfaction of such Concessionaire Condition Precedent to the Independent Engineer and the

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Independent Auditor (with a copy to the Implementing Agency) in accordance with Section 3.4.2(a);

- (c) Implementing Agency Conditions Precedent stand satisfied (and/or waived or deferred by the Concessionaire in accordance with Section 3.3.1(b)); and
- (d) Implementing Agency Conditions Precedent are not objected to or deemed to not have been objected to by the Concessionaire in accordance with Section 3.4.2(b) and if any Implementing Agency Condition Precedent is objected to by the Concessionaire in accordance with Section 3.4.2(b), the Implementing Agency has addressed such objections and re-submitted evidence of satisfaction of such Implementing Agency Condition Precedent to the Independent Engineer and the Independent Auditor (with a copy to the Concessionaire) in accordance with Section 3.4.2(b);

The Independent Engineer and the Independent Auditor, jointly, shall set out in the Commencement Certificate the date on which the Commencement Date is achieved.

3.5 TERMINATION PRIOR TO COMMENCEMENT DATE

3.5.1 In the event:

- (a) the Conditions Precedents are not satisfied, waived and/or deferred on or prior to the date falling [●] ([●]) days following the Scheduled Commencement Date, (including the extended time, if any) due to reasons attributable to the Concessionaire; and/or
- (b) of occurrence of a Concessionaire Event of Default prior to the Commencement Date;

then the Implementing Agency shall have the right (to be exercised in its sole and absolute discretion) to terminate this Agreement by issuance of a written Termination Notice to the Concessionaire. In such case, the Implementing Agency shall be entitled to encash the Bid Security or the Performance Security (as in effect at such time) to its full value. Except for the encashment of the Bid Security or the Performance Security (as in effect at such time) in terms of this Section 3.5.1, each Party hereto shall have no claims against the other for costs, damages, compensation or otherwise for such termination of this Agreement.

3.5.2 In the event:

- (a) the Conditions Precedents are not satisfied, waived and/or deferred on or prior to the date falling [●] ([●]) days following the Scheduled Commencement Date, (including the extended time, if any) due to reasons attributable to the Implementing Agency and/or a Force Majeure Event; and/or
- (b) of occurrence of an Implementing Agency Event of Default prior to Commencement Date,

the Concessionaire shall have the right (to be exercised in its sole discretion) to Terminate this Agreement by issuance of a written Termination Notice to the Implementing Agency. In such case, the Implementing Agency shall (within fifteen (15) days of its receipt of the Termination Notice) return the Bid Security or the Performance Security (as in effect at such time) to the Concessionaire without any encashments, demands or claims. Further, in the event the

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Concessionaire has prepared the Detailed Programme of Performance and the same has been approved by the Independent Engineer and is transferred/ delivered to the Implementing Agency, the Implementing Agency shall (within fifteen (15) days of its receipt of the Termination Notice) make payment of the cost of Detailed Programme of Performance, as set out in the Bid and as approved by the Independent Engineer and the Independent Auditor. Except as afore-stated and except as may be mutually agreed between the Parties, each Party hereto shall have no claims against the other for costs, damages, compensation or otherwise for Termination of this Agreement.

- 3.5.3 It is clarified that the provisions of this Section 3.5 (*Termination Prior to Commencement Date*) shall only apply to any Termination of this Agreement occurring on or prior to the Commencement Date.



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4. PROJECT SITE

4.1 LICENCE

- 4.1.1 The Implementing Agency shall, as a condition precedent to achievement of Commencement Date, Licence to the Concessionaire, pursuant to the Project Site Licence Agreement, for use and grant of the Vacant Possession of the Project Site (the **Licence**). The Project Site Licence Agreement shall be duly executed by the Parties and, to the extent required by Applicable Laws, registered by the Concessionaire with the relevant Government Authority and all costs, fees, expenses, duties, charges and taxes (including charges relating to the registration of the Project Site Licence Agreement) relating to the same shall be borne by the Concessionaire. For the purposes of clarification, the Project Site License Agreement or this Agreement shall not be construed as a transfer of ownership of the Project Site or lease rights in relation thereto to the Concessionaire.
- 4.1.2 The Concessionaire shall be responsible for payment of all charges in accordance with the Project Site Licence Agreement that relate to the Licence of the Project Site to the Concessionaire by Implementing Agency.
- 4.1.3 The Licence shall commence on the physical handing over of the Vacant Possession of the Project Site to the Concessionaire by the Implementing Agency and upon commencement shall be co-terminus on the Transfer Date without the need for any action to be taken by the Parties to terminate the Licence.

4.2 TITLE OF PROJECT SITE & DELIVERY OF VACANT POSSESSION

- 4.2.1 The Implementing Agency represents and warrants that it has the power and authority to grant the Licence in respect of the Project Site to the Concessionaire.
- 4.2.2 Subject to Section 15.2, the Implementing Agency shall at its own cost and expense, deliver to the Concessionaire the Vacant Possession of the Project Site (including all Easementary Rights), on or prior to the Scheduled Commencement Date.

4.3 USE OF PROJECT SITE

- 4.3.1 The Concessionaire hereby unconditionally and irrevocably confirms, acknowledges and agrees that the Implementing Agency shall enter into the Project Site Licence Agreement with the Concessionaire that shall grant the Licence of the Project Site to Concessionaire for the sole purpose of implementation of the Project and for enjoying the rights and benefits of the Concession granted hereunder and that the Concessionaire shall use the Project Site only for the purposes of implementing the Project thereupon and for purposes incidental or necessary thereto subject always to the terms and conditions of the Applicable Specifications. The Concessionaire shall, in carrying out its obligations under this Agreement, utilize all existing roads and land areas at the Project Site.
- 4.3.2 The Concessionaire hereby undertakes that it shall not without prior written consent of the Implementing Agency use the Project Site for any purpose other than:
- (a) for the purposes of the Project and purposes incidental thereto;

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- (b) as permitted under this Agreement (including for the purposes set out in Article 29 (*Additional Matters*)); or
- (c) as may otherwise be approved by the Implementing Agency in writing.

4.4 CONCESSIONAIRE'S RESPONSIBILITY

4.4.1 Subject to Section 4.15 (*Removal of Material Adverse Impediment*), the physical and the ambient conditions (including climatic, hydrological, hydro-geological, ecological, environmental, geotechnical, geological, paleontological and archaeological conditions) of the Project Site (the **Project Site Conditions**) shall be the sole responsibility of the Concessionaire. Accordingly, without limiting any other obligations of the Concessionaire that are included in this Agreement, the Concessionaire shall be deemed as at the Effective Date of the Agreement to have:

- (a) carried out an investigation of all Project Site Conditions and of any extraneous material in or under the Project Site including its surface, sub-soil and ground water to enable the Concession Assets to be designed and constructed and for its obligations to be performed with due regard for the Project Site Conditions and the seismic activity (if any) in the region of the Project Site;
- (b) for the purpose of such investigation in section (a), inspected and examined the Project Site and surroundings;
- (c) satisfied itself as to the nature of the Project Site Conditions, the surface, sub-soil and ground water of the Project Site, the form and nature of the Project Site, the load-bearing and other relevant properties of the Project Site, the risk of damage to property affecting the Project Site, the nature of the materials (whether natural or otherwise) to be excavated and the nature of the design, its obligations and material necessary for the implementation of the Project;
- (d) satisfied itself as to the adequacy of its right of passage over, access to and through the Project Site and any accommodation it may require for the purposes of fulfilling any of its obligations included in this Agreement, such as any additional land or buildings located outside the Project Site;
- (e) satisfied itself as to the possibility of interference by Persons with rights-of-way across, access to or use of the Project Site with particular regard to the owners and users of any land adjacent to the Project Site; and
- (f) satisfied itself as to the precautions, times and methods of working necessary to prevent or minimize nuisance or interference being caused to any third parties.

4.4.2 To avoid doubt, the Concessionaire accepts full responsibility for all matters in Section 4.4.1 above and the Concessionaire shall, subject to Section 4.15 (*Removal of Adverse Impediment*):

- (a) not be entitled to make any claim against the Implementing Agency whether in contract, tort or otherwise on any ground relating to the matters in Section 4.4.1 above; and
- (b) indemnify the Implementing Agency against all direct Losses sustained by the Implementing Agency and/or any third party in consequence of cleaning-up and

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otherwise dealing with any potentially hazardous materials being any natural or artificial substance, whether in solid, gaseous or liquid form capable of causing harm to any human or any other living organism supported by the environment (including air, water, land, surface land and sub-surface land) or capable of damaging the environment or public health or posing a threat to public safety including any pollutants and any hazardous, toxic, radioactive, noxious, corrosive or dangerous substances and all substances for which in each case liability or responsibility is imposed under applicable environment law) at the Project Site.

4.5 NO SALE OR CREATION OF ENCUMBRANCE

- 4.5.1 The Concessionaire shall not part with, dispose off, sell, sublease or create any Encumbrance of any nature whatsoever on the whole or any part of the Project Site and shall not place or create nor permit any Contractor or other person claiming through or under the Concessionaire to place or create any Encumbrance over all or any part of the Project Site or the Concession Assets, or on any rights of the Concessionaire therein or under this Agreement, save and except as otherwise expressly set forth in this Agreement.

4.6 PROTECTION OF SITE FROM ENCROACHMENTS

- 4.6.1 Following the delivery and handing over to the Concessionaire of the Vacant Possession of the Project Site by the Implementing Agency and until the Transfer Date, the Concessionaire shall be fully responsible for and shall protect the Project Site and the Concession Assets from, in each case, any and all occupations, thefts (to the extent of the Concession Assets), encroachments and Encumbrances. The Concessionaire further undertakes, covenants and confirms to indemnify the Implementing Agency, any Government Authority and GoPB from any costs, claims expenses or charges incurred resulting from any breach of its obligations under this Section 4.6. Provided always, that the Implementing Agency shall be responsible for ensuring police security of the Project Highway in accordance with the applicable law.

4.7 SPECIAL/TEMPORARY RIGHT OF WAY

- 4.7.1 The Concessionaire shall, at its own cost and risk, after getting written approval from the Implementing Agency, obtain any special or temporary right of way that is not included in the Scope of the Project and description of Project Site and the Concession Assets, and is required by the Concessionaire in connection with access to the Project Site and shall also obtain (at its cost and expense), after getting written approval from the Implementing Agency, such other facilities, the provision of which is not the responsibility of the Implementing Agency under the Implementing Agency Agreements, as may be required by the Concessionaire for the purposes of the Project and its implementation in accordance with the Applicable Specifications; provided, that the Implementing Agency shall reasonably facilitate the Concessionaire in obtaining the aforesaid special or temporary right of way.

4.8 PROJECT SITE ACCESS

- 4.8.1 Following Licence of the Project Site and delivery of the Vacant Possession of the Project Site to the Concessionaire by the Implementing Agency, the Licence granted to the Concessionaire shall always be subject to the right of access of the Implementing Agency, any relevant Government Authority, the Independent Auditor and the Independent Engineer and their representatives, officers, employees and agents for inspection, viewing and exercise of their rights and

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performance of their obligations under this Agreement; provided, that the exercise of such right of access shall not interfere with the Concessionaire's performance of its rights and obligations under this Agreement. Further, the Licence granted to the Concessionaire shall always be subject to the right of access of the Users.

4.9 GEOLOGICAL AND ARCHAEOLOGICAL FINDS

- 4.9.1 It is expressly agreed between the Parties that mining, geological or archaeological rights do not form part of the Licence to be granted to the Concessionaire in terms of the Project Site Licence Agreement and the Concessionaire hereby acknowledges and agrees that it shall not have any mining rights or interest in the underlying minerals, fossils, antiquities, structures or other remnants or things either of particular geological or archaeological interest and that all such rights, interest and property on or under the Project Site shall vest in and belong to the Implementing Agency or the relevant concerned Government Authority.
- 4.9.2 The Concessionaire shall procure all no-objection certificates and consents from the Culture Department, Government of Punjab that may be required by the Concessionaire under the Applicable Laws, in respect of any potential geological and archaeological finds on the Project Site, prior to commencement of the Project Works. Furthermore, the Concessionaire shall take all reasonable precautions to prevent its employees, workmen, agents, representatives and/ or any other persons appointed by the Concessionaire from having access to the Project Site, including the Contractors, from removing or damaging such interest or property (as set out in Section 4.9.1) and shall inform the Implementing Agency forthwith of the discovery thereof and comply with such instructions as the Implementing Agency and / or the concerned Government Authority may issue in relation to the protection and / or removal of such property. In the event any expenses are incurred by the Concessionaire in fulfilling its obligations as set out in this Section 4.9.2 and/or as a result of the geological and/or archaeological finds being on the Project Site, then the same shall be reimbursed by the Implementing Agency (provided the same are duly certified by the Independent Engineer and the Independent Auditor) and in such case the provisions of Article 15 (*Relief Extensions & Relief Compensations*) shall apply. Further, in the event the Concessionaire is delayed in performance of its obligations under this Agreement due to the occurrence of the circumstances set out in this Section 4.9 (*Geological and Archaeological Finds*), the Concessionaire shall be granted extensions in the timeline in which it has to perform its obligations under this Agreement (provided that such extensions are duly certified by the Independent Engineer) and in such case the provisions of Article 15 (*Relief Extensions & Relief Compensations*) shall apply. Notwithstanding anything contained herein, the Implementing Agency shall procure the issuance of the instructions required from the concerned Government Authority and referred to in this Section 4.9.2.

4.10 EXISTING UTILITIES AND ROADS

- 4.10.1 Notwithstanding anything to the contrary contained herein, the Concessionaire shall ensure that the respective entities owning the existing roads, right of way or utilities on, under or above the Project Site are enabled by the Concessionaire to keep such utilities in continuous satisfactory use, if necessary, by providing suitable temporary or permanent diversions with the Implementing Agency of the controlling body of that road, right of way or utility, and the Implementing Agency shall, upon written request from the Concessionaire (as certified by the Independent Engineer), initiate and undertake, at the Implementing Agency's cost, legal proceedings for acquisition of any right of way or any no objections or permits/ approvals necessary for such diversion.

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- 4.10.2 The Concessionaire shall be required to provide the details of the existing utilities, including the relocation plan to the Implementing Agency within ninety (90) days of the Signing Date. Upon submission of the relocation plan, the Implementing Agency shall procure the removal and/or relocation of the existing utilities including (providing for any alternate duct/ corridor) at its own cost and expense and, upon the completion of the same, provide Vacant Possession of the Project Site to the Concessionaire in accordance with the timelines of the Concession Agreement.
- 4.10.3 If the Concessionaire fails to provide the details of the existing utilities within 90 days of Signing Date (as such date may be extended with mutual consent), the Implementing Agency shall not be responsible for all delays resulting from the same.

4.11 INSTALLATION OF SIGNS

- 4.11.1 The Concessionaire shall, at its own cost, install and maintain signs marketing the Authority, GoPB and public private partnership projects every five (5) kilometres along the Project Highway. Each sign shall prominently display the Authority's sign, and include the names and/or logos of the Concessionaire, the Authority, and other relevant stakeholders as may be specified by the Implementing Agency. The format, size, and positioning of the signage must comply with the standards or instructions issued by the Implementing Agency.

4.12 NEW UTILITIES AND ROADS

- 4.12.1 The Concessionaire shall allow utility companies (subject to consent of Implementing Agency and subject to such conditions as the Implementing Agency may specify and subject to mutual agreement between the Implementing Agency and the utility companies), access to, and use of the Project Site for laying telephone lines, water pipes, electric cables or other public utilities; provided, that nothing contained in this Section 4.12.1 shall waive and / or relieve or be deemed to waive and / or relieve the obligations of the Concessionaire contained in the Implementing Agency Agreements and any damage caused to the Concession Assets by such access to, and use of the Project Site for laying telephone lines, water pipes, electric cables or other public utilities shall be restored forthwith.
- 4.12.2 The affected part of the Concession Assets (or any part thereof) (the **Utilities Affected Assets**) shall be restored in accordance with the Applicable Specifications and Good Industry Practice by the Concessionaire and the costs relating to the same shall be borne by the Concessionaire and/or the utility companies in accordance with the terms mutually agreed between the Concessionaire and the utility companies; provided, however, any such terms (including any amendments of the same) shall be subject to the prior approval of the Implementing Agency (which approval shall not be unreasonably delayed, conditioned or withheld). Notwithstanding anything to the contrary set out herein, the Implementing Agency shall neither be responsible for restoration of any Utilities Affected Assets nor for any costs relating to the same.
- 4.12.3 The Concessionaire exclusively reserves the right to charge fees from the utility company or any other entity for allowing the passage of the telephone lines, water pipes, electric cables or other public utilities over or under the Project Site on the rates notified by the Implementing Agency based on the latest market rate system (MRS) applicable in the Province of Punjab (the **Utility Proceeds**).

4.13 FELLING OF TREES

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- 4.13.1 The Concessionaire undertakes to fell the trees only on those areas on the Project Highway, where Installation Works shall be carried out, the cost of which shall be borne by the Concessionaire, provided, that the Concessionaire shall be responsible for procuring any approvals and/or permits from the GoPB or any other governmental agency for compliance with this Section 4.13. The Implementing Agency shall provide reasonable assistance to the Concessionaire in the acquisition of the permits required under this Section 4.13.
- 4.13.2 The trees removed by the Concessionaire shall be deemed to be owned by the Implementing Agency and shall be disposed in such manner and subject to such conditions as the Implementing Agency may in its sole discretion deem appropriate provided however all costs, fees and expenses of such disposal shall be borne by the Implementing Agency.
- 4.13.3 The Concessionaire hereby undertakes that it shall, at its sole cost and expense, plant and maintain at least [•] trees per kilometre on the Project Highway. Furthermore, the Concessionaire undertakes to maintain in accordance with the Applicable Specifications all the trees planted by it pursuant to this Section 4.13 (*Felling of Trees*) till the Transfer Date and shall ensure that at all times until Transfer Date, a minimum of [•] number of trees per kilometre remain planted and maintained on the Project Highway.

4.14 IMPLEMENTING AGENCY INDEMNITIES IN RESPECT OF PROJECT SITE

- 4.14.1 The Implementing Agency shall indemnify and shall hold the Concessionaire harmless from any Losses incurred in relocating, rehabilitating or resettling persons in connection with making available the Project Site to the Concessionaire for implementation of the Project and for delivery of Vacant Possession of the Project Site to the Concessionaire.
- 4.14.2 The Implementing Agency shall not be responsible for any Losses suffered by the Concessionaire as a consequence of the Concessionaire's failure to maintain the Project Site in its possession free from encroachments and encumbrances by third parties and/or is not as a consequence or failure by the Concessionaire to meet its obligations under this Agreement.

4.15 REMOVAL OF MATERIAL ADVERSE IMPEDIMENT

- 4.15.1 Following delivery of the Vacant Possession of the Project Site to the Concessionaire by Implementing Agency, the Concessionaire shall be responsible for removal of all impediments, debris (including any structures not in anyone's possession) on the Project Site, whether physical or legal, to the Installation Works and, Operation and Maintenance of the Concession Assets; provided, however, that the Concessionaire shall Notify the Implementing Agency of any impediment (the **Material Adverse Impediment**) on the Project Site, whether physical or legal, to the Installation Works and/or, Operation and Maintenance of the Concession Assets which:
- (a) causes a Material Adverse Effect;
 - (b) is not attributable to the Concessionaire; and
 - (c) does not result from any non-compliance by the Sponsor and/or the Concessionaire under any Implementing Agency Agreements.

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- 4.15.2 Any Notice issued by the Concessionaire pursuant to Section 4.15.1 shall be duly verified and certified by the Independent Engineer prior to submission to the Implementing Agency and the Independent Engineer shall, prior to delivery of such Notice to the Implementing Agency, duly certify in the Notice, *inter alia*, the occurrence and subsistence of the Material Adverse Impediment and the time period required for removal of the same (the **Material Impediment Removal Period**). Upon receipt by the Implementing Agency of the Notice duly verified and certified by the Independent Engineer (the **Certified Impediment Notice**), the Implementing Agency shall act so as to remove such Material Adverse Impediment within the Material Impediment Removal Period. In the event the Concessionaire suffers delays in the performance of its obligations and/or incurs Relief Costs, in each case, as a direct result of the Material Adverse Impediment, the same shall entitle the Concessionaire to issuance of a Relief Request and in such case, the provisions of Article 15 (*Relief Orders*) shall apply.

5. INDEPENDENT ENGINEER & INDEPENDENT AUDITOR

5.1 INDEPENDENT ENGINEER SELECTION

- 5.1.1 Within fifteen (15) days from the Effective Date, the Concessionaire shall provide the Implementing Agency with a list of three (3) reputable firms of engineers for appointment of the Independent Engineer (the **First IE List**).
- 5.1.2 Within fifteen (15) days of receipt by the Implementing Agency of the First IE List, the Implementing Agency shall (subject to one (1) of the firms in the First IE List being acceptable to the Implementing Agency) select a reputed firm of engineers from First IE List and the Implementing Agency and the Concessionaire shall appoint such firm as the Independent Engineer in terms of the Independent Engineer Contract.
- 5.1.3 In the event the firms of engineers identified by the Concessionaire in the First IE List are not acceptable to the Implementing Agency, the Concessionaire and the Implementing Agency shall appoint (in terms of the Independent Engineer Contract) such firm as the Independent Engineer as is mutually acceptable to the Implementing Agency and the Concessionaire and such appointment shall be in terms of the Independent Engineer Contract.
- 5.1.4 The Independent Engineer shall provide the services set out in the Independent Engineer Contract and as requested by the Parties with mutual consent from time to time. Unless mutually agreed otherwise between the Parties, the Independent Engineer Contract shall be in accordance with the mutual agreement between the Implementing Agency; and the Concessionaire.

5.2 TERM OF APPOINTMENT OF THE INDEPENDENT ENGINEER

- 5.2.1 The appointment of the Independent Engineer shall be for an initial term of two (2) years from the date of the effectiveness of the Independent Engineer Contract (the **Independent Engineer Appointment Term**); provided, however, that:
- (a) the Independent Engineer Appointment Term shall be extended prior to expiry of the same so as to ensure that at all times during the Concession Period an Independent Engineer is retained/appointed, for the purposes set out in this Agreement; or
 - (b) the Parties shall be entitled to appoint a new Independent Engineer prior to the expiry of the Independent Engineer Appointment Term (such appointment to be effective upon

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expiry of the Independent Engineer Appointment Term) so as to ensure that at all times during the Concession Period an Independent Engineer is retained/appointed for the purposes set out in this Agreement. In the event of the appointment of a new Independent Engineer upon expiry of the Independent Engineer Appointment Term, the provisions of Section 5.2.3 shall apply.

5.2.2 The appointment of the Independent Engineer may be terminated:

- (a) by either Party if, the Independent Engineer is adjudged insolvent and / or bankrupt and / or the winding up proceedings are filed against the Independent Engineer and/or the Independent Engineer files winding up proceedings in a court of law and / or any action for malpractice and / or misadministration is filed against the Independent Engineer in a court of law;
- (b) by the Parties with the mutual consent of the Parties.

5.2.3 Upon the occurrence of any of the events listed in Section 5.2.2, the Parties shall have the right to terminate the Independent Engineer Contract in accordance with the terms of the same or and/or in the event of expiry of the Independent Engineer Appointment Term, the Parties shall appoint a new Independent Engineer in accordance with this Section 5.2.3. In the afore-stated circumstances, the Parties shall replace the appointed Independent Engineer with another consulting engineering firm or body corporate selected by the Implementing Agency from the First IE List provided by the Concessionaire pursuant to Section 5.1.1 above; provided, however, that the termination and/or replacement of the Independent Engineer shall not have effect till such time as the replacement Independent Engineer has been appointed. In the event the Implementing Agency objects to the appointment of any firm of engineers named in the First IE List, then the Concessionaire shall provide the Implementing Agency with a new list of three (3) reputable firms of engineers for appointment of the replacement Independent Engineer (the **New IE List**). Within ten (10) days of receipt by the Implementing Agency of the New IE List, the Implementing Agency shall either:

- (a) select a reputable firm of engineer from the New IE List and shall cause the Concessionaire to appoint such firm as the Independent Engineer; or
- (b) reject the appointment of any of the firms provided in the New IE List, in which case, the Parties shall appoint such firm of engineers as the new Independent Engineer as is mutually agreed by the Parties.

The provisions of this Article 5 (*Independent Engineer*) shall apply to any new Independent Engineer (including appointment and replacement of the same) appointed in accordance with the terms herein.

5.2.4 The term of appointment of the replacement Independent Engineer shall be the unexpired period of the Independent Engineer Appointment Term or such other term as may be mutually agreed between the Parties.

5.2.5 The Concessionaire shall ensure that all provisions of this Agreement pertaining to the Independent Engineer and its responsibilities in respect of the matters set out herein are duly incorporated in the Independent Engineer Contract.

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5.3 INDEPENDENT ENGINEER AUTHORIZED SIGNATORIES

- 5.3.1 The Parties shall require the Independent Engineer to designate and notify to the Implementing Agency and the Concessionaire of the authorized representatives of the Independent Engineer that shall be authorized by the Independent Engineer to sign for and on behalf of the Independent Engineer, and any communication or document required to be signed by the Independent Engineer shall be valid and effective only if signed by such authorized signatories on behalf of the Independent Engineer; provided, that the Independent Engineer may, by notice in writing to the Parties, substitute any of the authorized signatories.

5.4 DECISION OF INDEPENDENT ENGINEER & DISPUTE RESOLUTION

- 5.4.1 Subject to Section 5.4.2, any advice, instruction, decision, direction and / or award of the Independent Engineer shall be binding on the Parties unless mutually agreed otherwise by the Parties.
- 5.4.2 In the event any Dispute arises between the Implementing Agency and the Concessionaire with regard to any advice, instruction, decision, direction and / or award of the Independent Engineer, then such Dispute shall be resolved in accordance with the Dispute Resolution Procedure.

5.5 INDEPENDENT ENGINEER REMUNERATION

- 5.5.1 The Concessionaire shall deposit into the Escrow Account the requisite amount for the payment of the fees and expenses payable to the Independent Engineer pursuant to the Independent Engineer Contract (the **Independent Engineer Payments**), notwithstanding that the Independent Engineer shall be appointed by and shall fulfil its obligations in accordance with the terms of the Independent Engineer Contract.
- 5.5.2 The Escrow Agent shall be responsible for the release of the Independent Engineer Payments from the Escrow Account to the Independent Engineer in a diligent and timely manner and in accordance with the Escrow Agreement and the Independent Engineer Contract.

5.6 INDEPENDENT AUDITOR SELECTION

- 5.6.1 Within fifteen (15) days from the Effective Date, the Concessionaire shall provide the Implementing Agency with a list of three (3) reputable firms of chartered accountants which should be within the “A Category” of SBP for appointment of the Independent Auditor (the **First IA List**).
- 5.6.2 Within fifteen (15) days of receipt by the Implementing Agency of the First IA List, the Implementing Agency shall (subject to one of the firms in the First IA List being acceptable to the Implementing Agency) select a reputed firm of auditors from First IA List and the Implementing Agency and the Concessionaire shall appoint such firm as the Independent Auditor in terms of the Independent Auditor Contract.
- 5.6.3 In the event the firms of auditors identified by the Concessionaire in the First IA List is not acceptable to the Implementing Agency, the Concessionaire and the Implementing Agency shall appoint (in terms of the Independent Auditor Contract) such firm as the Independent Auditor as is mutually agreed by the Implementing Agency and the Concessionaire and such appointment shall be in terms of the Independent Auditor Contract.

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5.6.4 The Independent Auditor shall provide the services set out in the Independent Auditor Contract and as requested by the Parties with mutual consent from time to time.

5.7 TERM OF APPOINTMENT OF THE INDEPENDENT AUDITOR

5.7.1 The appointment of the Independent Auditor shall be for an initial term of two (2) years from the date of the effectiveness of the Independent Auditor Contract (the **Independent Auditor Appointment Term**); provided, however, that:

- (a) the Independent Auditor Appointment Term shall be extended prior to expiry of the same with the mutual consent of the Parties so as to ensure that at all times during the Concession Period an Independent Auditor is retained/appointed for the purposes set out in this Agreement; or
- (b) the Parties shall be entitled to appoint a new Independent Auditor prior to the expiry of the Independent Auditor Appointment Term (such appointment to be effective upon expiry of the Independent Auditor Appointment Term) so as to ensure that at all times during the Concession Period an Independent Auditor is retained/appointed for the purposes set out in this Agreement. In the event of the appointment of a new Independent Auditor upon expiry of the Independent Auditor Appointment Term, the provisions of Section 5.7.3 shall apply.

5.7.2 The appointment of the Independent Auditor may be terminated:

- (a) by either Party if the Independent Auditor is adjudged insolvent and / or bankrupt and / or winding up proceedings are filed against the Independent Auditor and/or the Independent Auditor files winding up proceedings in a court of law and / or any action for malpractice and / or misadministration is filed against the Independent Auditor in a court of law;
- (b) by the Parties with the mutual consent of the Parties.

5.7.3 Upon the occurrence of any of the events listed in Section 5.7.2, the Parties shall have the right to terminate the Independent Auditor Contract in accordance with the terms of the same or and/or in the event of expiry of the Independent Auditor Appointment Term, the Parties shall appoint a new Independent Auditor in accordance with this Section 5.7.3. In the aforesaid circumstances, the Parties shall replace the appointed Independent Auditor with another firm of chartered accountants selected by the Implementing Agency from the First IA List provided by the Concessionaire pursuant to Section 5.6.1 above; provided, however, that the termination and/or replacement of the Independent Auditor shall not have effect till such time as the replacement Independent Auditor has been appointed. In the event the Implementing Agency objects to the appointment of any firm of chartered accountants named in the First IA List, then the Concessionaire shall provide the Implementing Agency with a new list of three (3) reputable firms of chartered accountants for appointment of the replacement Independent Auditor (the **New IA List**). Within ten (10) days of receipt by the Implementing Agency of the New IA List, the Implementing Agency shall either:

- (a) select a reputable firm of chartered accountants from the New IA List and shall cause the Concessionaire to appoint such firm as the Independent Auditor; or

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- (b) reject the appointment of any of the firms provided in the New IA List, in which case, the Parties shall appoint one of the Big Four Accounting Firms with mutual consent of the Parties as the new Independent Auditor.

The provisions of Section 5.6 to 5.10 shall apply to any new Independent Auditor (including appointment and replacement of the same) appointed in accordance with the terms herein.

- 5.7.4 The term of appointment of the replacement Independent Auditor shall be the unexpired period of the Independent Auditor Appointment Term or such other term as may be mutually agreed between the Parties.
- 5.7.5 The Concessionaire shall ensure that all provisions of this Agreement pertaining to the Independent Auditor and its responsibilities in respect of the matters set out herein are duly incorporated in the Independent Auditor Contract.

5.8 INDEPENDENT AUDITOR AUTHORIZED SIGNATORIES

- 5.8.1 The Parties shall require the Independent Auditor to designate and notify to the Implementing Agency and the Concessionaire of the authorized representatives of the Independent Auditor that shall be authorized by the Independent Auditor to sign for and on behalf of the Independent Auditor, and any communication or document required to be signed by the Independent Auditor shall be valid and effective only if signed by such authorized signatories on behalf of the Independent Auditor; provided, that the Independent Auditor may, by notice in writing to the Parties, substitute any of the authorized signatories.

5.9 DECISION OF INDEPENDENT AUDITOR & DISPUTE RESOLUTION

- 5.9.1 Subject to Section 5.9.2, any advice, instruction, decision, direction and / or award of the Independent Auditor shall be binding on the Parties unless mutually agreed otherwise by the Parties.
- 5.9.2 In the event any Dispute arises between the Implementing Agency and the Concessionaire with regard to any advice, instruction, decision, direction and / or award of the Independent Auditor, then such Dispute shall be resolved in accordance with the Dispute Resolution Procedure.

5.10 INDEPENDENT AUDITOR REMUNERATION

- 5.10.1 The Concessionaire shall deposit into the Escrow Account the requisite amount for the payment of the fees and expenses payable to the Independent Auditor pursuant to the Independent Auditor Contract (the **Independent Auditor Payments**), notwithstanding that the Independent Auditor shall be appointed by and shall fulfil its obligations in accordance with the terms of the Independent Auditor Contract.
- 5.10.2 The Escrow Agent shall be responsible for the release of the Independent Auditor Payments from the Escrow Account to the Independent Auditor in a diligent and timely manner and in accordance with the Escrow Agreement and the Independent Auditor Contract.

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7. CONCESSIONAIRE’S REPRESENTATIONS, WARRANTIES AND CERTAIN OBLIGATIONS & UNDERTAKINGS

7.1 CONCESSIONAIRE REPRESENTATIONS & WARRANTIES

7.1.1 The Concessionaire hereby represents and warrants to the Implementing Agency that:

- (a) it is duly organized and validly existing under the Applicable Laws, and that it has full power and authority to execute and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;
- (b) it has taken all necessary corporate and other actions under the Applicable Laws to:
 - (i) authorize the execution, delivery and performance of this Agreement; and
 - (ii) validly exercise its rights and perform its obligations under this Agreement;
- (c) this Agreement and all obligations contained herein constitutes its legal, valid and binding obligations, enforceable against it in accordance with the terms hereof;
- (d) it has the financial standing and capability to undertake and implement the Project in accordance with the Applicable Specifications and neither the Concessionaire nor the Sponsors have committed a breach in respect of their payment obligations in relation to a financial indebtedness;
- (e) it is subject to the Applicable Laws, and hereby expressly and irrevocably waives any immunity in any jurisdiction in respect of this Agreement and/or or matters arising hereunder including any obligation, liability or responsibility hereunder;
- (f) the execution, delivery and performance of this Agreement does not and shall not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of the terms of its memorandum and articles of association or any of its constitutive and corporate charters, filings with Government Authorities, documents, or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- (g) there are no actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it under the Applicable Laws before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform any of its obligations under this Agreement;
- (h) it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of any Government Authority which may result in any Material Adverse Effect on its ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would have a Material Adverse Effect on the performance of its obligations under this Agreement;

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- (i) it has complied with Applicable Laws in all material respects and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have a Material Adverse Effect on its ability to perform its obligations under this Agreement;
- (j) the Sponsor has the Concessionaire's Ownership And Management Control as of the Effective Date;
- (k) the Concessionaire and the Sponsor (along with its Associates (if any)) have the financial standing and resources to fund the required Equity for Shares and to raise the debt/ financing necessary for undertaking and implementing the Project in accordance with this Agreement;
- (l) no representation or warranty made by the Concessionaire and contained herein or in any other document furnished by it to the Implementing Agency or to any Government Authority in relation to the Concessionaire Permits contains any untrue or misleading statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty misleading;
- (m) no sums, in cash or kind, have been paid or will be paid, by it or on its behalf, to any Person by way of fees, commission or otherwise for securing the Concession or entering into this Agreement or for influencing or attempting to influence any officer or employee of the Implementing Agency in connection therewith and neither the Concessionaire nor the Sponsor (together with their Affiliates) have engaged in any Corrupt Act in respect of the foregoing;
- (n) the Sponsor has complied with requirements of the Applicable Laws and the RFP (to the extent the same are applicable to the Concessionaire and the bidders) in the preparation, finalization, delivery and submission of its Bid for the award of the Project and the Concession to the Concessionaire and have undertaken all acts and deeds (to the extent the same are applicable to the Concessionaire and the bidders) necessary for award of the Concession and the Project to the Concessionaire in terms of the RFP and the Applicable Laws;
- (o) all representations, breach of which may cause a Material Adverse Effect, provided by the Sponsors in its Bid submitted in response to the RFP, is true and accurate in all respects;
- (p) it is subject to civil and commercial law with respect to this Agreement and it hereby expressly and irrevocably waives any sovereign immunity (if any) in any jurisdiction.

7.1.2 In the event that any occurrence or circumstance comes to the attention of either Party that renders any of its aforesaid representations or warranties untrue or incorrect, such Party shall immediately Notify the other Party of the same. Such Notification shall not have the effect of remedying any breach of the representation or warranty that has been found to be untrue or incorrect nor shall it adversely affect or waive any right, remedy or obligation of either Party under this Agreement or any Implementing Agency Agreement.

7.2 CONCESSIONAIRE'S GENERAL UNDERTAKINGS

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7.2.1 The Concessionaire hereby undertakes that it shall, at its own cost and expense:

- (a) comply with and perform all duties, obligations, acts, deeds and obligations set out in, in each case, the Applicable Specifications;
- (b) continuously and diligently undertake, perform and complete all Project Works and Concession Assets in accordance with the Applicable Specifications and within the Time For Completion;
- (c) ensure that all Project Works and Concession Assets comply with the Applicable Specifications;
- (d) investigate, study, Operate and Maintain the Concession Assets in accordance with the Applicable Specifications;
- (e) ensure and achieve each Project Milestone on or prior to its Project Milestone Date in accordance with the Applicable Specifications including:
 - (A) Not used;
 - (B) achieve Installation Completion on or prior to the Scheduled Installation Completion Date;
- (f) remedy any Defects & Deficiencies in the Project Works (including in the performance of the same) and/or the Concession Assets at its own cost and risk;
- (g) obtain and maintain all Concessionaire Permits (including any renewals of the same) in conformity with the Applicable Laws and be in compliance thereof, and deliver copies of the same to the Implementing Agency, the Independent Engineer and the Independent Auditor from time to time;
- (h) be in compliance with and perform all its obligations in accordance with, in each case, the Applicable Laws and fulfil the requirements (including the environmental requirements) under the Applicable Laws,
- (i) procure and maintain in full force and effect, as necessary, appropriate proprietary rights, Licences, agreements and permissions for materials, methods, processes and systems used in or incorporated into the Project;
- (j) appoint, supervise, monitor and control as necessary, the activities of the Concessionaire Self Control Unit (including those of the Contractors under their respective and relevant Project Agreements);
- (k) make its own arrangements for materials (including installation materials), parts, components, supplies, tools, machinery etc. for performance of the Project Works;
- (l) be responsible for strict compliance with the relevant Applicable Specifications notwithstanding the appointment and/or engagement by it of the Concessionaire Self Control Unit to implement the Project (or any part thereof) and performance of Project Works (or any part thereof);

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- (m) keep and maintain the Project Site free from all encroachments and take all steps necessary to remove encroachments, if any;
- (n) except as provided in this Agreement, make payments to the relevant Government Authority, if required, for provision of such services as are not provided in the normal course or are available only on payment;
- (o) afford access of the Project Site to the authorized representatives of the Implementing Agency, the Independent Engineer, Independent Auditor and any Government Authority having jurisdiction over the Project, including those concerned with safety, security or environmental protection to inspect the Project Works and the Concession Assets and, upon reasonable notice, to investigate any matter within their Implementing Agency, and provide to such Persons assistance reasonably required to carry out their respective duties and functions;
- (p) not engage in any business or activity other than the business or related to, and conducted for, the purpose of the Project and/or other than as provided in this Agreement;
- (q) maintain its corporate existence and its rights to carry on operations of its business;
- (r) provide all necessary assistance to the Project Manager, as the Project Manager may reasonably require for the performance of its duties and services;
- (s) make all payments to the Implementing Agency of the amounts due and payable by the Concessionaire in accordance with the terms of this Agreement and the Implementing Agency Agreements;
- (t) ensure that no damage is caused to any property belonging to Implementing Agency and/or other third parties in the execution of the Project Works;
- (u) coordinate and manage all the Project Works and be responsible for the coordination and general management of the Project Works;
- (v) provide to the Implementing Agency, the Independent Auditor and the Independent Engineer all such information relating to the Project Works and the execution and completion of the same as is reasonably requested by the Implementing Agency, the Independent Auditor and the Independent Engineer from time to time;
- (w) Notify the Implementing Agency, the Independent Engineer and/or the Independent Auditor (as applicable) without undue delay upon becoming aware of any changes in the information provided and/or to be provided to the same by the Concessionaire pursuant to the Applicable Specifications;
- (x) provide all necessary assistance to the Independent Engineer and the Independent Auditor as the same may reasonably require for the performance of their duties and services in accordance with the Independent Engineer Contract and the Independent Auditor Contract, respectively, and for the performance of its roles and obligations contemplated under this Agreement and the Implementing Agency Agreements;

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- (y) ensure that the Project Agreements entered into by the Concessionaire shall not be inconsistent with the terms and conditions of the Implementing Agency Agreements;
- (z) submit from time to time to the Implementing Agency and the Independent Engineer its detailed installation, operation and maintenance methodology and quality assurance procedures for implementation and completion of the Project in accordance with the Applicable Specifications and the same shall be subject to the review and approval of the Independent Engineer;
- (aa) undertake, do and perform from time to time, all such acts, deeds and things as may be necessary or required before commencement of Project Works (or any part thereof) for the performance of the Project Works under and in accordance with the Applicable Specifications;
- (bb) construct, provide and maintain a reasonably furnished site office accommodation for the Independent Engineer at the Project Site commencing from the Commencement Date and until the Transfer Date;
- (cc) ensure the safety of the Concession Assets and the Users in accordance with the Safety Requirements;
- (dd) maintain the Project Site and the Concession Assets in good condition.
- (ee) comply with the Design Requirements.
- (ff) comply with all the conditions set out in the EIA Approval.

7.3 CONCESSIONAIRE SELF CONTROL UNIT

- 7.3.1 The Concessionaire shall, commencing from the Effective Date, have requisite organization and set up a Concessionaire Self Control Unit and designate and appoint suitable officers/representatives (which will include an adequate number of qualified engineers and technicians) to the Concessionaire Self Control Unit as the Concessionaire may deem appropriate to implement and supervise the Project, to deal with the Independent Engineer/Independent Auditor/the Implementing Agency and to be responsible for all necessary exchange of information required pursuant to the Applicable Specifications.
- 7.3.2 The Concessionaire shall ensure that the Concessionaire Self Control Unit contains experienced and qualified persons for the purposes of Project implementation and performance of the Project Works and are at all times properly trained for their respective functions. The Concessionaire shall appoint a duly qualified and experienced Civil Engineer as the head of the Concessionaire Self Control Unit. The Concessionaire shall further be responsible for maintaining harmony and good industrial relations amongst the Concessionaire Self Control Unit.
- 7.3.3 The Concessionaire shall be fully and solely responsible for:
- (a) observance by all of the members of the Concessionaire Self Control Unit of all the provisions and requirements of the Applicable Specifications;

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- (b) the acts, omissions, failure to perform, breaches or defaults of the Concessionaire Self Control Unit of the Applicable Specifications as fully as if they were the acts, omissions, failures, breaches or defaults of the Concessionaire of the Applicable Specifications under this Agreement and the Implementing Agency Agreement;
- (c) maintaining comprehensive and detailed knowledge of the condition of the Project Highway;
- (d) providing the Concessionaire's personnel with all information necessary for the effective management and maintenance of the Project Highway, without assuming direct responsibility for the execution of the works;
- (e) conducting regular patrols to monitor the condition of the roads on the Project Highway (with patrol frequency ranging from daily for high-traffic roads to weekly for low-traffic roads) unless otherwise agreed to in writing with the Independent Engineer;
- (f) verifying and auditing the proper implementation of the Concessionaire's Quality Assurance Plan, including all testing methods and procedures required by this Agreement, to ensure the quality of the works and materials used.
- (g) conducting periodic surveys with the Independent Engineer, Implementing Agency and authorized persons for assuring maintenance standards set out in Specifications.
- (h) Establish communications with Implementing Agency, Concessionaire and the Independent Engineer.

7.3.4 The Concessionaire shall be responsible for strict compliance with the Applicable Specifications notwithstanding the appointment and/or engagement by it of the Concessionaire Self Control Unit to implement the Project (or any part thereof) and performance of Project Works (or any part thereof) and any engagement by the Concessionaire of any of the Concessionaire Self Control Unit shall not release or discharge the Concessionaire of any of its liabilities, responsibilities or obligations under the Applicable Specifications and the Concessionaire shall not be entitled to any relief or compensation (including any extension of Time For Completion and/or monetary compensations) under this Agreement or otherwise for any acts, omissions, failures, breaches or defaults of the Concessionaire Self Control Unit. Notwithstanding anything to the contrary, the Implementing Agency shall not be liable or responsible in any manner whatsoever under any Applicable Laws, in contract, tort or otherwise in respect of the Concessionaire Self Control Unit.

7.3.5 Employment of any foreign persons as part of the Concessionaire Self Control Unit shall be subject to grant of requisite regulatory permits and approvals including employment/residential visas and work permits, if any required, and the obligation to apply for and obtain the same shall be the sole responsibility of the Concessionaire and, notwithstanding anything to the contrary contained in this Agreement or otherwise, refusal of or inability to obtain any such permits and approvals by the Concessionaire or the relevant Contractor shall not constitute Force Majeure Event, and shall not in any manner excuse the Concessionaire from the performance and discharge of its obligations and liabilities under the Applicable Specifications. The Concessionaire shall use reasonable efforts to promote local contractors and to employ and engage, to the extent practicable local employees and contractors.

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- 7.3.6 The Concessionaire undertakes that it shall itself and any the members of its Concessionaire Self Control Unit shall be available to attend any meetings with the Implementing Agency, the Independent Engineer and/or the Independent Auditor at all reasonable times, as required and Notified by the Implementing Agency, the Independent Engineer and/or the Independent Auditor (as applicable) to the Concessionaire. All costs for attending such meetings by (including those relating to preparation and attendance in such meetings by the Concessionaire Self Control Unit) shall be on the Concessionaire's account.
- 7.3.7 The Concessionaire Self Control Unit or the Concessionaire shall perform testing or quality assurance tasks in relation to the Project Highway only through other specialized personnel of the Concessionaire. The Concessionaire shall ensure that such tasks are carried out by appropriately qualified and experienced personnel, in accordance with the requirements of this Agreement.
- 7.3.8 The Concessionaire Self Control Unit will establish a communications system for monitoring and communicating specific complaints about the Project Highway.

7.4 CONCESSIONAIRE AUTHORIZED REPRESENTATIVE & CONCESSIONAIRE PROJECT ENGINEER

- 7.4.1 Within seven (7) days following the Effective Date, the Concessionaire shall:
- (a) appoint, with the prior written consent of the Implementing Agency (which consent shall be deemed to be accorded in case no response from Implementing Agency is received within fifteen (15) days of Implementing Agency's receipt of the Concessionaire's written request for such consent) and prior Notification to the Independent Engineer and the Independent Auditor, its representative duly authorized to deal with the Implementing Agency in respect of all matters under or arising out of or relating to this Agreement (the **Concessionaire Authorized Representative**);
 - (b) appoint, with the prior written consent of the Implementing Agency (which consent shall be deemed to be accorded in case no response from Implementing Agency is received within fifteen (15) days of Implementing Agency's receipt of the Concessionaire's written request for such consent) and prior Notification to the Independent Engineer and the Independent Auditor, at its sole cost and expense one or more established consulting engineering firm to design and supervise the Installation Works and in particular to ensure that the Installation Works are performed and are in accordance with the Applicable Specifications and Good Industry Practice (the **Concessionaire Project Engineer**);
 - (c) ensure that the Concessionaire Authorized Representative or the Concessionaire Project Engineer perform their respective obligations in the same manner as the Concessionaire is required to perform its obligations under this Agreement; and
 - (d) prior to the appointment or any substitution of the Concessionaire Authorized Representative and/or the Concessionaire Project Engineer, the Concessionaire shall submit the details of the same to the Implementing Agency in writing (with copies to the Independent Engineer and the Independent Auditor) and shall provide any other information reasonably requested by the Implementing Agency in respect of the same.

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7.4.2 The Concessionaire shall substitute the Concessionaire Authorized Representative and the Concessionaire Project Engineer with the prior approval of the Implementing Agency. The approval by the Implementing Agency shall not be unreasonably withheld, conditioned or delayed; provided, however, in the event the Implementing Agency fails to grant its approval or disapproval to the Concessionaire for the appointment and/or substitution of the Concessionaire Authorized Representative and/or the Concessionaire Project Engineer within fifteen (15) days following the receipt of such request by the Implementing Agency from the Concessionaire, the approval of the Implementing Agency for the appointment and/or substitution of the Concessionaire Authorized Representative and/or the Concessionaire Project Engineer shall be deemed accorded. The Concessionaire hereby unconditionally and irrevocably confirms, acknowledges and agrees that the liability of the Concessionaire for the performance of its obligation pursuant to this Agreement shall neither be rescinded, waived, reduced, cancelled, terminated and / or in any manner adversely impacted as a direct and / or indirect consequence of the approval or otherwise of the Implementing Agency pursuant to this Section.

7.5 THE CIVIL WORK CONTRACTOR & THE O&M CONTRACTOR

7.5.1 The Concessionaire hereby undertakes that it shall:

- (a) ensure that the Civil Work Contract and the O&M Contracts are entered into on an arm's length basis and on commercially viable terms;
- (b) ensure that the assets created and/or constructed forming part of the Concession Assets pursuant to the Civil Work Contract and the O&M Contract vest in Implementing Agency on the Transfer Date;
- (c) ensure that the Civil Work Contractor or the O&M Contractor perform their respective obligations in the same manner that the Concessionaire is required to perform its obligations under this Agreement; and
- (d) deliver copies of each of the Civil Work Contract(s) and the O&M Contract(s) to Implementing Agency within five (5) days of its execution prior to Civil Work Contractors' mobilization.

7.5.2 The Implementing Agency shall not be liable for losses (including any Losses) of any nature resulting from the Civil Work Contract and the O&M Contract entered into by the Concessionaire as a result of the expiry of the Concession Period or Termination of this Agreement.

7.5.3 Prior to the appointment or any substitution of the Civil Work Contractor and/or the O&M Contractor, the Concessionaire shall submit the details of the same to the Implementing Agency, the Independent Engineer and the Independent Auditor and shall provide any other information reasonably requested by the Implementing Agency, the Independent Engineer and the Independent Auditor in respect of the same.

7.5.4 The Implementing Agency shall have the right to approve and/or disapprove the appointment and/or replacement of the Civil Work Contractor and/or the O&M Contractor, if:

- (a) any such appointment and/or replacement, in the reasonable opinion of the Implementing Agency, has any implications on national security interests of Pakistan; and/or

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- (b) such Civil Work Contractor and/or O&M Contractor is from the country of origin that is proscribed by the Applicable Laws and/or is blacklisted by any Government Authority;

and the decision of the Implementing Agency in this regard shall be final and binding on the Concessionaire. The Concessionaire hereby unconditionally and irrevocably confirms, acknowledges and agrees that the liability of the Concessionaire for the performance of its obligations pursuant to this Agreement shall neither be rescinded, waived, reduced, cancelled, terminated and / or in any manner adversely impacted as a direct and / or indirect consequence of the approval or otherwise of the Implementing Agency pursuant to this Section.

7.5.5 The Independent Engineer (in respect of technical matters) and the Independent Auditor (in respect of financial matters) shall have the right to approve and / or disapprove the appointment and / or replacement of the Civil Work Contractor and/or the O&M Contractor, if any, in the event (in the reasonable opinion of the Independent Engineer (in respect of technical matters) and the Independent Auditor (in respect of financial matters)):

- (a) such Civil Work Contractor is technically and financially incapable (to the extent of its scope of work) of performing the Installation Works (or any part thereof); or
- (b) such O&M Contractor is technically and financially incapable (to the extent of its scope of work) to perform the Operations and Maintenance (or any part thereof).

7.5.6 The execution of the Civil Work Contract(s) and/or the O&M Contract(s), or any amendment thereof shall be subject to the prior approval of the Independent Engineer in respect of payment terms, payment milestones, scope of the relevant Project Works and technical matters. The Concessionaire shall deliver to the Independent Engineer copies of the proposed Civil Work Contract(s) and O&M Contract(s) (with a copy to the Implementing Agency), or any amendment thereof. The Implementing Agency shall, within fifteen (15) days of its receipt of the proposed Civil Work Contract(s) and/or the O&M Contract(s), provide its comments or observation on the same, if any, to the Independent Engineer. The Independent Engineer shall within twenty-eight (28) days of the delivery of the proposed Civil Work Contract(s) and O&M Contract(s) and/or any amendments thereof by the Concessionaire, grant its approval or disapproval of the same, in consultation with Implementing Agency, and/or after removing any objection by Implementing Agency). In the event no approval or objections to the proposed Civil Work Contract(s) and/or the O&M Contracts is granted by the Independent Engineer within twenty-eight (28) days of the delivery of the same by the Concessionaire, it shall be deemed not to have been objected to by the Independent Engineer.

7.5.7 The Concessionaire shall deliver certified (as being true and correct) copies of the executed Civil Work Contract(s) and O&M Contract(s), together with all amendments thereto, to the Implementing Agency, the Independent Engineer and the Independent Auditor within seven (7) days of execution of the same.

7.6 CONCESSIONAIRE PERMITS

7.6.1 The Concessionaire shall make or cause to be made, in a timely fashion, all applications (whether initial or renewal applications) for the Concessionaire Permits in the prescribed form and with the prescribed fee (in each case, in accordance with the Applicable Laws) to the appropriate Government Authority and shall diligently pursue all such applications. The information supplied

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in the applications shall be complete and accurate and shall satisfy the substantive and procedural requirements of the Applicable Laws applied in a “*non-discriminatory*” manner.

- 7.6.2 The Concessionaire shall make or cause to be made, at least monthly prior to the Installation Completion Date, and at least quarterly thereafter, reports listing its schedule for submitting Concessionaire Permits application forms or renewal application forms, the status of any Concessionaire Permit applications then outstanding, notifications of the granting or denial of any Concessionaire Permit or Concessionaire Permit renewal, and notifications of any violations of any Concessionaire Permit. Each report shall be submitted to the Implementing Agency, the Independent Engineer and the Independent Auditor and shall include copies of all applications and notifications discussed in the report which have not been provided with a previous report. The first section of each report shall also summarize any problems regarding any Concessionaire Permit or Concessionaire Permit application that may materially affect the Concessionaire’s performance under any Implementing Agency Agreement. In the event of any Lapse of Consent, the Concessionaire shall submit a report pursuant to this Section 7.6.2 within three (3) days after becoming aware thereof.

7.7 NOT USED

7.8 NOT USED

7.9 ACCESS ROUTE & TRANSPORTATION

- 7.9.1 The Concessionaire shall be responsible for selection and usage of all transportation means, transportation routes, roads, bridges, highways and routes within, and to and from the Project Site in respect of performance of its Project Works and the Implementing Agency shall not be responsible for any claims attributable to Concessionaire in respect of the same. The Concessionaire shall (as between the Parties) be responsible for the repair of access routes damaged by the Concessionaire and/or the Concessionaire Self Control Unit.

7.10 TAXES AND SUBSIDIES

- 7.10.1 The Concessionaire shall be responsible to make all payments in respect of the rates, taxes (as applicable), charges, levies, assessments or equivalent taxes levied on it.
- 7.10.2 The Concessionaire may raise any objections in terms of any charges levied on it by any Government Authority; provided, that such objections shall be filed and pursued at the Concessionaire’s cost and the Concessionaire shall be entitled to any benefit accruing as a result of the Concessionaire’s successful objection.
- 7.10.3 The Concessionaire fully understands that the Implementing Agency or any other Government Authority shall not provide any guarantee, subsidy, grant or any financial support of any nature to the Concessionaire in respect of the Project other than as provided under the Implementing Agency Agreements.

7.11 PROTECTION OF THE ENVIRONMENT

- 7.11.1 The Concessionaire shall comply with all Applicable Specifications (including any condition which may from time to time be imposed by any Governmental Authority, including the ‘*Punjab Environmental Protection Agency*’ as regards collection, treatment and disposal or discharge of

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effluents or waste) pertaining to protection of the environment in its arrangements, execution of Project Works, procurement, and operations on Project Site. The Concessionaire shall take all necessary steps to protect the environment (both on and off the Project Site) and shall not cause damage and nuisance to people and property resulting from pollution, noise and other results of its operations. The Concessionaire shall ensure that air emissions, surface discharges and effluent from the Project Site during the Concession Period shall not exceed the values prescribed by Applicable Specifications.

- 7.11.2 The Concessionaire shall provide properly designed storage areas for its hazardous materials that are impermeable to leakage into the surrounding soil for storage of hazardous wastes. Such storage shall also be covered and protected from inundation and overflow by rainfall into the surrounding soil. Any hazardous materials generated during completion of the Project Works by the Concessionaire (including any members of its Concessionaire Self Control Unit) shall be properly disposed off by the Concessionaire on completion of the Works. The Concessionaire shall be responsible for keeping safe and disposing any hazardous materials and any dangerous substances on the Project Site generated from time to time during performance and completion of the Project Works or brought on to the Project Site by the Concessionaire.
- 7.11.3 The Concessionaire undertakes to indemnify, defend and hold the Implementing Agency harmless from any and all liabilities, claims, damages, costs, penalties, fines, expenses, fees (including reasonable attorney's fees) and charges of any nature associated with any non-compliance by the Concessionaire of its obligations contained in this Section 7.3.11 (*Protection of Environment*).

7.12 INTERNAL INFRASTRUCTURE LINKAGES

- 7.12.1 The Concessionaire shall be responsible for internal infrastructure linkages required for the Project such as waste water and storm water drainage at the Project Site. The Implementing Agency shall use reasonable efforts to facilitate for the provision with respective Government Authorities at no cost to itself and it shall be the Concessionaire's responsibility to fulfil any monetary or other compliances, as may be required by such Government Authorities.

7.13 EMERGENCY DECOMMISSIONING

- 7.13.1 In the event, during the Operations Period, in the reasonable opinion of the Concessionaire, there exists an Emergency that warrants de-commissioning and closure to traffic and / or the Users of the whole or any part of the Concession Assets (the **Decommissioned Project Area**), the Concessionaire shall be entitled to de-commission and close the whole or any part of Decommissioned Project Area, as the case may be, to the traffic and / or the Users for so long as such Emergency and the consequences thereof warrant (the **Emergency Decommissioning**); provided, however, that such Emergency Decommissioning and the particulars thereof shall be notified by the Concessionaire to the Implementing Agency and the Independent Engineer without any delay, and the Concessionaire shall diligently abide by the Applicable Specifications (including the Safety Requirements) in dealing with such Emergency Decommissioning and act in accordance with the directions that the Independent Engineer may issue for dealing with such Emergency Decommissioning; provided, however:
- (a) that the Independent Engineer shall, within seven (7) days from the date of the Emergency Decommissioning, certify whether such Emergency Decommissioning was warranted; and

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- (b) that the Concessionaire shall re-commission the Decommissioned Project Area, without any delay, whenever the Independent Engineer either: (i) notifies the Concessionaire to re-commission the same; or (ii) certifies that such Emergency Decommissioning was not warranted.

7.13.2 Without prejudice to the provisions of Section 7.13.1 (b), the Concessionaire hereby undertakes to re-commission the Decommissioned Project Area efficiently and in a time sensitive manner and as quickly as practicable after the circumstances leading to the Emergency Decommissioning have ceased to exist or have so abated as to enable the Concessionaire to re-commission the Decommissioned Project Area and shall notify the Implementing Agency and the Independent Engineer of the same without any delay.

7.13.3 The Emergency Decommissioning of the Decommissioned Project Area and the re-commissioning thereof shall, as soon as practicable, be brought to the notice of the affected Persons / Users by means of public announcements/notice by the Implementing Agency. The Independent Engineer shall determine whether the Concessionaire has successfully re-commissioned the Decommissioned Project Area and made the same available for traffic / Users as soon as practicable upon the termination / ceasing of the circumstances that have resulted in the Emergency Decommissioning.

7.13.4 All expenses, charges, fees, overheads and costs of any nature and all delays, in each case, resulting from and relating to the Emergency Decommissioning shall be borne by and shall be on account of the Concessionaire; provided, however, in the event the Emergency Decommissioning results from a Implementing Agency Event of Default and/or a Force Majeure Event, the Concessionaire shall be entitled to issuance of a Relief Request and in such case, the provisions of Article 15 (*Relief Extensions & Relief Compensations*) shall apply.

7.14 RESTORATION OF LOSS OR DAMAGE TO PROJECT

7.14.1 Save and except as a result of a Permitted Events (excluding a Non Political Event), in the event that the Project Works and/or Concession Assets or any part thereof suffers any loss or damage during the Concession Period, the Concessionaire shall, at its cost and expense, rectify and remedy such loss or damage forthwith in accordance with the Applicable Specifications so that the Project Works and the Concession Assets conform to the Applicable Specifications.

7.15 ACCOUNTS AND REPORTS

7.15.1 APPOINTMENT OF AUDITORS

The Concessionaire shall make arrangements with respect to the installation and operation of an accounting and cost control system and for the appointment, as statutory auditors, of a reputed firm of independent chartered accountants reasonably acceptable to the Implementing Agency and the Independent Auditor.

7.15.2 SPECIFIC RECORDS

The Concessionaire shall maintain complete and accurate records accounting for all transactions relating to any Relief Order, Relief Costs, extensions of Time For Completion, Change of Scope, minutes of board meetings and shareholder meetings and other records, which records shall be

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subject to inspection and audit by the Implementing Agency, the Independent Engineer and the Independent Auditor.

7.15.3 PERIODIC REPORTS

The Concessionaire shall in accordance with this Agreement furnish to the Implementing Agency, the Independent Engineer and the Independent Auditor the O&M Quarterly Status Report.

The Concessionaire shall, as soon as available but in any event within [●] ([●]) days of filing, furnish to the Implementing Agency, the Independent Engineer and the Independent Auditor two (2) copies of all documents filed in compliance with the requirements of the Companies Act, 2017 as amended or superseded from time to time or any other Applicable Laws.

The Concessionaire shall, as soon as available, furnish to the Implementing Agency, the Independent Engineer and the Independent Auditor, a report on any factors materially and adversely affecting, or that might materially and adversely affect, the Project or the Concessionaire's business and operations.

7.15.4 REPORTING OF CHANGES

The Concessionaire shall, at least fourteen (14) days prior to its becoming effective, report to the Implementing Agency, the Independent Engineer and the Independent Auditor any contemplated (i) material change in its memorandum and articles of association; (ii) change in its fiscal year; (iii) change in the constitution of its board of directors; (iv) change in its chief executive officer, and (v) without prejudice to the provisions of Section 10.3 (*Change of Control*), registration of a transfer of Shares to any Person who thereby becomes a registered holder of greater than five percent (5%) of the issued Shares, or of a transfer of Shares to or from a Person or entity who, immediately prior to such transfer, held greater than five (5) percent of the issued Shares; provided, however, that, reporting as aforesaid shall not relieve the Concessionaire from its obligations or liabilities towards any other Government Authority having jurisdiction over any such matter.

7.15.5 LISTS OF CREDITORS

Together with the periodic reports required by Section 7.15.3, the Concessionaire shall also furnish to the Implementing Agency, the Independent Engineer and the Independent Auditor a list of each of its creditors to which the Concessionaire has an outstanding obligation of PKR [●] (Pakistani Rupees [●] only) or more, along with statements or schedules of repayment of local and foreign loans/debts to such creditors duly certified by its statutory auditors on a six (6) monthly basis in each Accounting Year. The report shall also indicate any changes, as compared to the report submitted the previous Accounting Year that might have occurred.

7.15.6 INFORMATION REGARDING STATUTORY NOTICE/WINDING UP PROCEEDINGS

The Concessionaire shall, within seven (7) days of receipt thereof, provide to the Implementing Agency, the Independent Engineer and the Independent Auditor a copy of any notice that the Concessionaire may be served under Sections 301 and 302 (as such Sections may be amended, modified or relocated) of the Companies Act, 2017 by any of its creditors.

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The Concessionaire shall provide to the Implementing Agency, the Independent Engineer and the Independent Auditor all information in respect of any further actions taken by its creditors following any notice under Sections 301 and 302 (as such Sections may be amended, modified or relocated) of the Companies Act, 2017.

7.15.7 FAILURE BY THE CONCESSIONAIRE TO SUBMIT REPORTS, DOCUMENTS AND INFORMATION

In addition to the rights the Implementing Agency may have under this Agreement or under the Applicable Laws, in the event that the Concessionaire fails to submit any of the documents, reports or information as and when required under this Agreement, the Implementing Agency shall be entitled to assess against and recover from the Concessionaire reasonable costs established from time to time by the Implementing Agency for such non-compliance. Such reasonable costs shall be paid to the Implementing Agency within ten (10) days of notice of such non-compliance and assessment by the Implementing Agency; provided, that such costs shall not exceed an amount equal to PKR [●]/- (Pakistani Rupees [●] only) for each day that each such document, report or information remains outstanding commencing from the date that notice thereof is delivered by the Implementing Agency to the Concessionaire.

7.16 AFFIRMATIONS

7.16.1 The Concessionaire hereby declares that it has not obtained or induced the procurement of this Agreement and/or any Project Agreement and/or any Implementing Agency Agreement and/or any contract, consent, approval, right, interest, privilege or other obligation or benefit related to this Agreement and/or any Implementing Agency Agreement and/or the Project from the Implementing Agency and/or any Government Authority through any corrupt (including Corrupt Act) or illegal business practice.

7.16.2 Without limiting the generality of the foregoing, the Concessionaire represents and warrants that it has fully disclosed in writing all commissions, brokerage and other fees, and other compensation (other than compensation paid to employees of the Concessionaire for services provided) paid or payable to any Person within or outside Pakistan in relation to the Project and has not given or agreed to give and shall not give, or agree to give to any Person within or outside Pakistan either directly or indirectly through any natural or juridical Person, including its Affiliates, employees, agents, associates, brokers, consultants, officers, directors, promoters, shareholders, sponsors or subsidiaries (and any of their employees, agents, associates, brokers, consultants, officers, directors, promoters, shareholders or sponsors), any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of any Implementing Agency Agreement or any Project Agreement or any contract, right, interest, privilege or other obligation or benefit related to any Implementing Agency Agreement or the Project from the Implementing Agency or any Governmental Authority, except that which has been expressly declared pursuant hereto.

7.16.3 The Concessionaire accepts full responsibility and strict liability for making any intentional false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of the representations and warranties contained herein and the declarations required hereby. The Concessionaire agrees in the event that any of the representations and warranties made by it in Section 7.12.1 and 7.12.2 are proved to be materially incorrect, that any contract, consent, approval, right, interest, privilege or other obligation or benefit obtained or procured as

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aforesaid shall, without prejudice to any other right and remedies available to the Implementing Agency, be voidable and without legal effect at the option of the Implementing Agency.

- 7.16.4 Notwithstanding any rights and remedies that are available to and may be exercised by the Implementing Agency in this regard, the Concessionaire agrees to indemnify the Implementing Agency for any loss (including Losses) or damage incurred by it on account of its corrupt business practices and further pay compensation to the Implementing Agency in an amount equivalent to ten (10) times the amount of any commission, gratification, bribe, finder's fee or kickback paid or given by the Concessionaire (either directly or indirectly through any natural or juridical Person, including its Affiliates, employees, agents, associates, brokers, consultants, officers, directors, promoters, shareholders, sponsors or subsidiaries (and any of their employees, agents, associates, brokers, consultants, officers, directors, promoters, shareholders or sponsors), as aforesaid for the purpose of obtaining or inducing the procurement of any Implementing Agency Agreement or any Project Agreement or any contract, consent, approval, right, interest, privilege or other obligation or benefit related to any Implementing Agency Agreement or the Project from the Implementing Agency or any Governmental Authority.

7.17 NO RELIEF FROM LIABILITY

- 7.17.1 No review, non-objection or approval by the Implementing Agency, the Independent Engineer, the Independent Auditor or any Government Authority of any Concession Asset or Project Works (including any agreement, document, instrument, drawing, specifications or design proposed by the Concessionaire) shall relieve the Concessionaire from any liability that it would otherwise have had for its negligence in the performance and completion of the Project Works and the Concession Assets (including preparation of an agreement, document, instrument, drawing, specification or design) or failure to comply with the Applicable Laws with respect thereto, or to satisfy the Concessionaire's obligations under the Implementing Agency Agreements, nor shall the Implementing Agency, the Independent Engineer, the Independent Auditor or any Government Authority be liable to the Concessionaire or any other Person by reason of its review and approval of an agreement, document, instrument, drawing, specification, or design.
- 7.17.2 The Concessionaire shall, at all times, be responsible and liable for all its obligations under the Applicable Specifications notwithstanding anything contained in the Project Agreements or any other agreement, and no default under any Project Agreement or other agreement shall excuse the Concessionaire from its obligations or liability hereunder.

7.18 WITHOUT PREJUDICE

- 7.18.1 The representations, warranties, undertakings, obligations, roles and responsibilities of the Concessionaire set out in this Article 7 (*Concessionaire's Representations, Warranties And Certain Obligations & Undertakings*) shall not limit or prejudice in any manner the representations, warranties, undertakings, obligations, roles and responsibilities of the Concessionaire set out elsewhere in the Implementing Agency Agreements.

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8. IMPLEMENTING AGENCY REPRESENTATIONS, WARRANTIES AND CERTAIN OBLIGATIONS & UNDERTAKINGS

8.1 IMPLEMENTING AGENCY REPRESENTATIONS & WARRANTIES

8.1.1 The Implementing Agency hereby represents and warrants to the Concessionaire that:

- (a) it has taken all necessary actions under Applicable Laws to:
 - (i) authorize the execution, delivery and performance of this Agreement; and
 - (ii) validly exercise its rights and perform its obligations under this Agreement;
- (b) this Agreement and all obligations contained herein constitutes its legal, valid and binding obligations, enforceable against it in accordance with the terms hereof;
- (c) the execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets are bound or affected;
- (d) there are no actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it under the Applicable Laws before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in a Material Adverse Effect;
- (e) it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of any Government Authority which may result in any Material Adverse Effect on its ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its material obligations under this Agreement; and
- (f) it has complied with Applicable Laws in all material respects and has not been subject to any fines, penalties, injunctive relief or any other civil liabilities which in the aggregate have or may have a Material Adverse Effect.

8.1.2 In the event that any occurrence or circumstance comes to the attention of either Party that renders any of its aforesaid representations or warranties untrue or incorrect, such Party shall immediately notify the other Party of the same. Such notification shall not have the effect of remedying any breach of the representation or warranty that has been found to be untrue or incorrect nor shall it adversely affect or waive any right, remedy or obligation of either Party under this Agreement or any Implementing Agency Agreement.

8.2 GENERAL UNDERTAKINGS

8.2.1 The Implementing Agency hereby undertakes to the Concessionaire that it shall:

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- (a) ensure peaceful use of the Project Site by the Concessionaire without any let or hindrance from the Implementing Agency and/or any person or Government Authority claiming through or under them;
- (b) procure assistance from the Punjab Highway Patrol for regulation of traffic on the Project Highway and provide reasonable assistance to the Concessionaire in procuring police assistance for removal of trespassers, removal of encroachments and security on and/or in respect of the Project;
- (c) upon written request of the Concessionaire, provide Punjab Highway Patrol support at and/or near the Project Site as required by the Concessionaire;
- (d) support, cooperate with and facilitate the Concessionaire in the implementation of the Project in accordance with the provisions of the Implementing Agency Agreements; and
- (e) issue the Toll Notification (substantially, in the form set out in **SCHEDULE R (Form of Toll Notification)** as per **SCHEDULE P (Toll Notification Structure)** and Applicable Laws in order to implement the Toll Notification Structure.

8.3 SUPPORT FOR CONCESSIONAIRE PERMITS & CONDITIONS FOR CONCESSIONAIRE PERMITS

- 8.3.1 Subject to the Concessionaire's timely submission of reports required by Section 7.6.2, upon request of the Concessionaire, the Implementing Agency shall support and use reasonable efforts to expedite consideration of the applications for the Concessionaire Permits or reissuance(s) thereof filed pursuant to Section 7.6 (*Concessionaire Permits*), and the timely issuance thereof or reissuance of a Concessionaire subject to a Lapse of Consent by any Government Authority. Any request for support under this Section shall be made by the Concessionaire and shall be accompanied with copies of the application for the Concessionaire Permit, any notice that the issuance or reissuance of the Concessionaire Permit was denied or deferred, and a statement of the efforts in obtaining the issuance or reissuance of the Concessionaire Permit to date.
- 8.3.2 The Implementing Agency or any Government Authority may attach such "*non discriminatory*" terms and conditions (as explained in Section 8.6 (*Non-Discriminatory*)) to the issuance or renewal of any of the Concessionaire Permits as are in accordance with the Applicable Laws and the attachment of such terms and conditions shall not in and of itself constitute a breach of this Agreement by the Implementing Agency, a Force Majeure Event, or a Implementing Agency Event of Default. The Concessionaire and its Contractors shall abide by all such terms and conditions (subject to this Section 8.3.2 and provisions in this Agreement relating to Lapse of Consent). If the Concessionaire (including where it is acting through its Contractors) fails to abide by any term or condition of any Concessionaire Permit, then the Implementing Agency or any Government Authority may exercise any power pursuant to the Applicable Laws (provided such power is exercised in a "*non-discriminatory*" manner) in respect of such failure and (subject to this Section 8.3.2 and provisions in this Agreement relating to Lapse of Consent) such exercise shall not of itself constitute a breach of this Agreement by the Implementing Agency, a Force Majeure Event, or a Implementing Agency Event of Default; provided, however, that, with respect to all such Concessionaire Permits issued by the Implementing Agency or any Government Authority that is also a department or instrumentality of Implementing Agency, the Implementing Agency shall not, and the Implementing Agency shall ensure that no such Government Authority shall, terminate prior to its expiration date or revoke any such Concessionaire Permit earlier than the later of (a) thirty (30) days after delivery to the

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Concessionaire (or the relevant Contractor) of written notice by the Implementing Agency or such department or instrumentality of Implementing Agency of such failure and (b) the period of time, if any, that must expire under the Applicable Laws or the relevant Concessionaire Permit prior to early termination or revocation of any such Concessionaire Permit; provided, further, that nothing in this Section shall limit the Implementing Agency or any Government Authority from taking any action in relation to a breach of, or non-compliance with, a Concessionaire Permit (other than termination or revocation) which it is entitled to take under the Applicable Laws (provided such action is taken in a “non-discriminatory” manner).

8.4 SUPPORT FOR OBLIGATIONS

8.4.1 Upon reasonable request by the Concessionaire, the Implementing Agency shall use its reasonable efforts and its good offices to support the Concessionaire’s performance of its obligations under and pursuant to this Agreement, including, its obligations to operate and maintain the Concession Assets. If the Concessionaire has failed to comply with its obligations under any Implementing Agency Agreement and such failure is the principal cause of the Concessionaire’s difficulties in performing such activities, the Implementing Agency may advise the Concessionaire of such determination, and the Implementing Agency shall not be obligated to take any action to assist the Concessionaire until such time as the Concessionaire has fully complied with its obligations under the Implementing Agency Agreements. By agreeing to use its reasonable efforts and its good offices to support the Concessionaire’s efforts, the Implementing Agency has not relieved, and does not relieve in any way, the Concessionaire of its obligations or potential liability under the Implementing Agency Agreements and the other documents comprising the Project Agreements.

8.5 PROCEDURE

8.5.1 To the extent permitted under the Applicable Laws, all applications and any other necessary requisites, whether for the Concessionaire, its employees or Contractors, are to be routed through the Concessionaire.

8.6 NON-DISCRIMINATORY

8.6.1 The use of the term “non-discriminatory” or “discriminatory” in any Implementing Agency Agreement is not intended to prohibit or limit in any way the Implementing Agency or any Government Authority from making rational distinctions between parties or from using measures, establishing conditions, or enforcing requirements that are, in each case, intended or designed to advance the purposes of the program being implemented by the Implementing Agency or any Government Authority or of a Concessionaire Permit. It is intended, however, to prohibit the use of Government Authority, over Concessionaire Permits, for example, to deprive the Concessionaire of the benefits of the Implementing Agency Agreements or any other Project Agreement by the application of a higher standard to the Concessionaire (alone, or together with others in a small class) than to others similarly situated because of, for example, its foreign ownership, or to gain commercial or political advantage.

8.7 PROJECT MANAGEMENT/IMPLEMENTATION UNIT

8.7.1 The Project Management/Implementation Unit shall oversee the day to day implementation of the Project and facilitate implementation of the Project Highway in accordance with Applicable Laws on the Users.

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8.8 IMPLEMENTING AGENCY PROJECT MANAGER

- 8.8.1 Unless already appointed prior to the Effective Date, the Implementing Agency shall, within seven (7) days following the Effective Date, appoint its representative duly authorized to deal on its behalf to facilitate on all matters under or arising out of or relating to the Implementing Agency Agreements (the Project Manager). The Implementing Agency may, by notice in writing to the Concessionaire, substitute the Project Manager at its discretion at any time. The Implementing Agency shall ensure that at all times during the Concession Period, the Project Manager remains appointed.

8.9 IMPLEMENTING AGENCY OVERRIDING POWERS

- 8.9.1 Notwithstanding anything contained in this Agreement, the Implementing Agency shall have the right upon the occurrence of a national emergency, civil commotion and / or as a consequence of a Force Majeure Event, to take over the performance of any or all the obligations of the Concessionaire to the extent deemed necessary by the Implementing Agency or as directed by the relevant Government Authority, and exercise such control over the Concession Assets and / or give such directions to the Concessionaire as may be deemed necessary by the Implementing Agency; provided, however, that the exercise of such overriding powers by the Implementing Agency shall be of no greater scope and of no longer duration than is reasonably required in the circumstances which causes the exercise of such overriding power by the Implementing Agency (the **Implementing Agency Overriding Power Event**). The Concessionaire hereby agrees to act in accordance with the instructions issued by the Implementing Agency pursuant to the provisions of this Section and undertakes to provide assistance and co-operation to the Implementing Agency for performance of its obligations hereunder. In the event the Implementing Agency exercises its overriding powers under this Section 8.9 (*Implementing Agency Overriding Powers*) whereby the Concessionaire incurs any costs and expenses and/or is delayed in performance of its obligations under this Agreement, the Concessionaire shall be entitled to issuance of a Relief Request and in such case, the provisions of Article 15 (*Relief Extensions & Relief Compensations*) shall apply.

8.10 SOVEREIGN IMMUNITY

- 8.10.1 The Implementing Agency unconditionally and irrevocably:
- (a) agrees that the execution, delivery and performance by it of the Implementing Agency Agreements and all other agreements, documents and writings relating to the same constitute private and commercial acts and not public or governmental acts;
 - (b) agrees that should any proceedings be brought against it or its assets (other than any of its assets which are significant in respect of national security of Pakistan (the **Protected Assets**)) in any jurisdiction in relation to the Implementing Agency Agreements or any transaction contemplated by the Implementing Agency Agreements, no immunity, sovereign or otherwise, from such proceedings, execution, attachment or other legal process shall be claimed by or on behalf of itself or with respect to any of its assets (other than the Protected Assets);

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- (c) waives any such right of immunity, sovereign or otherwise, which the Implementing Agency or its assets now has or may acquire in the future (other than the Protected Assets), in respect of proceedings under the Implementing Agency Agreements; and

8.11 WITHOUT PREJUDICE

- 8.11.1 The representations, warranties, undertakings, obligations, roles and responsibilities of the Implementing Agency set out in this Article 8 (*Implementing Agency Representations, Warranties And Certain Obligations & Undertakings*) shall not limit or prejudice in any manner the representations, warranties, undertakings, obligations, roles and responsibilities of the Concessionaire set out elsewhere in the Implementing Agency Agreements.



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9. INDEMNITIES & LIMITATION OF LIABILITY

9.1 GENERAL INDEMNITY

9.1.1 The Concessionaire

The Concessionaire shall indemnify and defend the Implementing Agency, for itself and its officers, servants, agents, Government Authority and Government owned and/or controlled entities/enterprises relating to the Project (the **Implementing Agency Indemnified Persons**) against, and hold the Implementing Agency Indemnified Persons harmless from, at all times after the Effective Date, any and all Losses, incurred, suffered, sustained or required to be paid, directly or indirectly, by, or sought to be imposed upon, the Implementing Agency Indemnified Persons for personal injury or death to persons or damage to property arising out of any negligent or intentional act or omission by the Concessionaire in connection with this Agreement. Notwithstanding anything to the contrary contained in the preceding sentence, nothing in this Section 9.1.1 shall apply to any Loss in respect of and to the extent of which the Implementing Agency receives proceeds from insurance policies relating to the Project.

9.1.2 The Implementing Agency

Except as specifically provided elsewhere in this Agreement, the Implementing Agency shall indemnify and defend the Concessionaire, for itself and as trustee for its officers, directors and employees against (the **Concessionaire Indemnified Persons**), and hold the Concessionaire Indemnified Persons harmless from, at all times after the Effective Date, any and all Loss incurred, suffered, sustained or required to be paid, directly or indirectly, by, or sought to be imposed upon the Concessionaire Indemnified Persons for personal injury or death to persons or damage to property arising out of any negligent or intentional act or omission by the Implementing Agency in connection with this Agreement. Notwithstanding anything to the contrary contained in the preceding sentence, nothing in this Section 9.1.2 shall apply to any Loss in respect of and to the extent of which the Concessionaire receives proceeds from insurance policies or indemnification from another party relating to the Project.

9.1.3 Joint Negligence

In the event injury or damage results from the joint or concurrent negligent or intentional acts or omissions of the Parties (as determined by the Independent Engineer and the Independent Auditor), each Party shall be liable under this indemnification in proportion to its relative degree of fault, as determined by the Independent Engineer and the Independent Auditor.

9.2 ASSERTION OF CLAIMS TO EXCEED MINIMUM INDEMNIFICATION AMOUNT

- 9.2.1 Each Party shall be solely liable, and shall not be entitled to assert any claim for indemnification under this Agreement, for any Loss that would otherwise be the subject of indemnification under this Agreement, until all Losses of such Party, in the aggregate, during the then-current Accounting Year, exceed the Minimum Indemnification Amount. For the purposes of this Section 9.2 (*Assertion of Claims to Exceed Minimum Indemnification Amount*), a Loss (or claim for indemnification) shall be deemed to arise in the Accounting Year in which the event giving rise to such Loss (or claim for indemnification) occurred, or if the event is continuing in more than one (1) Accounting Year, in the Accounting Year such event ends.

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9.3 NOTICE AND CONTEST OF CLAIMS

- 9.3.1 In the event that either Party receives a claim or demand from a third party in respect of which it is entitled to the benefit of an indemnity under this Article 9 (*Indemnities & Limitation of Liability*) (the **Indemnified Party**) it shall notify the other Party (the **Indemnifying Party**) within twenty-one (21) days of receipt of the claim or demand and shall not settle or pay the claim without the prior approval of the Indemnifying Party, which approval shall not be unreasonably withheld, conditioned or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim or demand, it may conduct the proceedings in the name of the Indemnified Party, subject to the Indemnified Party being secured against any costs involved, to its reasonable satisfaction.

9.4 DEFENSE OF CLAIMS

- 9.4.1 The Indemnifying Party shall be entitled, at its option and expense and with counsel of its selection, to assume and control the defense of such claim, action, suit or proceeding, subject to the prior approval of the Indemnified Party; provided, however, it gives prompt notice of its intention to do so to the Indemnified Party, and reimburses the Indemnified Party for the reasonable costs and expenses incurred by the Indemnified Party prior to assumption by the Indemnifying Party of such defense.
- 9.4.2 Not Used.
- 9.4.3 Unless and until the Indemnifying Party acknowledges in writing its obligation to indemnify the Indemnified Party and assumes control of the defense of a claim, suit, action or proceeding in accordance with Section 9.4.1, the Indemnified Party shall have the right, but not the obligation, to contest, defend and litigate, with counsel of its own selection, any claim, action, suit or proceeding by any third party, alleged or asserted against such Party in respect of, resulting from, related to or arising out of any matter for which it is entitled to be indemnified hereunder, and the reasonable costs and expense thereof shall be subject to the indemnification obligations of the Indemnifying Party hereunder.
- 9.4.4 Upon assumption by the Indemnifying Party of the control of the defense of a claim, suit, action or proceeding, the Indemnifying Party shall reimburse the Indemnified Party for the reasonable costs and expenses of the Indemnified Party in the defense of the claim, suit, action or proceeding prior to the Indemnifying Party's acknowledgment of the Indemnification and assumption of the defense.
- 9.4.5 Following acknowledgment of the indemnification and assumption of the defense by the Indemnifying Party, the Indemnified Party shall have the right to employ its own counsel, and such counsel may participate in such action, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party, when and as incurred, unless:
- (a) the employment of counsel by such Indemnified Party has been authorized in writing by the Indemnifying Party; or
 - (b) the Indemnified Party shall have reasonably concluded that there may be a conflict of interest between the Indemnifying Party and the Indemnified Party in the conduct of the defense of such action; or

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- (c) the Indemnifying Party shall not, in fact, have employed independent counsel reasonably satisfactory to the Indemnified Party, to assume the defense of such action and shall have been so notified by the Indemnified Party; or
- (d) the Indemnified Party shall have reasonably concluded and specifically Notified the Indemnifying Party either:
 - (i) that there may be specific defenses available to it which are different from or additional to those available to the Indemnifying Party; or
 - (ii) that such claim, action, suit or proceeding involves or could have a Material Adverse Effect upon it beyond the scope of this Agreement.

Provided that if Sections 9.4.5, (b), (c) or (d) shall be applicable, then the counsel for the Indemnified Party shall have the right to direct the defense of such claim, demand, action, suit or proceeding on behalf of the Indemnified Party, and the reasonable fees and disbursements of such counsel shall constitute legal or other expenses hereunder.

9.5 NO CONSEQUENTIAL CLAIMS

- 9.5.1 Notwithstanding anything to the contrary contained in this Article 9 (*Indemnities & Limitation of Liability*), the indemnities herein provided shall not include any claim or recovery in respect of any cost, expense, loss or damage of an indirect, incidental or consequential nature, including loss of profit, except as expressly provided in this Agreement.

9.6 SURVIVAL ON TERMINATION

- 9.6.1 The provisions of this Article 9 (*Indemnities & Limitation of Liability*) shall survive Termination for a maximum period of five (5) years following Termination and the provisions of this Article 9 (*Indemnities & Limitation of Liability*) shall apply solely in respect of claims that arose immediately on or prior to the Termination Date.

9.7 LIMITATION OF LIABILITY & INDEMNIFICATION FOR FINES AND PENALTIES

- 9.7.1 Neither Party shall be liable to the other Party in contract, tort, warranty, strict liability (except as may be expressly provided in any Implementing Agency Agreement), or any other legal theory for any indirect, consequential, incidental, punitive, or exemplary damages; provided, that the Implementing Agency hereby agrees that the Termination Payment payable under this Agreement are not indirect, consequential, incidental, punitive or exemplary damages. Neither Party shall have any liability to the other Party except pursuant to, or for breach of any Implementing Agency Agreement; provided, however, that this provision is not intended to constitute a waiver of any rights of one Party against the other with regard to matters unrelated to any Implementing Agency Agreement or to any activity not contemplated by the same.
- 9.7.2 Any fines or other penalties incurred by the Concessionaire for non-compliance with the Applicable Laws or other governmental directions issued pursuant thereto and in accordance therewith or the Concessionaire Permits shall not be reimbursed by Implementing Agency or any Government Authority but shall be the sole responsibility of the Concessionaire.

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10. FUNDING REQUIREMENTS & SHAREHOLDING MATTERS

10.1 FUNDING OF EQUITY

- 10.1.1 The Concessionaire hereby undertakes to procure funding by the Sponsor from time to time of the Sponsor Base Equity Amount through subscription in cash in Pak Rupees for Shares by the Sponsors.

10.2 SHARES

- 10.2.1 The Implementing Agency shall have the right (to be exercised in its sole discretion) to nominate two (2) non-voting director on the board of directors of the Concessionaire at its discretion.
- 10.2.2 Upon funding of the Sponsor Base Equity Amount (or any part thereof) by the Sponsors from time to time, the Sponsors shall be issued Shares by the Concessionaire in accordance with the Applicable Laws. The obligation to fund the Sponsor Base Equity Amount shall be independent of the shareholding of the Sponsor in the Concessionaire.
- 10.2.3 The Concessionaire shall not create any classes of its shares without the prior approval of the Implementing Agency.

10.3 CHANGE IN COMPLETE CONTROL, CHANGE IN CONTROL AND CHANGE IN SHAREHOLDING

- 10.3.1 The Concessionaire shall not undertake or permit and hereby undertakes to procure that the Sponsor does not undertake or permit any Change In Complete Control until the Installation Completion Date unless such Change In Complete Control:
- (a) is required by any Applicable Laws or by the operation of the Applicable Laws or by order of a court, tribunal, or Government Authority with appropriate jurisdiction; or
 - (b) is affected with the prior written approval of the Implementing Agency.
- 10.3.2 The Concessionaire shall not undertake or permit and hereby undertakes to procure that the Sponsor does not undertake or permit any Change In Control until the Transfer Date unless such Change In Control:
- (a) is required by any Applicable Laws or by the operation of the Applicable Laws or by order of a court, tribunal, or Government Authority with appropriate jurisdiction; or
 - (b) is affected with the prior written approval of the Implementing Agency; provided, that the Implementing Agency shall provide its determination in writing within ninety (90) days of the Implementing Agency having received a written request by the Concessionaire; provided, further, that the Implementing Agency shall exercise its discretion to grant such approval under this Section 10.3.2 in accordance with, *inter alia*, the Applicable Laws.
- 10.3.3 Following the Installation Completion Date, the Concessionaire may undertake or permit and the Sponsor may undertake or permit, in each case, any Change of Shareholding, without the consent of the Implementing Agency but with prior Notification to the Implementing Agency; provided,

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that the Person(s) acquiring and/or subscribing to the Shares resulting in the Change of Shareholding is:

- (a) is not from a nationality proscribed by the Applicable Laws;
- (b) is not blacklisted by any Government Authority; and
- (c) is not a defaulter of any bank or financial institution.

10.4 NOT USED.

11. BID SECURITY & PERFORMANCE SECURITY

11.1 BID SECURITY

11.1.1 Pursuant to the requirements of the RFP, the Sponsor has submitted a duly valid and effective Bid Security to the Implementing Agency and the Concessionaire hereby represents and warrants that:

- (a) the Bid Security is fully secured by the Sponsor as a principal debtor and not as surety without any recourse on the Concessionaire, its assets or properties;
- (b) all costs, expenses, fees and other charges of any nature, in each case, associated with the issuance, maintenance and encashment of the Bid Security are solely on account of the Sponsor.

11.1.2 The Bid Security shall secure:

- (a) all of the Sponsor's obligations, liabilities, payments, indemnities, representations, guarantees, warranties and responsibilities under the RFP and any Implementing Agency Agreement to which they are a party; and
- (b) all of the Concessionaire's obligations, liabilities, payments, liquidated damages, indemnities, representations, guarantees, warranties and responsibilities under the Implementing Agency Agreements, including the integrity and quality of the Concessionaire's and its Contractors' workmanship, the timely and continuous performance of the Project Works, the quality and quantity of the any equipment, materials, items and components supplied, the performance of Project Works by the Concessionaire and compliance of the same with the Applicable Specifications and all other works and services to be provided by the Concessionaire under the Implementing Agency Agreements.

11.1.3 The Bid Security shall be encashable in accordance with the terms thereof and shall be payable on the Implementing Agency's first written demand without any prior notice, reference or recourse to the Concessionaire, the Sponsors or any other entity or person.

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- 11.1.4 The Concessionaire shall be obligated to maintain and keep valid the Bid Security until submission by the Concessionaire of a fully valid and effective Performance Security in accordance with the terms of this Agreement (the **Bid Security Expiry Date**). In the event the Bid Security expires prior to the Bid Security Expiry Date, the Concessionaire shall extend the validity of the Bid Security, at least fifteen (15) business days prior to its expiry, so as to keep it valid and enforceable until the Bid Security Expiry Date. In the event of failure by the Concessionaire to keep valid or extend the validity of the Bid Security in accordance with this Section 11.1.4, the Implementing Agency shall have the right to encash the Bid Security at any time prior to its expiry to its full outstanding value at any time.
- 11.1.5 Upon delivery of a valid and effective Performance Security by the Concessionaire to the Implementing Agency in accordance with Section 11.3 (*Performance Security*), the Bid Security shall automatically terminate and be simultaneously returned to the Concessionaire.

11.2 NOT USED.

11.3 PERFORMANCE SECURITY

- 11.3.1 The Concessionaire hereby undertakes to procure issuance and delivery to the Implementing Agency of the Performance Security from time to time in accordance with this Section 11.3 (*Performance Security*).
- 11.3.2 The Concessionaire shall deliver the Performance Security to the Implementing Agency prior to the Performance Security Expiry Date and shall replace the same thirty (30) days prior to commencement of each Operational Year falling after the expiry of Performance Security Expiry Date. The Performance Security provided in the first instance shall become effective simultaneously upon return of the Performance Security to the Concessionaire by the Implementing Agency and thereafter, each Performance Security provided prior to commencement of an Operational Year shall become automatically become effective simultaneously upon return of the Performance Security for the previous Operational Year.
- 11.3.3 Notwithstanding anything to the contrary, the O&M Contractor may be the applicant for the issuance of the Performance Security provided that the Performance Security should be issued on behalf of the Concessionaire in favour of the Implementing Agency in accordance with the terms hereof.
- 11.3.4 The Performance Security:
- (a) shall be issued and maintained without any recourse on the Concessionaire, its assets or properties;
 - (b) shall not be secured through any Concession Assets and no Encumbrance of any nature shall be created on the assets and properties of the Concessionaire in respect of the same.

All costs, expenses, fees and other charges of any nature, in each case, associated with the issuance, maintenance and encashment of the Performance Security are solely on account of the Sponsors.

- 11.3.5 The Performance Security shall secure:

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- (a) all of the Sponsors' obligations, liabilities, payments, indemnities, representations, guarantees, warranties and responsibilities under the Implementing Agency Agreements to which they are a party; and
 - (b) all of the Concessionaire's obligations, liabilities, payments, liquidated damages, indemnities, representations, guarantees, warranties and responsibilities under the Implementing Agency Agreements, including the integrity and quality of the Concessionaire's and its Contractors' workmanship, the timely and continuous performance of the Project Works during the Operations Period, the timely and continuous performance of the Installation Works, the quality and quantity of the any equipment, materials, items and components supplied, the performance of Project Works during the Operations Period by the Concessionaire and compliance of the same with the Applicable Specifications and all other works and services to be provided by the Concessionaire under the Implementing Agency Agreements.
- 11.3.6 The Performance Security shall be encashable in accordance with the terms thereof and shall be payable on the Implementing Agency's first written demand without any prior notice, reference or recourse to the Concessionaire, the Sponsors or any other entity.
- 11.3.7 The Performance Security provided by the Concessionaire in respect of an Operational Year shall remain in force and effect until the date that falls sixty (60) days after the expiry of such Operational Year subject to receipt by the Implementing Agency of a fully valid and effective Performance Security for the subsequent Operational Year in accordance with the terms of this Agreement on or prior to such date (the **Performance Security Expiry Date**). In the event a Performance Security expires prior to the Performance Security Expiry Date, the Concessionaire shall extend the validity of the Performance Security, at least fifteen (15) business days prior to its expiry, so as to keep it valid and enforceable until the Performance Security Expiry Date. In the event of failure by the Concessionaire to keep valid or extend the validity of any Performance Security in accordance with this Section 11.3.7, it shall be considered a material breach of this Agreement and the Implementing Agency shall have the right to encash such Performance Security at any time prior to its expiry to its full outstanding value at any time in addition to any other remedies available to the Implementing Agency under this Agreement.
- 11.3.8 Upon the delivery of a Performance Security for an Operational Year (the **New Performance Security**) to the Implementing Agency by the Concessionaire in accordance with this Section 11.3 (*Performance Security*) on or prior to the commencement of such Operational Year (the **Operational Year**), the previous Performance Security issued for the previous Operational Year shall be null and void upon delivery of the New Performance Security and commencement of the New Operational Year and shall be returned to the Concessionaire by the Implementing Agency simultaneously with the provision of the New O&M Performance Security.
- 11.3.9 Notwithstanding anything to the contrary, the Concessionaire hereby undertakes and agrees that the Performance Security shall remain valid:
- (a) in case of Termination, at least for one (1) year after the Termination Notice has been issued;
 - (b) in case of expiry of this Agreement on the Final Expiry Date, one (1) year after the Final Expiry Date.

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12. DETAILED PROGRAMME OF PERFORMANCE

12.1 NOT USED.

12.2 NOT USED.

12.3 NOT USED.

12.4 NOT USED.

12.5 DETAILED PROGRAMME OF PERFORMANCE

12.5.1 Notwithstanding anything to the contrary, the Concessionaire shall, within ninety (90) days of the Effective Date, procure issuance of the Approved Detailed Programme of Performance, which shall set out, *inter alia*, and in addition to any other matters determined by the Independent Engineer, the exact location of the Project Site, the sequence of works and operations by which the Concessionaire intends to complete the Installation Works, attain and maintain the Service Levels as stipulated in this Agreement, the relocation of existing utilities on the Project Site, removal of impediments on the Project Site and all other matters relation to the operation and maintenance of the Project Highway.

12.5.2 The Parties hereby acknowledge and agree that the delivery of Vacant Possession of the Project Site, the exact area, location, relocation of existing utilities and other relevant matters relating to the same are a function of the Approved Detailed Programme of Performance.

12.5.3 The Concessionaire shall, as part of the process of the Concessionaire Conditions Precedent, submit its initial Detailed Programme of Performance to the Independent Engineer (with a copy to Implementing Agency) within two (2) months of the Effective Date for the approval of the Independent Engineer and Implementing Agency (the **Proposed Detailed Programme of Performance**). Within thirty (30) days of the receipt of the Proposed Programme of Performance, the Independent Engineer and Implementing Agency shall review the same and convey their observations to the Concessionaire with particular reference of the conformity of the same with Applicable Specifications and **SCHEDULE B (Design Requirements)**. In case, no comments/observations are provided by the Independent Engineer and/or the Implementing Agency, as the case may be, within twenty (20) days of their receipt of the Proposed Detailed Programme of Performance, the Concessionaire shall notify the Independent Engineer and Implementing Agency about such inactivity. In case, no comments are received from the Independent Engineer and/or Implementing Agency are received within ten (10) days following such notification, the Proposed Programme of Performance, as submitted by the Concessionaire, will be deemed to be approved by the Independent Engineer and Implementing Agency.

12.5.4 In the event the specific observations of the Independent Engineer and Implementing Agency on the Proposed Detailed Programme of Performance indicate that the Proposed Detailed Programme of Performance is not in conformity with the Applicable Specifications, the Proposed Detailed Programme of Performance shall be revised by the Concessionaire, at the cost and expense of the Concessionaire, and resubmitted to the Independent Engineer and Implementing Agency, as the case may be, for their review and approval within a period of fifteen (15) days after receiving the observations of the Independent Engineer and Implementing Agency on the Proposed Detailed Programme of Performance. Following receipt of the observations on the revision (within the time periods contemplated herein), the Independent

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Engineer and Implementing Agency shall give their observations, if any, within seven (7) days of their receipt of the revised Detailed Programme of Performance from the Concessionaire. In the event the Independent Engineer and/or Implementing Agency give their observations on the revised Detailed Programme of Performance, the Concessionaire shall revise the Detailed Programme of Performance and submit the same to the Independent Engineer and Implementing Agency within 15 days after receiving of observations on the same.

12.5.5 Not Used.

12.5.6 The Concessionaire may submit a revised Detailed Programme of Performance to the Independent Engineer (with a copy to the Implementing Agency) for approval, prior to the expiry of the time period prescribed in Section 12.5.5 hereinabove, if:

- (a) the actual progress of the Installation Works falls behind as per the timeframe provided in the submitted Detailed Programme of Performance; or
- (b) there are any material amendments to this Agreement which affect the ability of the Concessionaire to carry out the Installation Works.

13. INSTALLATION WORKS

13.1 INSTALLATION WORKS

- 13.1.1 The Concessionaire shall commence the Installation Works in accordance with the Applicable Specifications and shall perform and complete the same in accordance with the Installation Time For Completion. The Concessionaire shall commence the Installation Works on the Commencement Date. The Concessionaire shall immediately upon commencement of the Installation Works notify the Implementing Agency, the Independent Engineer and the Independent Auditor of the same.
- 13.1.2 The Concessionaire shall perform the Installation Works in accordance with the requirements set out in **Schedule C (Installation Works)** and shall ensure that the same complies with the Applicable Specifications. During the Installation Period, the Concessionaire shall be responsible for ensuring that the roads and lanes existing on the Project Site are available for the Users in accordance with the Applicable Specifications.
- 13.1.3 Without limiting the provisions of Section 13.1.2, the Concessionaire shall be in particular responsible for the performance and compliance, in each case, of the Installation Works with the Installation Requirements.
- 13.1.4 The Concessionaire shall perform the Installation Works within the Installation Time For Completion.
- 13.1.5 The Concessionaire shall perform the Installation Works either itself, or through the Civil Work Contractor(s) appointed in accordance with the terms of this Agreement; provided, however, the Concessionaire shall remain solely responsible and liable for performance (within Installation Time For Completion) and compliance of the Installation Requirements with the Applicable Specifications irrespective of whether the Installation Works are undertaken by the Concessionaire or the Civil Work Contractor(s)

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13.2 NOT USED.

13.3 TRAFFIC FLOW & SAFETY

- 13.3.1 Following commencement of the Installation Works, the Concessionaire shall ensure that the existing functional roads on the Project Site remain open to traffic and that the traffic flow is safe at all times during the Installation Period in accordance with the Applicable Specifications. The Concessionaire shall ensure minimal disruption in traffic on the existing functional roads and lanes situated at the Project Site.
- 13.3.2 The Concessionaire undertakes to perform the Installation Works in such manner as to ensure compliance with the obligation set out in Section 13.3.1.

13.4 NOT USED.

13.5 NOT USED.

13.6 INSTALLATION INSPECTION REPORT

- 13.6.1 Commencing from the appointment of the Independent Engineer and until the issuance of the Final Installation Completion Certificate, the Concessionaire shall procure that the Independent Engineer inspects the Installation Works and the Concession Assets, if required by the Implementing Agency, and shall make all arrangements for the same.
- 13.6.2 The Independent Engineer shall make a report of such inspection (**Installation Inspection Report**) stating in reasonable detail the Defects & Deficiencies, if any, in the Installation Works and /or the Concession Assets with particular reference to the Applicable Specifications.
- 13.6.3 The Independent Engineer shall, within [●] days of receiving a request by the Implementing Agency to inspect the Installation Works, provide a copy of the Installation Inspection Report to the Concessionaire and the Implementing Agency.
- 13.6.4 The Concessionaire hereby undertakes that, within [●] days from receipt of the Installation Inspection Report, it shall rectify and remedy the Defects & Deficiencies, if any, stated in the Installation Inspection Report, on its own cost and expense.
- 13.6.5 The inspection or submission of the Installation Inspection Report by the Independent Engineer shall not relieve or absolve the Concessionaire of its obligations and liabilities hereunder in any manner whatsoever.

13.7 DELAYS DURING INSTALLATION

- 13.7.1 In the event the Concessionaire fails to complete the Installation Works by the Installation Time for Completion, or the Independent Engineer shall have reasonably determined that the rate of progress of Installation Works is such that the Project cannot achieve Installation Completion on or before the Scheduled Installation Completion Date then the Independent Engineer shall issue a notice to the Concessionaire to this effect and the Concessionaire shall, within [●] ([●]) days of such notice, inform the Independent Engineer in reasonable detail about the steps the

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Concessionaire proposes to undertake to expedite progress and the period within which it shall achieve Installation Completion by the Scheduled Installation Completion Date.

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14. COMPLETION

14.1 COMPLETION TESTS

- 14.1.1 At least [●] ([●]) days prior to the expected Commercial Operations Date, the Concessionaire shall issue a notice to the Implementing Agency and the Independent Engineer (the **Completion Tests Date Notice**) fixing a date and time for performance of the Completion Tests (the **Proposed Completion Tests Date**).
- 14.1.2 The Proposed Completion Tests Date proposed by the Concessionaire shall be final for the conducting of the Completion Tests; provided, however, in the event the Proposed Completion Tests Date is unacceptable to the Independent Engineer and/or the Implementing Agency, the Concessionaire, the Implementing Agency and the Independent Engineer shall meet within seven (7) days of the Implementing Agency and Independent Engineer's receipt of the Concessionaire's Completion Tests Date Notice with an aim to mutually agree on an alternative date and time for performance of the Completion Tests, which date shall be no later than ten (10) days from the Proposed Completion Tests Date. If the Parties are unable to mutually agree on an alternative date and time for performance of the Completion Tests, the Concessionaire shall be entitled (with prior Notification to the Independent Engineer and the Implementing Agency) to carry out the Completion Tests on or after the tenth (10th) day from the Proposed Completion Tests Date.
- 14.1.3 Subject to the terms of this Agreement, in the event any Completion Tests are to be repeated due to reasons not attributable to the Implementing Agency, as determined by the Independent Engineer, such Completion Tests shall be repeated on account of the Concessionaire.
- 14.1.4 The Completion Tests shall be attended by the Project Manager and such other representatives of the Implementing Agency as the Implementing Agency may nominate in writing, subject to notification of the same to the Concessionaire and the Independent Engineer.
- 14.1.5 The Concessionaire shall provide such assistance as the Independent Engineer may reasonably require for conducting the Completion Tests.

14.2 NOT USED

14.3 NOT USED

14.4 INSTALLATION COMPLETION CHECK LIST & FAILURE TO ACHIEVE INSTALLATION COMPLETION

- 14.4.1 The Installation Completion Check List shall be jointly signed by the Independent Engineer and the Concessionaire as a confirmation of the outstanding works, actions and things required to be completed by the Concessionaire in line with the relevant Project Requirements (the **Installation Completion Check List Items**).
- 14.4.2 The Concessionaire undertakes to complete all Installation Completion Check List Items by the date determined by the Independent Engineer (the **Scheduled Installation Completion Date**); provided, however, the Parties agree that the Scheduled Installation Completion Date shall not be determined by the Independent Engineer to fall on any date that falls [●] ([●]) days following the Scheduled Installation Completion Date.

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- 14.4.3 In the event the Concessionaire fails to complete the Installation Works within [●] ([●]) days of the Scheduled Installation Completion Date, then such failure of the Concessionaire shall constitute a Concessionaire Event of Default, and the Implementing Agency may, at its sole discretion and without prejudice to its other rights and remedies available under the Implementing Agency Agreements, terminate this Agreement in accordance with Article 23 (*Termination*).
- 14.4.4 Without prejudice to Section 14.4.3 hereinabove, in the event the Concessionaire fails to complete the Installation Works by the Scheduled Installation Completion Date, the Implementing Agency may require the Concessionaire to pay to the Implementing Agency damages in a sum calculated at the rate of [●] per cent ([●]%) of the amount of Performance Security for each full day of delay in completing the Installation Works beyond the Scheduled Installation Completion Date up to a maximum of [●] percent ([●]%) of the amount of the Performance Security. All such damages becoming due and payable by the Concessionaire shall be invoiced by the Implementing Agency to the Concessionaire and shall become due and payable on the date falling [●] days following the Concessionaire's receipt of such invoice. In the event of failure by the Concessionaire to pay such damages to the Implementing Agency by this date, the Implementing Agency shall have the right to encash the Performance Security in an amount equal to [●] per cent ([●]%) of the amount of Performance Security. Notwithstanding anything contained herein, the recovery of these damages shall be without prejudice to the rights of the Implementing Agency under the Implementing Agency Agreements (including the right of Termination in accordance with Section 14.4.3).
- 14.4.5 The Parties agree that the amounts of damages provided under this Section 14.4 (*Installation Completion Checklist & Failure to Achieve Installation Completion*) are in lieu of actual damages and are the Parties' reasonable and genuine estimates of the losses and damages that may reasonably be anticipated from such failures in respect of such matters, and do not constitute a penalty.

14.5 NOT USED.

14.6 FINAL INSTALLATION COMPLETION CERTIFICATE

- 14.6.1 Within [●] days from the date of the successful conduct of the Completion Tests, the Independent Engineer shall issue a certificate certifying that the Project has achieved Installation Completion (the **Final Installation Completion Certificate**); provided, however, the Final Installation Completion Certificate may be issued only upon the confirmation by the Independent Engineer (in consultation with Implementing Agency) that the Installation Completion Check List Items have been completed in accordance with the Applicable Specifications.

14.7 INSTALLATION COMPLETION DATE

- 14.7.1 The Project shall be deemed to achieve installation completion (the **Installation Completion**) on the date of issuance of the Final Installation Completion Certificate (the **Installation Completion Date**).

14.8 SCHEDULED INSTALLATION COMPLETION DATE

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14.8.1 Subject to the terms of this Agreement, the Concessionaire hereby guarantees that the Installation Completion Date shall be achieved in accordance with the provisions of this Agreement and that the Installation Completion Date shall occur on or before the Scheduled Installation Completion Date.

14.9 NOT USED

14.10 TITLE TO PROJECT SITE, INSTALLATION WORKS AND CONCESSION ASSETS

14.10.1 The Implementing Agency shall retain all rights and title to the Project Site throughout the Concession Period. Subject to the terms of this Agreement, the Concessionaire has, and shall have, no title to, ownership interest in or lien over, the Project Site nor shall create any Encumbrance with respect thereto.

14.10.2 Subject to Section 14.10.1, the Concessionaire shall retain all legal and beneficial rights and ownership on the Concession Assets (including the Installation Works) as and when the same are performed and/or completed until the Transfer Date.

14.10.3 On the Transfer Date, the Concessionaire shall transfer the ownership rights to the Concession Assets to the Implementing Agency to the Implementing Agency in accordance with the terms of this Agreement.

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15. RELIEF EXTENSIONS & RELIEF COMPENSATIONS

15.1 NOT USED

15.2 RELIEF EVENTS

15.2.1 The Concessionaire shall be only entitled to initiate a request to the Independent Engineer and Independent Auditor (the **Relief Order Request**) for issuance by the same of a Relief Order relating to, as applicable, an extension of the Time For Completion and/or payment of Relief Costs by the Implementing Agency in the event of occurrence of the following event as certified by the Independent Engineer and circumstances (the **Relief Events**):

- (a) a Material Adverse Impediment; provided, that the Concessionaire shall be entitled to only an extension in Time For Completion for any delays and to Relief Costs that, in each case, directly result from the Material Adverse Impediment and as are determined by the Independent Engineer and Independent Auditor in the Relief Order;
- (b) a Political Event; provided, that the Concessionaire shall be entitled to only an extension in Time For Completion for any delays and to Relief Costs that, in each case, directly result from the Political Event and as are determined by the Independent Engineer and Independent Auditor in the Relief Order;
- (c) an Emergency Decommissioning directly resulting from a Implementing Agency Event of Default or a Political Event; provided, that the Concessionaire shall be entitled to only an extension in Time For Completion for any delays and to Relief Costs that, in each case, directly result from Emergency Decommissioning caused by a Political Event and as are determined by the Independent Engineer and Independent Auditor in the Relief Order;
- (d) the occurrence of the circumstances set out in Section 4.9 (*Geological and Archaeological Finds*) causing a delay in the performance of the Concessionaire's obligations under this Agreement; provided, that the Concessionaire shall be entitled to only an extension in Time For Completion for any delays and to Relief Costs that, in each case, directly result from the occurrence of the circumstances set out in Section 4.9 (*Geological and Archaeological Finds*) and as are determined by the Independent Engineer and Independent Auditor in the Relief Order;
- (e) the occurrence of the Implementing Agency Overriding Power Event; provided, that the Concessionaire shall be entitled to only an extension in Time For Completion for any delays and to Relief Costs that, in each case, directly result from the Implementing Agency Overriding Power Event and as are determined by the Independent Engineer and Independent Auditor in the Relief Order;
- (f) a Non-Political Event; provided, that the Concessionaire shall be entitled to only an extension in Time For Completion for any delays that directly result from the Non Political Event and as are determined by the Independent Engineer and Independent Auditor in the Relief Order;
- (g) an Emergency Decommissioning directly resulting from a Non-Political Event; provided, that the Concessionaire shall be entitled to only an extension in Time For Completion for

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any delays that directly result from Emergency Decommissioning caused by a Non Political Event and as are determined by the Independent Engineer and Independent Auditor in the Relief Order;

- (h) the Concessionaire having to engage in Emergency Works due to a natural disaster as has been notified by the Government of Punjab or the Federal Government of Pakistan.
- 15.2.2 If due to the occurrence of a Relief Event the Concessionaire is entitled to initiate a Relief Request, the Concessionaire shall prepare and deliver to the Independent Engineer and the Independent Auditor (with a copy to the Implementing Agency) a Relief Order Request, together with the Relief Order Proposal that is prepared in accordance with and is subject to Section 15.4 (*Relief Order Procedure*) and, if applicable, Section 15.5 (*Additional Requirements For Relief Orders Relating To Extension Of Time For Completion*). Each Relief Order Request prepared in accordance with Section 15.4 (*Relief Order Procedure*) and, if applicable, Section 15.5 (*Additional Requirements For Relief Orders Relating To Extension Of Time For Completion*) shall specifically set out in detail the events and circumstances constituting the Relief Event, together with all supporting satisfactory documentary evidence relating thereto.
- 15.2.3 Following submission to the Independent Engineer and the Independent Auditor of a Relief Order Request pursuant to Section 15.2.2, the Independent Engineer and the Independent Auditor shall proceed in accordance with Section 15.4 (*Relief Order Procedure*) and Section 15.5 (*Additional Requirements For Relief Orders Relating To Extension Of Time For Completion*).
- 15.2.4 Notwithstanding anything to the contrary, the Parties agree that the Concessionaire shall not be entitled to any extensions of Time For Completion and/or Relief Costs, as applicable, due to occurrence of a Relief Event, until such time the same is determined by the Independent Engineer and the Independent Auditor and set out in the Relief Order issued by the same in accordance with this Agreement provided further that the Independent Engineer certifies that the Concessionaire has no space for parallel or alternate sequencing of works available for carrying out its obligations within the prescribed timelines.

15.3 NOT USED

15.4 RELIEF ORDER PROCEDURE

- 15.4.1 In case the Concessionaire submits a Relief Order Request to the Independent Engineer and the Independent Auditor (with a copy to the Implementing Agency) pursuant to Section 15.2 (*Relief Events*) then prior to the Independent Auditor and the Independent Engineer issuing a Relief Order, the Concessionaire shall prepare and submit to the Independent Auditor and the Independent Engineer (with a copy to the Implementing Agency), as soon as practicable, a detailed proposal (the **Relief Order Proposal**) containing:
- (a) a description of the proposed work to be performed and a detailed programme for its execution;
- (b) the Concessionaire's proposal for any necessary modifications to the Installation Works and/or the O&M Programme, as applicable;
- (c) the Concessionaire's proposal for any Relief Costs and any adjustments to Time For Completion and/or any Project Milestone Date, accompanied by detailed pricing and

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documentary evidence;

- (d) a statement whether and the extent to which, in Concessionaire's opinion, the proposed proposals contained in the Relief Proposal would, notwithstanding the exercise of all due skill and care, result in defective Project Works or prevent the Concessionaire from performing its obligations under the Agreement, including defects liability,

provided, however, each Relief Order Request and Relief Order Proposal submitted by the Concessionaire that proposes an extension to Time For Completion or any Project Milestone Date for a Project Milestone shall be additionally subject to the provisions and requirements of Section 15.5 (*Additional Requirements For Relief Orders Relating To Extension Of Time For Completion*);

provided, further, however, in the event of submission of any Relief Order Request and a Relief Order Proposal, the Concessionaire shall provide such additional information as the Implementing Agency, the Independent Engineer and/or the Independent Auditor may reasonably request; and

provided, further, however, the Concessionaire shall keep and maintain such contemporary records (as may be necessary to substantiate any proposals contained in the Relief Order Proposal and/or the Relief Order Request) as may reasonably be requested by the Independent Engineer, the Independent Auditor and /or the Implementing Agency and the Concessionaire shall permit the Independent Engineer, the Independent Auditor and /or the Implementing Agency to inspect all such records and shall provide the same Representative with copies as required.

15.4.2 The Parties agree that compliance by the Concessionaire with the provisions of this Article 15 (*Relief Orders*) shall be a condition precedent to the Independent Engineer and the Independent Auditor issuance of a Relief Order, unless waived in writing by the Implementing Agency. Further, notwithstanding anything to the contrary contained herein:

- (a) if the Project Works (or any part thereof) are not in accordance with this Agreement, any rectification in that respect undertaken by the Concessionaire shall not entitle the Concessionaire to issuance of a Relief Order;
- (b) the Concessionaire is expressly precluded from any extension of the Time For Completion and any extension of a Project Milestone Date for Project Milestone or to payment of any Relief Costs due to delays resulting from any act or omission of the Concessionaire and/or any member of the Concessionaire Self Control Unit;
- (c) the Concessionaire shall not be entitled to any extensions of the Time For Completion for any delays or failure to perform and hence shall not be entitled to initiate Relief Order Request for issuance of a Relief Order to the extent the Concessionaire is, in any case, in delay of performance of its obligations under the Agreement.

15.4.3 Following receipt by the Independent Engineer and the Independent Auditor from the Concessionaire of the Relief Order Proposal and the Relief Order Request, the Independent Engineer and the Independent Auditor shall review the Concessionaire's proposals contained in the Relief Order Proposal and the Relief Order Request, for the purpose of determining:

- (a) the occurrence and subsistence of the Relief Event and the Concessionaire's entitlement to issuance of the Relief Order Request;

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- (b) whether to proceed with the proposals submitted by the Concessionaire in its submitted Relief Order Proposal;
- (c) (if applicable) any amendments or modifications to the estimates and proposals submitted by the Concessionaire in the Relief Order Proposal;
- (d) other matters set forth in the Relief Order Proposal and the Relief Order Request including determination of extension of Time For Completion and Relief Costs; and
- (e) any other matters considered necessary by the Independent Engineer and the Independent Auditor for the purposes of issuance of the Relief Order.

15.4.4 Following the Independent Engineer and the Independent Auditor’s determination of matters set out in Section 15.4.3 (together with any other matters relating to their evaluation for issuance for Relief Order), the Independent Engineer and the Independent Auditor shall either amend, approve or disapprove in writing the Concessionaire’s submitted proposals contained in the Relief Order Proposal and the Relief Order Request within twenty-one (21) days following receipt by the Independent Engineer and the Independent Auditor from the Concessionaire of the Relief Order Proposal and the Relief Order Request. If the Independent Engineer and the Independent Auditor amend, modify or reject the Relief Order Proposal and the Relief Order Request, in each case, submitted by the Concessionaire, the Concessionaire shall submit a revised Relief Order Proposal and Relief Order Request taking into account the amendments, modifications and comments on the same made by the Independent Engineer and the Independent Auditor, which shall be subject to approval by the Independent Engineer and the Independent Auditor within twenty-one (21) days of submission of the revised Relief Order Proposal and the Relief Order Request. In the event of the Independent Engineer and the Independent Auditor’s approval of the Relief Order Proposal and the Relief Order Request or, if applicable, a revision of the same approved by the Independent Engineer and the Independent Auditor, it is agreed that the Independent Engineer and the Independent Auditor shall jointly issue a written order of Relief Order to the Implementing Agency and the Concessionaire simultaneously. All extensions in Time For Completion, the Concession Period and in any Project Milestone Date for achievement of a Project Milestone and all Relief Costs, as applicable, shall be expressly set out in the Relief Order and shall be (subject to Section 15.6 below) binding on the Parties; provided, however, that such extensions in Time For Completion, the Concession Period and in any Project Milestone Date for achievement of a Project Milestone and the Relief Costs set in the Relief Order shall not be in excess of the Concessionaire’s request under the Relief Order Proposal and the Relief Order Request; provided, further, that any Relief Costs shall be paid by the Implementing Agency to the Concessionaire within ninety (90) days of receipt of the Relief Order by the Implementing Agency. In the event, the Implementing Agency fails to make payment of Relief Costs (as determined and certified by the Independent Engineer and the Independent Auditor) within ninety (90) days of receipt of the Relief Order, late payment interest on the Relief Costs (or part thereof which is unpaid) shall be paid at the rate of Delayed Payment Rate, such interest commencing to accrue from the date of receipt of the Relief Order and ending on the actual date on which the Implementing Agency makes payment of the Relief Costs.

15.4.5 Notwithstanding anything to the contrary, in the event of occurrence of a Relief Event (excluding a Non Political Event and an Emergency Decommissioning directly resulting from a Non Political Event, in each case, for which no Relief Costs shall be payable), the Concessionaire shall be only entitled to such Relief Costs that:

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- (a) are directly attributable to the Relief Event; and
 - (b) represent increase (as a result of a Relief Event) in only such costs that are expressly set out in the Financial Model.
- 15.4.6 Subject to the terms of this Agreement, the Project Works shall not be delayed pending the issuance of a Relief Order by the Independent Auditor and the Independent Engineer or by the granting of an extension of Time For Completion or payment of Relief Costs.

15.5 ADDITIONAL REQUIREMENTS FOR RELIEF ORDERS RELATING TO EXTENSION OF TIME FOR COMPLETION

- 15.5.1 The Parties agree the provisions of this Section 15.5 (*Additional Requirements for Relief Orders Relating to Extension of Time For Completion*) shall apply to each Relief Order Proposal and the Relief Order Request that, in each case, proposes an extension to the Time For Completion or to any Project Milestone Date for a Project Milestone.
- 15.5.2 Any Relief Order Proposal and/or, if applicable, the Relief Order Request submitted by the Concessionaire shall be subject to the Concessionaire otherwise being ready to progress with the aspect of the Project Works for which an extension is being sought. In the event the Concessionaire is in any event delayed in the performance of its obligations due to reasons other than the Relief Event, the Concessionaire shall not be granted any extension of Time For Completion to the extent of its delay.
- 15.5.3 In all cases where the Concessionaire submits a Relief Order Proposal and the Relief Order Request, the Concessionaire shall consult with the Implementing Agency, the Project Manager, the Independent Engineer and the Independent Auditor in order to determine steps (if any) which can be taken to overcome or minimize the actual or anticipated delay. The Concessionaire shall thereafter comply with all reasonable instructions that the Independent Engineer and the Independent Auditor shall give in order to overcome or minimize such delay.
- 15.5.4 If the Concessionaire intends to initiate a Relief Order Request for issuance of a Relief Order for an extension of Time For Completion, the Concessionaire shall give Notice to the Independent Engineer and the Independent Auditor (with a copy to the Implementing Agency) of such intention as soon as possible and in any event within seven (7) days of the day the Concessionaire should reasonably have become aware of the start of the Relief Event giving rise to the delay, together with any other notice required by the Agreement and relevant to such cause. The Concessionaire is further required to submit to the Independent Engineer and the Independent Auditor (with a copy to the Implementing Agency), as part of the Relief Order Proposal relating to the Relief Order Request that pertains to an extension of Time for Completion, an acceleration strategy and schedule to demonstrate how such delay can be eliminated and/or mitigated.
- 15.5.5 Within twenty-eight (28) days of the first day of a delay that has resulted from the Relief Event in initiation of the Relief Order Request by the Concessionaire for issuance of a Relief Order by the Independent Engineer and the Independent Auditor for an extension of Time for Completion, the Concessionaire shall submit full supporting details of its request, including, without limitation, a critical path analysis of the alleged delay reflecting the considerations set forth in this Section. If the Concessionaire cannot submit all relevant details within such period because the cause of

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delay has continued for a period exceeding seven (7) days, the Concessionaire shall submit interim details at intervals of not more than twenty-eight (28) days (from the first day of such delay) and full and final supporting details of its request within sixty (60) days of the last day of delay. In the appropriate circumstances, the Implementing Agency shall have the right to waive the time periods set out as above.

15.6 DISPUTES AND BURDEN OF PROOF

- 15.6.1 Any Dispute between the Parties in reference to the issuance of a Relief Order and/or any matters relating to the same shall be resolved pursuant to Article 30 (*Dispute Resolution*).
- 15.6.2 In case of a Dispute regarding the application of the provisions of this Article 15 (*Relief Orders*), the Concessionaire shall have the burden of proof as to its entitlement to relief under this Article 15 (*Relief Orders*).

15.7 FULL COMPENSATION

15.7.1 Any:

- (a) extensions of Time For Completion; and/or
- (b) payment of Relief Costs,

in each case, granted pursuant to a Relief Order shall be deemed to be full and complete compensation to the Concessionaire by the Implementing Agency in respect of matters relating to the Relief Order.

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16. CHANGE OF SCOPE

16.1 CHANGE OF SCOPE

- 16.1.1 Notwithstanding anything to the contrary contained in this Agreement, the Implementing Agency may require a change / amendment in the Scope of the Project (the **Change of Scope**); provided, that the accrued and cumulative change at any given time does not result in a variation in the Pre Estimated Project Cost by more than [●] percent ([●]%), as determined by the Independent Engineer and the Independent Auditor. All Additional Costs to be paid by the Implementing Agency in respect of the Change of Scope and any extensions in the timelines for the performance by the Concessionaire of its obligations resulting from a Change of Scope shall be in accordance with Section 16.2 and Section 16.3.

16.2 CHANGE OF SCOPE NOTICE

- 16.2.1 The Implementing Agency may request for the Change of Scope by issuing a Change of Scope Notice in accordance with the provisions of this Section 16.2 (*Change of Scope Notice*).
- 16.2.2 The Implementing Agency may request for a Change of Scope by issuing a notice in writing to the Concessionaire through the Independent Engineer (the **Change of Scope Notice**):
- (a) at least [●] days prior to the Scheduled Installation Completion Date in the event the Change of Scope is required in respect of the Installation Period; and
 - (b) at any time in the event the Change of Scope is required in respect of the Operations Period.
- 16.2.3 In the event at any time during the Installation Period and / or the Operations Period, the Concessionaire determines that a Change of Scope is necessary for providing safer and improved services to the Users, the Concessionaire shall issue a request in writing to the Implementing Agency through the Independent Engineer to consider issuing a Change of Scope Notice in respect of the same. The Implementing Agency shall within forty-five (45) days from the date of receipt of such notice, either accept such request for Change of Scope, on an “as is” basis or with modifications, and issue the requisite Change of Scope Notice in accordance with the provisions of this Section 16.2 (*Change of Scope Notice*) or communicate its reasons for not accepting the same to the Concessionaire.

16.3 CHANGE OF SCOPE ORDER

- 16.3.1 The Concessionaire shall, within fifteen (15) days of receipt of the Change of Scope Notice, provide to the Independent Engineer such information as is necessary and reasonable together with the preliminary documentation and details, including the calculations, where necessary, in support of the following:
- (a) the impact which the Change of Scope is likely to have on the Installation Requirements in the event the Change of Scope is in respect of the Installation Period and / or the O&M Requirements in the event the Change of Scope is in respect of the Operations Period;
 - (b) the budgeted estimate of the Additional Cost to be incurred by the Concessionaire for implementing the Change of Scope;

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- (c) the estimated additional time (number of days) that the Concessionaire would require to achieve Installation completion consequent to the Change of Scope and any delay, if any, in the Final Expiry Date;
 - (d) any extensions in the Installation Completion Schedule resulting from the Change of Scope; and
 - (e) any extensions in the timelines for performance by the Concessionaire of its obligations under this Agreement resulting from the Change of Scope.
- 16.3.2 The Independent Engineer shall after reviewing the information, documentation and the budgeted estimate of the Additional Cost submitted by the Concessionaire pursuant to Section 16.3.1, settle the rates, approve the designs and forward the budgeted estimates of the Additional Cost, as duly certified by the Independent Engineer and the Independent Auditor (in consultation with the Concessionaire) to the Implementing Agency. Notwithstanding anything to the contrary set out herein, in the event the Concessionaire disagrees with the determinations of the Independent Engineer, the decision of the Implementing Agency shall be final.
- 16.3.3 The Implementing Agency may, within a period of fifteen (15) days from the date of receipt of such statement, issue an order in writing to the Concessionaire, through the Independent Engineer instructing the Concessionaire to affect the Change of Scope (the **Change of Scope Order**).
- 16.3.4 In the event, the Implementing Agency for any reason whatsoever decides not to issue a Change of Scope Order in accordance with Section 16.3.1, then the Implementing Agency shall reimburse the Concessionaire for the cost/expenses actually incurred by the Concessionaire in the preparation and submission of the drawings, documents, estimates and other information in compliance with the Change of Scope Notice; provided, such costs and expenses are duly certified by the Independent Auditor and the Independent Engineer.
- 16.3.5 The mode for payment of the Additional Costs to the Concessionaire shall be as follows and shall be complied by the Implementing Agency within forty five (45) days of the issuance of a Change of Scope Order and until such time that the following conditions are complied by the Implementing Agency, the Concessionaire shall not be obligated to commence and/or perform the works forming part of the Change of Scope Order:
- (a) the hundred percent (100%) of the Additional Costs shall be transferred by the Implementing Agency to an escrow account pursuant to an escrow arrangement agreed with the Concessionaire wherefrom the same shall be utilized progressively upon certification by the Independent Engineer of the performance of works.
- 16.3.6 The Change of Scope Order shall be effective from the date that the Implementing Agency notifies the mode of reimbursement of the Additional Cost to the Concessionaire pursuant to sub-section 16.3.5 of this Section 16.3 (*Change of Scope Order*).
- 16.3.7 Save for the advance payment under Section 16.3.5(a), the Implementing Agency shall progressively pay the Additional Cost in accordance with sub-section 16.3.5 of this Section 16.3 (*Change of Scope Order*) or any other modality as mutually agreed between the Parties, only upon receiving a certificate from the Independent Engineer confirming that the Concessionaire

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has completed the relevant milestone(s) of the works in accordance with the Change of Scope Order.

- 16.3.8 In the event, the Implementing Agency fails to make payment of Additional Costs (as determined and certified by the Independent Engineer and the Independent Auditor) for the Change of Scope in accordance with the Change of Scope Order, late payment interest on the Additional Costs (or part thereof which is unpaid) shall be paid at the rate of Delayed Payment Rate, such interest commencing to accrue from the date the payment was due and ending on the actual date on which the Implementing Agency makes payment of the Additional Costs.



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17. TOLLING ARRANGEMENT

17.1 TOLL COLLECTION OPERATIONS

- 17.1.1 During the period commencing from Commercial Operations Date and until the Toll Collection End Date, the Concessionaire shall be authorized to collect, demand, levy and charge the Tolls from the Users (except the Exempted Vehicles), in accordance with **Schedule P (Toll Notification Structure)**. All funds collected from Tolls shall be deposited immediately with the Escrow Agent and allocated in accordance with the terms of the Escrow Agreement.

17.2 COMMENCEMENT OF TOLL COLLECTION

- 17.2.1 Not Used.
- 17.2.2 At least [●] ([●]) days prior to the Scheduled Installation Completion Date, the Concessionaire shall provide a copy of a toll operations manual (the **Toll Operations Manual**) for the review and approval of Independent Engineer and the Implementing Agency. If upon review of the Toll Operations Manual, Independent Engineer and/or the Implementing Agency determines that the procedures set forth therein require amendments, the Concessionaire shall, at its sole cost and expense, incorporate such changes as are required in the Toll Operations Manual and undertake periodic review and revision of the Toll Operations Manual as instructed by Implementing Agency and the Independent Engineer.
- 17.2.3 The Implementing Agency hereby grants the right and Implementing Agency to the Concessionaire to commence Tolling at the Project Highway, based on the Toll Notification Structure set out in **Schedule P (Toll Notification Structure)** from the Commercial Operations Date.
- 17.2.4 Not Used.
- 17.2.5 Subject to Section 17.2.6, the Concessionaire shall commence commercial operations at the Project Highway on the Commercial Operations Date based on the Toll Structure set out in **Schedule P (Toll Notification Structure)**, and continue such collection until the Toll Collection End Date.

17.3 TOLL PROGRESS REPORT

Commencing from the Commercial Operations Date and until the Transfer Date, the Independent Engineer shall, no later than ten (10) days after the end of each calendar month, furnish to the Implementing Agency and the Independent Auditor a monthly report (the **Toll Progress Report**) stating in reasonable detail the status of the Toll collected from the Project and shall promptly give such other relevant information as may be required by the Implementing Agency and/or the Independent Auditor in respect of the Toll collected from the Project. The Concessionaire shall facilitate the Independent Engineer in relation to the preparation of the Toll Progress Report.

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17.4 PROJECT REVENUES SHARING

17.4.1 During the Revenue Sharing Period, the Concessionaire shall be obligated to share the Initial Forecasted Revenue with the Implementing Agency on a Proportionate Basis for the first Operating Year (as specified in the Financial Model) (the **Expected Revenue Share**) in accordance with the Escrow Agreement. The Expected Revenue Share shall be deposited immediately into the Implementing Agency Payment Account.

17.4.2 In the event, during the Revenue Sharing Period, the Actual Project Revenues during an Operational Year are greater than Initial Forecasted Revenue (as set out in the Financial Model and determined by the Independent Auditor) (the **Excess Toll Revenues**), such Excess Toll Revenues shall also be shared between the Implementing Agency and the Concessionaire on a Proportionate Basis in accordance with the Escrow Agreement.

17.4.3 The Parties hereby agree that the Expected Revenue Share and the Implementing Agency's share of the Excess Toll Revenues (the **Implementing Agency Windfall**) shall be utilized by the Implementing Agency in its sole and absolute discretion.

17.4.4 To the extent:

- (a) the Expected Revenue Share and/or Implementing Agency Windfall is payable by the Concessionaire to the Implementing Agency; and
- (b) the Concessionaire fails to make payment of such due and payable Expected Revenue Share and/or Implementing Agency Windfall (the **Unpaid Implementing Agency Amount**) by the date falling thirty (30) days following the date such amount was due,

then, the Concessionaire shall (in addition to the payment of the due and payable Unpaid Implementing Agency Amount) make payment to the Implementing Agency of late payment interest on the Unpaid Implementing Agency Amount at the rate of Delayed Payment Rate, such interest commencing to accrue on the date falling fifty (50) days following the date such amount was due and ending on the actual date on which the Concessionaire makes payment of the Unpaid Implementing Agency Amount. The stipulation regarding additional amounts payable in respect of delayed Unpaid Implementing Agency Amount contained in this Section 17.4.4 shall not be construed nor be deemed to authorize any delay in payment of any amount due to the Concessionaire nor be construed or deemed to be a waiver of the underlying breach of payment obligations, in each case, in the afore-stated circumstances.

17.5 ISSUANCE OF TOLL NOTIFICATION

17.5.1 The Implementing Agency shall issue a notification (the **Toll Notification**) (substantially, in the form set out in **Schedule R (Form of Toll Notification)** and in accordance with **Schedule P (Toll Notification Structure)** in accordance with the Applicable Laws in order to implement the Toll Notification Structure. The Concessionaire shall, at least three (3) months prior to the date on which Toll rates have to be revised, write to the Implementing Agency (along with a copy to the Independent Engineer and the Independent Auditor) requesting for the issuance of Toll Notification. The Toll Notification shall notify (in writing) the Toll applicable during each year of the Concession Period. The Toll rates between each Operational Year shall be increased as per the percentage amount specified in a notification issued by the Implementing Agency to the Concessionaire, within [●] days of the beginning of the relevant Operational Year to which the

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increase in Toll relates to. In case the Implementing Agency reduces the Toll rates, the same shall entitle the Concessionaire to a Relief Request and in such case the provisions of Article 15 (*Relief Extension and Relief Compensations*) shall apply.

- 17.5.2 The Implementing Agency shall ensure that the Toll Notification is issued throughout the Concession Period in accordance with this Agreement. In the event the Implementing Agency fails to issue the Toll Notification in accordance with the Toll Notification Structure (the **Toll Notification Event**) and provided that the Toll Notification Event does not directly result from breach by the Concessionaire of its relevant obligations under this Agreement, then such Toll Notification Relief Event and all matters relating to the same shall constitute a Relief Event (the **Toll Notification Relief Event**) and the same shall entitle the Concessionaire to issuance of a Relief Order Request and in such case the provisions of Article 15 (*Relief Orders*) shall apply.

17.6 COMPETING ROUTE

- 17.6.1 The Implementing Agency represents and warrants that there is no Competing Route as of the Effective Date.

- 17.6.2 In case, the Implementing Agency, or a Public Sector Entity, constructs or upgrades any existing road to a Competing Route, the Concessionaire shall Notify the Implementing Agency of existence of such an event. In the event:

- (a) any Relief Costs are incurred and/or are projected to be incurred; and/or
- (b) the Concessionaire is delayed and or is projected to be delayed in performance of its obligations under this Agreement; and/or
- (c) the Concessionaire is unable to or may be unable perform its obligations (or any part thereof) under this Agreement; and/or
- (d) any of the Concessionaire's rights, titles, benefits and/or interests (in each case, including any part thereof) under this Agreement are or may be prejudiced under this Agreement;

directly result and/or may result from reasons attributable to any Competing Route (the **Competing Route Event**), and as a result thereof the average monthly traffic on the Project Highway declines by ten percent (10%) or more when compared to the average monthly traffic recorded over the three (3) months immediately preceding the date of assessment (as verified by the Independent Engineer and the Independent Auditor), then such Competing Route Event and all matters relating to the same (including rectification) shall constitute an Implementing Agency Relief Event (the **Competing Route Relief Event**) and the same shall entitle the Concessionaire to issuance of a Relief Order Request in respect of (a), (b), (c) and/or (d) above (including for grant of extension of Time For Completion, Relief Costs (including Loss of Toll Revenues to be paid on a quarterly basis) and/or relief from relevant obligations and liabilities under this Agreement) (as applicable) and, in such case, the provisions of Article 15 (*Relief Orders*) shall apply.

17.7 ALTERNATIVE ROUTE

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- 17.7.1 The Implementing Agency represents and warrants that there is no Alternative Route as of the Effective Date.
- 17.7.2 In case, the Implementing Agency, or a Public Sector Entity, constructs or upgrades any existing road to a Alternative Route, the Concessionaire shall Notify the Implementing Agency of existence of such an event.

In the event:

- (a) the Concessionaire is delayed and or is projected to be delayed in performance of its obligations under this Agreement;
- (b) the Concessionaire is unable to or may be unable perform its obligations (or any part thereof) under this Agreement;
- (c) any of the Concessionaire's rights, titles, benefits and/or interests (in each case, including any part thereof) under this Agreement are or may be prejudiced under this Agreement;

directly result and/or may result from reasons attributable to any Competing Route (the **Alternative Route Event**), and as a result thereof the average monthly traffic on the Project Highway declines by ten percent (10%) or more when compared to the average monthly traffic recorded over the three (3) months immediately preceding the date of assessment (as verified by the Independent Engineer and the Independent Auditor), then such Alternative Route Event and all matters relating to the same (including rectification) shall constitute an Implementing Agency Relief Event (the **Alternative Route Relief Event**) and the same shall entitle the Concessionaire to issuance of a Relief Order Request in respect of (a), (b) (c) and/or (d) above (including for grant of extension of Time For Completion, Relief Costs (including Loss of Toll Revenues to be paid on a quarterly basis) and/or relief from relevant obligations and liabilities under this Agreement) (as applicable) and, in such case, the provisions of Article 15 (*Relief Orders*) shall apply.

17.8 ESCROW ARRANGEMENT

The Parties shall enter into an Escrow Agreement which shall, inter alia, set out the following provisions:

- a) mechanism to deposit/collect all Toll Revenues (and other revenues) and the mechanism for distribution of respective share of such revenues to the Concessionaire and the Implementing Agency;
- b) right for the Implementing Agency and the Concessionaire to set-off and make direct deductions of any amounts in case any amount contractually payable by the Concessionaire or the Implementing Agency which have not been paid by the same;
- c) Implementing Agency's ability (with the confirmation of the Independent Auditor) to determine the amounts of Insurance proceeds (to the extent they are deposited in the escrow

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account) and other compensations received by the Concessionaire and to make adjustments in the amounts of Termination Payments payable by the Implementing Agency;

- d) the mechanism for the disbursement of funds from the Escrow Account to the Implementing Agency Payment Account;
- e) the mechanism for the disbursement of funds from the Escrow Account to the Independent Engineer and Independent Auditor; and
- f) any other rights and matters contemplated by the Implementing Agency (in consultation with the Independent Engineer and the Independent Auditor) which it believes are reasonable and necessary for the transactions of this nature and deductions as determined with the Independent Engineer and the Independent Auditor.

18. DEFECTS & DEFICIENCIES, NOTICE OF REMEDY, SUSPENSION

18.1 REMEDYING DEFECTS & DEFICIENCIES

18.1.1 The Concessionaire warrants that the:

- (a) Project Works shall be performed in good workmen like manner in accordance with the Applicable Specifications and shall be free from all Defects & Deficiencies; and
- (b) the Concession Assets shall comply with the Applicable Specifications.

18.1.2 In order that the Project Works and the Concession Assets comply with the foregoing warranties and that the same are in the condition required by this Agreement, the Concessionaire shall execute all works and services relating to amendment, reconstruction and remedying of Defects & Deficiencies (including the removal, replacement and reinstallation of materials and equipment, remedying of Defects & Deficiencies and retesting of repaired or replaced portions of the Project Works (if appropriate in accordance with Good Industry Practices)) at its own cost, risk and expense; provided, however the amendment, reconstruction and remedying of such Defects & Deficiencies shall be at the cost, risk and expense of the Implementing Agency in the event the same is caused by a Permitted Events (except a Non Political Event).

18.1.3 If the remedying of any Defect & Deficiency or damage is such that it may significantly affect the performance of the Project Works and/or the Concession Assets, the Independent Engineer and/or the Implementing Agency may require that certain O&M Tests and/or the Completion Tests (as the case may be) to be repeated to the extent necessary. The requirement shall be made by written Notice after the Defect & Deficiency or damage is remedied. Such tests shall be carried out by the Concessionaire in accordance with the Applicable Specifications and all costs and expenses of any nature associated with re-performance of such tests shall be allocated in accordance with Section 18.1.2.

18.2 NOTICE REMEDY

18.2.1 In the event the (the **Remedy Events**):

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- (a) the Project Works (or any part thereof) are not performed in accordance with the Applicable Specifications; and/or
- (b) the Project Works (or any part thereof) fail to comply with the Applicable Specifications; and/or
- (c) the Concession Assets (or any part thereof) fails to comply with the Applicable Specifications, then the Independent Engineer and/or the Implementing Agency (through the Independent Engineer) shall be entitled to issue a Notice to the Concessionaire to rectify and remedy the same (the **Notice of Remedy**). The Notice of Remedy shall set out the reasonable time period (as determined by the Independent Engineer) (the **Remedy Time Period**) in which the Concessionaire shall remedy and rectify the Remedy Events in accordance with the Applicable Specifications.

18.2.2 In the event of failure by the Concessionaire to remedy the Remedy Events within the Remedy Time Period, the Implementing Agency shall, without prejudice to any of its other rights and remedies under this Agreement, be entitled to, with the prior approval of the Independent Engineer and at the risk and cost of the Concessionaire, cause the remedying and rectification of the Remedy Events.

18.2.3 The Concessionaire shall reimburse all costs incurred by the Implementing Agency (as certified by the Independent Auditor and the Independent Engineer) on account of such remedying and rectification of the Remedy Events within thirty (30) days of receipt of the Implementing Agency's claim thereof set out in an invoice approved by the Independent Engineer and the Independent Auditor (the **Implementing Agency Remedy Invoice**). In the event of failure by the Concessionaire to pay the amounts set out in the Implementing Agency Remedy Invoice (the **Implementing Agency Remedy Amount**) within the time period set out herein, the Implementing Agency shall be entitled to receive such Implementing Agency Remedy Amount through encashment of (as in effect at such time) the Performance Security. In the event the funds received by the Implementing Agency through encashment of the Performance Security are less than the Implementing Agency Remedy Amount, the Concessionaire shall be obligated to pay the Implementing Agency the shortfall within three (3) days of the Implementing Agency's written demand.

18.3 SUSPENSION

18.3.1 The:

- (a) Implementing Agency may by Notice in writing to the Concessionaire (with a copy to the Independent Engineer and the Independent Auditor) require the Concessionaire to suspend forthwith the whole or any part of the Project Works if, in the reasonable opinion of the Implementing Agency: (i) such work threatens the safety of the Users and pedestrians; or (ii) such Project Works are not in accordance with the Applicable Specifications and/or Good Industry Practices; and/or
- (b) Independent Engineer may, by Notice to the Concessionaire (with a copy to the Implementing Agency and the Independent Auditor), require the Concessionaire to suspend forthwith the whole or any part of the Project Works which in the reasonable opinion of the Independent Engineer is being carried on / conducted in a manner that is not in conformity with the Applicable Specifications and / or is not in accordance with Good Industry Practice,

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(the **Suspension, Suspend and its grammatical variations**).

- 18.3.2 The Concessionaire shall, pursuant to the any notice issued under Section 18.3.1, Suspend the Project Works or any part thereof for such time and in such manner as may be specified by the Implementing Agency and/or the Independent Engineer and thereupon carry out remedial measures to secure the safety of Suspended works and the Users and for compliance of the Suspended Project Works with the Applicable Specifications and Good Industry Practices.
- 18.3.3 The Concessionaire may by Notice (with a copy to the Implementing Agency) require the Independent Engineer to inspect such remedial measures forthwith and the Independent Engineer shall, following such inspection, make a report to the Implementing Agency recommending whether or not the Suspension may be revoked. Upon receiving the recommendations of the Independent Engineer, the Implementing Agency shall either revoke such Suspension or instruct the Concessionaire to carry out such other and further remedial measures as may be necessary in the reasonable opinion of the Implementing Agency, and the procedure set forth in this Section 18.3 (*Suspension*) shall be repeated till such time as the Suspension hereunder is revoked.
- 18.3.4 All reasonable costs incurred for maintaining and protecting the Project Works (or part thereof) during the period of Suspension (the **Preservation Costs**) shall be borne by the Concessionaire; provided, that if the Suspension has occurred as a result of a Permitted Event, the provisions of Article 21 (*Force Majeure*) and Article 15 (*Relief Orders*), as the case may be, shall apply.
- 18.3.5 All delays caused as a result of the Suspension shall be on account of the Concessionaire; provided, however, in the event the Suspension is caused due to a Permitted Event, any extensions of the Time For Completion shall be subject to the provisions of Article 15 (*Relief Orders*) and Article 21 (*Force Majeure*), as the case may be.

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19. OPERATION AND MAINTENANCE

19.1 OPERATION AND MAINTENANCE

- 19.1.1 The Concessionaire shall perform the Operation and Maintenance in accordance with the Applicable Specifications and shall ensure that the same complies with the Applicable Specifications. During the Operations Period, the Concessionaire shall be responsible for Operating and Maintaining the Concession Assets on a twenty four (24) hours per day, three-sixty-five (365) days per year basis according to the Applicable Specifications so as to ensure that the same comply with the Applicable Specifications.
- 19.1.2 Without limiting the provisions of Section 19.1.1, the Concessionaire shall be in particular responsible for the performance and compliance, in each case, of the Operation and Maintenance with the O&M Requirements.
- 19.1.3 The Concessionaire shall perform the Operation and Maintenance within the O&M Time For Completion and hereby undertakes to perform and complete each Project O&M Milestone on or prior to its Project O&M Milestone Date.
- 19.1.4 The Concessionaire shall perform the Operation and Maintenance either itself, or through the O&M Contractor appointed in accordance with the terms of this Agreement; provided, however, the Concessionaire shall remain solely responsible and liable for performance (within O&M Time For Completion) and compliance of the Operations and Maintenance with the Applicable Specifications irrespective of whether the Operation and Maintenance is undertaken by the Concessionaire or the O&M Contractor.

19.2 OPERATION AND MAINTENANCE OBLIGATIONS OF THE CONCESSIONAIRE

- 19.2.1 The Concessionaire undertakes to perform the Operation and Maintenance of the Concession Assets during the Operations Period in accordance with the provisions of Section 19.1 (*Operation and Maintenance*) and undertakes to modify, repair and to provide all such improvements and services as may be required for the Operation and Maintenance of the Concession Assets in accordance with the Applicable Specifications.
- 19.2.2 The Concessionaire hereby agrees that the Operation and Maintenance obligations of the Concessionaire hereunder shall include, without limitation, the performance of the following obligations in accordance with the Applicable Specifications and Good Industry Practices and within the O&M Time For Completion:
- (a) ensuring that during the Operations Period, the Concession Assets are in a condition to permit safe, smooth and uninterrupted flow of traffic during normal operating conditions;
 - (b) minimizing disruption to traffic in the event of accidents or other incidents affecting the safety and use of the Project Highway and by providing a rapid and effective response and maintaining liaison with emergency services of the Implementing Agency;
 - (c) carrying out routine maintenance and the periodic preventive maintenance of the Concession Assets;

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- (d) undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments, structures, pavement markings, lighting, road signs and other traffic control devices;
- (e) preventing, with the assistance of concerned law enforcement agencies, any unauthorized use of the Concession Assets;
- (f) preventing, with the assistance of the concerned law enforcement agencies, any encroachments on the Project Site;
- (g) protecting the environment (to the extent of the Concessionaire's activities) and providing equipment and materials therefor;
- (h) operation and maintenance of all communication, control and administrative systems necessary for the efficient operation of the Concession Assets;
- (i) operate and maintain the toll plazas and toll gates in accordance with Applicable Specifications, **Schedule A (Scope of the Project)** and **Schedule Q (Requirements Of Electronic Toll And Ticketing Management System –ETTMS)**.
- (j) maintaining a public relations unit to interface with and attend to suggestions from the Users, the Implementing Agency, the Government Authorities, media and other agencies;
- (k) complying with Safety Requirements;
- (l) promptly removing from the Project Site, all surplus installation machinery and materials, waste materials (including hazardous materials and waste water), rubbish and other debris (including, without limitation, accident debris) and keeping the Project Site in a clean, tidy and orderly condition, in each case, in conformity with the Applicable Specifications;
- (m) performing all other activities and obligations relating to Operation and Maintenance so as to comply with the Applicable Specifications; and
- (n) ensuring that the Project Highway is managed and operated in a manner that Service Levels are maintained pursuant to the provisions of Section 5 (*Operational Performance Measures*) and Section 6 (*Management Performance Measures*) of **SCHEDULE H (O&M Requirements)**.

19.3 EMERGENCY WORKS

- 19.3.1 The Concessionaire shall, in addition to the obligations contained in Section 19.2.2 hereinabove, carry out remedial works if an Emergency Event occurs during the Operating Period (the “**Emergency Works**”).
- 19.3.2 The Concessionaire shall undertake to carry out the Emergency Works, unless a natural disaster, as notified by the Government of Punjab or the Federal Government of Pakistan, has occurred, in which case the Concessionaire shall be entitled to the issuance of a Relief Request and in such case, the provisions of Article 15 (*Relief Extensions & Relief Compensations*) shall apply. The Concessionaire shall, on a monthly basis, deposit [•]% of the Toll Revenues into a dedicated

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account established by the Implementing Agency (the “**Emergency Works Account**”) for the exclusive purpose of meeting the costs of Emergency Works.

- 19.3.3 The Concessionaire shall submit an Emergency Works Request to the Independent Engineer immediately upon the occurrence of an Emergency Event. The Emergency Works Request shall include all necessary and supporting documentation to substantiate the Emergency Works Request, including but not limited to, a detailed description of the nature and circumstances of the Emergency Event, the extent of the damages sustained, and corroborating evidence such as photographs, video recordings, or any other relevant materials.
- 19.3.4 Upon receipt of the Emergency Works Request, the Independent Engineer shall, without undue delay, conduct a visit to the Project Site and prepare a detailed report on the proposed Emergency Works. The Independent Engineer shall promptly communicate its decision in writing to the Concessionaire and shall notify the Implementing Agency of the classification of the damages as Emergency Works, along with any recommended actions. The Independent Engineer shall assess the cost of the Emergency Works and request the Implementing Agency to release funds from the Emergency Works Account to the Concessionaire for the execution of such Emergency Works. If the funds available in the Emergency Works Account are inadequate to cover the required cost for the Emergency Works, the Concessionaire shall be responsible for funding the shortfall. Any such funding by the Concessionaire shall subsequently be reimbursed through adjustment against (i) future deposits to be made into the Emergency Works Account, or (ii) future periodic revenue share payments otherwise payable by the Concessionaire to the Implementing Agency.
- 19.3.5 The Concessionaire shall not commence Emergency Works until the Independent Engineer issues a work program governing the execution of the Emergency Works. During the execution of Emergency Works, the Concessionaire shall remain fully responsible for compliance with the Service Levels set forth in Schedule H (*O&M Requirements*) and the continued use of the Project Highway, including for areas of the Project Highway affected by the Emergency Event.

19.4 MATERIAL BREACH OF O&M REQUIREMENTS

- 19.4.1 The Concessionaire shall be deemed to be in material breach of the O&M Requirements (the **Material Breach of O&M Requirements**) if the Independent Engineer and/or the Implementing Agency (through the Independent Engineer), acting reasonably and in accordance with the provisions of this Agreement, has determined that due to breach of its obligations by the Concessionaire:
- (a) there has been a failure/undue delay in carrying out scheduled/planned maintenance or the scheduled/planned maintenance has not been carried out in accordance with the O&M Requirements;
 - (b) there has been a material failure in performance by the Concessionaire of the Operation and Maintenance (or any part thereof) within the O&M Time For Completion which has resulted in a Material Adverse Effect;
 - (c) the riding quality of the Project Highway or any part thereof has material deteriorated to a level which is below the acceptance level prescribed by the O&M Requirements;
 - (d) there has been a serious or persistent let up in adhering to Safety Requirements and thereby the Concession Assets or any part thereof is not safe for operations;

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- (e) there has been “Persistent Breach of O&M Requirements”.

The term “*Persistent Breach of O&M Requirements*” means:

- (i) any reoccurring and persistent breach of the O&M Requirements that remains un-remedied despite the issuance of Notice of Remedy by the Independent Engineer;
- (ii) repeated occurrences of a breach that has been remedied pursuant to a Notice of Remedy, notwithstanding that the earlier occurrences of breach may have been remedied pursuant to the Notice of Remedy or otherwise,

in each case subsection (e) (i) and (ii) above, that results in a Material Adverse Effect;

provided, however, the Concessionaire shall not be deemed to be in Material Breach of the O&M Requirements in the afore-stated circumstances in the event such breach is caused by the Permitted Events.

19.5 IMPLEMENTING AGENCY’ RIGHTS WITH REGARD TO MATERIAL BREACH OF O&M REQUIREMENTS

- 19.5.1 Upon the occurrence of a Material Breach of O&M Requirements, the Implementing Agency shall without prejudice to and notwithstanding any other consequences provided thereof shall have the right and be entitled to Terminate this Agreement in accordance with Section 23 (*Termination*).

19.6 PRIORITY OF TRAFFIC FLOW

- 19.6.1 The Concessionaire shall ensure that the Project Highway remains open to traffic and that the traffic flow is safe at all times during Operations Period in accordance with the Applicable Specifications.
- 19.6.2 The Concessionaire undertakes to conduct the Operation and Maintenance in such manner as to ensure compliance with the obligation set out in Section 19.6.1.

19.7 O&M MANUAL

- 19.7.1 Ninety (90) days prior to the anticipated date for commencement of the Operations Period (as determined by the Independent Engineer), the Concessionaire, the Concessionaire Project Engineer and the Independent Engineer shall jointly prepare and submit to Implementing Agency, an operations, repair, maintenance and safety manual (together with arrangements and procedures for conducting safety related measures) in respect of the Concession Assets that shall comply with the Applicable Specifications and Good Industry Practices and shall set out, *inter alia*, the regular preventive maintenance and operating procedures for the Concession Assets, as to be performed pursuant to the Applicable Specifications and Good Industry Practices. Such operations, repair, maintenance and safety manual shall include provisions for operation and maintenance of the Concession Assets and shall, *inter alia*, provide for life cycle maintenance, routine maintenance and reactive maintenance which may be reasonably necessary for maintenance and repair of the Concession Assets, including replacement thereof, such that their

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overall condition conforms to the Applicable Specifications. The operations, repair, maintenance and safety manual shall also set out certain Project O&M Milestones and their respective Project O&M Milestone Dates.

- 19.7.2 The operations, repair, maintenance and safety manual jointly prepared by the Concessionaire, the Concessionaire Project Engineer and the Independent Engineer shall be subject to approval of the Implementing Agency; provided, however, such approval shall be granted by Implementing Agency within fifteen (15) days of the Concessionaire's request for such approval if the operations, repair, maintenance and safety manual is recommended by the Independent Engineer for approval after addressing any comments and observations of the Implementing Agency on the same. The operations, repair, maintenance and safety manual, as approved by the Implementing Agency, shall be binding on the Parties (the **O&M Manual**).
- 19.7.3 Four (4) copies of the O&M Manual shall be provided by the Concessionaire to each of Implementing Agency and the Independent Engineer.
- 19.7.4 The O&M Manual shall be revised and updated on third (3rd) anniversary of its initial preparation and subsequently every three (3) years thereafter, in each case, with mutual consent of the Parties and in consultation with the Independent Engineer; provided, however, the Parties may revise, update and/or amend the O&M Manual with mutual consent at any time.

19.8 O&M PROGRAMME

- 19.8.1 Ninety (90) days prior to commencement of the Operations Period and thereafter thirty (30) days prior to the commencement of each Operational Year during the Operations Period, as the case may be, the Concessionaire, the Concessionaire Project Engineer and the Independent Engineer shall jointly prepare and provide to the Implementing Agency, a proposed annual program, to be prepared in compliance with the Applicable Specifications and Good Industry Practices, of Operation and Maintenance during the upcoming Operational Year (including preventive, urgent and other scheduled maintenance of Concession Assets) (the **Proposed O&M Programme**). The Proposed O&M Programme shall include, without restriction, the following:
- (a) the Project O&M Milestones to be achieved during the upcoming Operational Year and the respective Project O&M Milestone Dates for each of the same;
 - (b) routine maintenance and preventive maintenance schedule;
 - (c) arrangements and procedures for carrying out urgent repairs in respect of the Concession Assets;
 - (d) criteria to be adopted for determining and ascertaining the maintenance requirements of the Concession Assets;
 - (e) the timelines, intervals and procedures for conducting the inspection of all elements of the Concession Assets;
 - (f) the timelines and intervals at which the Concessionaire shall conduct periodic maintenance in respect of the Concession Assets;

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- (g) arrangements and procedures for conducting safety related measures in relation to the Concession Assets;
- (h) timelines and intervals for maintenance works and the scope thereof; and
- (i) all major events and activities in the preparation of O&M Documents and submission of the same to the Implementing Agency, the Independent Engineer and/or the Independent Auditor (as applicable) for the review and approval (as applicable);

19.8.2 The Proposed O&M Programme jointly prepared by the Concessionaire, the Concessionaire Project Engineer and the Independent Engineer shall be subject to approval of the Implementing Agency; provided, however, such approval shall be granted by Implementing Agency within twenty one (21) days of the Concessionaire's request for such approval if the Proposed O&M Programme is recommended by the Independent Engineer for approval after addressing any comments and observations of the Implementing Agency on the same. The Proposed O&M Programme prepared in respect of an Operational Year, as approved by the Implementing Agency on the Independent Engineer's recommendation, shall be binding on the Parties for such Operational Year (the **O&M Programme**).

19.8.3 The Concessionaire shall, whenever required by the Implementing Agency, the Independent Engineer and/or the Independent Auditor, provide in writing, a general description of the arrangements and methods which the Concessionaire proposes to adopt for the execution of the Operation and Maintenance. Any alteration to the O&M Programme or to such arrangements and methods shall be made by the Concessionaire with prior written consent of the Independent Engineer.

19.8.4 Any reports (including the O&M Quarterly Status Reports) submitted by the Concessionaire and covering the execution of the Operation and Maintenance shall emphasize any delays in the O&M Time For Completion.

19.9 SAFETY, VEHICLE BREAKDOWN AND ACCIDENTS

19.9.1 The Concessionaire shall ensure safe conditions for the Users, and in the event of unsafe conditions, lane closures, diversions, vehicle breakdowns and accidents, it shall follow the relevant Applicable Specifications including the setting up of temporary traffic cones and lights, and removal of obstruction and debris without delay, in each case, in accordance with the Applicable Specifications.

19.10 SERVICE LEVELS

19.10.1 The Concessionaire shall ensure that the Project Highway is operated and maintained in accordance with Operational Performance Measures and Management Performance Measures set forth in Section 5 (*Operational Performance Measures*) and Section 6 (*Management Performance Measures*) of Schedule H (*O&M Requirements*) (the '**Service Levels**'). Failure of the Concessionaire to meet the required Service Levels shall be called a "**Service Level Defect**".

19.10.2 The Concessionaire shall be liable to pay a fixed amount to the Implementing Agency, as specified in Schedule H (*O&M Requirements*) for each Service Level Defect, which shall be imposed immediately upon the detection of the Service Level Defect during inspection of the Project Site (the '**First Day Deduction**'). The First-Day Deduction shall be paid by the

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Concessionaire to the Implementing Agency the fixed amount specified in Schedule H for the period in which the Service Level Defect is detected. Notwithstanding the foregoing, the Implementing Agency may waive the First-Day Deduction if, at the time the inspection is conducted, the Concessionaire demonstrates that its staff and equipment are actively engaged in rectifying the relevant Service Level Defect.

- 19.10.3 Following the First Day Deduction, a time period is specified for each Service Level Defect, which shall allow the Concessionaire an opportunity to remedy the identified Service Level Defect (the ‘**Grace Period**’). If the Service Level Defect is not rectified within the applicable Grace Period, the Concessionaire shall be liable to pay similar additional amounts to the Implementing Agency for each subsequent day of the existence of the Service Level Defect, commencing on the second day following the detection of the said Service Level Defect. These daily charges shall continue to accrue until the Service Level Defect is fully remedied, with no limit on the duration of such charges being payable.
- 19.10.4 A Service Level Defect shall be deemed rectified only after the Concessionaire submits a written notification to the Independent Engineer, along with supporting documentary evidence, clearly demonstrating that the Service Level Defect has been fully addressed and resolved. Upon receipt of such written notification, the Independent Engineer shall review the submitted evidence, and it is satisfied that the Service Level Defect has been remedied, it shall certify, in writing to the Implementing Agency with a copy to the Concessionaire, that no further inspection is required. The Concessionaire shall continue to be liable to make fixed amount payments to the Implementing Agency, in accordance with this Section, till the date of the issuance of the abovementioned certificate of the Independent Engineer stating that the Service Level Defect has been remedied satisfactorily.
- 19.10.5 The fixed amount payments that arise from multiple Service Level Defects within a single kilometre of the Project Highway shall be cumulative. The total amount applicable, for a Service Level Defect, to a one-kilometre section of the Project Highway shall be equal to the sum of all individual amounts that are payable for each identified non-conformance within that section. Notwithstanding the foregoing, the aggregate Service Level Defect payment deductions imposed for a single kilometre of the Project Highway in any given month shall not exceed one hundred percent (100%) of the monthly lump-sum amount payable to the Concessionaire from the Implementing Agency Payment Account for maintenance services for that kilometre.
- 19.10.6 The imposition of First Day Deductions and subsequent deductions shall not relieve the Concessionaire of its obligations under the Concession Agreement to *inter alia* comply with Service Levels.
- 19.10.7 Failure by the Concessionaire to rectify a Service Level Defect for a continuous period of [●] days shall constitute a Concessionaire Event of Default.

19.11 MAJOR MAINTENANCE

- 19.11.1 At any time during the Concession Period, the Implementing Agency may require that Major Maintenance be carried out on the Project Highway, during which time the Project Highway shall remain closed.
- 19.11.2 If the duration of the Major Maintenance extends beyond a period of six (6) months **the Concession Period shall be extended by a period equal to the duration of the Major Maintenance.**

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19.12 NOT USED.

19.13 NOT USED.

19.14 IMPLEMENTING AGENCY PAYMENT ACCOUNT

- (a) The Implementing Agency shall establish and maintain the Implementing Agency Payment Account from the Commencement Date and until the Trigger Date.
- (b) The Implementing Agency shall issue irrevocable standing instructions to the Implementing Agency Payment Account Bank (in form and substance agreed between the Parties) (the **Implementing Agency Payment Account Standing Instructions**) containing, *inter alia*, instructions to the Implementing Agency Payment Account Bank to debit the Implementing Agency Payment Account and credit the same to the Escrow Account.
- (c) The Implementing Agency Payment Account Standing Instructions issued by the Concessionaire shall be irrevocable and shall remain effective, in each case, until the Trigger Date, and no withdrawal from the Implementing Agency Payment Account may be made by the Implementing Agency, except as provided in this Agreement.
- (d) The Implementing Agency Payment Account Standing Instructions (or any part thereof) issued by the Implementing Agency may be revoked pursuant a written revocation Notice duly executed and confirmed by the authorized representatives of Implementing Agency and the Concessionaire, if applicable.

The Implementing Agency Payment Account shall be strictly operated and maintained in accordance with the Implementing Agency Payment Account Standing Instructions. Further, the Concessionaire (hereby undertakes and covenants that it shall not until the Trigger Date create, incur, permit, assume or suffer to exist any Encumbrance whatsoever upon or with respect to the Implementing Agency Payment Account. Further, the Concessionaire hereby undertakes and covenants with the Concessionaire that it shall not until the Trigger Date transfer or dispose of all or any of its rights and benefits under or in respect of the Implementing Agency Payment Account.

19.15 NOT USED.

19.16 O&M DOCUMENTS

19.16.1 The Concessionaire shall prepare the O&M Documents in accordance with the Applicable Specifications and shall complete and deliver the same to the Implementing Agency, the Independent Engineer and the Independent Auditor (as applicable) from time to time within the O&M Time For Completion. Further, the Concessionaire hereby undertakes that the O&M Documents shall comply with the Applicable Specifications.

19.16.2 The Implementing Agency, the Independent Engineer and the Independent Auditor (as applicable) shall have the right to review and inspect all O&M Documents. The Concessionaire shall provide all such O&M Documents that the Implementing Agency, the Independent Engineer

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and the Independent Auditor may reasonably require to inspect in respect of the Operation and Maintenance. It is made clear that nothing in the above shall diminish the Concessionaire's responsibility to provide the Implementing Agency, the Independent Engineer and the Independent Auditor with sufficient information to enable the same to satisfy themselves regarding the Operation and Maintenance.

19.16.3 For each part of the Operation and Maintenance, if the Implementing Agency, the Independent Engineer and the Independent Auditor (as applicable) wish to modify any O&M Documents, the Implementing Agency, the Independent Engineer and the Independent Auditor (as applicable) shall immediately submit their proposal for modification to the Concessionaire. Subject to Section 19.12.4, performance of such modification shall be subject to mutual agreement between the Parties.

19.16.4 Defects & Deficiencies, errors, omissions, ambiguities, inconsistencies, inadequacies and other defects in the O&M Documents or arising there from shall be rectified by the Concessionaire at its sole cost and risk.

19.16.5 The Implementing Agency, the Independent Engineer and the Independent Auditor (as applicable) may use the O&M Documents for such purposes as it may require for the purposes of the Project.

19.17 NOT USED

19.18 NOT USED

19.19 MODIFICATIONS TO THE PROJECT

19.19.1 The Concessionaire shall not carry out any material modifications to the Concession Assets, save and except where such modifications are necessary for: (a) the Operation and Maintenance of the Concession Assets in conformity with the Applicable Specifications; and (b) compliance by the Concession Assets with the Applicable Specifications; provided, however, the Concessionaire shall Notify the Independent Engineer and the Implementing Agency of the proposed modifications along with particulars thereof at least thirty (30) business days before commencing work on such modifications and shall only implement such modifications upon receipt of the Independent Engineer's and/or Implementing Agency's approval of the same, which approval shall be provided or declined by the Independent Engineer and/or the Implementing Agency within fifteen (15) days of its receiving the Concessionaire's proposal. For the avoidance of doubt, all modifications made hereunder shall comply with the Applicable Specifications.

19.20 BARRIERS AND DIVERSIONS

19.20.1 The Implementing Agency shall procure that during the Operations Period, no barriers are erected or placed by any Government Authority on the Concession Assets, except for reasons of Emergency, national security, law and order; provided, that all such barriers shall be in accordance with the Applicable Specifications (including the Safety Requirements).

19.21 O&M QUARTERLY STATUS REPORT

19.21.1 During the Operations Period, the Concessionaire shall, no later than seven (7) days after the end of each quarter of a calendar year (i.e. three months) of the Operations Period, furnish to the

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Implementing Agency and the Independent Engineer a quarterly report (the **O&M Quarterly Status Report**) stating in reasonable detail the condition of the Concession Assets including its compliance or otherwise with the Applicable Specifications and shall promptly give such other relevant information as may be required by the Independent Engineer, the Independent Auditor and/or the Implementing Agency. In particular, the O&M Quarterly Status Report shall separately identify and state in reasonable detail the Defects & Deficiencies in the Concessionaire Assets and/or the Operation and Maintenance that require rectification and any delays in the performance of its obligations by the Concessionaire set out in the O&M Programme. The O&M Quarterly Status Report shall also expressly highlight all Defects & Deficiencies in the Operation and Maintenance and/or the Concession Assets identified by the Independent Engineer in its O&M Inspection Report and shall set out all actions taken and arrangements made by the Concessionaire for remedying the same.

19.21.2 Each O&M Quarterly Status Report shall be updated by the Concessionaire based on any observations and comments made by the Independent Engineer and shall be provided again to each of the Implementing Agency and the Independent Engineer until such time that it is approved by the Independent Engineer; provided, that the Independent Engineer shall not accord its approval of the O&M Quarterly Status Report until it is satisfied that all reasonable comments and observations of the Implementing Agency on the O&M Quarterly Status Report are addressed.

19.21.3 The O&M Quarterly Status Report shall be in the form approved by the Independent Engineer from time to time.

19.22 O&M INSPECTION REPORT

19.22.1 During the Operations Period, the Concessionaire shall facilitate a joint inspection carried out by the Independent Engineer, the Concessionaire, through its Concessionaire Self Control Unit and the Implementing Agency, to inspect the Operation and Maintenance and the Concession Assets on the [●] day each month in the Operations Period and the Concessionaire shall make all arrangements for the same. Additional inspections may also be carried out by the Independent Engineer or the Implementing Agency at any time during the Operations Period.

19.22.2 The Independent Engineer shall make a report of such inspection (the **O&M Inspection Report**) stating in reasonable detail the Defects & Deficiencies, if any, in the Operation and Maintenance and /or the Concession Assets with particular reference to the Applicable Specifications.

19.22.3 The Independent Engineer shall, within seven (7) days of commencement of a month, provide a copy of the O&M Inspection Report to the Concessionaire and the Implementing Agency.

19.22.4 The Concessionaire hereby undertakes that, within fifteen (15) days from receipt of the O&M Inspection Report, it shall rectify and remedy the Defects & Deficiencies, if any, stated in the O&M Inspection Report, on its own cost and expense.

19.22.5 The inspection or submission of the O&M Inspection Report by the Independent Engineer shall not relieve or absolve the Concessionaire of its obligations and liabilities hereunder in any manner whatsoever.

19.23 O&M TESTS

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- 19.23.1 The Concessionaire shall conduct or procure to be conducted such tests, as specified in **SCHEDULE G (List of Tests & Completion Tests)** and the AASHTO Standards in order to determine whether the Operation and Maintenance and/or the Concession Assets conform to the Applicable Specifications (the **O&M Tests**). The O&M Tests shall be conducted at such time and frequency and in such manner as may be specified by the Independent Engineer and the Implementing Agency.
- 19.23.2 The Concessionaire hereby undertakes to conduct the O&M Tests under the supervision of the Independent Engineer (in consultation with the Implementing Agency) and in accordance with the Applicable Specifications at its own cost and expense.
- 19.23.3 The Concessionaire hereby undertakes to carry out, at its sole cost, the necessary remedial measures required to rectify the Defects & Deficiencies in the Operation and Maintenance and/or the Concession Assets that are identified in the O&M Tests and to ensure that as a consequence of such remedial measures the Operation and Maintenance and the Concession Assets conform to the Applicable Specifications. The Concessionaire further undertakes that the remedial measures required to be undertaken by the Concessionaire pursuant to this Section 19.19.3 shall be repeated by the Concessionaire at its sole cost till such time as the Operation and Maintenance and the Concession Assets conform to the Applicable Specifications to the satisfaction of the Independent Engineer. In the aforesaid circumstances, the Independent Engineer may require the Concessionaire to conduct additional tests to determine whether the Defects & Deficiencies are rectified and in such case the costs of such additional tests shall be borne by the Concessionaire.
- 19.23.4 The Concessionaire shall maintain proper record of the O&M Tests and the remedial measures taken to cure the Defects & Deficiencies, if any, indicated by the O&M Test results.
- 19.23.5 Results of all O&M Tests shall be jointly recorded by the Independent Engineer and the Concessionaire.

19.24 REMEDIAL MEASURES

- 19.24.1 The Concessionaire shall repair or rectify the Defects & Deficiencies, if any, set forth in the O&M Inspection Report or in the O&M Tests results referred to in Section 19.19 (*O&M Tests*) and furnish a report in respect thereof to the Independent Engineer and the Implementing Agency within seven (7) days of receiving the O&M Inspection Report or the O&M Tests results, as the case may be; provided, that where the remedying of such Defects & Deficiencies is likely to take more than seven (7) days, the Concessionaire shall submit progress reports of the repair works once every week until such works are completed in conformity with this Agreement.
- 19.24.2 The Independent Engineer shall require the Concessionaire to carry out or cause to be carried out the O&M Tests, at its own cost, to determine that such remedial measures have brought the relevant Concession Assets into compliance with the Applicable Specifications and the procedure set forth in this Section 19.20 (*Remedial Measures*) shall be repeated until the Concession Assets conform to the Applicable Specifications.
- 19.24.3 The provisions of this Section 19.20 shall not in any manner limit the obligations of the Concessionaire relating to remedying of Defects & Deficiencies set out elsewhere in this Agreement.

19.25 MONTHLY COMPLIANCE TABLE

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19.25.1 The Concessionaire Self Control Unit shall no later than three (3) days after the end of each month of the Operations Period, furnish to the Implementing Agency and the Independent Engineer a monthly report (the **SCU Monthly Compliance Table**) stating in reasonable detail its compliance with the Service Levels and shall promptly give such other relevant information as may be required by the Independent Engineer and/or and the Implementing Agency.

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20. INSURANCES

20.1 INSTALLATION PERIOD INSURANCES

- 20.1.1 The Concessionaire shall, at its sole cost and expense, procure and maintain during the Installation Period all such Insurances, as described in **PART I (*Installation Period Insurances*) OF SCHEDULE I (*Insurances*)**, that are necessary and required to be procured by the Concessionaire in accordance with the Applicable Laws.

20.2 OPERATIONS PERIOD INSURANCES

- 20.2.1 The Concessionaire shall, at its sole cost and expense, procure and maintain during the Operations Period all such Insurances, as described in **PART II (*Operations Period Insurances*) OF SCHEDULE I (*Insurances*)**, that are necessary and required to be procured by the Concessionaire in accordance with the Applicable Laws.

20.3 INSURANCE COMPANIES

- 20.3.1 The Concessionaire agrees that it shall procure the Insurances from such insurance companies that are acceptable to the Implementing Agency and further agrees that the Concessionaire shall only procure Insurances through foreign insurance companies if the relevant Insurances are not being offered by local companies at comparable rates, subject always to the prior consent of the Implementing Agency.
- 20.3.2 Further, the Insurances to be maintained in terms of this Agreement and in accordance with the terms set out herein will be maintained throughout until the Trigger Date.

20.4 EVIDENCE OF INSURANCES

- 20.4.1 The Concessionaire shall, from time to time, provide to the Implementing Agency copies (duly attested as certified to be a true and correct copy by the relevant insurance company) of all insurance policies (or appropriate endorsements, certifications or other satisfactory evidence of insurance) obtained by the Concessionaire in accordance with this Agreement.
- 20.4.2 Failure by the Concessionaire to obtain the Insurance coverage or certificates of Insurance required by this Article 20 (*Insurances*) shall not in any way relieve or limit the Concessionaire's obligations and liabilities under any provision of this Agreement.
- 20.4.3 In case the Concessionaire fails to procure or maintain any Insurance required pursuant to this Article 20 (*Insurances*), then the Implementing Agency shall have the right to procure such Insurance in accordance with the requirements of **SCHEDULE I (*Insurances*)** and shall be entitled to offset the premiums paid for such insurance against any amounts owed to the Concessionaire pursuant to the terms of this Agreement and the Implementing Agency Agreements. The Concessionaire shall be named as the loss payee on any such Insurance procured by the Implementing Agency pursuant to this Section 20.4.3.
- 20.4.4 The Concessionaire shall provide the Implementing Agency with copies of any underwriters' reports or other reports received by the Concessionaire from any insurance company; provided, that the Implementing Agency shall not disclose such reports to any other person except as necessary in connection with administration and enforcement of this Agreement or any other

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Implementing Agency Agreement or as may be required by any Governmental Authority and shall use and internally distribute such reports only as necessary in connection with the administration and enforcement of this Agreement.

20.5 APPLICATION OF INSURANCE PROCEEDS

20.5.1 All moneys received under the Insurance shall be promptly applied by the Concessionaire towards repair, renovation, restoration and / or substitution of the Concession Assets or any part thereof which may have been damaged or destroyed; provided, that all costs relating to such repair, renovation, restoration and / or substitution shall be duly certified by the Independent Engineer and the Independent Auditor.

20.5.2 [not used]

20.5.3 The Concessionaire shall carry out the repair, renovation, restoration and / or substitution to the extent possible in such manner that the Concession Assets or any part thereof, shall, after such repair, renovation, restoration and / or substitution be as far as possible in the same condition as they were before such damage or destruction, normal wear and tear excepted.

20.6 VALIDITY OF INSURANCES

20.6.1 The Concessionaire hereby undertakes to promptly pay the insurance premium in respect of the Insurances and to keep the policies in force and valid during the entire Concession Period. The Concessionaire shall provide to the Implementing Agency, copies of the renewed policies and other documentary evidence of the payment of the insurance premium in respect of the Insurances.

20.6.2 The Concessionaire shall ensure, subject to market availability, that each instrument, contract and / or policy issued in respect of the Insurances shall provide that the Insurance may not be cancelled and / or terminated without at least ten (10) days prior written notice to the Implementing Agency of such cancellation and / or termination.

20.6.3 Notwithstanding anything contained herein, in the event the Concessionaire fails to comply with its obligations to procure the Insurances in accordance with Section 20.1 (*Installation Period Insurances*) and / or Section 20.2 (*Operations Period Insurances*), then the Implementing Agency may, without prejudice to its other rights and remedies for breach, at its option, obtain and maintain such Insurance and all sums incurred by the Implementing Agency therefor shall be reimbursed by the Concessionaire to the Implementing Agency within seven (7) days from the receipt of a claim by the Concessionaire in respect thereof from the Implementing Agency.

20.6.4 The Concessionaire shall notify the Implementing Agency in advance, prior to any material variation of the Insurances.

20.7 MAINTENANCE OF “OCCURRENCE” FORM POLICIES

20.7.1 A coverage required under this Article 20 (*Insurances*) and **SCHEDULE I (*Insurances*)** and any “umbrella” or excess coverage shall be “occurrence” form policies. In the event the Concessionaire has “claims-made” form coverage, the Concessionaire must obtain prior approval of all “claims-made” policies from the Implementing Agency.

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20.8 POLICY ENDORSEMENTS

20.8.1 The Concessionaire shall cause the insurance companies to provide the following endorsement items in the commercial general liability and, if applicable, umbrella or excess liability policies relating to the installation, upgradation, operation and maintenance of the Concession Assets provided pursuant to this Article 20 (*Insurances*) and **SCHEDULE I (*Insurances*)**:

- (a) the Implementing Agency, its officers, servants and agents shall be additionally insured under such policies with respect to claims arising out of or in connection with this Agreement;
- (b) the insurance shall be primary with respect to the interest of the Implementing Agency, its officers, servants and agents and any other insurance maintained by them is excess and not contributory with such policies;
- (c) the following separation of interests clause shall be made a part of the policy:

“In the event of claims being made by reason of (i) personal and/or bodily injuries suffered by any employee or employees of one insured hereunder for which another insured hereunder is or may be liable, or (ii) damage to property belonging to any insured hereunder for which another insured is or may be liable, then this policy shall cover such insured against whom a claim is made or may be made in the same manner as if separate policies have been issued to each insured hereunder, except with respect to the limits of insurance.”;
- (d) the insurer shall waive all rights of subrogation against the Implementing Agency, its officers, servants and agents; and
- (e) notwithstanding any provision of the policy, the policy may not be cancelled or not renewed without the insurer endeavouring to give thirty (30) days written notice to the Implementing Agency except in the case of non-payment, in which case it will be ten (10) days with prior written notice to the Implementing Agency. All other terms and conditions of the policy shall remain unchanged.

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21. FORCE MAJEURE

21.1 FORCE MAJEURE EVENT

21.1.1 A “**Force Majeure Event**” shall mean any event or circumstance or combination of events or circumstances (including the effects thereof) that is beyond the reasonable control of a Party and that on or after the Commencement Date materially and adversely affects the performance by such affected Party (the **Affected Party**) of its obligations under or pursuant to this Agreement; provided, however, that, such material and adverse effect could not have been prevented, overcome or remedied in whole or in part by the Affected Party through the exercise of diligence and reasonable care, it being understood and agreed that reasonable care includes acts and activities to protect the Concession Assets from a casualty or other event that are reasonable in light of the probability of the occurrence of such event, the probable effect of such event if it should occur, and the likely efficacy of the protection measures. Without limiting the generality of the foregoing, “**Force Majeure Events**” hereunder shall include each of the following events and circumstances (including the effects thereof), but only to the extent that each satisfies the requirements above:

- (a) the following political events that occur inside or directly involve Pakistan (each a **Political Event**):
 - (i) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, civil commotion, or act or campaign of terrorism or political sabotage; or
 - (ii) any Lapse of Consent of which report to Implementing Agency, the Independent Engineer and the Independent Auditor shall have been given under Section 7.6.2 and that shall have existed for thirty (30) consecutive days or more; or
 - (iii) any strike, work-to-rule, go-slow, or analogous labour action that is politically motivated or is widespread or nationwide and that shall have existed for thirty (30) consecutive days or more;
- (b) the following events beyond the reasonable control of the affected Party (each a **Non Political Event**), including, but not limited to:
 - (i) lightning, fire, earthquake, tsunami, flood, storm, cyclone, typhoon, or tornado, which has, in each case, affected the work or operations for more than fifteen (15) consecutive days; or
 - (ii) any Lapse of Consent of which report to Implementing Agency, the Independent Engineer and the Independent Auditor shall have been given under Section 7.6.2 and that shall have existed for less than thirty (30) consecutive days; or
 - (iii) any strike, work-to-rule, go-slow, or analogous labour action that is not politically motivated or is not widespread or nationwide and that shall have existed for thirty (30) consecutive days or more; or
 - (iv) explosion, chemical contamination, radioactive contamination or ionizing radiation (except to the extent any of the foregoing events or circumstances

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results directly from a Political Event, in which case such event or circumstance shall constitute a Political Event); or

- (v) epidemic or plague.
- (c) Force Majeure Events shall expressly not include the following conditions, events or circumstances:
 - (i) late delivery or interruption in the delivery of machinery, equipment materials, spare parts or consumables;
 - (ii) a delay in the performance of any Contractor;
 - (iii) a breakdown in machinery and/or equipment; and
 - (i) normal wear and tear or random flaws in materials and equipment,
 - (ii) a delay caused by rains, monsoons and fog;

provided, that each of the events described in clauses (c)(i), (ii), (iii) or (iv) shall constitute a Force Majeure Event to the extent that such events or circumstances are caused by an event or circumstance that is in itself a Force Majeure Event whether experienced directly by the Concessionaire or by one of its Contractors.

21.2 OBLIGATION TO NOTIFY

- 21.2.1 Notwithstanding anything contained herein, the Affected Party shall, as soon as practicable, and in any case within seven (7) days of the date of occurrence of a Force Majeure Event or from the date of having knowledge thereof, Notify the Independent Engineer, the Independent Auditor and the other Party, of the occurrence of the Force Majeure Event by the issuance of a notice in writing (the **Force Majeure Notice**).
- 21.2.2 The Affected Party shall provide all relevant details in respect of the Force Majeure Event in the Force Majeure Notice, including but not restricted to the following:
 - (a) the nature and extent of the Force Majeure Event;
 - (b) the estimated Force Majeure Period;
 - (c) the nature of and the extent to which, performance of any of the Affected Party's obligations under this Agreement are affected by the Force Majeure Event;
 - (d) the measures which the Affected Party has taken or proposes to undertake to alleviate/mitigate the impact of the Force Majeure Event and to resume performance of such of its obligations that are affected by the Force Majeure Event; and
 - (e) any other relevant information concerning the Force Majeure Event, and /or the rights and obligations of the Parties under this Agreement.

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21.2.3 The Parties shall, as soon as practicable upon the receipt of the Force Majeure Notice and in any case within five (5) days from the date of receipt of the same, convene a meeting, along with the Independent Engineer for the purpose of conducting discussions, in good faith, and where necessary the Parties shall agree to conduct inspections and / or surveys of the Project in order to:

- (a) assess the impact of the underlying Force Majeure Event;
- (b) to determine the likely duration of Force Majeure Period; and
- (c) to formulate damage mitigation measures and the steps to be undertaken by the Parties for resumption of the obligations, the performance of which had been affected by the Force Majeure Event.

21.2.4 The Affected Party shall during the Force Majeure Period provide to the other Party with regular (not less than weekly) reports in respect of the matters set out Section 21.2.3 and such other information, details and / or documents that the other Party may reasonably require.

21.3 CONSEQUENCE OF FORCE MAJEURE EVENT

21.3.1 Upon occurrence of a Force Majeure Event, the following shall apply:

- (a) there shall be no Termination of this Agreement except in accordance with the provisions of Section 21.5 (*Termination Notice for Force Majeure Event*), Section 21.6 (*Termination Payment for Force Majeure Event*) and Article 23 (*Termination*);
- (b) in the event of occurrence of a Force Majeure Event:
 - (i) subject to Section 21.8, the Project Milestone Dates for the Project Milestones (affected by the Force Majeure Event) to be performed (together with the timelines for performance by the Concessionaire of its relevant obligations to be performed) shall be extended by the Force Majeure Period (as determined by the Independent Engineer and the Independent Auditor in accordance with Article 15 (*Relief Orders*)) and in such case, the provisions of Article 15 (*Relief Orders*) shall apply;
 - (ii) all costs, fees, expenses and charges arising from and relating to the Force Majeure Event shall be allocated in accordance with Section 21.4 (*Allocation of Costs Arising out of Force Majeure*).

provided, however, that no relief, including extension of Time For Completion, shall be granted to the affected Party to the extent that such failure or delay would nevertheless have been experienced by the Affected Party had the Force Majeure Event not occurred.

21.4 ALLOCATION OF COSTS ARISING OUT OF FORCE MAJEURE

21.4.1 Upon occurrence of a Force Majeure Event, the Force Majeure Costs shall be allocated as follows:

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- (a) upon occurrence of a Non Political Event, all Force Majeure Costs shall be on the account of the Concessionaire and the Implementing Agency shall not be liable or responsible for the same in any manner;
- (b) upon occurrence of a Political Event, the Implementing Agency shall fund and bear the Force Majeure Costs (as set out in a Relief Order) and in such case, the provisions of Article 15 (*Relief Extensions & Relief Compensations*) shall apply.

21.4.2 Not Used

21.4.3 Save and except as expressly provided in this Section 21.4 (*Allocation of Costs Arising out of Force Majeure*) and, if applicable, Section 19.3 (*Emergency Works*), Section 21.5 (*Termination Notice For Force Majeure Event*) and Section 21.6 (*Termination Payment For Force Majeure Event*), neither Party shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event or exercise of any right pursuant hereto.

21.5 TERMINATION NOTICE FOR FORCE MAJEURE EVENT

21.5.1 If:

- (a) a Force Majeure Event subsists for a continuous period of one hundred and twenty (120) days, either Party may in its discretion Terminate this Agreement by issuing a Termination Notice to the other Party; or
- (b) in case of a Political Event, the Implementing Agency determines that the Force Majeure Costs relating the same are unacceptable then the Implementing Agency may in its discretion Terminate this Agreement by issuing a Termination Notice to the Concessionaire,

in each case above, without being liable in any manner whatsoever, save as provided in this Section 21.5 (*Termination Notice for Force Majeure*) and Section 21.6 (*Termination Payment for Force Majeure Event*), and upon issue of such Termination Notice, this Agreement shall, notwithstanding anything to the contrary contained herein, stand Terminated forthwith; provided, that before issuing such Termination Notice, the Party intending to issue the Termination Notice shall inform the other Party of such intention and grant fifteen (15) days' time to make a representation, and may after the expiry of such fifteen (15) days period, whether or not it is in receipt of such representation, in its sole discretion issue the Termination Notice.

21.6 TERMINATION PAYMENT FOR FORCE MAJEURE EVENT

- 21.6.1 If Termination is on account of a Non Political Event, the Implementing Agency shall make a Termination Payment to the Concessionaire on or prior to the Termination Payment Date in an amount equal to the Non Political Event Termination Amount.
- 21.6.2 If Termination is on account of a Political Event, the Implementing Agency shall make a Termination Payment to the Concessionaire on or prior to the Termination Payment Date in an amount equal to the Political Event Termination Amounts.

21.7 FORCE MAJEURE DISPUTE RESOLUTION

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21.7.1 In the event that the Parties are unable to agree in good faith about the occurrence or existence of a Force Majeure Event, such Dispute shall be finally settled in accordance with the Dispute Resolution Procedure; provided, that the burden of proof as to the occurrence or existence of such Force Majeure Event shall be upon the Party claiming relief and/or excuse on account of such Force Majeure Event.

21.8 EXCUSE FROM PERFORMANCE OF OBLIGATIONS

21.8.1 If the Affected Party is rendered wholly or partially unable to perform its obligations under this Agreement because of a Force Majeure Event, it shall be excused from performance of such of its obligations (except payment obligations) to the extent it is unable to perform on account of such Force Majeure Event; provided, that:

- (a) the suspension of performance shall be of no greater scope and of no longer duration than is reasonably required by the Force Majeure Event and/or of the effects of the same;
- (b) the Affected Party shall make all reasonable efforts to mitigate or limit damage to the other Party arising out of or as a result of the existence or occurrence of such Force Majeure Event and to cure the same with due diligence; and
- (c) when the Affected Party is able to resume performance of its obligations under this Agreement, it shall give to the other Party (with a copy to the Independent Engineer and the Independent Auditor) notice to that effect and shall promptly resume performance of its obligations hereunder.

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22. EVENTS OF DEFAULT

22.1 CONCESSIONAIRE EVENT OF DEFAULT

22.1.1 Any of the following events shall constitute an event of default by the Concessionaire (the **Concessionaire Event of Default**) unless such event has occurred as a consequence of Permitted Events and/or as a consequence events or circumstances for which the Concessionaire is relieved of its obligations under this Agreement:

- (a) any Material Breach by the Concessionaire or the Sponsor of any Implementing Agency Agreement which Material Breach has not been cured within [●] ([●]) days from the date of written notice thereof by the Implementing Agency, or within such time period as provided in the relevant Implementing Agency Agreement, respectively;
- (b) the Concessionaire fails to commence the Installation Works within [●] ([●]) days from the Commencement Date;
- (c) the Concessionaire fails to complete Installation Works by the date falling [●] ([●]) days following the Scheduled Installation Completion Date;
- (d) any statement, representation or warranty made by the Concessionaire in this Agreement proving to have been incorrect, in any material respect, when made or when reaffirmed and such incorrect statement, representation or warranty having a Material Adverse Effect on the Concessionaire's ability to perform its obligations under this Agreement and/or on the Project or having a Material Adverse Effect on the rights and/or obligations of the Implementing Agency hereunder or under the Implementing Agency Agreements;
- (e) the Concessionaire creates any Encumbrance on the Concession Assets in favour of any Person save and except as otherwise expressly permitted in terms of this Agreement;
- (f) the transfer, assignment or sub-contracting of the rights and/or obligations of the Concessionaire under this Agreement, save and except as permitted in terms of this Agreement; and/or
- (g) except for the purpose of amalgamation or reconstruction (provided, that such amalgamation or reconstruction does not affect the ability of the amalgamated or reconstructed entity, as the case may be, to perform its obligations under this Agreement and further; provided, that such amalgamation has been agreed to by the Implementing Agency), the occurrence of any of the following events:
 - (i) the passing of a resolution for the dissolution or winding up of the Concessionaire;
 - (ii) the voluntary filing by the Concessionaire of a petition of bankruptcy, moratorium, winding up, or other similar relief;
 - (iii) the appointment of a provisional liquidator in a proceeding for the winding up of the Concessionaire after notice to the Concessionaire and due hearing, which appointment has not been set aside or stayed within [●] ([●]) days of such

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appointment;

- (iv) the making by a court with jurisdiction over the Concessionaire of an order winding up the Concessionaire that is not stayed or reversed by a court of competent authority within [●] ([●]) days; and/or
- (v) any proceeding being validly instituted under the Applicable Laws for the dissolution of the Concessionaire or attachment of the Concession Assets in accordance with Applicable Laws that has a Material Adverse Effect and that is not stayed or suspended in [●] ([●]) days; provided, that, if, within [●] ([●]) business days of the Concessionaire becoming aware of such proceedings being filed, the Concessionaire:
 - (1) confirms to the Implementing Agency that such proceedings relate to the recovery of a claim against the Concessionaire that is disputed bona fide by the Concessionaire as payable, and
 - (2) furnishes a certificate by the Independent Auditor to the effect that the Concessionaire is and will remain solvent despite the payment of the claim subject to the said insolvency proceedings,

then, in such case, the Concessionaire Event of Default set forth in Section 22.1.1(g)(v) shall not constitute a Concessionaire Event of Default until such time that the said certificate by the Independent Auditor is revoked or otherwise ceases to remain accurate;

- (h) an Abandonment by the Concessionaire, without the prior written consent of the Implementing Agency, for a period of [●] ([●]) consecutive days or for an aggregate period of [●] ([●]) days during any Accounting Year; provided, however, that the Concessionaire shall not be deemed to have Abandoned the Concession Assets so long as it is using all reasonable efforts (as determined by the Independent Engineer) to regain control of the Concession Assets and reinstate its Installation Works and/or Operation and Maintenance, as applicable;
- (i) the Concessionaire is in Material Breach of O&M Requirements, including but not limited to not meeting the required Service Levels provided in Schedule H (*O&M Requirements*);
- (j) any other events or circumstances expressly set out in this Agreement as a Concessionaire Event of Default;
- (k) the Bid Security or Performance Security in each case, is not issued, renewed, replaced or provided (as the case may be) in accordance with this Agreement or becomes inoperative or ceases to remain valid or in force in breach of the relevant provisions of this Agreement;
- (l) a breach by the Concessionaire of its obligation to take out and maintain the required insurances in accordance with Article 20 (*Insurances*);

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- (m) a Change In Control, Change In Complete Control and/or Change In Shareholding has occurred in breach of this Agreement;
- (n) the Concessionaire or the Sponsors repudiate any of the Implementing Agency Agreements or otherwise evidence an intention not to be bound by the same; and/or
- (o) termination of the Project Site Licence Agreement as a result of a material breach by the Concessionaire that is not remedied in accordance with the terms of the Project Site Licence Agreement.
- (p) the Concessionaire has delayed any payment that has fallen due and payable under this Agreement and any of the Implementing Agency Agreements and if such delay exceeds [●] ([●]) days, save where such payment is duly Disputed by the Concessionaire in accordance with this Agreement;
- (q) any assets or shares of the Concessionaire are expropriated, confiscated, compulsorily acquired or nationalised by any Government Authority or entity due to an act or omission of the Concessionaire or its shareholders, causing a Material Adverse Effect;
- (r) the Concessionaire has failed to deposit the funds collected from the Tolls with the Escrow Agent in accordance with Section 17.1.1;
- (s) a material breach by the Civil Work Contractors, the O&M Contractors or any other subcontractor or any of the parties to the Project Agreements or any of their respective contracts with the Concessionaire having a Material Adverse Effect;
- (t) Not used;
- (u) the Concessionaire has delayed the payment of the Implementing Agency Windfall that has fallen due and payable under this Agreement and any of the Implementing Agency Agreements and if such delay exceeds [●] ([●]) days, save where such payment is duly Disputed by the Concessionaire in accordance with this Agreement;
- (v) [Not used];
- (w) The Concessionaire fails to remedy a Service Level Defect for a continuous period of [●] days.

22.2 IMPLEMENTING AGENCY EVENT OF DEFAULT

22.2.1 The following events shall constitute events of default by the Implementing Agency (the **Implementing Agency Event of Default**), unless the same has occurred and / or results from a Concessionaire Event of Default or a Force Majeure Event:

- (a) any Material Breach by the Implementing Agency of any Implementing Agency Agreement and the same has not been cured within [●] ([●]) days from the date of written notice thereof by the Concessionaire, or within such time period as provided in the relevant Implementing Agency Agreement, respectively;

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- (b) any statement, representation or warranty made by the Implementing Agency in any Implementing Agency Agreement proving to have been incorrect, in any material respect, when made or when reaffirmed and such incorrect statement, representation or warranty having a Material Adverse Effect on the Concessionaire's ability to perform its obligations under this Agreement and/or on the Project;
- (c) any termination, cancellation, resumption or revocation of the Concessionaire's interest established under the Project Site Licence Agreement in respect of the Project Site (otherwise than for a breach of the conditions of the Project Site Licence Agreement by the Concessionaire entitling such termination, cancellation, resumption or revocation);
- (d) any change in any Applicable Laws:
 - (i) making unenforceable, invalid, or void any material undertaking of the Implementing Agency under the Implementing Agency Agreements; and/or
 - (ii) making:
 - (aa) it unlawful for the Concessionaire, or the Sponsors to make or receive any payment, to perform any material obligation or to enjoy or enforce any material right under any Implementing Agency Agreement; or
 - (bb) any payment, the performance of any material obligation or the enjoyment or enforcement of any material right unenforceable under any Implementing Agency Agreement, invalid or void as a result of any such change in Applicable Laws;
- (e) the expropriation, compulsory acquisition, or nationalization by the Implementing Agency or any Government Authority of: (i) any Shares in the Concessionaire; or (ii) of any Concession Assets or rights of the Concessionaire;
- (f) any change in, or any change in the interpretation of, any of the Applicable Laws (including the Constitution of Pakistan and any other Applicable Laws that gives effect to the injunctions of Islam, being in the case of a decision of a court, a decision which is no longer in suspense as a result of an appeal) from and after the date of this Agreement having the effect of making:
 - (i) unlawful, unenforceable, invalid, or void any material undertaking of the Implementing Agency under any Implementing Agency Agreement; or
 - (ii) unlawful for the Concessionaire to make or receive or the Sponsors to receive any payment (including interest or return), for the Concessionaire to perform any material obligation or to enjoy or enforce any material right under this Agreement or any other Project Agreement in relation to the Project; or
 - (iii) any such payment, the performance of any such material obligation or the enjoyment or enforcement of any such material right becoming unenforceable, invalid or void as a result of any such change in the Applicable Laws,

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which in the case of (i) (ii) or (iii) above, has a continuing effect for more than one hundred and eighty (180) days without an arrangement being provided to exempt the affected party from the effect of such Change in Law;

- (g) Not used.
- (h) the Implementing Agency has delayed any payment that has fallen due and payable under this Agreement and /or any of the Implementing Agency Agreements and if such delay exceeds ninety (90) days, save where such payment is duly Disputed by the Implementing Agency in accordance with this Agreement and /or Implementing Agency Agreements;
- (i) non-implementation of Toll in accordance with the Toll Implementation Structure and/ or any adverse notification, non-issuance, revocation and/ or amendment of the Toll Notification, provided that the Concessionaire had made a written request at least [●] ([●]) months before the date on which the Toll rates had to be revised in accordance with Section 17.5.

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23. TERMINATION

23.1 TERMINATION FOR CONCESSIONAIRE EVENT OF DEFAULT

- 23.1.1 Without prejudice to any other right or remedy which the Implementing Agency may have in respect thereof under this Agreement, upon the occurrence and continuation of a Concessionaire Event of Default, the Implementing Agency shall be entitled to Terminate this Agreement by issuing a Termination Notice to the Concessionaire; provided, that before issuing the Termination Notice, the Implementing Agency shall by a notice in writing inform the Concessionaire of its intention to issue the Termination Notice (the **Implementing Agency Preliminary Notice**).
- 23.1.2 In the event the underlying Concessionaire Event of Default is not cured within the Cure Period and the same is subsisting at the expiry of the Cure Period, the Implementing Agency shall be entitled to:
- (a) Terminate this Agreement by issuing the Termination Notice upon expiry of the Cure Period; and
 - (b) encash the Performance Security, as applicable and in effect as such time, on or following the issuance of the Termination Notice.
- 23.1.3 The following shall apply in respect of Cure Period relating to a Concessionaire Event of Default:
- (a) the Cure Period provided in this Agreement shall not relieve the Concessionaire from liability for damages (as expressly set out in this Agreement), if any, caused by its underlying breach or default giving rise to the Implementing Agency Preliminary Notice;
 - (b) the Cure Period shall not in any way be extended by any period of Suspension under this Agreement;
 - (c) if the cure of any breach by the Concessionaire requires any reasonable action by Concessionaire that must be approved by the Implementing Agency and/or the Government Authority hereunder, the applicable Cure Period shall be extended from the date the Concessionaire notifies the Implementing Agency of the same until the date that the Implementing Agency, and/or the Government Authority, as the case may be, accords the required approval.
- 23.1.4 Upon issuance of a Termination Notice by the Implementing Agency (following expiry of the Cure Period) on account of occurrence and continuation of a Concessionaire Event of Default during the Operations Period, the right of the Concessionaire to charge Tolls shall stand terminated with immediate effect and no Toll Revenues shall accrue and / or be payable to the Concessionaire from the date of occurrence of the Concessionaire's receipt of the Termination Notice;
- 23.1.5 In the event of Termination due to a Concessionaire Event of Default, the Implementing Agency shall pay to the Concessionaire on or prior to the Termination Payment Date, by way of Termination Payment, an amount equal to the Concessionaire Default Termination Amount.
- 23.1.6 Notwithstanding anything contained in this Agreement, in the event of the occurrence of the Concessionaire Event of Default listed in Section 22.1.1(k), the Implementing Agency shall be

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entitled to immediately issue the Termination Notice without the issuance of the Implementing Agency Preliminary Notice or providing a Cure Period to the Concessionaire to remedy the said Concessionaire Event of Default.

23.2 TERMINATION FOR IMPLEMENTING AGENCY EVENT OF DEFAULT

- 23.2.1 Without prejudice to any other right or remedy which the Concessionaire may have in respect thereof under this Agreement, upon the occurrence and continuation of any of the Implementing Agency Event of Default, the Concessionaire shall by a notice in writing inform the Implementing Agency of its intention to issue the Termination Notice (the **Concessionaire Preliminary Notice**).
- 23.2.2 In the event the underlying Implementing Agency Event of Default is not cured by the Implementing Agency within the Cure Period and the same is subsisting at the expiry of the Cure Period, the Concessionaire shall be entitled to terminate this Agreement by issuing the Termination Notice upon expiry of the Cure Period.
- 23.2.3 In the event of Termination due to an Implementing Agency Event of Default, the Implementing Agency shall pay to the Concessionaire on or prior to the Termination Payment Date, by way of Termination Payment, an amount equal to the Implementing Agency Default Termination Amount.

23.3 TERMINATION FOR CORRUPT ACTS

- 23.3.1 The Concessionaire warrants that in entering into this Agreement it has not committed any Corrupt Act.
- 23.3.2 If any Corrupt Act is committed, then the Implementing Agency shall be entitled to act in accordance with the following provisions of this Section 23.3; provided, that at all times the Implementing Agency shall bear the burden of proof for establishing that a Corrupt Act has been committed:
- (a) if the Corrupt Act is committed by the Concessionaire or any Associate of the Concessionaire, as the case may be, then in any such case, the Implementing Agency may issue a notice to the Concessionaire of its intent to issue a Termination Notice;
 - (b) if the Corrupt Act is committed by an employee of the Concessionaire, then in such case, the Implementing Agency may give written notice to the Concessionaire of its intention to issue a Termination Notice; provided, however, the Implementing Agency shall not be entitled to issue a Termination Notice in the event the Concessionaire, within [●] ([●]) days of its receipt the Implementing Agency's notice stating its intention to issue a Termination Notice, terminates such employee's involvement in the Project and (if necessary) provides evidence to the Implementing Agency of the performance of any part of the Project deliverables previously performed by such employee by another person;
 - (c) Not used;
 - (d) Not used;

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- (e) if the Corrupt Act is committed by any other person not specified in sub-section (b) above but involved in the Project as a subcontractor or supplier to any Contractor or to the Concessionaire, then the Implementing Agency may give notice to the Concessionaire of its intention to issue a Termination Notice; provided, however, that the Implementing Agency shall not be entitled to issue a Termination Notice in the event the Concessionaire, within [●] ([●]) days of its receipt the Implementing Agency's notice stating its intention to issue a Termination Notice, procures the termination of such person's involvement in the Project and (if necessary) procures the performance of the relevant contract and procures the performance of the relevant part of the Project Works by another person.

23.3.3 Any notice of intention to issue a Termination Notice by the Implementing Agency under this Section 23.3 shall specify:

- (a) the nature of the Corrupt Act;
- (b) the identity of the party or parties who the Implementing Agency believes has committed the Corrupt Act; and
- (c) the date on which the Termination Notice will be issued, which date shall be subject to the timelines provided in Section 23.3.2(b) and (e), as applicable.

23.3.4 Without prejudice to its other rights or remedies under this Section, the Implementing Agency shall be entitled to recover from the Concessionaire, the greater of:

- (a) the amount or value of the gift, consideration or commission which is the subject of the Corrupt Act; and
- (b) any direct losses (including Losses) sustained by the Implementing Agency in consequence of any breach of this Section by the Concessionaire.

23.3.5 Nothing contained in this Section shall prevent the Concessionaire from paying any proper commission or bonus to its employees within the agreed terms of their employment.

23.3.6 In the event of Termination due to a Corrupt Act in accordance with this Section 23.3, the Implementing Agency shall pay to the Concessionaire on or prior to the Termination Payment Date, by way of Termination Payment, an amount equal to the Corrupt Act Termination Amount.

23.4 RIGHTS OF THE IMPLEMENTING AGENCY ON TERMINATION AND/OR FINAL EXPIRY DATE

23.4.1 In case of Termination of this Agreement for any reason whatsoever and subject to receipt by the Concessionaire of the Termination Payment on or prior to the Transfer Date or in case of expiry of this Agreement on the Final Expiry Date, the Implementing Agency shall, on the Transfer Date, have the power and authority to:

- (a) take possession and control of Concession Assets;
- (b) prohibit the Concessionaire and any person claiming through or under the Concessionaire from entering upon the Concession Assets or dealing with or any part thereof except in

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the case where the Concessionaire and any person claiming through or under the Concessionaire enters the Concession Assets or deals with or any part thereof as a User.

23.5 TERMINATION PAYMENTS

23.5.1 The Termination Payment shall be payable to the Concessionaire by the Implementing Agency on or prior to the Termination Payment Date in accordance with a demand being made by the Concessionaire in writing, subject to the same being duly certified by the Independent Engineer and Independent Auditor.

23.5.2 To the extent:

- (a) the Termination Equity and/or Termination Dividend Amount is payable by the Implementing Agency to the Concessionaire upon Termination of this Agreement; and
- (b) the Implementing Agency fails to make payment of such due and payable Termination Equity and/or Termination Dividend Amount (the **Unpaid Termination Equity Amount**) by the date falling fifty (50) days following the Termination Payment Date,

then, the Implementing Agency shall (in addition to the payment of the due and payable Unpaid Termination Equity Amount) make payment to the Concessionaire of late payment interest on the Unpaid Termination Equity Amount at the rate of Delayed Payment Rate, such interest commencing to accrue on the date falling [●] ([●]) days following the Termination Payment Date and ending on the actual date on which the Implementing Agency makes payment of the Unpaid Termination Equity Amount. The stipulation regarding additional amounts payable in respect of delayed Unpaid Termination Equity Amount contained in this Section 23.5.2 shall not be construed nor be deemed to authorize any delay in payment of any amount due to the Concessionaire nor be construed or deemed to be a waiver of the underlying breach of payment obligations, in each case, in the afore-stated circumstances.

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23.6 MODE OF PAYMENT

- 23.6.1 Notwithstanding any instructions to the contrary issued or any dispute raised by the Concessionaire, the Termination Payment, and all other payments that are or may be payable by the Implementing Agency under any of the provisions of this Agreement shall be made only by way of credit directly to a bank account of the Concessionaire notified by the Concessionaire.
- 23.6.2 Notwithstanding anything to the contrary contained in this Agreement, any Termination pursuant to the provisions of this Agreement shall be without prejudice to accrued rights of either Party including its right to claim and recover money damages and other rights and remedies which it may have in law or contract. All rights and obligations of either Party under this Agreement, including without limitation Termination Payment, shall survive the Termination of this Agreement to the extent such survival is necessary for giving effect to such rights and obligations.
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24. DIVESTMENT OF RIGHTS AND INTEREST

24.1 REQUIREMENTS FOR DIVESTMENT

24.1.1 In case of (as applicable):

- (A) Termination of this Agreement prior to Final Expiry Date and subject to the Implementing Agency fully complying with all its obligations in respect of making Termination Payments on or prior to the Termination Payment Date; or
- (B) [●] ([●]) year prior to expiry of this Agreement on the Final Expiry Date,

the Concessionaire shall comply with and conform complete compliance with the following requirements by the Transfer Date (the **Divestment Requirements**):

- (a) Notify to the Implementing Agency forthwith the location and particulars of all Concession Assets;
- (b) deliver forthwith the actual or constructive possession of the Concession Assets, free and clear of all Encumbrances;
- (c) unless this Agreement is Terminated due to a Permitted Event (excluding Non-Political Event), cure all Concession Assets of all Defects & Deficiencies in accordance with the Handover List; provided, that in the event of Termination during the Installation Period, all Concession Assets shall be handed over on ‘*as is where is*’ basis after bringing them to a safe condition;
- (d) deliver and transfer all relevant records, reports, intellectual property and other Licences pertaining to the Concession Assets and its Installation Works, Operation and Maintenance, including all programs and manuals pertaining thereto, and complete O&M Documents as on the Transfer Date;
- (e) transfer and/or deliver to the Implementing Agency, all Concessionaire Permits to the extent permissible under Applicable Laws;
- (f) execute such deeds of conveyance, documents and other writings as the Implementing Agency may reasonably require for conveying, divesting and assigning all the rights, title and interest of the Concessionaire in the Concession Assets, including manufacturers’ warranties in respect of any plant or equipment and the right to receive outstanding insurance claims, absolutely unto the Implementing Agency or its nominee; and
- (g) train all staff notified by the Implementing Agency for Operations and Maintenance in accordance with the O&M Manual;
- (h) comply with all other requirements as may be prescribed or required under Applicable Laws for completing the divestment and assignment of all rights, title and interest of the Concessionaire in the Concession Assets, free from all Encumbrances, absolutely unto the Implementing Agency or to its nominee.

24.2 INSPECTION AND CURE

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24.2.1 In case of:

- (a) Termination during the Operations Period, not earlier than thirty (30) days prior to Termination but not later than fifteen (15) days prior to the Transfer Date; or
- (b) expiry of this Agreement on the Final Expiry Date, not earlier twelve (12) months prior to Transfer Date but not later than six (06) months prior to the Transfer Date,

the Independent Engineer shall verify, after giving due notice to the Concessionaire of the time, date and venue of such verification, compliance by the Concessionaire with the Applicable Specifications, and if required, cause appropriate tests to be carried out. In the event of Termination (excluding Termination due to Political Event or a Implementing Agency Event of Default) or expiry of this Agreement on the Final Expiry Date, the Concessionaire shall bear the cost for this purpose. In the event of Termination due to Implementing Agency Event of Default or Political Event, the Implementing Agency shall bear the cost for this purpose. All Defects & Deficiencies shall be cured by the Concessionaire at its cost unless the same is due to a Political Event or a Implementing Agency Event of Default in which case, the Implementing Agency shall bear such costs.

24.2.2 Until the Transfer Date, all risks shall vest with the Concessionaire for loss of or damage to the whole or any part of the Concession Assets and following the Transfer Date, all risks in relation to the same shall be deemed to have been transferred to and vest with the Implementing Agency.

24.3 COOPERATION AND ASSISTANCE FOR TRANSFER OF THE CONCESSION ASSETS

24.3.1 The Parties shall cooperate on a best effort basis and take all necessary measures, in good faith, to achieve a smooth transfer of the Concession Assets in accordance with the provisions of this Agreement so as to protect the safety of and avoid undue delay or inconvenience to the users, other members of the public or the lawful occupiers of any part of the Project Site and the Concession Assets.

24.3.2 The Parties shall provide to each other (as applicable):

- (a) in case of Termination of this Agreement, [●] ([●]) months prior to the Termination Payment Date in the event of Termination and immediately in the event of either Party conveying to the other Party its intent to issue a Termination Notice, as the case may be; or
- (b) in case of expiry of this Agreement on the Final Expiry Date, [●] ([●]) months prior to the Final Expiry Date,

as much information and advice as is reasonably practicable regarding the proposed arrangements for operation of the Project following the Transfer Date. The Concessionaire shall further provide such reasonable advice and assistance as the Implementing Agency, its appointed concessionaire or agent may reasonably require for operation of the Project until the Transfer Date.

24.4 VESTING CERTIFICATE

24.4.1 Subject to:

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- (a) in case of Termination of this Agreement, the Implementing Agency fully complying with all its obligations in respect of making Termination Payments on or prior to the Termination Payment Date; or
- (b) expiry of this Agreement on the Final Expiry Date,

the divestment of all rights, title and interest in the Project shall be deemed to be complete on the Transfer Date, and the Independent Auditor and the Independent Engineer shall jointly, without unreasonable delay, thereupon issue a certificate (the **Vesting Certificate**) substantially in the form set forth in **SCHEDULE O (Form of Vesting Certificate)**, which will have the effect of constituting evidence of divestment by the Concessionaire of all of its rights, title and interest in the Concession Assets, and their vesting in the Implementing Agency pursuant hereto.

24.5 TRANSFER CONSIDERATION

- 24.5.1 The Parties agree that the Concession Assets shall be transferred to the Implementing Agency on the Transfer Date for a sum of (as consideration) PKR 1/- (Pakistani Rupees One only).

24.6 DIVESTMENT COSTS

- 24.6.1 Subject to Section 24.6.2, the Concessionaire shall bear and pay, in case of Termination due to a Concessionaire Event of Default and/or due to Corrupt Act and/or due to a Non Political Event or in case of expiry of this Agreement on the Final Expiry Date, all costs incidental to divestment of all of the rights, title and interest of the Concessionaire in the Concession Assets in favour of the Implementing Agency, save and except that all stamp duties payable on any deeds or documents executed by the Concessionaire in connection with such divestment shall be borne by the Implementing Agency. In the event of Termination due to a Force Majeure Event and/or an Implementing Agency Event of Default, the Implementing Agency shall bear and pay all the above-mentioned costs.
- 24.6.2 The Implementing Agency shall be responsible for the costs and expenses, including stamp duties, taxes, legal fees and expenses incurred in connection with the transfer of the Concession Assets to the Implementing Agency or its nominated agency on the Transfer Date. The Implementing Agency shall at its own cost obtain or effect all clearances, permits, authorizations, consents and approvals under or pursuant to Applicable Laws and take such other actions as may be necessary for such transfer.
- 24.6.3 In the event of any Dispute relating to matters covered by and under this Article 24 (*Divestment of Rights and Interest*), the Dispute Resolution Procedure shall apply.

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25. DEFECTS LIABILITY DURING EXIT IMPLEMENTATION PERIOD

25.1 LIABILITY FOR DEFECTS DURING EXIT IMPLEMENTATION PERIOD

25.1.1 Without prejudice to any obligation of the Concessionaire in this Agreement, the Concessionaire shall be responsible for all Defects & Deficiencies in the Concession Assets during the Exit Implementation Period in accordance with this Section 25.1.1 and it shall have the obligation to repair or rectify all Defects & Deficiencies observed by the Independent Engineer in the Concession Assets during the aforesaid period, as set out in a list jointly prepared by the Independent Engineer and the Concessionaire (the **Handover List**) within:

- (a) in case of Termination of this Agreement, [●] ([●]) year of the issuance of a Termination Notice;
- (b) in case of expiry of this Agreement on the Final Expiry Date, [●] ([●]) year after the Final Expiry Date.

All costs for remedying of such Defects & Deficiencies in accordance with the Handover List shall be borne by:

- (a) the Concessionaire in the event this Agreement expires on the Final Expiry Date or in the event this Agreement is Terminated due to a Concessionaire Event of Default or due to a Corrupt Act or due to a Non Political Event;
- (b) the Implementing Agency in the event this Agreement is Terminated due to an Implementing Agency Event of Default or Political Events.

25.1.2 Notwithstanding anything to the contrary set out herein, the provisions of this Article 25 (*Defects Liability During Exit Implementation Period*) shall not apply to any Defects & Deficiencies caused by a Political Event that has resulted in Termination.

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26. DISCLAIMER

26.1 DISCLAIMER

- 26.1.1 Subject to the terms of this Agreement, the Concessionaire acknowledges that prior to the execution of this Agreement, the Concessionaire has, after a complete and careful examination, made an independent evaluation of the RFP, Scope of the Project, Project Requirements, Project Site, existing structures, local conditions, physical qualities of ground, subsoil and geology, traffic volumes and all information provided by the Implementing Agency or obtained, procured or gathered otherwise, and has determined to its satisfaction the accuracy or otherwise thereof and the nature and extent of difficulties, risks and hazards as are likely to arise or may be faced by it in the course of performance of its obligations hereunder. Except as expressly provided in this Agreement, the Implementing Agency makes no representation whatsoever, express, implicit or otherwise, regarding the accuracy, adequacy, correctness, reliability and/or completeness of any assessment, assumptions, statement or information provided by it and the Concessionaire confirms that it shall have no claim whatsoever against the Implementing Agency in this regard.
- 26.1.2 Subject to the terms of Agreement, the Concessionaire acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth in Section 26.1.1 and hereby acknowledges and agrees that the Implementing Agency shall not be liable for the same in any manner whatsoever to the Concessionaire, the Sponsors and their Associates or any person claiming through or under any of them.
- 26.1.3 Any mistake or error in or relating to any of the matters set forth in Section 26.1.1 shall not vitiate this Agreement or render it voidable.
- 26.1.4 In the event that either Party becomes aware of any mistake or error relating to any of the matters set forth in sub-section 26.1.1 of this Section 26.1 (*Disclaimer*) above, such Party shall immediately notify the other Party, specifying the mistake or error; provided, however, it is expressly agreed between the Parties that any such failure on part of the Implementing Agency to give any notice pursuant to this sub-section 26.1.4 of Section 26.1 (*Disclaimer*) shall not prejudice the disclaimer of the Implementing Agency contained in sub-section 26.1.1 of this Section 26.1 (*Disclaimer*) and shall not in any manner shift to the Implementing Agency any risks assumed by the Concessionaire pursuant to this Agreement.
- 26.1.5 Except as otherwise provided in this Agreement, all risks relating to the Concession Assets shall be borne by the Concessionaire and the Implementing Agency shall not be liable in any manner for such risks or the consequences thereof.
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27. ASSIGNMENT AND CHARGES

27.1 RESTRICTION ON ASSIGNMENT AND CHARGES

27.1.1 Subject to Section 27.2 (*Permitted Assignment and Charges*), this Agreement shall not be assigned by the Concessionaire to any person, save and except with the prior consent in writing of the Implementing Agency, which consent the Implementing Agency shall be entitled to decline without assigning any reason.

27.1.2 Subject to the provisions of Section 27.2 (*Permitted Assignment and Charges*), the Concessionaire shall not:

- (a) create nor permit to subsist any Encumbrance, or otherwise transfer or dispose of all or any of its rights and benefits under this Agreement; or
- (b) create or permit to subsist any Encumbrance on the Concession Assets or otherwise transfer or dispose of the Concession Assets;

in each case above, except with prior consent in writing of the Implementing Agency, which consent the Implementing Agency shall be entitled to decline without assigning any reason.

27.2 PERMITTED ASSIGNMENT AND CHARGES

27.2.1 The restriction set forth in sub-section 27.1.2 of Section 27.1 (*Restriction on Assignment and Charges*) shall not apply to liens and Encumbrances arising by operation of law (or by an agreement evidencing the same) in the ordinary course of business of the Project;

27.3 [NOT USED]

27.4 [NOT USED]

27.5 ASSIGNMENT BY THE IMPLEMENTING AGENCY

27.5.1 Notwithstanding anything to the contrary contained in this Agreement or any other Implementing Agency Agreement, the Implementing Agency shall not assign and/ or transfer any of its rights and benefits and/or obligations under this Agreement or any Implementing Agency Agreement to an assignee or any Person without the consent of the Concessionaire.

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28. NOT USED.



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29. ADDITIONAL MATTERS

29.1 ADVERTISING & ADVERTISING REVENUES

- 29.1.1 The Concessionaire shall have a right to propose from time to time a plan for various advertising activities to be implemented on the Concession Assets (the **Concessionaire Advertising Plan**). The Concessionaire shall submit the Concessionaire Advertising Plan to the Independent Engineer for its approval.
- 29.1.2 In the event the Concessionaire Advertising Plan is approved by the Independent Engineer, the Concessionaire shall be fully responsible for the implementation of the Concessionaire Advertising Plan.
- 29.1.3 The Concessionaire shall have the exclusive right to the revenues relating to and/or generated through the approved Concessionaire Advertising Plan.

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29.2 COMMERCIAL RIGHTS & ADDITIONAL FACILITIES

- 29.2.1 At any time prior to the expiration of the Concession Period, the Implementing Agency shall have the exclusive right to establish Additional Facilities along the Project Site or either through the Concessionaire or any other party at its sole and absolute discretion. Nothing contained in this Agreement shall prevent the Implementing Agency from granting Development Rights to any person who is not affiliated with the Concessionaire or its shareholders.
- 29.2.2 Subject to Section 29.2.1, nothing contained in this Agreement shall obligate the Implementing Agency in any way to grant or deny such Development Rights and its decision regarding such rights will be carried out at its complete discretion. For the avoidance of doubt, Development Rights are not a part of the Concession Assets.
- 29.2.3 For the purposes of implementation by the Implementing Agency of its development rights the Concessionaire shall enter into all such agreements as may be reasonably required by the Implementing Agency to give full effect to the grant of Development Rights and to enable the Implementing Agency to use the Development Rights granted by the Implementing Agency and are solely for the benefit of Implementing Agency and/or its designated (as notified to the Concessionaire) nominee.

The Implementing Agency shall make use of all Development Rights granted to it in such a manner so as not to impair the general integrity of the Concession Assets and with full regard for the safety of all Users and shall implement the Development Rights so as to avoid danger to any such Persons.

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30. DISPUTE RESOLUTION

30.1 DISPUTE RESOLUTION

- 30.1.1 Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the **Dispute**).
- 30.1.2 The Parties shall, in the first instance, use their best efforts for resolving the Dispute(s), amicably amongst each other in an attempt to achieve consensus, and try to resolve the Dispute(s) promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non-privileged records, information and data pertaining to any Dispute.

30.2 MEDIATION

- 30.2.1 In the event of no consensus being achieved, pursuant to Section 30.1.2, any Dispute between the Parties, the Dispute shall be referred for mediation by an independent and impartial person appointed by the PPP Board in accordance with the Act, for amicable settlement. In the event the Parties are unable to resolve the matters through conciliation either Party may refer the Dispute to arbitration in accordance with the provisions of Section 30.3 (*Arbitration*).

30.3 ARBITRATION

- 30.3.1 Any Dispute which is not resolved amicably by conciliation, as provided in Section 30.2 (*Conciliation*), shall be finally decided by reference to arbitration by a board of arbitrators (the **Board of Arbitrators**) appointed in accordance with Section 30.3.3. Such arbitration shall be held in accordance with the provisions of the Arbitration Act.
- 30.3.2 The venue of such arbitration shall be Lahore and the language of arbitration proceedings shall be English.
- 30.3.3 There shall be a Board of Arbitrators of three (3) arbitrators, of whom each Party shall select one, and the third arbitrator shall be appointed by the two (2) arbitrators so selected, and in the event the two (2) arbitrators are unable to agree on the third arbitrator, then the same will be appointed in accordance with the Arbitration Act.
- 30.3.4 The arbitrators shall make a reasoned award (the **Award**). Any Award made in any arbitration held pursuant to this Article 30 (*Dispute Resolution*) shall be final and binding on the Parties as from the date it is made, and the Concessionaire and the Implementing Agency agree and undertake to carry out such Award without delay.
- 30.3.5 The Concessionaire and the Implementing Agency agree that an Award may be enforced against the Concessionaire and/or the Implementing Agency, as the case may be, and their respective assets wherever situated.
- 30.3.6 This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the Award in any arbitration proceedings hereunder.

31. MISCELLANEOUS

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31.1 GOVERNING LAW AND JURISDICTION

- 31.1.1 This Agreement shall be construed and interpreted in accordance with and governed by the Applicable Laws and the courts of appropriate jurisdiction in the Province of Punjab shall have the exclusive jurisdiction over all Disputes or matters arising out of or relating to this Agreement.

[The rights and responsibilities of the Implementing Agency in relation to laws applicable provincially shall continue to take precedence, explicitly and implicitly.]

31.2 WAIVER

- 31.2.1 Waiver by either Party of any default by the other Party in the observance and performance of any provision of or obligations or under this Agreement:

- (a) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions or obligations under this Agreement;
- (b) shall not be effective unless it is in writing and executed by a duly authorized representative of such Party; and
- (c) shall not affect the validity or enforceability of this Agreement in any manner.

- 31.2.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

31.3 SURVIVAL

- 31.3.1 Termination of this Agreement (a) shall not relieve the Concessionaire or the Implementing Agency of any obligations hereunder which expressly or by implication survives Termination hereof, and (b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.

31.4 AMENDMENTS

- 31.4.1 This Agreement and the Schedules together constitute a complete and exclusive statement of the terms of this Agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless agreed to by all the Parties hereto and evidenced in writing.

31.5 NOTICES

- 31.5.1 Unless otherwise stated, notices to be given under this Agreement including but not limited to a notice of waiver of any term, breach of any term of this Agreement and Termination of this Agreement, shall be in writing and shall be given by hand delivery, recognized international courier, mail, telex or facsimile transmission and delivered or transmitted to the Parties at their

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respective addresses set forth below in **SCHEDULE S (Notices)** or such address, telex number, or facsimile number as may be duly notified by the respective Parties from time to time, and shall be deemed to have been made or delivered (a) in the case of any communication made by letter, when delivered by hand, by recognized international courier or by mail (registered, return receipt requested) at that address and (b) in the case of any communication made by telex or facsimile, when transmitted properly addressed to such telex number or facsimile number.

31.6 CONFIDENTIALITY

31.6.1 Each of the Parties and their Contractors (including the Concessionaire Self Control Unit), subcontractors, consultants, employees and agents and each of their respective successors and permitted assigns shall hold in confidence all documents and other information, whether technical or commercial, supplied to it by or on behalf of the other Party, relating to insurance, Operation and Maintenance, installation, transfer, management and financing of the Concession Assets, and all information and documents obtained in accordance with the terms of the Implementing Agency Agreements, and shall not, without the consent of the other Party, save as required by Applicable Laws or appropriate regulatory authorities, prospective financiers to, or investors in the Concessionaire and their professional advisers, publish or otherwise disclose or use the same for its own purposes otherwise than as may be required to perform its obligations under this Agreement. Notwithstanding the above, nothing herein contained shall preclude the use of provisions similar to those contained in the Implementing Agency Agreements and the other agreements referred to herein and in agreements prepared and issued or to be prepared and issued in connection with other projects by the Implementing Agency.

31.6.2 The provisions of paragraph (a) hereabove shall not apply to:

- (a) any information in the public domain otherwise than by breach of this Agreement or any other Implementing Agency Agreement;
- (b) information in the possession of the receiving Party thereof before divulgence as aforesaid, and which was not obtained under any obligation of confidentiality.

31.7 SEVERABILITY

31.7.1 If for any reason whatever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable.

31.8 NO PARTNERSHIP

31.8.1 Nothing contained in this Agreement shall be construed or interpreted as constituting a partnership between the Parties. Neither Party shall have any Implementing Agency to bind the other in any manner whatsoever.

31.8.2 Notwithstanding anything to the contrary set out in this Agreement or elsewhere, nothing contained in this Agreement shall be construed or interpreted as the Concessionaire providing designing and/or engineering consulting services to the Implementing Agency.

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31.9 LANGUAGE

31.9.1 All notices required to be given under this Agreement and all communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

31.10 EXCLUSION OF IMPLIED WARRANTIES

31.10.1 This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement (except the Implementing Agency Agreements) between the Parties or any representation by any Party not contained in a binding legal agreement executed by the Parties.

31.11 COUNTERPARTS

31.11.1 This Agreement shall be executed in two counterparts, each of which when executed and delivered shall constitute an original of this Agreement.

32. AUTHORITY FEE

32.1 PAYMENT OF AUTHORITY FEE

The Private Partner shall make a payment of an amount equal to one percent (1%) of the Pre Estimated Project Cost (the “Authority Fee”) to the Authority on the Commercial Operations Date of the Roads into the designated bank account of the Authority, the details of which will be communicated to the Private Partner in writing by the Authority prior to such date.

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LIST OF SCHEDULES

SCHEDULE A – SCOPE OF THE PROJECT

SCHEDULE B – DESIGN REQUIREMENTS

SCHEDULE C – INSTALLATION WORKS

SCHEDULE D – PROJECT FACILITIES

SCHEDULE E – INSTALLATION COMPLETION SCHEDULE

SCHEDULE F – PROJECT SITE

SCHEDULE G – LIST OF TESTS & COMPLETION TESTS

SCHEDULE H – O&M REQUIREMENTS

SCHEDULE I – PART I– INSTALLATION PERIOD INSURANCES

SCHEDULE I – PART II– OPERATION PERIOD INSURANCES

SCHEDULE J – SPECIFIED CONCESSIONAIRE PERMITS

SCHEDULE K – CORPORATE DOCUMENTS

SCHEDULE L – [NOT USED]

SCHEDULE M – FORM OF PERFORMANCE SECURITY

SCHEDULE N – INDICATIVE INDEPENDENT ENGINEER TERMS OF REFERENCE

SCHEDULE O – FORM OF VESTING CERTIFICATE

SCHEDULE P – TOLL NOTIFICATION STRUCTURE

**SCHEDULE Q – REQUIREMENTS OF ELECTRONIC TOLL AND TICKETING MANAGEMENT SYSTEM -
ETTMS**

SCHEDULE R – TOLL NOTIFICATION

SCHEDULE S – NOTICES

SCHEDULE T – TERMINATION PAYMENTS

SCHEDULE U – FINANCIAL MODEL

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SCHEDULE A – SCOPE OF THE PROJECT

1. DETAILED PROJECT SCOPE

Terms of Reference to achieve overall objectives of the Project are as follows:

1.1 GENERAL

Project Highway is located in district [●]. Start point is located in [●], on [●] Road. The end point of Project Highway is in [●]. Total Length of this project is about [●] km, which is indicative at this stage. Exact length shall be determined at the Detailed Design stage.

1.2 EXISTING CONDITION

Existing provincial road between [●] to [●] is an un-divided two lane single carriageway having width of about [●], without any median separator, having earthen shoulders on either sides.

1.3 PROJECT COMPONENTS

Project Components *include detailed installation, upgradation, operation and maintenance* of following listed items:

[●]

1.4 NOT USED

1.5 DETAILED DESIGN OF THE PROJECT

Detailed design shall be based on preliminary design and its parameters as mentioned in RFP Documents.

1.6 INSTALLATION AND/OR UPGRADATION OF TOLL PLAZAS, ETTMS AND WEIGHBRIDGES

- The Concessionaire will be responsible for all aspects of Installation Works in conformity with [●]
- During installation, the Concessionaire will be required to comply with the traffic management requirements set out in the Concession Agreement to minimize the impact of installation on other roads and provide certainty for Users.
- As stated in the Concession Agreement, the Concessionaire must plan for the Installation Scheduled Completion Date no later than [●] months after the Commencement Date.
- Cost overruns and delays in completing the work shall be governed by the Concession Agreement and related Implementing Agency Agreements.

1.7 THE CONCESSIONAIRE SHALL NEED TO:

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- Install the toll plazas, weighbridges and ETTMS as per Schedule C within estimated time and the Installation Time for Completion
- Carry-out all quality control tests as per NHA General Specifications, 1998 (AASHTO recommendations) (see **SCHEDULE G (List of Tests & Completion Tests)** of the Concession Agreement as per AASHTO and ASTM references). Records of tests will be signed-off by the Independent Engineer.
- Submit road safety plan and issues diversion plan during installation to obtain control of traffic and minimum hindrance to traffic and make proper liaison with the local police and other relevant civil and district administration/authorities of the area before commencement of work.
- The Concessionaire should provide independent supervision officer and facilitates their offices and inspection vehicles
- Construction material for the Installation Works will be used from approved sources with appropriate tests and certification
- The Concessionaire has to make sure that the Project Site is clean from any debris, construction material and-machinery during Operation Period
- International and local safety standards and best practice procedure should be followed during Installation Period
- The Concessionaire has to submit the 'As-built drawings' at completion of Works in accordance with the Concession Agreement

1.8 FACILITIES TO BE PROVIDED BY CONCESSIONAIRE:

1.8.1 Temporary Water Supply

- The Concessionaire shall be responsible for supply of water for installation and upgradation activities and for the offices and accommodation of the Concessionaire
- Where water tank and pumps are temporarily removed, supply to the property must be maintained by the Concessionaire

1.8.2 Engineer's Facilities

- The Concessionaire shall provide following facilities for the Independent Engineer and its staff:
 - **Construct/Provide, furnish, equip and maintain site office**
The office shall be provided/constructed, furnished, equipped and maintained by the Concessionaire, at all times for the duration of the Concession Period including extension period if any

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➤ **Provide, furnish equip and maintain accommodation**

The accommodation shall be rented, furnished, equipped and maintained by the Concessionaire, at all times for the duration of the Concession Period including extension period if any

➤ **Survey Equipment**

The Survey equipment and their accessories shall be provided and maintained by the Concessionaire along with survey helpers and all consumables, at all times for the duration of the Concession Period including extension period if any

➤ **Vehicles**

Vehicles shall be provided with driver, fuel, maintenance, insurance, registration etc. by the Concessionaire at all times for the `Concession Period including extension period if any.

1.8.3 Laboratory facility with testing equipment:

- The Concessionaire shall furnish the laboratory testing facility with testing equipment, services, supplies, attendants, furniture and its running and maintenance cost for the tests to be conducted
- All tests shall be executed according to AASHTO, ASTM and BS standards as provided in NHA General Specifications, 1998 and all required equipment for facilitation of tests should be furnished in the lab with two sets of latest edition of prescribed standards (one to be placed in the laboratory and other for the Independent Engineer)
- **Note:** The Concessionaire should submit the list of tests to be carried out and their sample forms in the proposed methodology

1.8.4 Temporary road, traffic management and control, general protection

- Layout plans showing the detailed proposals of temporary diversions to be carried out by the Concessionaire/its Contractor(s) shall be submitted to the Independent Engineer and to concerned district police, civil agencies and local administration for their written approval 10 days before the implantation date
- Diversions must be constructed in advance of any interference within the right of way / existing carriage way and shall be maintained in accordance to traffic load in a condition satisfactory to the Independent Engineer

1.8.5 Operation and Maintenance

- The Concessionaire is required to carry out the Operation and Maintenance in respect of the Project in conformity with AASHTO standards and in accordance with the Operation and Maintenance - O&M Requirements which are set out in the Main Body of the Concession Agreement (including Article 19 (*Operation*

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and Maintenance)) and **SCHEDULE H (O&M Requirements)** of the Concession Agreement

- The general scope of Operation and Maintenance includes all services associated with the planning, management and delivery of the operations, maintenance and asset preservation activities to ensure compliance with AASHTO standards and with all performance measures set out in the Concession Agreement

1.8.6 Operations Role

- The Concessionaire should ensure the smooth flow of vehicles and minimization of traffic delay and closures
- The Concessionaire should ensure the safety of commuters and shall provide emergency support to commuters
- Control building, safety vehicles, tow trucks, ambulances, patrolling vehicles should be used by developer to ensure smooth operations of Project Works
- The Concessionaire should ensure the administration, monitoring of conditions, traffic control, assessment of the need for load restriction, posting of warnings to vehicles, and signage
- Rest areas and other facilitations will be operated and maintained by the Concessionaire
- Quality management on a self-auditing basis, in conformity with AASHTO testing procedures

1.8.7 Operation Methodology

- On Patrolling on three hour intervals, on 24/7/365 basis
- Emergency & Rescue response system
- Provision of Tow away facilities
- Provision of emergency medical services/ambulance/clinic
- Maintaining traffic sign maintenance data
- Maintaining Cat eyes
- Maintaining Road marking
- Maintaining Culverts
- Maintaining road

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- Maintaining weigh bridges
- Maintaining weight violations data
- Maintaining death/injuries data
- Preparing periodic report with peak hour flows and peak day flows and other statistics
- Maintaining operational crew & equipment for emergency Maintenance
- Preparing and implementing education programs and campaigns on:
 - Road safety and customer safety
 - Customer response & comments
 - Customer awareness
 - Operational staff awareness
 - Incentives for fragment road users
 - Maintaining firefighting systems

1.8.8 Maintenance Role

The Concessionaire shall maintain the Concession Assets including road pavement, structures, pavement markings, drainage infrastructure, electrical systems, mechanical installations, closed landfill sites, landscaping, inspections, periodic repairs, traffic maintenance, toll booths, toll collection buildings and emergency maintenance.

a) Annual/Routine Maintenance (after the Final Installation Completion Date)

- Isolated holes, pot holes, fold pavements, skin patch, windings and rutting in asphaltic layer should immediately be repaired
- Any damages to side barrier due to any accident or other causes should immediately be repaired
- Road Marking Maintenance
- Cat's Eyes Maintenance
- Traffic Sign Maintenance
- Minor maintenance due to damage caused by Road accidents

b) Periodic Maintenance

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- Over-lays (two overlays, first after [●] years of the Scheduled Installation Completion and second on [●] years of first overlay)
- Potholes Maintenance
- Guard Rail Maintenance
- Shoulder Maintenance
- International Road Roughness Test at selected sections identified by an Independent Engineer should be carried-out at every [●] years of operation and any portion of pavement found failed should be maintained as per AASHTO standards with approval from Independent Engineer. All the formalities will be checked for their stability and smooth operation.

The Concessionaire is required to carry out Project appraisal in detail and price the same in accordance with foreseen work. The installation of the toll plazas, weighbridges and ETTMS is to be completed within [●] of the Commencement Date and the bids not accompanied with the workable completion schedule of [●] months shall be declared as non- responsive. Any deviation on from the submitted schedule by the successful bidder till the signing of Concession Agreement shall be treated as a breach and shall cause forfeiture of security deposit unless an agreement, in writing, is reached with the Implementing Agency for such a change.

1.9 SPECIAL PURPOSE VEHICLE

- a. Not used.
- b. The Concessionaire shall get incorporated a company exclusively for the purpose of implementing the Project (“**Project Company**” and/ or “**SPV**”). The Concessionaire shall not undertake or permit and hereby undertakes to procure that the Sponsors do not undertake or permit any Change in Ownership And/Or Control during the Concession Period, except as may be permitted pursuant to the Concession Agreement.

1.10 HAND-OVER OF THE STRUCTURE

The Concessionaire is responsible for handing over the structures to the Implementing Agency in a good working condition at the end of the Concession Period as specified in the Concession Agreement without any further compensation to the Concessionaire at the time of such transfer. These structures are subject to an inspection and correction process in order to ensure that they are handed over in accordance with established terms and conditions.

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SCHEDULE B – DESIGN REQUIREMENTS

1. DETAILED DESIGN OF PROJECT

- a) Carryout map/ satellite photographs study and review of all material/documents/studies/preliminary design/drawings provided supplemented with area reconnaissance and detailed topographic survey, study options for alignment of additional carriageway, design of in-route towns and present all options with merits and demerits after ground assessment of salient features of each alignment.
- b) Carry out soil & material investigation to determine the “Subsoil Condition”, other required soil tests and analysis for the authenticity of any available report as the Implementing Agency will not be liable to any discrepancy.
- c) Carry out condition survey of existing structure (bridges, culverts, drains, retaining walls etc.), and pavement structure to determine load carrying capacity, strength evaluation, rehabilitation methodologies.
- d) Carry out hydrological studies for each structure by determining catchment areas for each and every structure.
- e) Carry out geotechnical investigations for new toll plazas, weighbridges and ETTMS (where required).
- f) Carry out traffic surveys and studies. Due consideration should be given to heavy vehicles/large vehicles traversing the Project Highway.
- g) [not used].
- h) [not used].
- i) Design of other minor structures and intersections (at-grade or grade separated).
- j) [not used].
- k) [not used].
- l) [not used].
- m) Clearance of encroachment will be the responsibility of the Implementing Agency.
- n) Carry out a detailed design of rest areas by modifying the designated existing fuel stations, weigh bridges, offices and residence of operation and maintenance staff.
- o) Give detailed plan of implementation strategy.
- p) A summary of the design criteria is provided hereunder, however, to promote innovation, Bidders are encouraged to develop Proposals that differ or vary from the reference design

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and that comply with the requirements of the Concession Agreement. The general performance requirements for the Project Highway are given below:

2. GEOMETRIC DESIGN CRITERIA

Design life

Buildings & Bridges	
Culverts/Drains/Retaining Walls etc	
Communication & Electrical Cabling	
Electric & Electronic systems	
Pavement*	

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Design Criteria

Item	Sub-Item	Rural Area	Urban Area
1) Design Speed			
2) Road Cross Section			
2.1) Width	a) Formation		
	b) Carriageway		
	c) Shoulder		
	d) Median		
	e) FP/Drain		
2.2) Camber	a) Carriageway		
	b) Shoulders		
2.3) Embankment Slope	(H:V)		
2.4) Right-of -Way	As per typical x-sec		
3) Stopping Sight Distance in meter			
4) Passing Sight Distance in meter			
5) Minimum Horizontal Curve Radius			
6) Maximum Super elevation			
7) Maximum Gradient			
8) Rate of Vertical Curvature			
8.1) k value for crest curves			
• For stopping sight distance (m/%A)			
• For passing sight distance (m/%A)			
8.2) k value for sag curves (m/%A)			
9) Minimum length of vertical curvature			
10) Design Life of Pavement			
11) Standards for Geometric Design	A policy on Geometric Design of Highways and streets, 2004 of AASHTO		
12) Standards for Pavement Design	British Road Note No. 31, AASHTO Guide 1993 for pavement and SHRP		

Above design criteria is general, however, specific design criteria is provided in preliminary design.

For Bridges & Culverts

Width

(See Cross Section attached)

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Live Load

Class AA Loading for bending movements and
Class A loading for shear according to West
Pakistan Highway Code (1967).

For Material and Testing:

ASTM -American Society for Testing Materials

AASHTO-American Association of State Highway and Transportation Officials.

For Structures:

AASHTO LRFD (Latest Edition) American Association of State Highway and Transportation
Officials.

Loading:

West Pakistan Code of Practice for Highway Bridges 1967.

Seismic Design:

AASHTO analysis and design with latest seismic zoning map for Pakistan as per revised current
Government of Pakistan seismic parameters.

Other design criteria not specified herein shall be approved by the Independent Engineer /
Implementing Agency before being adopted for the design.

Structural Design:

Drawing scale of 1:500 shall be used showing the main features of the structure proposed, the
centre line of the proposed carriageway, the topography of the adjoining terrain and the
benchmarks, the final design plans shall include all details in appropriate scale necessary to
construct the said structures. The choice of structure and specifications will be determined
keeping in view the economy, aesthetics of material.

For Scale of drawings, refer Preliminary Design Drawings. All drawings must be in MKS system

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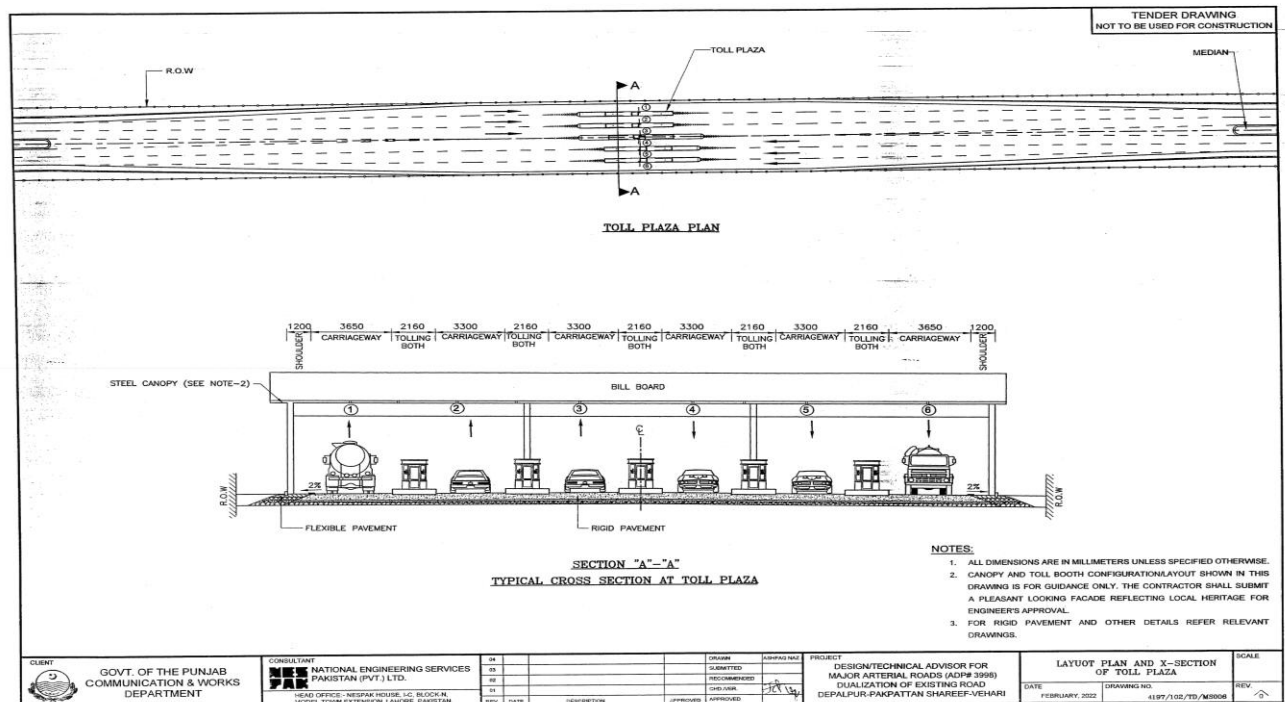
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SCHEDULE C – INSTALLATION WORKS

TOLL PLAZA (Muridke – Narowal)

2-Nos New Toll Plaza purposed for Dual Carriageway Road of *Muridke – Narowal*

TOLL PLAZA DESIGN DUAL CARRIAGEWAY



Side View of Toll Plaza



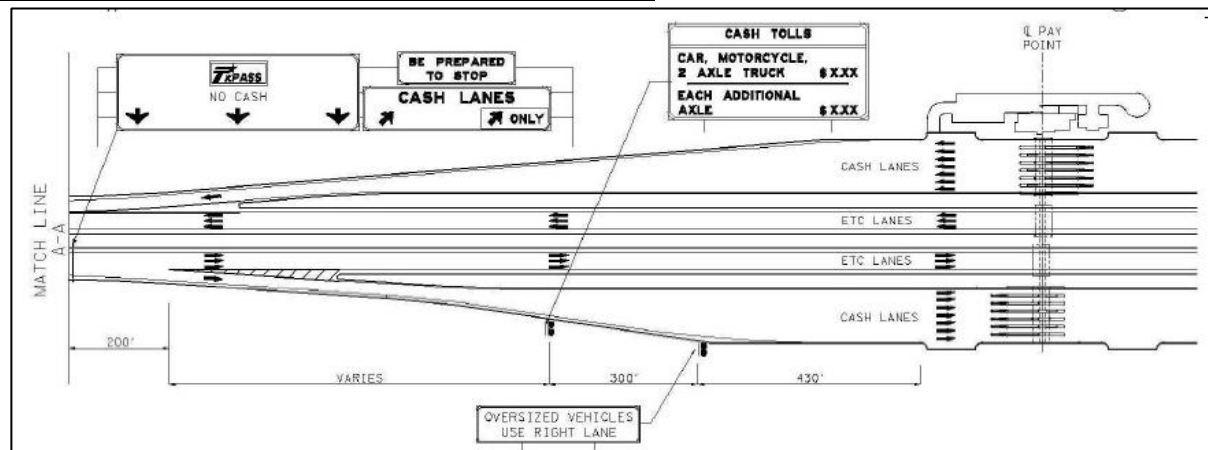
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TOLL PLAZA (Narowal – Shakkar Garh)

1-No New Toll Plaza purposed for Single Carriageway Road of *Narowal – Shakkar Garh*

TOLL PLAZA DESIGN SINGLE CARRIAGEWAY



EQUIPMENT

Toll Plaza Equipment attached as *Annexure-A*

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SCHEDULE D – PROJECT FACILITIES

1. TEMPORARY WATER SUPPLY

Where private or government owned water tank and pumps are temporarily removed a supply to the property must be maintained by the Concessionaire.

2. ENGINEER’S FACILITY

- The Concessionaire shall provide furnished, equip and maintain site office for the engineer. Office provided shall be maintained by the Concessionaire; all times during the duration of the Concession Period including extension period if any.
- The Concessionaire shall provide following facilities for the Independent Engineer and its staff:
 - Provide, furnish, equip and maintain site office
The office shall be constructed, furnished, equipped and maintained by the Concessionaire, at all times for the duration of the Concession Period including extension period if any.
 - Provide, furnish equip and maintain accommodation
The accommodation shall be rented, furnished, equipped and maintained by the Concessionaire, at all times for the duration of the Concession Period including extension period if any.
 - Survey Equipment
The Survey equipment and accessories shall be provided and maintained by the Concessionaire along with survey helpers and all consumable, at all times for the duration of the Concession Period including extension period if any.
 - Vehicles
The vehicles shall be provided with driver, fuel, maintenance, insurance, registration etc. by the Concessionaire at all times for the duration of the Concession Period including extension period if any.

3. LABORATORY FACILITIES WITH TESTING EQUIPMENT

The Concessionaire shall furnish the laboratory testing facility with testing equipment, services, supplies, attendants/helpers, furniture and its running maintenance cost for the tests to be conducted.

The Concessionaire shall also provide for the laboratory a vehicle with driver to be approved by the Independent Engineer for the sole use of the laboratory to transport testing equipment, testing samples and laboratory technicians, for carrying out inspection and testing on site throughout the same period.

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All the tests shall be executed according to AASHTO and ASTM and all required equipment for facilitation of the tests should be furnished in the lab with two sets of latest edition of prescribed standards (one to be placed in the laboratory and other for the Independent Engineer).

The number of vehicles, survey equipment, laboratory equipment, furniture for office/accommodation/laboratory will be finalized with the approval of the Independent Engineer.

4. TEMPORARY ROAD, TRAFFIC MANAGEMENT AND CONTROL, GENERAL PROTECTION

Layout plans showing the detailed proposals of temporary diversions to be carried out by the Concessionaire shall be submitted to the Independent Engineer / Implementing Agency and to concerned district police and civil agencies and local administration for their written approval 10 days before the implantation date.

Diversion must be constructed in advance of any interference within the existing carriageway/RoW and shall be maintained in accordance with the traffic load in condition satisfactory to the Independent Engineer.

5. LOCATION OF UTILITY SERVICES

Location and identification of all services, in consultation with relevant Utility service providers, companies whether above ground or below the ground shall be Concessionaire and its Contractor(s)' responsibility following transfer of that utility by Implementing Agency and providing the right of way to the Concessionaire, free from any encumbrances.

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SCHEDULE E – INSTALLATION COMPLETION SCHEDULE

Commencement Date	Within [•] days from the Effective Date
Anticipated start of installation	Commencement Date
Scheduled Installation Completion Date	As determined by Independent Auditor but in any event not exceeding [•] days following the Commencement Date

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SCHEDULE F – PROJECT SITE



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SCHEDULE G – LIST OF TESTS & COMPLETION TESTS

The Concessionaire shall furnish the laboratory testing facility with testing equipment, services, supplies, attendants/helper, furniture and its running and maintenance cost for the tests to be conducted. The Concessionaire shall also provide for the laboratory a vehicle with driver to be approved by the Independent Engineer for the sole use of the laboratory to transport testing equipment, testing samples and laboratory technicians, for carrying out inspection and testing on site throughout the same period.

All tests shall be executed as per the designated standard and all required equipment for facilitation of the tests should be furnished in the lab with two sets of latest edition of prescribed standards (one to be placed in the laboratory and other in the Independent Engineer office).

The Concessionaire should submit the list of tests to be carried out and their sample forms in the proposed methodology.

THE TESTS

A) LABORATORY TESTS

The Laboratory shall be equipped to perform the following tests:

SR. NO.	TESTS	AASHTO DESIGNATION
1	Dry preparation of soil samples	T-87
2	Soil Classification	M-145
3	Determination of Moisture Content	T-265
4	Atterberg Limits	T-89 & 90
5	Moisture density relationship (Modified Method)	T-180
6	C.B.R Test and swelling test	T-193
7	Relative Density Test	ASTM D4253, D4254
8	Sieve Analysis of Soils, aggregate and Mineral Filler	T-88, T-27 & T-37
9	Los Angeles Abrasion test of aggregates	T-96
10	Sand Equivalent	T-176
11	Soundness of aggregates	T-104
12	Asphalt Coating	T-195
13	Coating and stripping of Bitumen Aggregate	T-182
14	Specific Gravity & Absorption of Coarse Aggregate	T-85
15	Specific Gravity and Absorption of Fine Aggregate	T-84
16	Penetration of bitumen material	T-49
17	Amount of Passing No. 200 sieve	T-11
18	Quantitative Extraction of Bitumen from Mixtures	T-164
19	Gradation analysis of bitumen extracted aggregates	T-30

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20	Specific gravity of compacted bitumen mixture	T-166
SR. NO.	TESTS	AASHTO DESIGNATION
21	Marshall test and loss in stability	T-245
22	Maximum specific gravity of bitumen paving mixture	T-209
23	Air voids in compacted paving bitumen mix	T-269
24	Specific gravity of bitumen material	T-228
25	Softening point of bitumen (Ring and Ball method)	T-53
26	Sampling aggregates	T-2
27	Fineness Modulus	T-27
28	Organic impurities	T-21
29	Mortar Strength	T-71
30	Friable particles	T-112
31	Potential reactivity of carbonate rocks for concrete aggregates (rock-Cylinder method)	ASTM C-586
32	Unit weight of aggregates	T-19
33	Air content of freshly mixed concrete by volumetric method	T-196
34	Making and curing of concrete test specimens	T-126
35	Curing concrete compressive test specimens	T-23
36	Compressive strength of cylinder concrete specimens	T-22
37	Setting time and consistency of cement	T-131
38	Normal consistency of hydraulic cement	T-129

B) FIELD TESTS:

The following tests will be carried out for field control/spot checking purposes as the Works proceeds: -

SR. NO.	TEST	AASHTO DESIGNATION
1	In-plaCe density by Sand Cone Method	T-191
2	Sampling fresh concrete	T-141
3	Slump of Portland cement concrete	T-119
4	Sampling bituminous materials	T-40
5	Determining the temp. of bituminous paving mixtures	-
6	Determining Degree of Pavement Compaction by coring	T-230
7	Bulk specific gravity	T-166
8	Density of soil and soil aggregate by Nuclear methods	T-238
9	Moisture content of soil and soil aggregate by Nuclear method	T-239

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THE COMPLETION TESTS

Completion Tests shall mean the following final inspection and tests of the Toll Plazas, Weighbridges and ETTMS by the Independent Engineer to ensure that the same conforms to the Installation Requirements:

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SCHEDULE H – O&M REQUIREMENTS

1. OPERATION AND MAINTENANCE

- The Concessionaire is required to carry out Operations & Maintenance – O&M in respect of the Project in conformity with AASHTO standards and the Service Level requirements set out in this in this Schedule. The O&M Requirements are set out, *inter alia*, in Article 19 (*Operations and Maintenance*) and this **SCHEDULE H (O&M Requirements)** of the Concession Agreement.
- The general scope of Operations & Maintenance includes all services associated with the planning, management and delivery of the operations, maintenance and asset preservation activities to ensure compliance with AASHTO standards and with all performance measures set out in the Concession Agreement.

2. OPERATIONS ROLE

- The Concessionaire will ensure the smooth flow of vehicles and minimization of traffic delays and closures
- The Concessionaire will ensure the safety of commuters and will provide emergency support to commuters
- Safety vehicle, two trucks, ambulances, patrolling vehicles will be used by Concessionaire to ensure smooth operations of works
- The Concessionaire will ensure the administration, monitoring of conditions, traffic control, assessment of the need for load restriction, posting of warnings to vehicles, and signage
- The Concessionaire will ensure the Quality Management on a self-auditing basis, in conformity with AASHTO testing procedures
- Following Operation methodology should be followed by the Concessionaire:
 - Patrolling on three hour intervals, on 24/7/365 basis
 - Emergency & Rescue response system
 - Provision of emergency medical services/ambulance/clinic
 - Maintaining traffic sign maintenance data
 - Maintaining Cat eyes
 - Maintaining Road marking
 - Maintaining Culverts
 - Maintaining road

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- Maintaining weigh bridges
- Maintaining weight violations data
- Maintaining death/injuries data
- Preparing periodic report with peak hour flows and peak day flows and other statistics
- Maintaining operational crew & equipment for emergency maintenance
- Preparing and implementing education programs and campaigns on:
 - ☐ Road safety and customer safety
 - ☐ Customer response & comments
 - ☐ Customer awareness
 - ☐ Operational staff awareness
 - ☐ Incentives for fragment road users
 - ☐ Maintaining firefighting systems
- Ensuring that the following classes of Service Levels are maintained, as per the requirements set out in Section 5 (*Operational Performance Measures*) and Section 6 (*Management Performance Measures*) of this Schedule H (*O&M Requirements*), during the Operational Period:
 - Service Level Class A (the highest and normally applicable for multi-lane highways with high traffic volumes);
 - Service Level Class B (lower level which is normally applicable for roads and highways with medium traffic levels); and
 - Service Level Class C (normally applicable for lower-traffic roads of secondary importance).

3. MAINTENANCE ROLE

Concessionaire is responsible for maintaining the Concession Assets, including the Project Facilities, the Project Highway and the relating road pavement, structures, pavement markings, drainage infrastructure, electrical systems, mechanical installations, closed landfill sites, landscaping, inspections, periodic repairs, traffic maintenance and emergency maintenance mentioned as under.

a) Annual/Routine Maintenance (From year 3 of Operations phase)

- Isolated holes, Pot holes, fold pavements, skin patch, widening roads in asphaltic layer should immediately be repaired

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- Any damages to side barrier due to any accident or other causes should immediately be reported periodically
- Road Marking Maintenance
- Cat's Eyes Maintenance
- Traffic Sign Maintenance
- Minor maintenance due to damage caused by Road accidents

b) Periodic Maintenance

- Over-lays (two overlays, first after [●] years of Installation Completion Date and second on [●] year of first overlay)
- Potholes Maintenance
- Guard Rail Maintenance
- Shoulder Maintenance
- International Road Roughness Test at selected sections identified by the Independent Engineer should be carried out at every [●] years of operation and any portion of pavement found failed should be maintained as per AASHTO standards with approval from Independent Engineer. All the formalities will be checked for their stability and smooth operation.

4. OPERATION AND MAINTENANCE CRITERIA

4.1 Operation Requirements - General Criteria

The Concessionaire shall be responsible for the efficient operation of the Project Highway, the recovery and removal of broken-down vehicles, the removal of debris and spillage from the Project Highway, the provision of basic services to Users of the Project Highway and all toll collection responsibilities. The Concessionaire will be required to liaise closely with police and the emergency services to ensure that performance and safety standards are met at all times.

The Concessionaire shall ensure that the Project Highway is operated and maintained in a manner that Service Levels are complied with. A series of Operational Performance Measures and Management Performance Measures are set out that must be met at all times by the Concessionaire to maintain Service Levels. The O&M Manual shall set out procedures whereby these standards – or higher performance standards as may be agreed upon – are to be met.

The Project Highway shall be divided into distinct classes for the purpose of applying both Operational Performance Measures and Management Performance Measures. The classification shall be as follows:

Class	Description
A	Dual Carriageway Minimum 24-ft carriageway either side
B	Collectors Road with 20-24ft Carriageway Asphaltic Surface with or without Treated Shoulders
C	10-12ft Carriageway Asphaltic Surface.

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5. OPERATIONAL PERFORMANCE MEASURES (OPM)

The “**Operational Performance Measures**” or “**OPMs**” shall be utilised as a set of performance criteria that pertain to the physical condition of the roads and shall be used to evaluate the Concessionaire’s compliance with the Service Levels.

The Concessionaire shall monitor the Operational Performance Measures continuously and measure them on a monthly basis in accordance with this Section 5 of this Schedule H. The results of such monitoring shall be expressed and reported as either “in compliance” or “not in compliance.” If the Concessionaire is found to be “not in compliance” with any of the Operational Performance Measures, such non-compliance shall remain recorded until it is fully remedied by the Concessionaire to the satisfaction of the Independent Engineer and the Implementing Agency.

The Concessionaire shall comply with the following OPMs:

1.	OPM-1:	<i>Usability (availability of each lane-km for use by traffic)</i>
2.	OPM-2:	<i>Pavement defects (potholes, rutting, raveling, cracking in pavement, edge break, etc.)</i>
3.	OPM-3:	<i>Pavement Roughness</i>
4.	OPM-4:	<i>Shoulder and Verge Maintenance</i>
5.	OPM-5:	<i>Drainage</i>
6.	OPM-6:	<i>Bridges, Structures and Embankments</i>
7.	OPM-7:	<i>Incident Response and Emergency Works</i>
8.	OPM-8:	<i>Road signs, line-markings and road furniture</i>
9.	OPM-9:	<i>Vegetation control</i>
10.	OPM-10:	<i>Performance of the Concessionaire’s Self Control Unit (SCU)</i>

5.1 OPM-1: Usability

The Concessionaire must ensure that the Project Highway, including all traffic lanes and other lanes, is open to traffic and free of interruptions at all times. Permitted exceptions are:

- lane closures following serious traffic accidents (not exceeding four (4) hours after release of the accident site by traffic police);
- necessary restrictions on traffic flow for the Concessionaire to carry out scheduled works on the Project Site;
- natural disasters;
- lane or road closures as a result of direct instructions of the traffic police or other relevant authorities, not attributable to the Concessionaire; and
- any traffic restriction which is not caused by an act or omission of the Concessionaire.

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Method of Inspection: By driving on the Project Highway in a normal manner, utilizing a vehicle type that is similar to the vehicles typically used by Users. This requirement is not complied with if one or several traffic lanes of the Project Highway are partially or fully interrupted or blocked at any point. This requirement is complied with if the Project Highway, including all travel and turning lanes, is fully open to traffic and usable as designed.

Payment reduction for non-compliance if all travel lanes of the Project Highway are interrupted: one percent (1%) of the monthly lump-sum for the full length of the entire Project Highway that is affected (not only of the specific point or length where the obstruction is located), for each two (2) hour period of non-compliance between any two interchanges/intersections.

Payment reduction for non-compliance if one or several travel lanes are interrupted, but at least one lane remains open in each direction: one half of one percent (0.5%) of the monthly lump-sum for the entire length of the Project Highway that is affected, for each two (2) hour period of non-compliance between any two interchanges/interchanges.

5.2 OPM-2: Pavement Defects

OPM-2.1: Potholes

The different values of the performance indicators for the corresponding Service Levels are given in the table below:

	Service Levels		
	Class C	Class B	Class A
Potholes (Max. allowed diameter of any single pothole in cm)	30	30	15
Potholes (Max. number in any one (1) km section, with a diameter greater than 10 cm)	10	6	3
Potholes (Max. allowed depth of any single pothole, in cm)	4	3	2
Grace Period granted after First-Day Payment Deduction			
Grace Period in days*	28*	14*	7*

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*For OPM-2.1, the Grace Period refers to the time allowed for technically appropriate repairs, such as patching, to be completed in accordance with the requirements of the O&M Manual or Good Industry Practice. However, as potholes pose a risk to Project Highway safety, the Concessionaire is required to temporarily fill potholes using cold mix or other materials approved by the Independent Engineer within 24 hours of their detection.

Frequency of Inspection: Daily.

Method of Inspection: By visual inspection with video/image backup. Measuring shall be carried out using a tape measure, ruler or straightedge, transparent ruler or calibrated steel probe.

Payment reduction for non-compliance: ten percent (10%) of the monthly lump-sum rate for each one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.3 OPM-2.2: Patching

Patching is the mandatory repair method to be used for different kinds of pavement defects that may be detected on the Project Highway.

Table: Patching for all Service Levels

Patches shall be in the manners including but not limited to the following: Patches (i) shall be square or rectangular, (ii) must have squared edges cut with a blade or a similar tool, (iii) shall be level with the surrounding pavement, (iv) shall be made using materials similar to those used for the surrounding pavement, and (v) shall not have cracks wider than three (3) mm.
Grace Period granted after First-Day Deduction: 28 days for permanent repair, but 24 hour for temporary repair.
Frequency of inspection: Monthly

Method of Inspection: Patches shall have a smooth and regular surface, flush with the surrounding road surface. When checking with a straightedge extending across the surface of the patch in any direction, there shall be no deviation from the lower edge of the straightedge of more than 5 mm. Methods and equipment used for inspection:

- Visual inspection with video/image backup (for detection of shape and materials used);
- Straightedge (for patch evenness);
- Ruler (to check if patch is level with surrounding pavement); and
- Small transparent ruler (for measuring cracks).

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Payment reduction for non-compliance: Ten percent (10%) of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.4 OPM-2.3: Isolated cracking in pavement

An isolated crack is defined as a linear opening in the pavement with a width of more than three (3) mm, such as longitudinal cracks, transverse cracks and edge cracks.

The Concessionaire is obliged to seal all linear isolated cracks wider than three (3) mm. Sealing must be preceded by routing of the crack (if needed) and cleaning to ensure adherence of sealant material. The seal must ensure that water cannot enter the road structure through the crack.

Linear isolated cracks more than 3 mm wide must not exist on the pavement.
Grace Period for repairs, after First Day Payment Deduction: 14 days
Frequency of inspection: Monthly

Method of Inspection: The Laser Crack Measurement System or crack widths are measured with a small transparent ruler.

Payment reduction for non-compliance: 0.5% percent of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.5 OPM-2.4: Multiple cracks in the pavement

OPM 2.4 applies in cases of multiple visible cracks (such as alligator cracks, block cracking or cracks crossing each other). For multiple cracks, the cracked area is equivalent to a square or rectangle, parallel to the traffic lanes, which fully encloses the cracks, and where the closest crack is at least 0.25 m away from the sides of the square.

The cracked areas shall not exceed ten (10) percent of any 50-meter section of road. Cracked areas exceeding this threshold must be repaired, with a repair method proposed by the Concessionaire and approved by the Independent Engineer.

The repair methods that may be used are (i) patching, with or without repair of underlying pavement layers, (ii) applying a seal coat to the entire cracked area or (iii) sealing of the individual cracks. All repair methods must ensure that water cannot enter the road structure through the repaired area.

For any 50-meter section of the pavement, the cracked area shall not be more than ten (10) percent of the pavement surface. Repairs must be performed as per the requirements.
Grace Period for repairs, after First Day Payment Deduction: 28 days

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Frequency of inspection: Monthly

Method of Inspection: Laser Crack Measuring System or detection of multiple cracks by visual inspection or analysis of video images along with video/image backup. Measurement of cracked areas by measuring tape, handheld measuring wheels or other appropriate measuring devices. The “cracked area” is equivalent to a square or rectangular area, parallel to the traffic lanes, which fully encloses the cracked area.

Payment reduction for non-compliance: ten percent (10%) of the monthly lump-sum rate for one km, to be applied for each one-km section in which a non-compliance exists and for each day during which the non-compliance persists.

5.6 OPM 2.5: Cleanliness of the pavement, shoulders and right-of-way

Cleanliness refers to the absence of soil, debris, trash, rubbish, dead animals and other such objects. The terms “cleanliness” and “absence” are defined further below for the purposes of the contract.

The requirement is that the road and shoulder surface must always be “clean”.

Also, debris, trash, rubbish and other objects, including dead animals, must be absent from the Right-of-Way of the road at least up to 20 meters away from the edge of the pavement on both sides of the road, unless otherwise specified by the Independent Engineer.

	Service Level (Grace Period for removal, in days)		
	Class C	Class B	Class A
Cleanliness of the pavement surface and shoulders when unclean conditions present a safety risk .	To be cleaned during patrol. No Grace Period.	To be cleaned during patrol. No Grace Period.	To be cleaned during patrol. No Grace Period.
Cleanliness of the pavement surface and shoulders when there are no safety risks	14	7	3
<i>Absence</i> of trash/rubbish from the Project Highway right-of-way , outside the pavement and shoulder surface	30	30	14

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Frequency of inspection: Daily

Method of Inspection: Visual inspection.

Payment reduction for non-compliance: Five percent (5%) of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.7 OPM 2.6: Rutting:

There are two performance criteria for rutting: (i) Rutting shall not exceed the defined maximum tolerable depth at any point along any one-km road section; and (ii) Rutting of more than 75% of the maximum tolerable depth shall not be present for more than the maximum tolerable percentage of length within any one-km road section. Different levels are set for roads with one traffic lane in each direction (single carriageway) and for multiple carriageway roads and highways.

[Note: For areas with high rainfall, the tolerances may need to be lower to reduce the risk of aquaplaning with the approval of IE.]

Frequency of inspection: Daily	Service Levels		
	Class C	Class B	Class A
Max. allowed rutting depth (mm) – for multi-lane highways	30	25	20
Max. allowed rutting depth (mm) – single carriageway roads	35	25	20
Max. allowed rutting % of any km length)	≤ 10	≤ 10	≤ 5
Grace Period for repairs, after First Day Payment Deduction:			
Rutting (Grace Period in days)	56	56	30

Method of Inspection: Measured with one straightedge & ruler and one calibrated wedge. Straightedge of three meters length placed horizontally and perpendicularly across lane. Rut depth is measured as the space between the lower edge of straightedge and the lowest point of rut, using a small ruler / calibrated wedge with scale in mm.

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Payment reduction for non-compliance: 5% percent of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.8 OPM 2.7: Ravelling/ Stripping of pavements

Ravelled pavement areas must not exist for roads at Service Level A. For Service Levels B and C, the maximum surface area of ravelling within any continuous one-km centreline length shall be less than one percent (1%) and two percent (2%) respectively.

Service Level A- Ravelled areas must not exist at all.
Service Level B - Maximum tolerable Ravelled areas: two percent (2%) of surface in each one km section of road.
Service Level C - Maximum tolerable Ravelled areas: four percent (4%) of surface in each one km section of road.
Grace Period for repairs, after First Day Deduction: 56 days
Frequency of inspection: Monthly

Method of Inspection: Detection of Ravelling by visual inspection with video/image backup.

Measurement of ravelled areas by measuring tape, handheld measuring wheels or other appropriate measuring devices. The “ravelled area” is equivalent to a square or rectangular area, parallel to the traffic lanes, which fully encloses the ravelling.

Payment reduction for non-compliance: 05%of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.9 OPM 2.8: Loose pavement edges

Pavement edges, for all Service Levels

There shall not be loose pavement edges, or pieces of pavement breaking off at the edges. A one-km section is non-compliant if pavement edges are loose or broken off for a combined length of more than 5 meters and width 2 cm at any location.
Grace Period for repairs, after First Day Deductions: 30 days.
Frequency of inspection: Monthly.

Method of Inspection: Edge dropout by straight edge of 3 meters and calibrated wedge or ruler, Visual inspection with video/image backup.

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Payment reduction for non-compliance: five percent (5%) of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.10 OPM 2.9: Pavement roughness and skid

Maximum tolerable pavement roughness (measured in m/km).

Frequency of inspection: Bi-annually	Service Levels		
	Class C	Class B	Class A
Max. tolerable roughness (IRI) – (m/km) single carriageway (1-2-lane) roads	≤5	≤4	≤3.2
Max. tolerable roughness (IRI) – (m/km) Dual or multiple Carriageway highways: Left- most traffic lane	≤6	≤4.8	≤4
Max. tolerable Roughness (IRI) – (m/km) Dual or multiple Carriageway highways: Other traffic lanes	≤4.5	≤3.8	≤3.2
Pavement Condition Index	2	2.1	2.5
Grace Period for Repairs, after First Day Deduction:			
Roughness (Grace Period in days) after First Day Deduction	180	180	120
By using Class I Profilometer SCRIM (Sideway force Coefficient Routine Investigation Machine or equivalent or Road Roid Software)			

Method of Inspection: The pavement roughness for each traffic lane of the Project Highway shall be measured using the methods described in the O&M Manual or as advised by the Independent Engineer or Road Roid Software.

Payment reduction for non-compliance: One percent (1%) of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.11 OPM-4 Embankment, slope, shoulder and verge Maintenance

OPM-4.1: Paved shoulders

The shoulder is defined as the width from the edge of the paved traffic lane to the end of the verge or the start of the side drain. The shoulder must be maintained (i) to support the pavement

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edge, (ii) to allow for the occasional use by traffic, (iii) to ensure its function as the drainage path for water runoff from the carriageway and (iv) to ensure the elimination of an edge drop off at the edge of the sealed pavement.

The criteria of OPM-2 (Pavement Defects) also apply for paved shoulders. In addition, paved shoulders shall always be adequately sealed to prevent water penetration, without deformations or erosions in excess of 15mm under a 3-meter straightedge in any direction

Grace Period for Repairs granted after First Day Deduction: 56 days

Method of Inspection: Visual inspection with video/image backup to detect defects. Straightedge and calibrated wedge / ruler (for measuring evenness).

Payment reduction for non-compliance: Five percent (5%) of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

OPM-4: Shoulder & Verge Maintenance	Service Levels		
	Class C	Class B	Class A
Max. allowed shoulder drop: Height of pavement vs. Height of Shoulder (difference in mm), over any lengths of 10 meters or more	40	35	25
Max. allowed shoulder rise (in mm), over any lengths of 10 meters or more	4	2	2
Grace Period for Repairs granted after First Day Deduction: 56 days			

OPM-4.2: Unpaved Shoulders

Table: Unpaved shoulder for all Service Levels

Unpaved (gravel) shoulders shall be maintained compacted and graded to a smooth condition across the full width, with no depression or hump in excess of 75mm under a 3-meter straightedge in any direction.
Grace Period for repairs granted after First Day Deduction: 60 days

Method of Inspection: Visual inspection with video/image backup to detect defects. Straightedge and calibrated / ruler (for measuring evenness).

Payment reduction for non-compliance: Five percent (5%) of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

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5.12 OPM-5: Drainage

Table: Drainage for all Service Levels

Frequency of inspection: 4 times in a year (specifically before and after rainy season).
The Concessionaire must ensure that all drainage elements are structurally sound, clean and without obstructions (due to sediment or debris) which may reduce their normal cross-section and impede the free flow of water. The basic principle used to determine the cleanliness of drainage structures or devices is “the percentage of the theoretical cross-section of the structure or device which is obstructed”. The obstructed percentage shall not exceed 15% of the theoretical cross-section. Also, erosion caused by runoff from drainage elements must be mitigated in order for (i) the structure itself to be protected against future structural failure and (ii) to avoid any significant damage and erosion to adjacent areas. Drainage elements include (but are not limited to) manholes, sumps, slot drains, catch pits, soak holes, flumes, outlets to subsoil drains, and access way/driveway culverts) and other drainage structures such as culverts (pipes and boxes), side drains.
Recommended Remedial measures: Cleaning silt up soils and debris in culvert barrel after rainy season, removal of bushes and vegetation, U/s of barrel, under barrel and D/s of barrel before rainy season. 15 days before onset of monsoon and within 30 days after end of rainy season.
Grace Period for cleaning and/or repairs granted after First Day Deduction: 30 days

Method of Inspection: Inspection is done visually to detect obstructions or defects. The percentage of obstruction is calculated for each type of drainage element, based on the measurement or estimate of obstructed cross-section areas. Compliance requires that drainage fulfils the requirements stated above. Determination of structural soundness is based solely on the judgment of the Independent Engineer.

Payment reduction for non-compliance: Five percent (5%) of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.13 OPM-6: Bridges, Structures and Embankments

The Concessionaire shall be responsible for the routine maintenance of all bridges, structures, and embankments along the roads and road sections of the Project Highway. This includes ensuring the proper functioning of structures, such as maintaining the paint on metallic structures (if not galvanized), the condition of road surfaces on structures, and the presence and upkeep of guardrails, to provide safety and comfort for Users traveling at normal speeds.

The Concessionaire must immediately notify the Independent Engineer of any conditions that may compromise the structural integrity of any structure on the Project Highway. However, the reconstruction, structural repair and improvement of bridges (including culverts, retaining walls and embankments) is included in the Concessionaire’s obligations, unless specified elsewhere in the Agreement.

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OPM-6.1 Bridges and structures

Item	Requirements (for all Service Levels)	Measurement/ Detection and nd frequency of inspection	Grace Period granted after First Day Deduction
Bridges and structures generally	Road surface, kerbs, guard rails, pedestrian hand railing and barriers must be in sound condition. Guardrails on bridges and access ramps must be present, painted or galvanized, and not deformed. There shall be no erosion or undermining of bridges and structures.	Visual inspection with video/image backup Monthly Inspection	Damages and defects must be repaired within (28) days.
Steel or other metal parts and structures	All metal parts of the overall structure shall be painted or otherwise protected and free of corrosion. All the corroded reinforcement shall need to be thoroughly cleaned from rusting and applied with anti-corrosive coating before carrying out the repairs to affected Concrete portion with 3poxy mortar/concrete	Visual inspection with video/image backup By-Annually Inspection	Any corrosion must be cleaned and over-painted using a paint system approved by the Independent Engineer, within (28) days.
Concrete structures (minor or non-structural repairs)	Beams and all other structural parts must be in good conditions, free of spalling/delamination and fully functional. The cracks wider than 0.30 mm shall not be more than one meter in length. There will be no rainwater seepage through deck slab	Visual inspection with video/image backup Quarterly inspection using mobile bridge inspection unit between 15 to 30m	Grouting with epoxy mortar, investigating causes for cracker development and carry out necessary rehabilitation within 48 hours. Structural damage to be notified to the Independent Engineer same day /immediately. Proposals for rectification submitted to The Independent Engineer within fourteen (14) days.
Retaining walls	Concessionaire must ensure presence and adequate condition of retaining walls and their drainage.	Visual inspection with video/image backup	Damages and defects must be repaired within twenty-eight (28) days.

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Riverbeds	Concessionaire must ensure free flow of water under bridges and through culverts, and a clear, unobstructed channel at least equal to the structure opening for at least 100 meters upstream and downstream. Concessionaire must maintain design clearance under bridge. The Concessionaire shall take all reasonable measures to control erosion around bridge abutments and piers.	Visual inspection with video/image backup	Causes for non-compliance must be eliminated within (56) days after water has sufficiently receded to allow minimum working conditions.
Level of expansion joints	No bump shall exist. Moreover, the upper surface of the pavement shall not be more than 5 mm below the upper surface of the expansion joint, measured with a 1m straightedge put on top of the expansion joint in the direction of the road.	Straightedge and ruler measurement Daily inspection	Damages and defects must be repaired within (30) days.
Expansion joints	Expansion joints shall be operating properly be watertight if designed to be so, without any loose parts or visible wear and tear. The new expansion joint should have the same or better specifications as compared with the existing expansion joint.	Visual inspection with video/image backup	Temporary replacement of a non-compliant joint part with cold sand-asphalt must be made within (3) days. Damages and defects must be repaired within (28) days.
Leakage in expansion joints	No damage to elastomeric sealant compound in strip seal expansion joint, no leakage of rain water through expansion joint in case of buried and asphalt plug and copper strip joint	Quarterly inspection using mobile bridge inspection unit	Replace of seal in expansion joint within 15 days
Debris and dust in strip seal expansion joint	No dust or debris in expansion joint gap.	Monthly inspection using mobile bridge inspection unit	cleaning of expansion joint gaps thoroughly within 7 days
Drainage spouts	No down take pipe missing/broken below soffit of the deck slab. No silt, debris, clogging of drainage spout collection chamber.	Monthly inspection using mobile bridge inspection unit	Cleaning of drainage spouts thoroughly Replacement of missing/broken down take pipes with a minimum pipe extension of 500mm below soffit of slab. Providing sealant around the drainage spout if any leakages observed

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			Within 3 days
Bridge Substructure Bearings	Delamination of rearing enforcement not more than 5%, cracking or tearing of rubber not more than 2 location per side, no rupture of reinforcement or rubber	Bi-Annually inspection using mobile bridge inspection unit	In case of failure of even one bearing or my pier/abutment, shall be bearings on that pier/abutment shall be replaced, in order to get uniform load transfer on to bearings Within 3 months
Bridge Foundations; Scouring around foundations	Scouring shall not be lower than maximum scour level for the bridge	2 times in a year (before and after rainy season) Condition survey) and Visual inspection with video/image backup using Mobile Bridge Inspection Unit. in case of doubt, use Underwater camera for inspection of deep wells in major Rivers.	Suitable protection works around pier/abutment 30 days
Suitable protection works around pier /abutment	Damaged of rough stone apron or bank revetment not more than 3 sq.m, damage to solid apron (concrete apron) not more than one sq.m	Using mobile bridge inspection unit	30 days after defect observation or 2 weeks before onset of rainy season whichever is earlier.
Note: Any Structure during the entire Concession Period which is found that does not comply with all requirements of this Table will be prepared, rehabilitated or even reconstructed under the scope of the concessionaire.			

Method of Inspection: Visual inspection with video/image backup using mobile bridge inspection unit will be undertaken as part of the formal and informal inspections. Bridges, structures and other items listed in the table above will be checked during inspections at points selected by the Independent Engineer based on visual appearance. The Independent Engineer shall be the sole judge of compliance. If a specified criterion is not met, the one-kilometre section in which the defect occurs will be judged non-compliant.

Payment reduction for non-compliance: Ten percent (10%) of the monthly lump-sum rate for one km, to be applied for the one km section where the non-compliant bridge, structure or item is located, for each day during which the non-compliance persists.

OPM-6.2 Embankments, Slopes and Retaining walls

The Concessionaire shall be responsible for the maintenance of all embankments, slopes, and existing retaining walls along the Project Highway. The Concessionaire shall ensure that all embankments and slopes shall be kept stable, well compacted, and free from deformations or

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erosion at all times. All existing retaining walls and stabilization measures shall be maintained in a stable and fully operational condition.

The Concessionaire's routine maintenance obligations shall include routine maintenance, stabilization, and preventive measures, as well as minor repairs of slopes and retaining walls. The Concessionaire shall conduct regular inspections of slopes and promptly notify the Independent Engineer upon detection of any risk of slope failure requiring major rehabilitation or Emergency Works, along with a detailed proposal of remedial measures.

The Concessionaire shall comply with the following performance measures:

Table: Embankment and Slopes, for all Service Levels

Item	Service Level (applied to all Service Levels)	Measurement/ Detection	Grace Period granted after First Day Deduction
Cut and Embankment slopes	Shall be stable and without deformations and erosions.	Visual inspection with video/image backup	Repairs must be completed within (28) days after the detection of the defect.
Retaining walls	Concessionaire must ensure presence and adequate condition of retaining walls and their drainage.	Visual inspection with video/image backup	Damages and defects must be repaired within (28) days.
Removal of slides	Fallen slope material must be removed immediately.	Visual inspection with video/image backup for fallen slope material on shoulders or pavement	Fallen slope material must be removed. For quantities below 50 m³: from pavement within 12 hours after detection From shoulders and side drains within 48 hours after detection. Above 50 m³: from pavement within 24 hours after detection from shoulders and side drains within seven (7) days after detection

Method of Inspection: The visual inspection with video/image backup of cut and fill slopes and of retaining walls will be undertaken as part of the inspections of the Project Highway. Compliance with the criteria for slopes and retaining walls will be based on visual appearance. The Independent Engineer shall be the sole judge of compliance with performance measures. If a

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specified criterion is not met, the one-kilometre section in which the deficit occurs will be judged non-compliant.

Payment reduction for non-compliance: Ten percent (10%) of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.14 OPM-7: Incident Response and Emergency Works

An **Incident response** is defined as:

- a) The response to all storm damage and to other weather-related incidents;
- b) Carrying out special road patrols in advance of and during
 - Announced storms and other extreme weather-related events;
 - Major public events on road or adjacent to the Project Highway;
- c) Responding to accidents, incidents and other events that may affect:
 - the safety of Users or people adjacent to the Project Highway;
 - the safety and integrity of the Project Highway.

Incident response includes:

- Assisting police and other emergency service providers at accident sites with traffic management, detours and site clean-up; or clean-up of the accident debris including oil, fuel or other spillages, sufficient to maintain the safe passage of vehicles and pedestrians.
- Repairing any damage caused by the accident or incident and reinstating the road.
- Attending any other incident that may affect User safety, Project Highway availability and integrity, and completing temporary works to make the site safe. This includes activities such as eliminating obstructions to the free flow of traffic and removing unauthorized deposits of materials and abandoned vehicles from the road and its Right-of-Way.
- During wet weather the Concessionaire shall pay particular attention to sections of the Project Highway which are likely to be inundated by water. The Concessionaire shall provide signs on inundated sections of road, clear waterways, pit entrances and culverts of obstructions, and divert water from the roadway when possible and necessary.
- The Concessionaire shall remove all blockages from bridges and culverts immediately after water levels permit such work to proceed. In case of flood, the highest level reached by the water on both sides of the road shall be recorded and informed the Independent Engineer within (07) days for his advice.

Response Time: This is the time within which the Concessionaire must be on site with at least basic equipment for the clean-up, traffic control and site securing, after becoming

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aware or receiving notification of an incident. The Concessionaire is required to record and report his own conformance with the Response Times. Where the Independent Engineer becomes aware of a failure to achieve the response time requirement, a non-conformance will be recorded by the Independent Engineer unless the Concessionaire can provide clear and verifiable evidence to be acceptable by the Independent Engineer.

The term **Time of Notification** is defined as the time when the Concessionaire is advised of the incident, accident or emergency; by the Independent Engineer/ Implementing Agency or by the Concessionaire's personnel, or by a third party such as the police or a member of the public.

Supplementary Resources. The Implementing Agency reserves the right to engage additional resources (chargeable to the Concessionaire) to supplement those provided by the Concessionaire if the Concessionaire is unable to provide adequate resources to manage the incident or emergency work.

Temporary Warning Signage. Where required, the Concessionaire shall provide and install all necessary temporary warning signage, cones, high visibility netting etc.

Incident Response Site Boundaries. In certain circumstances during an incident the Concessionaire may be required to undertake work outside the Project Site, or another Concessionaire may be required to undertake work within the Project Site. In either circumstance, undertaking of such work by a third party shall not constitute a breach of this Agreement. In such instances of working outside Project Site, the provisions of the Agreement shall nevertheless apply. The Independent Engineer/Implementing Agency/ GoP will confirm in writing any specific cross boundary protocols that may apply during large scale emergency events.

Incident Response - prior programming requirements. To facilitate conformance with the required response times, the Concessionaire shall identify in advance all such high-risk locations or road sections within the Project Highway and the travel times required from the nearest Concessionaire's camp. The Concessionaire shall have developed and instituted adequate systems and measures to ensure that timely response to any incident is achievable. The Concessionaire shall also develop and maintain an up to date a list of relevant contact numbers for the local police, hospitals, and utility providers. This information shall be readily available to the Concessionaire's personnel and to the Independent Engineer at all times and included in the Concessionaire's Quality Assurance Plan.

Incident and Emergency Response Activities - Response Times

Maximum response time taken (from the Time of Notification to the Concessionaire):

- to contact and inform appropriate authorities: one (1) hour
- to secure the site: four (4) hours
- remove materials, vehicles and any other obstructions etc. to re-establish normal traffic

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flow: twelve (12) hours , unless the volume of materials obstructing the road is such that it cannot be reasonably be expected that the Concessionaire can remove them within 12 hours, with the Independent Engineer being the sole judge if this condition is applicable.

Method of inspection: The incident and emergency response times shall be assessed based on communication records and written confirmations of actions taken by the Concessionaire, as submitted to the Independent Engineer or Implementing Agency, in writing, or through on-site observations by the Independent Engineer/Implementing Agency or others. The resources deployed by the Concessionaire to manage emergencies and incidents must be deemed satisfactory by the Independent Engineer/Implementing Agency.

Payment reduction for non-compliance: A payment reduction of PKR 100,000/- is to be applied for each case of non-compliance.

5.15 OPM-8: Road signs, line-markings and road furniture

OPM-8.1: Signaling, Lighting and Road Safety

The Concessionaire is responsible for ensuring that all horizontal and vertical signaling, as well as lighting, traffic lights, electrotechnical equipment, guardrails and road safety devices are fully functional and comply with the Applicable Specifications and Good Industry Practice.

Signalling, lighting and road safety devices for all Service Levels:

Item	Service Level (applied to all Service Levels)	Measurement/ Detection	Grace Period granted after First Day Deduction
Vertical signs (Information signs, warning signs, traffic rule signs, etc.)	Signal has to be present, complete, clean, legible, structurally sound and clearly visible day and night.	Visual inspection with video/image backup	Absent* or defect signs must be replaced within fourteen (14) days.
Horizontal Road markings	Have to be present, clearly legible during day and night, and firmly attached to the pavement.	Visual inspection with video/image backup with video/image backup	Non-compliant parts must be repainted or replaced within (30) days.

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Delineators and additional road furniture	Have to be present, clean, structurally sound, firmly attached to the surface and clearly visible day and night.	Visual inspection with video/image backup with video/image backup	Non-compliant items must be replaced within (30) days.
Mileposts, guidance posts and similar markers	Have to be present, visible, complete, clean, legible and structurally sound; surface painted or otherwise covered.	Visual inspection with video/image backup with video/image backup	Absent* or defect elements must be replaced within (30) days.
Guardrails	Have to be present, clean, without any structural damage, without corrosion.	Visual inspection with video/image backup with video/image backup	Damaged guardrails must be replaced within (30) days
Road and Street lighting, traffic lights and lighted signs	The Concessionaire is responsible that all installed street and road lighting, and traffic lights, including power supply systems (cables, transformers, switching equipment, etc.) is functional at all times.	Visual inspection with video/image backup with video/image backup	Non-functioning lights and equipment shall be made functional within (14) days

* **“Absence”** refers to the signs and elements that are either listed on the initial road inventory or that have been installed by the Concessionaire as scope of work.

Road Markings: Road markings must include all carriageway markings required by the Applicable Specifications, including edge lines, centre lines, double centre lines, etc. together with markings on intersections (give way line, side road centre line, pedestrian crossings, etc.), hazardous locations, parking and the markings on kerbs. All road marking should conform to the design standards stated above. If it is not covered, the provisions of the Program of Performance are to be applied.

Unless specified otherwise, the use of thermoplastic reflective road marking materials is mandatory for all lines in the primary road network and the central line of the secondary road network.

For roads or road sections scheduled for pavement Rehabilitation Works to be completed within 24 months after the Commencement Date, other reflective road marking paint can be used until the Rehabilitation Works are completed. For all other road markings, the relevant parts of the O&M Manual must be respected.

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Road Signs: Unless otherwise specified in the O&M Manual, road signs to be installed by the Concessionaire shall conform to the design standards defined in the Program of Performance. A sign must be considered ineffective when it can no longer be detected or easily read by day and night from a vehicle travelling at the average speed of traffic on the road on which the sign is placed, or when the luminosity is 70% of the minimum values stated in the relevant standards. Ineffective signs must be replaced. For all roads with posted speed ≤ 80 km/h medium size signs will be used and for posted speed > 80 km/h large size signs shall be used.

Distance Marker Posts (mileposts): The Concessionaire's bid for Maintenance Services must allow for the provision and maintenance of distance marker posts on one side of the project road (at least one post per km) unless otherwise indicated in the Concession Agreement. The design and specifications of distance marker posts must conform to the relevant standards. Posts that are absent at the beginning of the Agreement must be installed within the first 12 months of execution of the Agreement.

Method of measurement: Visual inspection with video/image backup. The Independent Engineer shall be the sole judge as to the compliance with the requirements.

Payment reduction for non-compliance: Ten percent (10%) of the monthly lump-sum rate for one km, to be applied for each case of non-compliance and for each day during which the non-compliance persists. If there are multiple cases of non-compliance on a one-km section, the payment reduction shall be applied separately for each case of non-compliance.

OPM-8.2: Retro-reflectivity of Road Signs and Markings

Table: Retro-reflectivity of Road Signs, Road Markings and Road Safety devices - all Service Levels

Item	Service Level (applied to all Service Levels)	Measurement/ Detection	Grace Period granted after "First- day" payment deduction
Vertical signs (Information signs, warning signs, traffic rule signs, etc.)	Reflectivity $>80\%$ of the values in the relevant design standard	Visual inspection with video/image backup with video/image backup	Non-compliant items must be replaced within fourteen (14) days.
Horizontal road markings	Luminance (Qd) or Retro reflectivity (RL) is greater than or equal to 80 mcd/m ² /lx	Visual inspection with video/image backup with video/image backup	If non-compliant, must be repainted or replaced within fifty-six (56) days.
Delineators and additional road furniture	Retro reflective items must have retained at least 80% of their original reflectivity.	Visual inspection with video/image backup with video/image backup	Non-compliant items must be replaced within twenty-eight (28) days.

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Mileposts, guidance posts and similar markers	Retro reflective parts must have retained at least 70% of their original reflectivity.	Visual inspection with video/image backup with video/image backup	Absent or defect reflective elements must be replaced Fifty-Six (56) days.

Method of measurement: Inspection with testing apparatus. The Illumination level shall be measured with Luxmeter .

Payment reduction for non-compliance: Five percent (5%) of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

5.16 OPM 9: Vegetation control, Green Environment, Plantation of Trees, Horticulture

OPM-9.1: Vegetation Control

Vegetation growth is to be limited to the heights, at the locations and with the restrictions advice by the Independent Engineer. However, the Sightline shall be free from obstruction by vegetation. And furthermore, the drainage structure shall also be free from the vegetation by all means.

The Plantation: The Vegetation/Plantation shall comply with the requirement and as desired by the Implementing Agency, Punjab EPA, or instructions issued from time to time.

Table: Vegetation growth control for all Service Levels

Type	Maximum permitted height (cm)	Applied to:
1	maximum average permitted height is 25 cm	Urban highway shoulders, medians, traffic islands and highway verges, grass in rest areas (including around rest area furniture).
2	maximum average permitted height is 40 cm	Non-urban roads and large vegetated areas, including surface water channels with longitudinal gradient $\geq 3\%$.
3	maximum average permitted height is 25 cm	Vegetation control around: Edge marker posts Signposts Bridge end and culvert markers Guardrails Sight rails Lighting Columns Bridge abutments

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4	Vegetation-free or near Vegetation-free	Applies to vegetation control around: Culvert ends Culvert headwalls Side drains Culvert waterways Surface water channels with gradient < 3% (except where nominated for mowing in the specific contract requirements) Weigh pits Kerb and channel Lined channels All sealed surfaces Metalled shoulders Bridge decks.
5	Growth must be removed when it encroaches into the Vegetation-free Zone from the side or top.	Applies to vegetation control in the envelope (grey shaded area in Figure below), including trees, scrub or branches hanging into the Vegetation Free Zone (within 0.5m of the line of the edge marker posts or to within 6.0m above the pavement).
6	The Plantation/forestation under EIA Report	The Vegetation/Plantation shall comply with the requirement of the EIA Report. And as desired by the Punjab EPA, time to time in pursuance of the EIA Report/ updated EIA Report.

Grace Period for vegetation control after First Day Deduction: 14 days

Method of inspection: The height of vegetation is defined as the vertical distance between the ground and the highest point of the plant. It is measured by using a ruler or measuring tape. Clearance is also measured with a ruler or tape and defined as the distance between the lowest point of the tree (or other plant) above the road surface. The average height of vegetation in a one km section will be equal to the average of five values measured at points selected by the Independent Engineer, with each point being at least 10 meters apart from the next.

Payment reduction for non-compliance: Ten (10%) percent of the monthly lump-sum rate for one km, to be applied for each one km section that does not comply and for each day during which the non-compliance persists.

OPM-9.2: Green Environment, Plantation of Trees, Horticulture

The Plantation: The Vegetation/Plantation shall comply with the requirement and as desired by the Implementing Agency, Punjab EPA, or instructions issued time to time.

Type	Type and Minimum permitted (No)	Applied to:
1	The Concessionaire will be required to plant trees to a minimum of 60 trees on either side of road.	Rural highways, highway edge of RoW, rest areas (including around rest area furniture).

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2	Type of trees allowed	Acacia (kikar), Shisham, Mahagony, Arjan, Toot and other shade bearing trees and all fruit bearing trees, like Jamun, Mango, Cherry, etc. which also bear shade.
3	Average height is 5m when grown	The Concessionaire will procure or build its own nursery for saplings, plant, water and nurture tree plants till the end of Concession Period.

Grace Period in days for plantation of trees First Day Deduction: 180 days.

Inspection Frequency: Every six months.

Method of Inspection: All trees will be numbered and a register of record of trees will be maintained by SCU bearing date of plantation, type of tree, average girth of tree every year. All trees shall be individually numbered and recorded by the Concessionaire Self Control Unit. The Concessionaire Self Control Unit shall maintain a comprehensive tree register, which shall include, for each tree: the date of plantation, species/type, and the average girth measured annually. This register shall be updated on a yearly basis and made available for inspection by the Implementing Agency or the Independent Engineer.

All trees within the Project Site shall be properly enumerated. In the event that the number of trees enumerated in any one-kilometer stretch falls short of the required count by more than five (5) trees due to loss caused by neglect, disease, or inadequate maintenance by the Concessionaire, such shortfall shall trigger a penalty, as specified below.

Payment reduction for non-compliance: Rs. 500 for loss of 5 trees in one km, to be applied for each one km section that does not comply.

5.17 OPM-10: Performance of the Self Control Unit

The correct execution depends to a large degree on the adequate functioning of the Concessionaire Self Control Unit and on the accuracy of the data provided by the Concessionaire Self Control Unit. The Independent Engineer will assess the performance of the Concessionaire Self Control Unit by comparing the data provided by the Concessionaire Self Control Unit in the SCU Monthly Compliance Table with the data measured or observed in the O&M Inspection Report.

The Concessionaire must ensure that the data included in the SCU Monthly Compliance Table prepared by the Concessionaire Self Control Unit and provided to the Independent Engineer prior to the inspections of the Project Highway is accurate and based on actual measurements or observations carried out by the Concessionaire Self Control Unit. The Independent Engineer will verify the data provided by the Concessionaire Self Control Unit in the O&M Inspection Report through inspections of the Project Highway.

If the Independent Engineer finds that the data provided by the Concessionaire Self Control Unit for any road or road section of the Project Highway is incorrect for more than 20% of the

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individual data on OPM's 1 to 9 provided for a road or road section, this will be considered as a non-compliance with OPM-10 and will trigger the application of the corresponding payment reduction under OPM-10 for the same road.

Furthermore, if a situation of non-conformance with OPM-10 continues for more than six months, the Implementing Agency will have sufficient grounds to terminate the contract, if it desires.

Method of assessment: The assessment is done on the basis of the verification by the Independent Engineer all of the 20 performance criteria and sub-criteria included under OPM-1 to OPM-9. The 20% threshold limit corresponds to four (4) criteria. If the information provided by the Concessionaire Self-Control Unit for five (5) or more criteria of a road or road section of the Project Highway is incorrect, this shall constitute a non-compliance with OPM-10 for that road or road section of the Project Highway. An example for calculation is provided hereunder:

Sample Calculation - Payment Reduction for OPM-10

Data No.	OPM List	Non-compliant length (km)		
		Data from SCU Monthly Compliance Tables	Data from Monthly Inspection	Incorrect Data supplied by SCU*
1	OPM-1	0	0	No
2	OPM-2.1	2	4	YES
3	OPM-2.2	0	0	No
4	OPM-2.3	0	0	No
5	OPM-2.4	0	0	No
6	OPM-2.5	0	4	YES
7	OPM-2.6	2	2	No
8	OPM-2.7	0	0	No

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9	OPM-2.8	1	1	No
10	OPM-3	0	0	No
11	OPM-4.1	0	0	No
12	OPM-4.2	0	0	No
13	OPM-5	0	0	No
14	OPM-6.1	0	0	No
15	OPM-6.2	1	3	YES
16	OPM-7	0	0	No
17	OPM-8.1	0	1	YES
18	OPM-8.2	1	1	No
19	OPM-9	3	5	YES

Total No. of Data: **19**No. of "Yes": **5**

20% of 19 OPM's would be 4 OPM's, which means that if the number of "Yes" is higher than 4 then the penalty is triggered and to be applied.

* Only applies if road condition is "worse" than reported by SCU, not if better.

Payment reduction for non-compliance: Ten percent (10%) of the monthly lump-sum rate for the entire road or road section, to be applied for each road or road section for which incorrect information was provided by the Concessionaire in the O&M Quarterly Status Report for five (5) or more of the OPM criteria or sub-criteria.

Reduced Service Levels prior to Major Maintenance

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The Independent Engineer with the consultation of the Implementing Agency/Project Manager may reduce the service levels (OPM) gradually, and especially six months prior to the Major Maintenance / end of concession except OPM-2.1 “Potholes” and OPM-2.5 “Cleanliness of Pavement Surface and Shoulders” and Road Marking under OPM-8: Thermoplastic markings shall not be required for roads or road sections which are under Major Maintenance. In those cases, reflective paint can be used instead. *(It would not be reasonable to require the rather expensive reflective pavement markings if the pavement is to be or/and overlaid for Major Maintenance).*

6. MANAGEMENT PERFORMANCE MEASURES (MPMs)

6.1 Management Performance Measures

“**Management Performance Measures**” or “**MPMs**” refer to a set of performance criteria that the Concessionaire is required to meet for managing the Concession Assets. These measures include quality assurance and testing requirements, as well as the collection, reporting, and timely submission of various data and information to the Independent Engineer, which may be needed as input to the Implementing Agency’s Road Asset Management System (RAMS). The specific Management Performance Measures applicable to the Project Highway are outlined in the table below.

Compliance with the Management Performance Measures shall be evaluated monthly or as otherwise specified in this Agreement. Results shall be classified as either compliant or non-compliant. In the event of non-compliance, such non-compliance shall continue to be recorded until the Concessionaire achieves compliance to the satisfaction of the Independent Engineer.

In cases of non-compliance with the Management Performance Measures, the Concessionaire’s monthly lump-sum payment shall be reduced by the amounts specified in the table below, multiplied by the duration of the non-compliance, calculated in calendar days.

MPM #	Item	Compliance criteria	Penalty/dayPKR
MPM-1	Quality Assurance Plan (QAP) with its Supplements (ITP including frequency of tests, desirable value of results and tolerance limit; Inspection/ Check request system, Check request register, Mock-up Plan etc.)	The Concessionaire shall submit draft Quality Assurance Plan (QAP) ninety (90) days prior to the anticipated date for commencement of the Operations Period to the Independent Engineer / Independent Auditor. In case of comments, the revised document must be resubmitted within fourteen (14) days after the issuance of written comments	1,000

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		by Independent Engineer /Independent Auditor.	
MPM-2	O&M Manual	The Concessionaire shall submit draft O&M Manual ninety (90) days prior to the anticipated date for commencement of the Operations Period to the Independent Engineer in accordance with the section 19.7 of the Concession Agreement. The O&M Manual shall not be less qualitative than this document. The tolerance limit provided in the O&M Manual shall not be more than tolerance limit provided in this document.	1,000
MPM-3	Programme of Performance and	Must be complete and submitted by due date, separately.	1,000
MPM-4	Works Completion Reports	In case of comments, the revised documents must be resubmitted within fourteen (14) days after the issuance of written comments by the Independent Engineer/ Independent Auditor / Project Manager. Penalty is enforced for each and every separate non-compliance, and for each day during which non-compliance persists.	

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MPM-5	DAILY REPORT: (cause for any Relief Order, Relief Costs, extensions of Time For Completion and any Change of Scope)	The Concessionaire shall maintain complete and accurate records and provide promptly to the Independent Engineer, Independent Auditor and the Implementing Agency for any event or cause for any Relief Order, Relief Costs, extensions of Time for Completion and any Change in the Scope.	Rs. 100/- per day of delay. If the event/cause is not reported up to 28 day of its occurrence then no claim will be entertained.
MPM-6	WEEKLY REPORT (Minutes of meeting of Board/stakeholder including site inspection)	The record of minutes of board meetings and shareholder meetings and other records, which records shall be subject to inspection and audit by the Implementing Agency, the Independent Engineer and the Independent Auditor, shall be included in the weekly report.	Rs. 100/- per day of delay. If the event caused for change of scope, no claim will be entertained if reporting is after 28 days
MPM-7	Classified Traffic Count/Reporting System: with Toll Collection on Daily, Weekly and Monthly Basis on appropriate format of Report	In case of any breakdown of ETTM system, the Concessionaire should switch to manual operating system with the required number of manpower and should update the system after restoration of system.	Rs. 100/- per day of delay of report In case of any breakdown of ETTM Rs.1000/hour/entry or exit point; and
MPM-8	Asset Inventory Reports and updates	The reports will be submitted including but not limited to the following: i. Pavements, including shoulders (Hard Shoulder / Emergency Lane) ii. Slopes, Embankments iii. Drainage facilities, gullies, culverts, lined channels, sumps etc. iv. Signs, traffic signals and	1000

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		lighting installed v. Pavement markings vi. Bridges and Major Structures vii. All other road furniture (i.e. Safety Barriers, Lighting Points) Reports must be complete and submitted by due date. Revision must be completed within twenty-one (21) days after the issuance of written comments by the Independent Engineer, Independent Auditor and Project Manager.	
MPM-9	Submission of Designs	Initial Submission of complete design by due date. Revisions must be completed within fourteen (14) days after the issuance of written comments by the Independent Engineer/Implementing Agency, or as agreed in writing with the Independent Engineer/Implementing Agency.	1000
MPM-10	SCU Monthly Compliance Tables for Maintenance Services	Submission of complete The Compliance Tables shall be submitted complete in all respect within 3 working day after each month, in accordance with Section 19.25.1 of this Agreement.	2,000
MPM-11	Monthly Progress Report for Maintenance Work, Major Maintenance and Emergency Works including out of scope work (if any)	Initial Submission must be done within 3 days after each month. Revision and resubmission must be completed within seven (7) days after the issuance of written comments by the Independent Engineer/Independent Auditor/Implementing Agency.	5000
MPM-12	Road Asset	Submission by due date.	1000

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	Damage and Emergency Incident report		
MPM-13	Compliance with requirements in the areas of Environment, Social, Health and Safety of workers, and Traffic Management Plans	The Concessionaire has to be in compliance at all times. Penalty is enforced for each and every separate non-compliance, and for each day during which non-compliance persists.	100
MPM-14	Grievance Redressal System	The Concessionaire shall submit draft Grievances Redressal Mechanism (GRM) ninety (90) days prior to the anticipated date for commencement of the Operations Period to the Independent Engineer / Independent Auditor that how grievances and complaints will be received, monitored, resolved and reported on. The Concessionaire shall submit status of redressal of community complaints and time spent to resolve the community grievances.	100

FACILITIES AND EQUIPMENT TO BE PROVIDED BY CONCESSIONAIRE

The Concessionaire is obliged to provide the following equipment/facility:

Project Manager Office:

- i. Vehicles with fuels and maintenance for the entire project period
 - 1600 / 1800 CC, Vehicles: 1 numbers
- ii. Site Office with furniture and utilities services for the entire period of project
- iii. Computers, Printers, Scanner, Internet, Networking
- iv. MIS Access i/c internet facility

Independent Engineer Offices:

- v. Vehicles with fuels and maintenance for the entire Concession Period
 - 1000 CC, Vehicles: 01 numbers
- vi. Site Office with furniture and utilities services for the entire Concession Period
- vii. Computers, Printers, Scanner, Internet, Networking

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- viii. Mobile material testing lab equipped with necessary tools for sampling, testing and formal and informal inspection

Independent Auditor Offices:

- ix. Computers, Printers, Scanner, Internet, MIS Access

Data collection, reporting and documentation

The role of the Concessionaire extends much beyond the execution/O&M of works and includes important activities related to Road Asset Management. This requires that the Concessionaire must:

- continuously collect different types of data and information on the roads included in the Agreement;
- organize and store such data and information in an electronic database;
- prepare various types of reports presenting the data and information, in formats to be agreed with the Independent Engineer/Auditor, for the Concessionaire's own use and for the use of the Independent Engineer/Auditor, Implementing Agency; and
- Submit those reports to the Independent Engineer/Auditor, Implementing Agency in accordance with deadlines defined in the contract.

The timely collection of data and presentation of reports are part of the Management Performance Measures. Some of the reports must be prepared periodically (typically monthly) while others are one-time reports to be submitted at specific times or at special occasions during the duration of the Agreement. The reports are listed in the table below and described in the sub-sections further below.

Report Title	Frequency / Periodicity
Quality Assurance Plan (QAP) with its Supplements (ITP including frequency of tests, desirable value of results and tolerance limit; Inspection/ Check request system, Check request register, Mock-up Plan etc.) (MPM-1)	The Concessionaire shall submit draft Quality Assurance Plan (QAP) Ninety (90) days prior to the anticipated date for commencement of the Operations Period to the Independent Engineer / Independent Auditor In case of comments, the revised document must be resubmitted within fourteen (14) days after the issuance of written comments by Independent Engineer /Independent Auditor/ Project Manager

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O&M Manual (MPM-2)	The Concessionaire shall submit draft O&M Manual Ninety (90) days prior to the anticipated date for commencement of the Operations Period to the Independent Engineer in accordance with the section 19.7 of the Concession Agreement. The O&M Manual shall not be less qualitative than this document. The tolerance limit provided in the O&M Manual shall not be more than tolerance limit provided in this document.
DAILY REPORT (cause for any Relief Order, Relief Costs, extensions of Time For Completion and any Change of Scope) (MPM-5)	The Concessionaire shall maintain complete and accurate records and provide promptly to the Independent Engineer, Independent Auditor and the Implementing Agency for any event or cause for any Relief Order, Relief Costs, extensions of Time For Completion and any Change of Scope for recommendation of the Independent Engineer, Independent Auditor and for approval of the Implementing Agency.
WEEKLY REPORT (Minutes of meeting of Board/stakeholder including site inspection) (MPM-6)	The record of minutes of board meetings and shareholder meetings and other records, which records shall be subject to inspection and audit by the Implementing Agency, the Independent Engineer and the Independent Auditor, shall be included in the weekly report.
SCU Monthly Compliance Tables for Maintenance Services (MPM-10)	Monthly self-reporting by the Concessionaire on his own compliance with Service Level requirements which is the basis for the part of the Concessionaire Monthly Statement which relates to Maintenance Services.
Monthly Progress Report for Maintenance Work, Major Maintenance and Emergency Works including out of scope work (if any). (MPM-11)	Monthly report - Initial Submission must be done within 3 days after each month. Revision and resubmission must be completed within seven (7) days after the issuance of written comments by the Independent Engineer/ Independent Auditor/Implementing Agency.

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Classified Traffic Count/Reporting System with Toll Collection on Daily, Weekly and Monthly Basis on appropriate format (MPM-7)	Daily, Weekly and Monthly reports containing traffic data collected by flow counters shall be submitted to the Implementing Agency/Project Manager. Reports shall contain all details of Traffic Count with Toll Collection. ETTM system (Japanese or European Make) of minimum scale is to be provided which should have the capability of reporting daily, weekly and monthly classified traffic passing through each tolling gate. This system should also have the capability of automatic toll gate opening and closing system.
Road Asset Inventory Database and Condition Reports (MPM-8)	• Initial Report • Periodic updates as specified
Road Asset Damage Reports (MPM-12)	These are reports due each time when damages to road assets occur.
Design Reports (MPM-9)	These are required for all works requiring a detailed engineering design.
1. Programme of Performance 2. Works Completion Reports (MPM-3 & 4)	Separate reports for each 1. Programme of Performance; and 2. Works Completion Reports shall be submitted by due date.
Report for Environment, Social, Health and Safety of workers, and Traffic Management Plans (MPM-13)	Shall be submitted by due date, separately for i. Environment including addressing issues related to child labour, sexual exploitation, sexual abuse and sexual harassment and women empowerment (provide equal pay to men and women for work of equal value, in accordance with national laws and international treaty obligations) ii. Social, Health and Safety of workers Report iii. Traffic Management Plans Report

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Grievance Redressal System (MPM-15)	The Concessionaire shall submit status of redressal of community complaints and time spent to resolve the community grievances.

7. DEFINITIONS

This Annexure contains numerous technical terms. For those that may be ambiguous or potentially confusing, definitions are provided herein. These definitions are also applicable to related manuals and a handbook.

Asphalt Mixture “Asphalt mixture” is a material used for the wearing course and binder course of pavement. It is a mixture of asphalt, coarse aggregate, fine aggregate, and filler, and refers specifically to the material after use.

HMA (Hot Mix Asphalt) “HMA” is a material used in asphalt layers, consisting of asphalt, coarse aggregate, fine aggregate, and filler heated and mixed together.

Specifically, it refers to the loose state of the material before it is compacted.

Asphalt Layer “Asphalt layer” refers to a layer composed of asphalt mixture in a pavement structure, including wearing course and binder course.

Wearing Course “Wearing Course” refers to the layer that forms the surface of the asphalt layer.

Binder Course “Binder course” refers to the layer between the basecourse or subbase and the surface layer in an asphalt layer.

Base Course “Base Course” refers to the layer of the subbase that is located directly beneath the asphalt layer, with a thickness of 20 cm or less. It does not exist in cases where the pavement structure is simple.

Subbase “Subbase” refers to a layer composed of materials such as granular crushed stone that forms the lower layer beneath the asphalt layer. In high-specification roads, when the base course exists, it specifically

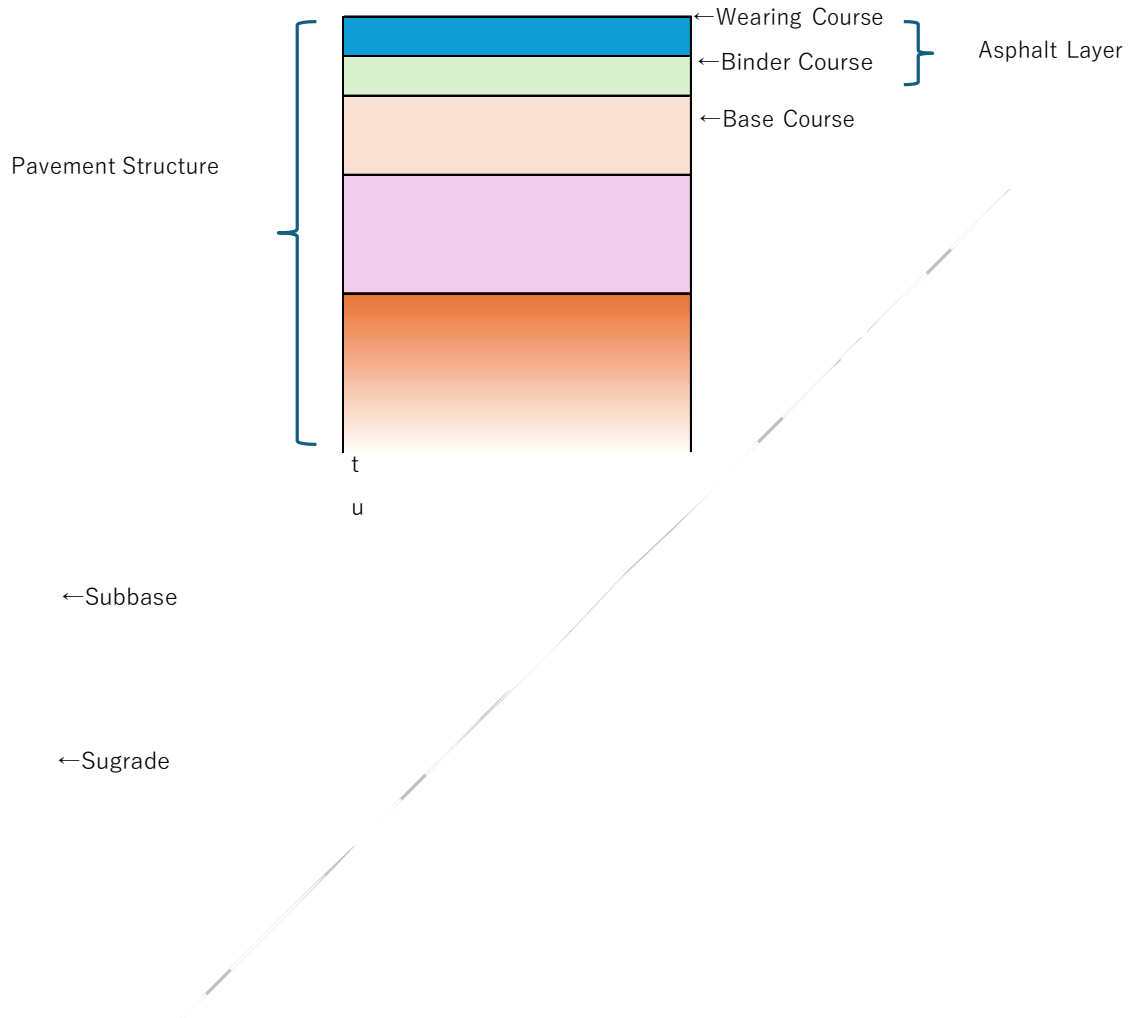
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refers to the layer between the upper roadbed and the roadbed.

Subgrade

“Subgrade” is the lowest layer of the pavement structure and is up to 1 m thick. It mainly consists of existing ground.



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Maintenance	“Maintenance” refers to planned, repetitive care or emergency minor repairs that are performed for the purpose of restoring the performance of the road surface. Main maintenance activities include patching and surface treatment.
Repair	“Repair” is performed for the purpose of restoring a pavement to its original level of performance when maintenance work is uneconomical or not sufficiently effective.
Road Surface Condition Survey	“Road surface condition survey” refers to survey that evaluate road surface conditions using visual inspection results and PCI, as well as surveys that quantitatively evaluate road surface conditions using RSP.
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Structural Survey	“Structural survey” refers to gaining a detailed understanding of the pavement structures and investigating the causes of damage. They include FFWD and GPR surveys, as well as core sampling and test pit surveys.
Core-sampling	“Core sampling” refers to the process of collecting asphalt layers using a boring machine to investigate the properties of asphalt mixtures (such as asphalt content and void ratio).
Test pit	“Test pit” refers to a type of pavement structure survey in which test excavations are carried out on site to directly investigate the thickness of each layer and the condition of the base course, subbase and subgrade. Base course, subbase and subgrade materials are collected for use in CBR tests and other tests.
Deterioration	“Deterioration” refers to the overall deterioration of pavement performance and condition (pavement structure, layers).
Aging	“Aging” refers to changes in material properties over time.
Degradation	“Degradation” refers to the deterioration of material properties and quality (chemical and physical changes).
Patching	“Patching” refers to filling of pothole with asphalt concrete with average depth up to 2 inch in Wearing course and/or Binder course.
Heavy Patching	“Heavy Patchin” refers to filling of pothole with asphalt concrete with average depth up to 4 inch in Wearing course and/or Binder course.
Functional Overlay	“Functional Overlay” refers to milling of the existing Wearing course (default value = 2 inches) and may include laying a fresh Wearing course (again 2 inches).
Structural Overlay	“Structural overlay” refers to the removal of existing asphalt layers and the restructuring of the asphalt layer and/or basecourse, subbase.
Surface treatment	“Surface treatment” refers to a method of maintenance in which the existing pavement is left as is and treated on top of it. Examples include thin overlay and fog seal.
Fog seal	“Fog seal” refers to a maintenance method in which modified asphalt is sprayed directly onto the surface of the asphalt layer to ensure curing time.
Chip Seal	“Chip seal” refers to a road resurfacing repair method that involves cleaning the road surface, heating and spraying asphalt, spreading a mixture of gravel and crushed stone, and compressing it. There are three types of chip seal: single layer (1 layer), double layer (2 layers), and triple layer (3 layers).

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SCHEDULE I – INSURANCES

PART I – INSTALLATION PERIOD INSURANCES

It is mandatory that the following insurances should be acquired:

Insurance Type	Coverage Description
Contractor’s All Risk (CAR) Insurance	Covers damage to works (toll plaza, weighbridge etc.), construction equipment, and materials due to fire, flood, theft, etc.
Third-Party Liability Insurance	Covers bodily injury or property damage to third parties during construction (e.g., local public or passing vehicles).
Workers’ Compensation Insurance	Statutory cover for injuries, illness, or death of workers during construction.

In addition to the above, the Concessionaire may take on additional insurances as required by it.

PART II – OPERATIONS PERIOD INSURANCES

It is mandatory that the following insurances should be acquired:

Insurance Type	Coverage Description
Property All-Risks Insurance	Covers damage or loss to toll plaza, ETTM equipment, buildings, etc., due to fire, flood, vandalism, etc.
Business Interruption Insurance	Covers loss of toll revenue due to interruption from insured events (e.g., fire, flood).
Public Liability Insurance	Covers claims from third parties for injury or property damage (e.g., from system malfunction, vehicle damage).
Motor Vehicle Insurance (if weighbridge or maintenance vehicles are owned)	Mandatory cover for vehicles used in operations.
Cash Insurance	Coverage of Cash in transit collected from toll plaza

In addition to the above, the Concessionaire may take on additional insurances as required by it.

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SCHEDULE J – SPECIFIED CONCESSIONAIRE PERMITS

The following shall constitute the Concessionaire Specified Permits, to the extent the same are required to be procured and are applicable/relevant for the purposes of the Project:

- 1. Communication & Works Department, Government of Punjab
- 2. PPP Steering Committee, Government of Punjab.
- 3. Punjab Environmental Protection Agency.
- 4. Water & Power Development Authority, Government of Pakistan.
- 5. National Transmission & Despatch Company Limited.
- 6. Sui Northern Gas Company Limited.
- 7. Pakistan Telecommunication Authority.
- 8. Oil & Gas Development Corporation.
- 9. Forest Department, Government of Punjab.
- 10. Irrigation Department, Government of Punjab.
- 11. Mosques, Imam Barghas, Places of Religious Affairs, Government of Punjab.
- 12. Graveyards through Ministry of Municipalities and Rural Affairs, Government of Punjab.
- 13. Culture Department, Government of Punjab.

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SCHEDULE K – CORPORATE DOCUMENTS

- 1. The certified copies of the memorandum and articles of association of the Concessionaire;
- 2. Board Resolution duly passed by the board of directors of the Concessionaire resolving that the Concessionaire may undertake the Project and stating the name of the authorized signatory of the Concessionaire who shall sign this Agreement, the Implementing Agency Agreements, and the Project Agreements (to which the Concessionaire is a party) and all other necessary documents in favour of the Implementing Agency for and on behalf of the Concessionaire;
- 3. Certificate of incorporation; and
- 4. Latest corporate filing with the Securities & Exchange Commission of Pakistan.

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SCHEDULE L – NOT USED.



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SCHEDULE M – FORM OF PERFORMANCE SECURITY

To:
PROJECT MANAGER,
[●] ROAD PROJECT,
GOVERNMENT OF PUNJAB

GUARANTEE NO. (hereinafter referred to as the “Guarantee”)
Dated:

[INSERT NAME OF BANK], being the Guarantee issuing bank (hereinafter referred to as the “Guarantor Bank”) understands that the following parties have entered into an agreement entitled the “CONCESSION AGREEMENT” dated [●], 2025 (hereinafter referred to as the “Agreement”) for the financing, commissioning, operations and maintenance of the [●] Road Project and the installation of toll plazas, weighbridges and ETTMS on the Project Highway under the public private partnership mode:

- (a) THE GOVERNOR OF PUNJAB (THROUGH COMMUNICATION AND WORKS DEPARTMENT), having its offices at Old Anarkali, Lahore (hereinafter referred to as the “Implementing Agency”); and
- (b) [●], a company incorporated under the laws of Pakistan, having its registered office located at [●], Pakistan (hereinafter referred to as the “Concessionaire”, which expression shall, where the context so permits, be deemed to mean and include its legal heirs, successors in interest, administrators, executors, and permitted assigns).

Further, the Guarantor Bank understands that pursuant to the terms of the Agreement, the Concessionaire is required to provide the Implementing Agency with a bank guarantee in an amount equal to PKR [INSERT AMOUNT IN NUMBERS]/- (Pakistani Rupees [INSERT AMOUNT IN WORDS]).

The above premised, the Guarantor Bank hereby undertakes irrevocably and unconditionally to pay to the Implementing Agency, without any notice, reference or recourse to the Concessionaire or to any other entity or without any recourse or reference to the Agreement, any sum or sums (or any part thereof) equivalent in aggregate up to but not exceeding a maximum amount of:

PKR [●]/- (Pakistani Rupees [●])
(hereinafter referred to as the “Guaranteed Amount”)

immediately, however not later than within ten (10) business days from the date of the Guarantor Bank’s receipt of the Implementing Agency’s first written demand (hereinafter referred to as the “Demand”) at the Guarantor Bank’s offices located at [INSERT ADDRESS OF THE GUARANTOR BANK AT WHICH DEMAND WILL BE MADE], such Demand stating:

- (a) the total amounts demanded; and
- (b) the bank account to which the amounts demanded pursuant to the demand are to be credited/transferred (hereinafter referred to as the “Bank Account”).

A Demand shall only be honoured by the Guarantor Bank if it is made by and bears the signature of an authorised officer or representative of the Implementing Agency.

The Guarantor Bank shall unconditionally honour a Demand hereunder made in compliance with this Guarantee immediately (however not later than ten (10) business days) of its receipt of the Implementing Agency’s Demand, as stated earlier, and shall transfer the amount specified in the Demand to the Bank Account.

This Guarantee shall come into force and shall become automatically effective upon its issuance.

After having come into force, this Guarantee and the Guarantor Bank’s obligations hereunder shall expire on [INSERT DATE AND TIME] (the **Guarantee Expiry Hard Date**) irrespective of whether this Guarantee has been returned to the Guarantor Bank provided that, in the event that the Implementing Agency issues a Demand to the Guarantor Bank on or immediately prior to the Guarantee Expiry Hard Date and the

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same is received by the Guarantor Bank on or prior to the Guarantee Expiry Hard Date, the Guarantor Bank shall honour such Demand.

Upon expiry, this Guarantee shall be returned to the Concessionaire without undue delay. Multiple Demands may be made by the Implementing Agency under this Guarantee but the Guarantor Bank’s aggregate liability shall be restricted up to the Guaranteed Amount.

The Guarantor Bank hereby agrees that any part of the Agreement may be amended, renewed, extended, modified, compromised, released or discharged by mutual agreement between the Implementing Agency and the Concessionaire without:

- (a) in any way impairing or affecting the Guarantor Bank’s liabilities hereunder;
- (b) notice to the Guarantor Bank; and
- (c) the necessity for any additional endorsement, consent or guarantee by the Guarantor Bank.

This Guarantee for its validity period shall not be affected in any manner by any change in the Guarantor Bank’s constitution or of the Concessionaire’s constitution or of their successors and assignees and this Guarantee shall be legally valid, enforceable and binding on each of their successors and permitted assignees.

All references to any contract or other instruments are by way of reference only and shall not affect the Guarantor Bank’s obligations to make payment under the terms of this Guarantee.

The Implementing Agency shall not assign / transfer or cause or permit to be assigned or transferred any of its rights, title, interests and benefits of this Guarantee without the prior written consent of the Guarantor Bank and the Concessionaire.

If one or more of the provisions of this Guarantee are held or found to be invalid, illegal, or unenforceable for any reason whatsoever, in any respect, any such invalidity, illegality, or unenforceability of any provision shall not affect the validity of the remaining provisions of this Guarantee.

The Guarantor Bank hereby declares and confirms that under its constitution and applicable laws, it has the necessary power and authority to:

- (a) enter into, execute and deliver this Guarantee; and
- (b) perform the obligations it has undertaken under this Guarantee, which obligations are valid and legally binding on and enforceable against the Guarantor Bank under the laws of Pakistan.

Further, the Guarantor Bank hereby declares and confirms that the signatory(ies) to this Guarantee is/are its duly authorized officer(s) to execute this Guarantee.

This Guarantee and all rights and obligations arising from this Guarantee shall be governed and construed in all respects in accordance with the laws of Pakistan. The courts in Lahore, Pakistan shall have exclusive jurisdiction in respect of any dispute relating to any matter contained herein.

**EXECUTED & ISSUED
FOR & ON BEHALF OF THE GUARANTOR BANK**

.....
NAME:
DESIGNATION:
DATED:

WITNESSES

WITNESS I

WITNESS II

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NAME:
CNIC No.:

NAME
CNIC No.:



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SCHEDULE N - INDICATIVE INDEPENDENT ENGINEER TERMS OF REFERENCE

1. GENERAL

The Independent Engineer of the Project shall, in principle be responsible for review of installation, upgradation, progress monitoring, operation and affirmation of all certification done by the Concessionaire.

The Independent Engineer shall supervise that the requirement of the Concession Agreement and its various appendices, other than mentioned for Independent Auditor-IA of the Project, are met by the Concessionaire and in case of any discrepancy / deviations, and shall inform Implementing Agency and the Concessionaire. The responsibility of the Independent Engineer during various phases of the Installation Works and Operation and Maintenance shall be but not limited to the following.

2. DESIGN REVIEW PHASE

- (a) Review and approve the adequacy of topographical surveys, geo-technical and sub-soil investigations, hydrological investigation for the Project Highway and other structures.
- (b) Review and approve the condition survey of existing bridges, culverts and other structures conducted by the Concessionaire to establish the structure adequacy, and proposed strengthening for the Project Highway.
- (c) Review and approve reports prepared and submitted by the Concessionaire, with respect to the traffic, traffic management etc.
- (d) Review and approve the implementation schedule of Installation Works of the Project submitted by the Concessionaire and determine that adequate provisions have been made for the following:
 - (i) Raw material sourcing
 - (ii) Raw material processing equipment
 - (iii) Utilities
 - (iv) Other Equipment procurement
 - (v) Installation
 - (vi) Testing
- (e) Review and approve the capability of the proposed toll collection system to perform as required in anticipated operating conditions.
- (f) Review and approve the Operation and Maintenance during the Operations Period.
- (g) Review and comment on the consistency of all project documents.
- (h) Review the available permits or permit applications.
- (i) Review the environmental management plan for the Project Highway during the Installation Period (and the Operations Period, if required).
- (j) Review and comment on the utilities arrangement for the Project, including, but not limited to the water supply and electricity supply.
- (k) Review and approve the adequacy and reasonableness of the Project co-ordination and monitoring systems.
- (l) Review quality assurance and quality control provisions during the Installation Period and O&M phase:
 - (i) Independent Engineer is required to prove due diligence and utmost expertise in ensuring that quality control provisions are maintained at all times during the Installation Period and the Operations Period; and
 - (ii) Independent Engineer will be responsible to report to the Implementing Agency in case the quality standards and quality control provisions are not maintained on the Project Site.

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- (m) Audit the safety of the Project Highway during Installation Period and the Operations Period.

3. ROLE OF INDEPENDENT ENGINEER DURING INSTALLATION PERIOD

- (a) The duties of the Independent Engineer are to supervise the works and to approve the materials and workmanship of the works. As stated in the Concession Agreement, the Independent Engineer shall have no authority to relieve the Concessionaire of any of its duties or to impose additional obligations.
- (b) The Independent Engineer shall review and approve works program prepared and submitted by the Concessionaire. Payments will be made upon Independent Engineer’s certification, with final approval of Independent Auditor.
- (c) The Independent Engineer shall review the material testing results and mix designs and to order special tests of materials and / or completed works, and / or order removal and substitution of substandard material and / or work as required.
- (d) The Independent Engineer shall review quality assurance and quality control during Installation Period.
- (e) The Independent Engineer shall ensure that the Installation Works are accomplished in accordance with the Applicable Specifications.
- (f) The Independent Engineer shall identify installation delays, if any and recommend to the Implementing Agency/Lender the remedial measures to expedite the progress.
- (g) Not Used.
- (h) Review the safety measures provided for the traffic and Project workers.
- (i) Determine any extension of the Project Completion Schedule, to which the Concessionaire is entitled and shall notify the Implementing Agency.
- (j) Review compliance by the Concessionaire of its obligations under the Concession Agreement.
- (k) Not used.
- (l) Issue Final Installation Completion Certificate after checking the results of the Completion Tests.
- (m) For performance testing, the Independent Engineer will:
 - (i) Review test procedures developed by the Concessionaire appointed O&M Contractor and confirm compliance with applicable test codes and standards and with testing criteria specified in Concession Agreement and its Schedules;
 - (ii) Review the quality control reports, material testing results and mix design and to order special tests of materials and/or completed works, and/or order removal and substitution of substandard materials and/or works as required;
 - (iii) Review test reports prepared by Concessionaire or Concessionaire’s testing consultant; and
 - (iv) Monitor successful completion of the Project Completion Check List Items. Make one final visit to Project Site to verify that Project Completion Check List Items have been completed and thereafter sign and submit the Final Installation Completion Certificate.

4. ROLE OF INDEPENDENT ENGINEER DURING OPERATIONS PERIOD

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- (a) Review and approve work plan and schedules of various operation and maintenance activities.
- (b) Review and approve the O&M Manual(s) prepared by the Concessionaire for their completeness and compatibility with those of similar facilities.
- (c) Review and approved the performance of Operation and Maintenance activities including equipment, service, traffic, operation and safety.
- (d) Recommend necessary actions to the Implementing Agency to undertake maintenance obligations of the Concessionaire at risk and cost of the Concessionaire in the event of his failure to carry out the Operations and Maintenance.
- (e) Undertake audit of the traffic using the Project Highway at reasonable times.
- (f) Review and inspect the Project Highway at all reasonable times and upon reasonable notice to the Concessionaire during the Operations Period and issue a Installation Inspection Report and O&M Inspection Report of such inspections to the Implementing Agency.
- (g) Review the accident record, prepared and submitted by Concessionaire, on the Project Highway and suggest remedial measures at reasonable intervals.

5. THE OTHER FUNCTIONS OF THE INDEPENDENT ENGINEER SHALL BE THE FOLLOWING.

- (a) Perform functions, including issue of directions to the Concessionaire, in respect of the Emergency De-commissioning of the Concession Assets as provided in this Agreement.
- (b) Verify and ascertain evidence of insurance cover as provide in this Agreement.
- (c) Perform functions in respect of Change of Scope as provided in this Agreement.
- (d) Inspect the Concession Assets including the Project Highway at the time of handing over thereof by the Concessionaire to the Implementing Agency and perform functions in respect to such handing over as provided in this Agreement.

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SCHEDULE O – FORM OF VESTING CERTIFICATE

- a. [insert details] being the Independent Engineer, and [insert details] being the Independent Auditor, refer to the agreement entitled “Concession Agreement” dated [●], 2025 (as amended from time to time) (the “**Concession Agreement**”) relating to, *inter alia*, the operation and maintenance (through Public Private Partnership on a management contract basis) of the [●] Road and the installation of toll plazas, weighbridges and ETTMS on the [●] Road (the “**Project**”);
- b. The Independent Engineer and the Independent Auditor hereby acknowledge the compliance the fulfilment by the Concessionaire of the Divestment Requirements set forth in Article 24 of the Concession Agreement and, on such basis, hereby issue this Vesting Certificate (the “**Certificate**”). Upon issuance of this Certificate, the Implementing Agency shall be deemed to have acquired, and all title and interest of the Concessionaire in or about the Concession Assets (*as defined in the Concession Agreement*) and the same shall be deemed to have vested unto the Implementing Agency, free from any encumbrances, charges and liens whatsoever, other than such encumbrances which the Implementing Agency was responsible to prevent under the terms of this Agreement.

Signed this day of, at

FOR AND ON BEHALF OF
[INSERT DETAILS]

Signature

Name

Designation

Signed in the presence of the following witnesses:

Signature

Signature

Name

Name

NIC No.

NIC No.

FOR AND ON BEHALF OF
[●]

Signature

Name

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Designation

Signed in the presence of the following witnesses:

Signature

Signature

Name

Name

NIC No.

NIC No.

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B. Special Condition

- 1. Axle Load limits for Single Axle is 12 tons, Tandem Alex is 22 tons and Tridem Axle is 31 tons with Front Axle Load Limit is 5.5 Tons.
- 2. The Pressure of Rear Axle should not be more than 120 psi and for Front Axle 100 psi.

C. Fine on Over Loading

S. NO.	Excess Over Permissible Limit	Fine
1	1.1% to 5%	Rs. 1000
2	5.1% to 10%	Rs. 2500
3	10.1% to 15%	Rs. 5000
4	Above 15%	Vehicle will not be allowed to use the road

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SCHEDULE Q – REQUIREMENTS OF ELECTRONIC TOLL AND TICKETING MANAGEMENT
SYSTEM -ETTMS

1. TOLLING METHODOLOGY

Project Highway will be provided with two Toll Gates, one at [●] Side and other near [●], as shown in the following figure.

[insert]

All vehicles entering gate of [●] road side will pay applicable toll and will be issued a machine readable toll ticket. At the exit toll gate i.e. at [●] side the vehicle will show the ticket, and pass the gate without any further payment.

Vehicle entering the Project Highway in between the two toll gates and having no machine readable toll ticket, will stop at any of the two exit toll gates and pay applicable toll and will be issued a machine readable toll ticket before exiting the Project Highway.

2. COMPONENTS OF ETTMS

Following are the components of ETTMS comprising both hardware and software:

a. Electronically Operated toll gates barrier

Electronically operated toll gates tractable barriers or boom gates shall be a bar, or pole pivoted to allow the boom to block vehicular access through a controlled point. The tip of a boom gate shall rise in a vertical arc to a near vertical position. Boom gates shall be counterweighted, so the pole is easily tipped. Boom gates shall be paired either end to end, or offset appropriately to block traffic in both directions. Boom gates may also have a second arm, which pivots on links that allow the second arm to hang 300 to 400 mm below the upper arm when it descends into the horizontal position, to increase approach visibility.

b. Variable Message Signs System including Information signs (electrical) for “stop” and “go”

The VMS shall consist of Video Display with LED Panels, controllers, flicker-free display and IP65 rating with dimensions and specification mentioned below, all necessary hardware and software fulfilling the requirement. VMS shall provide information signs (electrical) for “stop” and “go”.

c. Vehicle Scanning, Type Identification and Number Plate Recording System including ANPR cameras at each lane

The Automatic Number Plate Recognition Cameras (ANPR) shall be used for Entry /Exit Toll station and/or other locations to record number plate’s information. The ANPR Camera shall have 5 Mega pixels. ANPR camera shall have capability of operating day/night and capturing image of standard and nonstandard number plates of vehicles.

d. Machine Readable Toll Ticket Generation System

Electronic toll collection system shall be deployed to collect tolls with use of machine assistance and thereafter maintain primary and backup records thereof. The Toll Collection systems shall be set up as a closed loop system allowing automatic toll collection proportionate to the distance covered. Low cost reusable Magnetic Card shall be deployed for this purpose.

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e. System of Video Filming, and achieving with time and date of all vehicles entering and exiting the toll gates, round the clock

The Concessionaire shall provide an integrated digital video filming system that provides Client the capability to investigate lane performance issues and support Client in customer dispute resolution. The Concessionaire shall develop, procure, furnish, and install two or more IP addressable, color video cameras at each Tolling Zone sufficient to meet the requirements. The cameras installed shall be the same at all Tolling Zones.

f. Reporting System of Toll Ticket Generation to Control Center

The Concessionaire shall provide high-speed connectivity between all storage, database, application, and reporting servers, and backup systems for sending and receiving toll collection data to Control Centre using latest wireless technologies such as Radio-frequency identification (RFID). RFID is the wireless non-contact use of radio-frequency electromagnetic fields to transfer data, for the purposes of automatically identifying and tracking tags attached to objects. The tags shall contain electronically stored information. Tags can be powered by and read at short ranges (a few meters) via magnetic fields (electromagnetic induction). Alternatively may use a local power source such as a battery, or else have no battery but collect energy from the interrogating EM field, and then act as a passive transponder to emit microwaves or UHF radio waves (i.e., electromagnetic radiation at high frequencies).

g. Data Base and Data Back-up Center for this system

Control Centre shall comprise of Blade Servers, Video Servers/Processors and Video archiving, Video Recorder(s), IP Contact Centre, Video wall and Work Stations. Video Storage of 72 Hours shall be provided. Software Licenses shall be included for creating video walls on the operator’s machines where they can see the output of multiple cameras on a single screen. This control centre shall be located either in [•] or [•] or in between at a toll station with backup recording features for 72 Hours and viewing facility of all cameras.

h. Telecommunication System

The telecommunication backbone for the ETTMS shall be a modularly expandable system to cater for data video and speech requirements of the future with running out of reserve capacity.

To provide real-time Toll information system, different technologies can be applied. Optical Fibre Cable (OFC) based communication backbone can be used for primary network. Alternatively wireless/ radio networks can be used for communication. Wireless network may consist of 4G networks of licensed cellular mobile operators for ETTMS applications.

i. Proper Illumination/Lighting

Energy Efficient LED lights shall be used to achieve the required lighting level with minimized power consumption. 5 to 10% lights shall be connected on “**Central Battery System**” to provide minimum uninterrupted lighting to avoid 100% black-out during power failure.

The illumination shall be designed keeping in view the basic illumination levels in accordance with the recommendations in EN12464-1 & EN12464-2, IES and CIBSE Standards.

j. Stand-by power generation system for un-interrupted ETTMS Operation

AC UPS of Twenty four hour backup shall be provided to power all the equipment and systems. It shall comprise; redundant chargers; battery bank; redundant invertors. The switch over from mains to the UPS supply and vice versa shall be accomplished in less than 5 msec.

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k. Classified Traffic Count/Reporting System with Toll Collection on Daily, Weekly and Monthly Basis on appropriate format

Classified Traffic Count/Reporting System shall include Poles, 2D LIDAR sensors, Traffic Controllers FPS, Ethernet Switches, UPS, Power, Control and UPS cabinets, Electrical/Data Cables etc.

3G/4G devices can be used for connecting all sites to Control Centre. Data stored in Traffic Controller shall be transferred using 3G/4G devices to Control Centre in csv format for statistical purposes. Daily, Weekly and Monthly reports containing traffic data collected by Flow counters shall be submitted to Client. Reports shall contain all details of Traffic Count with Toll Collection.

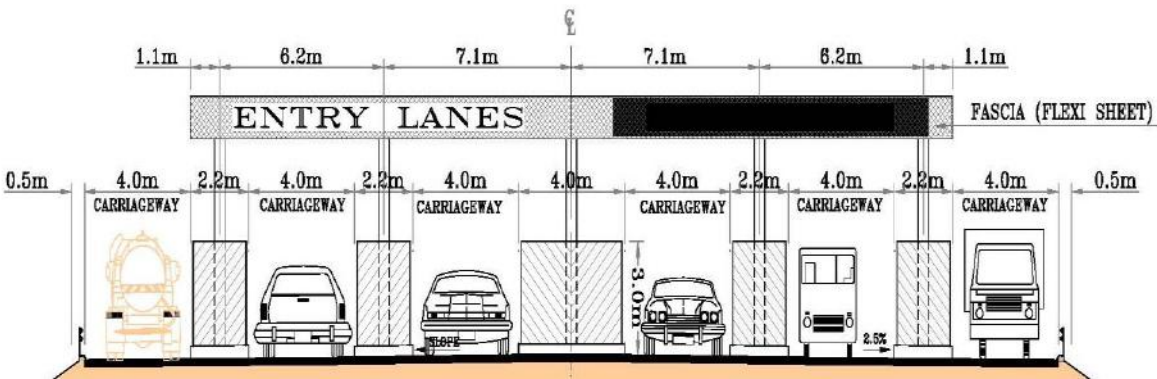
ETTM system (Japanese or European Make) of minimum scale is to be provided which should have the capability of reporting daily, weekly and monthly classified traffic passing through each tolling gate. This system should also have the capability of automatic toll gate opening and closing system.

In case of any breakdown of system, Concessionaire should switch to manual operating system with the required number of manpower and should update the system after restoration of system.

On entry of each toll gate, the Concessionaire will issue a machine readable ticket to the passing vehicle. On arrival at the exit toll gate, the vehicle driver will give this ticket back to Concessionaire’s representative, who will enter the machine readable card to the system. The system should have the capability to automatically determine the vehicle type, travelling length and amount of toll chargeable.

3. COMPOSITION OF TOLL GATES

Following Typical Cross Section shows the schematic arrangement of Toll Gates, which are similar for both the Toll Plazas:



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SCHEDULE R – FORM OF TOLL NOTIFICATION

The Toll Notification shall be issued by the Communication and Works Department in accordance with the Applicable Laws.



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SCHEDULE S – NOTICES

4. IMPLEMENTING AGENCY:

Attention: [•],
Address: [•]
Phone: [•]

5. CONCESSIONAIRE:

Attention: [•]
Address: [•]
Phone: [•]

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SCHEDULE T – TERMINATION PAYMENT

Sr. No.	Termination Payment Amount	Compensation Payable by Implementing Agency
1.	Non Political Event Termination Amount	the Termination Equity
2.	Political Event Termination Amount	(a) the Termination Equity in addition to KIBOR + 200 bps over face value of Termination Equity; plus (b) the Termination Dividend Amount
3.	Concessionaire Default Termination Amount	[No payment]
4.	Implementing Agency Default Termination Amount	(a) the Termination Equity; plus (b) the Termination Dividend Amount
5.	Corrupt Act Termination Amount	[No payment]
6.	Change in Law Termination Amount	(a) the Termination Equity; plus (b) the Termination Dividend Amount

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SCHEDULE U – FINANCIAL MODEL

Included as Annexure A to this Agreement.



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SIGNATURE PAGE

For and on behalf of GOVERNOR OF PUNJAB (Through COMMUNICATION DEPARTMENT) through its authorised signatory	}	SIGNATURE
Name: Designation:		
Name: Designation:		
in the presence of: signature of WITNESSES		SIGNATURE
1- Name: Address: NIC No:		
2- Name: Address NIC No:		
For and on behalf of [●] through its authorised signatory	}	SIGNATURE
Name: Designation:		
in the presence of: signature of WITNESSES		
1- Name: Address: NIC No:		SIGNATURE
2- Name: Address NIC No:		
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EQUIPMENT

Detail of Equipment minimum, but Not Limited to

	Total of Bill No. 9b		
Ch./Item No.	Item Description	Unit	Quantity
	OPTICAL FIBER CABLE (OFC)		
1	12 Core Optical Fiber Cable Armaid - Direct Buried Cable type Single Mode • Cable construction Loose tube • Layer of Aramid Yarn 5mm• Wavelength 1300/1550 nm • Max attenuation 0.36 db/km including Excavation, Backfilling and duct with all accessories	M	3,000
2	Man Hole/Hand Hole Man Hole/Hand hole should pre-cast RCC structure. The Hand hole inner size shall W*L*D=0.9MX0.9M*0.9M For Pre-cast manhole/hand hole, shall be • Concrete Ratio =1:1.5:3, target strength >2400 PSI • Steel Bar=10 mm (min) used every 4 inches horizontally & vertically • Thickness of Walls=4inches • Entry holes should be made in advance in four walls • Slab and cover should be same strength of material, which will be used for covering the manhole and hand hole	No.	12
3	Rope for spare HDPE Pipe, Route Markers, GI Pipe, Cable/HH Tagging, Caution Tape.	M	3,000
4	OFC Distribution Frame (ODF) IP 66	No.	12
5	ROUTING & SWITCHING		
6	Core Switches 1) Interfaces: 48x10GBASE-R(SFP+)/1000BASE-X (SFP) 4x40GBASE-SR4/LR4 (QSFP) 2) Console port: RS232/RJ-45 3) Switching Capacity / Bandwidth: 1.28 Tbps 4) MAC table: 128K 5) L3 interfaces: 128 16) Jumbo frames: 12270 bytes 6) IPv4 Unicast routes: 16K 7) Hot swappable redundant power supply 8) Cooling Front-to-Back, 4 fans 9) Operating temperature from -0° to +50°C 10) Operating humidity 80% 11) Mounting Rack 19", 1U	No.	2

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7	Main Rack mount Server for Video Management & Processing (with minimum of following specs): - Intel Xeon 14 Processor or eqvt - redundant Power supply - 16GB DDR4-RAM - Full height PCIe filler - Mega RAID Controller - 6 TB SAS, HDD/hot plug/drive sled mounted - Mega RAID (Raid card)	No	2
8	Core i7 Ultra Slim Desktop PC • 2TB HDD • DVD Writer • Genuine Latest MS WINDOWS 10 Professional 64 bit pre-installed Operating System and associated software.	No	2
9	Industrial Grade Access 8 port Switch Features of 8 port POE access switch shall be as follows: • 8x100/1000BASE-T (PoE/PoE+, RJ-45), • Bandwidth : 20 Gbps • Power budget PoE : 120W • Device Housing : Metal, IP-30 rating • Operating humidity : 5 – 95% • Operating temperature: -40° to 70°	No.	12
Ch./Item No. MRS	Item Description	Unit	Quantity
10	OUTDOOR ACCESS POINT 3x3 MIMO • Dual band Wi-Fi 802.11ac • Data Transfer rate: 802.11ac: 1300 Mbps • 3x3 MIMO support • IEEE 802.11 a/b/g/n/ac standard support • Power supply: PoE+ 48V/54V (IEEE 802.3at-2009) • Operating temperature -40 C to +60 C	No.	4

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11	24 Access Switches layer 3 with SFP Managed •1000 Base –T (RJ-45) Ports(PoE / PoE+) : 24 Ports • 1000 Base-X (SFP) : 4 Ports • Console Port RS-232/RJ-45 • Switching Capacity Bandwidth 128 Gbps • Packet forwarding rate (64B) : 92.1Mpps • Buffer memory 12 Mb • RAM (DDR3) : 512 MB • ROM (RAW HAND) : 512 MB • MAC table : 16K • VLAN table : 4k • Link aggregation Group (LAG) : 16, upto 8 ports per LAG • Maximum size of ECMP group : 8 • Maximum Jumbo – frames size : 10240 B • Stacking : 08 devices • Max power consumption : 400W (PoE)	No.	2
12	Solar System 5KVA with Hybrid UPS/Inverter & 8 hour Power Back up	No.	1
13	Indoor Wi-Fi Access points (APs) 3x3 MIMO a) Interface 2x 10/100/1000Base-T ports (RJ-45) PoE/PoE+ b) User 400 c) Maximum transmitter power 18 dBm d) Radius coverage up to 200 m e) NAND flash 128 MB f) RAM DDR3 256 g) Power: - PoE i) 32 virtual access points j) Operating temperature +5 to +40 °C l) Humidity: upto 90% - k)Dual-band antennas - l)Support for 3x3 MIMO (Multiple-input multiple-output) - m)Two built-in Broadcom chip (IEEE 802.11 b/g/n/a/ac) n) 802.11n: 216,7 Mbit/s (20 MHz channel), 450 Mbit/s (40 MHz channel and 802.11ac: 1300 Mbit/s (80 MHz)	No.	2
14	Poles		
	Surveillance poles with anti-climbing fixture. • 10 Meters height Poles. • 8-M25 Anchor Bolts (Grade 8.8) • Foundation shall be Designed as per site survey • steel plate shall be 250 MPa or 36 Ksi	No.	10
15	Cabinets		
	12 U Out door Equipment cabinet for sites having rating of IP68 with active temeperature control for both heating and cooling.	No.	10
Ch./Item No.	Item Description	Unit	Quantity
16	Cables		
	Ancillary equipment Power cable, ducts, clamps, ties and allied accessories.	No.	10

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	UTP Network Cabling, One Roll CAT 6 . 306 M Minimum 23 AWG. Low Smoke Zero Halogen (LSOH)	Roll	3
21	IP BASED VIDEO SURVEILLANCE SYSTEM		
22	<u>NETWORK BASED CAMERAS</u>		
23	Fixed and PTZ Cameras:		
24	Fixed Bullet IP Camera 8MP • Image Sensor : 8 MPX (4K Ultra HD) • Lens: motorized, auto-iris and auto-focus function, f=2.8 ~ 12 mm/F1.4 • Human/Vehicle Object Classification • D/N function - IR cut filter • Min. Illumination: 0.015 lx (0 lx, IR on) • IR LED, range up to 70 m • 128Gb SD card • Video Intelligent Analytics • facial recognition. • Deep learning algorithm having People and Vehicle Counting technology • Detect, track, capture vehicle, non-motor vehicle and people • Protection class: IP67	No.	10
25	Outdoor PTZ Camera 4MP • IP Camera 4MP • 30X Optical Zoom • Lens Type motorized, auto-iris function, f=4.7 ~ 141 mm/F1.5 ~ F4 • Edge Analytics • facial recognition. • Deep learning algorithm having People and Vehicle Counting technology • Detect, track, capture vehicle, non-motor vehicle and people	No.	10
26	IP Based Outdoor ANPR Camera with Software • Image Sensor : 2 MPX • Lens Type :motorized, auto-iris function, f=7 ~ 22 mm/F1.4 • IR Range : 100 meter • Frame Rate 60 fps for 1920 x 1080 (Full HD) • Recommended maximum speed of the vehicle 70 km/h • Minimum IP Class: IP67 • Memory Micro SD Card Slot up to 128 GB • along with ANPR software • Operating Temperature -30°C ~ 60°C	No.	12
27	55 inch 4k Display Screen for CCTV Cameras	No	1
28	Wall Mounted Communication Rack 27U (Floor Mounted) suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDUs) with at least 5 imported power sockets etc. Complete in all respects. • 4 no. cooling fans • Steel front door • Earthing strip • Door lock	No	2

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Ch./Item No.	Item Description	Unit	Quantity
29	Bio-Metric System • Fingerprint capacity: 8000 • Card capacity: 10 000 • Record capacity 200 000 • Display 3.5 inch Screen • Communication: RS232/484, TCP/IP, USB host • Wigand ports: 2 - IN/OUT • standard functions: Work code, SMS, DST, scheduled-bell, self-service query, automatic status switch, T9 input, photo-ID, 9 digits user ID, anti- passback • Optional functions: ID/MIFARE/HID, webserver, Wi-Fi, 3G, • Biometric identification speed <1sec • operating temperature 0°C do +45°C • operating humidity 20% - 80%	No.	2
30	Web Base Time Management Software and integration with Existing Time Management Software System	No.	1
31	ELECTRONIC TOLL COLLECTION AND ACCESS CONTROL SYSTEM - 06 No. of Toll Station		
32	Fog Light	No.	6
33	Lane Status Indicator ↓×	No.	6
34	Motorized Entry Barrier	No.	6
35	Automatic Vehicle classification system	No	6
36	Camera Pole	No.	6
37	IP Based Fixed Bullet Camera • Image Sensor : 5 MPX CMOS sensor 1/2.7” • Lens Type : motor-zoom,f=2.8 ~ 12 mm/F1.4 or higher • IR Range : 50 meter • Frame Rate: 30 fps • Multi-streaming • Compression : H.264+, H.265+, G.711 Facial Recognition Advanced Analytics • Video Intelligence Analytics • Minimum IP Class: IP-67 with IK-10 rating & Aluminium Casing • Memory Micro SD Card Slot up to 128 GB • Operating Temperature -30°C ~ 60°C • Power Supply High POE.	No	6
38	Lane Traffic Light	No.	6
39	Alarm Rotating Beacon	No.	6
40	Alarm Siren	No.	6
41	Traffic Light Pole	No.	6
42	RFID Antenna	No.	6
43	Automatic Transit Distributor (ATD) fitted with 4 Contactless cards distributors including: - Lane Controller, - I/O boards.	No.	2
44	Toll Station attendand PC (Core i7) with Toll Collection software	No.	6
45	Thermal Printer / booth	No.	6

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46	UPS for Toll Station 2 KVA / Booth	No.	6
47	2D LiDAR sensors, Traffic Controller FPS		
48	2D LiDAR sensor Shall records the contour of the passing vehicle, measuring range and scans the vehicle using a non-contact time of-flight process. The laser beam shall emitted through the inspection window. The scan plane position shall indicated by a housing marking next to the inspection.	No	2
49	Traffic Controller FPS The Traffic Controller FPS shall be used the installed profiling software to calculate the vehicle dimensions, vehicle class, and number of axles. These calculations shall based on the vehicle contour that has been recorded and the position of the vehicle within the lane. At the same time, the Traffic Controller FPS acts as the central control unit for the profiling system. Using its TCP/IP Ethernet interface, it constantly provides the downstream systems with all system data, the measuring points, measurement results, and system messages. The TCP/IP interface shall also used for set-up, calibration, and fault analysis with the aid of tools.	No	1
50	IP Medium Executive Phone • High quality TFT LCD Touch color screen of at least 480 x 320 pixels • 10 programmable keys (2x19) • 2 VIP touch buttons on screen • 2-way conference • HD Audio voice quality • Two access level: administrator, user	No	6
Ch./Item No.	Item Description	Unit	Quantity
51	Proximity Door Access Controller suitable for Standard controller, 4 doors one way, 2 doors two way, 4 readers ports, TCP/RS-485 communication ports, 20 000 card buffer, 50 000 events buffer, 20 000 alarm buffer. Supported readers with Wiegand interface 26-40 bits	No	2
52	Proximity card reader with keypad for Unique (EM), HID Prox (125 kHz) and Mifare Classic (13.56 MHz) card type. Work with Wiegand port. Switched output Wiegand format - 26/34-bit for Unique and Mifare, 26/37 for HID Prox (automatic). Switched output keypad format - 4/8-bit or virtual card number. Read range from 2 to 10 cm.	No	6
53	Proximity Cards ISO credit card standard size and thickness, thin, MIFARE® compatible, Operatig frequency:13.56 MHz, flexible polyvinyl chloride laminated, passive type, easy printable on both sides.	No	100
54	Administrator proximity card Unique, MIFARE®, HID, Prox, reader type, operating frequency: 125 kHz, 13.56 MHz and USB interface.	No.	1

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55	Magnetic Drop Bolt Lock (Single Door) with holder and fixing accessories.	No	5
56	Magnetic Drop Bolt Lock (Double Door) with holder and fixing accessories.	No	1
57	Push Button (Exit Switch) suitable for installation on BS standard size back box connected to door controller for access including emergency door release break glass button.	No	5
58	Power Supply The buffer power supply shall intended for the uninterrupted supply of demanding devices stabilized voltage of 12V DC (+/- 15%). The PSU supplies voltage U = 13.8V DC with current efficiency I = 4.5A + 0.5A battery charging controller (1 door) and for RS controllers. In the event of a power failure, it shall instantaneous switching to battery operation. With high energy efficiency and placed in a metal casing (RAL 9003 color) with place for 7Ah / 12V battery. The maximum battery charging current is 0.5A *. Total current of receivers + battery is max. 5A	No.	2
59	32 channels (NVR Network Video Recorder) • Resolution : Resolution (4K) (video + audio) • Internal storage : 8 x HDD 3.5” 14 TB SATA (each) • Video Intelligence Analytics • Recording: Recording speed up to 960 fps at 3840 x 2160 • High quality images and support H.264, H.264+, H.265, H.265+ • Supported protocols: ONVIF, RTSP • Supports up to 2 monitors simultaneously • disk mounting: 8 x S-ATA 3,5 or higher" • Operating system: Microsoft Windows 10 IoT • Recording and surveillance system: VMS (Video Management System) • Redundant multi-site video storage with primary and backup storage •Integration with Access Control System • Power Supply High POE.	No.	1
Ch./Item No. MRS	Item Description	Unit	Quantity
60	IP Based Power Amplifier 2x150 W RMS (EN standard) • High efficiency amplifier (class D) • 2 analogue audio inputs x 2 powered audio outputs • Euroblock input and output connectors • High efficiency, auto standby function and convection cooling (fanless, 100% silent) • THD+Noise @ 1kHz Full Power <0.05% • S+N/N 20Hz - 20kHz @ 1W/4Ω >85dB • Frequency response (-1 dB, -3dB) 20Hz - 25kHz • BRIDGE mode ready • Thermal protection • Complete in all respect.	No.	1

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61	20W Out Door Sound Projector Speaker EN STANDARD • 20 WRMS • Suitable for extreme humidity and/or temperature • Frequency response (-10dB) 80Hz - 20KHz • Sensitivity (dB@1m 1W) 89dB	No	10
62	16 Zone Call Station with Keypad (as per EN standard) has a microphone on a flexible stem, a push-to-talk button, a speaker, and a headset socket suitable for rack mounting. Complete in all respects including all accessories. • Call station interface via a CAT-6 cable of up to 500 m • Supervised microphone on a gooseneck stem with good speech intelligibility with 4 programmable keys and 16 keypads	No	1
63	2C, 2.5 Sq.mm LSZH imported Speaker Cable for Public Address System from Speaker to Speaker as per zoning layout to be installed in Conduit / Cable tray with cover complete in all respects.	m	500
64	4G Device to transfer data from Toll Plaza to Control Room	No.	2
65	UPS for Toll Station 10 KVA For all system	No.	1
	Total of Bill No. 9c		
Ch./Item	Item Description	Unit	Quantity
-	Operational Building for Toll Plaza	Sq.m	50

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VOLUME - III

Traffic Assessment Report for Operation and Management Contracts for Muridke - Narowal - Shakargarh Road in Punjab on PPP Mode



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Document Control Sheet

Project	Operation and Management Contracts for Muridke - Narowal - Shakargarh Road in Punjab on PPP Mode
Project No.	147
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1. INTRODUCTION

The Muridke - Narowal - Shakargarh Road project is a strategic initiative aimed at advancing road infrastructure in Punjab, Pakistan, through a Public-Private Partnership (PPP) model. Undertaken by the Communication and Works Department of the Government of Punjab, this project is integral to enhancing connectivity, fostering economic development, and supporting rural and urban mobility within the Muridke, Narowal and Shakargarh regions. The focus on a PPP model highlights the government's commitment to innovative financing solutions that bring together public oversight and private expertise in the planning, design, rehabilitation, and operation of vital infrastructure.

A cornerstone of this project is the traffic assessment study, a comprehensive analysis designed to support the feasibility report for road development and management. This study provides essential data on traffic patterns and volumes, offering insights critical to the planning and operational strategies that ensure the road meets current and future transportation demands. By assessing existing and projected traffic flows, the study aims to furnish a robust data-driven foundation that can guide strategic decision-making regarding road design, financial viability, and environmental considerations. The following key elements underscore the value of this study in fulfilling the project's objectives:

- **Project Planning:** Understanding traffic patterns is essential for determining road design requirements, including the optimal number of lanes, intersection configurations, and safety features. Detailed traffic data enables engineers to customize the road design to accommodate both present and anticipated traffic volumes effectively.
- **Financial Viability:** Accurate traffic projections inform revenue estimates, an essential aspect for engaging private sector partners under the PPP model. Expected toll revenues or traffic flows directly impact the project's financial sustainability, influencing investment decisions and resource allocation.

1.1. Overview of Road

The Muridke-Narowal-Shakargarh Road is a strategic 113-kilometer corridor that plays an essential role in supporting economic, agricultural, and cultural connectivity within Punjab, Pakistan. Stretching from Muridke's industrial zones through the agriculturally rich regions of Narowal and Shakargarh, this road serves as a vital link between productive hinterlands and cross-border areas, facilitating the movement of goods, people, and services. By connecting these areas, the Muridke-Narowal-Shakargarh Road boosts trade, tourism, and regional development, positioning it as a key infrastructural asset within Punjab's road network.

This road is crucial for linking the industrial center of Muridke with Narowal and Shakargarh, regions known for their fertile agricultural lands and rich natural resources. The route enhances the efficiency of transporting goods, directly benefiting local farmers, traders, and manufacturers. As a vital trade route, the road enables timely access to markets for agricultural products, helping to strengthen rural economies and improve livelihoods in the surrounding areas.

Beyond trade and agriculture, the road's role in regional development is profound. It links remote and semi-urban areas to central Punjab, enhancing access to essential services such as education, healthcare, and business opportunities. This connectivity fosters a more integrated regional economy by creating reliable transportation infrastructure that meets the needs of commuters and businesses alike.

The road also strengthens strategic connectivity in light of the Kartarpur Corridor, a landmark initiative facilitating visa-free cross-border access between Pakistan and India. Located near Narowal, the Kartarpur Corridor has significantly increased religious tourism, particularly for Sikh pilgrims visiting the Gurdwara Darbar Sahib. The Muridke-Narowal-Shakargarh Road, therefore, plays a critical role in supporting this influx of visitors, reinforcing Pakistan's commitment to fostering cross-border harmony and cultural exchange.

1.2. Scope of Services

The traffic assessment study requires three primary services as per the Project's Terms of Reference (ToR): traffic count surveys, social surveys, and traffic analysis.

- **Traffic Count Surveys:** These surveys use advanced video camera technology to record traffic flows at specific locations. The captured data helps categorize vehicle types and analyze movement patterns, laying the groundwork for subsequent traffic volume calculations and projections.
- **Social Surveys:** Conducted at key locations along the road, social surveys capture user behavior and preferences. Two distinct types of surveys—Origin-Destination (OD) and Willingness-to-Pay (WTP)—offer insights into travel routes and user attitudes toward potential toll-based improvements, essential for revenue estimation and stakeholder engagement.
- **Traffic Analysis:** Using data from traffic count surveys, this component involves processing and analyzing traffic volumes through specialized software, adhering to the National Transport Research Center (NTRC) guidelines for calculating Average Daily Traffic (ADT) and Average Annual Daily Traffic (AADT). Projected traffic volumes over the next 25 years are also calculated, ensuring a long-term vision for infrastructure development.

1.3. Methodology

The methodology for the traffic assessment study is a systematic and data-driven approach designed to capture, process, and analyze key traffic parameters. This comprehensive methodology aims to quantify existing traffic conditions, predict future traffic volumes, and evaluate user behavior and preferences. The findings from these processes will inform feasibility, financial viability, and environmental assessments to support the project's development under a Public-Private Partnership (PPP) model. The methodology consists of three major components: traffic count surveys, social surveys, and traffic analysis.



1.3.1. Survey Locations

Traffic surveys are carried out along the study road, to capture typical traffic demand of roadway segments. These areas represent traffic segments that typically serves the traffic demand of study road. Traffic Surveys are conducted on typical weekdays including on Monday, Tuesday, Wednesday and Thursday to capture the day to day travel pattern of study road. Table below provides an overview of the survey locations, including their geographical coordinates (latitude and longitude), the type of survey conducted, the duration of each survey, and the specific dates on which the surveys are conducted. A map of the survey locations is presented in Figure below, offering a visual representation of the key sites.

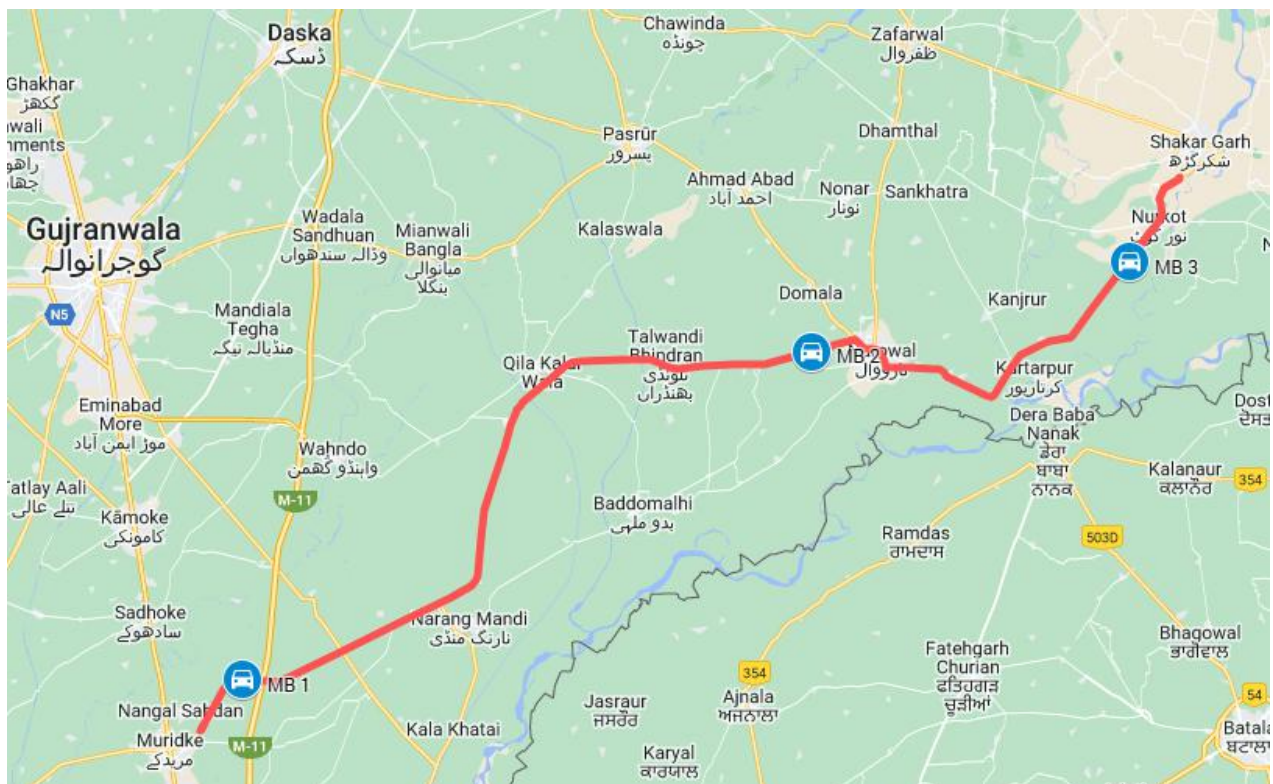


Figure 1 - Map of Survey Locations

Table 1 - Location, Coordinates and Duration of Traffic Survey Locations

S.No	Group	Location Code	Coordinates (Lat, Long)	Mid-Block Count (Days)	OD Surveys (Days)	Survey Start Date
1	Group-1 Muridke - Narowal & Narowal - Shakkar Garh	G1 - MB 1	31.8623882, 74.3161695	3	1	October 7, 2024
2		G1 - MB 2	32.1074635, 74.8171722	3	1	October 7, 2024
3		G1 - MB 3	32.1743739, 75.0965285	3	1	October 7, 2024

These locations are selected based on their strategic importance, as they serve typical travel demand and commute along the road. These surveys provided valuable data points that reflect the movement patterns, volume of vehicles, and nature of traffic across key access points. The combination of quantitative data and geospatial analysis is critical for forming a complete picture of the traffic demand along study road.

1.3.2. Traffic Count Surveys

Traffic count surveys are a foundational element of this study, providing quantitative data on vehicle volumes, classifications, and movement patterns along the project road. The methodology for traffic count surveys includes advanced video monitoring, quality control processes, and comprehensive data processing techniques, as detailed below:



Figure 2 - Vehicle Counting Device Mounted at Traffic Survey Site

Survey Equipment: Specialized video camera systems were installed at predetermined survey points along the road segment. These cameras recorded traffic continuously for 24 hours over multiple days, capturing

a full range of daily and weekly traffic variations. The equipment was equipped with weather-resistant enclosures and temperature control features to ensure reliable operation in the field.

Data Collection: The video cameras were strategically placed at key mid-block locations that represent typical traffic flow and congestion points. Survey locations were selected based on traffic patterns, geographical coverage, and access points to ensure a holistic representation of the traffic demand along the road.

Vehicle Classification: The recorded footage was processed using software capable of identifying and classifying vehicles into ten categories based on type and size, including motorbikes, rickshaws, cars, trucks, trailers, buses, and agricultural tractors. This categorization provides insight into vehicle composition, which is essential for infrastructure planning and financial modeling.

Table 2 - Vehicle Classification

S. NO.	VEHICLE TYPE	S. NO.	VEHICLE TYPE
1	Motor Bike	6	Large Bus
2	Rickshaw	7	2/3 Axle Trucks
3	Car	8	Trailer
4	Pickup	9	Tractor
5	Mini Bus	10	Tractor with Trolley

Quality Assurance: Data extracted from video recordings underwent rigorous quality checks by field supervisors, who cross-referenced sample footage against the processed data to confirm accuracy. Discrepancies identified during this quality control stage were resolved through reprocessing of the footage, ensuring the reliability of the final data.

1.3.3. Social Surveys

The social survey component complements the traffic count surveys by gathering qualitative data on user behavior, preferences, and attitudes toward the project road. Social surveys were conducted at strategic locations to capture travel patterns, user experiences, and willingness-to-pay data, which are critical for understanding stakeholder perspectives and evaluating the potential financial feasibility of the project.

1.3.3.1. Origin-Destination (OD) Survey

This survey captures the starting and ending points of trips, along with vehicle types, to map out travel patterns along the road. The data collected through OD surveys enables traffic flow modeling, helping to predict how the project's improvements might influence commuting routes and overall traffic dynamics.

1.3.3.2. Willingness-to-Pay (WTP) Survey

The WTP survey was conducted through roadside interviews, where users were asked about their willingness to pay tolls or fees for enhanced road conditions, such as improved pavement, reduced congestion, and shorter travel times. This data provides an indication of potential toll revenue, essential for assessing the project's financial viability under the PPP model.

Experienced personnel are assigned to supervise the social surveys using structured questionnaires designed to capture high-quality data. Surveys were conducted at various times throughout the day at key locations, such as toll plazas, rest areas, and fuel stations, ensuring a representative sample of road users. Trained interviewers facilitated the surveys, and the collected responses are subsequently digitized for analysis.



Figure 3 - Social Surveys at Site

1.3.4. Traffic Analysis

The Traffic Analysis methodology of the project is designed to convert raw data from traffic surveys into actionable insights. This analysis provides a detailed understanding of existing traffic patterns, volume measurements, vehicle classifications, and future traffic projections, which are critical for planning, financial modeling, and environmental assessment. By utilizing advanced software, statistical methodologies, and quality assurance protocols, this section ensures the accuracy and reliability of data required for the Public-Private Partnership (PPP) feasibility study. Key aspects of the traffic analysis include data processing, calculation of traffic volumes, quality control, and traffic volume projections.

1.3.4.1. Data Processing

Data processing is the initial stage of traffic analysis, where raw data from the video traffic count surveys are transformed into structured datasets that can be used for in-depth analysis.

- **Software Utilization:** Advanced traffic analysis software is employed to analyze video footage and accurately classify vehicles by type, speed, and direction. This software allows for detailed categorization of vehicles, enabling precise analysis of traffic flows and peak periods.
- **Vehicle Classification:** Each vehicle recorded in the footage is classified into one of ten categories, including motorbikes, rickshaws, cars, mini-buses, large buses, pickups, 2/3-axle trucks, trailers, tractors, and tractor-trolleys. This classification is essential for understanding the distribution of different vehicle types on the road, which influences both road design and financial models, especially for toll calculation.
- **Time-Based Analysis:** The processed data is segmented by hour, day, and week, allowing for identification of peak and off-peak hours. By understanding these patterns, planners can make informed decisions about road capacity, intersection design, and congestion management.
- **Quality Control in Data Processing:** Throughout data processing, quality checks are conducted to ensure the accuracy of vehicle classification and movement data. Field supervisors perform spot checks on processed data to confirm its consistency with observed traffic conditions, ensuring that all data points accurately reflect real-world traffic scenarios.

1.3.4.2. Traffic Volume Calculations

Calculating traffic volumes is a critical component of traffic analysis. It involves computing Average Daily Traffic (ADT) and Average Annual Daily Traffic (AADT) based on the processed data, following guidelines provided by Pakistan's National Transport Research Center (NTRC) as per requirements specified in project's Term of Reference (ToR). These metrics are vital for evaluating road capacity requirements, toll revenue potential, and overall project feasibility.

(a) Average Daily Traffic (ADT)

ADT represents the average number of vehicles passing a specific point on the road per day. This metric is calculated by averaging the vehicle counts recorded over the survey period. The ADT calculation provides a snapshot of typical daily traffic volumes, which is essential for assessing road utilization and planning capacity.

(b) Average Annual Daily Traffic (AADT)

AADT is a key metric used in long-term planning and is calculated by adjusting ADT to account for weekly and monthly variations in traffic. Using NTRC's guidelines, AADT is derived by multiplying ADT with the

weekday and monthly multiplying factors to represent typical variations. This adjustment provides a more accurate representation of traffic over an entire year, accounting for seasonal fluctuations and weekday-specific traffic changes.

Weekday Multiplying Factor: Based on survey data from typical weekdays (Tuesday, Wednesday, and Thursday), a multiplying factor of 0.9866 was applied to represent average weekday traffic. This factor is taken from NTRC guidelines, providing a standardized approach to account for weekday-specific variations.

Table 3 - Weekday Multiplying Factors for AADT Computation (Source NTRC)

Day of Week	Weekday Multiplying Factors
Sunday	1.0126
Monday	0.992
Tuesday	0.9928
Wednesday	0.9888
Thursday	0.9783
Friday	1.0101
Saturday	1.0318
Average for Tuesday, Wednesday and Thursday	0.9866

Monthly Multiplying Factor: A multiplying factor of 0.9753 for October, the month of data collection, was used. This factor accounts for seasonal changes in traffic volumes and adjusts the ADT to an annual average, as recommended by NTRC.

Table 4 - Monthly Multiplying Factors for AADT Computation (Source NTRC)

Month of Year	Monthly Multiplying Factors
January	0.9974
February	1.0935
March	0.9808
April	0.9711
May	1.0168
June	1.0019
July	0.9557
August	0.9943
September	1.0137
October	0.9753
November	1.0113
December	1.001
Monthly Multiplying Factor for October	0.9753

AADT Formula: Using the formula below, the AADT provides an adjusted annual traffic volume metric, which is critical for forecasting toll revenue and assessing long-term infrastructure needs.

$$AADT = ADT \times \text{Weekday Multiplying Factor} \times \text{Monthly Multiplying Factor}$$

1.3.4.3. Quality Assurance and Quality Control (QA/QC)

Quality assurance and control (QA/QC) measures are implemented throughout the data processing and analysis phases to ensure data accuracy and integrity. Rigorous QA/QC protocols are necessary for producing reliable results, as they directly impact the validity of feasibility assessments and financial projections.

- **Data Validation Checks:** Random samples of processed video footage are cross-checked with software output to verify vehicle classifications, counts, and movement patterns. This validation step helps identify and correct discrepancies, ensuring the consistency of the data with actual traffic conditions.
- **Internal Review Procedures:** Each stage of data processing and analysis is subject to internal review by field supervisors and data analysts. Supervisors verify that all traffic survey methodologies, software classifications, and data entry processes adhere to best practices and project standards.
- **Survey Questionnaire Review:** Social survey data, collected through questionnaires and interviews, is also reviewed to confirm the completeness and reliability of responses. Consistency checks are performed on survey responses to identify any potential biases or inconsistencies in user-reported trip origins, destinations, and willingness to pay for tolls.

1.3.4.4. Traffic Volume Projection

A core component of the traffic analysis is the projection of future traffic volumes over a 25-year period. This forecast is essential for evaluating the long-term feasibility of the road project, particularly under the PPP model, where anticipated traffic volumes drive revenue projections and private sector interest.

- **Historical Traffic Growth Data:** The traffic growth projection relies on historical data from the Government of Punjab’s Communication and Works Department, specifically analyzing traffic trends published in Traffic Summary Books from 2014 to 2022. These datasets cover traffic growth across Punjab’s highway network, providing a robust basis for establishing an annual growth rate applicable to the study road.

- **Annual Traffic Growth Rate:** Based on an analysis of the historical data, an annual traffic growth rate of 2.57% was determined as the median growth rate for highways in Punjab. This rate is applied to the current AADT figure to forecast future traffic volumes.
- **Traffic Projection Formula:** The formula below, is used to estimate traffic volumes over a 25-year period. By applying this compound growth formula, the projected traffic data informs decisions on road capacity planning, toll fee structure, and maintenance needs.

$$AADT_{i+1} = AADT_i \times (1 + \text{Annual Growth Rate})$$

- **Impact of Projected Traffic on Road Design:** Projected traffic volumes are analyzed to determine infrastructure needs, such as the potential for road widening, lane expansion, and intersection modifications. These insights are also valuable for developing financial models under the PPP model, as they provide a basis for estimating toll revenue and potential return on investment for private partners.

1.3.5. Data-Driven Insights and Reporting

The traffic analysis findings are compiled into a comprehensive report that serves as a key input for feasibility assessments, financial modeling, and environmental impact studies. This report includes detailed traffic volume metrics, growth projections, and quality assurance outcomes, which collectively provide a data-backed foundation for decision-making.

- **Traffic Patterns and Peak Analysis:** The report provides a breakdown of traffic patterns, including hourly and daily variations, to help stakeholders understand demand surges and potential congestion points. This information is crucial for managing peak traffic loads and optimizing toll plaza operations.
- **Vehicle Composition Analysis:** By categorizing traffic into vehicle types, the report offers insights into the proportion of different vehicles. This analysis guides road design decisions, such as lane width and pavement thickness, which directly impact safety, and maintenance requirements.

The Traffic Analysis method transforms raw traffic data into detailed, actionable insights that are essential for the planning, financial structuring, and operational strategies of the study project. By employing rigorous data processing methods, ensuring data quality, and projecting future traffic demand, this analysis provides a comprehensive understanding of traffic conditions, which supports sustainable and efficient infrastructure development under the PPP model.

1.4. Deliverables

Deliverables of this study includes following, as mentioned in the project's Terms of Reference (ToR):

- **Data Collection and Analysis Methodology:** A comprehensive account of the methodologies employed for data collection, quality assurance, and analysis, including detailed descriptions of survey locations, survey dates, and technical specifications of the equipment used.
- **Traffic Count Findings:** Results from the traffic count surveys, including traffic volumes and vehicle classifications, as well as ADT and AADT values.
- **Social Survey Insights:** Summary of findings from the OD and WTP surveys, illustrating user travel patterns and preferences, including potential willingness to pay for tolls.
- **Future Traffic Projections:** A projection of traffic volumes over a 25-year horizon based on historical growth rates and adjusted for expected regional development.

2. TRAFFIC FLOW – NETWORK ILLUSTRATION

This chapter provides a comprehensive overview of the traffic flow patterns along the study Road, using data gathered from traffic count surveys, Origin-Destination (OD) surveys, and Willingness-to-Pay (WTP) surveys. The analysis presents an in-depth look at the movement of vehicles, common travel routes, and potential toll viability across the study road network. By integrating these data points, the traffic flow assessment offers insights that are critical for infrastructure planning, financial modeling, and decision-making within the context of a Public-Private Partnership (PPP).

2.1. Network Traffic Flow

The Network Traffic Flow section illustrates the distribution of vehicular movement across the study road network, based on the Average Annual Daily Traffic (AADT) as recorded at various survey stations. Each station represents key segments of the road network, capturing typical traffic volume and the nature of commuter demand at specific locations.

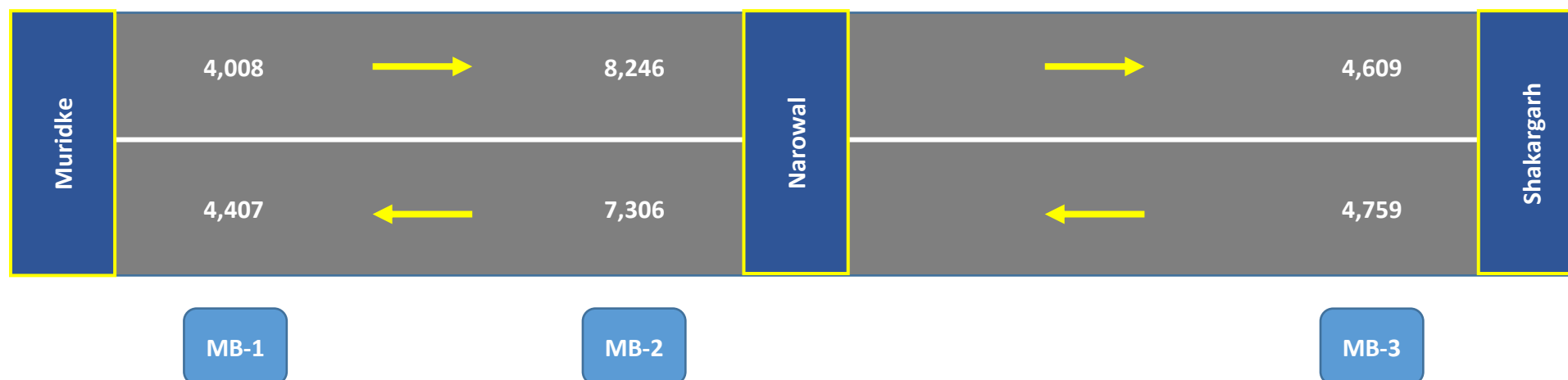


Figure 4 - Existing Traffic Flow along study road in AADT (vehicle per day)

2.2. Origin Destination Travel Pattern

The OD travel pattern analysis provides a detailed view of the movement of vehicles along the study road, captured through OD surveys conducted with drivers. These surveys reveal trip origins and destinations, preferred routes, and commuter willingness to pay for potential road improvements. By examining this data, planners can identify the most frequently traveled routes, assess demand for specific segments, and understand regional travel behaviors. The table below ranks the top 20 most frequently traveled origin-destination pairs along the study road, which illustrate traffic hotspots within the network (complete matrix is provided in annexures):

Table 5 - Top 20 Most Frequently Travelled OD Pair along Study Road

Rank	Origin	Destination	AADT (Veh per Day)	Rank	Origin	Destination	AADT (Veh per Day)
1	Lahore	Shakargarh	1,755	11	Shakargarh	Muridke	504
2	Narowal	Shakargarh	1,423	12	Narowal	Lahore	502
3	Shakargarh	Narowal	1,227	13	Muridke	Narang Mandi	501
4	Shakargarh	Lahore	1,070	14	Narowal	Qila Kalar Wala	418
5	Muridke	Shakargarh	762	15	Nurkot	Muridke	389
6	Narowal	Muridke	744	16	Daharki	Muridke	343
7	Lahore	Narowal	595	17	Kamoke	Shakargarh	333
8	Muridke	Narowal	587	18	Gujranwala	Shakargarh	289
9	Narang Mandi	Muridke	528	19	Narowal	Talwandi Bhindran	279
10	Zafarwal	Lahore	511	20	Zafarwal	Muridke	279
Rest of the Traffic							9,344
Total Network AADT in vehicles per day							22,383

The OD data highlights several significant insights into traffic demand and mobility patterns along the study road:

- **High-Volume Travel Pattern:** The top-ranked travel pairs, particularly those connecting Lahore and Muridke to Narowal and Shakargarh, show a strong travel pattern. This demand underscores the importance of these segments for daily commuters, and freight vehicles.



- **Potential for Toll Collection:** The concentration of traffic in high-demand segments presents feasible tolling opportunities. These routes could serve as primary toll points to generate revenue for road maintenance and management under the PPP model.

Overall, the total network AADT is approximately 22,383 vehicles per day, with the top 20 OD pairs accounting for significant volumes of daily travel. The data suggests that the Muridke-Narowal-Shakargarh Road functions as a critical link within Punjab, facilitating both intercity and regional connectivity.

2.3. Willingness to Pay

The Willingness-to-Pay (WTP) survey was conducted to evaluate road users' openness to paying tolls in exchange for improved road conditions, such as reduced travel time and enhanced road quality. This assessment is crucial for estimating potential revenue from tolling, which supports the financial viability of the project under the PPP model. The survey results are summarized in the table below, which shows the percentage of respondents willing to pay a toll, as well as their preferred toll range.

Table 6 - Percentage of Vehicles Willing to Pay Toll with suggested toll range in PKR

Willingness to Pay	Percentage
No	61%
Yes	39%
PKR 10 - 30	2.30%
PKR 30 - 50	11.49%
PKR 50 - 100	2.30%
PKR 100 - 150	1.15%
PKR 150 - 170	0.00%
PKR 170 - 180	0.00%
C&W Applicable Toll *	21.84%

* C&W Applicable Toll means that the commuters are willing to pay according to existing Toll Structure as applied on Highways in Punjab by Communication and Works Department.



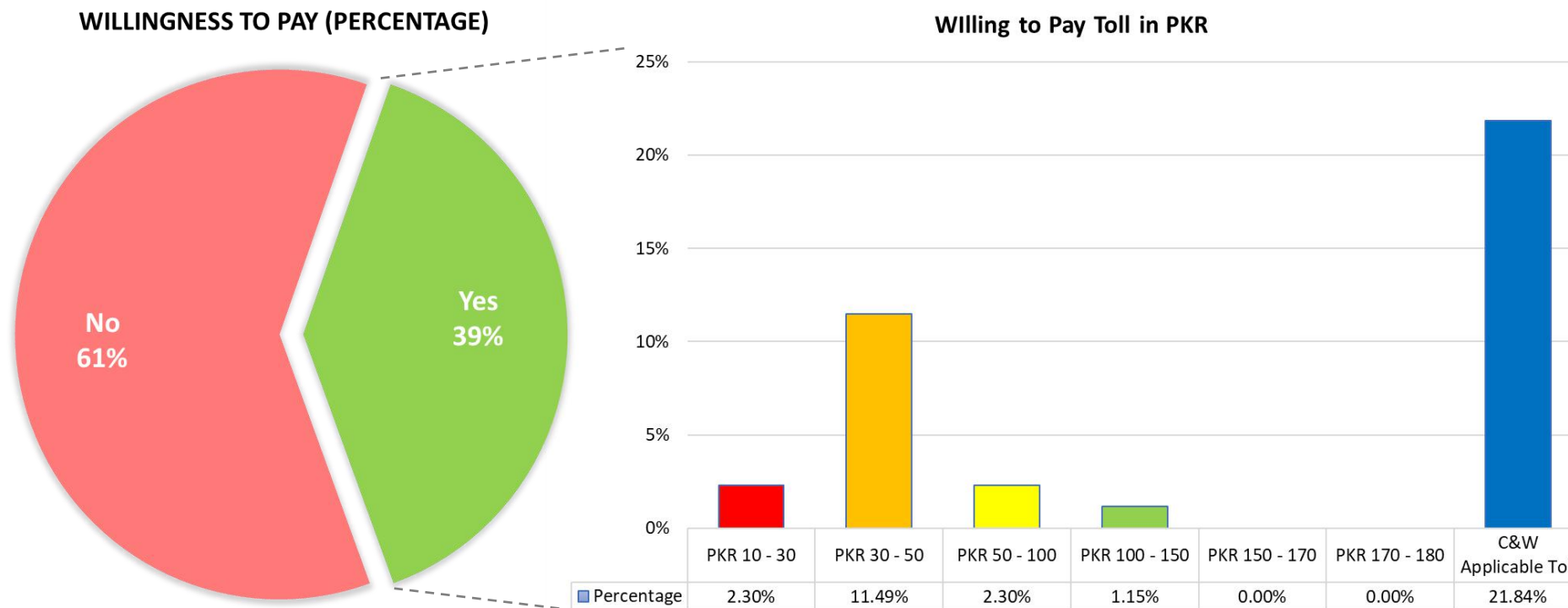


Figure 5 - Percentage of Vehicles Willing to Pay Toll with suggested toll range in PKR

The WTP analysis reveals several insights regarding commuter attitudes toward toll payments:

- **Willingness to Pay:** A substantial 39% of surveyed commuters expressed a willingness to pay a toll, while 61% preferred not to pay. This indicates a moderate level of toll acceptance, suggesting potential for revenue generation if implemented within an affordable price range that aligns with commuter expectations.



- **Preferred Toll Range:** Among those willing to pay, the largest percentage (11.49%) preferred a toll range of PKR 30 - 50. This range appears to strike a balance between affordability and revenue potential, indicating that a toll within this bracket could maximize compliance and satisfaction among commuters. Lower willingness is observed for tolls above PKR 50, highlighting price sensitivity among users.
- **Alignment with C&W Toll Structure:** Notably, 21.84% of users indicated a willingness to pay according to the existing toll structure applied by the Communication and Works (C&W) Department of Punjab on provincial highways. This reflects a baseline acceptance of standardized toll rates among a portion of users, which can be leveraged to maintain consistency with other regional toll policies.

The WTP data suggests that while there is reasonable support for tolling, keeping tolls within a range of PKR 30 - 50 may be most effective in balancing revenue goals with commuter affordability. Implementing a toll aligned with C&W rates could further reinforce acceptance, making toll collection on the Muridke-Narowal-Shakargarh Road feasible within the PPP model.

2.4. Suggested Toll Plaza Locations

Determining the optimal location for a toll plaza on the Muridke – Narowal – Shakargarh Road is essential to the project's success within the Public-Private Partnership (PPP) model. The ideal site must balance operational efficiency, revenue potential, and minimal disruption to local communities. This recommendation requires a comprehensive analysis of factors, including traffic volumes, tollable traffic patterns, physical site characteristics, regional geography, and strategic positioning to maximize toll collection from significant commuter flows while avoiding short, local trips.

2.4.1. Criteria for Toll Plaza Location Selection

The following considerations were central in identifying a suitable toll plaza location:

- **Traffic Volume and Tollable Traffic:** The suggested location must capture a high volume of tollable traffic, particularly from long-distance commuters who benefit most from improved road conditions. Analysis of Average Annual Daily Traffic (AADT) data indicates that certain road segments experience substantial commuter flow, making them more suitable for toll collection.



- **Geography and Terrain:** The physical layout and topography of the area must allow for safe construction and operation of a toll plaza. Flat or gently sloping areas are preferred, as they facilitate the layout of toll booths, lanes, and any necessary queuing space for vehicles, ensuring efficient flow.
- **Infrastructure and Space Requirements:** The toll plaza location must offer adequate space for the infrastructure required, including toll booths, lanes, signage, and possibly an administrative building. The area should accommodate these structures without causing congestion or safety hazards, and allow for future expansion if needed.
- **Minimizing Local Disruption:** To reduce inconvenience to local communities, the toll plaza should be situated away from densely populated residential areas and local access points. This avoids unnecessary tolling for short-distance or local trips, which would place an unfair financial burden on local residents who rely on the road for daily activities.
- **Strategic Positioning for Revenue Optimization:** The toll plaza should ideally capture the majority of through traffic—commuters traveling between major destinations. By positioning the toll plaza in an area that intersects these high-traffic routes, the project can achieve optimal toll collection from those who use the road extensively for long-distance travel.

2.4.2. Recommended Toll Plaza Location

Following a careful analysis, the consultant recommends two toll plaza locations along the Muridke-Narowal-Shakargarh Road: one for the Muridke-Narowal section and another for the Narowal-Shakargarh section. This dual setup is advised due to the road's considerable length of 113 km and the significant commuter flow between these sections.

Muridke – Narowal Toll Plaza: For the Muridke-Narowal section, a former, non-operational toll plaza near Chak Bhulay, located at Latitude 31.8689, Longitude 74.3707, has been identified as an optimal location. This recommendation is based on a comprehensive evaluation of commuter patterns, traffic analysis, and the site's suitability for infrastructure development. Key advantages of this location include:



- **High Commuter Capture Rate:** Situated along a key segment of the road, this location is well-positioned to capture traffic from commuters traveling between major urban areas such as Lahore, Muridke, and Narang Mandi, as well as the towns of Talwandi Bhindran, Narowal, and Shakargarh. This area sees a significant amount of long-distance, tollable traffic, making it an ideal site for maximizing toll revenue.
- **Existing Infrastructure and Geography:** Given that this location has previously served as a toll plaza, the existing infrastructure provides a favorable foundation for re-establishing toll operations. The site offers ample space for toll booths, queuing lanes, and safety features, with a layout that supports efficient traffic flow, minimizing delays and congestion.

Narowal – Shakargarh Toll Plaza: For the Narowal-Shakargarh section, the OD travel data indicates substantial commuter traffic toward Shakargarh, with a travel distance of approximately 40 kilometers. Based on this, Latitude 32.0828, Longitude 74.98511 on the Narowal-Shakargarh Road is recommended as the most suitable site for a toll plaza. This choice is supported by an evaluation of commuter dynamics, traffic patterns, and site geography. Key advantages of this location include:

- **High Commuter Capture Rate:** This location effectively captures the flow of commuters traveling between Narowal, Shakargarh, and nearby areas such as Lahore, Muridke, and Kartarpur. This high-volume, long-distance commuter traffic presents a strong basis for toll collection and is ideal for sustained revenue generation.
- **Infrastructure Suitability and Geographic Layout:** The topography and spatial configuration of this location allow for the construction of a well-equipped toll plaza, including sufficient space for toll booths, queuing lanes, and essential safety infrastructure. The site's physical characteristics facilitate smooth traffic movement, reducing congestion and ensuring efficient toll operations.



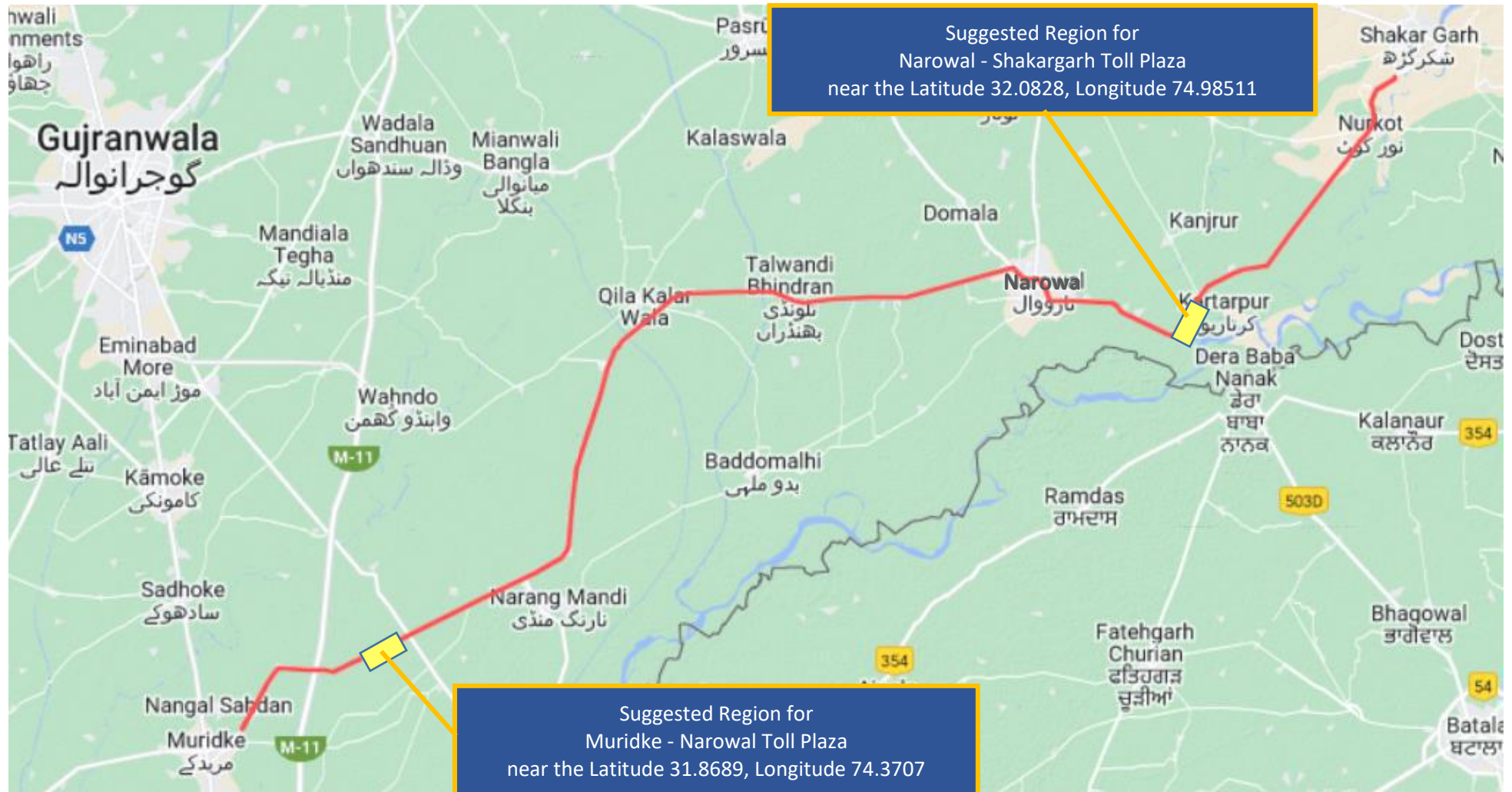


Figure 6 - Suggested location for Toll Plaza on Muridke Narowal Shakargarh Road

2.4.3. Future Analysis and Planning Considerations

While the suggested location meets the preliminary criteria, it will require further analysis during the detailed design and planning phases to ensure optimal functionality and compliance with regulatory standards. Additional factors to be evaluated include:

- **Environmental and Social Impact Assessment:** This analysis will examine the potential environmental impacts, including air quality and noise levels, and evaluate the social implications for nearby communities. This ensures that the toll plaza aligns with sustainability goals and minimizes adverse effects on the local environment and population.
- **Infrastructure Expansion Potential:** As traffic volumes are expected to increase over time, the toll plaza site should have the capacity for future expansion. This will support increased lane numbers or additional facilities if required, ensuring long-term operational efficiency.
- **Stake Holders and Local Residents Consultation:** In planning and implementing the toll plaza at the suggested location, consulting with stakeholders and local residents is essential to ensure the project aligns with community interests and mitigates potential concerns. Such consultations will provide valuable feedback, foster transparency, and enhance public support for the toll plaza, particularly in areas where residents may be impacted by changes in road access or travel costs.

The proposed toll plaza locations offer a strategically sound option that aligns with the project's financial, operational, and social objectives. By situating the toll plaza in a high-traffic segment used primarily by long-distance commuters, this location maximizes revenue potential while minimizing disruption to local communities. Further analysis in the planning and detailed design phases will confirm the suitability of this location, ensuring that it meets all technical, environmental, and regulatory requirements for a successful PPP implementation.



3. MB-1 MURIDKE

3.1. Direction Map

The location of the camera used for traffic monitoring at the MB-1 site is depicted in below Figure. This figure provides a clear view of the placement of traffic monitoring equipment and the specific areas under observation.



Figure 7 - Camera location at site (MB-1)

3.2. Vehicle Count Summary (AADT)

The following table presents a summary of the AADT vehicle count at MB-1, categorized by vehicle type and direction. The data highlights the total number of vehicles passing through this location, along with a breakdown by vehicle type. This information provides valuable insights into the composition of traffic at MB-1, which is essential for understanding how different types of vehicles contribute to overall traffic patterns in the area.

Table 7 - Summary AADT count of MB-1

Direction	From	Towards	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable
Total			4,731	749	1,384	537	39	87	680	33	28	147	8,415	2,935
Percentage Composition (%)			56%	9%	16%	6%	0%	1%	8%	0%	0%	2%	100%	35%
1	Narowal	Muridke	2,504	404	684	266	21	40	376	15	18	78	4,407	1,499
2	Muridke	Narowal	2,228	344	700	271	18	46	304	17	10	69	4,008	1,436



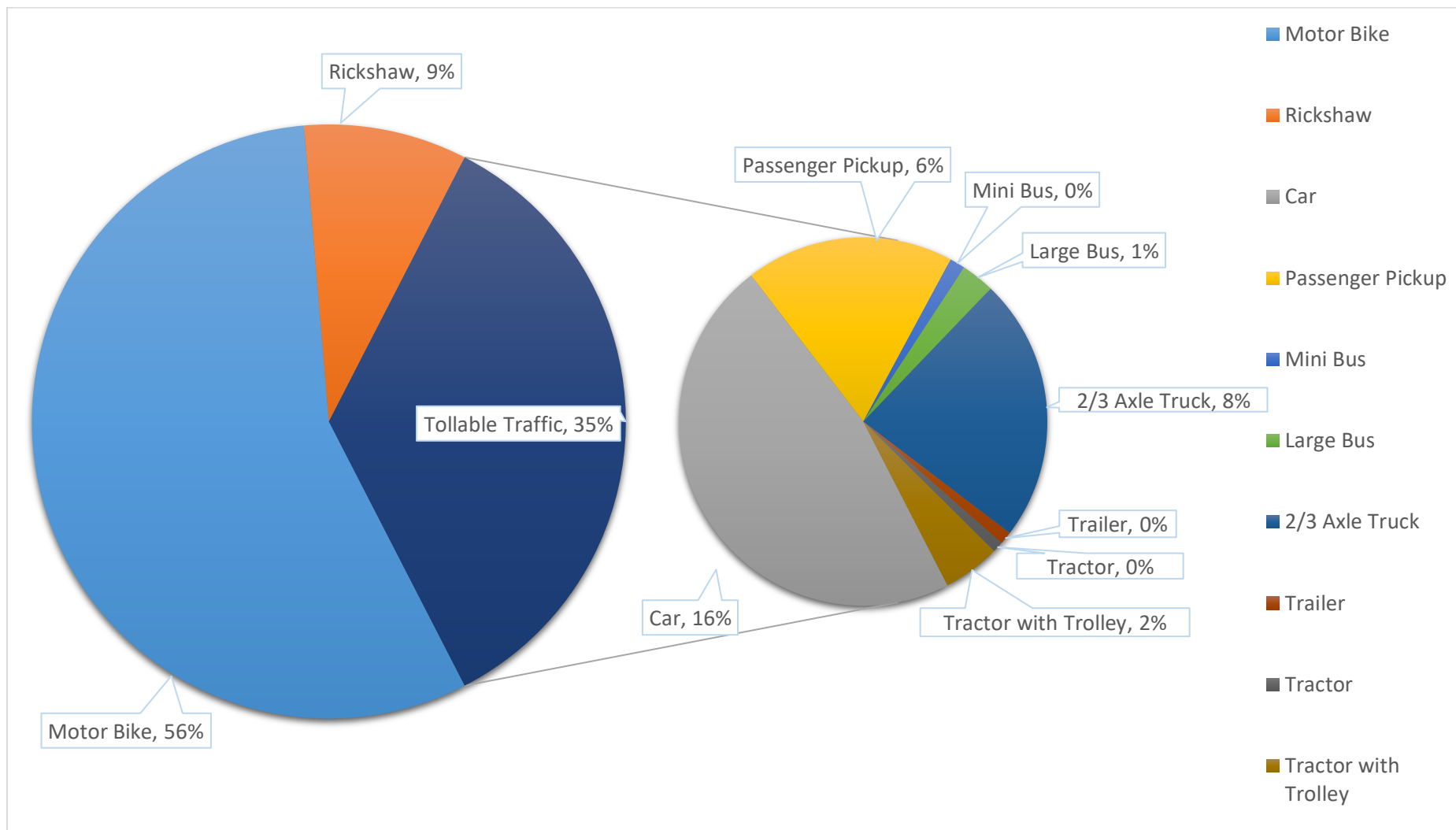


Figure 8 - Modal composition of average daily traffic at MB-1



3.3. Traffic Projection for 25 Year

Following table presents the AADT projection for 25 years with application of yearly traffic growth rate of 2.57% per Year.

Table 8 - 25 Years AADT Projection for Total Traffic of MB-1

Year	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor Trolley	AADT	Tollable
2024	4,731	749	1,384	537	39	87	680	33	28	147	8,415	2,935
2025	4,853	768	1,419	551	40	89	698	34	29	151	8,632	3,011
2026	4,978	788	1,455	565	41	91	716	35	30	155	8,854	3,088
2027	5,106	808	1,492	580	42	93	734	36	31	159	9,081	3,167
2028	5,237	829	1,530	595	43	95	753	37	32	163	9,314	3,248
2029	5,372	850	1,569	610	44	97	772	38	33	167	9,552	3,330
2030	5,510	872	1,609	626	45	99	792	39	34	171	9,797	3,415
2031	5,652	894	1,650	642	46	102	812	40	35	175	10,048	3,502
2032	5,797	917	1,692	658	47	105	833	41	36	179	10,305	3,591
2033	5,946	941	1,735	675	48	108	854	42	37	184	10,570	3,683
2034	6,099	965	1,780	692	49	111	876	43	38	189	10,842	3,778
2035	6,256	990	1,826	710	50	114	899	44	39	194	11,122	3,876
2036	6,417	1,015	1,873	728	51	117	922	45	40	199	11,407	3,975
2037	6,582	1,041	1,921	747	52	120	946	46	41	204	11,700	4,077
2038	6,751	1,068	1,970	766	53	123	970	47	42	209	11,999	4,180
2039	6,925	1,095	2,021	786	54	126	995	48	43	214	12,307	4,287
2040	7,103	1,123	2,073	806	55	129	1,021	49	44	219	12,622	4,396
2041	7,286	1,152	2,126	827	56	132	1,047	50	45	225	12,946	4,508
2042	7,473	1,182	2,181	848	57	135	1,074	51	46	231	13,278	4,623
2043	7,665	1,212	2,237	870	58	138	1,102	52	47	237	13,618	4,741
2044	7,862	1,243	2,294	892	59	142	1,130	53	48	243	13,966	4,861
2045	8,064	1,275	2,353	915	61	146	1,159	54	49	249	14,325	4,986
2046	8,271	1,308	2,413	939	63	150	1,189	55	50	255	14,693	5,114
2047	8,484	1,342	2,475	963	65	154	1,220	56	51	262	15,072	5,246
2048	8,702	1,376	2,539	988	67	158	1,251	57	52	269	15,459	5,381



3.4. Annual Hourly Peak Traffic Volume

Peak hour traffic data provides insights into the periods of the day when traffic flow is at its highest. This information is critical for identifying the times when congestion is most severe and for understanding the distribution of different vehicle types during these periods. Table below presents the total vehicle counts during peak hours, while subsequent Figure illustrates the distribution of vehicle types during these times, categorized into private/public transport and heavy vehicles.

Table 9 - Peak hour count of MB-1

Day	Peak Hour Time	Direction	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable
Tollable Vehicle Peak	17:00	Total	446	61	114	39	1	7	37	2	2	14	723	216
		1	245	33	60	19	-	4	24	1	1	8	395	116
		2	201	28	54	20	1	3	13	1	1	7	328	99
AM Peak	10:00	Total	343	57	70	42	3	10	23	1	4	5	557	158
		1	196	34	38	20	1	5	10	-	3	3	309	79
		2	146	23	33	22	2	5	13	1	1	2	248	79
PM Peak	17:00	Total	446	61	114	39	1	7	37	2	2	14	723	216
		1	245	33	60	19	-	4	24	1	1	8	395	116
		2	201	28	54	20	1	3	13	1	1	7	328	99



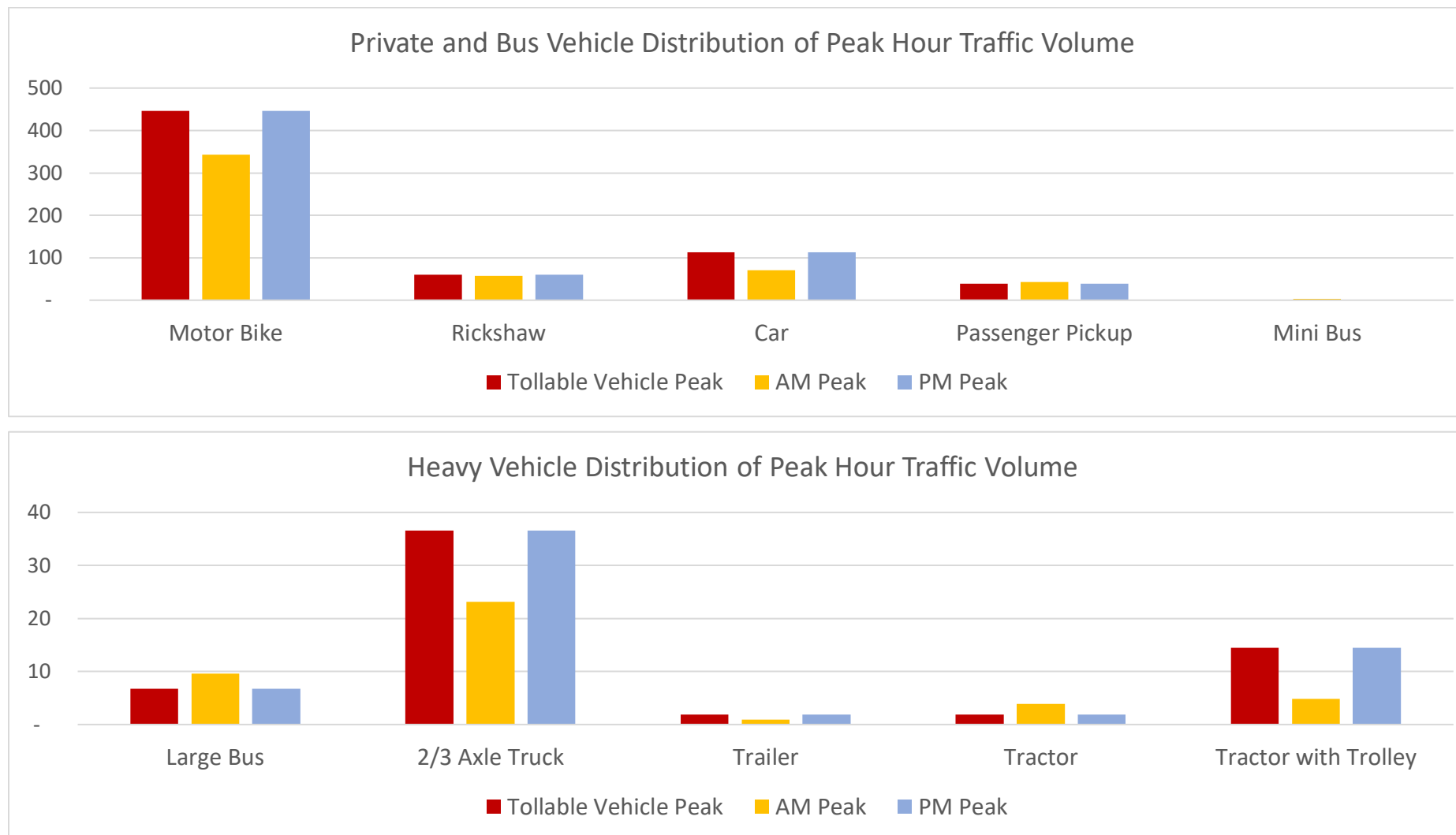
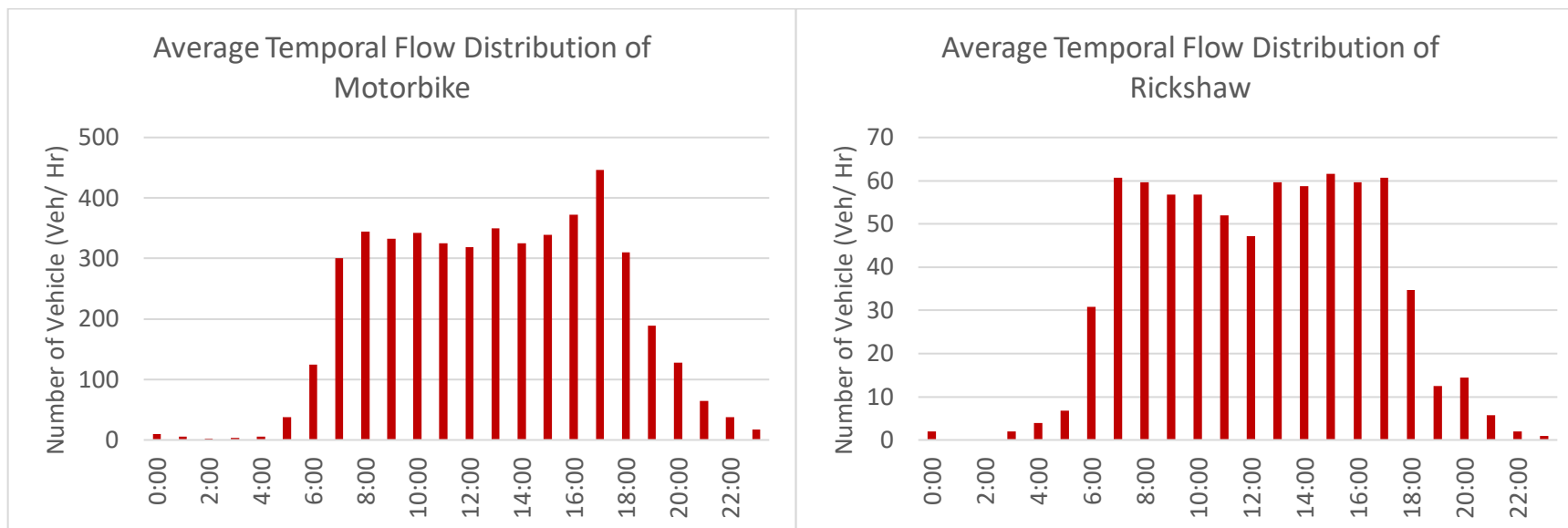


Figure 9 - Peak Hour Vehicle distribution at MB-1

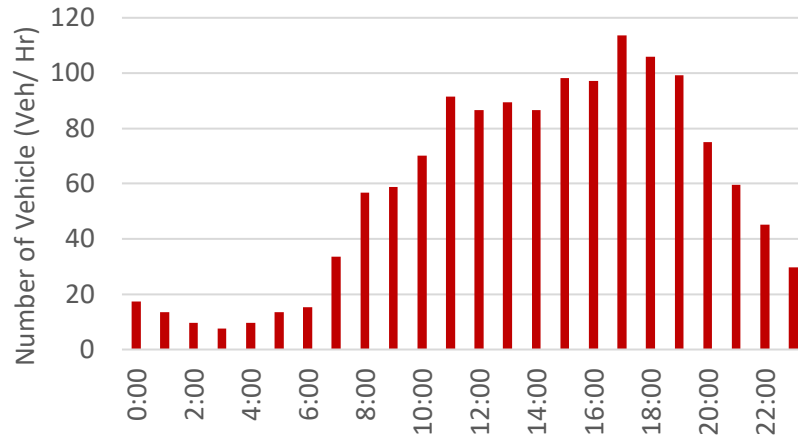


3.5. Average Annual Daily Traffic Temporal Traffic Flow Distribution

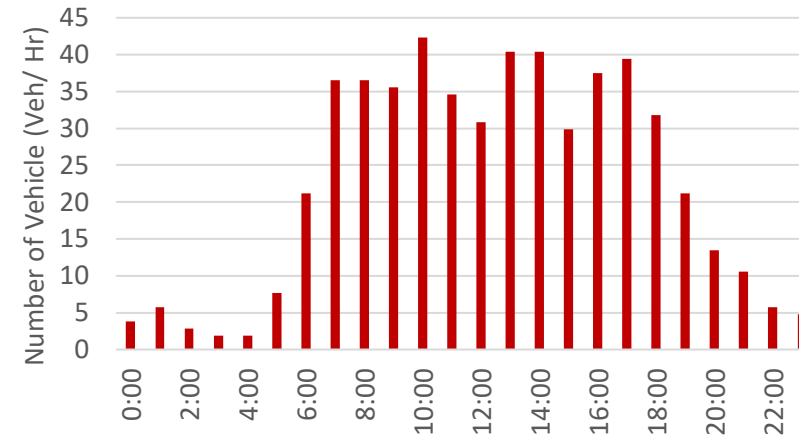
To capture broader traffic trends, the daily traffic count data was averaged over multiple days and analyzed by vehicle type. The resulting graphs below show the average flow of traffic per hour, offering valuable insights into temporal traffic patterns across different modes of transport. This analysis allows for the identification of peak traffic hours, patterns of vehicle movement, and the distribution of traffic over a 24-hour period.



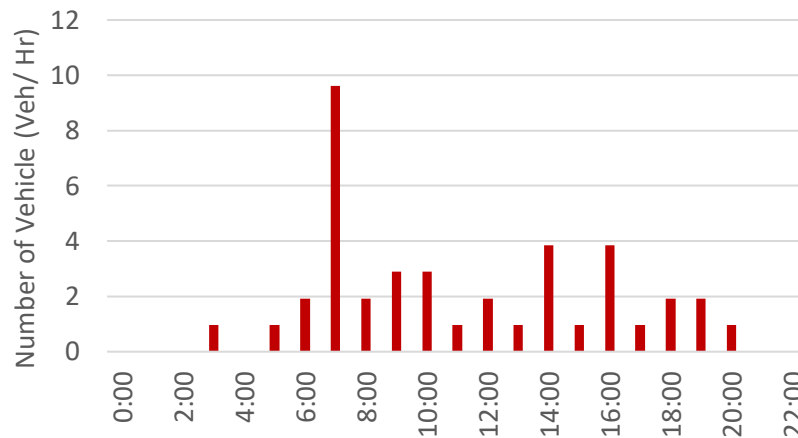
Average Temporal Flow Distribution of Car



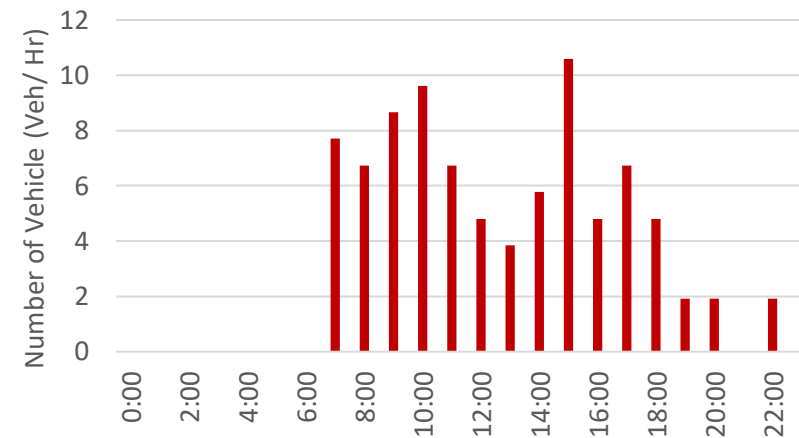
Average Temporal Flow Distribution of Pickup



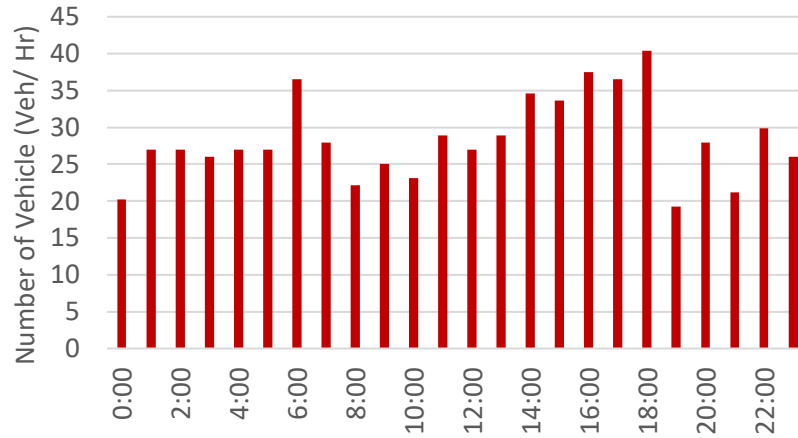
Average Temporal Flow Distribution of Mini Bus



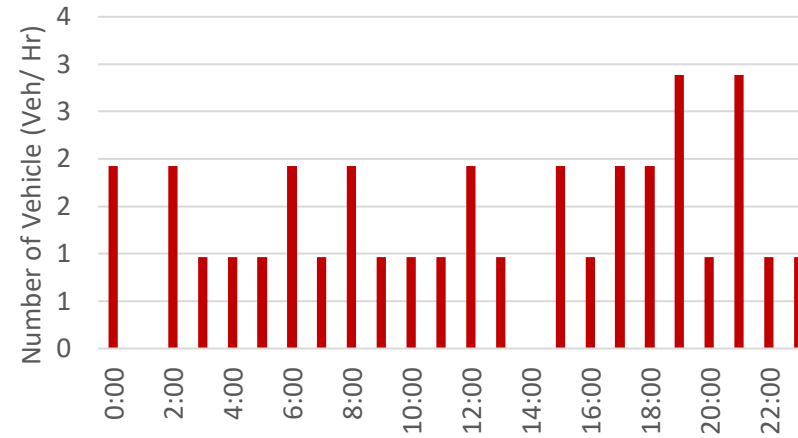
Average Temporal Flow Distribution of Large Bus



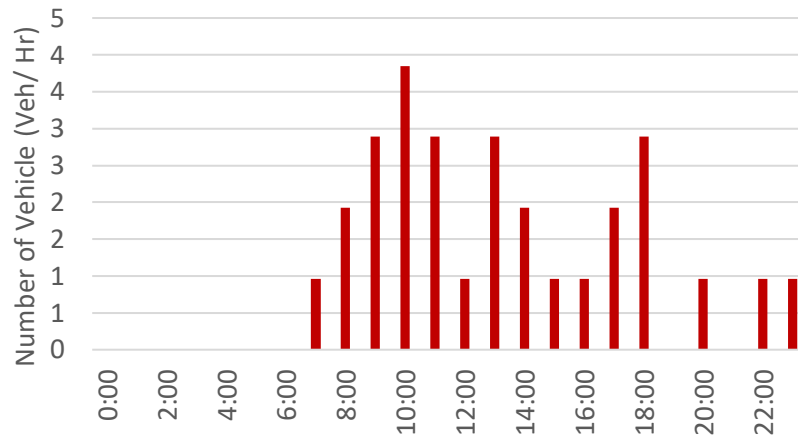
Average Temporal Flow Distribution of 2/3 Axle Trucks



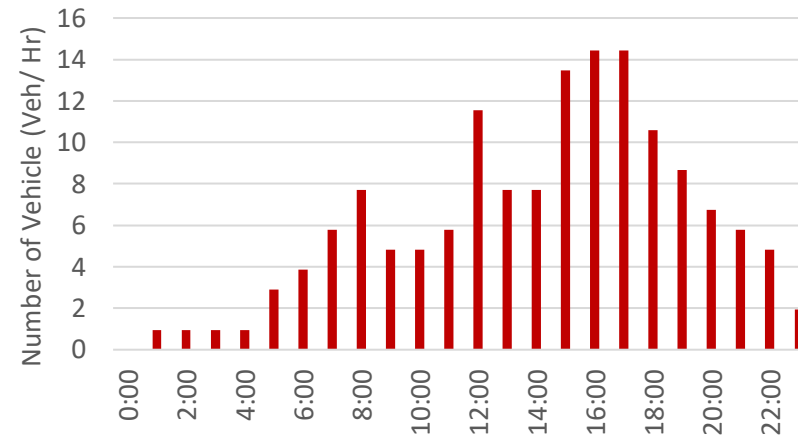
Average Temporal Flow Distribution of Trailer



Average Temporal Flow Distribution of Tractor



Average Temporal Flow Distribution of Tractor with Trolley



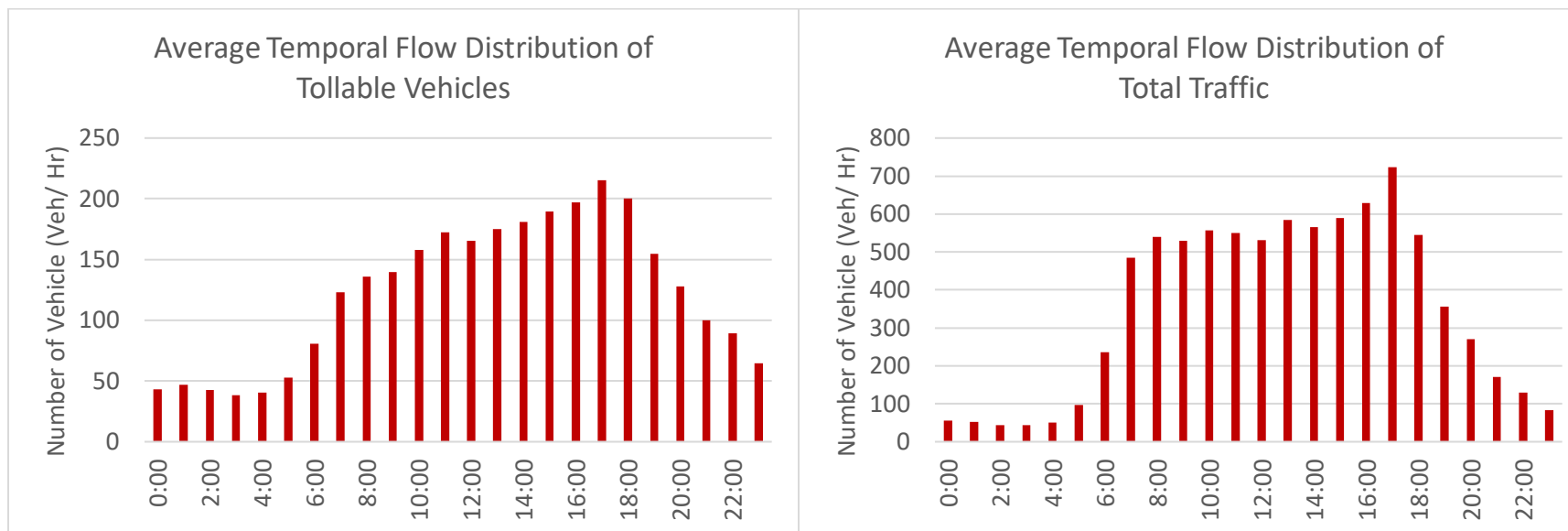


Figure 10 - Average Annual Daily Traffic Temporal Modal Flow Distribution at MB-1



4. MB-2 NAROWAL

4.1. Direction Map

The location of the camera used for traffic monitoring at the MB-2 site is depicted in below Figure. This figure provides a clear view of the placement of traffic monitoring equipment and the specific areas under observation.



Figure 11 - Camera location at site (MB-2)

4.2. Vehicle Count Summary (AADT)

The following table presents a summary of the AADT vehicle count at MB-2, categorized by vehicle type and direction. The data highlights the total number of vehicles passing through this location, along with a breakdown by vehicle type. This information provides valuable insights into the composition of traffic at MB-2, which is essential for understanding how different types of vehicles contribute to overall traffic patterns in the area.

Table 10 - Summary AADT count of MB-2

Direction	From	Towards	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable
Total			9,547	1,275	2,718	569	36	217	751	40	24	376	15,553	4,730
Percentage Composition (%)			61%	8%	17%	4%	0%	1%	5%	0%	0%	2%	100%	30%
1	Muridke	Narowal	5,173	671	1,381	289	17	111	363	14	13	216	8,246	2,403
2	Narowal	Muridke	4,374	604	1,338	280	18	106	388	26	12	161	7,306	2,328



Traffic Assessment Report

For Operation and Management Contracts for Muridke – Narowal – Shakargarh Road in Punjab on PPP Mode

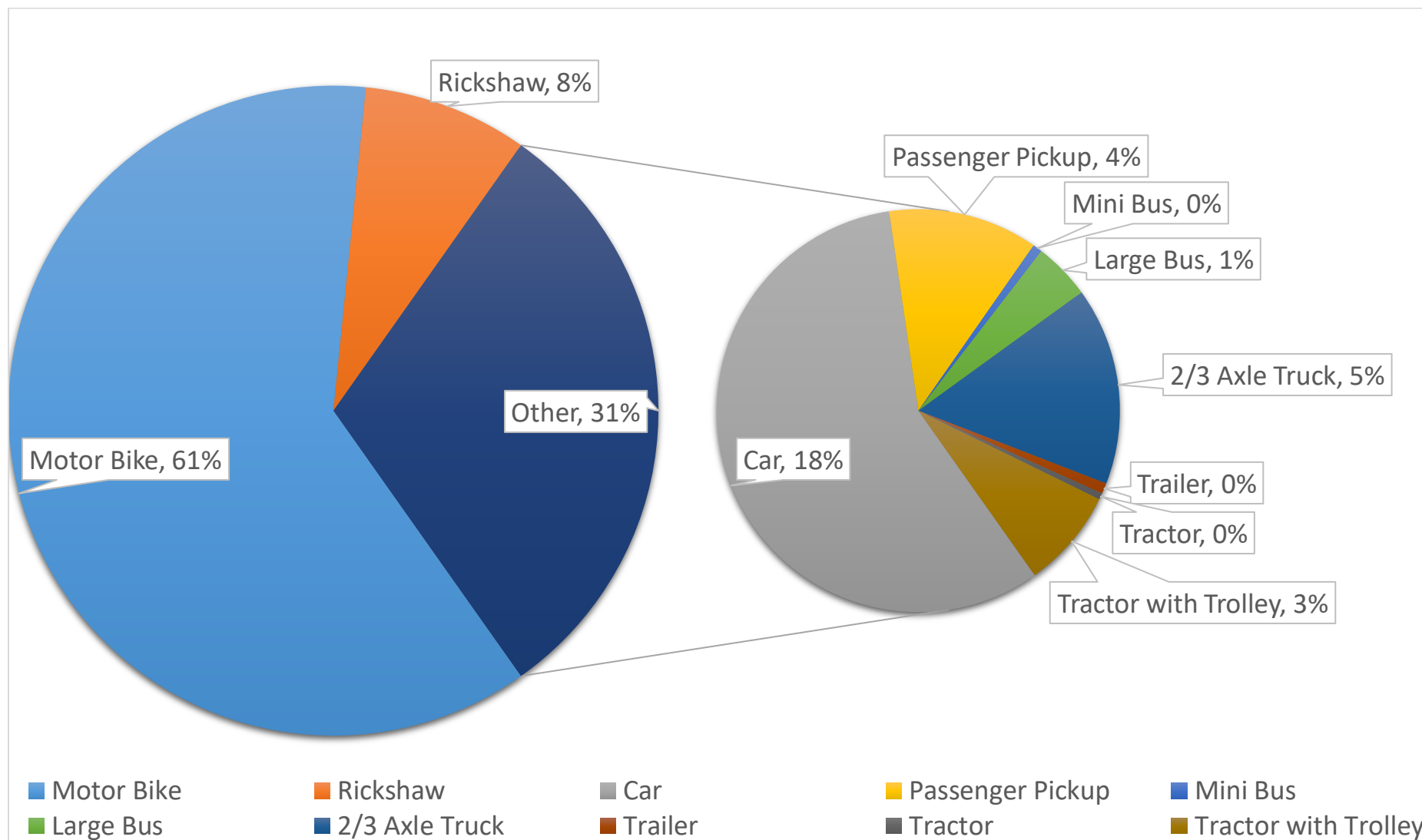


Figure 12 - Modal composition of average daily traffic at MB-2



4.3. Traffic Projection for 25 Year

Following table presents the AADT projection for 25 years with application of yearly traffic growth rate of 2.57% per Year.

Table 11 - 25 Years AADT Projection for Total Traffic of MB-2

Year	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor Trolley	AADT	Tollable
2024	9,547	1,275	2,718	569	36	217	751	40	24	376	15,553	4,730
2025	9,793	1,308	2,788	583	37	222	770	41	25	386	15,953	4,852
2026	10,045	1,342	2,860	598	38	228	790	42	26	396	16,365	4,978
2027	10,303	1,376	2,934	613	39	234	810	43	27	406	16,785	5,106
2028	10,568	1,411	3,009	629	40	240	831	44	28	416	17,216	5,237
2029	10,840	1,447	3,086	645	41	246	852	45	29	427	17,658	5,371
2030	11,119	1,484	3,165	662	42	252	874	46	30	438	18,112	5,509
2031	11,405	1,522	3,246	679	43	258	896	47	31	449	18,576	5,649
2032	11,698	1,561	3,329	696	44	265	919	48	32	461	19,053	5,794
2033	11,999	1,601	3,415	714	45	272	943	49	33	473	19,544	5,944
2034	12,307	1,642	3,503	732	46	279	967	50	34	485	20,045	6,096
2035	12,623	1,684	3,593	751	47	286	992	51	35	497	20,559	6,252
2036	12,947	1,727	3,685	770	48	293	1,017	52	36	510	21,085	6,411
2037	13,280	1,771	3,780	790	49	301	1,043	53	37	523	21,627	6,576
2038	13,621	1,817	3,877	810	50	309	1,070	54	38	536	22,182	6,744
2039	13,971	1,864	3,977	831	51	317	1,097	55	39	550	22,752	6,917
2040	14,330	1,912	4,079	852	52	325	1,125	56	40	564	23,335	7,093
2041	14,698	1,961	4,184	874	53	333	1,154	57	41	578	23,933	7,274
2042	15,076	2,011	4,292	896	54	342	1,184	58	42	593	24,548	7,461
2043	15,463	2,063	4,402	919	55	351	1,214	59	43	608	25,177	7,651
2044	15,860	2,116	4,515	943	56	360	1,245	61	44	624	25,824	7,848
2045	16,268	2,170	4,631	967	57	369	1,277	63	45	640	26,487	8,049
2046	16,686	2,226	4,750	992	58	378	1,310	65	46	656	27,167	8,255
2047	17,115	2,283	4,872	1,017	59	388	1,344	67	47	673	27,865	8,467
2048	17,555	2,342	4,997	1,043	61	398	1,379	69	48	690	28,582	8,685



4.4. Annual Hourly Peak Traffic Volume

Peak hour traffic data provides insights into the periods of the day when traffic flow is at its highest. This information is critical for identifying the times when congestion is most severe and for understanding the distribution of different vehicle types during these periods. Table below presents the total vehicle counts during peak hours, while subsequent Figure illustrates the distribution of vehicle types during these times, categorized into private/public transport and heavy vehicles.

Table 12 - Peak hour count of MB-2

Day	Peak Hour Time	Direction	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable
Tollable Vehicle Peak	17:00	Total	848	89	217	33	2	14	29	3	3	31	1,267	331
		1	348	38	84	16	1	7	16	1	2	20	533	147
		2	499	51	133	16	1	8	13	2	1	11	734	184
AM Peak	8:00	Total	757	123	122	32	5	9	26	2	2	25	1,103	222
		1	518	65	63	21	2	3	15	1	1	13	702	119
		2	240	58	60	11	3	6	11	1	1	12	400	103
PM Peak	17:00	Total	848	89	217	33	2	14	29	3	3	31	1,267	331
		1	348	38	84	16	1	7	16	1	2	20	533	147
		2	499	51	133	16	1	8	13	2	1	11	734	184



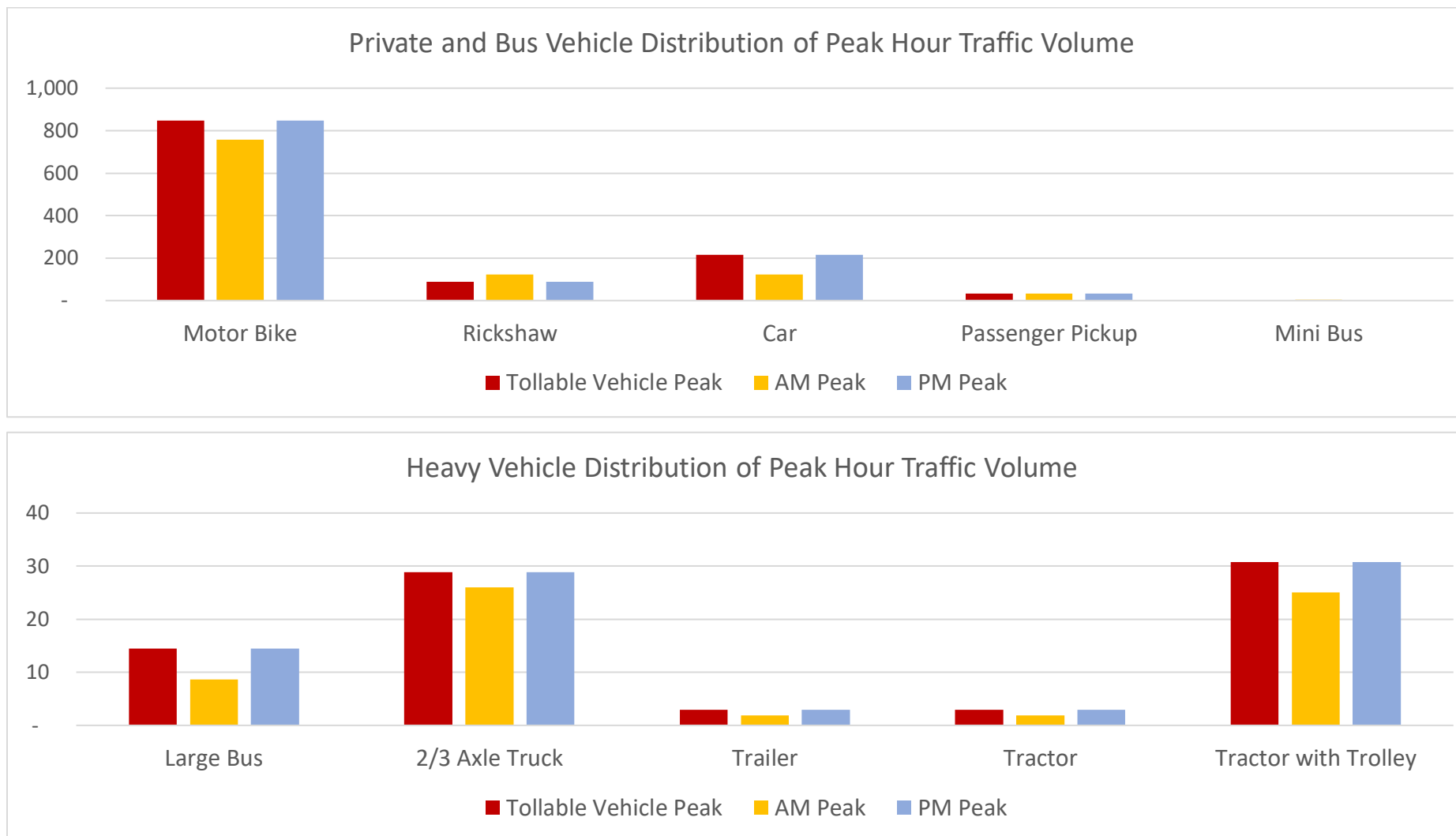
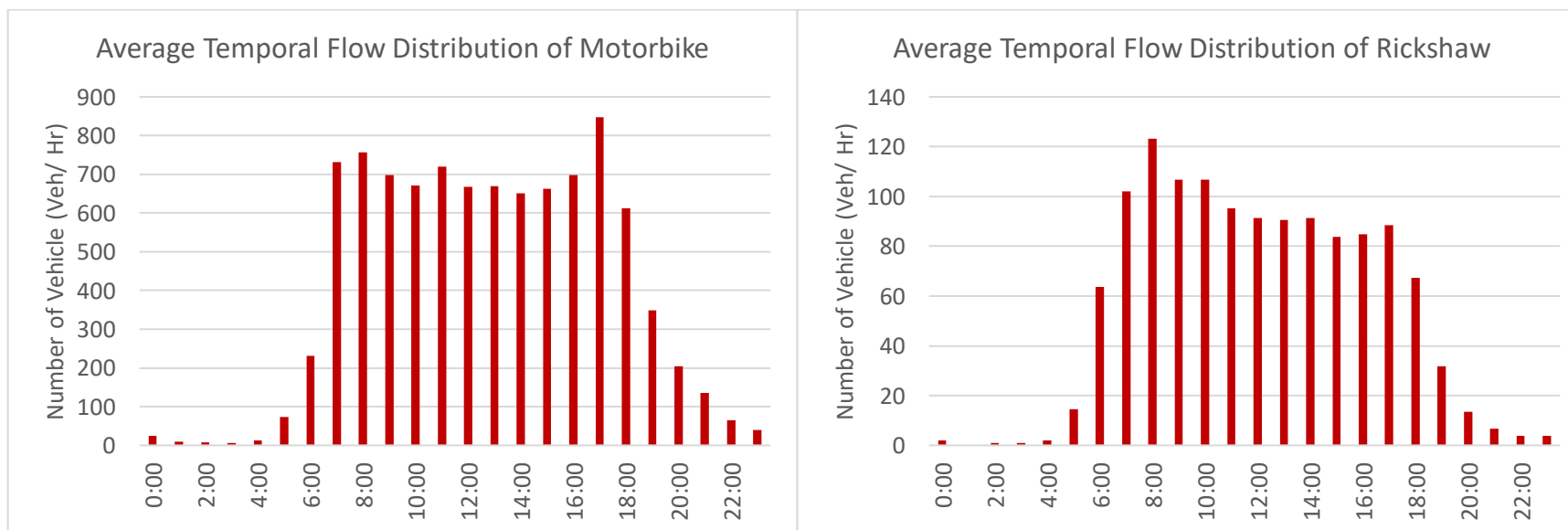


Figure 13 - Peak Hour Vehicle distribution at MB-2

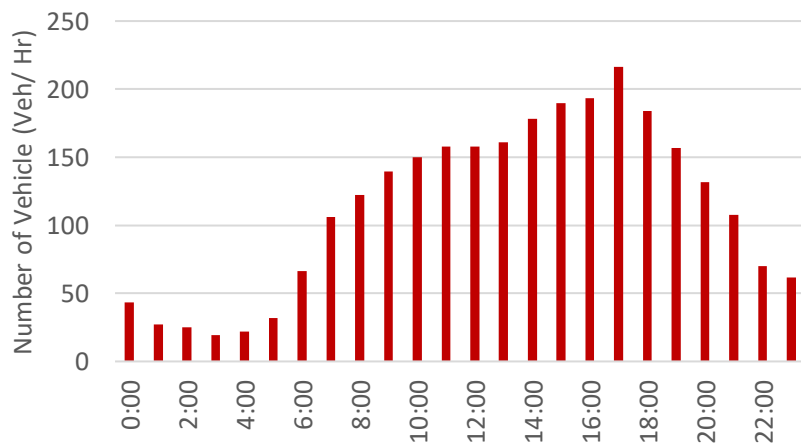


4.5. Average Annual Daily Traffic Temporal Traffic Flow Distribution

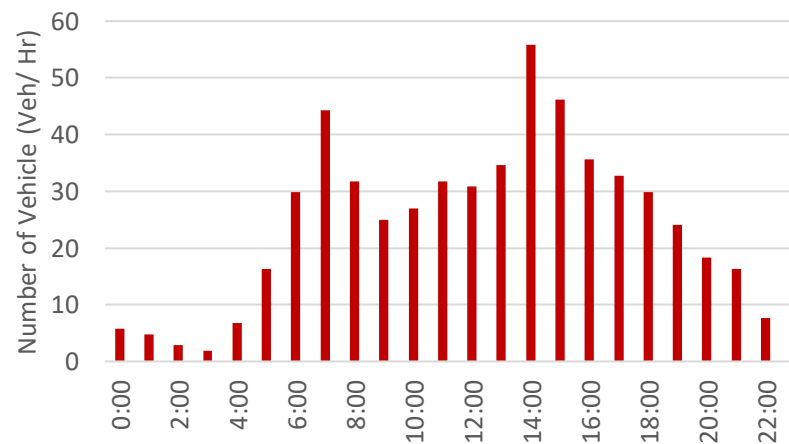
To capture broader traffic trends, the daily traffic count data was averaged over multiple days and analyzed by vehicle type. The resulting graphs below show the average flow of traffic per hour, offering valuable insights into temporal traffic patterns across different modes of transport. This analysis allows for the identification of peak traffic hours, patterns of vehicle movement, and the distribution of traffic over a 24-hour period.



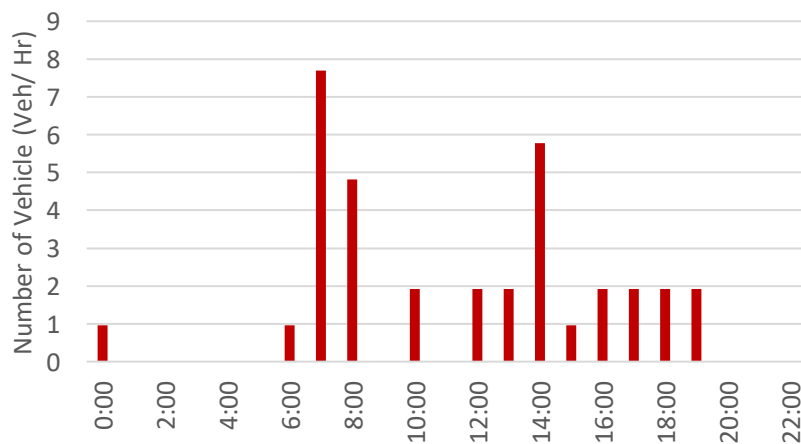
Average Temporal Flow Distribution of Car



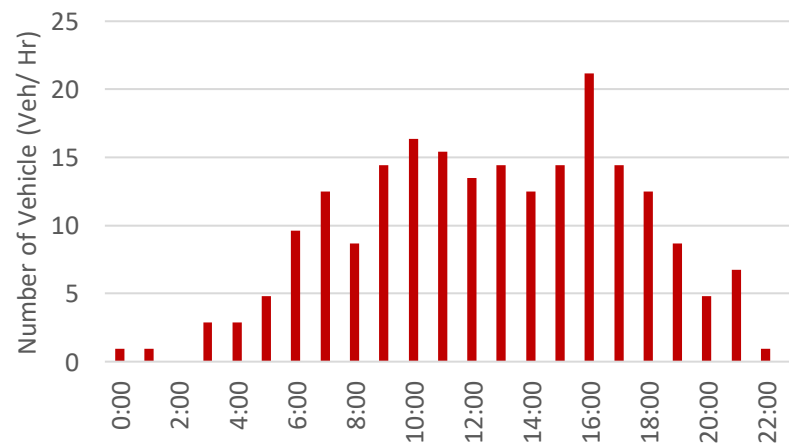
Average Temporal Flow Distribution of Pickup



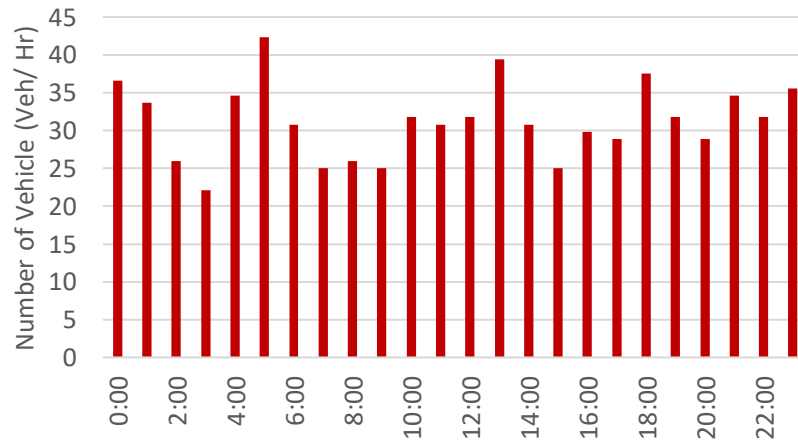
Average Temporal Flow Distribution of Mini Bus



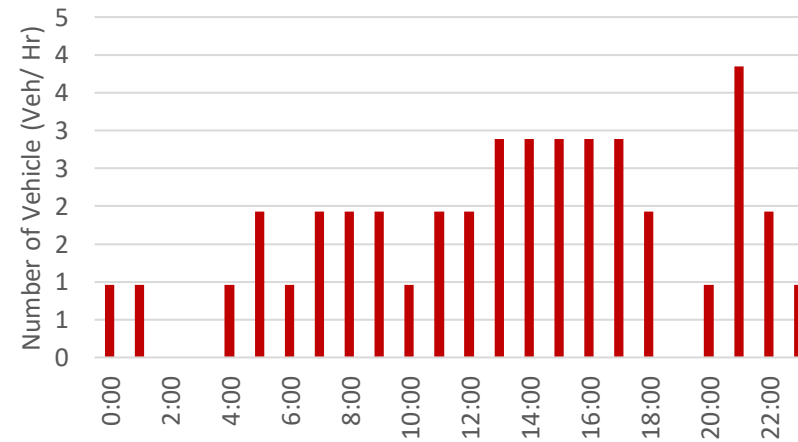
Average Temporal Flow Distribution of Large Bus



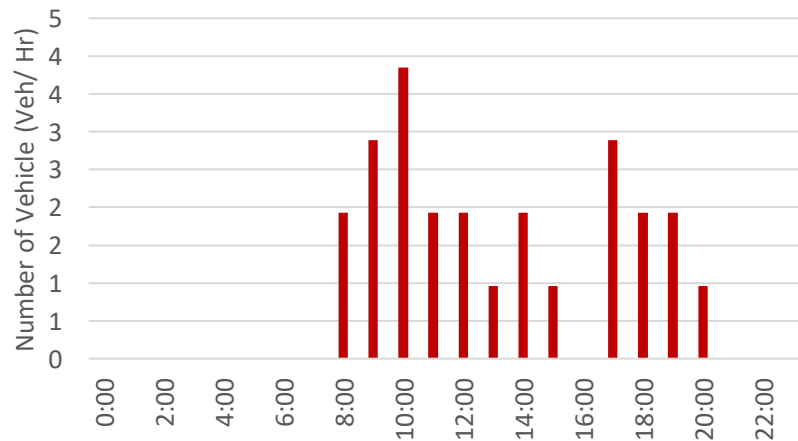
Average Temporal Flow Distribution of 2/3 Axle Trucks



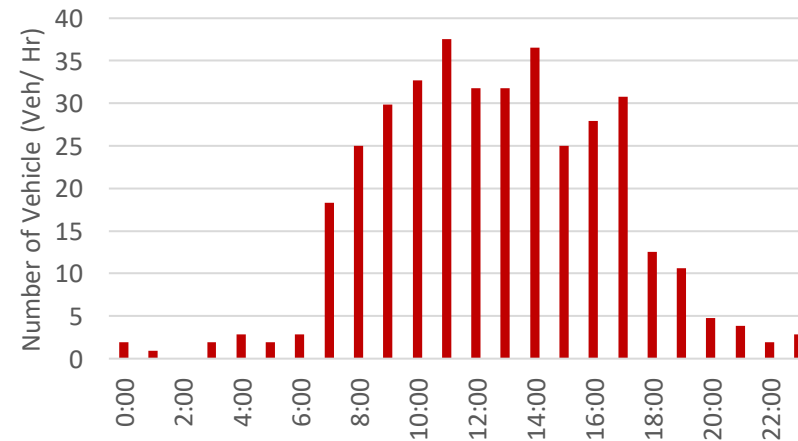
Average Temporal Flow Distribution of Trailer



Average Temporal Flow Distribution of Tractor



Average Temporal Flow Distribution of Tractor with Trolley



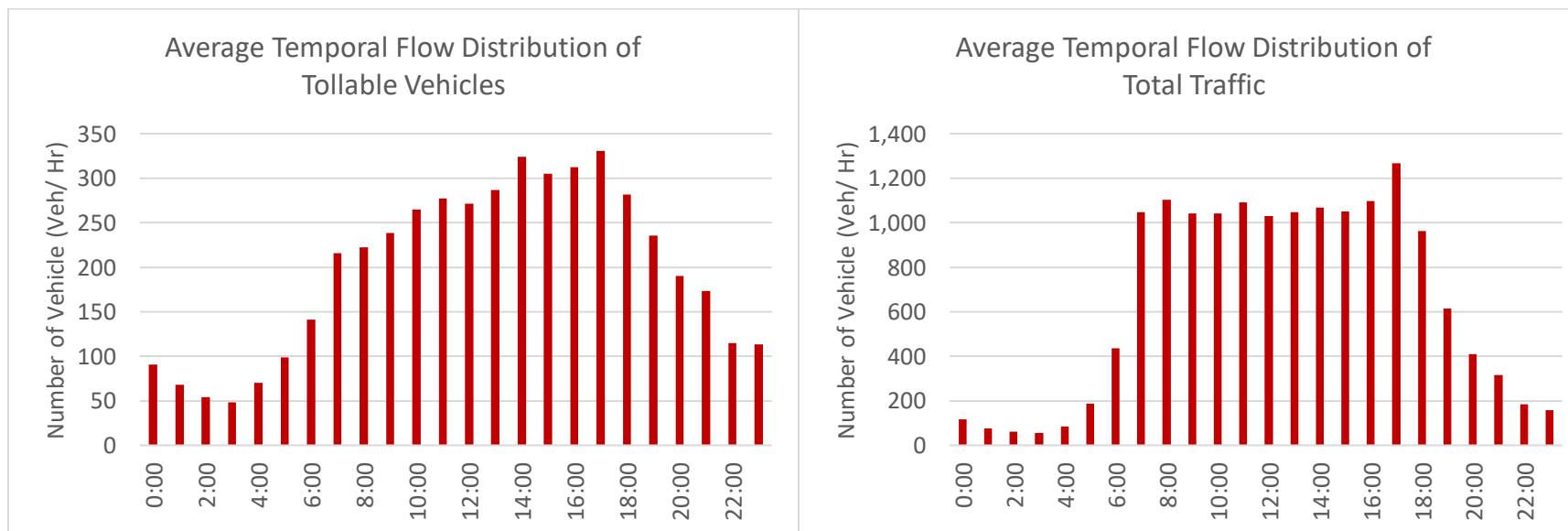


Figure 14 - Average Annual Daily Traffic Temporal Modal Flow Distribution at MB-2



5. MB-3 SHAKARGARH

5.1. Direction Map

The location of the camera used for traffic monitoring at the MB-3 site is depicted in below Figure. This figure provides a clear view of the placement of traffic monitoring equipment and the specific areas under observation.



Figure 15 - Camera location at site (MB-3)

5.2. Vehicle Count Summary (AADT)

The following table presents a summary of the AADT vehicle count at MB-3, categorized by vehicle type and direction. The data highlights the total number of vehicles passing through this location, along with a breakdown by vehicle type. This information provides valuable insights into the composition of traffic at MB-3, which is essential for understanding how different types of vehicles contribute to overall traffic patterns in the area.

Table 13 - Summary AADT count of MB-3

Direction	From	Towards	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable
Total			5,850	543	1,704	497	52	110	486	15	19	92	9,368	2,975
Percentage Composition (%)			62%	6%	18%	5%	1%	1%	5%	0%	0%	1%	100%	32%
1	Shakargarh	Narowal	2,971	276	842	260	34	56	257	10	11	43	4,759	1,512
2	Narowal	Shakargarh	2,879	267	862	237	18	54	229	6	9	49	4,609	1,464



Traffic Assessment Report

For Operation and Management Contracts for Muridke – Narowal – Shakargarh Road in Punjab on PPP Mode

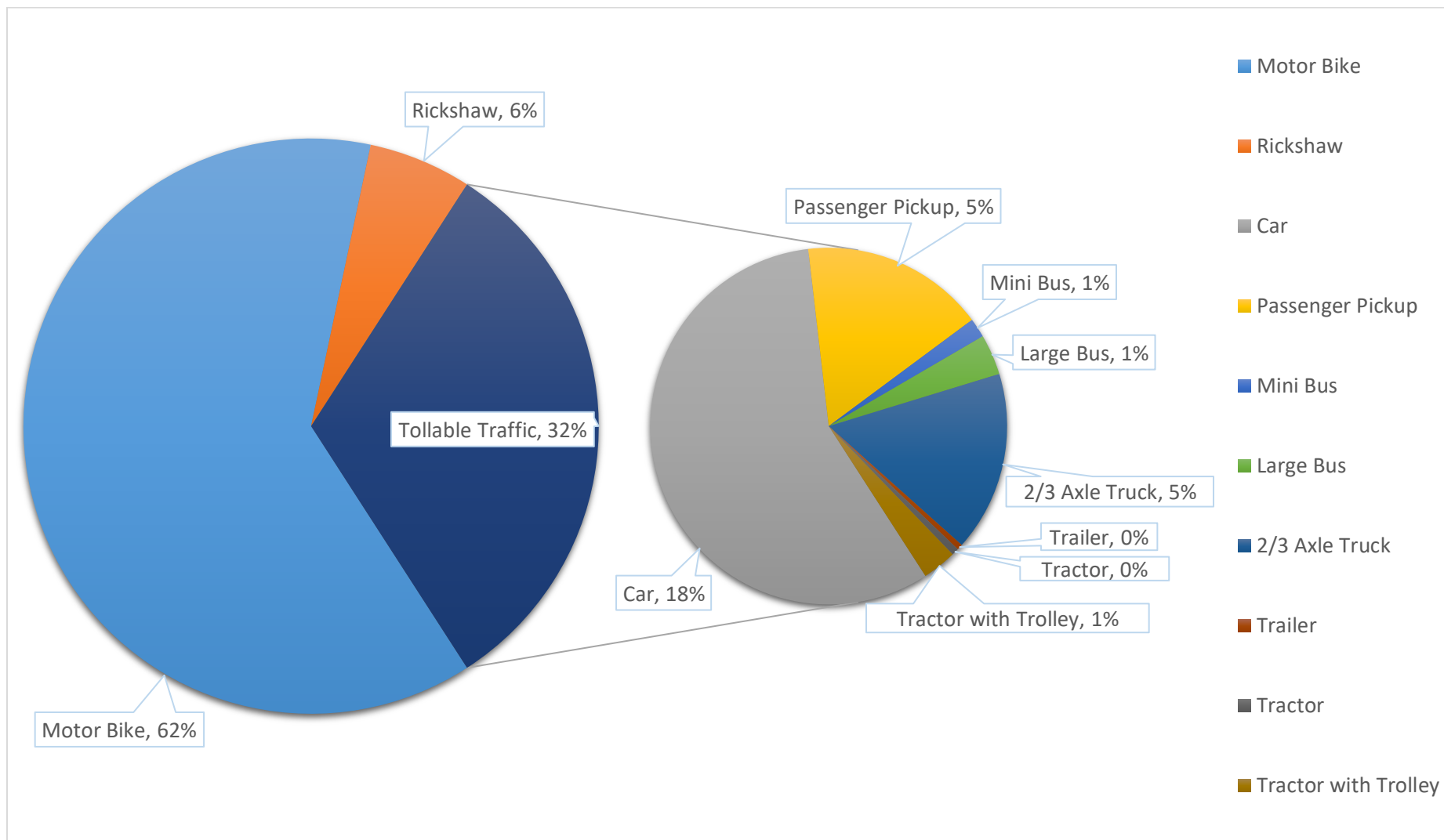


Figure 16 - Modal composition of average daily traffic at MB-3



5.3. Traffic Projection for 25 Year

Following table presents the AADT projection for 25 years with application of yearly traffic growth rate of 2.57% per Year.

Table 14 - 25 Years AADT Projection for Total Traffic of MB-3

Year	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor Trolley	AADT	Tollable
2024	5,850	543	1,704	497	52	110	486	15	19	92	9,368	2,975
2025	6,001	557	1,748	509	53	113	498	16	20	95	9,610	3,052
2026	6,155	571	1,793	522	54	116	511	16	21	97	9,856	3,130
2027	6,313	586	1,839	535	55	119	524	16	22	99	10,108	3,209
2028	6,475	601	1,886	549	56	122	537	16	23	102	10,367	3,291
2029	6,641	616	1,934	563	57	125	551	16	24	105	10,632	3,375
2030	6,812	632	1,984	577	58	128	565	16	25	108	10,905	3,461
2031	6,987	648	2,035	592	59	131	580	16	26	111	11,185	3,550
2032	7,167	665	2,087	607	61	134	595	16	27	114	11,473	3,641
2033	7,351	682	2,141	623	63	137	610	16	28	117	11,768	3,735
2034	7,540	700	2,196	639	65	141	626	16	29	120	12,072	3,832
2035	7,734	718	2,252	655	67	145	642	16	30	123	12,382	3,930
2036	7,933	736	2,310	672	69	149	658	16	31	126	12,700	4,031
2037	8,137	755	2,369	689	71	153	675	16	32	129	13,026	4,134
2038	8,346	774	2,430	707	73	157	692	16	33	132	13,360	4,240
2039	8,560	794	2,492	725	75	161	710	16	34	135	13,702	4,348
2040	8,780	814	2,556	744	77	165	728	16	35	138	14,053	4,459
2041	9,006	835	2,622	763	79	169	747	16	36	142	14,415	4,574
2042	9,237	856	2,689	783	81	173	766	16	37	146	14,784	4,691
2043	9,474	878	2,758	803	83	177	786	16	38	150	15,163	4,811
2044	9,717	901	2,829	824	85	182	806	16	39	154	15,553	4,935
2045	9,967	924	2,902	845	87	187	827	16	40	158	15,953	5,062
2046	10,223	948	2,977	867	89	192	848	16	41	162	16,363	5,192
2047	10,486	972	3,054	889	91	197	870	16	42	166	16,783	5,325
2048	10,755	997	3,132	912	93	202	892	16	43	170	17,212	5,460



5.4. Annual Hourly Peak Traffic Volume

Peak hour traffic data provides insights into the periods of the day when traffic flow is at its highest. This information is critical for identifying the times when congestion is most severe and for understanding the distribution of different vehicle types during these periods. Table below presents the total vehicle counts during peak hours, while subsequent Figure illustrates the distribution of vehicle types during these times, categorized into private/public transport and heavy vehicles.

Table 15 - Peak hour count of MB-3

Day	Peak Hour Time	Direction	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable
Tollable Vehicle Peak	14:00	Total	464	41	121	52	11	8	22	-	2	8	728	223
		1	225	23	60	21	10	3	11	-	1	4	357	109
		2	239	18	62	31	1	5	12	-	1	4	371	115
AM Peak	10:00	Total	456	53	107	31	-	8	16	-	1	4	675	166
		1	220	29	62	13	-	4	7	-	-	1	335	86
		2	236	24	45	18	-	4	10	-	1	3	341	81
PM Peak	17:00	Total	532	43	140	28	2	6	18	-	2	5	777	201
		1	295	26	72	15	1	2	12	-	1	3	427	106
		2	237	17	68	13	1	4	7	-	1	2	349	95



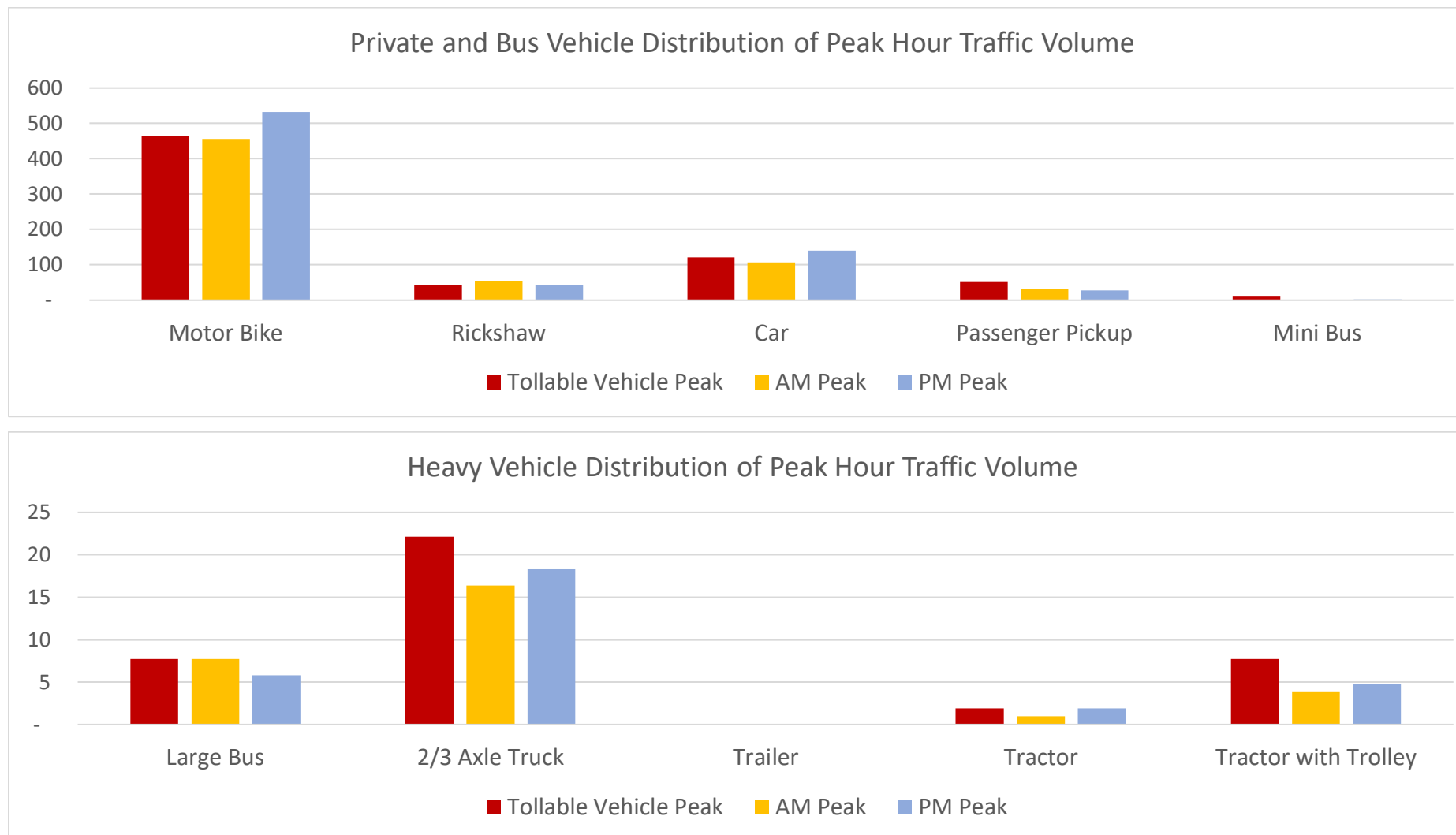
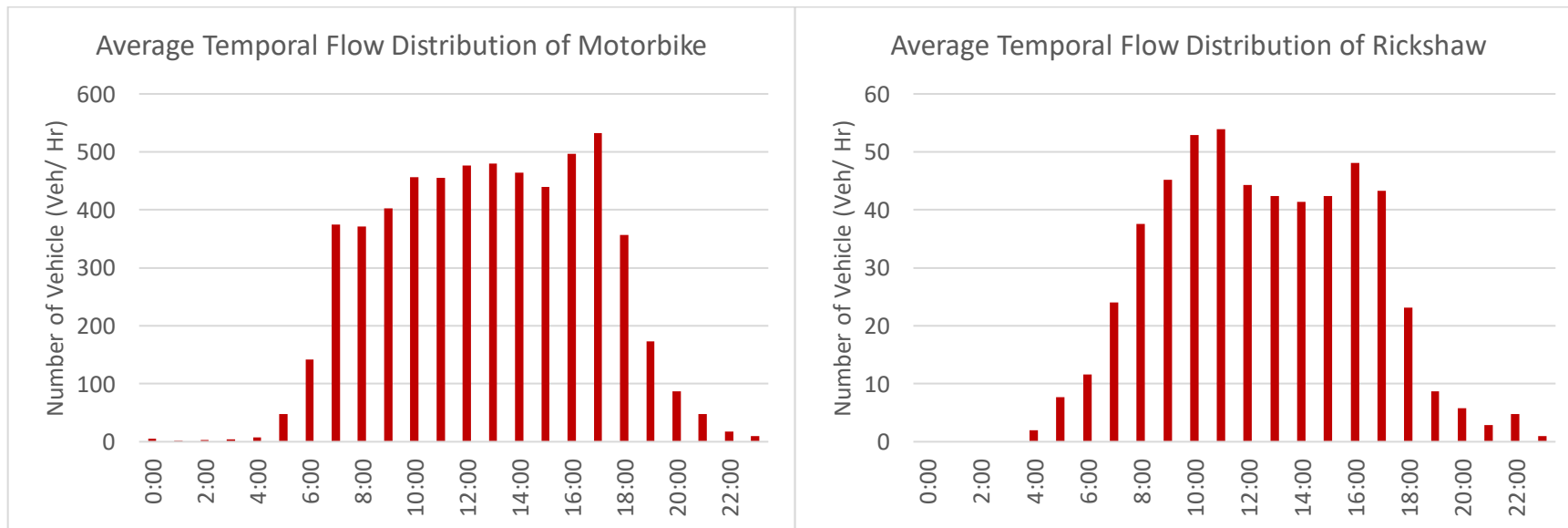


Figure 17 - Peak Hour Vehicle distribution at MB-3

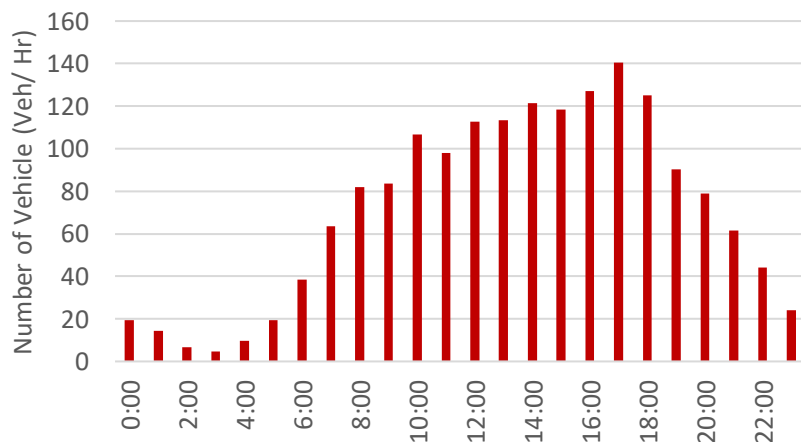


5.5. Average Annual Daily Traffic Temporal Traffic Flow Distribution

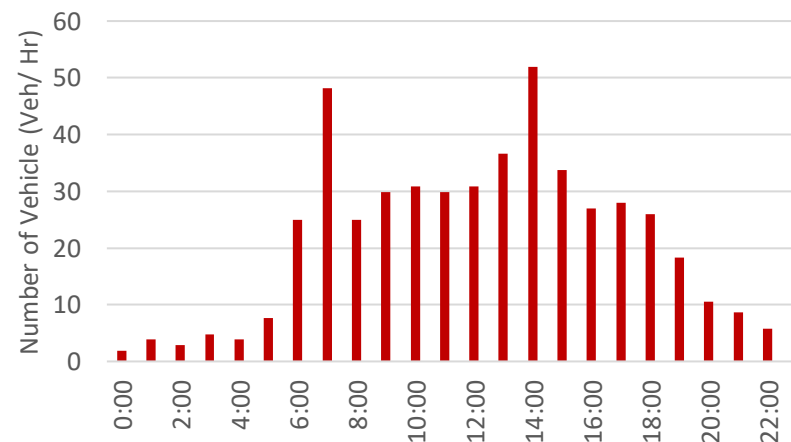
To capture broader traffic trends, the daily traffic count data was averaged over multiple days and analyzed by vehicle type. The resulting graphs below show the average flow of traffic per hour, offering valuable insights into temporal traffic patterns across different modes of transport. This analysis allows for the identification of peak traffic hours, patterns of vehicle movement, and the distribution of traffic over a 24-hour period.



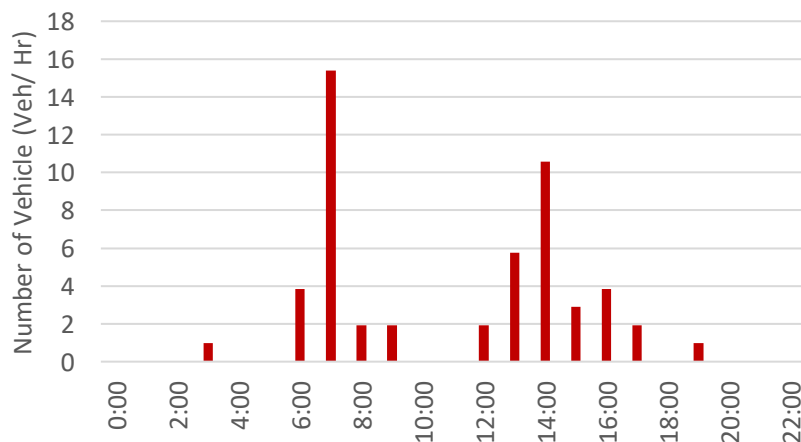
Average Temporal Flow Distribution of Car



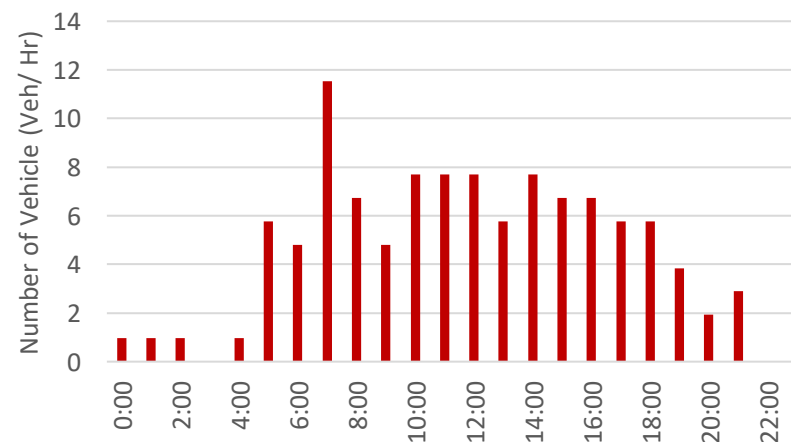
Average Temporal Flow Distribution of Pickup



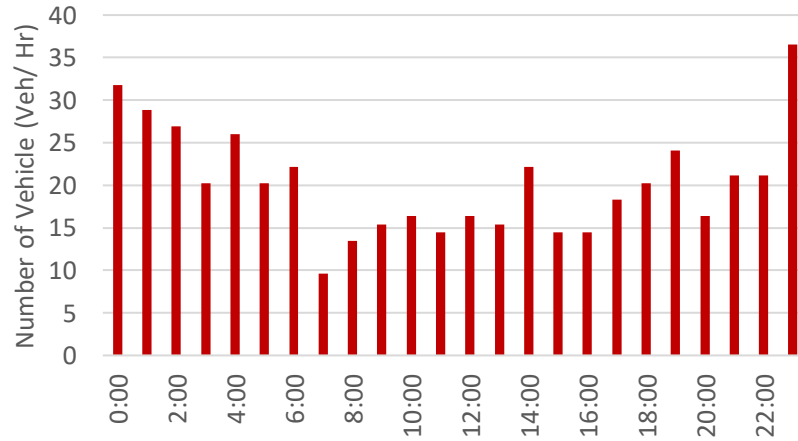
Average Temporal Flow Distribution of Mini Bus



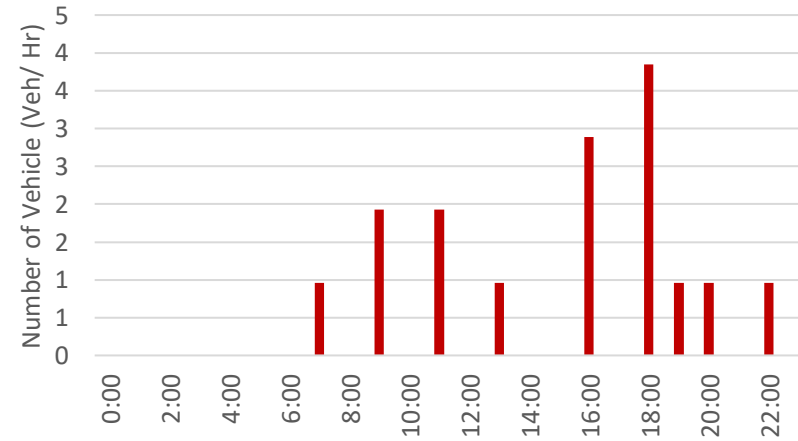
Average Temporal Flow Distribution of Large Bus



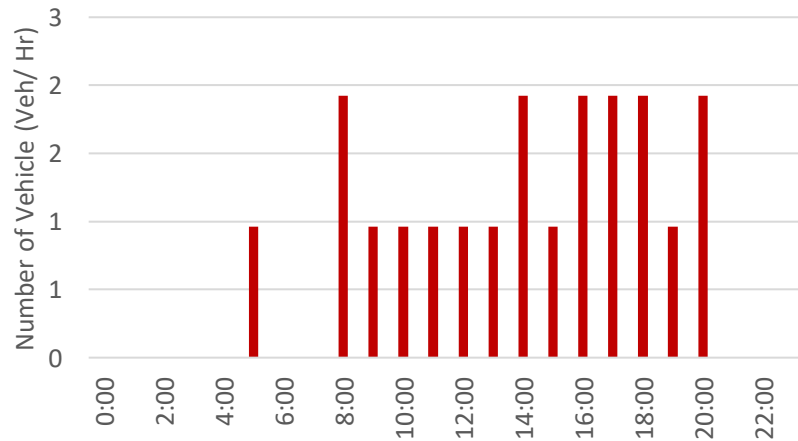
Average Temporal Flow Distribution of 2/3 Axle Trucks



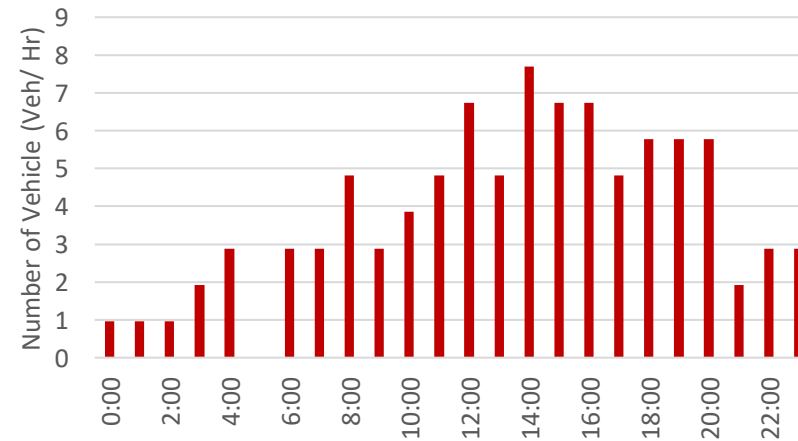
Average Temporal Flow Distribution of Trailer



Average Temporal Flow Distribution of Tractor



Average Temporal Flow Distribution of Tractor with Trolley



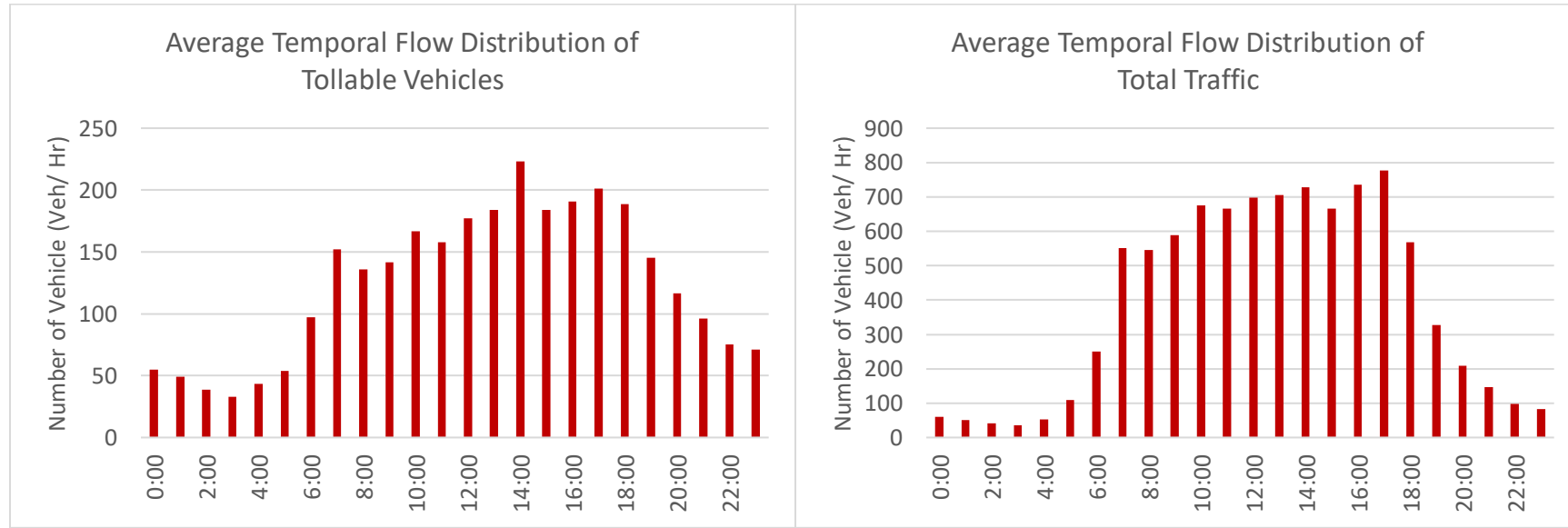


Figure 18 - Average Annual Daily Traffic Temporal Modal Flow Distribution at MB-3



Annexures



Annexure-A

Traffic Count Survey



MB-1 Muridke



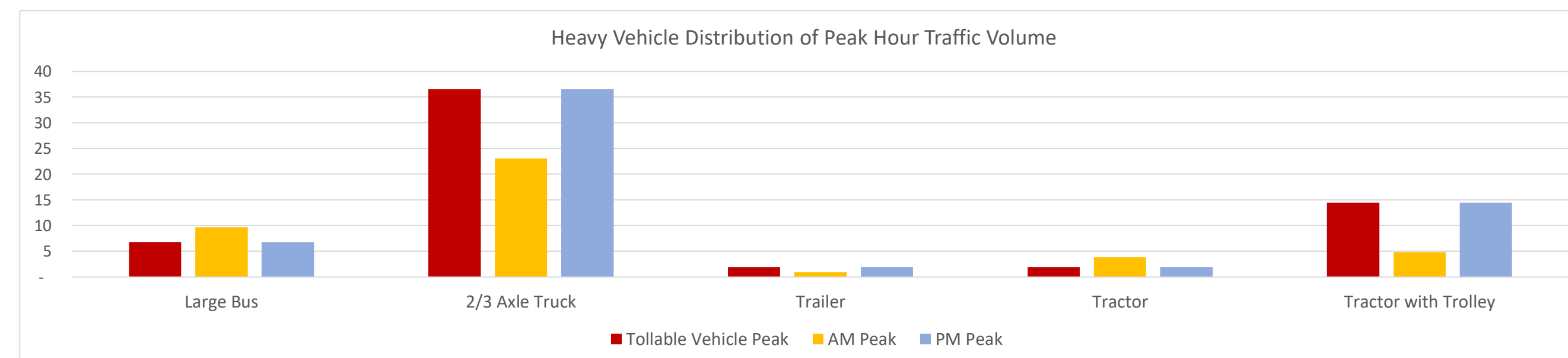
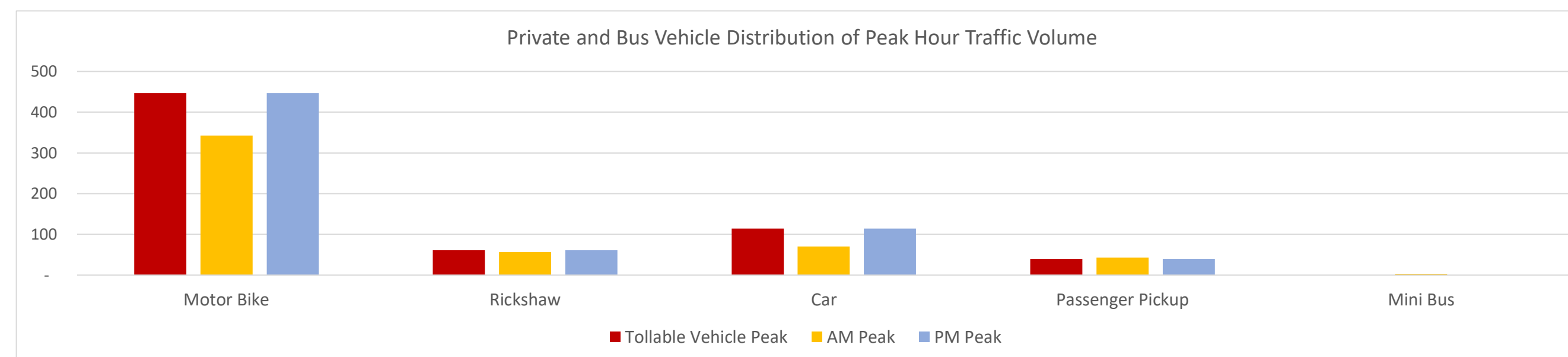
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode
 Vehicles Count Survey
 Summary



Location	MB-1 Muridke	Direction Map
Coordinates	31.8623882, 74.3161695	



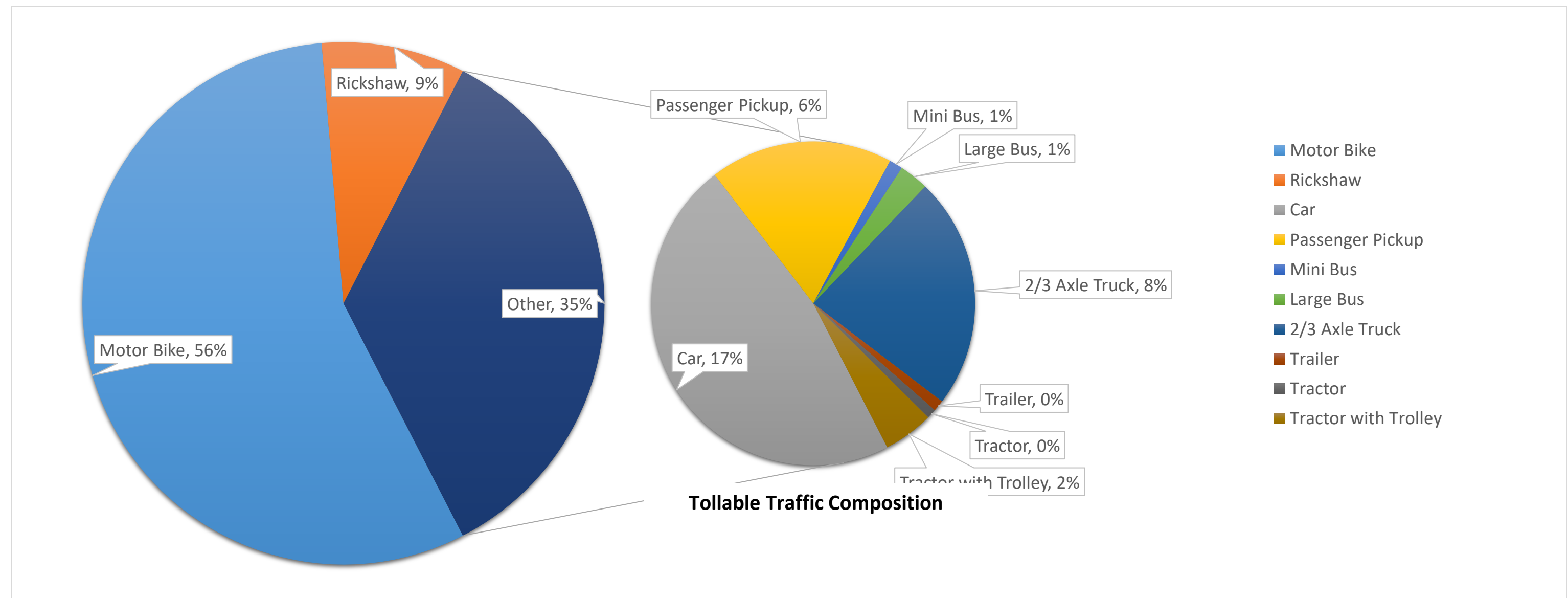
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode														
Vehicles Count Survey														
Summary														
Location		MB-1 Muridke				Peakest Hours Summary (Vehicles per Hour in Average Annual Hourly Traffic)								
Coordinates		31.8623882, 74.3161695												
Day	Peak Hour Time	Direction	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable
Tollable Vehicle Peak	17:00	Total	446	61	114	39	1	7	37	2	2	14	723	216
		1	245	33	60	19	-	4	24	1	1	8	395	116
		2	201	28	54	20	1	3	13	1	1	7	328	99
AM Peak	10:00	Total	343	57	70	42	3	10	23	1	4	5	557	158
		1	196	34	38	20	1	5	10	-	3	3	309	79
		2	146	23	33	22	2	5	13	1	1	2	248	79
PM Peak	17:00	Total	446	61	114	39	1	7	37	2	2	14	723	216
		1	245	33	60	19	-	4	24	1	1	8	395	116
		2	201	28	54	20	1	3	13	1	1	7	328	99



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode												
Vehicles Count Survey												
Summary												
Location	MB-1 Muridke		25 Year Traffic Projection of AADT (Both Direction)									
Coordinates	31.8623882, 74.3161695											
Year	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	AADT	Tollable
2024	4,731	749	1,384	537	39	87	680	33	28	147	8,415	2,935
2025	4,853	768	1,419	551	40	89	698	34	29	151	8,632	3,011
2026	4,978	788	1,455	565	41	91	716	35	30	155	8,854	3,088
2027	5,106	808	1,492	580	42	93	734	36	31	159	9,081	3,167
2028	5,237	829	1,530	595	43	95	753	37	32	163	9,314	3,248
2029	5,372	850	1,569	610	44	97	772	38	33	167	9,552	3,330
2030	5,510	872	1,609	626	45	99	792	39	34	171	9,797	3,415
2031	5,652	894	1,650	642	46	102	812	40	35	175	10,048	3,502
2032	5,797	917	1,692	658	47	105	833	41	36	179	10,305	3,591
2033	5,946	941	1,735	675	48	108	854	42	37	184	10,570	3,683
2034	6,099	965	1,780	692	49	111	876	43	38	189	10,842	3,778
2035	6,256	990	1,826	710	50	114	899	44	39	194	11,122	3,876
2036	6,417	1,015	1,873	728	51	117	922	45	40	199	11,407	3,975
2037	6,582	1,041	1,921	747	52	120	946	46	41	204	11,700	4,077
2038	6,751	1,068	1,970	766	53	123	970	47	42	209	11,999	4,180
2039	6,925	1,095	2,021	786	54	126	995	48	43	214	12,307	4,287
2040	7,103	1,123	2,073	806	55	129	1,021	49	44	219	12,622	4,396
2041	7,286	1,152	2,126	827	56	132	1,047	50	45	225	12,946	4,508
2042	7,473	1,182	2,181	848	57	135	1,074	51	46	231	13,278	4,623
2043	7,665	1,212	2,237	870	58	138	1,102	52	47	237	13,618	4,741
2044	7,862	1,243	2,294	892	59	142	1,130	53	48	243	13,966	4,861
2045	8,064	1,275	2,353	915	61	146	1,159	54	49	249	14,325	4,986
2046	8,271	1,308	2,413	939	63	150	1,189	55	50	255	14,693	5,114
2047	8,484	1,342	2,475	963	65	154	1,220	56	51	262	15,072	5,246
2048	8,702	1,376	2,539	988	67	158	1,251	57	52	269	15,459	5,381



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode															
Vehicles Count Survey															
Summary															
Location		MB-1 Muridke			Average Annual Daily Traffic (AADT) Summary										
Coordinates		31.8623882, 74.3161695													
Direction	From	Towards	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable	
	Total			4,731	749	1,384	537	39	87	680	33	28	147	8,415	2,935
	Percentage Composition (%)			56%	9%	16%	6%	0%	1%	8%	0%	0%	2%	100%	35%
	1	Narowal	Muridke	2,504	404	684	266	21	40	376	15	18	78	4,407	1,499
	2	Muridke	Narowal	2,228	344	700	271	18	46	304	17	10	69	4,008	1,436



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Average Annual Hourly Interval													
Location Coordinates		MB-1 Muridke 31.8623882, 74.3161695				All Directional Count							
S.No.	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	0:00	1:00	10	2	17	4	0	0	20	2	0	0	55
2	1:00	2:00	6	0	13	6	0	0	27	0	0	1	53
3	2:00	3:00	2	0	10	3	0	0	27	2	0	1	44
4	3:00	4:00	4	2	8	2	1	0	26	1	0	1	44
5	4:00	5:00	6	4	10	2	0	0	27	1	0	1	50
6	5:00	6:00	38	7	13	8	1	0	27	1	0	3	97
7	6:00	7:00	124	31	15	21	2	0	37	2	0	4	236
8	7:00	8:00	300	61	34	37	10	8	28	1	1	6	484
9	8:00	9:00	344	60	57	37	2	7	22	2	2	8	540
10	9:00	10:00	333	57	59	36	3	9	25	1	3	5	529
11	10:00	11:00	343	57	70	42	3	10	23	1	4	5	557
12	11:00	12:00	325	52	91	35	1	7	29	1	3	6	549
13	12:00	13:00	318	47	87	31	2	5	27	2	1	12	531
14	13:00	14:00	350	60	89	40	1	4	29	1	3	8	585
15	14:00	15:00	325	59	87	40	4	6	35	0	2	8	565
16	15:00	16:00	339	62	98	30	1	11	34	2	1	13	590
17	16:00	17:00	372	60	97	38	4	5	38	1	1	14	629
18	17:00	18:00	446	61	114	39	1	7	37	2	2	14	723
19	18:00	19:00	310	35	106	32	2	5	40	2	3	11	545
20	19:00	20:00	189	13	99	21	2	2	19	3	0	9	356
21	20:00	21:00	128	14	75	13	1	2	28	1	1	7	270
22	21:00	22:00	64	6	60	11	0	0	21	3	0	6	170
23	22:00	23:00	38	2	45	6	0	2	30	1	1	5	129
24	23:00	0:00	17	1	30	5	0	0	26	1	1	2	83
Average Annual Daily Traffic			4,731	749	1,384	537	39	87	680	33	28	147	8,415



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location Coordinates		MB-1 Muridke 31.8623882, 74.3161695						All Directional Count							
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	1	Monday, October 7, 2024	20:00	21:00	147	17	93	18	2	3	24	-	1	6	311
2	1	Monday, October 7, 2024	21:00	22:00	84	8	57	15	1	1	13	3	1	4	187
3	1	Monday, October 7, 2024	22:00	23:00	51	3	55	9	-	2	30	-	-	7	157
4	1	Monday, October 7, 2024	23:00	0:00	24	-	36	5	-	-	24	2	-	1	92
5	1	Tuesday, October 8, 2024	00:00	1:00	13	1	16	6	-	-	16	1	-	1	54
6	1	Tuesday, October 8, 2024	01:00	2:00	9	-	13	8	-	-	30	-	-	2	62
7	1	Tuesday, October 8, 2024	02:00	3:00	4	1	9	7	-	1	27	-	-	1	50
8	1	Tuesday, October 8, 2024	03:00	4:00	4	2	11	3	1	-	18	-	-	2	41
9	1	Tuesday, October 8, 2024	04:00	5:00	7	3	5	-	1	-	18	-	-	1	35
10	1	Tuesday, October 8, 2024	05:00	6:00	49	2	11	7	2	1	31	-	1	4	108
11	1	Tuesday, October 8, 2024	06:00	7:00	161	30	18	22	2	2	42	-	-	1	278
12	1	Tuesday, October 8, 2024	07:00	8:00	346	59	38	46	5	12	24	-	2	9	541
13	1	Tuesday, October 8, 2024	08:00	9:00	399	61	62	35	-	9	16	1	1	8	592
14	1	Tuesday, October 8, 2024	09:00	10:00	423	64	62	33	4	8	29	-	2	4	629
15	1	Tuesday, October 8, 2024	10:00	11:00	378	47	69	56	3	8	21	-	6	9	597
16	1	Tuesday, October 8, 2024	11:00	12:00	420	48	89	40	1	5	34	-	6	8	651
17	1	Tuesday, October 8, 2024	12:00	13:00	390	39	84	37	-	7	18	1	-	11	587
18	1	Tuesday, October 8, 2024	13:00	14:00	393	58	88	36	-	5	28	-	2	15	625
19	1	Tuesday, October 8, 2024	14:00	15:00	367	67	102	41	3	7	39	-	2	9	637
20	1	Tuesday, October 8, 2024	15:00	16:00	403	53	116	39	1	12	29	2	-	13	668
21	1	Tuesday, October 8, 2024	16:00	17:00	440	57	96	43	5	5	23	-	-	13	682
22	1	Tuesday, October 8, 2024	17:00	18:00	512	65	120	45	2	8	36	-	-	16	804
23	1	Tuesday, October 8, 2024	18:00	19:00	352	34	108	36	-	10	28	-	1	9	578
24	1	Tuesday, October 8, 2024	19:00	20:00	185	11	85	17	2	1	20	4	-	13	338

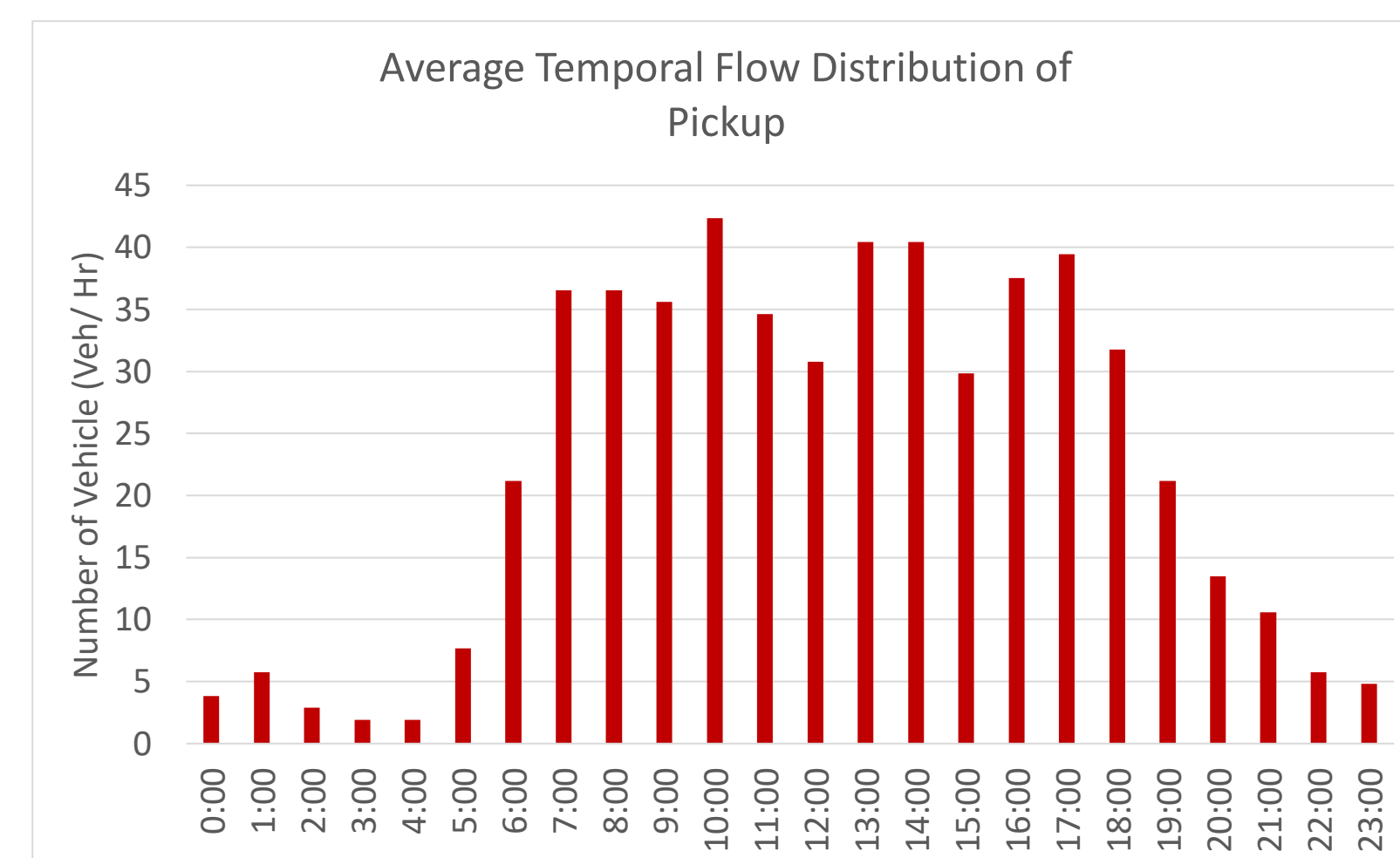
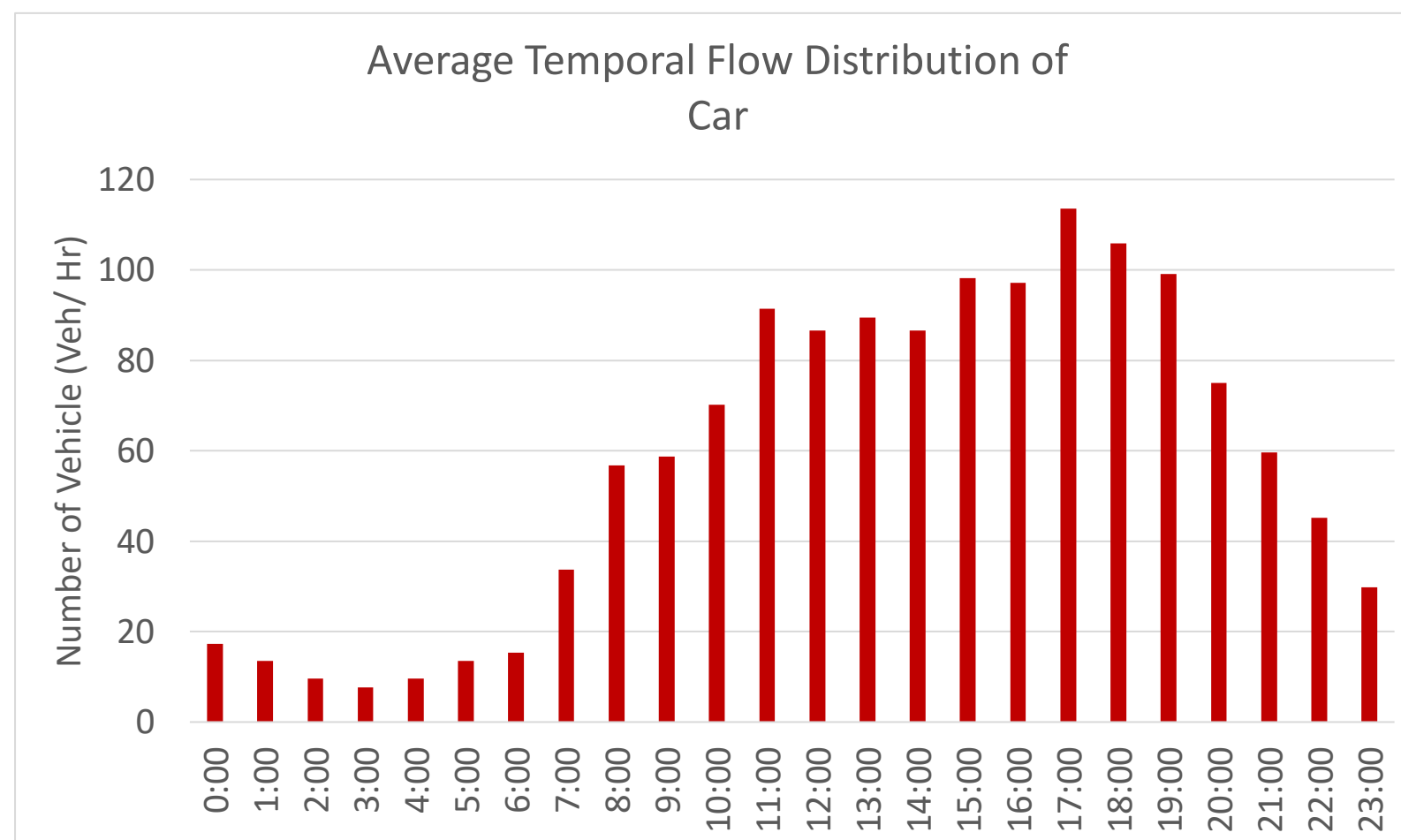
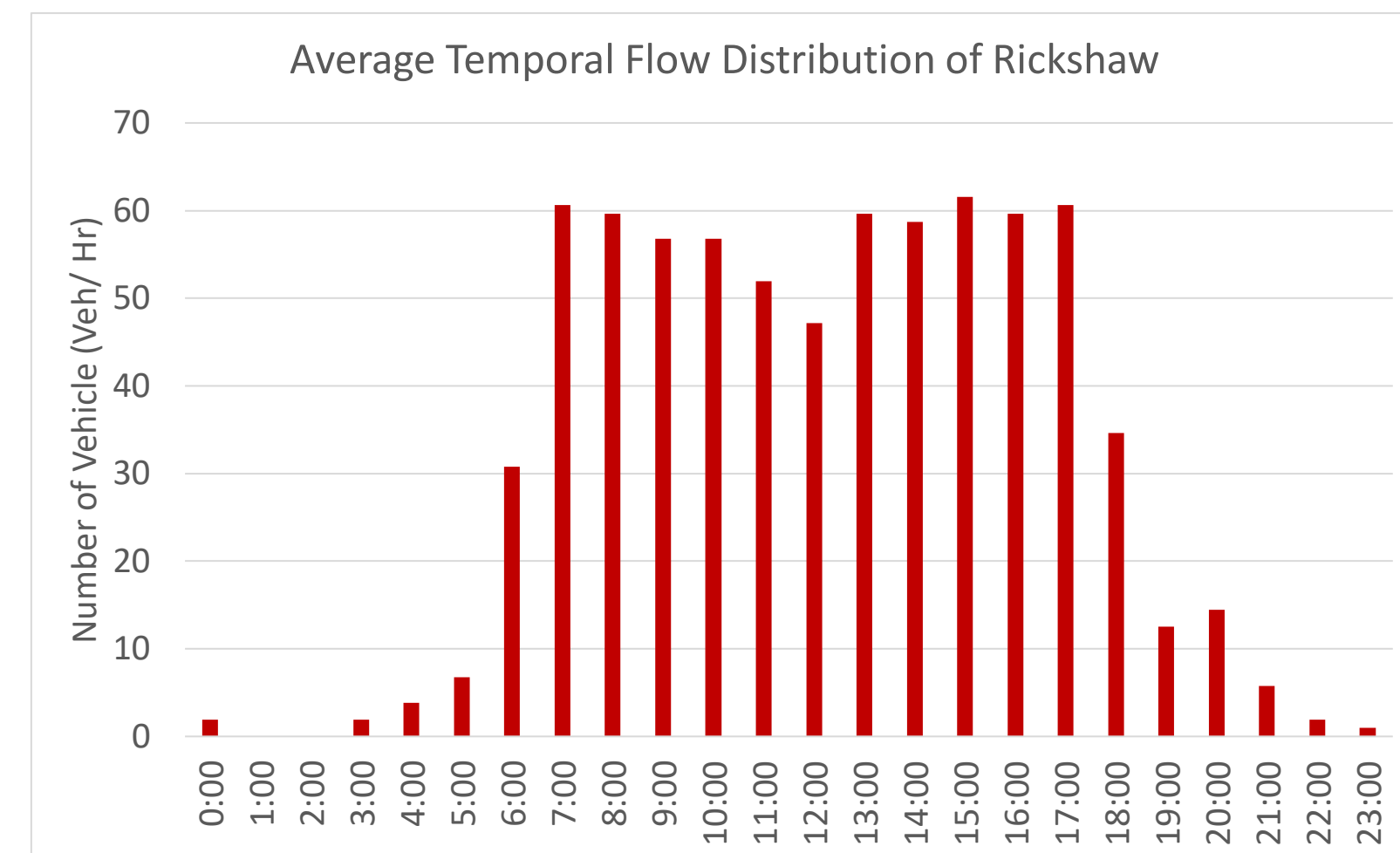
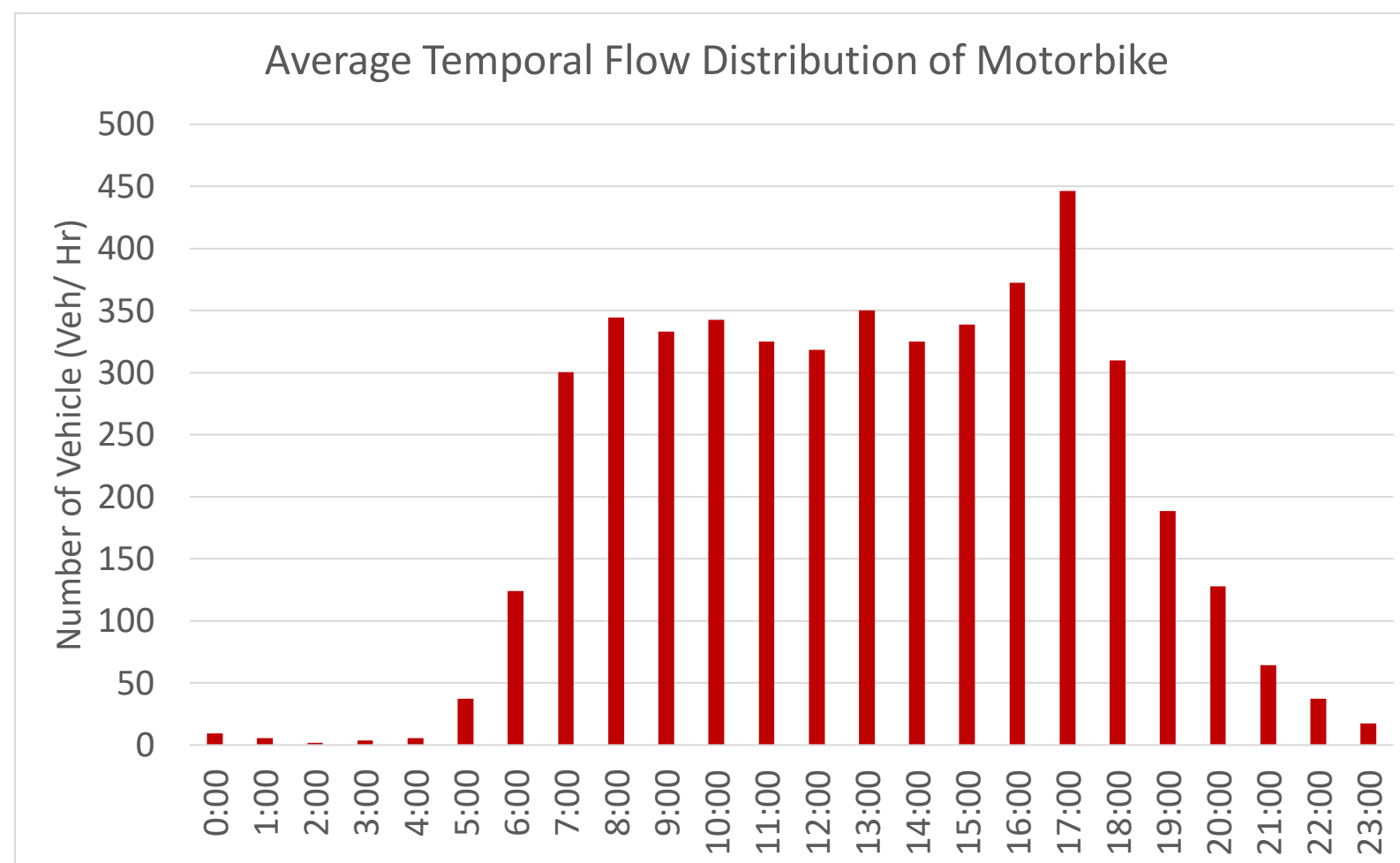


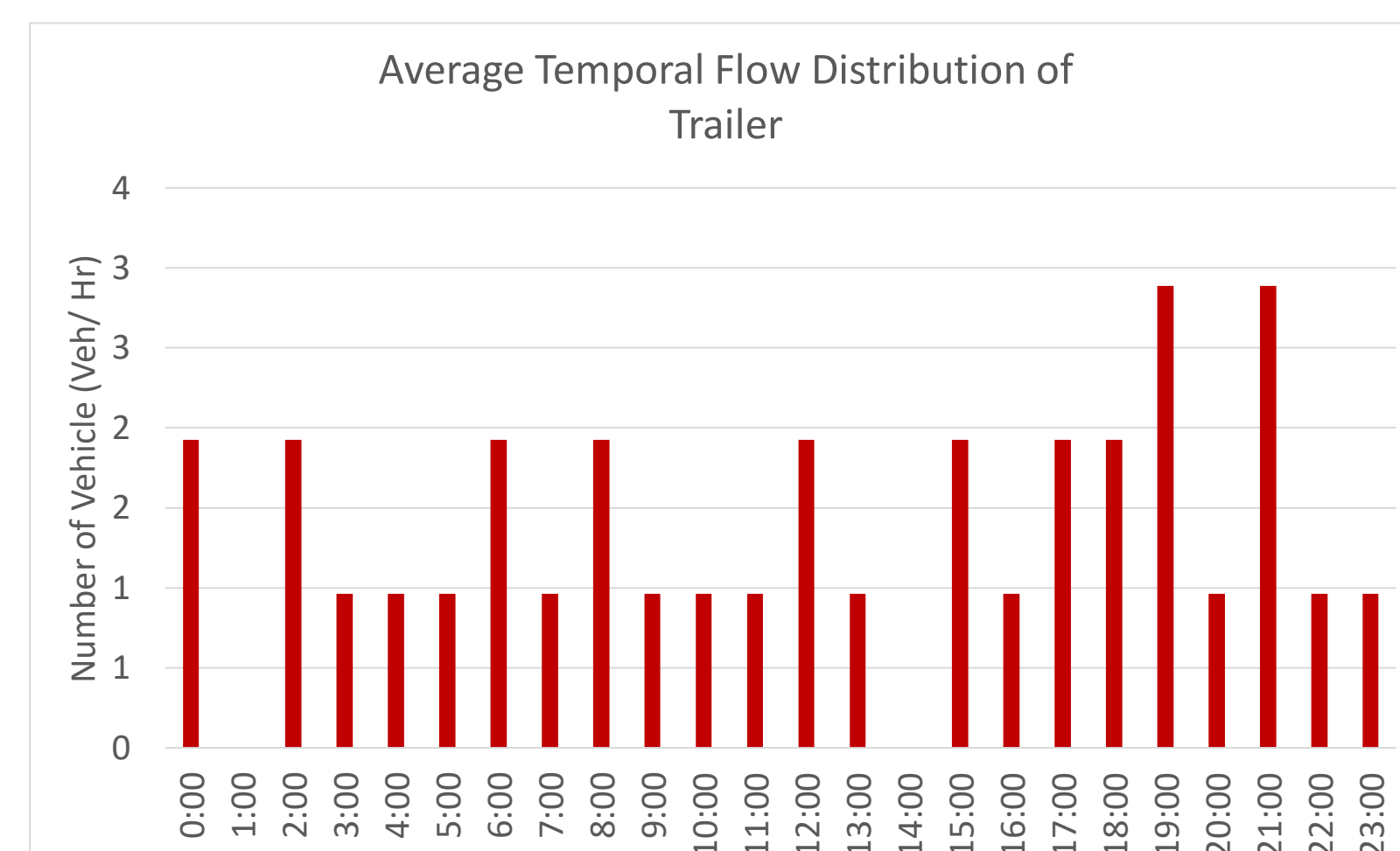
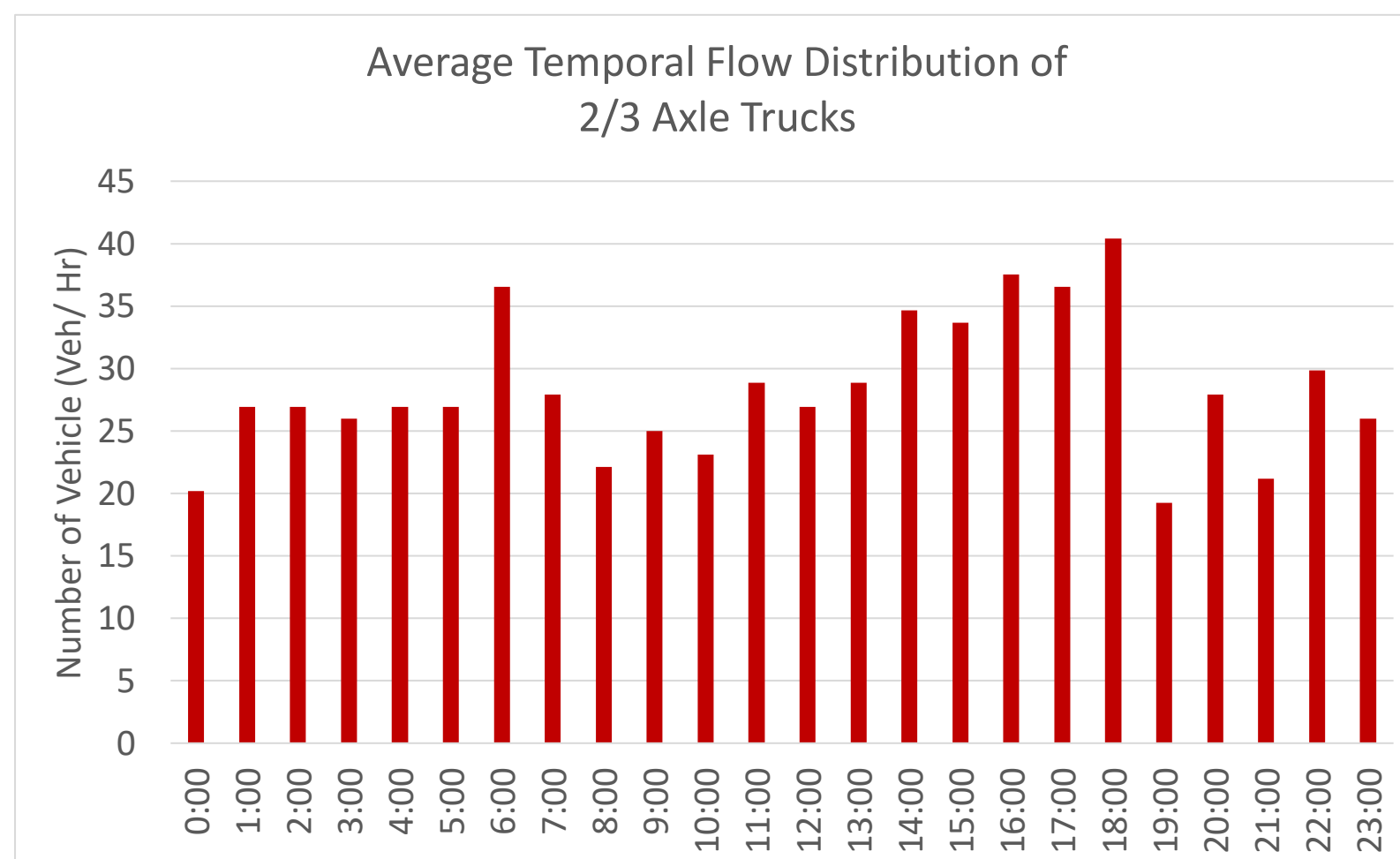
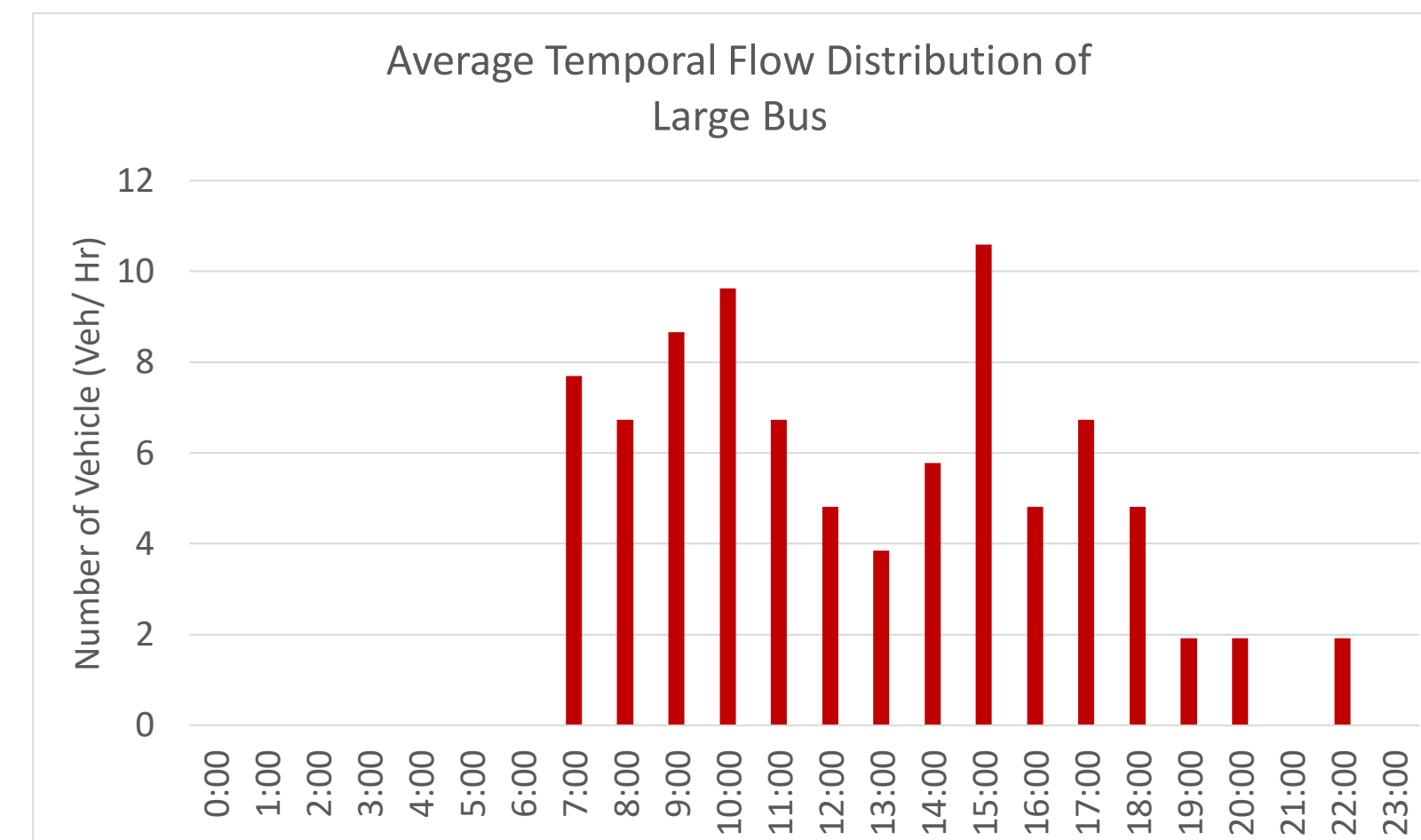
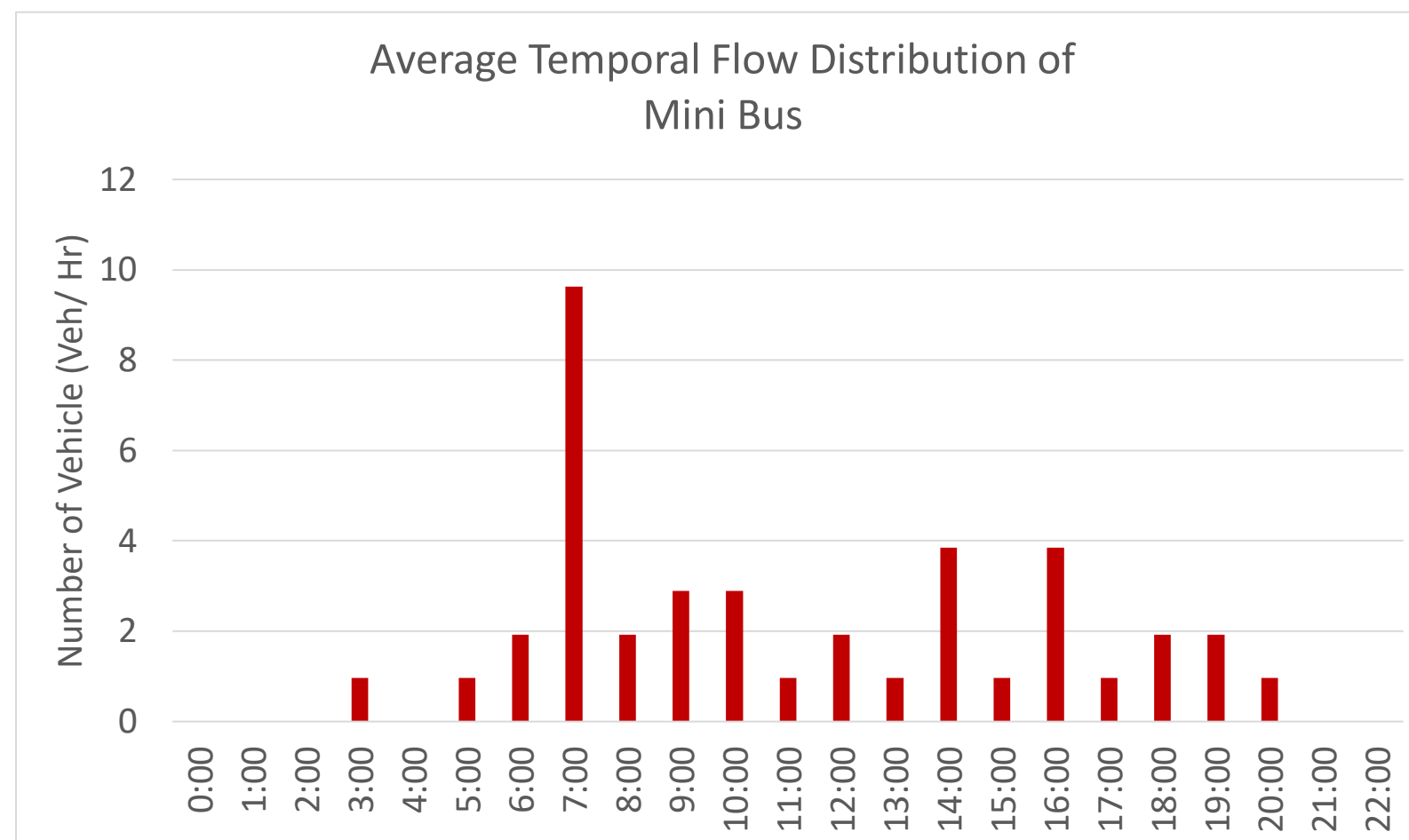
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location Coordinates		MB-1 Muridke 31.8623882, 74.3161695						All Directional Count							
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
25	2	Tuesday, October 8, 2024	20:00	21:00	130	14	67	10	1	1	38	2	-	8	271
26	2	Tuesday, October 8, 2024	21:00	22:00	64	6	61	1	-	-	32	1	-	11	176
27	2	Tuesday, October 8, 2024	22:00	23:00	38	2	40	3	-	-	29	-	1	4	117
28	2	Tuesday, October 8, 2024	23:00	0:00	14	3	20	4	-	-	30	-	-	2	73
29	2	Wednesday, October 9, 2024	00:00	1:00	10	2	17	3	1	-	20	1	1	-	55
30	2	Wednesday, October 9, 2024	01:00	2:00	3	1	17	3	-	-	30	2	-	-	56
31	2	Wednesday, October 9, 2024	02:00	3:00	1	-	10	1	-	-	35	4	-	2	53
32	2	Wednesday, October 9, 2024	03:00	4:00	7	2	2	1	-	-	38	2	-	1	53
33	2	Wednesday, October 9, 2024	04:00	5:00	9	2	10	2	-	-	21	3	-	-	47
34	2	Wednesday, October 9, 2024	05:00	6:00	32	10	9	7	-	-	27	4	-	2	91
35	2	Wednesday, October 9, 2024	06:00	7:00	103	37	21	24	1	-	39	2	1	6	234
36	2	Wednesday, October 9, 2024	07:00	8:00	288	67	34	38	13	5	28	2	3	6	484
37	2	Wednesday, October 9, 2024	08:00	9:00	344	77	59	36	3	5	26	2	4	10	566
38	2	Wednesday, October 9, 2024	09:00	10:00	298	53	54	43	4	5	23	1	3	8	492
39	2	Wednesday, October 9, 2024	10:00	11:00	365	66	76	39	3	11	25	1	3	2	591
40	2	Wednesday, October 9, 2024	11:00	12:00	281	65	105	35	-	10	29	1	-	6	532
41	2	Wednesday, October 9, 2024	12:00	13:00	313	49	111	30	2	3	30	1	3	16	558
42	2	Wednesday, October 9, 2024	13:00	14:00	344	58	87	38	-	4	33	1	1	6	572
43	2	Wednesday, October 9, 2024	14:00	15:00	307	62	79	40	4	4	43	2	3	5	549
44	2	Wednesday, October 9, 2024	15:00	16:00	346	60	90	28	2	8	37	4	3	15	593
45	2	Wednesday, October 9, 2024	16:00	17:00	384	60	99	33	6	2	60	1	2	20	667
46	2	Wednesday, October 9, 2024	17:00	18:00	459	64	105	37	1	8	43	-	3	10	730
47	2	Wednesday, October 9, 2024	18:00	19:00	313	39	96	28	2	1	51	2	2	11	545
48	2	Wednesday, October 9, 2024	19:00	20:00	180	13	97	24	-	2	21	1	-	13	351

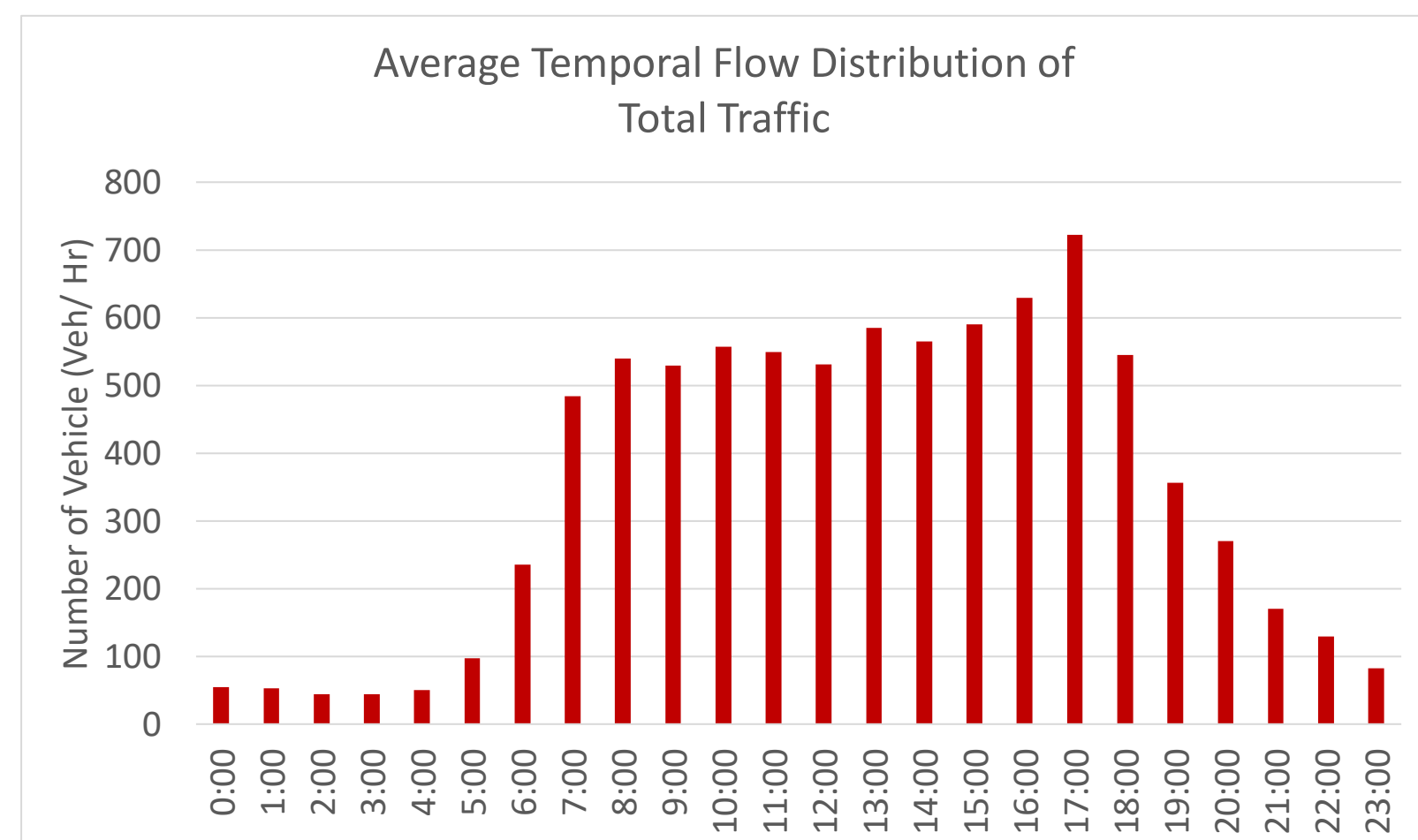
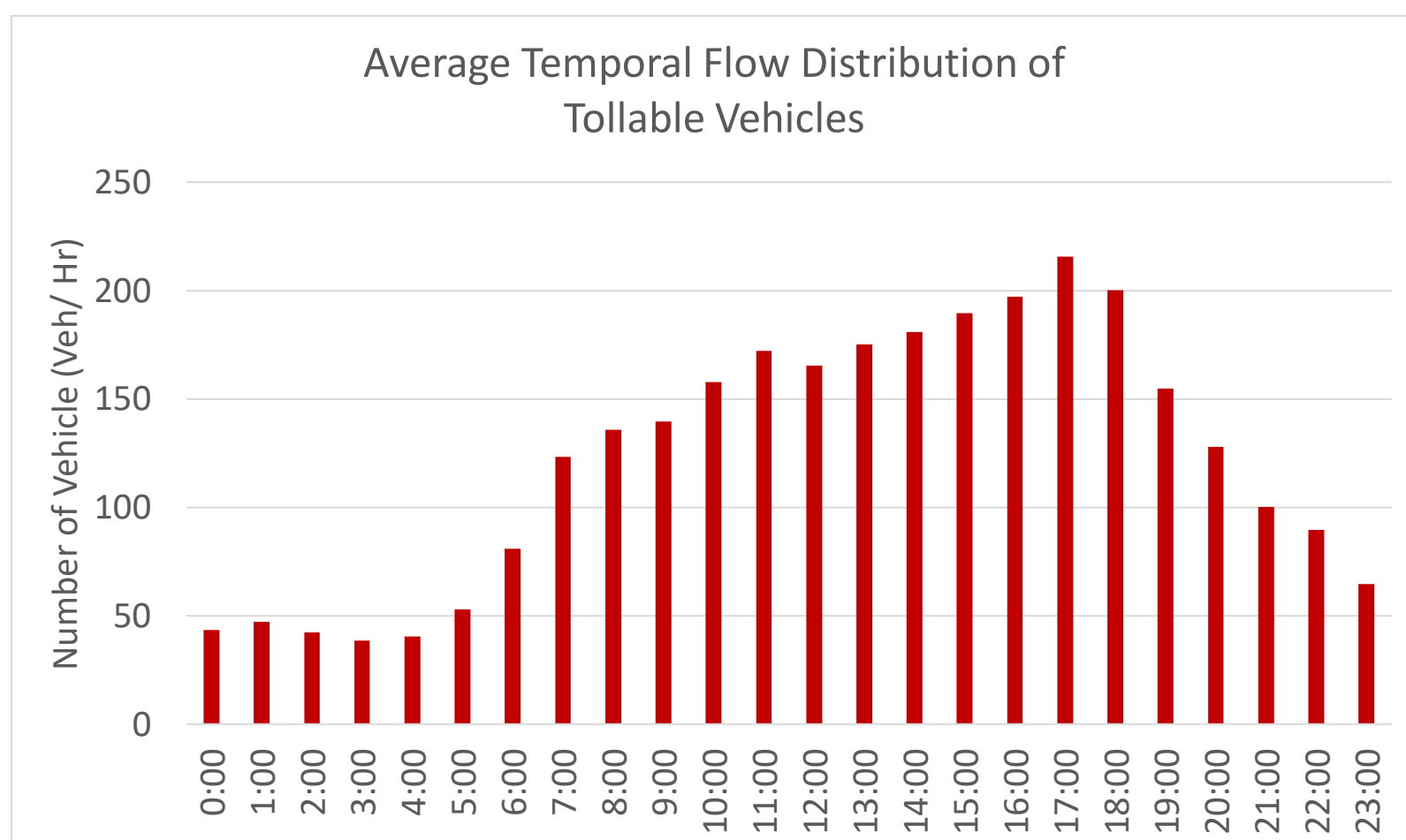
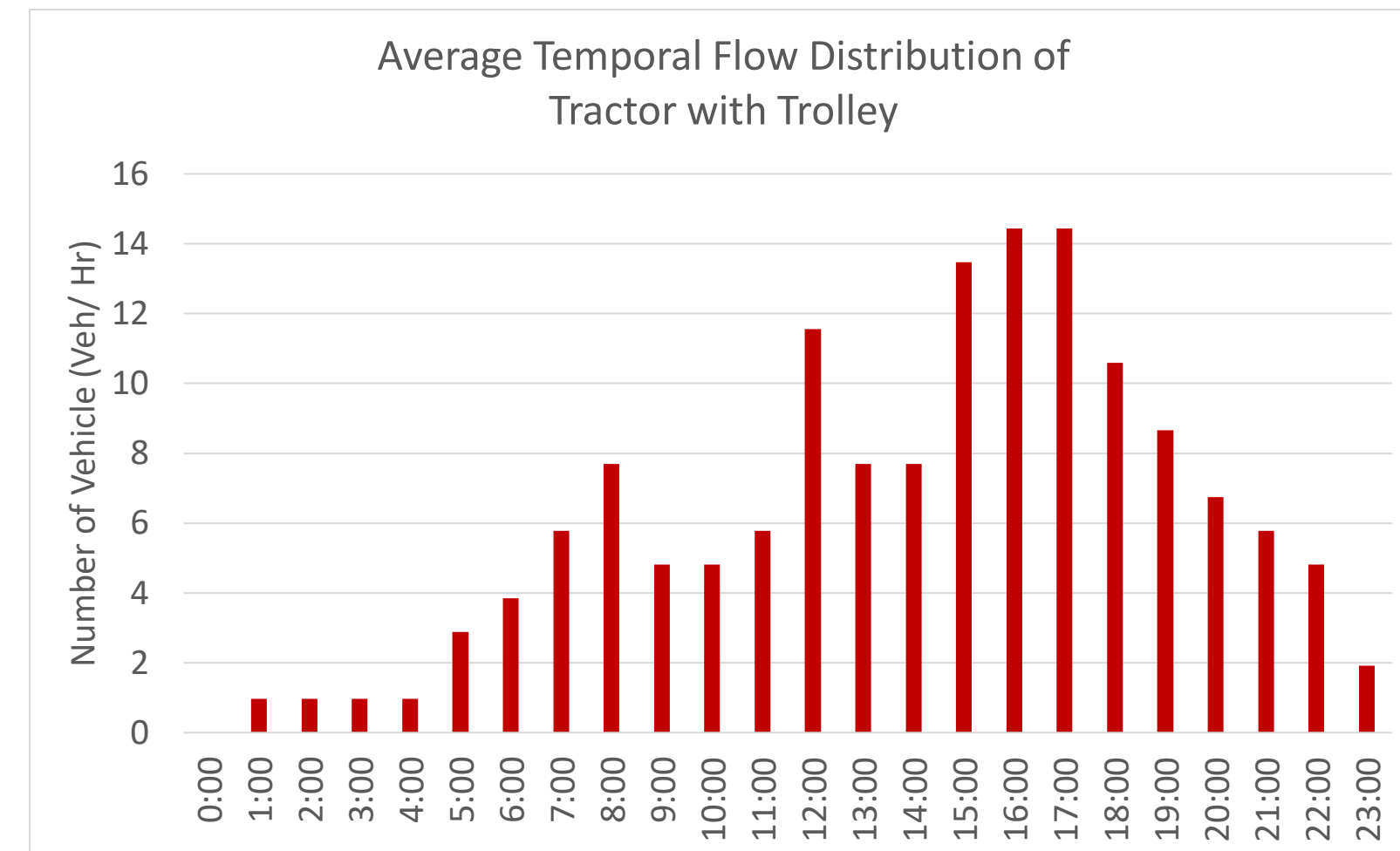
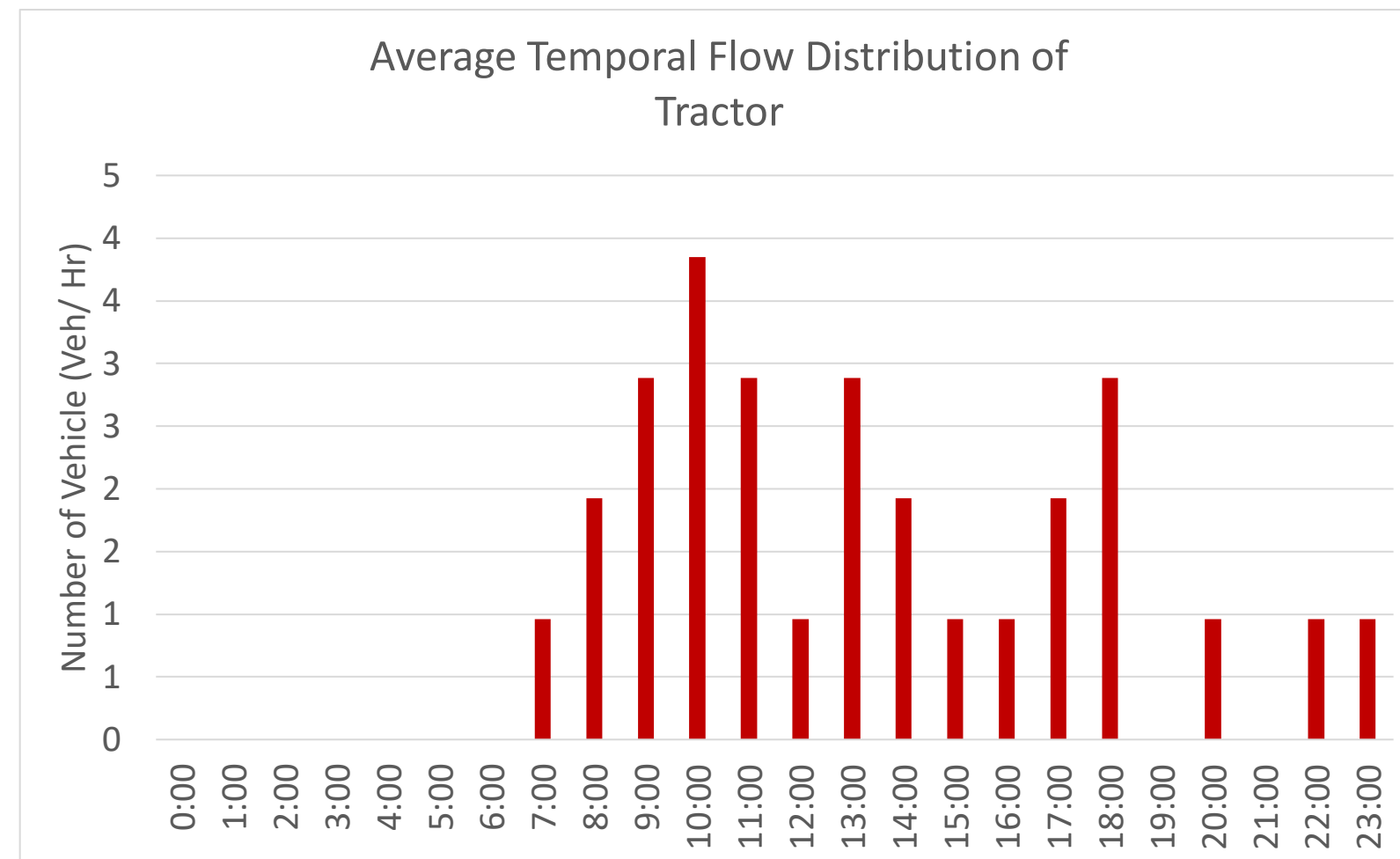


Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location Coordinates		MB-1 Muridke 31.8623882, 74.3161695						All Directional Count							
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
49	2	Wednesday, October 9, 2024	20:00	21:00	121	12	74	14	1	1	25	2	2	5	257
50	3	Wednesday, October 9, 2024	21:00	22:00	52	2	70	16	-	-	21	6	-	3	170
51	3	Wednesday, October 9, 2024	22:00	23:00	29	2	45	6	1	3	36	4	2	6	134
52	3	Wednesday, October 9, 2024	23:00	0:00	16	1	38	6	-	1	25	1	3	3	94
53	3	Thursday, October 10, 2024	00:00	1:00	6	2	19	3	-	-	26	4	-	-	60
54	3	Thursday, October 10, 2024	01:00	2:00	5	-	11	7	-	-	25	-	-	1	49
55	3	Thursday, October 10, 2024	02:00	3:00	1	-	12	-	-	-	21	2	-	1	37
56	3	Thursday, October 10, 2024	03:00	4:00	3	2	10	3	1	1	25	2	-	-	47
57	3	Thursday, October 10, 2024	04:00	5:00	4	6	13	5	-	1	45	1	-	2	77
58	3	Thursday, October 10, 2024	05:00	6:00	38	9	23	10	-	-	27	-	-	2	109
59	3	Thursday, October 10, 2024	06:00	7:00	122	28	9	20	2	-	33	4	-	3	221
60	3	Thursday, October 10, 2024	07:00	8:00	302	63	32	31	12	9	37	-	-	3	489
61	3	Thursday, October 10, 2024	08:00	9:00	331	48	56	42	3	5	28	2	2	6	523
62	3	Thursday, October 10, 2024	09:00	10:00	317	59	69	35	1	12	27	2	6	4	532
63	3	Thursday, October 10, 2024	10:00	11:00	327	62	74	36	2	9	25	2	4	4	545
64	3	Thursday, October 10, 2024	11:00	12:00	313	49	91	33	2	6	26	2	1	3	526
65	3	Thursday, October 10, 2024	12:00	13:00	292	58	75	31	3	6	34	3	2	10	514
66	3	Thursday, October 10, 2024	13:00	14:00	355	70	105	52	2	4	30	2	7	3	630
67	3	Thursday, October 10, 2024	14:00	15:00	342	54	87	44	5	5	27	-	1	11	576
68	3	Thursday, October 10, 2024	15:00	16:00	309	78	98	27	-	11	40	-	1	16	580
69	3	Thursday, October 10, 2024	16:00	17:00	335	68	108	40	3	8	33	1	2	12	610
70	3	Thursday, October 10, 2024	17:00	18:00	422	59	129	40	2	5	34	4	3	19	717
71	3	Thursday, October 10, 2024	18:00	19:00	299	35	127	33	3	4	45	3	6	14	569
72	3	Thursday, October 10, 2024	19:00	20:00	221	16	127	25	2	2	21	3	1	3	421









Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Average Annual Hourly Interval													
Location		MB-1 Muridke						Direction Number				1	
Coordinates		31.8623882, 74.3161695						From	Narowal		Towards	Muridke	
S.No.	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	0:00	1:00	4	1	8	1	0	0	11	1	0	0	25
2	1:00	2:00	3	0	7	1	0	0	15	0	0	1	27
3	2:00	3:00	0	0	6	1	0	0	16	1	0	0	24
4	3:00	4:00	3	2	4	0	0	0	13	0	0	0	22
5	4:00	5:00	4	3	4	1	0	0	11	0	0	0	22
6	5:00	6:00	15	5	6	5	0	0	11	0	0	2	43
7	6:00	7:00	66	21	8	13	1	0	22	0	0	2	133
8	7:00	8:00	177	41	15	20	9	5	13	0	0	3	284
9	8:00	9:00	212	36	33	17	2	4	11	1	2	3	319
10	9:00	10:00	191	29	32	13	1	4	15	0	2	2	289
11	10:00	11:00	196	34	38	20	1	5	10	0	3	3	309
12	11:00	12:00	172	27	49	18	1	4	13	1	2	4	291
13	12:00	13:00	166	23	40	13	0	1	14	1	1	6	267
14	13:00	14:00	184	29	45	19	1	2	15	1	2	4	302
15	14:00	15:00	167	28	43	18	2	2	19	0	1	5	286
16	15:00	16:00	162	32	45	15	1	5	21	1	0	8	290
17	16:00	17:00	191	28	59	22	1	2	21	1	1	8	334
18	17:00	18:00	245	33	60	19	0	4	24	1	1	8	395
19	18:00	19:00	160	15	54	18	1	2	23	1	1	7	282
20	19:00	20:00	84	6	41	13	1	1	12	2	0	5	164
21	20:00	21:00	55	7	36	7	0	0	16	1	1	4	126
22	21:00	22:00	23	4	24	4	0	0	13	2	0	2	72
23	22:00	23:00	15	1	18	3	0	1	21	0	1	3	64
24	23:00	0:00	8	1	11	3	0	0	14	1	1	1	39
Average Annual Daily Traffic			2,504	404	684	266	21	40	376	15	18	78	4,407



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-1 Muridke						Direction Number				1			
Coordinates		31.8623882, 74.3161695						From	Narowal			Towards	Muridke		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	1	Monday, October 7, 2024	20:00	21:00	57	5	39	8	-	-	16	-	1	4	130
2	1	Monday, October 7, 2024	21:00	22:00	28	4	26	5	-	-	8	3	-	4	78
3	1	Monday, October 7, 2024	22:00	23:00	29	1	27	4	-	1	20	-	-	5	87
4	1	Monday, October 7, 2024	23:00	0:00	13	-	13	3	-	-	15	2	-	-	46
5	1	Tuesday, October 8, 2024	00:00	1:00	4	-	8	2	-	-	4	1	-	1	20
6	1	Tuesday, October 8, 2024	01:00	2:00	3	-	7	1	-	-	18	-	-	2	31
7	1	Tuesday, October 8, 2024	02:00	3:00	-	1	3	2	-	-	15	-	-	-	21
8	1	Tuesday, October 8, 2024	03:00	4:00	4	2	7	-	-	-	9	-	-	1	23
9	1	Tuesday, October 8, 2024	04:00	5:00	3	-	1	-	-	-	4	-	-	-	8
10	1	Tuesday, October 8, 2024	05:00	6:00	18	1	5	4	-	-	9	-	-	2	39
11	1	Tuesday, October 8, 2024	06:00	7:00	91	19	8	13	1	1	30	-	-	-	163
12	1	Tuesday, October 8, 2024	07:00	8:00	197	43	19	25	4	8	11	-	1	2	310
13	1	Tuesday, October 8, 2024	08:00	9:00	244	36	39	19	-	4	4	1	1	2	350
14	1	Tuesday, October 8, 2024	09:00	10:00	238	35	29	15	2	3	18	-	1	2	343
15	1	Tuesday, October 8, 2024	10:00	11:00	225	29	42	25	1	3	9	-	3	6	343
16	1	Tuesday, October 8, 2024	11:00	12:00	218	25	48	17	1	3	12	-	4	4	332
17	1	Tuesday, October 8, 2024	12:00	13:00	191	16	41	16	-	1	11	-	-	5	281
18	1	Tuesday, October 8, 2024	13:00	14:00	190	24	40	17	-	3	16	-	2	9	301
19	1	Tuesday, October 8, 2024	14:00	15:00	180	32	47	17	2	3	21	-	-	6	308
20	1	Tuesday, October 8, 2024	15:00	16:00	189	27	52	17	-	6	19	2	-	5	317
21	1	Tuesday, October 8, 2024	16:00	17:00	224	25	66	23	3	1	13	-	-	8	363
22	1	Tuesday, October 8, 2024	17:00	18:00	256	33	69	22	-	6	22	-	-	8	416
23	1	Tuesday, October 8, 2024	18:00	19:00	164	14	56	20	-	4	15	-	1	7	281
24	1	Tuesday, October 8, 2024	19:00	20:00	75	4	31	12	1	1	9	4	-	6	143

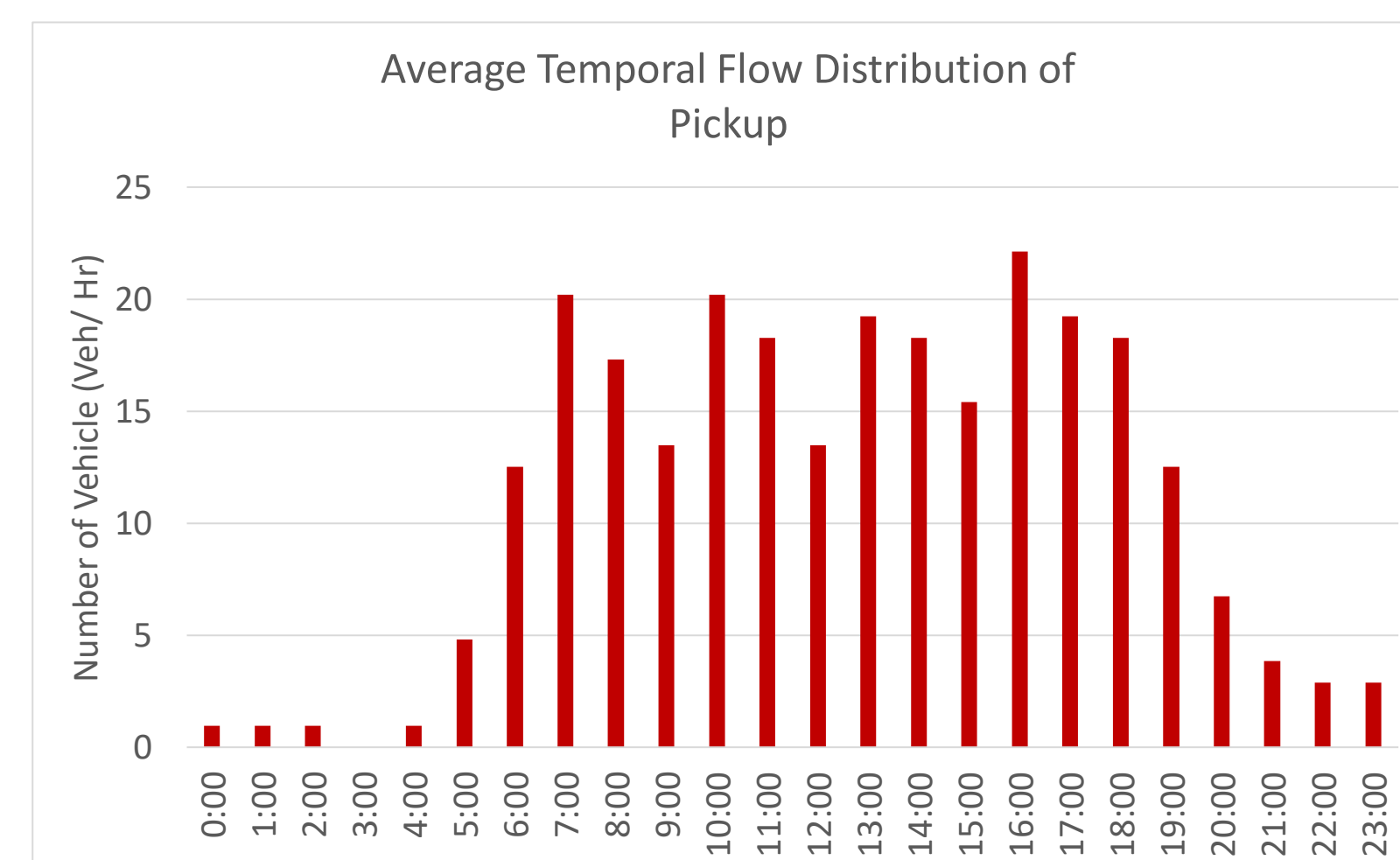
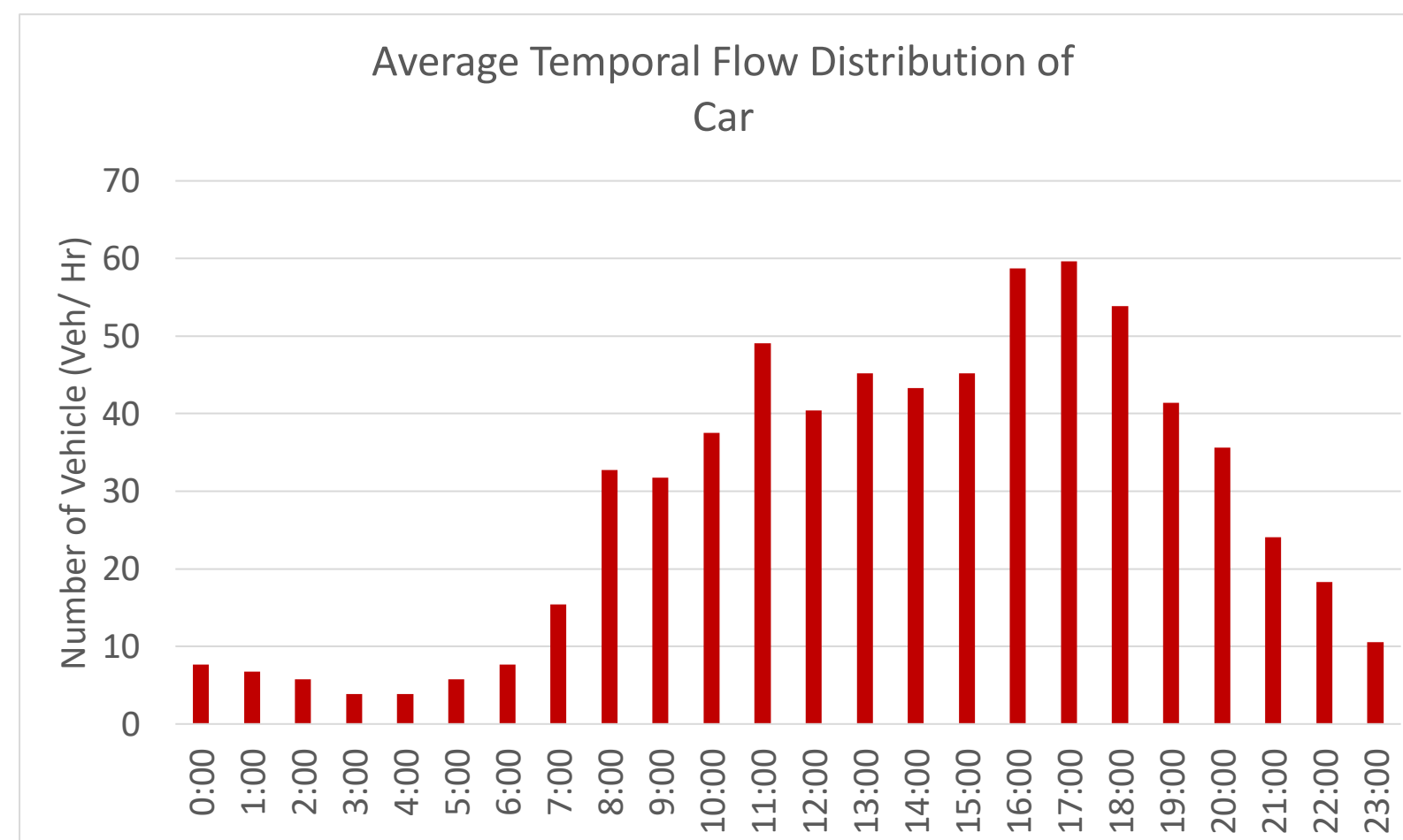
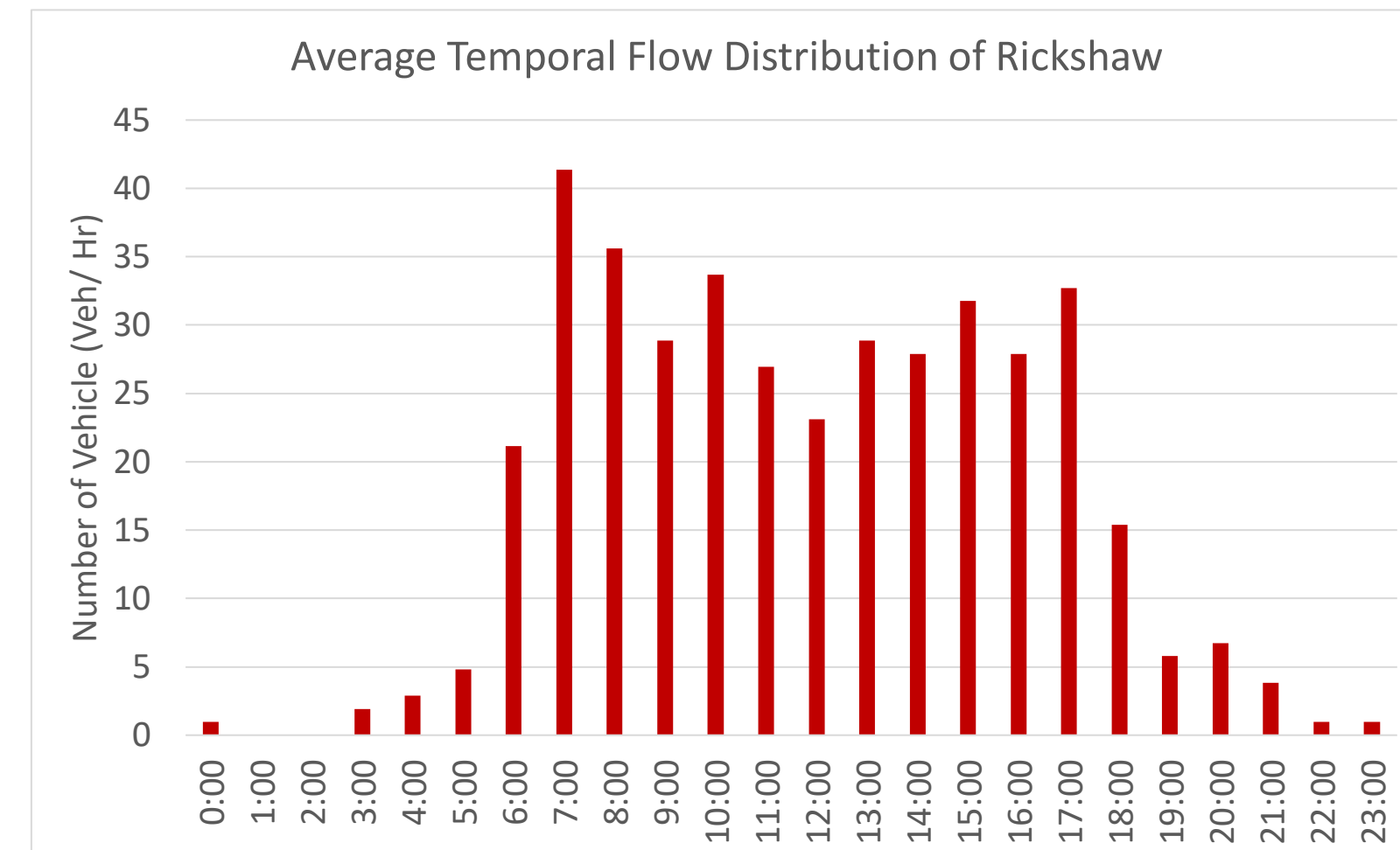
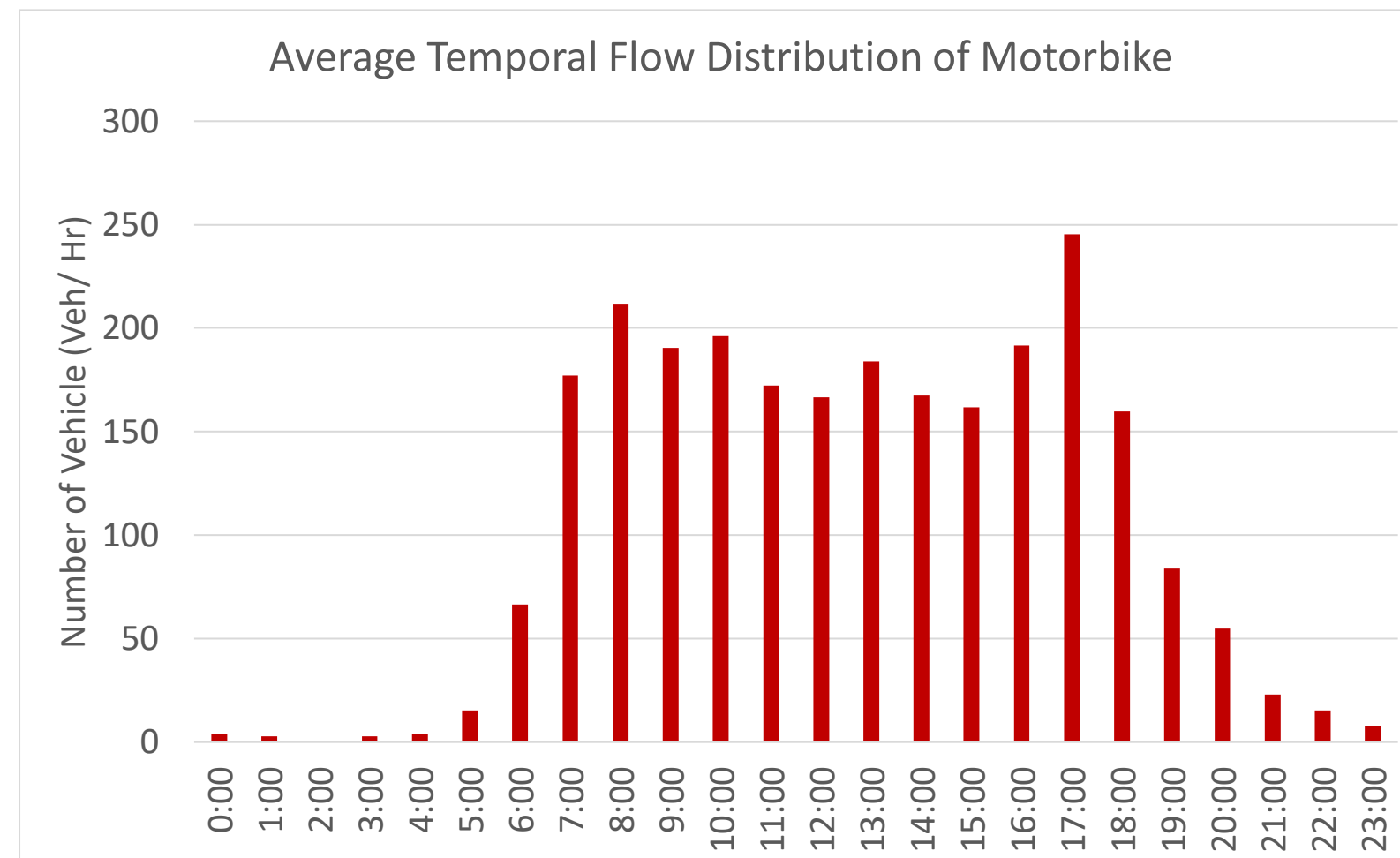


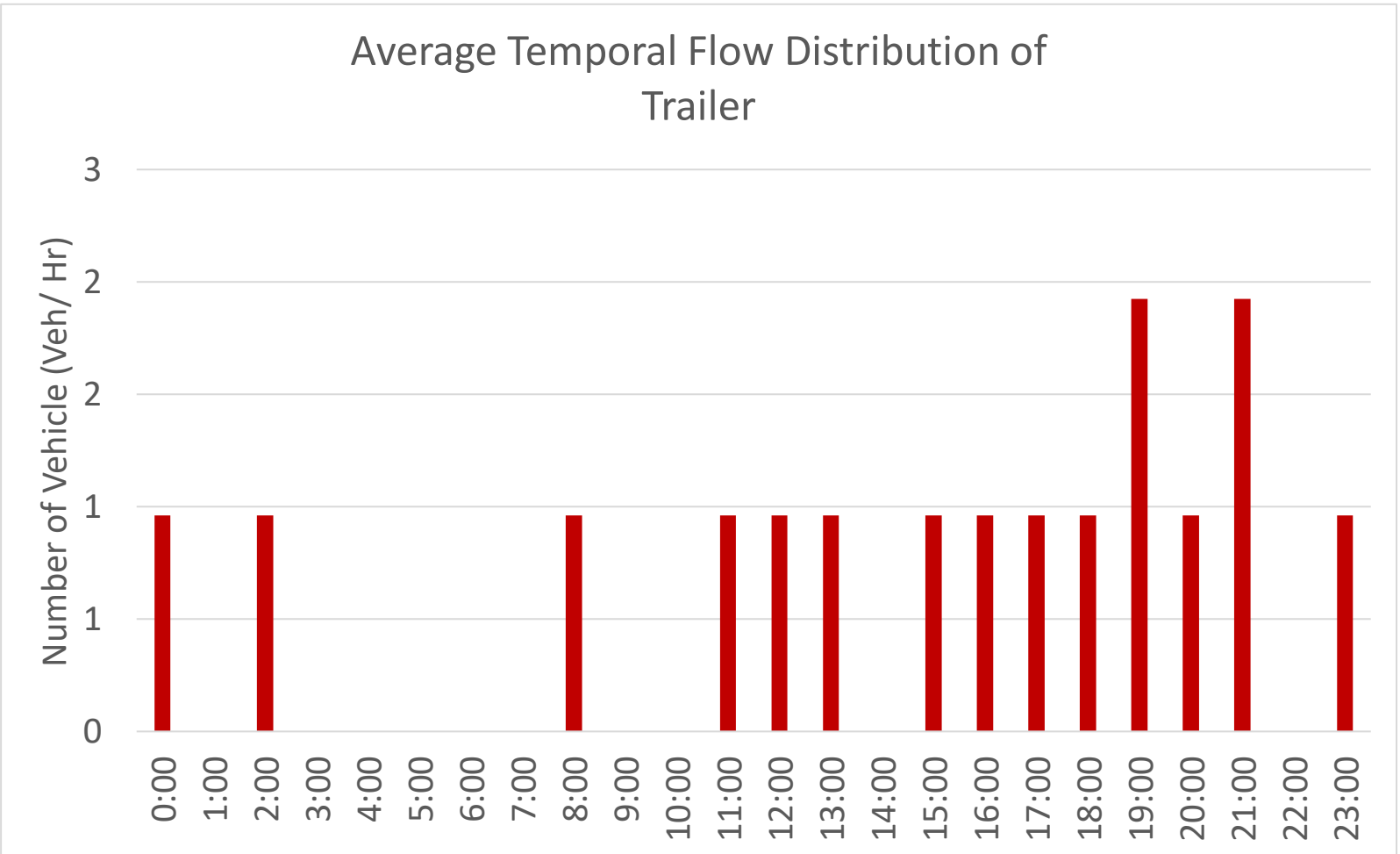
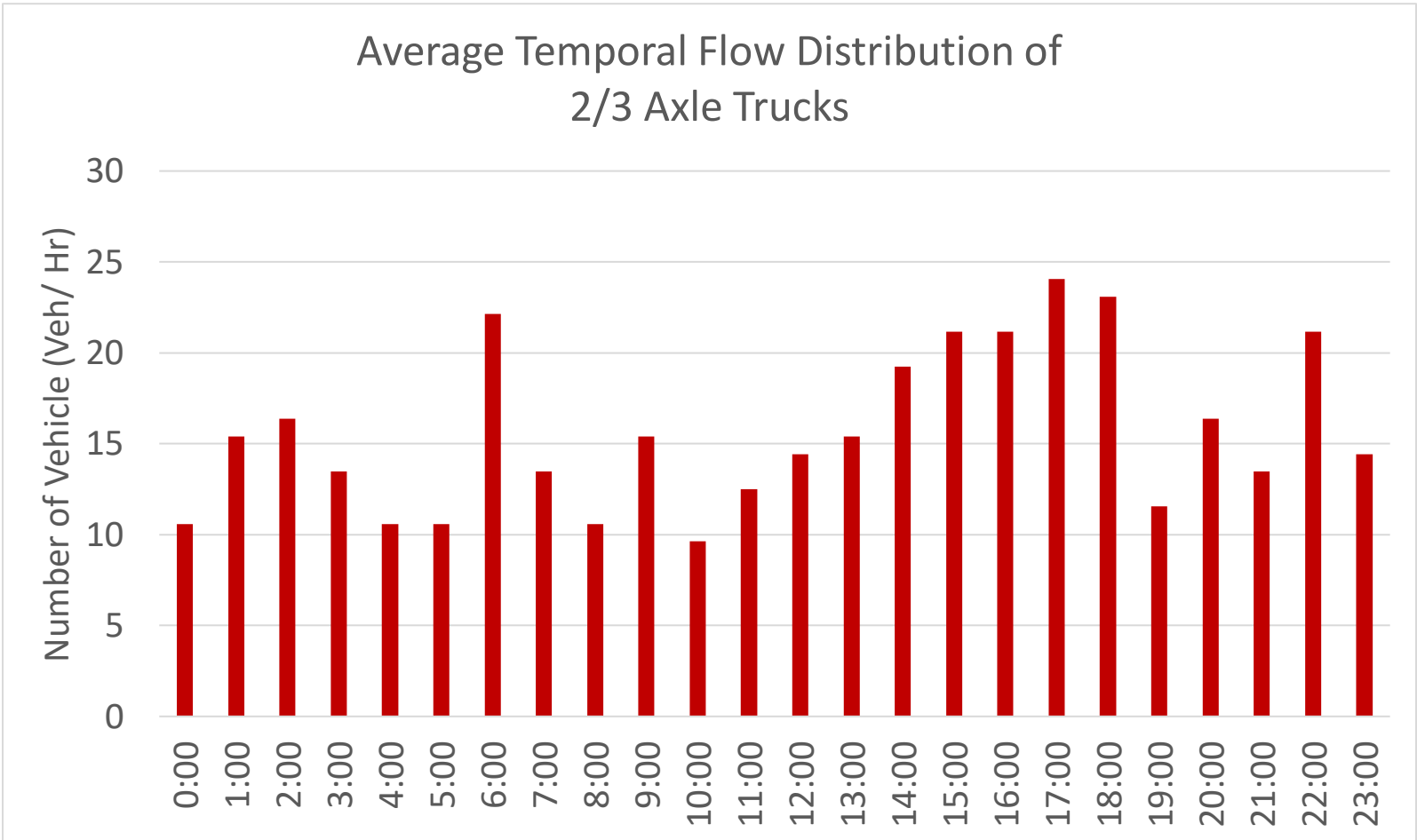
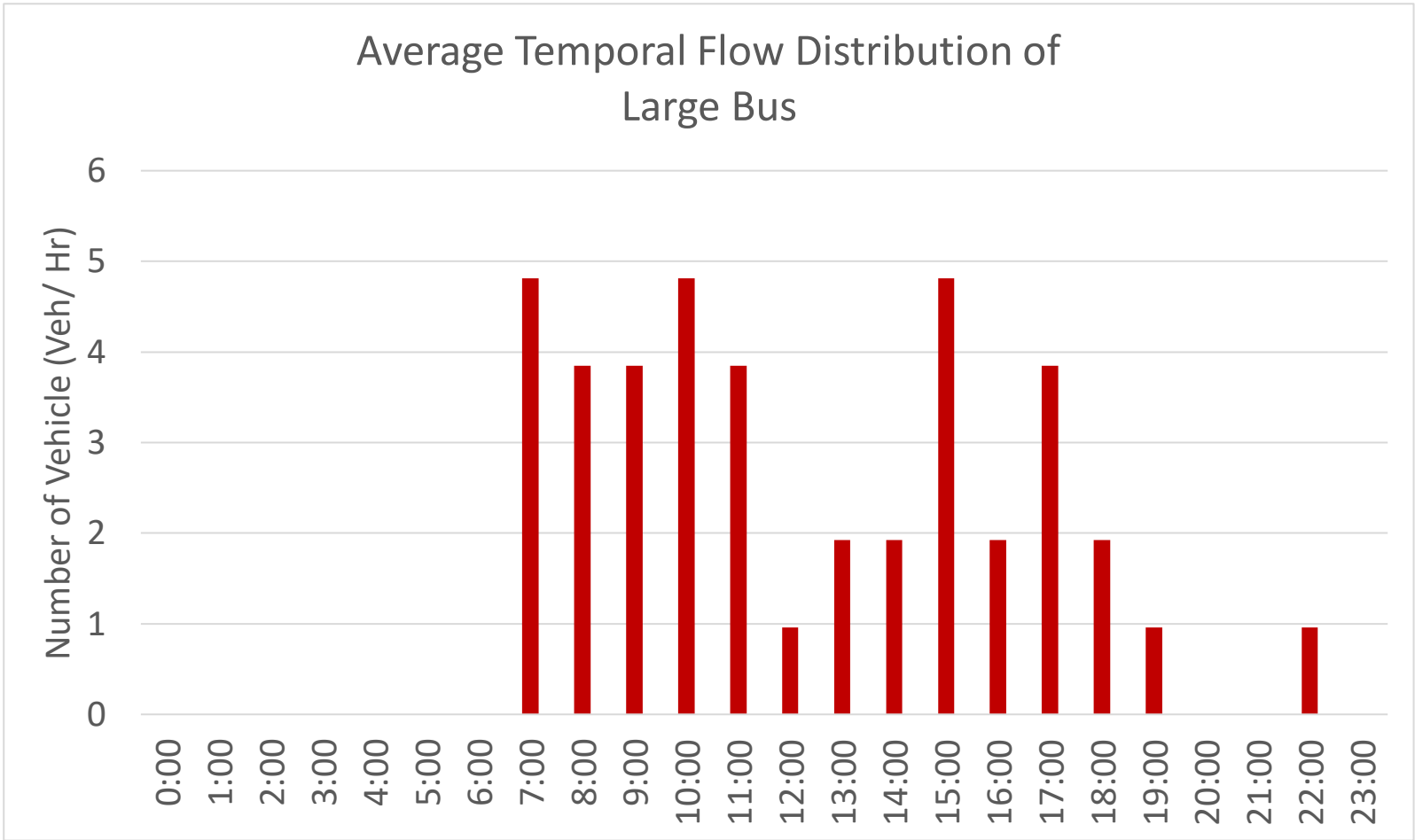
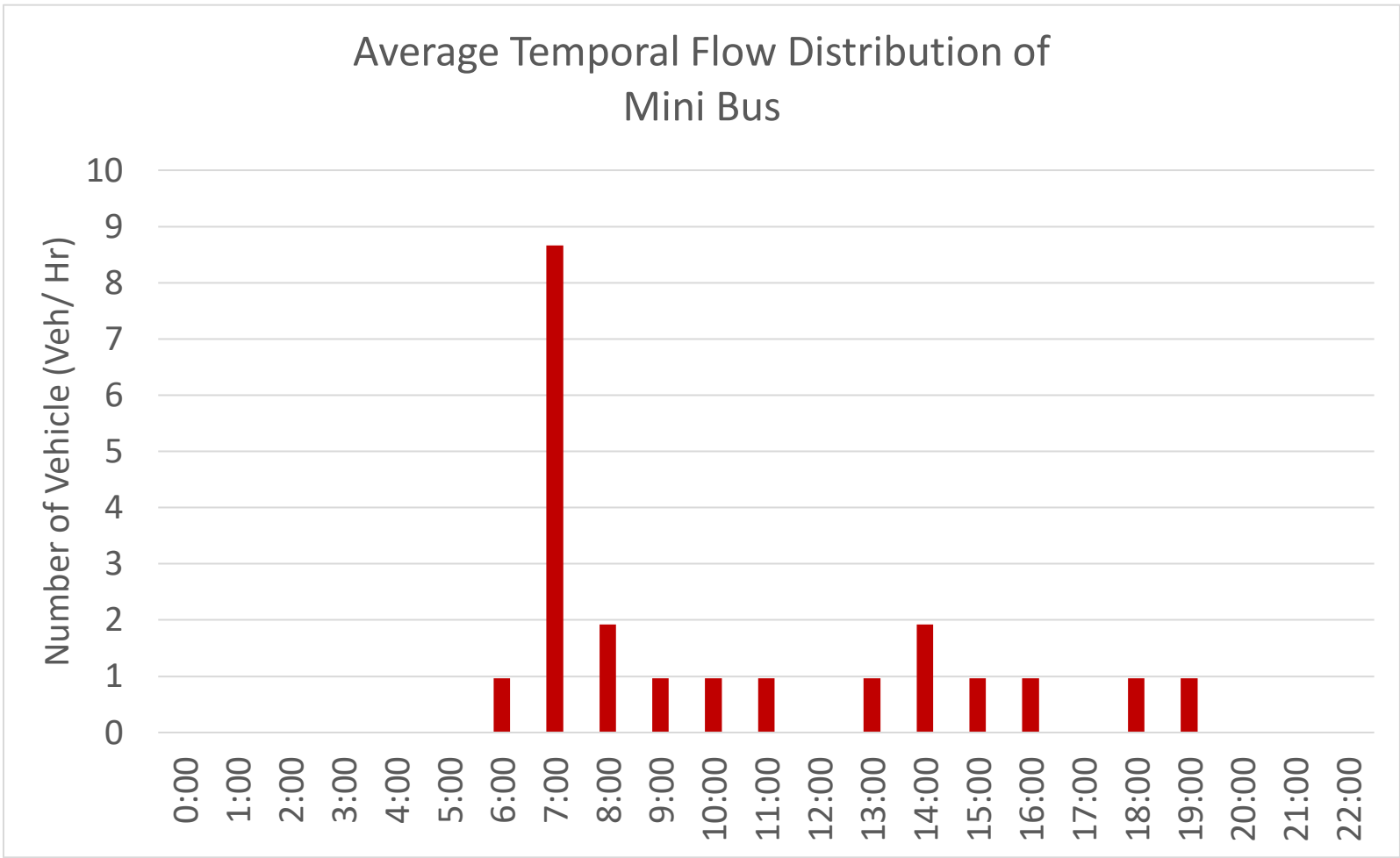
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-1 Muridke						Direction Number					1		
Coordinates		31.8623882, 74.3161695						From	Narowal			Towards	Muridke		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
25	2	Tuesday, October 8, 2024	20:00	21:00	62	6	38	10	1	-	15	2	-	4	138
26	2	Tuesday, October 8, 2024	21:00	22:00	24	6	24	-	-	-	19	1	-	1	75
27	2	Tuesday, October 8, 2024	22:00	23:00	10	1	13	2	-	-	22	-	1	4	53
28	2	Tuesday, October 8, 2024	23:00	0:00	3	2	9	3	-	-	18	-	-	1	36
29	2	Wednesday, October 9, 2024	00:00	1:00	4	1	8	1	1	-	11	1	-	-	27
30	2	Wednesday, October 9, 2024	01:00	2:00	2	1	4	3	-	-	19	1	-	-	30
31	2	Wednesday, October 9, 2024	02:00	3:00	1	-	5	1	-	-	20	2	-	-	29
32	2	Wednesday, October 9, 2024	03:00	4:00	4	2	-	1	-	-	16	-	-	-	23
33	2	Wednesday, October 9, 2024	04:00	5:00	7	2	3	1	-	-	9	-	-	-	22
34	2	Wednesday, October 9, 2024	05:00	6:00	11	6	4	6	-	-	10	-	-	2	39
35	2	Wednesday, October 9, 2024	06:00	7:00	52	26	10	15	1	-	20	-	1	2	127
36	2	Wednesday, October 9, 2024	07:00	8:00	174	43	17	21	10	3	15	-	-	5	288
37	2	Wednesday, October 9, 2024	08:00	9:00	213	48	33	15	3	4	16	1	3	3	339
38	2	Wednesday, October 9, 2024	09:00	10:00	179	26	37	16	1	2	14	-	3	4	282
39	2	Wednesday, October 9, 2024	10:00	11:00	205	38	38	18	2	5	9	-	2	2	319
40	2	Wednesday, October 9, 2024	11:00	12:00	146	30	51	22	-	5	15	-	-	6	275
41	2	Wednesday, October 9, 2024	12:00	13:00	168	25	53	11	-	-	19	1	2	7	286
42	2	Wednesday, October 9, 2024	13:00	14:00	187	31	45	19	-	2	15	-	1	2	302
43	2	Wednesday, October 9, 2024	14:00	15:00	172	28	46	18	3	1	22	1	1	3	295
44	2	Wednesday, October 9, 2024	15:00	16:00	167	31	43	16	2	2	18	2	1	11	293
45	2	Wednesday, October 9, 2024	16:00	17:00	197	24	55	23	-	2	31	1	2	12	347
46	2	Wednesday, October 9, 2024	17:00	18:00	267	39	52	16	-	4	32	-	2	4	416
47	2	Wednesday, October 9, 2024	18:00	19:00	154	19	53	17	-	1	30	1	1	9	285
48	2	Wednesday, October 9, 2024	19:00	20:00	92	10	42	14	-	1	11	-	-	8	178

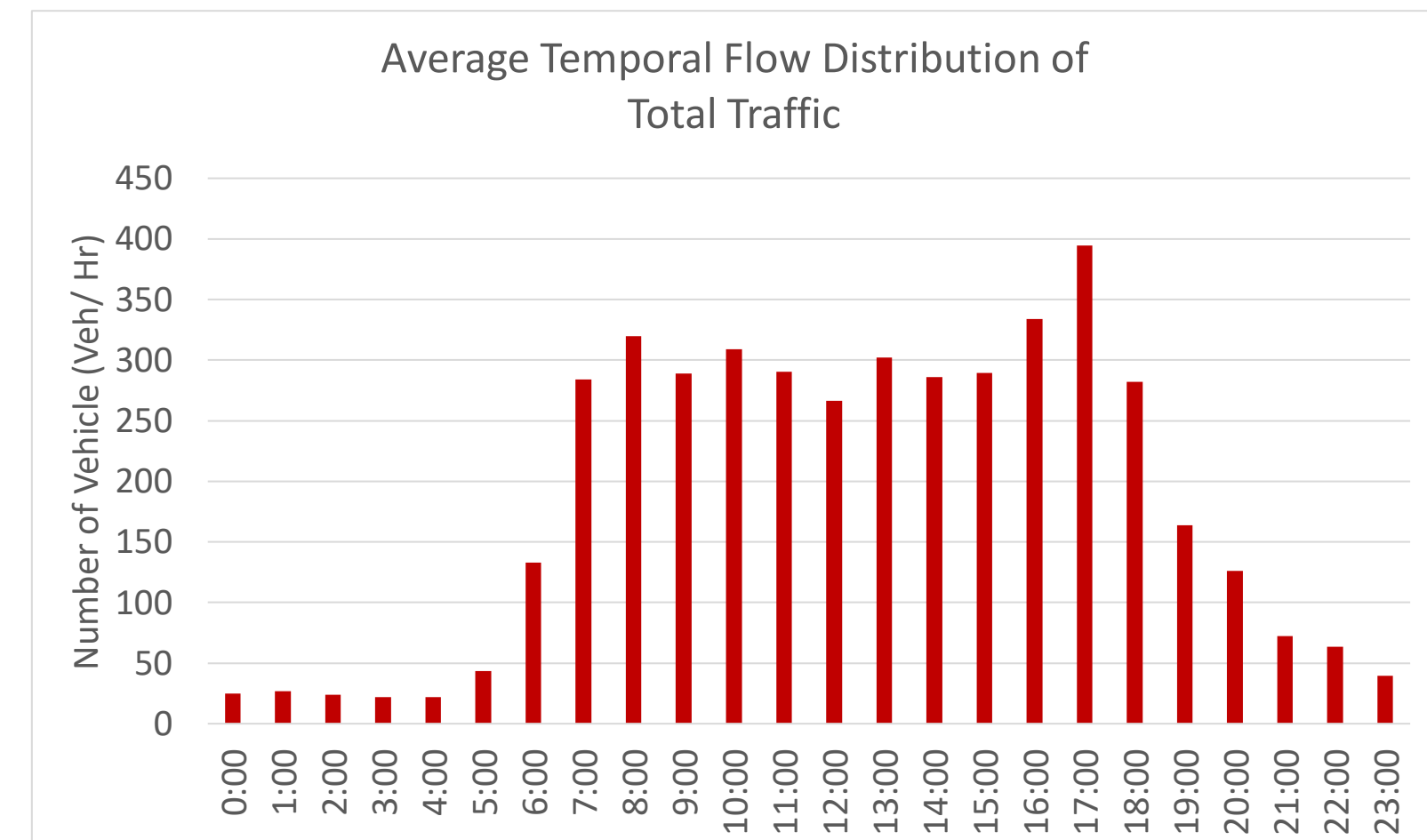
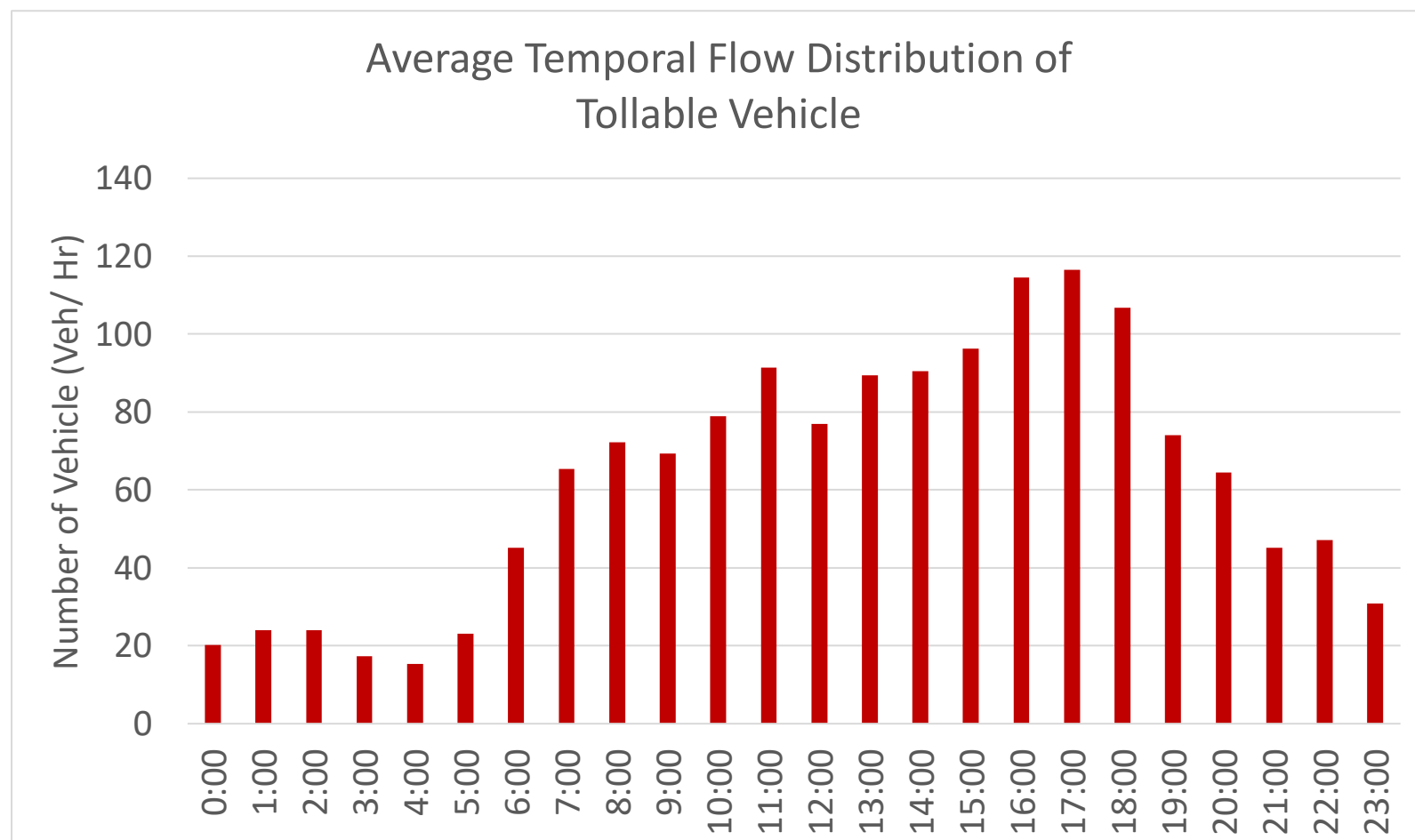
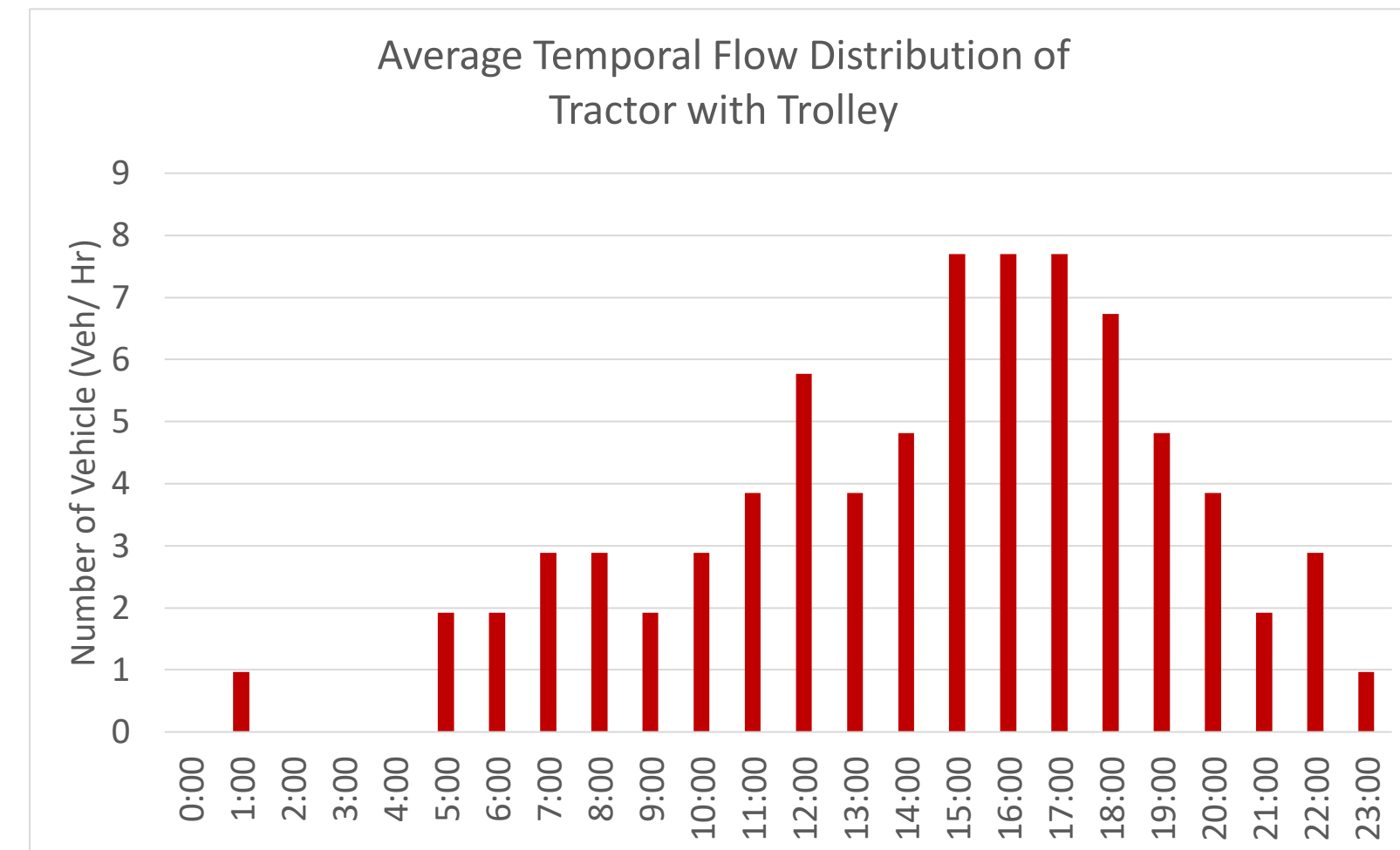
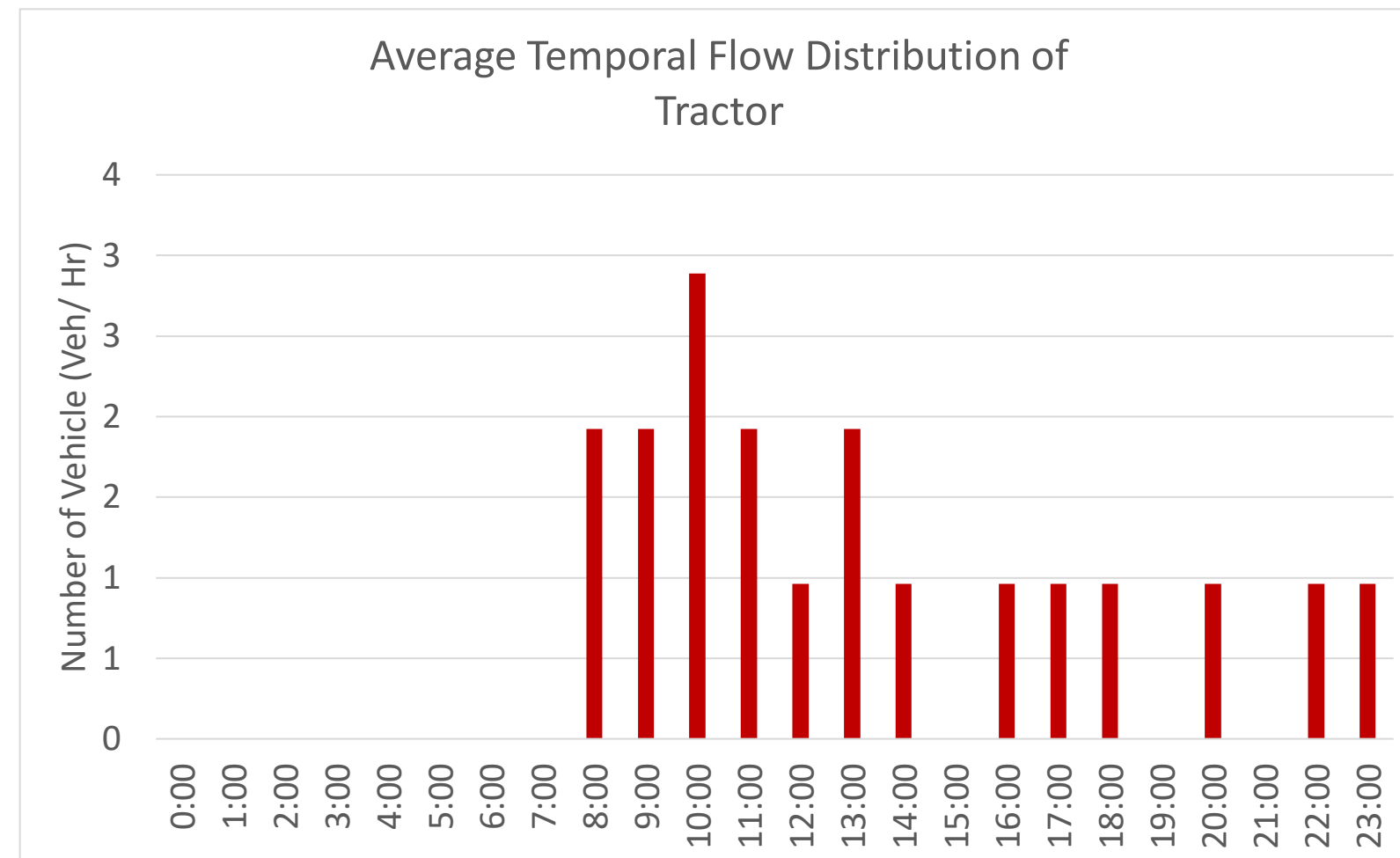


Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-1 Muridke						Direction Number				1			
Coordinates		31.8623882, 74.3161695						From	Narowal			Towards	Muridke		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
49	2	Wednesday, October 9, 2024	20:00	21:00	52	9	34	4	-	-	19	1	2	3	124
50	3	Wednesday, October 9, 2024	21:00	22:00	20	1	26	6	-	-	14	2	-	-	69
51	3	Wednesday, October 9, 2024	22:00	23:00	9	2	17	2	1	1	25	1	2	1	61
52	3	Wednesday, October 9, 2024	23:00	0:00	9	1	11	3	-	-	11	1	3	3	42
53	3	Thursday, October 10, 2024	00:00	1:00	3	2	7	1	-	-	17	2	-	-	32
54	3	Thursday, October 10, 2024	01:00	2:00	3	-	9	-	-	-	12	-	-	1	25
55	3	Thursday, October 10, 2024	02:00	3:00	-	-	10	-	-	-	15	1	-	-	26
56	3	Thursday, October 10, 2024	03:00	4:00	2	2	5	-	-	-	17	1	-	-	27
57	3	Thursday, October 10, 2024	04:00	5:00	3	6	7	2	-	-	19	-	-	-	37
58	3	Thursday, October 10, 2024	05:00	6:00	20	7	9	6	-	-	15	-	-	2	59
59	3	Thursday, October 10, 2024	06:00	7:00	64	21	6	10	1	-	19	-	-	3	124
60	3	Thursday, October 10, 2024	07:00	8:00	181	42	11	18	12	5	17	-	-	2	288
61	3	Thursday, October 10, 2024	08:00	9:00	202	28	30	19	2	3	14	1	2	3	304
62	3	Thursday, October 10, 2024	09:00	10:00	177	29	34	12	1	6	16	1	3	1	280
63	3	Thursday, October 10, 2024	10:00	11:00	183	37	38	20	-	6	12	-	4	2	302
64	3	Thursday, October 10, 2024	11:00	12:00	172	29	54	18	1	3	11	2	1	2	293
65	3	Thursday, October 10, 2024	12:00	13:00	161	31	31	16	-	2	14	2	2	7	266
66	3	Thursday, October 10, 2024	13:00	14:00	196	35	56	24	2	2	18	2	3	2	340
67	3	Thursday, October 10, 2024	14:00	15:00	171	27	41	21	2	1	18	-	1	6	288
68	3	Thursday, October 10, 2024	15:00	16:00	149	40	45	16	-	6	29	-	-	9	294
69	3	Thursday, October 10, 2024	16:00	17:00	175	37	62	22	1	2	22	1	1	5	328
70	3	Thursday, October 10, 2024	17:00	18:00	242	30	66	21	1	2	21	2	1	11	397
71	3	Thursday, October 10, 2024	18:00	19:00	179	16	60	19	2	2	26	1	2	6	313
72	3	Thursday, October 10, 2024	19:00	20:00	93	4	57	13	1	1	17	1	1	2	190









Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Average Annual Hourly Interval													
Location		MB-1 Muridke						Direction Number				2	
Coordinates		31.8623882, 74.3161695						From	Muridke		Towards	Narowal	
S.No.	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	0:00	1:00	6	1	10	3	0	0	10	1	0	0	30
2	1:00	2:00	3	0	7	5	0	0	12	0	0	0	26
3	2:00	3:00	2	0	4	2	0	0	11	1	0	1	20
4	3:00	4:00	1	0	4	2	1	0	13	1	0	1	22
5	4:00	5:00	2	1	6	1	0	0	16	1	0	1	28
6	5:00	6:00	22	2	8	3	1	0	16	1	0	1	54
7	6:00	7:00	58	10	8	9	1	0	14	2	0	2	103
8	7:00	8:00	123	19	18	16	1	3	14	1	1	3	200
9	8:00	9:00	133	24	24	19	0	3	12	1	0	5	220
10	9:00	10:00	142	28	27	22	2	5	10	1	1	3	241
11	10:00	11:00	146	23	33	22	2	5	13	1	1	2	248
12	11:00	12:00	153	25	42	16	0	3	16	0	1	2	259
13	12:00	13:00	152	24	46	17	2	4	13	1	0	6	265
14	13:00	14:00	166	31	44	21	0	2	13	0	1	4	283
15	14:00	15:00	158	31	43	22	2	4	15	0	1	3	279
16	15:00	16:00	177	30	53	14	0	6	13	1	1	6	300
17	16:00	17:00	181	32	38	15	3	3	16	0	0	7	295
18	17:00	18:00	201	28	54	20	1	3	13	1	1	7	328
19	18:00	19:00	150	19	52	13	1	3	17	1	2	4	263
20	19:00	20:00	105	7	58	9	1	1	8	1	0	4	192
21	20:00	21:00	73	8	39	7	1	2	12	0	0	3	144
22	21:00	22:00	41	2	36	7	0	0	8	1	0	4	98
23	22:00	23:00	22	1	27	3	0	1	9	1	0	2	65
24	23:00	0:00	10	0	19	2	0	0	12	0	0	1	43
Average Annual Daily Traffic			2,228	344	700	271	18	46	304	17	10	69	4,008



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-1 Muridke						Direction Number				2			
Coordinates		31.8623882, 74.3161695						From	Muridke			Towards	Narowal		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	1	Monday, October 7, 2024	20:00	21:00	90	12	54	10	2	3	8	-	-	2	181
2	1	Monday, October 7, 2024	21:00	22:00	56	4	31	10	1	1	5	-	1	-	109
3	1	Monday, October 7, 2024	22:00	23:00	22	2	28	5	-	1	10	-	-	2	70
4	1	Monday, October 7, 2024	23:00	0:00	11	-	23	2	-	-	9	-	-	1	46
5	1	Tuesday, October 8, 2024	00:00	1:00	9	1	8	4	-	-	12	-	-	-	34
6	1	Tuesday, October 8, 2024	01:00	2:00	6	-	6	7	-	-	12	-	-	-	31
7	1	Tuesday, October 8, 2024	02:00	3:00	4	-	6	5	-	1	12	-	-	1	29
8	1	Tuesday, October 8, 2024	03:00	4:00	-	-	4	3	1	-	9	-	-	1	18
9	1	Tuesday, October 8, 2024	04:00	5:00	4	3	4	-	1	-	14	-	-	1	27
10	1	Tuesday, October 8, 2024	05:00	6:00	31	1	6	3	2	1	22	-	1	2	69
11	1	Tuesday, October 8, 2024	06:00	7:00	70	11	10	9	1	1	12	-	-	1	115
12	1	Tuesday, October 8, 2024	07:00	8:00	149	16	19	21	1	4	13	-	1	7	231
13	1	Tuesday, October 8, 2024	08:00	9:00	155	25	23	16	-	5	12	-	-	6	242
14	1	Tuesday, October 8, 2024	09:00	10:00	185	29	33	18	2	5	11	-	1	2	286
15	1	Tuesday, October 8, 2024	10:00	11:00	153	18	27	31	2	5	12	-	3	3	254
16	1	Tuesday, October 8, 2024	11:00	12:00	202	23	41	23	-	2	22	-	2	4	319
17	1	Tuesday, October 8, 2024	12:00	13:00	199	23	43	21	-	6	7	1	-	6	306
18	1	Tuesday, October 8, 2024	13:00	14:00	203	34	48	19	-	2	12	-	-	6	324
19	1	Tuesday, October 8, 2024	14:00	15:00	187	35	55	24	1	4	18	-	2	3	329
20	1	Tuesday, October 8, 2024	15:00	16:00	214	26	64	22	1	6	10	-	-	8	351
21	1	Tuesday, October 8, 2024	16:00	17:00	216	32	30	20	2	4	10	-	-	5	319
22	1	Tuesday, October 8, 2024	17:00	18:00	256	32	51	23	2	2	14	-	-	8	388
23	1	Tuesday, October 8, 2024	18:00	19:00	188	20	52	16	-	6	13	-	-	2	297
24	1	Tuesday, October 8, 2024	19:00	20:00	110	7	54	5	1	-	11	-	-	7	195

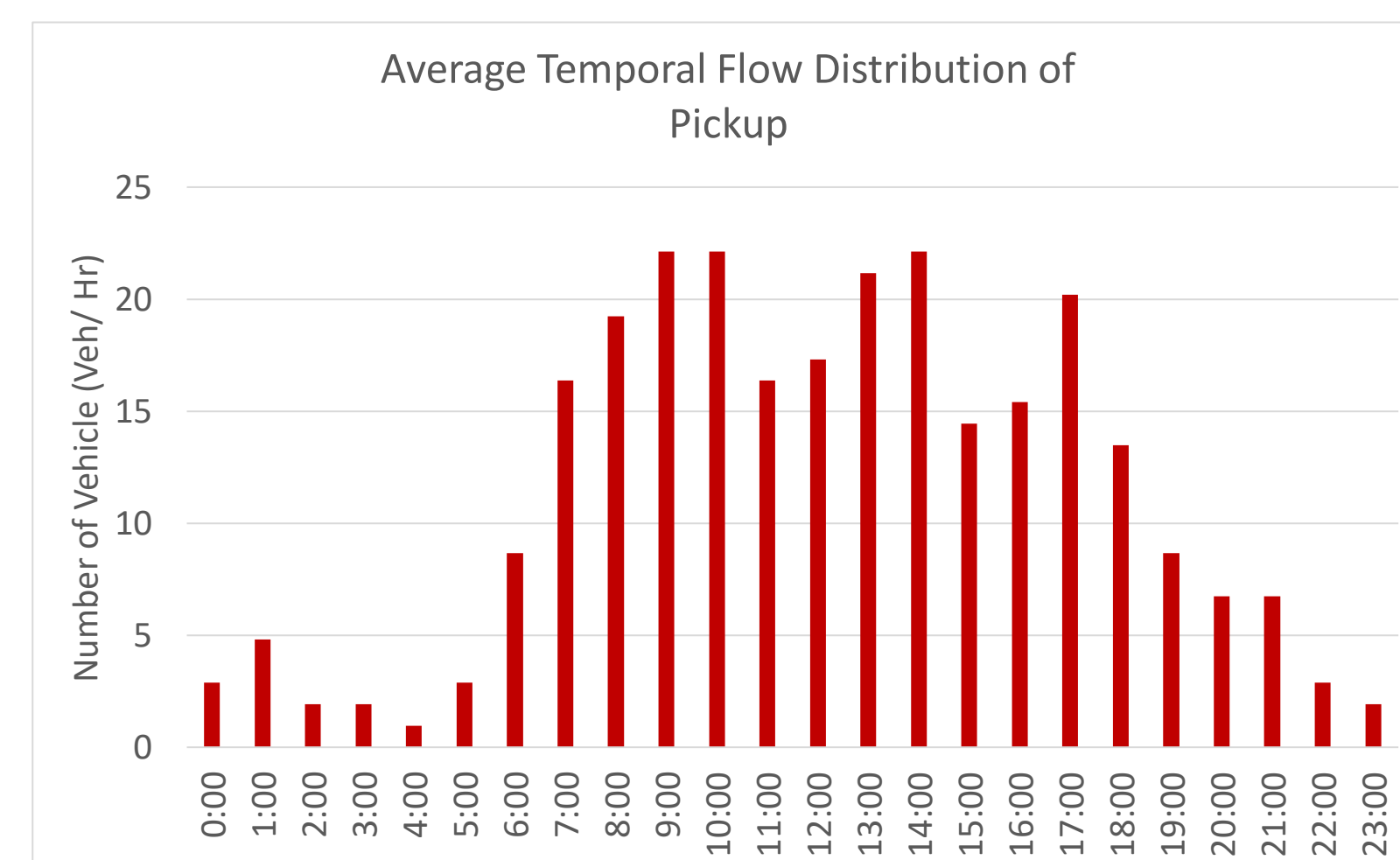
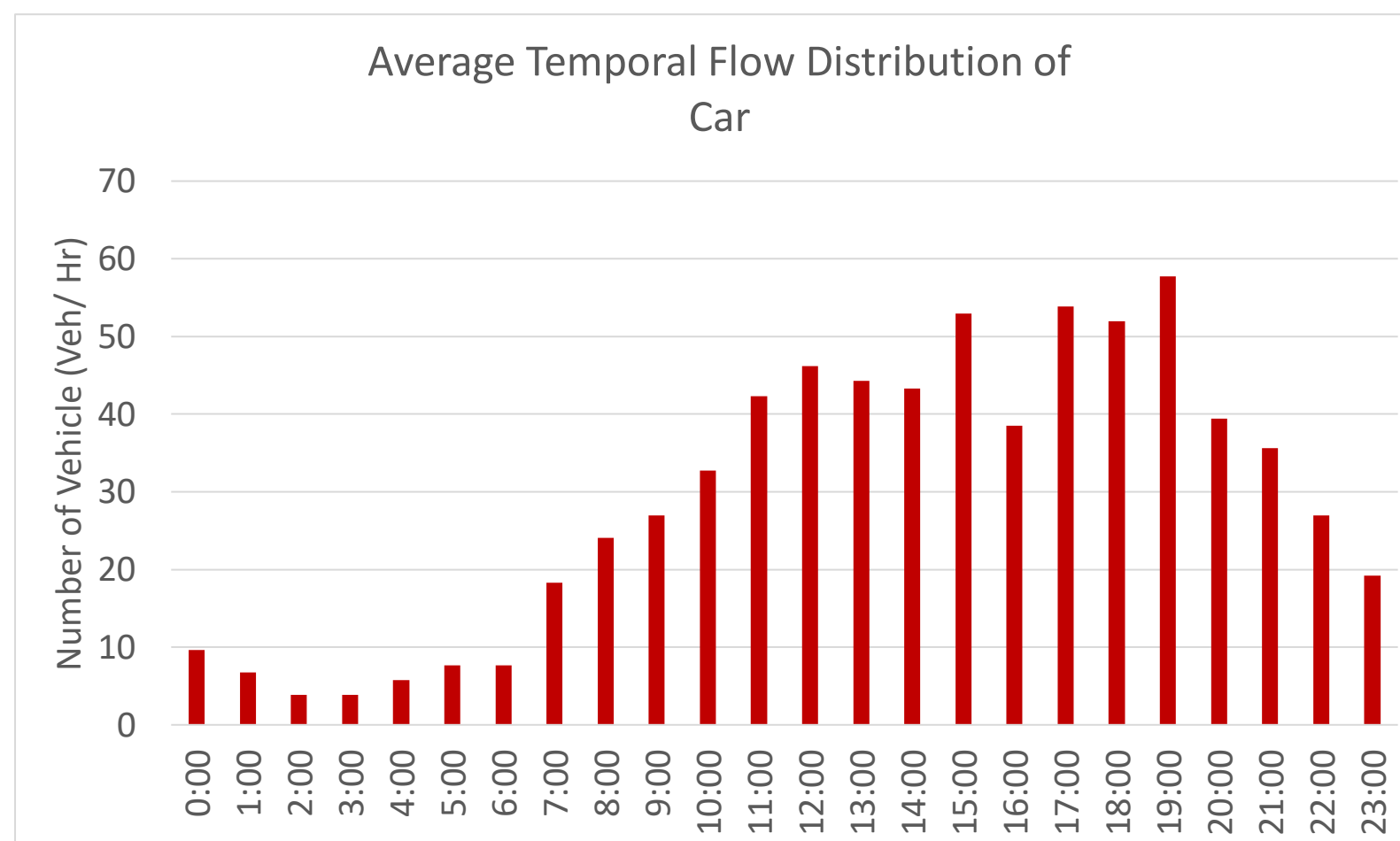
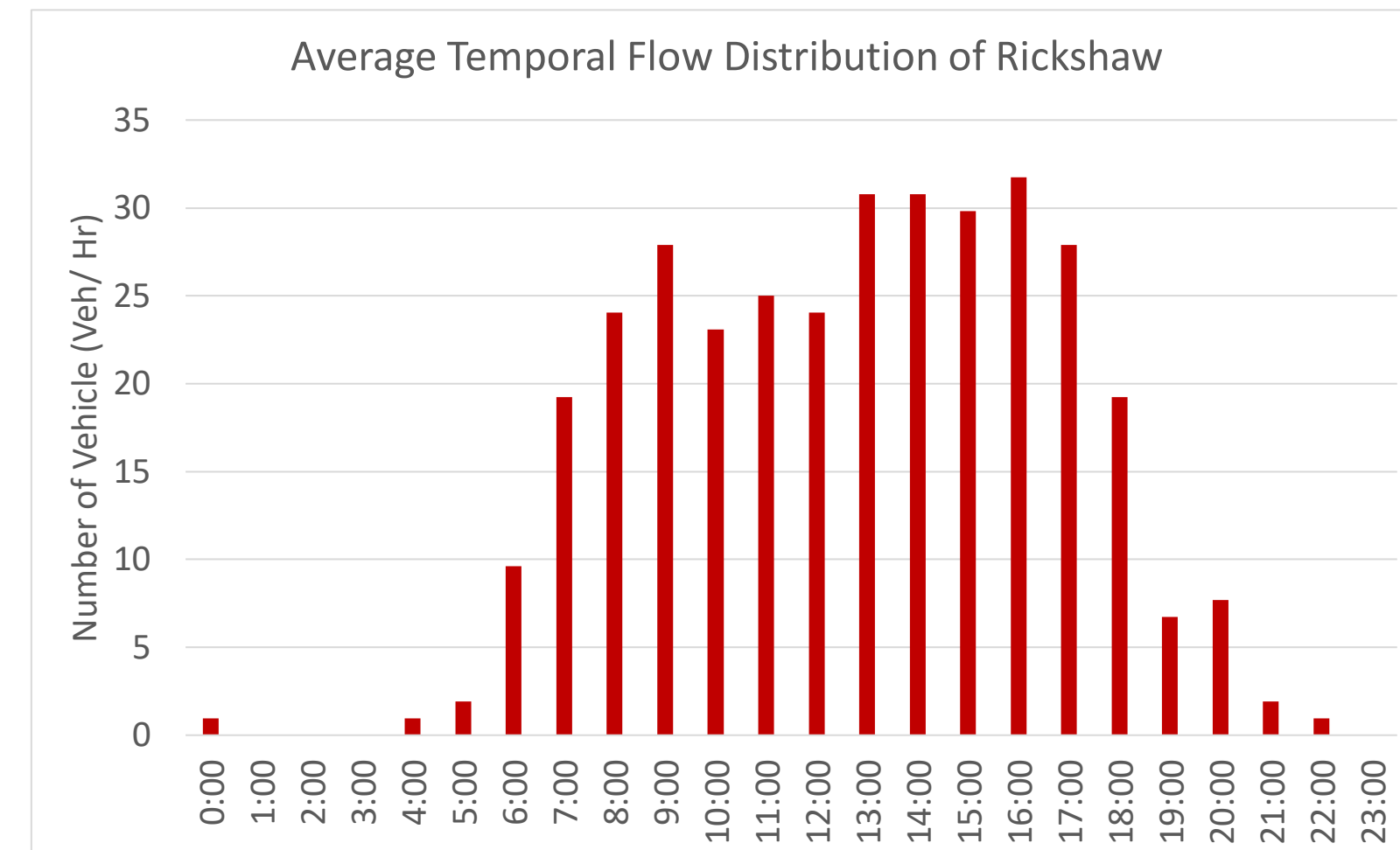
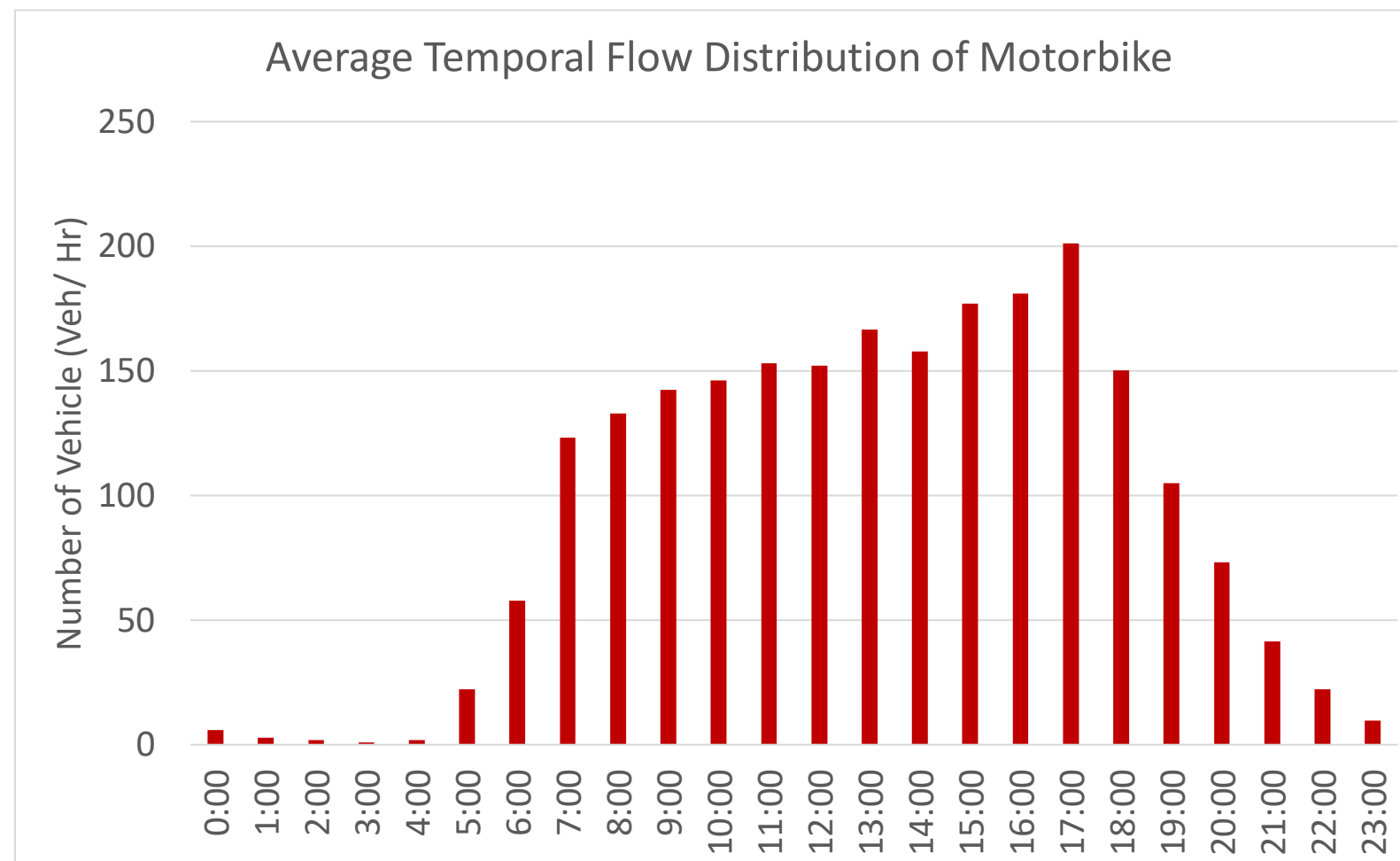


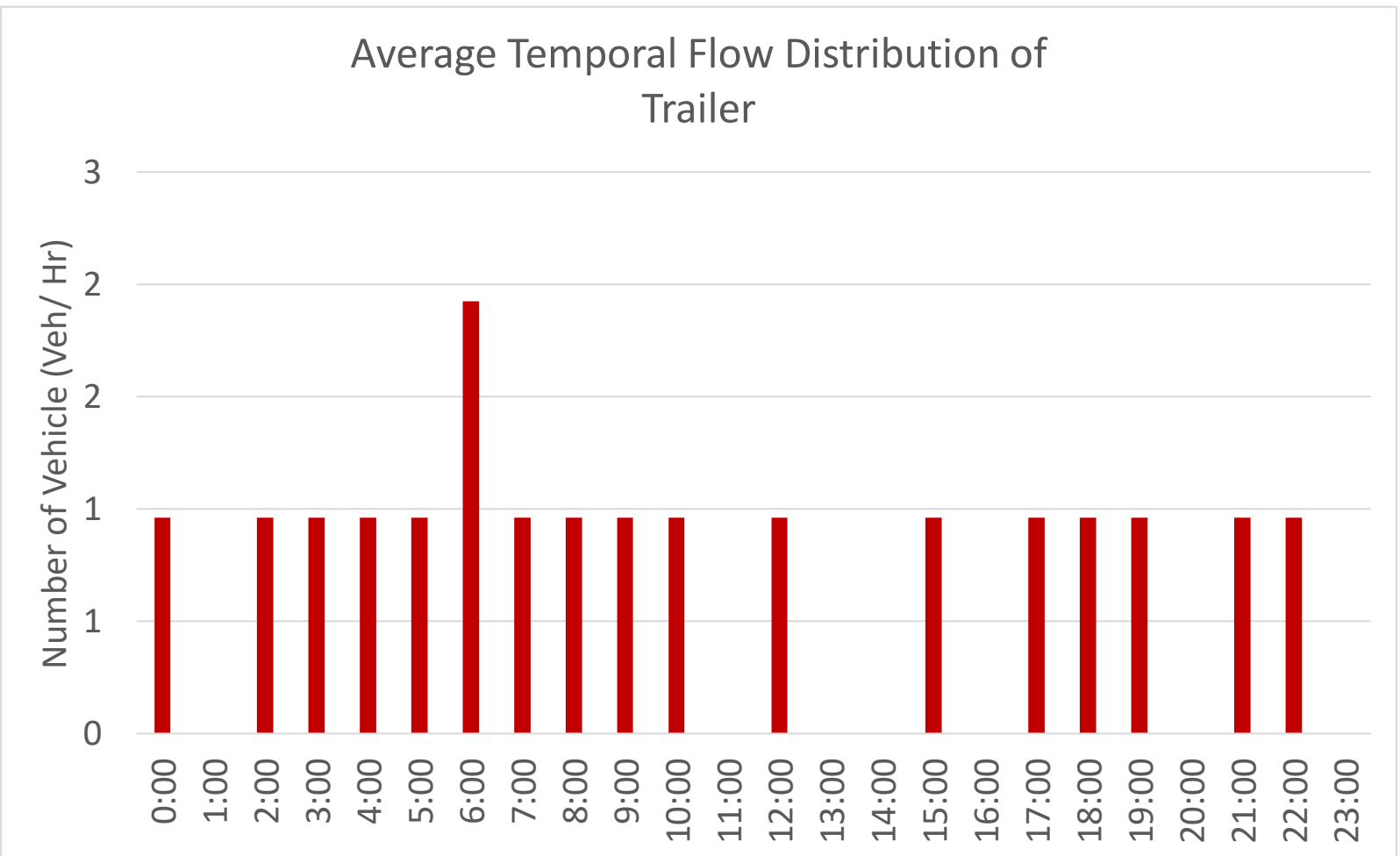
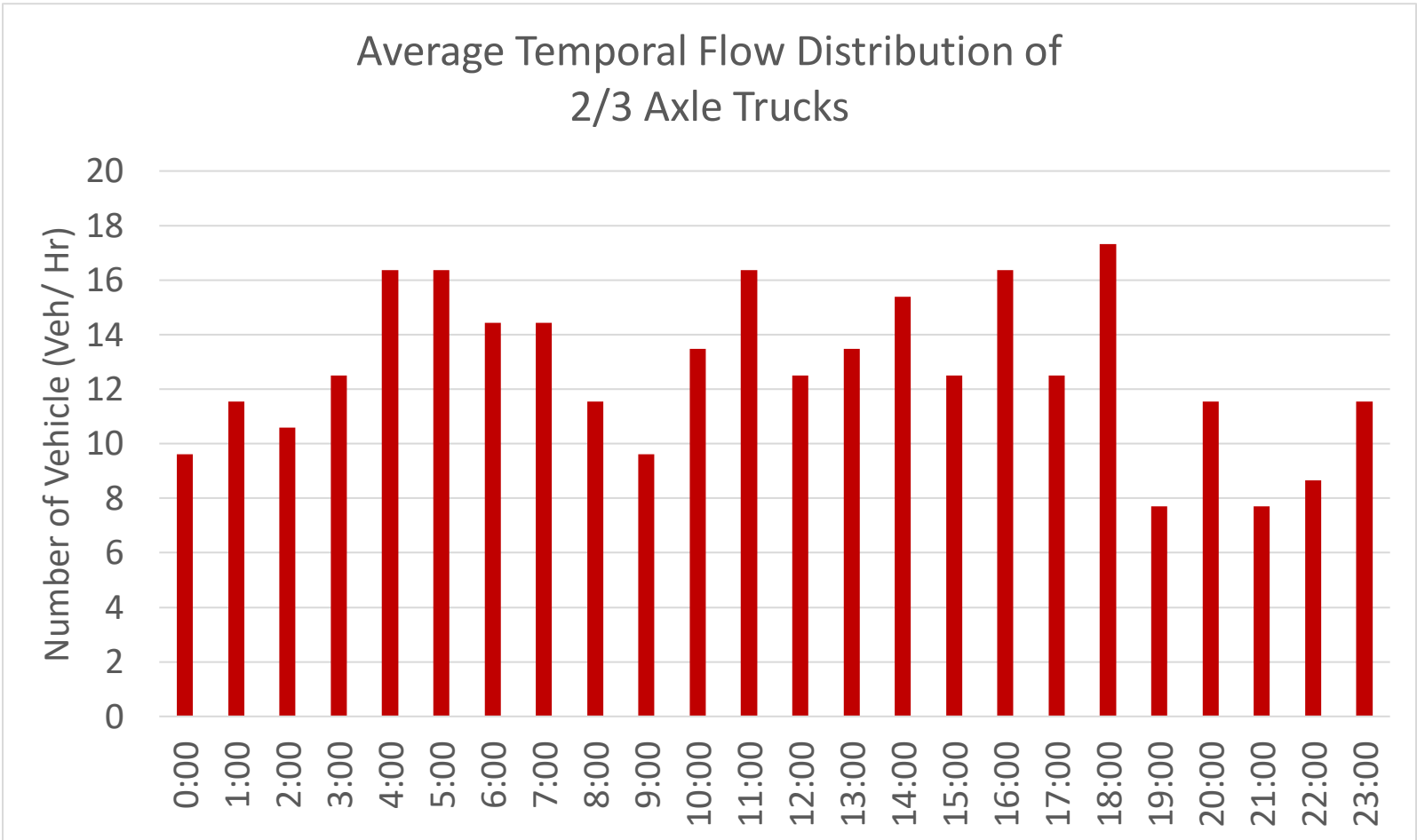
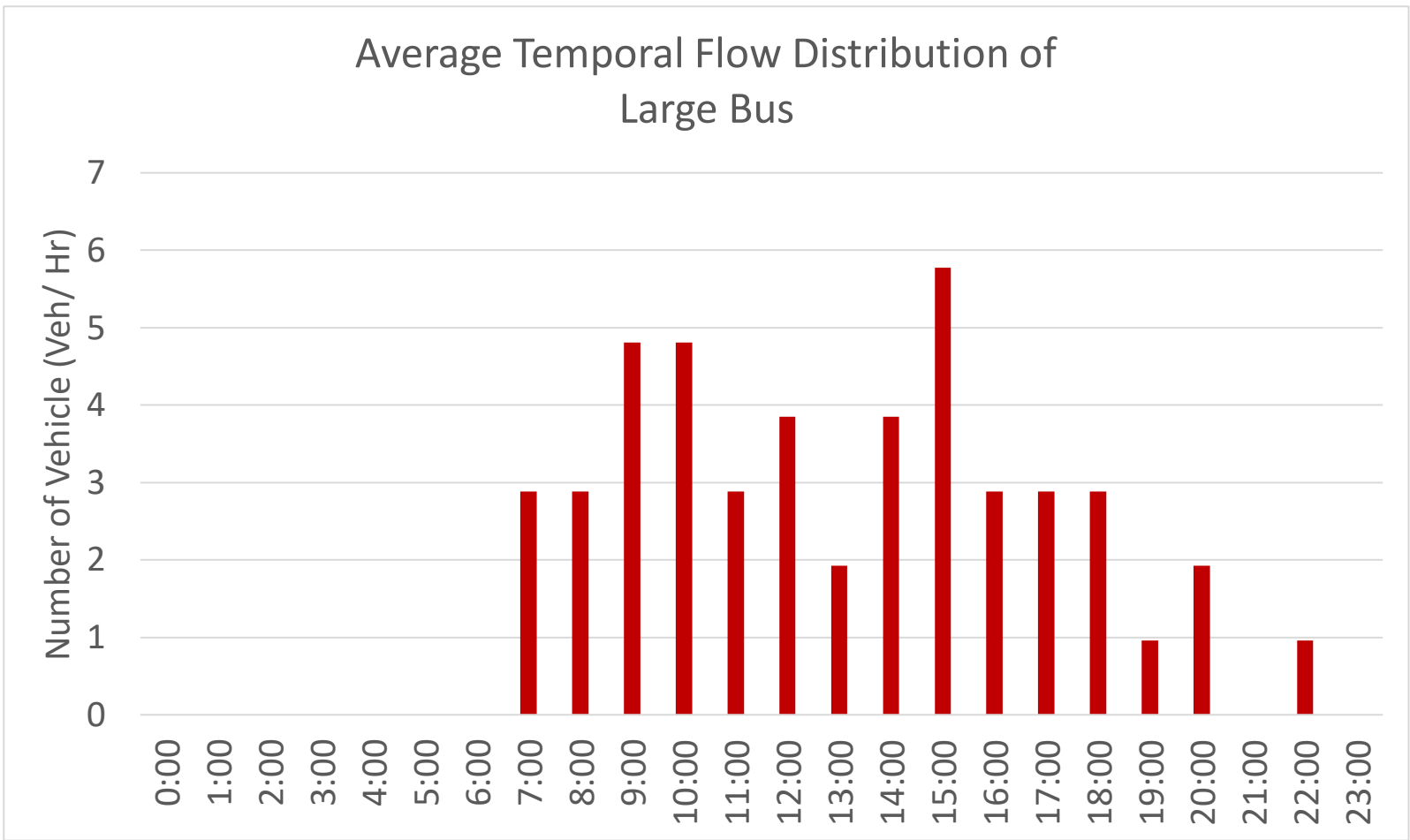
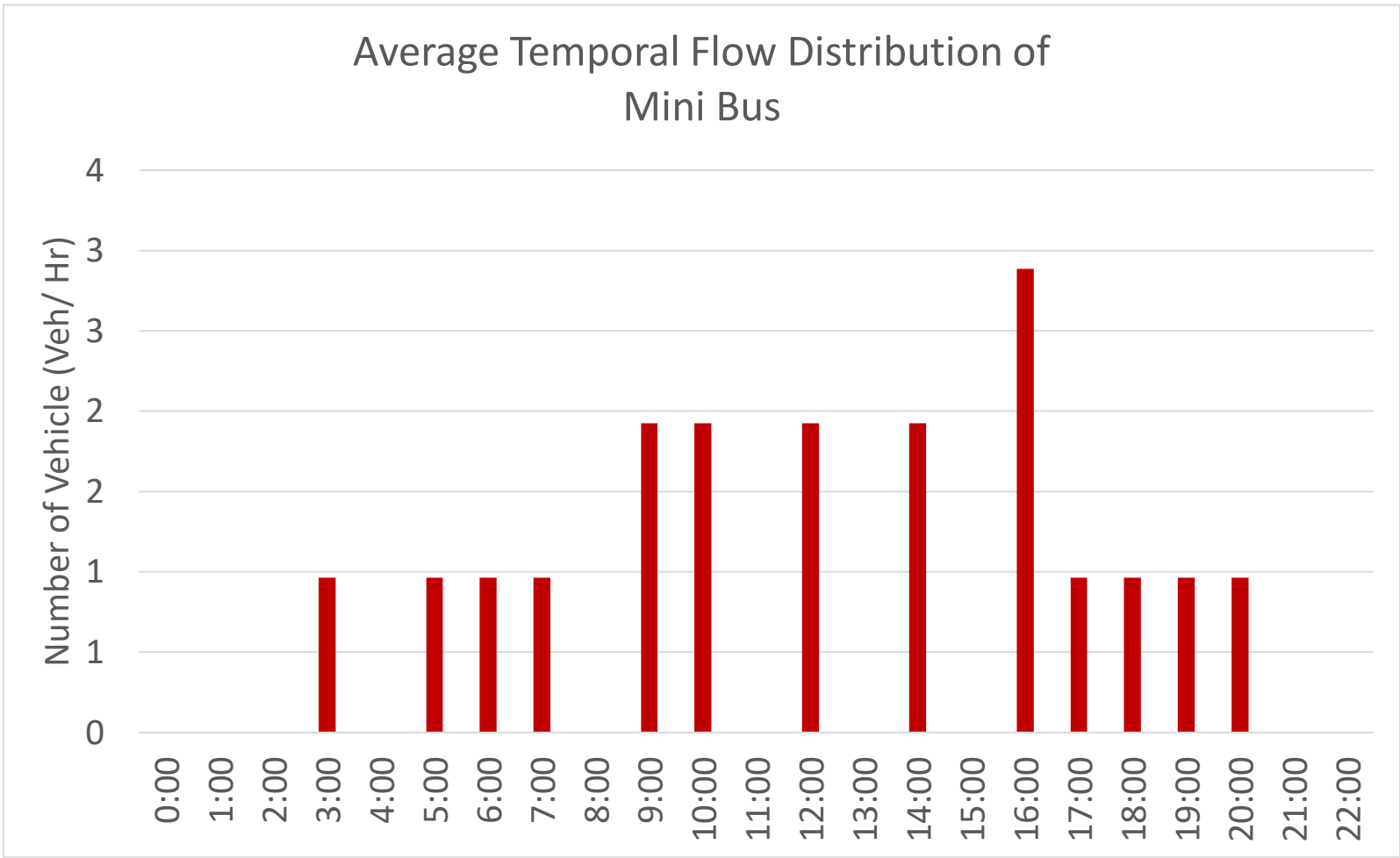
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode															
Vehicles Count Survey - Hourly Interval															
Location		MB-1 Muridke						Direction Number					2		
Coordinates		31.8623882, 74.3161695						From	Muridke			Towards	Narowal		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
25	2	Tuesday, October 8, 2024	20:00	21:00	68	8	29	-	-	1	23	-	-	4	133
26	2	Tuesday, October 8, 2024	21:00	22:00	40	-	37	1	-	-	13	-	-	10	101
27	2	Tuesday, October 8, 2024	22:00	23:00	28	1	27	1	-	-	7	-	-	-	64
28	2	Tuesday, October 8, 2024	23:00	0:00	11	1	11	1	-	-	12	-	-	1	37
29	2	Wednesday, October 9, 2024	00:00	1:00	6	1	9	2	-	-	9	-	1	-	28
30	2	Wednesday, October 9, 2024	01:00	2:00	1	-	13	-	-	-	11	1	-	-	26
31	2	Wednesday, October 9, 2024	02:00	3:00	-	-	5	-	-	-	15	2	-	2	24
32	2	Wednesday, October 9, 2024	03:00	4:00	3	-	2	-	-	-	22	2	-	1	30
33	2	Wednesday, October 9, 2024	04:00	5:00	2	-	7	1	-	-	12	3	-	-	25
34	2	Wednesday, October 9, 2024	05:00	6:00	21	4	5	1	-	-	17	4	-	-	52
35	2	Wednesday, October 9, 2024	06:00	7:00	51	11	11	9	-	-	19	2	-	4	107
36	2	Wednesday, October 9, 2024	07:00	8:00	114	24	17	17	3	2	13	2	3	1	196
37	2	Wednesday, October 9, 2024	08:00	9:00	131	29	26	21	-	1	10	1	1	7	227
38	2	Wednesday, October 9, 2024	09:00	10:00	119	27	17	27	3	3	9	1	-	4	210
39	2	Wednesday, October 9, 2024	10:00	11:00	160	28	38	21	1	6	16	1	1	-	272
40	2	Wednesday, October 9, 2024	11:00	12:00	135	35	54	13	-	5	14	1	-	-	257
41	2	Wednesday, October 9, 2024	12:00	13:00	145	24	58	19	2	3	11	-	1	9	272
42	2	Wednesday, October 9, 2024	13:00	14:00	157	27	42	19	-	2	18	1	-	4	270
43	2	Wednesday, October 9, 2024	14:00	15:00	135	34	33	22	1	3	21	1	2	2	254
44	2	Wednesday, October 9, 2024	15:00	16:00	179	29	47	12	-	6	19	2	2	4	300
45	2	Wednesday, October 9, 2024	16:00	17:00	187	36	44	10	6	-	29	-	-	8	320
46	2	Wednesday, October 9, 2024	17:00	18:00	192	25	53	21	1	4	11	-	1	6	314
47	2	Wednesday, October 9, 2024	18:00	19:00	159	20	43	11	2	-	21	1	1	2	260
48	2	Wednesday, October 9, 2024	19:00	20:00	88	3	55	10	-	1	10	1	-	5	173

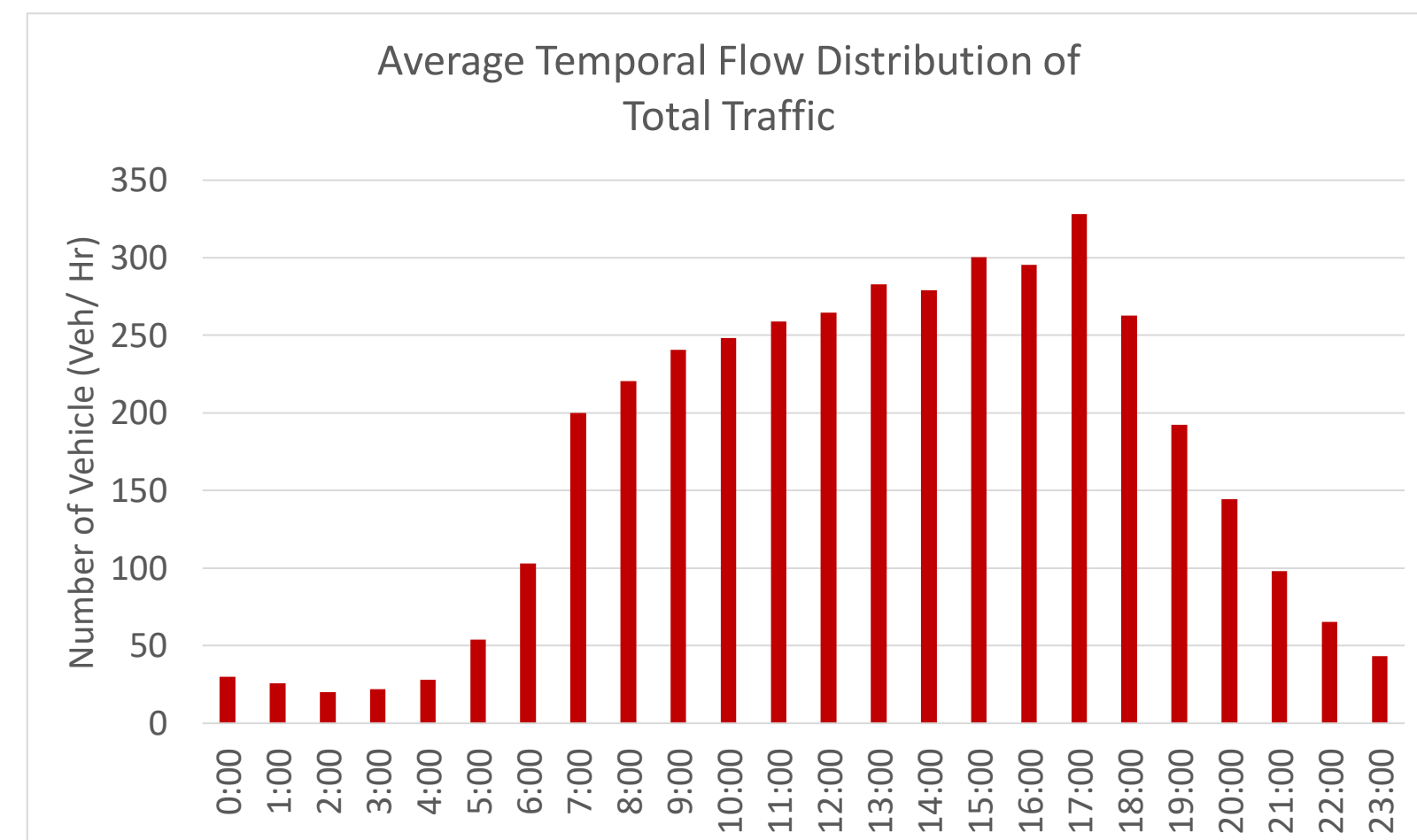
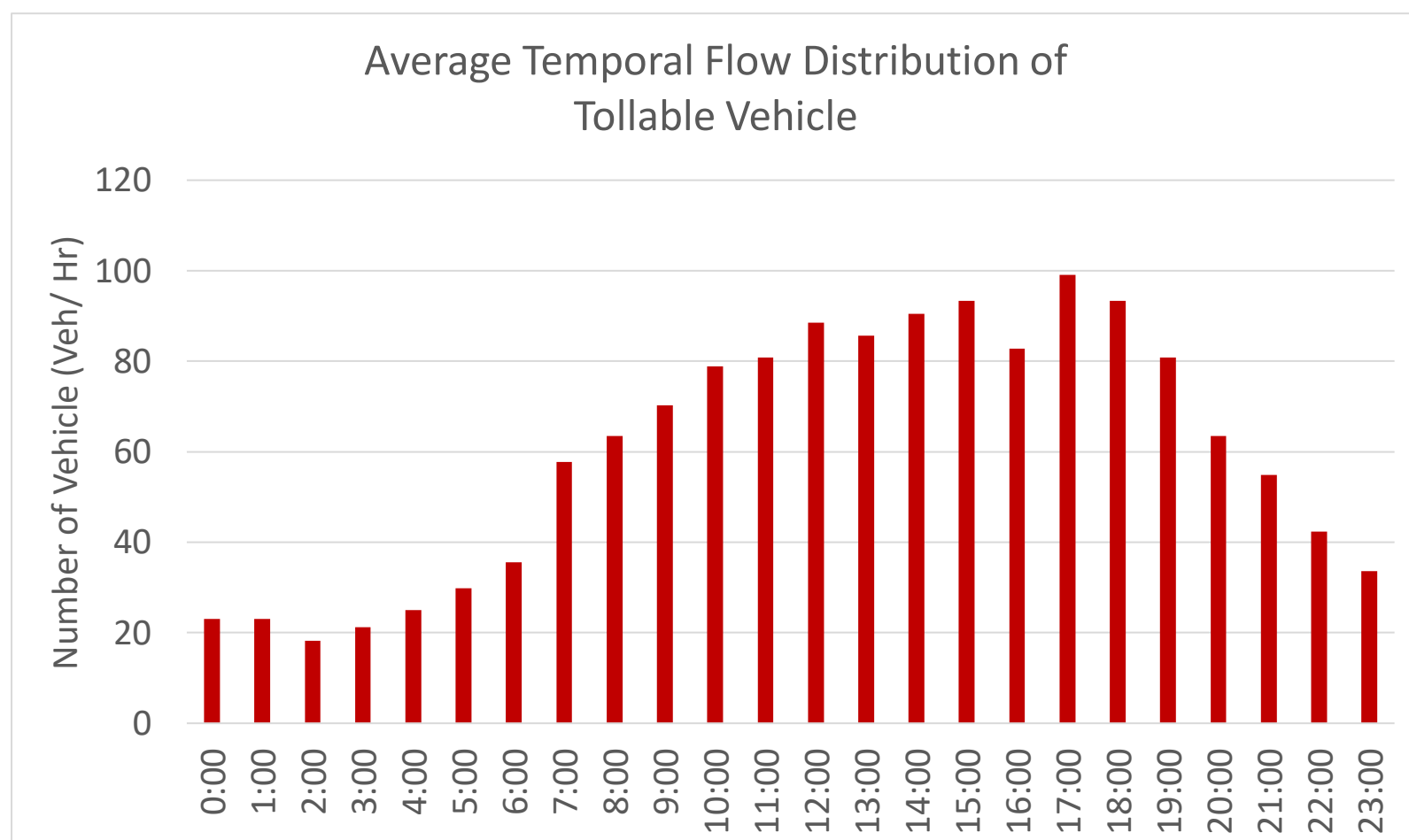
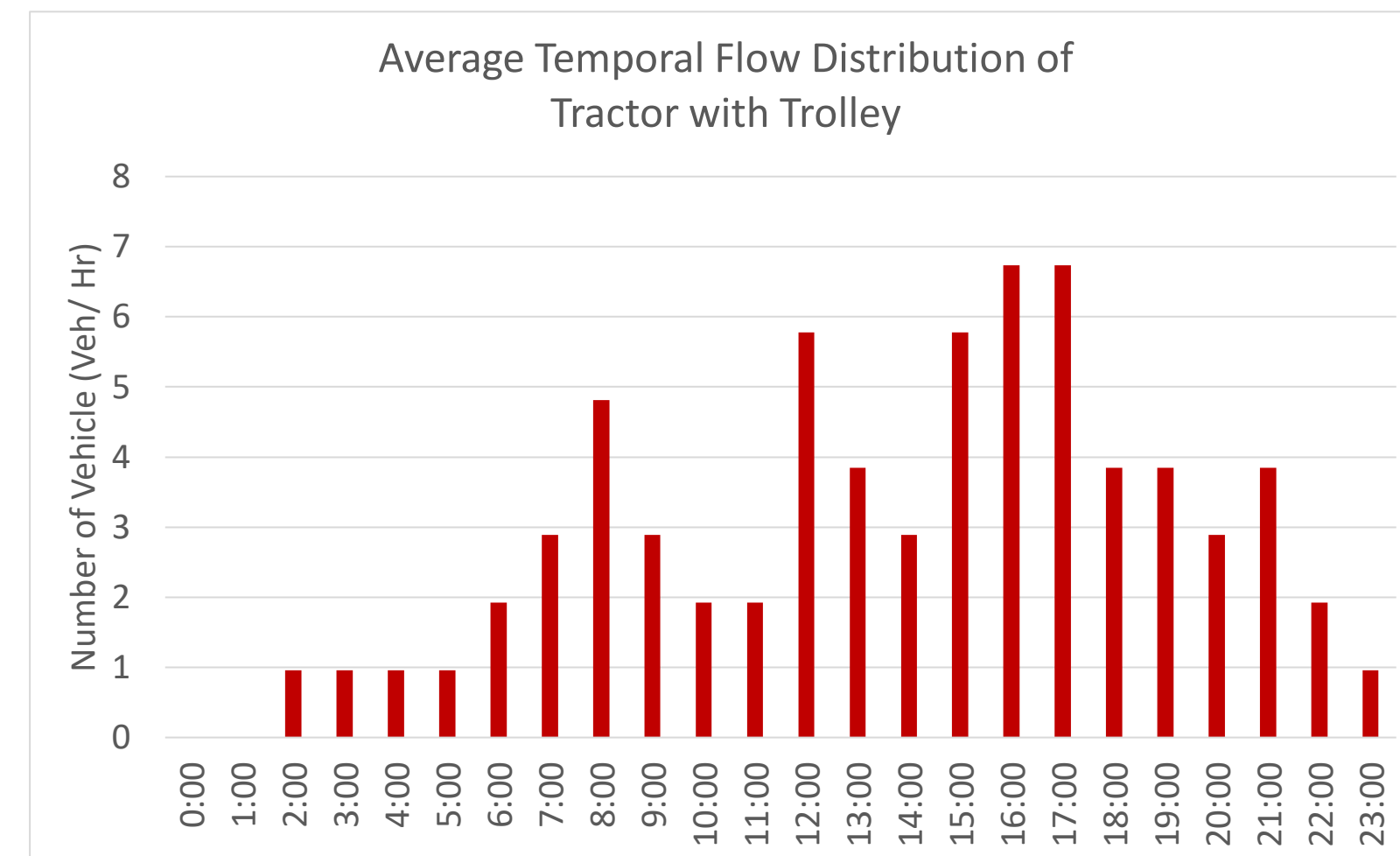
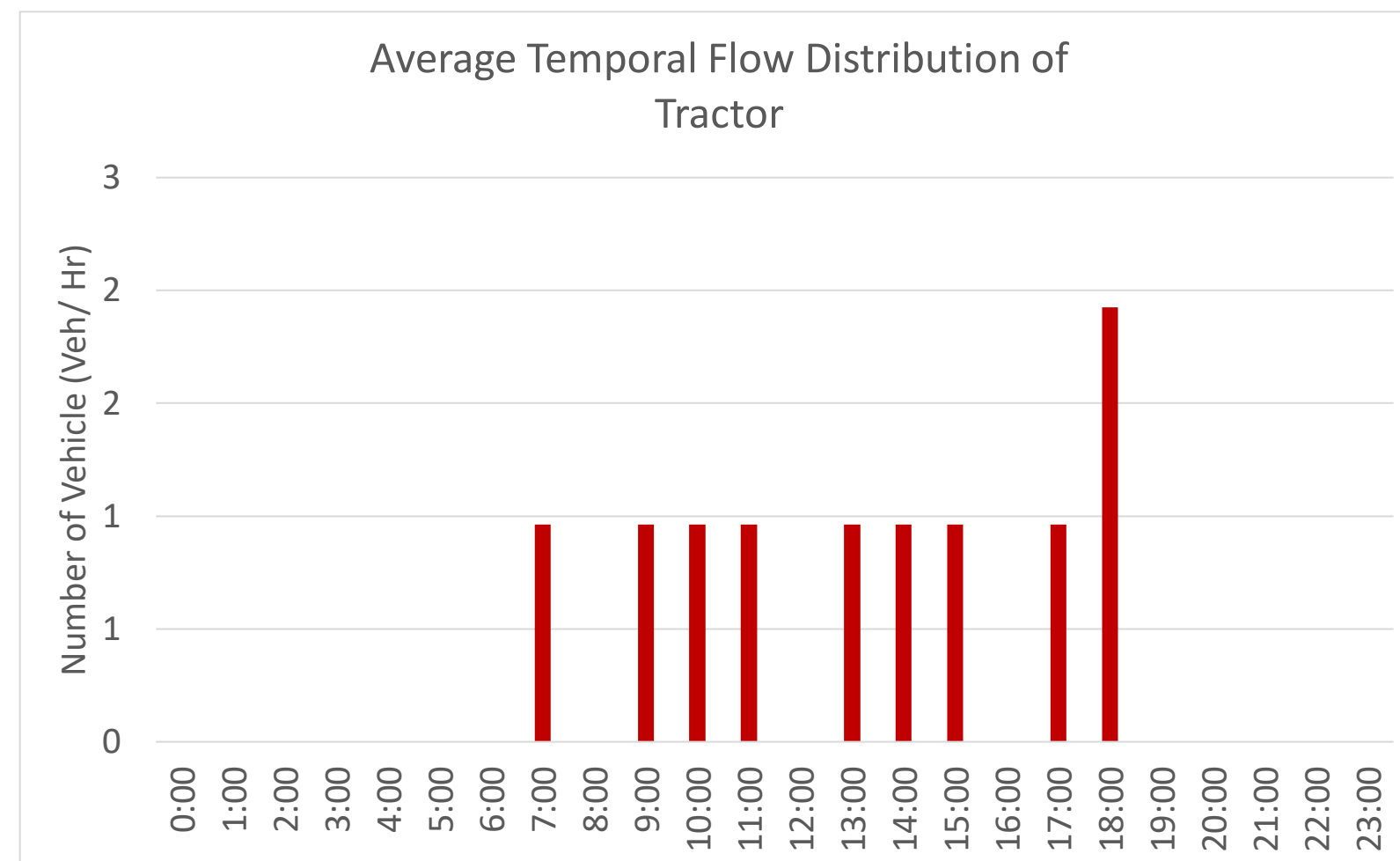


Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-1 Muridke						Direction Number				2			
Coordinates		31.8623882, 74.3161695						From	Muridke			Towards	Narowal		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
49	2	Tuesday, September 10, 2024	20:00	21:00	69	3	40	10	1	1	6	1	-	2	133
50	3	Tuesday, September 10, 2024	21:00	22:00	32	1	44	10	-	-	7	4	-	3	101
51	3	Tuesday, September 10, 2024	22:00	23:00	20	-	28	4	-	2	11	3	-	5	73
52	3	Tuesday, September 10, 2024	23:00	0:00	7	-	27	3	-	1	14	-	-	-	52
53	3	Thursday, October 10, 2024	00:00	1:00	3	-	12	2	-	-	9	2	-	-	28
54	3	Thursday, October 10, 2024	01:00	2:00	2	-	2	7	-	-	13	-	-	-	24
55	3	Thursday, October 10, 2024	02:00	3:00	1	-	2	-	-	-	6	1	-	1	11
56	3	Thursday, October 10, 2024	03:00	4:00	1	-	5	3	1	1	8	1	-	-	20
57	3	Thursday, October 10, 2024	04:00	5:00	1	-	6	3	-	1	26	1	-	2	40
58	3	Thursday, October 10, 2024	05:00	6:00	18	2	14	4	-	-	12	-	-	-	50
59	3	Thursday, October 10, 2024	06:00	7:00	58	7	3	10	1	-	14	4	-	-	97
60	3	Thursday, October 10, 2024	07:00	8:00	121	21	21	13	-	4	20	-	-	1	201
61	3	Thursday, October 10, 2024	08:00	9:00	129	20	26	23	1	2	14	1	-	3	219
62	3	Thursday, October 10, 2024	09:00	10:00	140	30	35	23	-	6	11	1	3	3	252
63	3	Thursday, October 10, 2024	10:00	11:00	144	25	36	16	2	3	13	2	-	2	243
64	3	Thursday, October 10, 2024	11:00	12:00	141	20	37	15	1	3	15	-	-	1	233
65	3	Thursday, October 10, 2024	12:00	13:00	131	27	44	15	3	4	20	1	-	3	248
66	3	Thursday, October 10, 2024	13:00	14:00	159	35	49	28	-	2	12	-	4	1	290
67	3	Thursday, October 10, 2024	14:00	15:00	171	27	46	23	3	4	9	-	-	5	288
68	3	Thursday, October 10, 2024	15:00	16:00	160	38	53	11	-	5	11	-	1	7	286
69	3	Thursday, October 10, 2024	16:00	17:00	160	31	46	18	2	6	11	-	1	7	282
70	3	Thursday, October 10, 2024	17:00	18:00	180	29	63	19	1	3	13	2	2	8	320
71	3	Thursday, October 10, 2024	18:00	19:00	120	19	67	14	1	2	19	2	4	8	256
72	3	Thursday, October 10, 2024	19:00	20:00	128	12	70	12	1	1	4	2	-	1	231









MB-2 Narowal



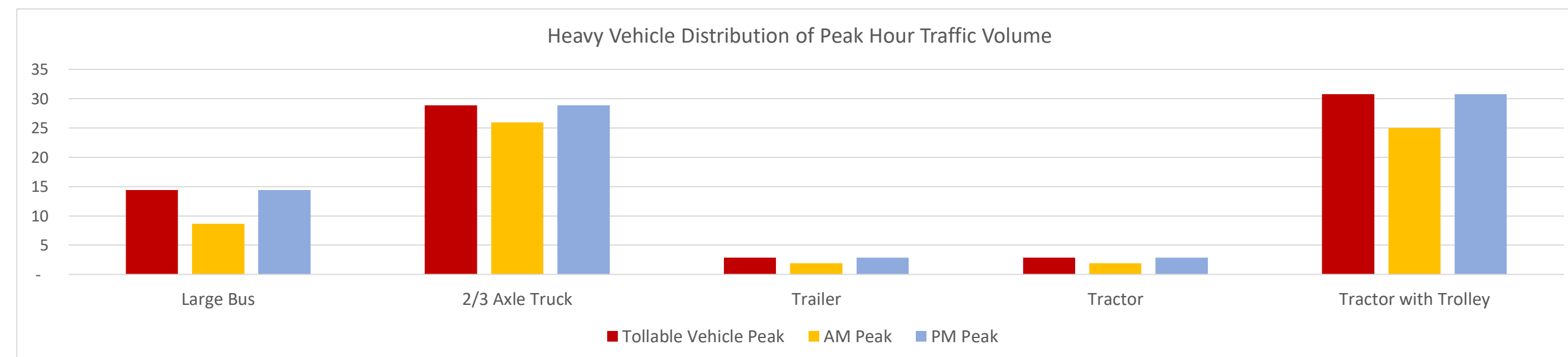
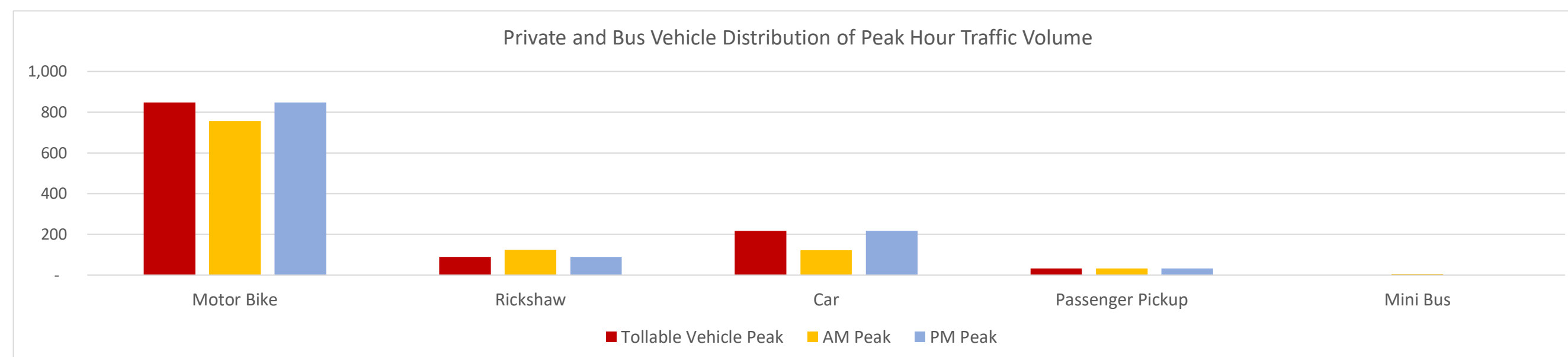
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode
Vehicles Count Survey
Summary



Location	MB-2 Narowal	Direction Map
Coordinates	32.1074635, 74.8171722	



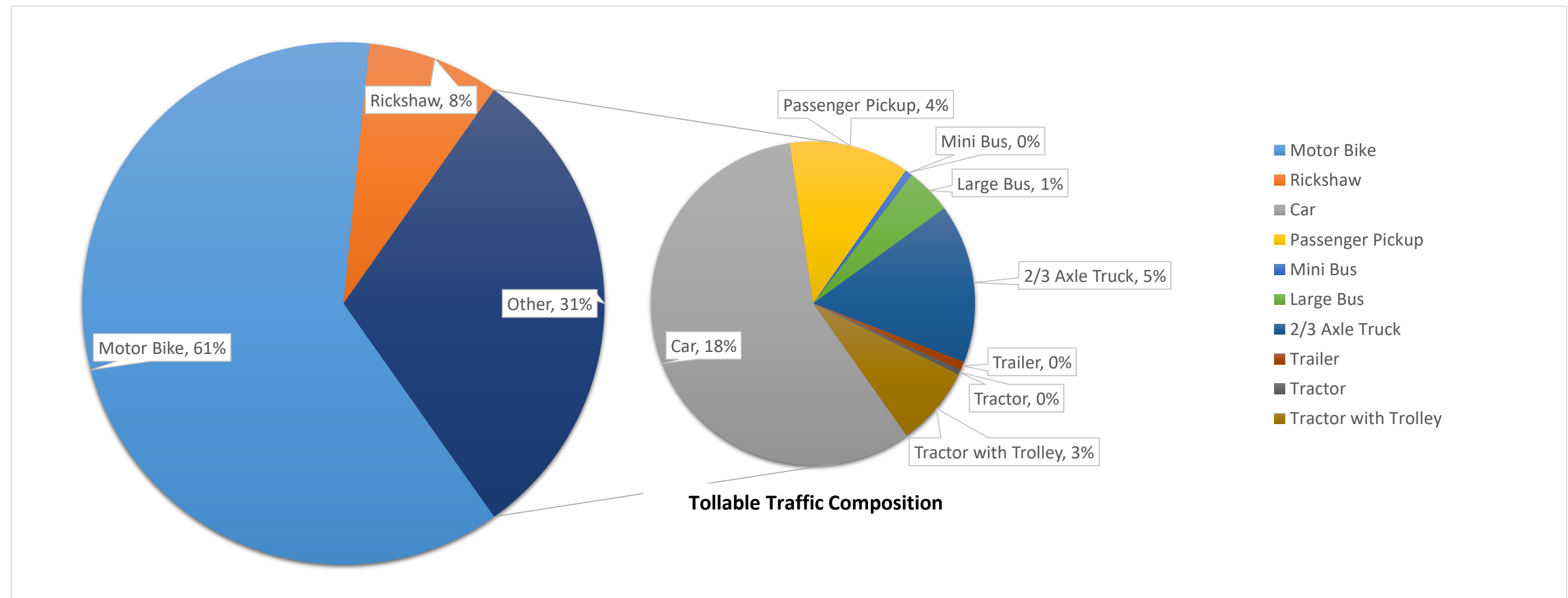
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode													Vehicles Count Survey		Summary			
Location		MB-2 Narowal				Peakest Hours Summary (Vehicles per Hour in Average Annual Hourly Traffic)												
Coordinates		32.1074635, 74.8171722																
Day	Peak Hour Time	Direction	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable				
Tollable Vehicle Peak	17:00	Total	848	89	217	33	2	14	29	3	3	31	1,267	331				
		1	348	38	84	16	1	7	16	1	2	20	533	147				
		2	499	51	133	16	1	8	13	2	1	11	734	184				
AM Peak	8:00	Total	757	123	122	32	5	9	26	2	2	25	1,103	222				
		1	518	65	63	21	2	3	15	1	1	13	702	119				
		2	240	58	60	11	3	6	11	1	1	12	400	103				
PM Peak	17:00	Total	848	89	217	33	2	14	29	3	3	31	1,267	331				
		1	348	38	84	16	1	7	16	1	2	20	533	147				
		2	499	51	133	16	1	8	13	2	1	11	734	184				



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode												
Vehicles Count Survey												
Summary												
Location	MB-2 Narowal		25 Year Traffic Projection of AADT (Both Direction)									
Coordinates	32.1074635, 74.8171722											
Year	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	AADT	Tollable
2024	9,547	1,275	2,718	569	36	217	751	40	24	376	15,553	4,730
2025	9,793	1,308	2,788	583	37	222	770	41	25	386	15,953	4,852
2026	10,045	1,342	2,860	598	38	228	790	42	26	396	16,365	4,978
2027	10,303	1,376	2,934	613	39	234	810	43	27	406	16,785	5,106
2028	10,568	1,411	3,009	629	40	240	831	44	28	416	17,216	5,237
2029	10,840	1,447	3,086	645	41	246	852	45	29	427	17,658	5,371
2030	11,119	1,484	3,165	662	42	252	874	46	30	438	18,112	5,509
2031	11,405	1,522	3,246	679	43	258	896	47	31	449	18,576	5,649
2032	11,698	1,561	3,329	696	44	265	919	48	32	461	19,053	5,794
2033	11,999	1,601	3,415	714	45	272	943	49	33	473	19,544	5,944
2034	12,307	1,642	3,503	732	46	279	967	50	34	485	20,045	6,096
2035	12,623	1,684	3,593	751	47	286	992	51	35	497	20,559	6,252
2036	12,947	1,727	3,685	770	48	293	1,017	52	36	510	21,085	6,411
2037	13,280	1,771	3,780	790	49	301	1,043	53	37	523	21,627	6,576
2038	13,621	1,817	3,877	810	50	309	1,070	54	38	536	22,182	6,744
2039	13,971	1,864	3,977	831	51	317	1,097	55	39	550	22,752	6,917
2040	14,330	1,912	4,079	852	52	325	1,125	56	40	564	23,335	7,093
2041	14,698	1,961	4,184	874	53	333	1,154	57	41	578	23,933	7,274
2042	15,076	2,011	4,292	896	54	342	1,184	58	42	593	24,548	7,461
2043	15,463	2,063	4,402	919	55	351	1,214	59	43	608	25,177	7,651
2044	15,860	2,116	4,515	943	56	360	1,245	61	44	624	25,824	7,848
2045	16,268	2,170	4,631	967	57	369	1,277	63	45	640	26,487	8,049
2046	16,686	2,226	4,750	992	58	378	1,310	65	46	656	27,167	8,255
2047	17,115	2,283	4,872	1,017	59	388	1,344	67	47	673	27,865	8,467
2048	17,555	2,342	4,997	1,043	61	398	1,379	69	48	690	28,582	8,685



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode														
Vehicles Count Survey Summary														
Location		MB-2 Narowal			Average Annual Daily Traffic (AADT) Summary									
Coordinates		32.1074635, 74.8171722												
Direction	From	Towards	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable
Total			9,547	1,275	2,718	569	36	217	751	40	24	376	15,553	4,730
Percentage Composition (%)			61%	8%	17%	4%	0%	1%	5%	0%	0%	2%	100%	30%
1	Muridke	Narowal	5,173	671	1,381	289	17	111	363	14	13	216	8,246	2,403
2	Narowal	Muridke	4,374	604	1,338	280	18	106	388	26	12	161	7,306	2,328



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Average Annual Hourly Interval													
Location Coordinates		MB-2 Narowal 32.1074635, 74.8171722				All Directional Count							
S.No.	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	0:00	1:00	25	2	43	6	1	1	37	1	0	2	117
2	1:00	2:00	9	0	27	5	0	1	34	1	0	1	77
3	2:00	3:00	8	1	25	3	0	0	26	0	0	0	63
4	3:00	4:00	7	1	19	2	0	3	22	0	0	2	56
5	4:00	5:00	13	2	22	7	0	3	35	1	0	3	85
6	5:00	6:00	73	14	32	16	0	5	42	2	0	2	187
7	6:00	7:00	232	64	66	30	1	10	31	1	0	3	437
8	7:00	8:00	731	102	106	44	8	13	25	2	0	18	1,049
9	8:00	9:00	757	123	122	32	5	9	26	2	2	25	1,103
10	9:00	10:00	698	107	140	25	0	14	25	2	3	30	1,043
11	10:00	11:00	672	107	150	27	2	16	32	1	4	33	1,043
12	11:00	12:00	720	95	158	32	0	15	31	2	2	38	1,092
13	12:00	13:00	668	91	158	31	2	13	32	2	2	32	1,031
14	13:00	14:00	670	90	161	35	2	14	39	3	1	32	1,047
15	14:00	15:00	651	91	178	56	6	13	31	3	2	37	1,067
16	15:00	16:00	662	84	190	46	1	14	25	3	1	25	1,051
17	16:00	17:00	699	85	193	36	2	21	30	3	0	28	1,096
18	17:00	18:00	848	89	217	33	2	14	29	3	3	31	1,267
19	18:00	19:00	613	67	184	30	2	13	38	2	2	13	962
20	19:00	20:00	348	32	157	24	2	9	32	0	2	11	616
21	20:00	21:00	205	13	132	18	0	5	29	1	1	5	409
22	21:00	22:00	136	7	108	16	0	7	35	4	0	4	316
23	22:00	23:00	64	4	70	8	0	1	32	2	0	2	183
24	23:00	0:00	40	4	62	9	1	3	36	1	0	3	158
Average Annual Daily Traffic			9,547	1,275	2,718	569	36	217	751	40	24	376	15,553



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location Coordinates		MB-2 Narowal 32.1074635, 74.8171722						All Directional Count							
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	1	Monday, October 7, 2024	15:00	16:00	775	99	182	51	2	16	17	3	3	28	1,176
2	1	Monday, October 7, 2024	16:00	17:00	776	76	192	40	4	22	33	2	-	24	1,169
3	1	Monday, October 7, 2024	17:00	18:00	884	96	237	25	1	17	33	3	2	26	1,324
4	1	Monday, October 7, 2024	18:00	19:00	632	79	183	33	3	13	35	-	1	9	988
5	1	Monday, October 7, 2024	19:00	20:00	359	39	181	24	2	9	29	2	3	7	655
6	1	Monday, October 7, 2024	20:00	21:00	231	14	132	18	1	6	30	2	1	9	444
7	1	Monday, October 7, 2024	21:00	22:00	143	9	106	14	-	7	37	4	-	3	323
8	1	Monday, October 7, 2024	22:00	23:00	66	3	72	11	-	1	33	3	-	2	191
9	1	Monday, October 7, 2024	23:00	0:00	46	8	63	17	-	2	32	3	1	2	174
10	1	Tuesday, October 8, 2024	00:00	1:00	31	2	38	5	-	-	37	2	1	-	116
11	1	Tuesday, October 8, 2024	01:00	2:00	5	-	27	2	-	1	31	1	-	1	68
12	1	Tuesday, October 8, 2024	02:00	3:00	10	1	28	2	-	-	29	-	-	-	70
13	1	Tuesday, October 8, 2024	03:00	4:00	7	-	33	1	1	3	33	-	-	1	79
14	1	Tuesday, October 8, 2024	04:00	5:00	15	1	26	10	-	3	35	-	-	2	92
15	1	Tuesday, October 8, 2024	05:00	6:00	71	16	37	15	-	6	43	3	-	2	193
16	1	Tuesday, October 8, 2024	06:00	7:00	267	64	86	34	1	10	34	-	-	4	500
17	1	Tuesday, October 8, 2024	07:00	8:00	755	111	111	44	6	13	28	1	-	16	1,085
18	1	Tuesday, October 8, 2024	08:00	9:00	818	132	127	29	5	9	27	1	1	11	1,160
19	1	Tuesday, October 8, 2024	09:00	10:00	752	107	155	28	-	15	26	2	3	15	1,103
20	1	Tuesday, October 8, 2024	10:00	11:00	719	126	169	28	1	18	30	-	5	17	1,113
21	1	Tuesday, October 8, 2024	11:00	12:00	716	123	178	36	-	15	26	2	-	18	1,114
22	1	Tuesday, October 8, 2024	12:00	13:00	718	98	177	31	2	15	29	4	4	16	1,094
23	1	Tuesday, October 8, 2024	13:00	14:00	709	95	162	36	3	14	48	3	2	24	1,096
24	1	Tuesday, October 8, 2024	14:00	15:00	664	85	183	51	6	12	19	2	-	17	1,039

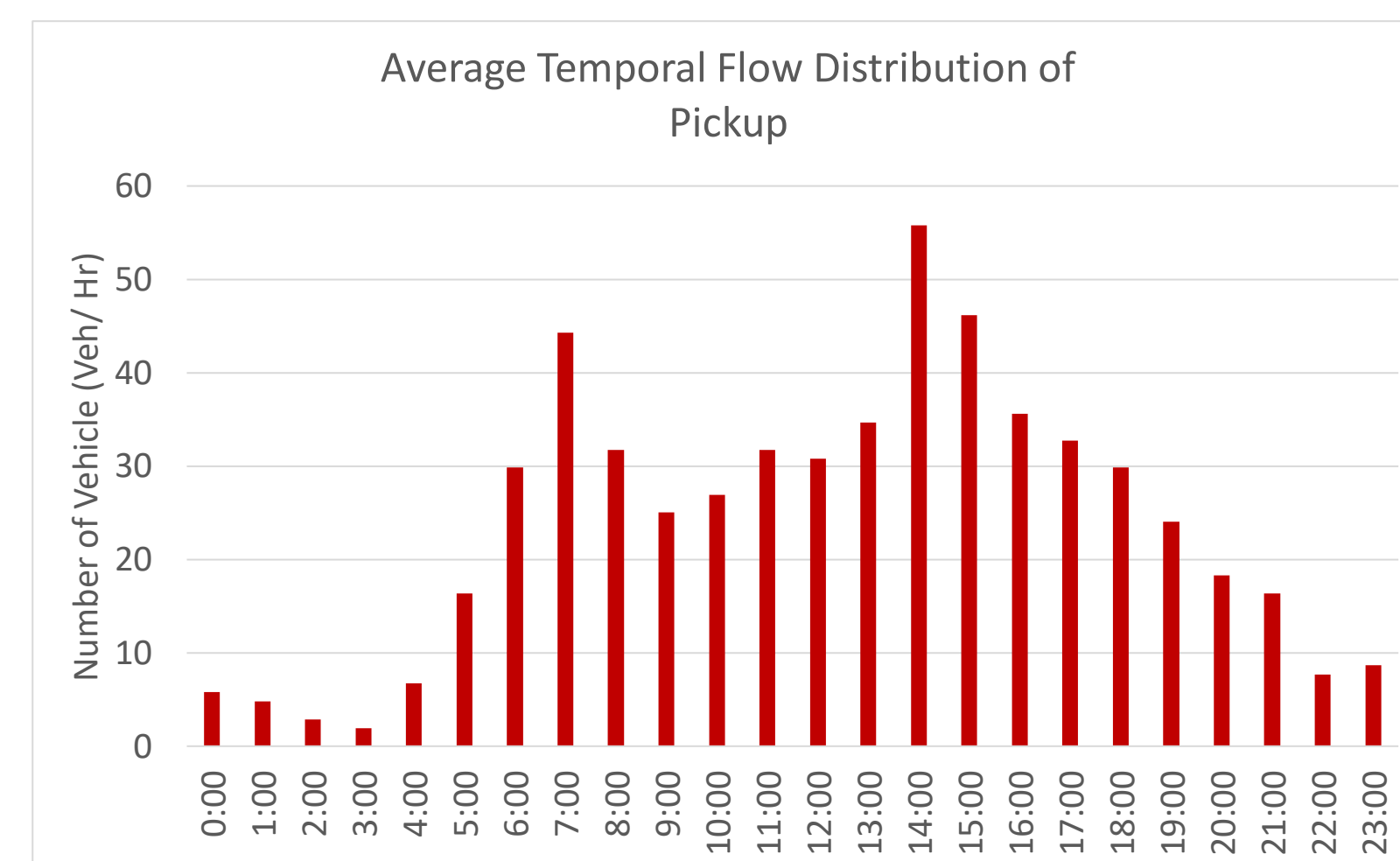
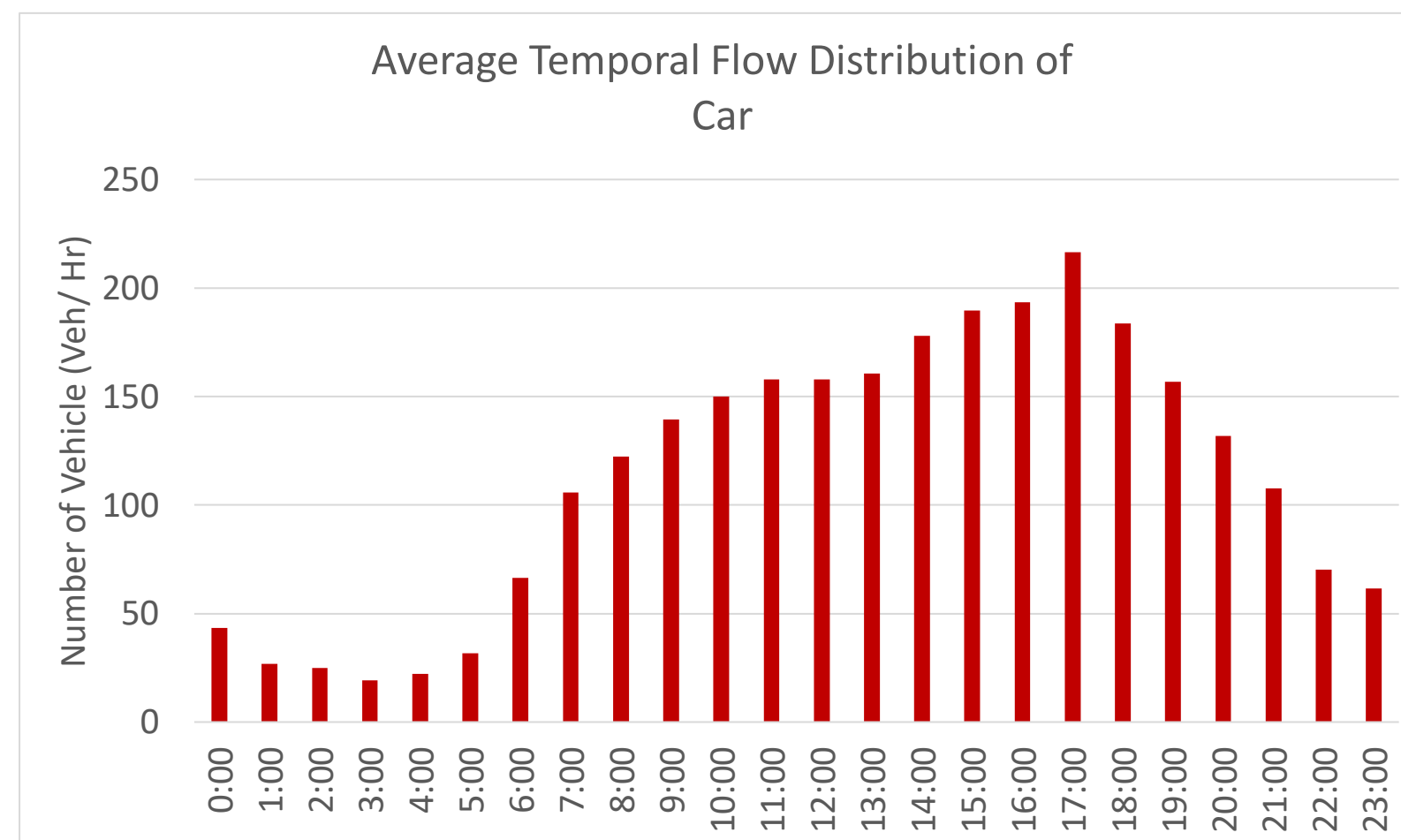
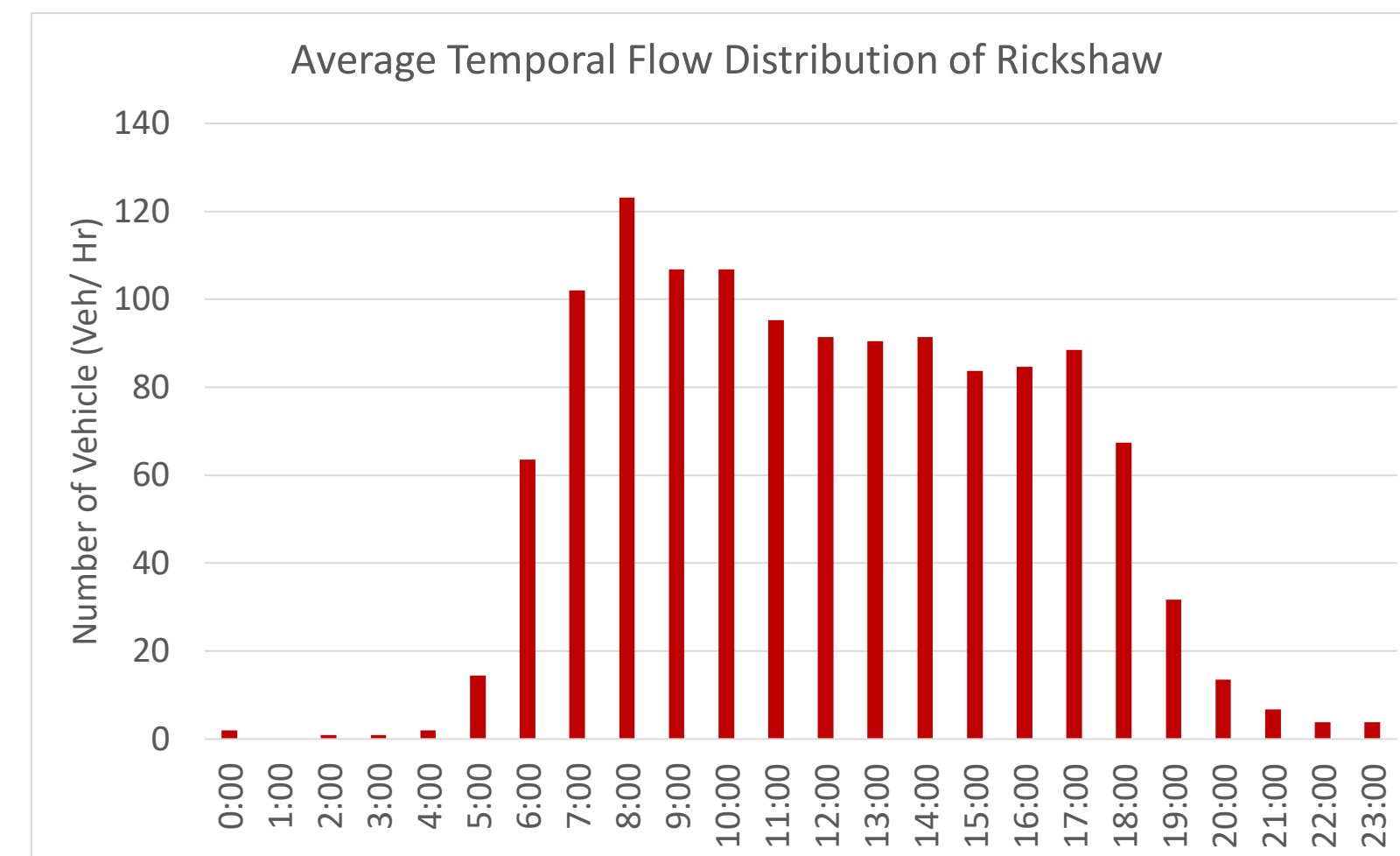
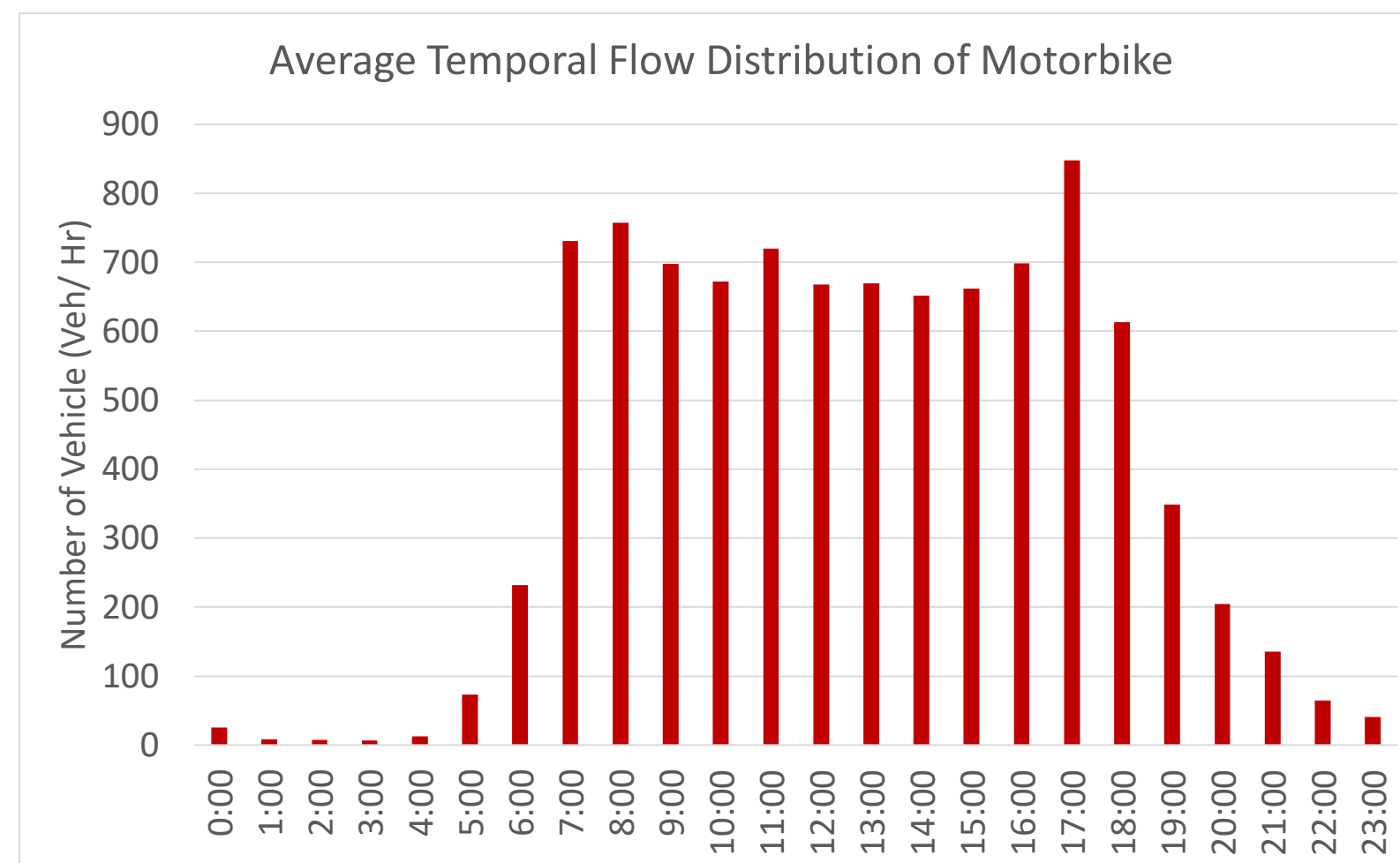


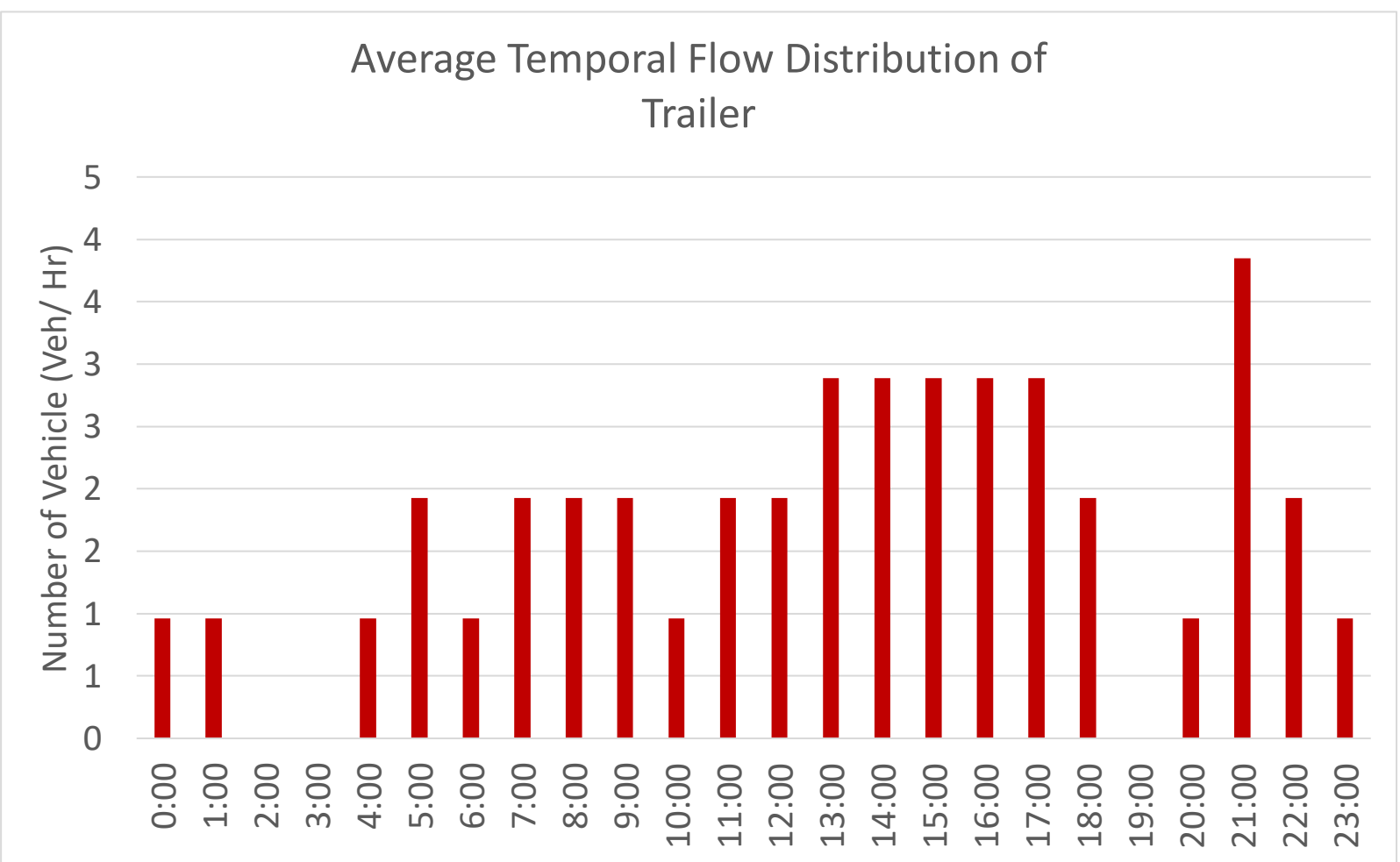
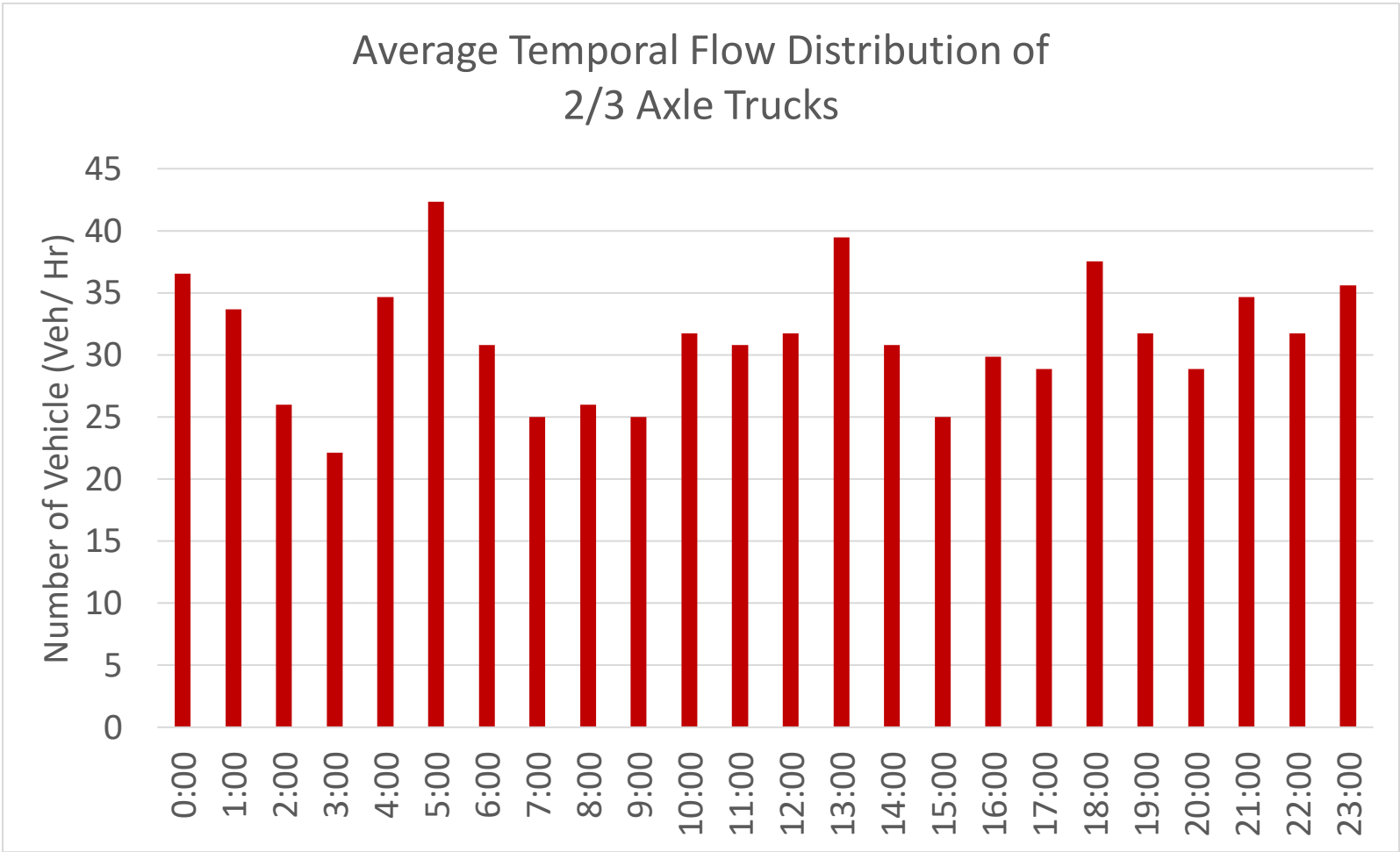
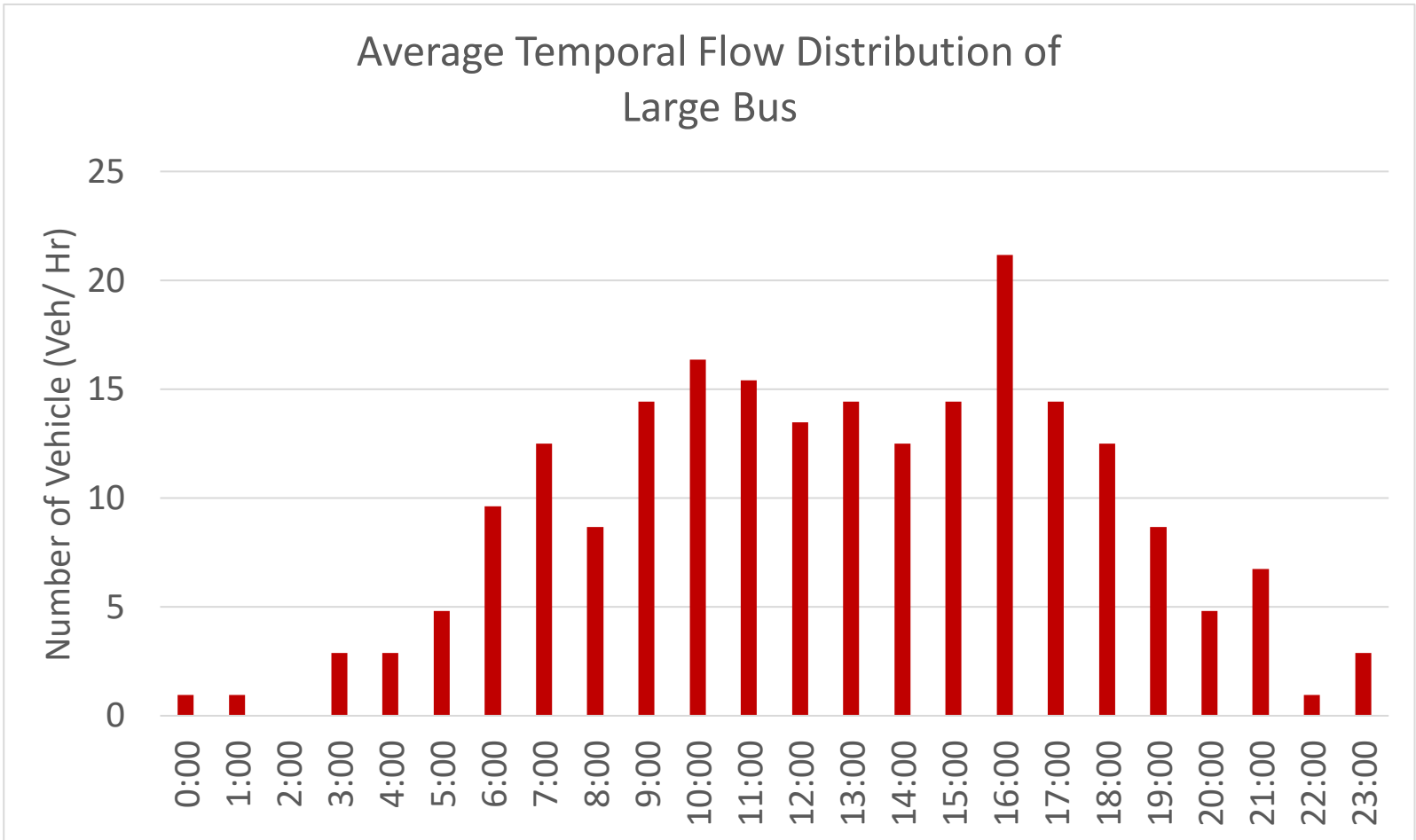
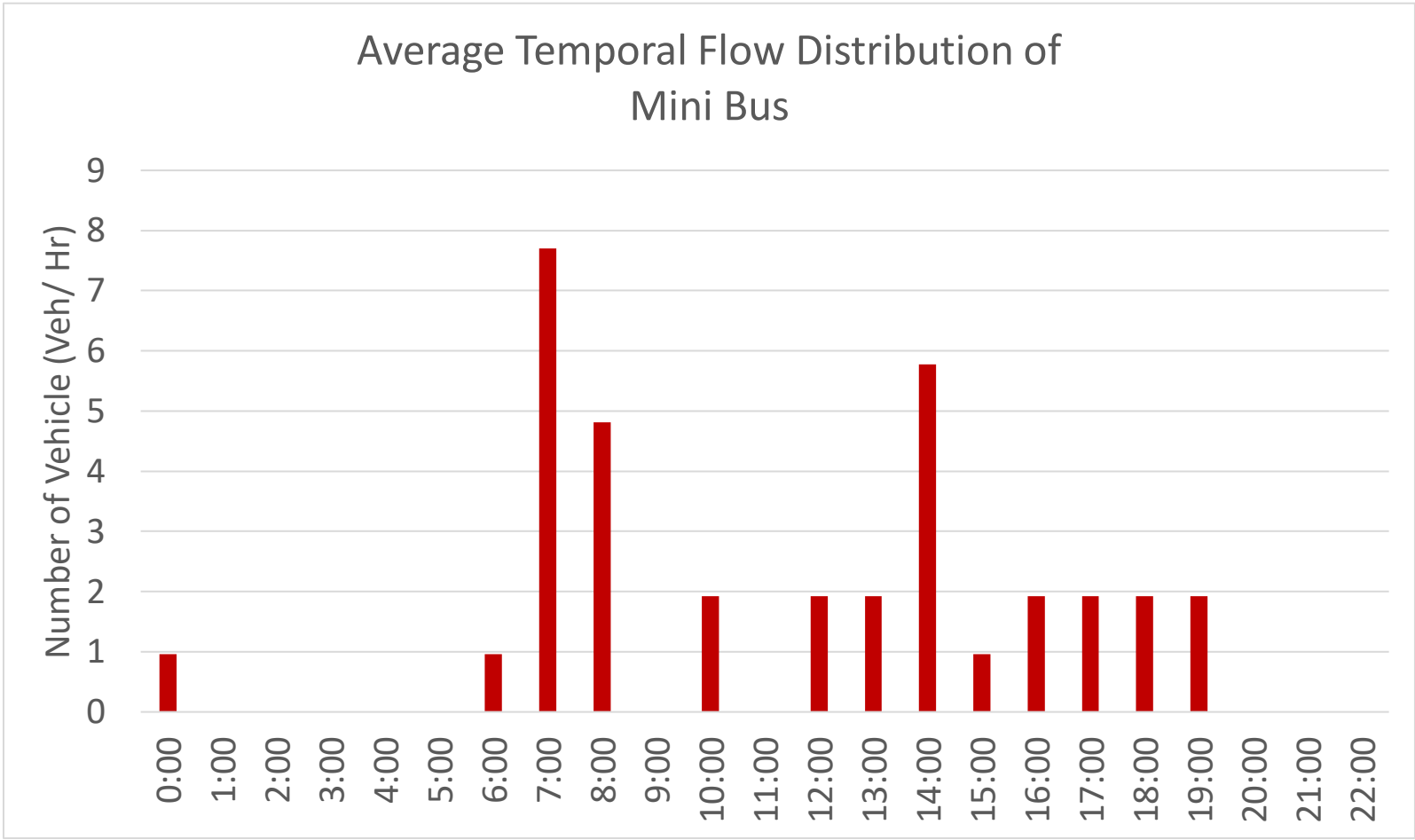
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location Coordinates		MB-2 Narowal 32.1074635, 74.8171722						All Directional Count							
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
25	2	Tuesday, October 8, 2024	15:00	16:00	697	84	232	53	1	12	32	4	-	15	1,130
26	2	Tuesday, October 8, 2024	16:00	17:00	705	81	225	35	1	23	26	3	-	17	1,116
27	2	Tuesday, October 8, 2024	17:00	18:00	881	84	228	41	-	14	29	3	7	24	1,311
28	2	Tuesday, October 8, 2024	18:00	19:00	578	62	197	27	-	13	40	3	2	19	941
29	2	Tuesday, October 8, 2024	19:00	20:00	359	25	151	22	2	8	33	-	2	10	612
30	2	Tuesday, October 8, 2024	20:00	21:00	204	13	146	16	-	5	36	1	-	2	423
31	2	Tuesday, October 8, 2024	21:00	22:00	125	5	123	21	-	9	40	4	-	4	331
32	2	Tuesday, October 8, 2024	22:00	23:00	57	5	68	5	-	1	36	2	-	1	175
33	2	Tuesday, October 8, 2024	23:00	0:00	39	5	59	5	2	3	37	-	-	4	154
34	2	Wednesday, October 9, 2024	00:00	1:00	28	-	56	4	1	1	42	2	-	2	136
35	2	Wednesday, October 9, 2024	01:00	2:00	11	-	23	8	-	1	31	-	-	-	74
36	2	Wednesday, October 9, 2024	02:00	3:00	9	1	25	5	-	-	28	-	-	-	68
37	2	Wednesday, October 9, 2024	03:00	4:00	5	-	17	3	-	3	21	-	1	-	50
38	2	Wednesday, October 9, 2024	04:00	5:00	13	4	24	7	-	2	38	3	-	-	91
39	2	Wednesday, October 9, 2024	05:00	6:00	68	12	36	14	-	6	57	1	-	1	195
40	2	Wednesday, October 9, 2024	06:00	7:00	227	66	59	33	2	12	34	-	2	3	438
41	2	Wednesday, October 9, 2024	07:00	8:00	737	100	115	41	7	12	19	2	2	16	1,051
42	2	Wednesday, October 9, 2024	08:00	9:00	724	125	120	39	3	8	27	4	4	36	1,090
43	2	Wednesday, October 9, 2024	09:00	10:00	660	112	143	23	-	16	27	4	5	35	1,025
44	2	Wednesday, October 9, 2024	10:00	11:00	663	101	135	23	-	14	31	-	3	37	1,007
45	2	Wednesday, October 9, 2024	11:00	12:00	761	73	163	33	-	18	34	2	3	53	1,140
46	2	Wednesday, October 9, 2024	12:00	13:00	623	90	143	26	2	12	35	2	1	36	970
47	2	Wednesday, October 9, 2024	13:00	14:00	669	82	165	26	2	14	43	5	3	40	1,049
48	2	Wednesday, October 9, 2024	14:00	15:00	648	91	188	50	7	12	38	2	4	48	1,088

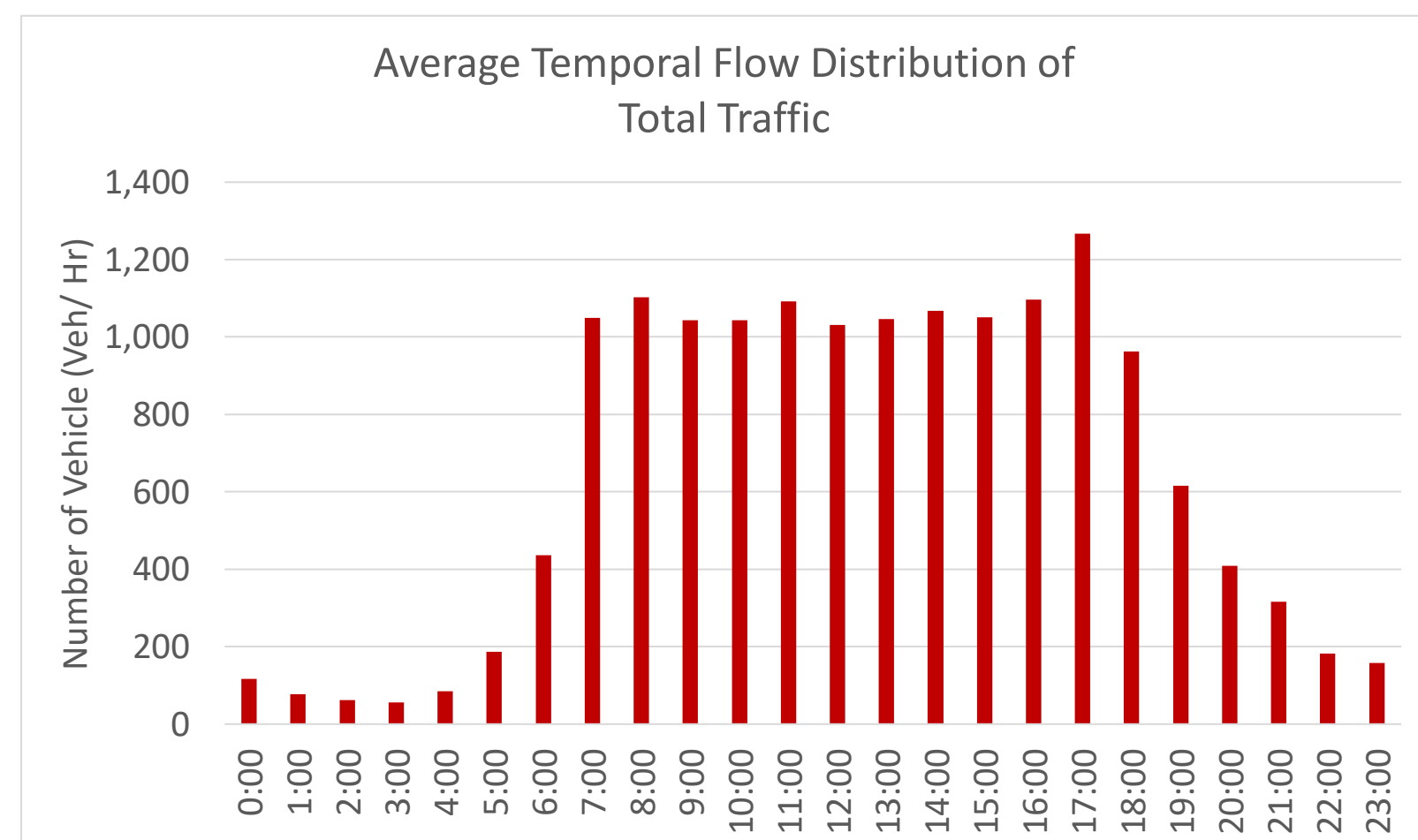
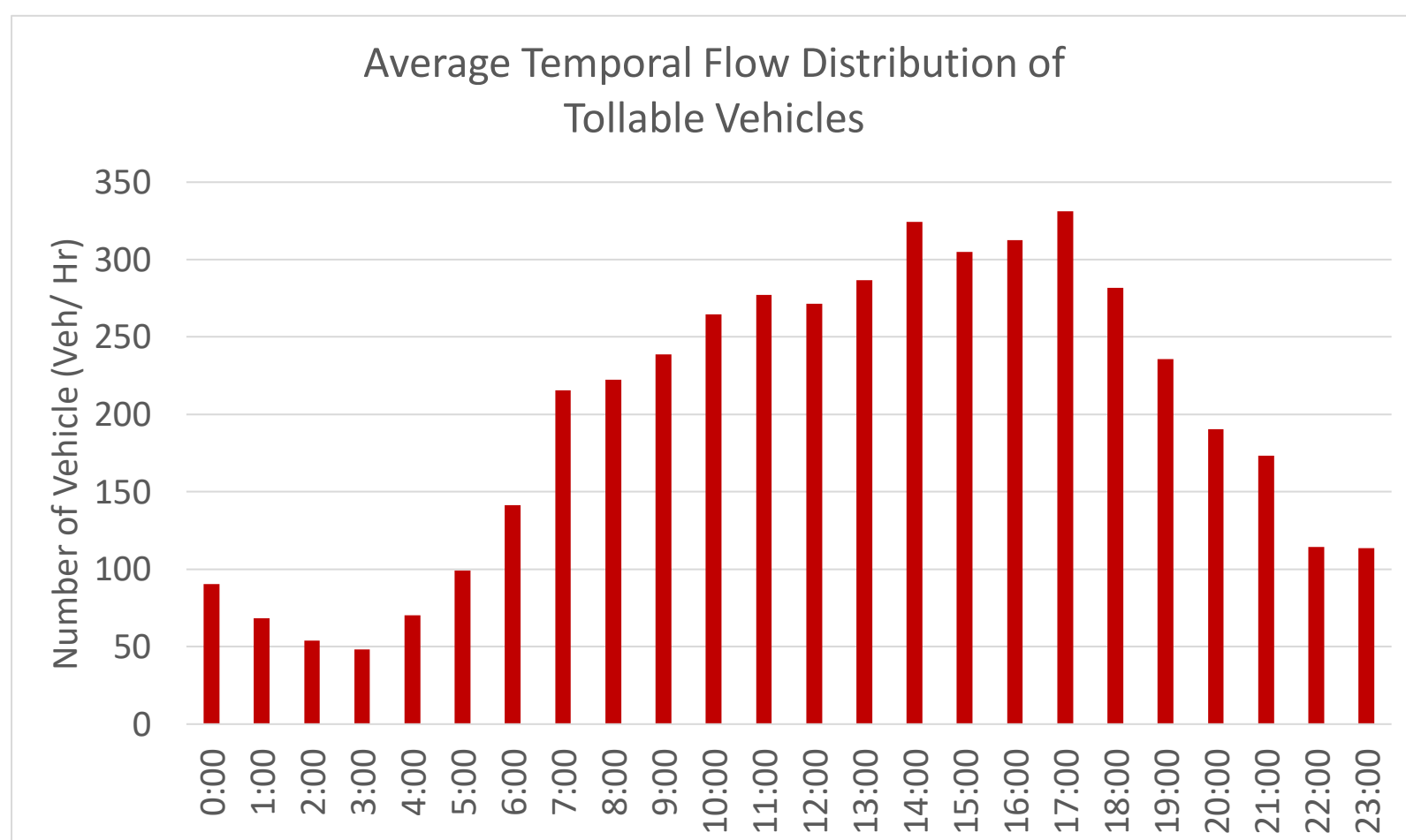
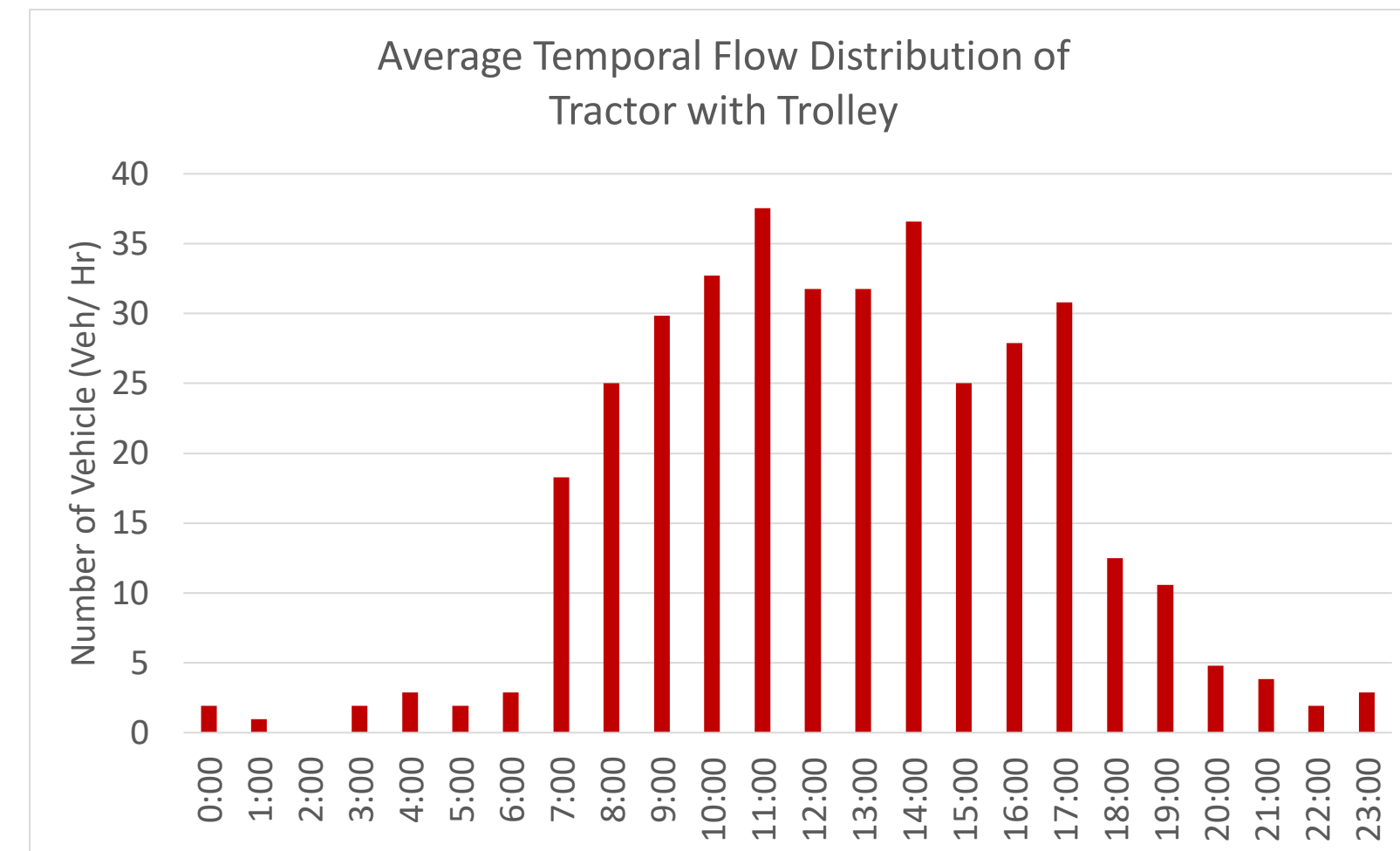
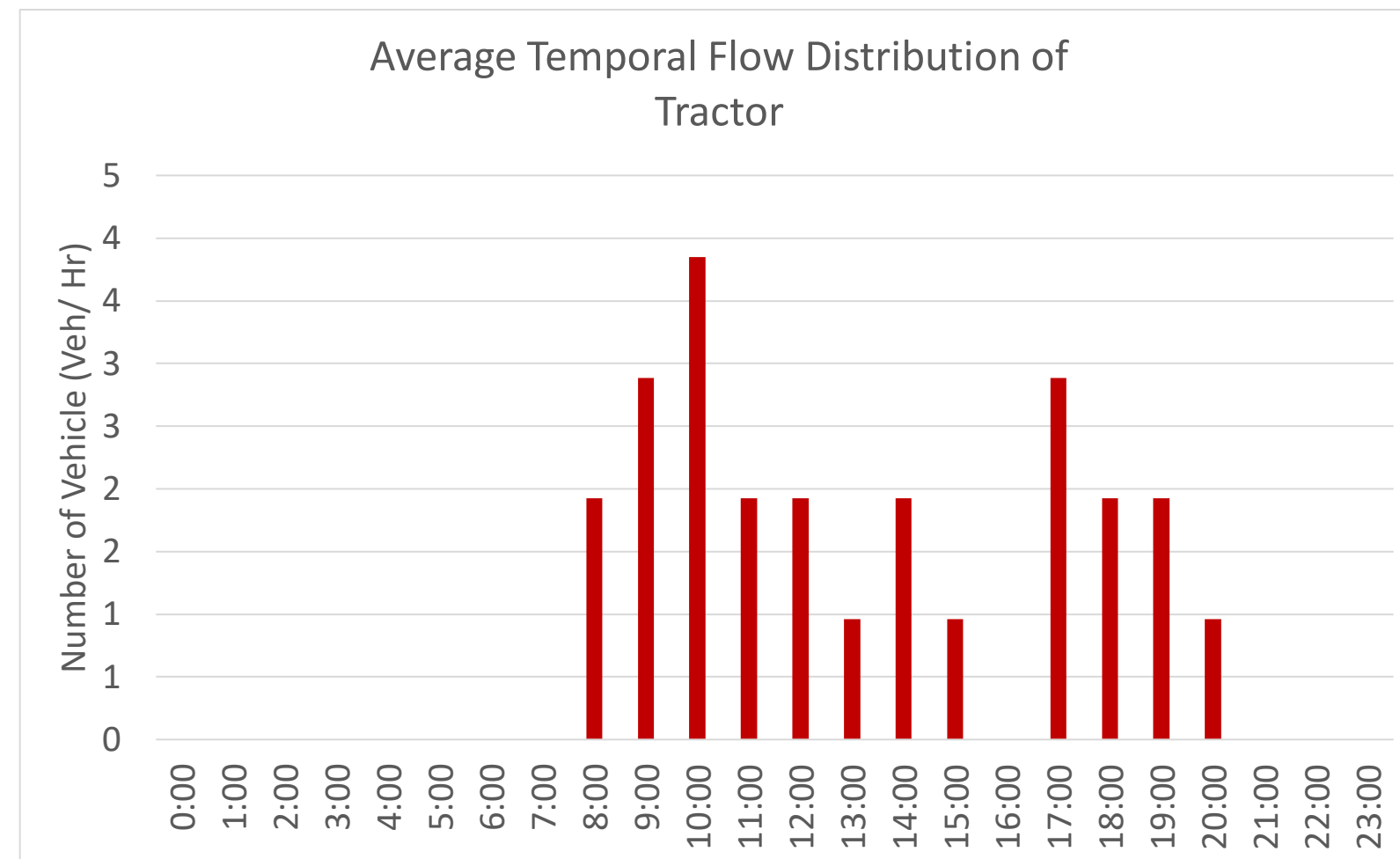


Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-2 Narowal						All Directional Count							
Coordinates		32.1074635, 74.8171722													
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
49	2	Wednesday, October 9, 2024	15:00	16:00	592	80	177	41	-	17	27	3	1	36	974
50	3	Wednesday, October 9, 2024	16:00	17:00	697	107	188	37	1	22	35	4	-	47	1,138
51	3	Wednesday, October 9, 2024	17:00	18:00	878	96	210	38	3	15	27	3	1	46	1,317
52	3	Wednesday, October 9, 2024	18:00	19:00	703	69	192	31	1	13	42	4	4	12	1,071
53	3	Wednesday, October 9, 2024	19:00	20:00	369	37	158	29	1	10	38	-	2	16	660
54	3	Wednesday, October 9, 2024	20:00	21:00	202	14	132	22	1	6	24	1	1	3	406
55	3	Wednesday, October 9, 2024	21:00	22:00	154	7	107	18	-	4	31	2	-	7	330
56	3	Wednesday, October 9, 2024	22:00	23:00	79	4	78	9	-	2	29	-	-	1	202
57	3	Wednesday, October 9, 2024	23:00	0:00	43	-	69	5	1	3	42	-	-	4	167
58	3	Thursday, October 10, 2024	00:00	1:00	19	3	42	8	2	1	36	-	-	3	114
59	3	Thursday, October 10, 2024	01:00	2:00	10	-	35	5	-	1	42	1	-	2	96
60	3	Thursday, October 10, 2024	02:00	3:00	4	1	25	3	-	-	25	-	1	1	60
61	3	Thursday, October 10, 2024	03:00	4:00	9	2	11	2	-	2	13	-	-	4	43
62	3	Thursday, October 10, 2024	04:00	5:00	12	1	19	4	1	4	33	-	1	7	82
63	3	Thursday, October 10, 2024	05:00	6:00	89	18	27	23	-	4	34	1	-	2	198
64	3	Thursday, October 10, 2024	06:00	7:00	230	68	64	26	1	10	29	2	-	1	431
65	3	Thursday, October 10, 2024	07:00	8:00	786	107	105	52	10	13	32	2	-	25	1,132
66	3	Thursday, October 10, 2024	08:00	9:00	820	126	133	31	7	11	26	2	1	32	1,189
67	3	Thursday, October 10, 2024	09:00	10:00	765	116	139	28	-	13	25	-	2	45	1,133
68	3	Thursday, October 10, 2024	10:00	11:00	713	107	165	34	4	18	39	2	4	49	1,135
69	3	Thursday, October 10, 2024	11:00	12:00	769	103	152	30	-	14	36	2	3	45	1,154
70	3	Thursday, October 10, 2024	12:00	13:00	742	96	172	40	3	16	35	1	2	49	1,156
71	3	Thursday, October 10, 2024	13:00	14:00	709	105	173	44	3	17	32	2	-	33	1,118
72	3	Thursday, October 10, 2024	14:00	15:00	719	109	183	71	5	15	38	4	1	49	1,194









Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Average Annual Hourly Interval													
Location		MB-2 Narowal						Direction Number				1	
Coordinates		32.1074635, 74.8171722						From	Muridke		Towards	Narowal	
S.No.	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	0:00	1:00	11	1	30	4	1	1	13	1	0	1	62
2	1:00	2:00	5	0	14	4	0	1	17	0	0	1	42
3	2:00	3:00	4	1	12	2	0	0	10	0	0	0	28
4	3:00	4:00	4	1	13	2	0	3	13	0	0	1	36
5	4:00	5:00	9	1	16	3	0	2	19	1	0	0	51
6	5:00	6:00	54	13	14	7	0	2	24	1	0	1	115
7	6:00	7:00	165	53	28	16	0	4	20	0	0	2	288
8	7:00	8:00	553	72	59	25	7	4	13	1	0	12	746
9	8:00	9:00	518	65	63	21	2	3	15	1	1	13	702
10	9:00	10:00	449	56	74	13	0	7	15	1	2	19	636
11	10:00	11:00	414	62	82	15	1	8	19	0	2	19	622
12	11:00	12:00	391	48	84	16	0	7	14	0	1	21	582
13	12:00	13:00	324	41	78	14	1	8	15	1	1	18	502
14	13:00	14:00	314	40	84	18	0	6	19	1	1	18	501
15	14:00	15:00	307	49	82	19	0	7	13	1	0	18	497
16	15:00	16:00	326	42	89	21	0	7	15	1	1	18	521
17	16:00	17:00	313	41	86	17	2	13	15	1	0	13	502
18	17:00	18:00	348	38	84	16	1	7	16	1	2	20	533
19	18:00	19:00	291	20	90	13	1	8	15	0	1	7	446
20	19:00	20:00	184	15	88	11	1	6	11	0	1	6	321
21	20:00	21:00	89	6	69	10	0	2	11	1	0	2	190
22	21:00	22:00	58	1	67	11	0	4	11	1	0	1	153
23	22:00	23:00	30	3	38	5	0	1	14	1	0	1	93
24	23:00	0:00	14	1	38	6	1	3	13	0	0	2	78
Average Annual Daily Traffic			5,173	671	1,381	289	17	111	363	14	13	216	8,246



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-2 Narowal						Direction Number					1		
Coordinates		32.1074635, 74.8171722						From	Muridke			Towards	Narowal		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	1	Monday, October 7, 2024	15:00	16:00	362	52	94	25	-	9	12	2	3	21	580
2	1	Monday, October 7, 2024	16:00	17:00	351	38	86	20	3	14	17	1	-	9	539
3	1	Monday, October 7, 2024	17:00	18:00	360	46	89	10	-	8	21	1	1	20	556
4	1	Monday, October 7, 2024	18:00	19:00	289	21	91	9	1	8	16	-	1	4	440
5	1	Monday, October 7, 2024	19:00	20:00	196	18	98	9	2	6	8	1	1	5	344
6	1	Monday, October 7, 2024	20:00	21:00	99	7	77	12	1	2	10	2	-	4	214
7	1	Monday, October 7, 2024	21:00	22:00	59	1	64	8	-	4	15	-	-	2	153
8	1	Monday, October 7, 2024	22:00	23:00	36	1	45	7	-	1	14	1	-	1	106
9	1	Monday, October 7, 2024	23:00	0:00	13	1	35	10	-	2	13	1	-	2	77
10	1	Tuesday, October 8, 2024	00:00	1:00	9	1	26	3	-	-	17	1	1	-	58
11	1	Tuesday, October 8, 2024	01:00	2:00	2	-	17	1	-	1	21	-	-	-	42
12	1	Tuesday, October 8, 2024	02:00	3:00	4	-	15	2	-	-	12	-	-	-	33
13	1	Tuesday, October 8, 2024	03:00	4:00	4	-	19	1	1	3	24	-	-	-	52
14	1	Tuesday, October 8, 2024	04:00	5:00	10	1	18	4	-	2	16	-	-	-	51
15	1	Tuesday, October 8, 2024	05:00	6:00	54	13	13	7	-	2	24	3	-	1	117
16	1	Tuesday, October 8, 2024	06:00	7:00	179	55	34	15	1	4	21	-	-	1	310
17	1	Tuesday, October 8, 2024	07:00	8:00	556	76	58	24	6	4	13	-	-	10	747
18	1	Tuesday, October 8, 2024	08:00	9:00	559	70	64	18	3	3	18	1	-	5	741
19	1	Tuesday, October 8, 2024	09:00	10:00	490	57	76	14	-	7	17	1	2	12	676
20	1	Tuesday, October 8, 2024	10:00	11:00	450	71	85	13	-	10	16	-	3	12	660
21	1	Tuesday, October 8, 2024	11:00	12:00	406	63	86	18	-	5	11	1	-	9	599
22	1	Tuesday, October 8, 2024	12:00	13:00	352	44	89	13	1	8	12	3	2	10	534
23	1	Tuesday, October 8, 2024	13:00	14:00	335	43	86	20	-	5	25	3	2	16	535
24	1	Tuesday, October 8, 2024	14:00	15:00	317	47	85	18	-	6	12	-	-	5	490

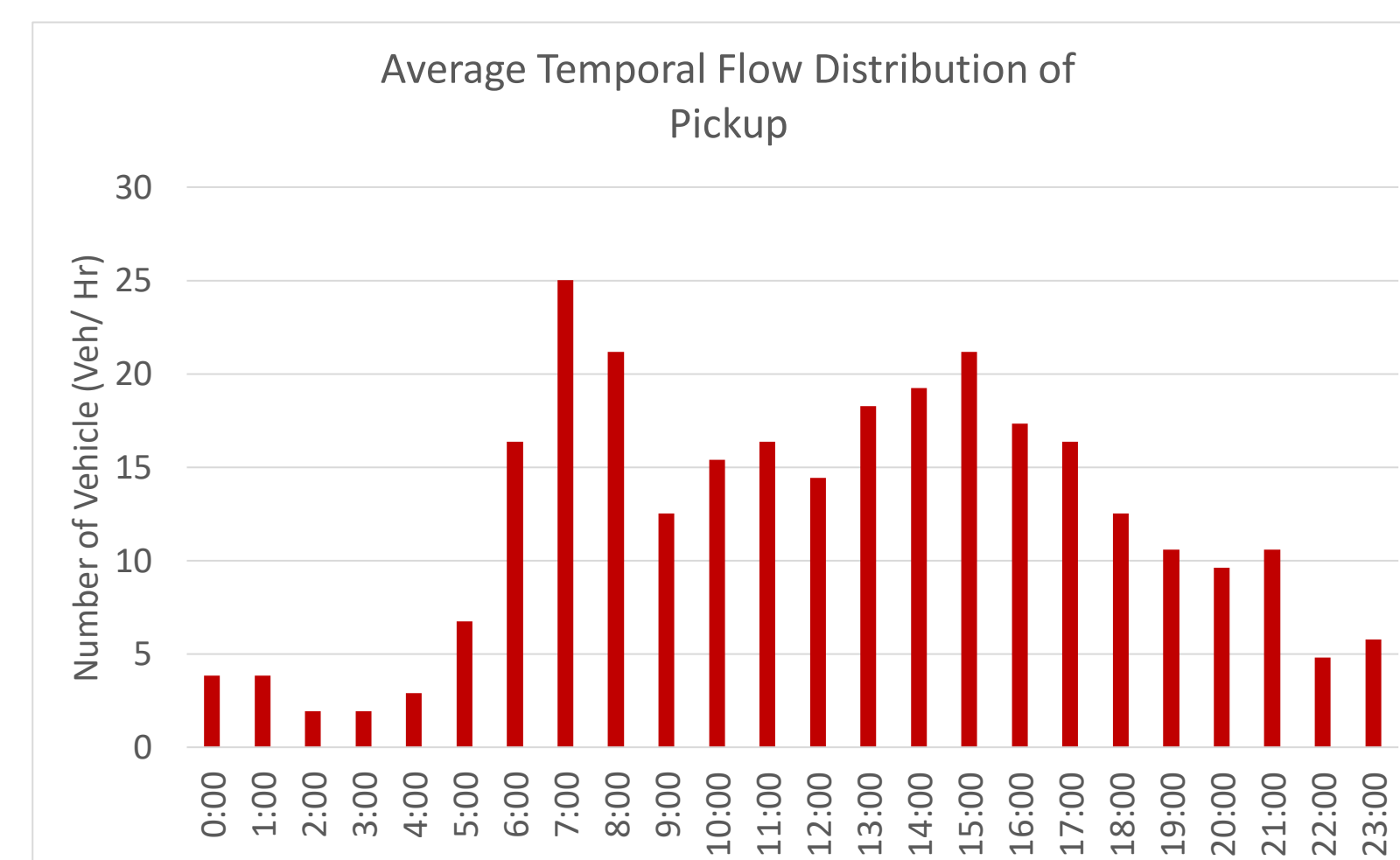
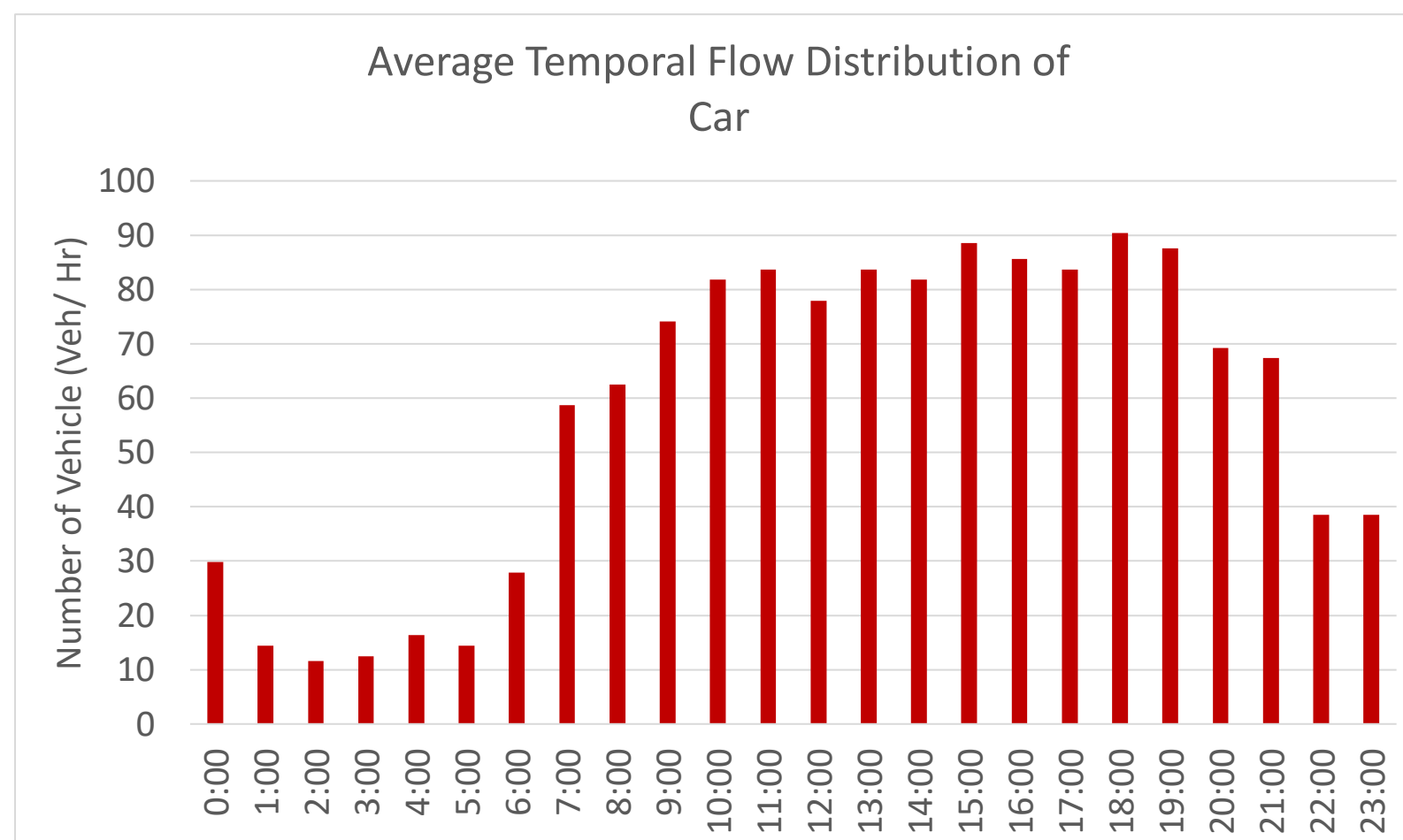
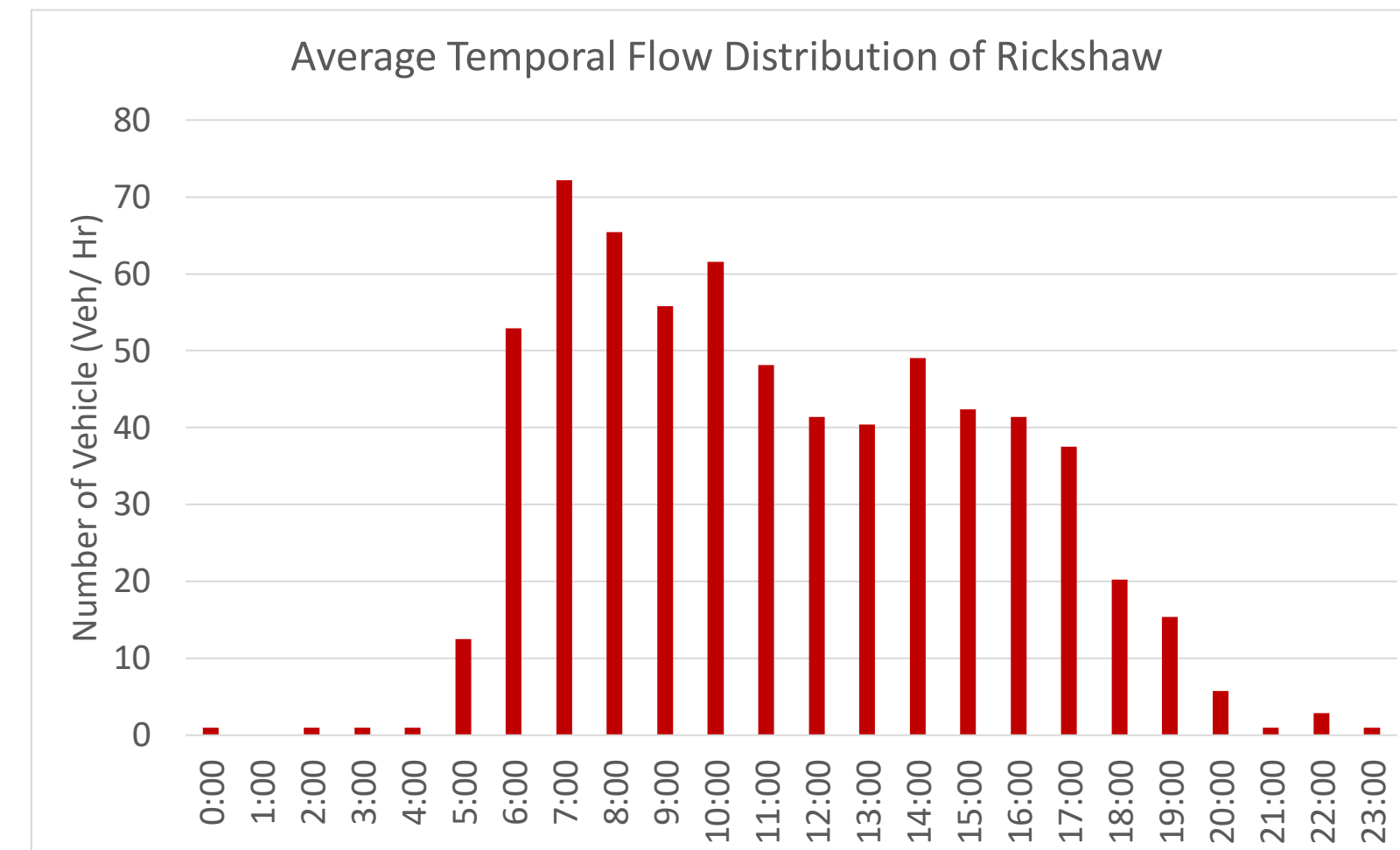
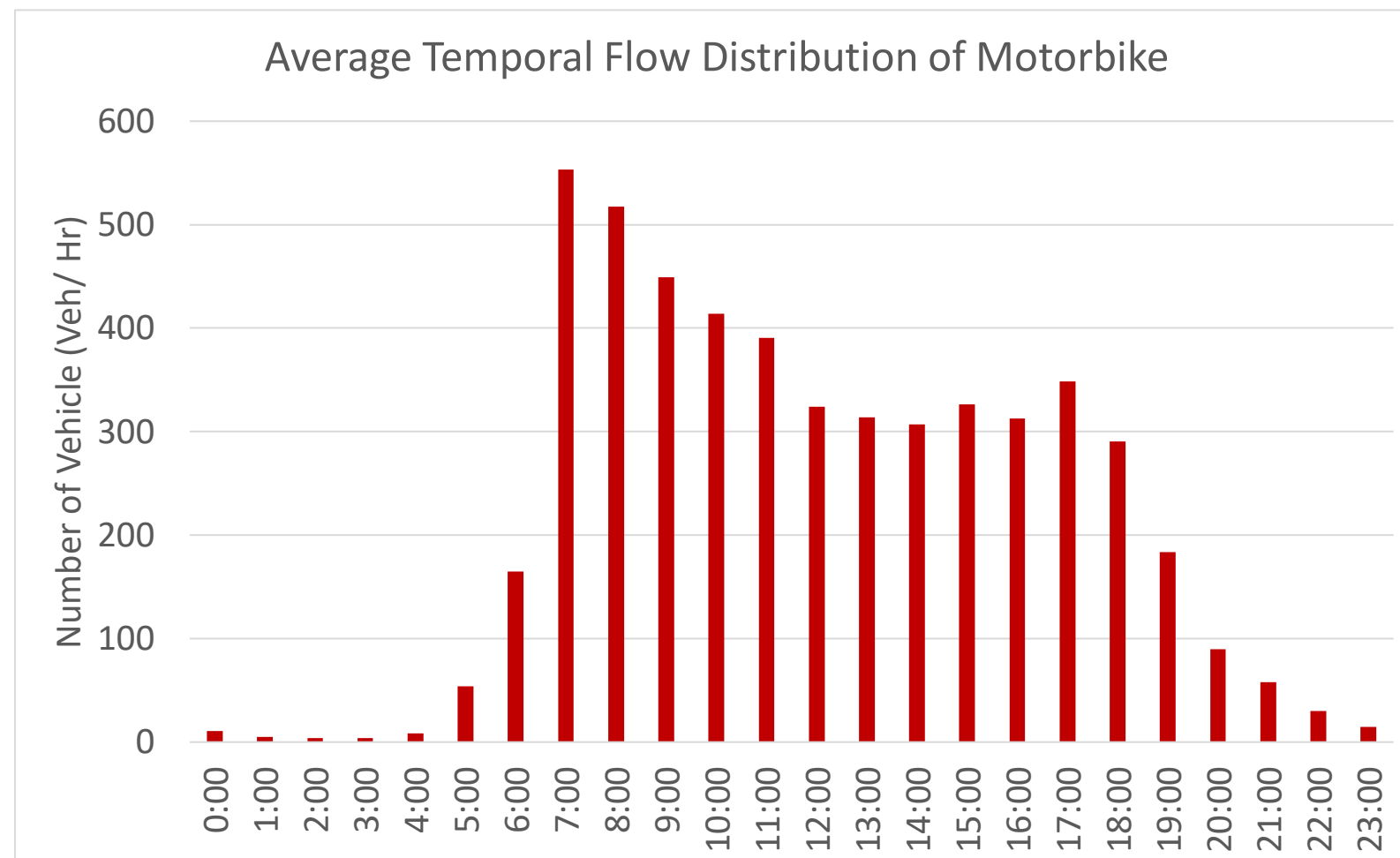


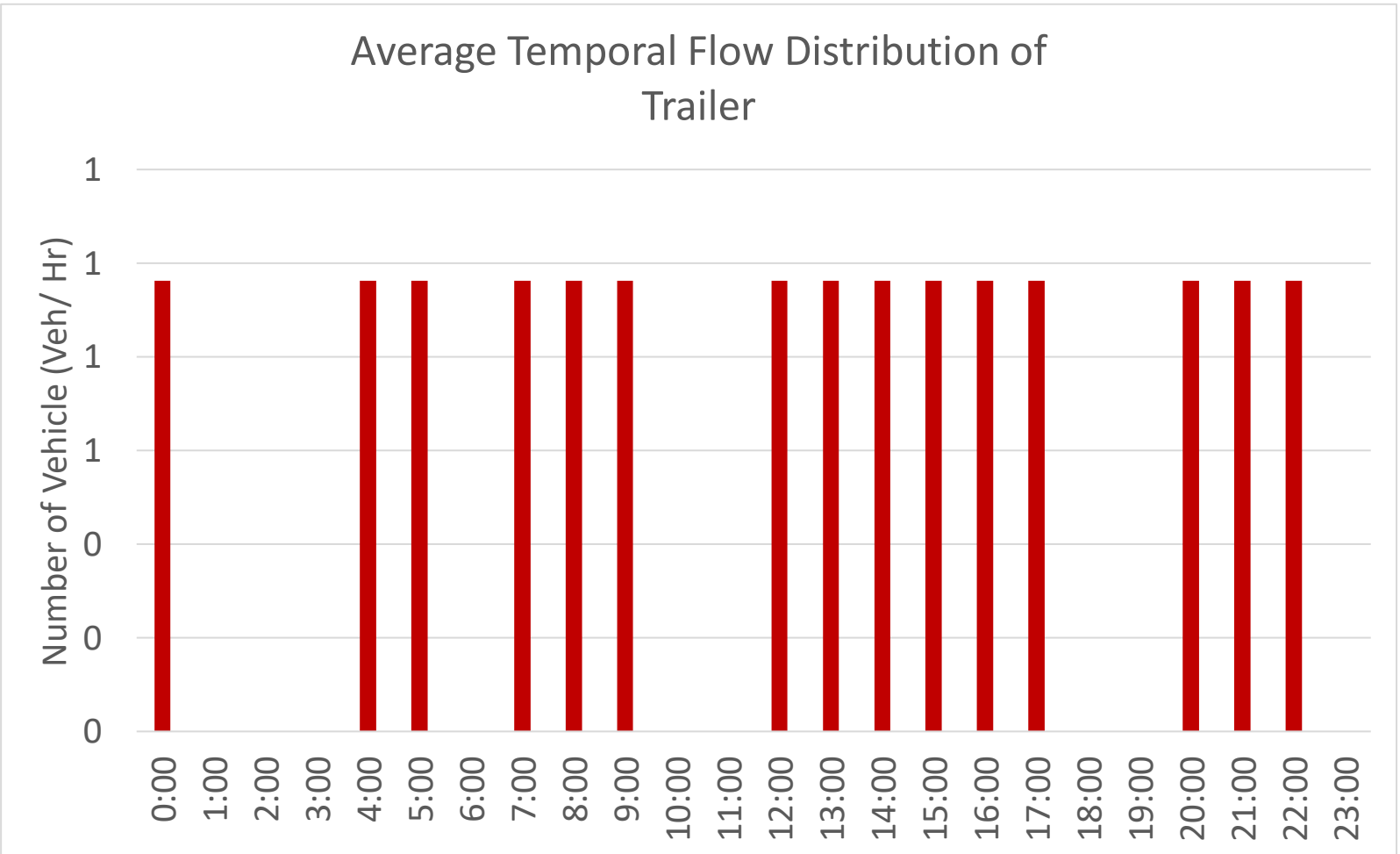
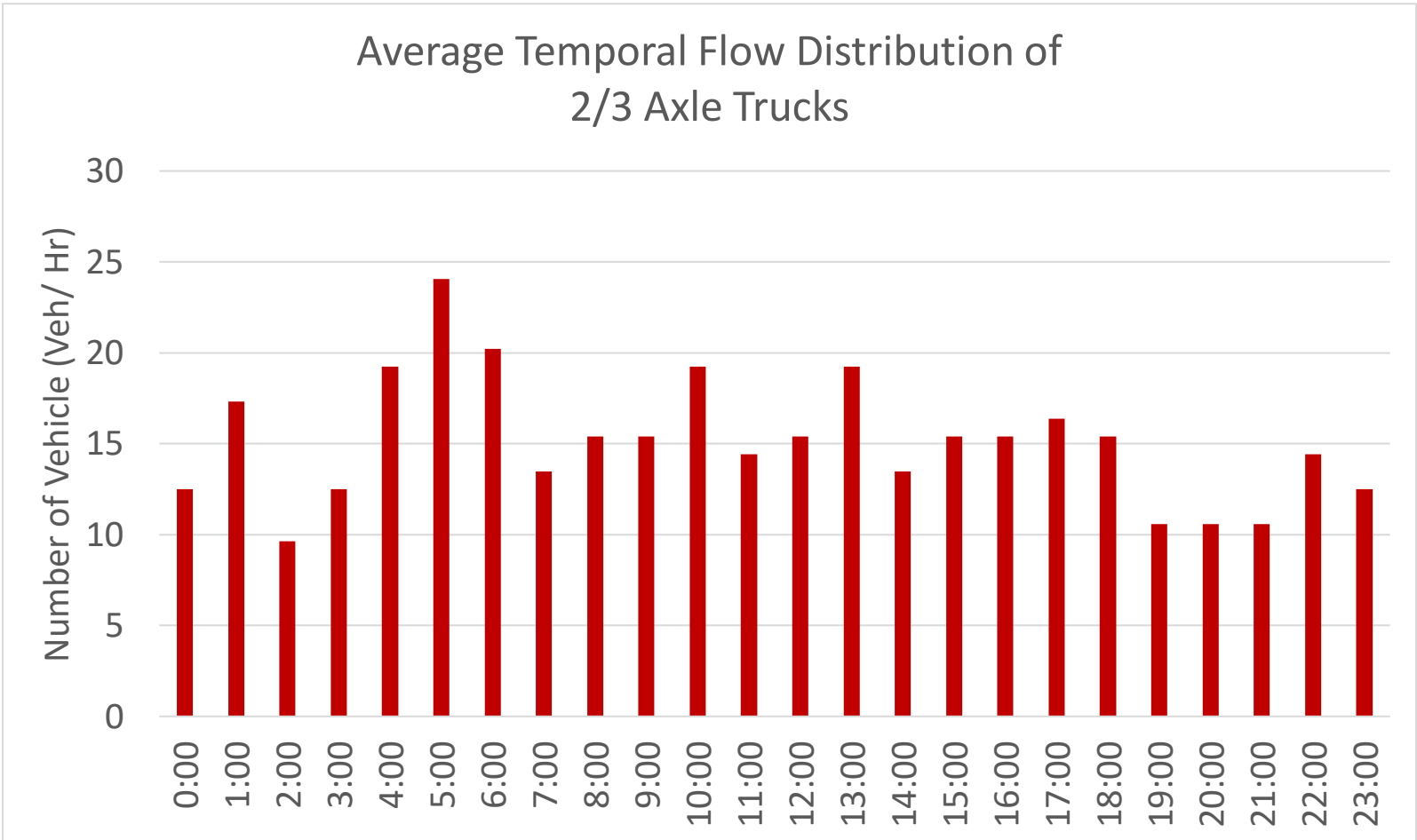
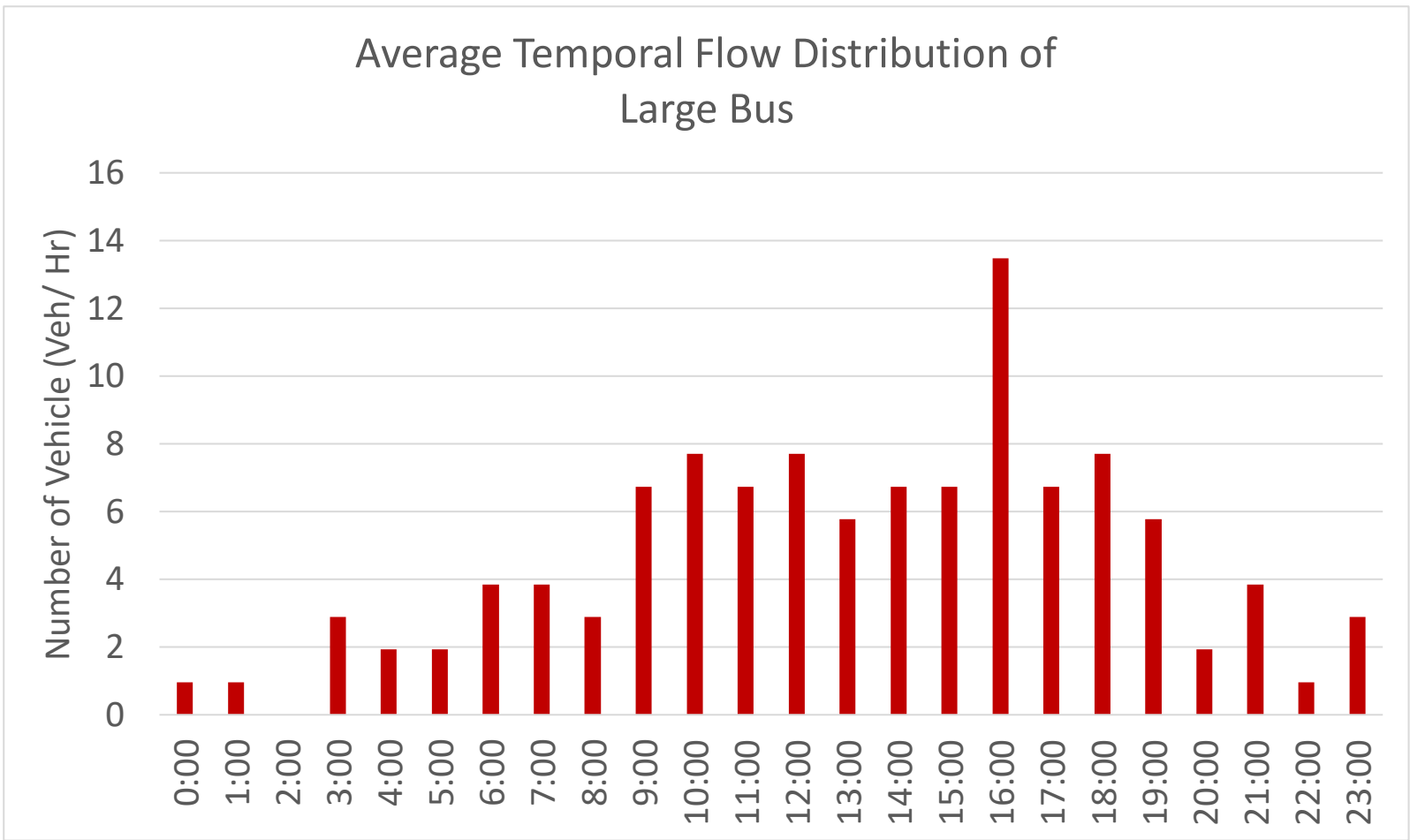
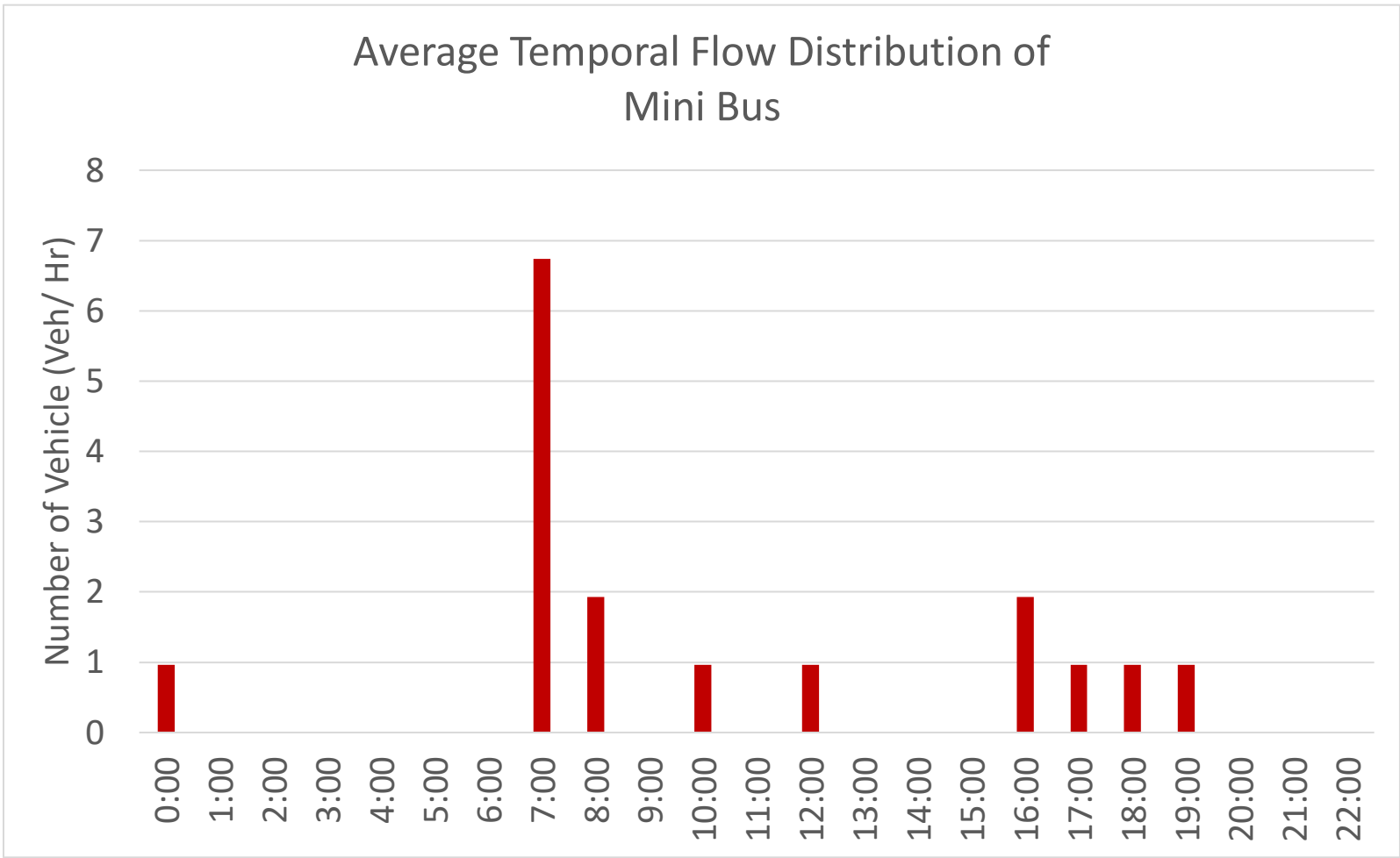
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-2 Narowal						Direction Number					1		
Coordinates		32.1074635, 74.8171722						From	Muridke			Towards	Narowal		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
25	2	Tuesday, October 8, 2024	15:00	16:00	333	38	104	24	-	5	18	1	-	12	535
26	2	Tuesday, October 8, 2024	16:00	17:00	312	41	95	15	1	15	7	3	-	10	499
27	2	Tuesday, October 8, 2024	17:00	18:00	364	40	95	21	-	6	19	3	6	16	570
28	2	Tuesday, October 8, 2024	18:00	19:00	302	16	98	16	-	8	15	-	1	9	465
29	2	Tuesday, October 8, 2024	19:00	20:00	191	10	85	12	1	5	8	-	1	6	319
30	2	Tuesday, October 8, 2024	20:00	21:00	95	3	80	9	-	2	13	1	-	-	203
31	2	Tuesday, October 8, 2024	21:00	22:00	54	2	77	14	-	5	8	2	-	-	162
32	2	Tuesday, October 8, 2024	22:00	23:00	27	4	38	2	-	1	15	1	-	-	88
33	2	Tuesday, October 8, 2024	23:00	0:00	12	2	41	5	1	3	15	-	-	2	81
34	2	Wednesday, October 9, 2024	00:00	1:00	16	-	38	3	1	1	10	2	-	-	71
35	2	Wednesday, October 9, 2024	01:00	2:00	8	-	12	6	-	1	18	-	-	-	45
36	2	Wednesday, October 9, 2024	02:00	3:00	6	1	12	3	-	-	11	-	-	-	33
37	2	Wednesday, October 9, 2024	03:00	4:00	1	-	14	3	-	3	9	-	1	-	31
38	2	Wednesday, October 9, 2024	04:00	5:00	10	2	19	1	-	1	23	3	-	-	59
39	2	Wednesday, October 9, 2024	05:00	6:00	53	10	22	7	-	2	33	-	-	-	127
40	2	Wednesday, October 9, 2024	06:00	7:00	169	55	25	20	-	6	25	-	1	3	304
41	2	Wednesday, October 9, 2024	07:00	8:00	575	72	58	21	7	4	8	2	1	9	757
42	2	Wednesday, October 9, 2024	08:00	9:00	514	67	58	22	1	3	17	2	3	23	710
43	2	Wednesday, October 9, 2024	09:00	10:00	430	62	72	10	-	8	15	1	3	21	622
44	2	Wednesday, October 9, 2024	10:00	11:00	416	60	80	14	-	5	15	-	3	25	618
45	2	Wednesday, October 9, 2024	11:00	12:00	404	34	88	16	-	9	17	-	2	32	602
46	2	Wednesday, October 9, 2024	12:00	13:00	298	39	63	14	-	8	17	-	-	21	460
47	2	Wednesday, October 9, 2024	13:00	14:00	304	32	96	16	-	5	20	1	2	23	499
48	2	Wednesday, October 9, 2024	14:00	15:00	313	56	95	17	1	7	13	2	-	32	536

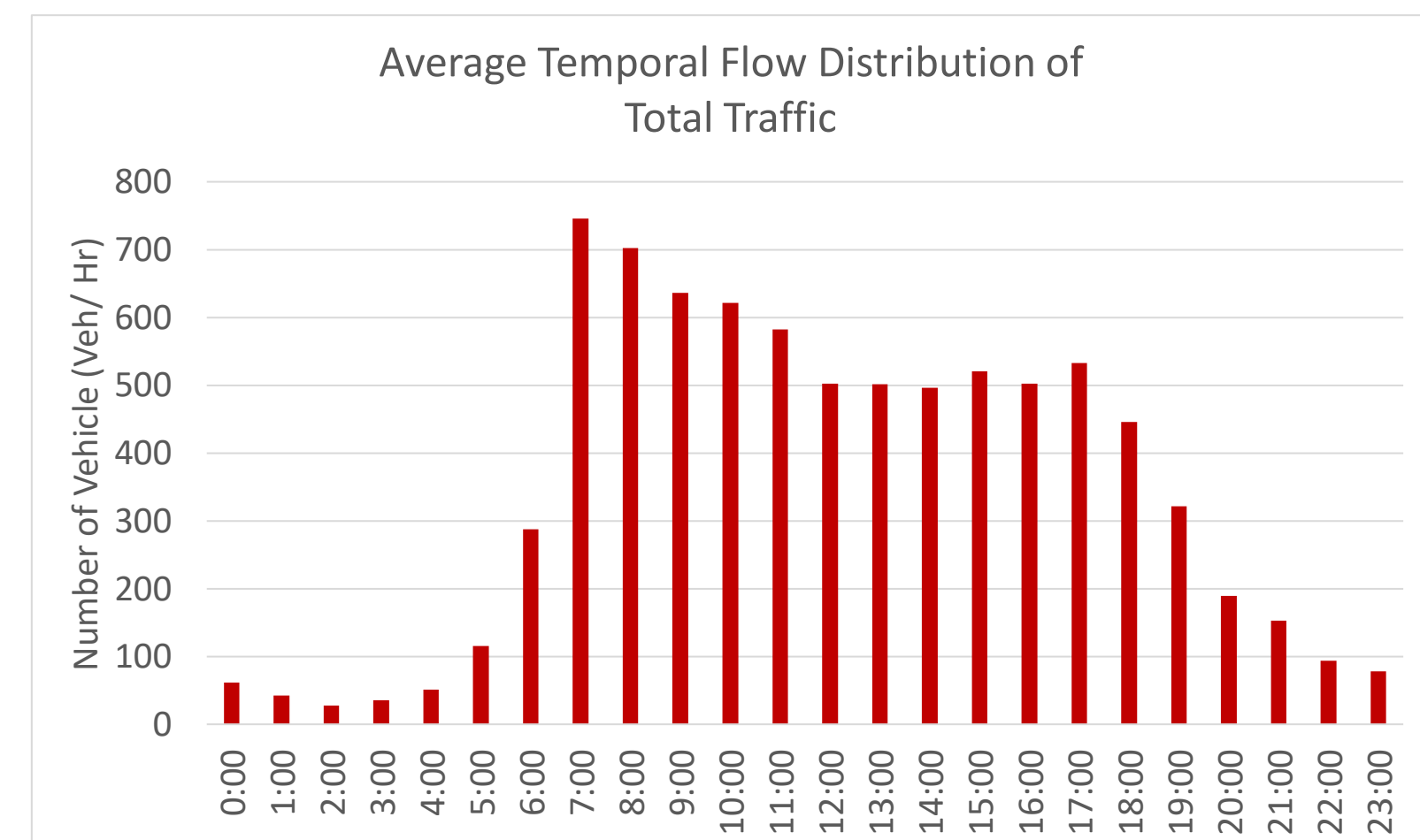
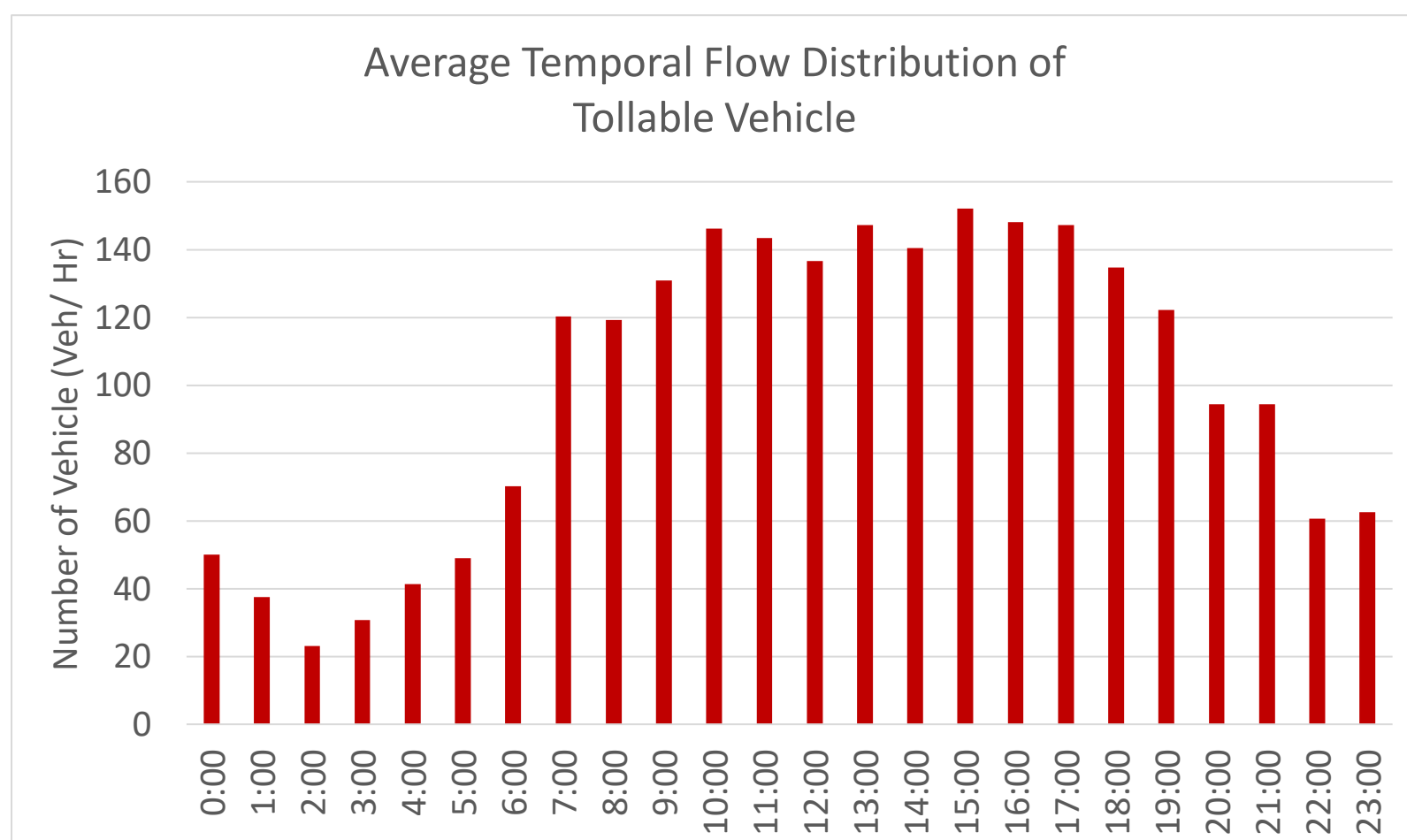
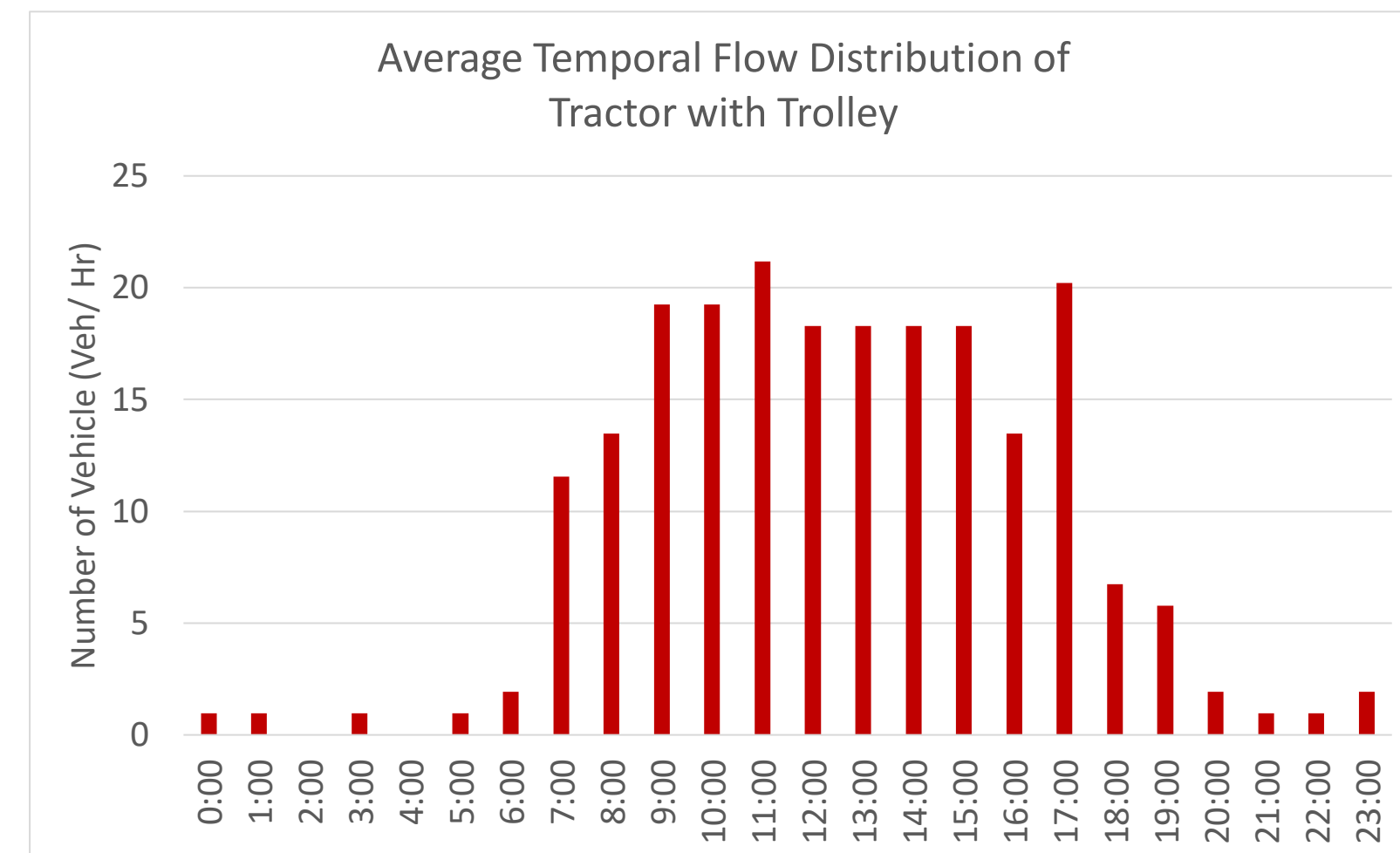
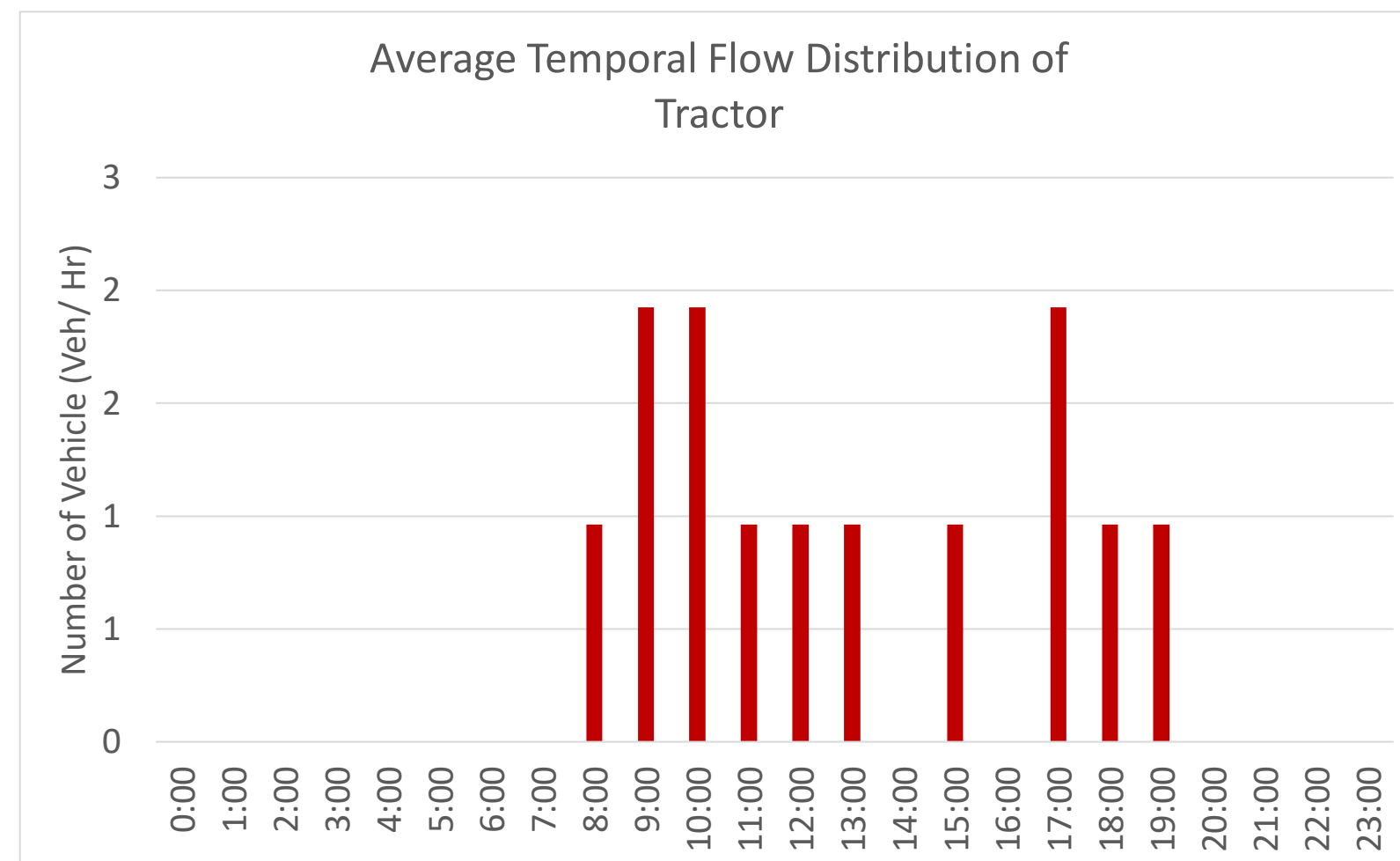


Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-2 Narowal						Direction Number				1			
Coordinates		32.1074635, 74.8171722						From	Muridke			Towards	Narowal		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
49	2	Wednesday, October 9, 2024	15:00	16:00	321	43	78	18	-	8	17	-	-	24	509
50	3	Wednesday, October 9, 2024	16:00	17:00	313	50	87	19	1	14	25	-	-	24	533
51	3	Wednesday, October 9, 2024	17:00	18:00	362	32	78	21	2	7	10	-	-	28	540
52	3	Wednesday, October 9, 2024	18:00	19:00	316	25	92	13	1	7	17	1	2	9	483
53	3	Wednesday, October 9, 2024	19:00	20:00	187	21	90	13	-	7	17	-	1	6	342
54	3	Wednesday, October 9, 2024	20:00	21:00	84	8	59	8	-	3	11	-	-	2	175
55	3	Wednesday, October 9, 2024	21:00	22:00	67	1	68	12	-	3	9	-	-	2	162
56	3	Wednesday, October 9, 2024	22:00	23:00	31	3	36	6	-	1	16	-	-	1	94
57	3	Wednesday, October 9, 2024	23:00	0:00	21	-	43	3	1	3	11	-	-	2	84
58	3	Thursday, October 10, 2024	00:00	1:00	9	2	30	6	2	1	13	-	-	2	65
59	3	Thursday, October 10, 2024	01:00	2:00	5	-	17	5	-	1	15	-	-	2	45
60	3	Thursday, October 10, 2024	02:00	3:00	2	1	10	2	-	-	7	-	1	1	24
61	3	Thursday, October 10, 2024	03:00	4:00	7	2	7	1	-	2	5	-	-	2	26
62	3	Thursday, October 10, 2024	04:00	5:00	8	1	14	4	1	3	20	-	1	1	53
63	3	Thursday, October 10, 2024	05:00	6:00	60	16	10	8	-	2	19	-	-	2	117
64	3	Thursday, October 10, 2024	06:00	7:00	166	55	29	17	-	3	18	-	-	1	289
65	3	Thursday, October 10, 2024	07:00	8:00	593	76	68	32	7	4	21	-	-	18	819
66	3	Thursday, October 10, 2024	08:00	9:00	542	67	73	26	2	4	12	-	-	14	740
67	3	Thursday, October 10, 2024	09:00	10:00	482	56	84	15	-	5	16	-	2	28	688
68	3	Thursday, October 10, 2024	10:00	11:00	424	61	90	22	3	9	29	-	1	23	662
69	3	Thursday, October 10, 2024	11:00	12:00	409	54	87	16	-	6	17	-	-	25	614
70	3	Thursday, October 10, 2024	12:00	13:00	362	46	90	18	2	8	19	-	2	27	574
71	3	Thursday, October 10, 2024	13:00	14:00	338	51	79	20	1	7	15	-	-	17	528
72	3	Thursday, October 10, 2024	14:00	15:00	327	50	75	24	-	7	17	-	-	20	520









Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Average Annual Hourly Interval													
Location		MB-2 Narowal						Direction Number				2	
Coordinates		32.1074635, 74.8171722						From	Narowal		Towards	Muridke	
S.No.	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	0:00	1:00	14	1	13	2	0	0	24	0	0	1	56
2	1:00	2:00	4	0	13	1	0	0	16	1	0	0	35
3	2:00	3:00	4	0	13	1	0	0	16	0	0	0	35
4	3:00	4:00	3	0	7	0	0	0	10	0	0	1	20
5	4:00	5:00	4	1	6	4	0	1	15	0	0	3	34
6	5:00	6:00	19	2	17	10	0	3	18	1	0	1	71
7	6:00	7:00	67	11	38	13	1	6	11	1	0	1	149
8	7:00	8:00	178	30	47	19	1	9	12	1	0	7	303
9	8:00	9:00	240	58	60	11	3	6	11	1	1	12	400
10	9:00	10:00	248	51	65	13	0	8	10	1	1	11	407
11	10:00	11:00	258	45	68	12	1	9	13	1	2	13	421
12	11:00	12:00	329	47	74	15	0	9	16	2	1	16	510
13	12:00	13:00	344	50	80	16	1	6	16	1	1	13	528
14	13:00	14:00	356	50	77	16	2	9	20	2	0	13	546
15	14:00	15:00	344	42	96	37	6	6	17	2	2	18	571
16	15:00	16:00	336	41	101	25	1	8	10	2	0	7	530
17	16:00	17:00	386	43	108	18	0	8	14	2	0	14	594
18	17:00	18:00	499	51	133	16	1	8	13	2	1	11	734
19	18:00	19:00	322	47	93	17	1	5	22	2	1	6	517
20	19:00	20:00	165	16	69	13	1	3	21	0	1	5	294
21	20:00	21:00	115	8	63	9	0	3	18	0	1	3	219
22	21:00	22:00	78	6	40	6	0	3	24	3	0	3	163
23	22:00	23:00	35	1	32	3	0	0	17	1	0	1	89
24	23:00	0:00	26	3	23	3	0	0	23	1	0	1	80
Average Annual Daily Traffic			4,374	604	1,338	280	18	106	388	26	12	161	7,306



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-2 Narowal						Direction Number				2			
Coordinates		32.1074635, 74.8171722						From	Narowal			Towards	Muridke		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	1	Monday, October 7, 2024	15:00	16:00	413	47	88	26	2	7	5	1	-	7	596
2	1	Monday, October 7, 2024	16:00	17:00	425	38	106	20	1	8	16	1	-	15	630
3	1	Monday, October 7, 2024	17:00	18:00	524	50	148	15	1	9	12	2	1	6	768
4	1	Monday, October 7, 2024	18:00	19:00	343	58	92	24	2	5	19	-	-	5	548
5	1	Monday, October 7, 2024	19:00	20:00	163	21	83	15	-	3	21	1	2	2	311
6	1	Monday, October 7, 2024	20:00	21:00	132	7	55	6	-	4	20	-	1	5	230
7	1	Monday, October 7, 2024	21:00	22:00	84	8	42	6	-	3	22	4	-	1	170
8	1	Monday, October 7, 2024	22:00	23:00	30	2	27	4	-	-	19	2	-	1	85
9	1	Monday, October 7, 2024	23:00	0:00	33	7	28	7	-	-	19	2	1	-	97
10	1	Tuesday, October 8, 2024	00:00	1:00	22	1	12	2	-	-	20	1	-	-	58
11	1	Tuesday, October 8, 2024	01:00	2:00	3	-	10	1	-	-	10	1	-	1	26
12	1	Tuesday, October 8, 2024	02:00	3:00	6	1	13	-	-	-	17	-	-	-	37
13	1	Tuesday, October 8, 2024	03:00	4:00	3	-	14	-	-	-	9	-	-	1	27
14	1	Tuesday, October 8, 2024	04:00	5:00	5	-	8	6	-	1	19	-	-	2	41
15	1	Tuesday, October 8, 2024	05:00	6:00	17	3	24	8	-	4	19	-	-	1	76
16	1	Tuesday, October 8, 2024	06:00	7:00	88	9	52	19	-	6	13	-	-	3	190
17	1	Tuesday, October 8, 2024	07:00	8:00	199	35	53	20	-	9	15	1	-	6	338
18	1	Tuesday, October 8, 2024	08:00	9:00	259	62	63	11	2	6	9	-	1	6	419
19	1	Tuesday, October 8, 2024	09:00	10:00	262	50	79	14	-	8	9	1	1	3	427
20	1	Tuesday, October 8, 2024	10:00	11:00	269	55	84	15	1	8	14	-	2	5	453
21	1	Tuesday, October 8, 2024	11:00	12:00	310	60	92	18	-	10	15	1	-	9	515
22	1	Tuesday, October 8, 2024	12:00	13:00	366	54	88	18	1	7	17	1	2	6	560
23	1	Tuesday, October 8, 2024	13:00	14:00	374	52	76	16	3	9	23	-	-	8	561
24	1	Tuesday, October 8, 2024	14:00	15:00	347	38	98	33	6	6	7	2	-	12	549

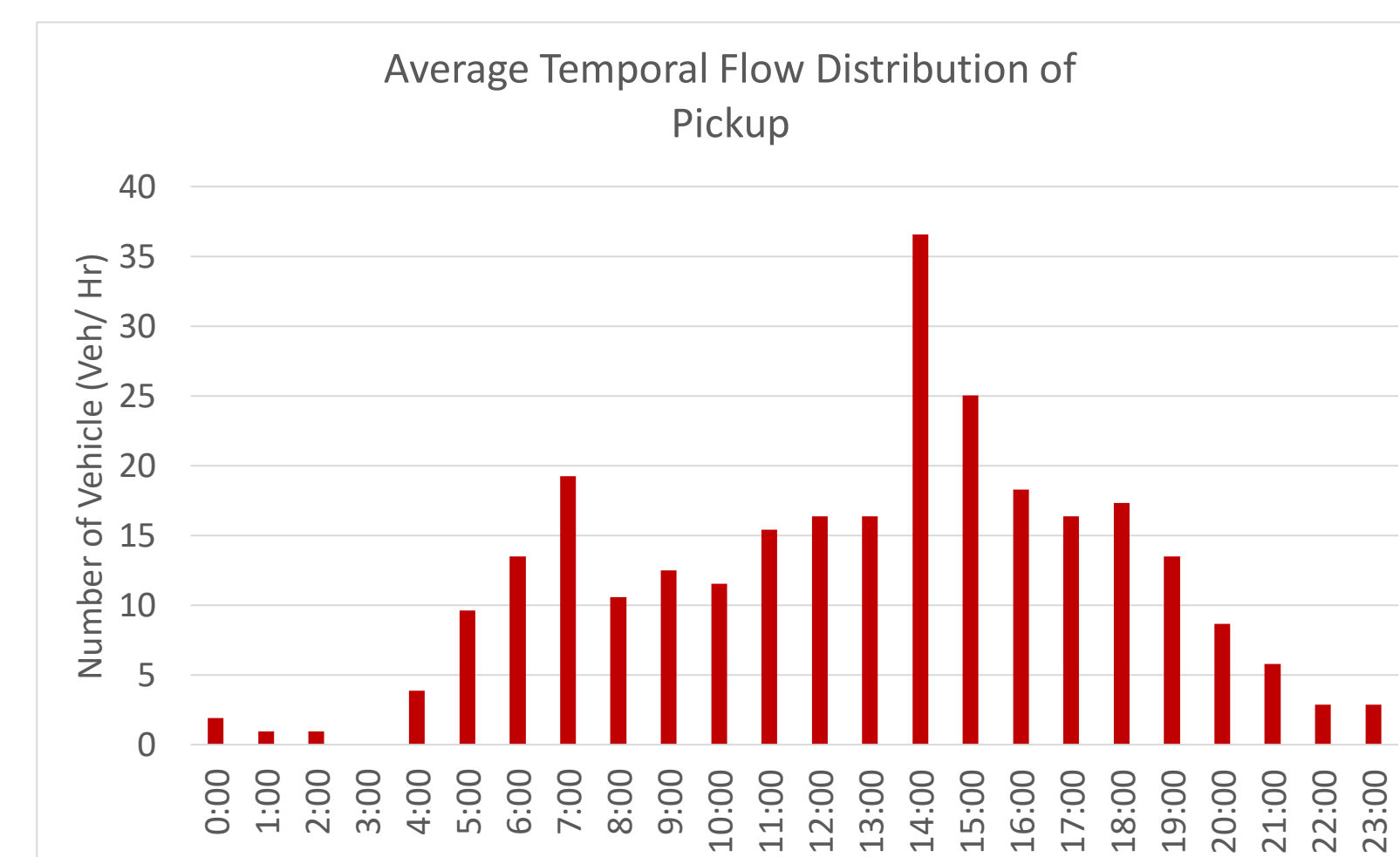
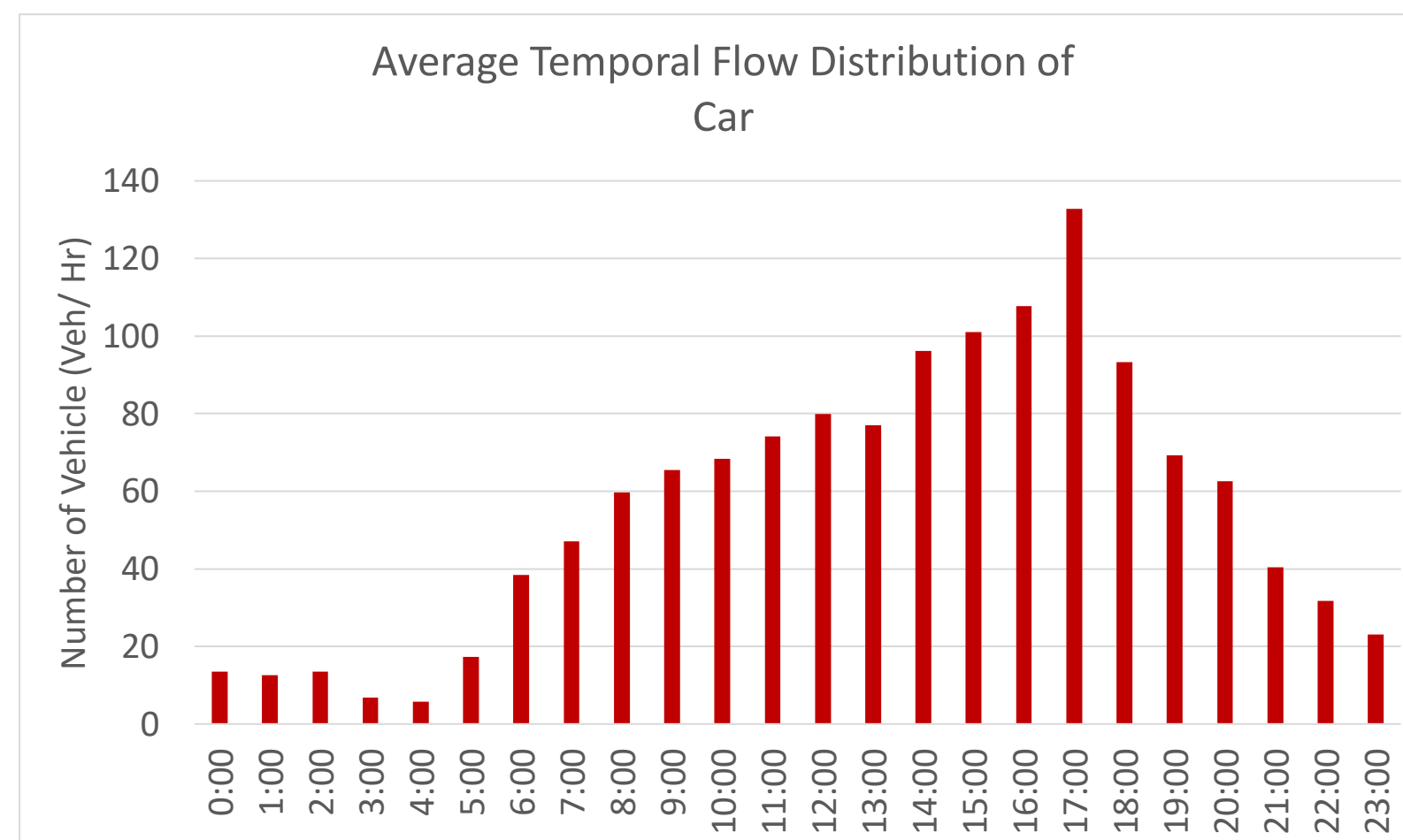
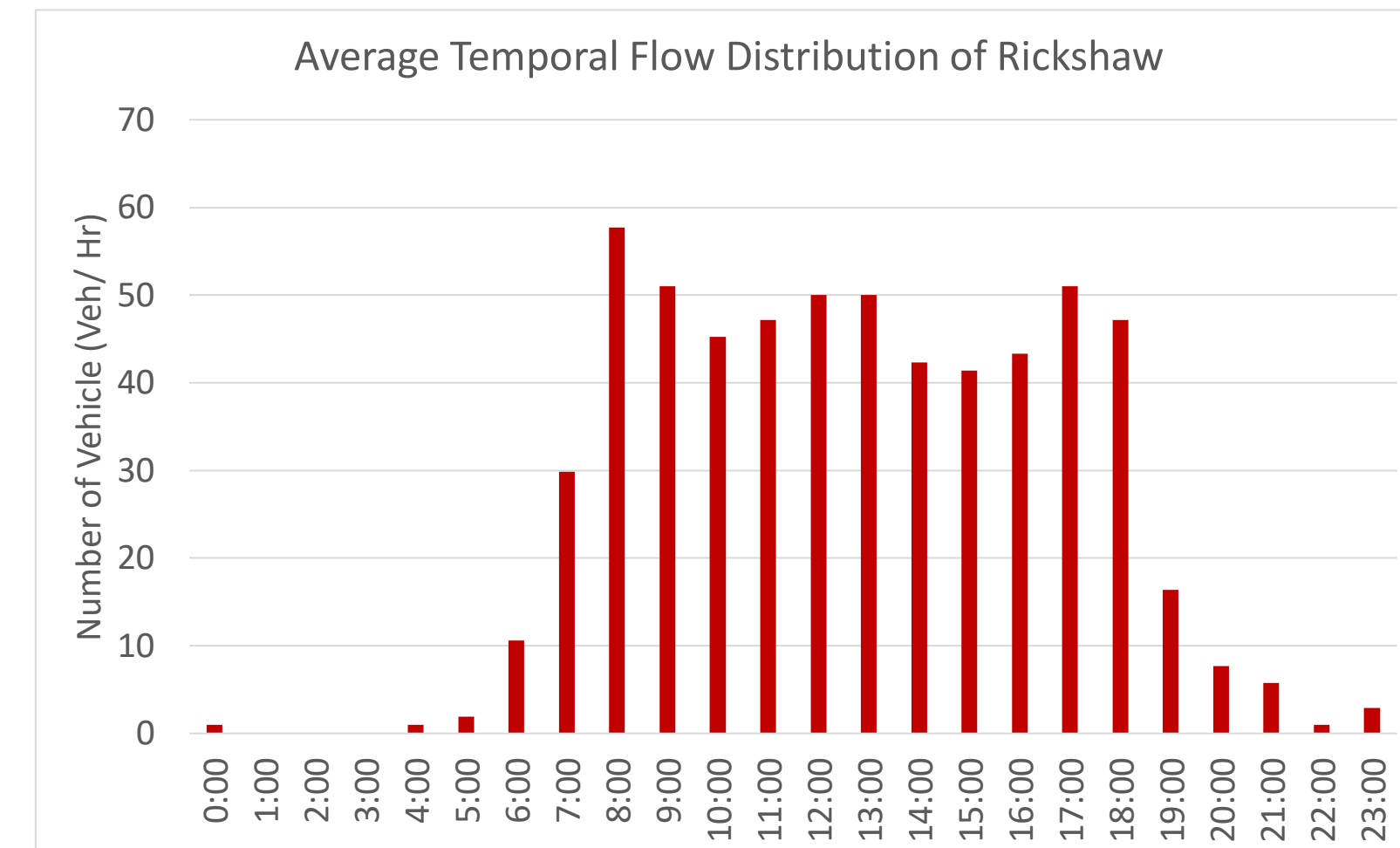
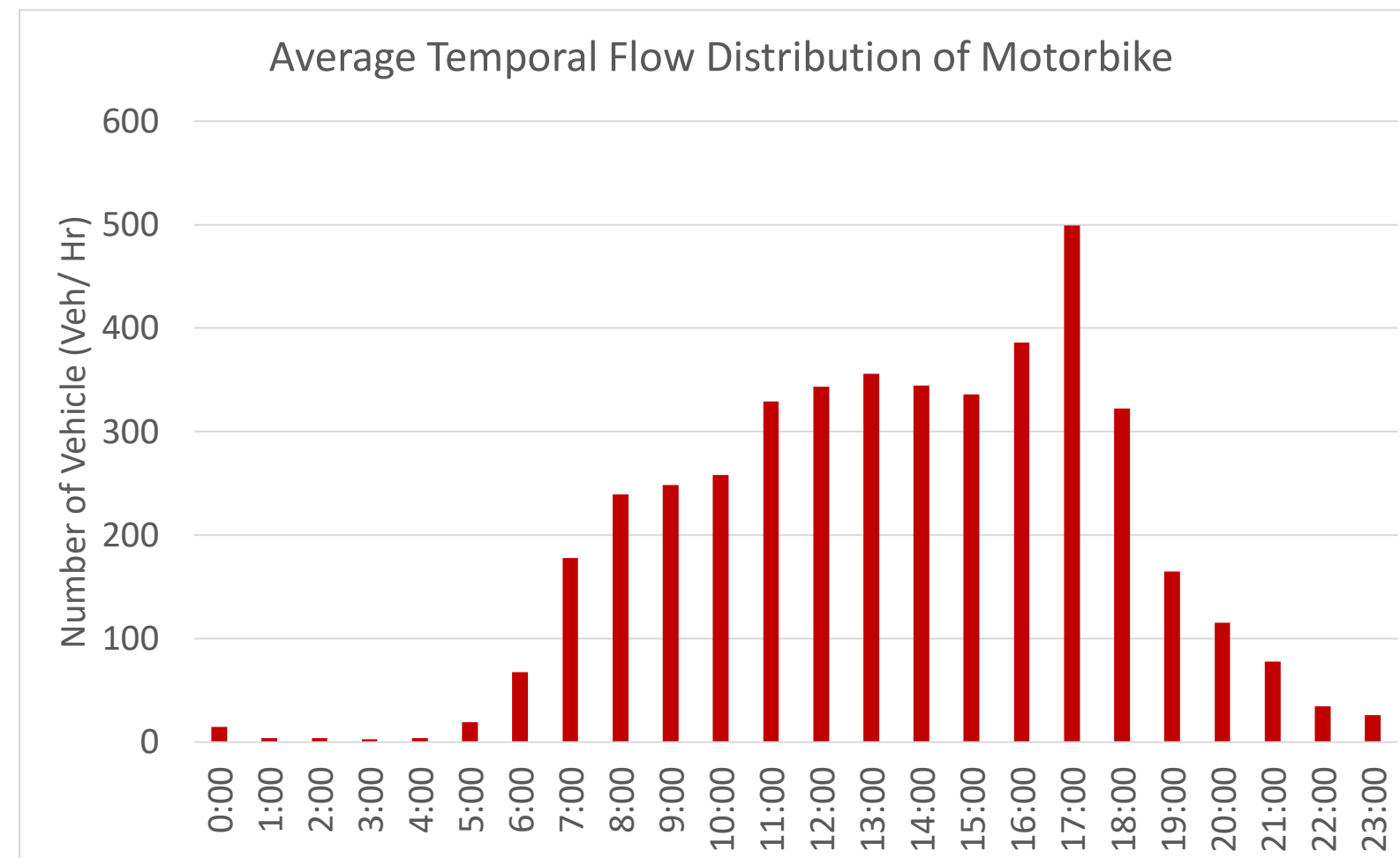


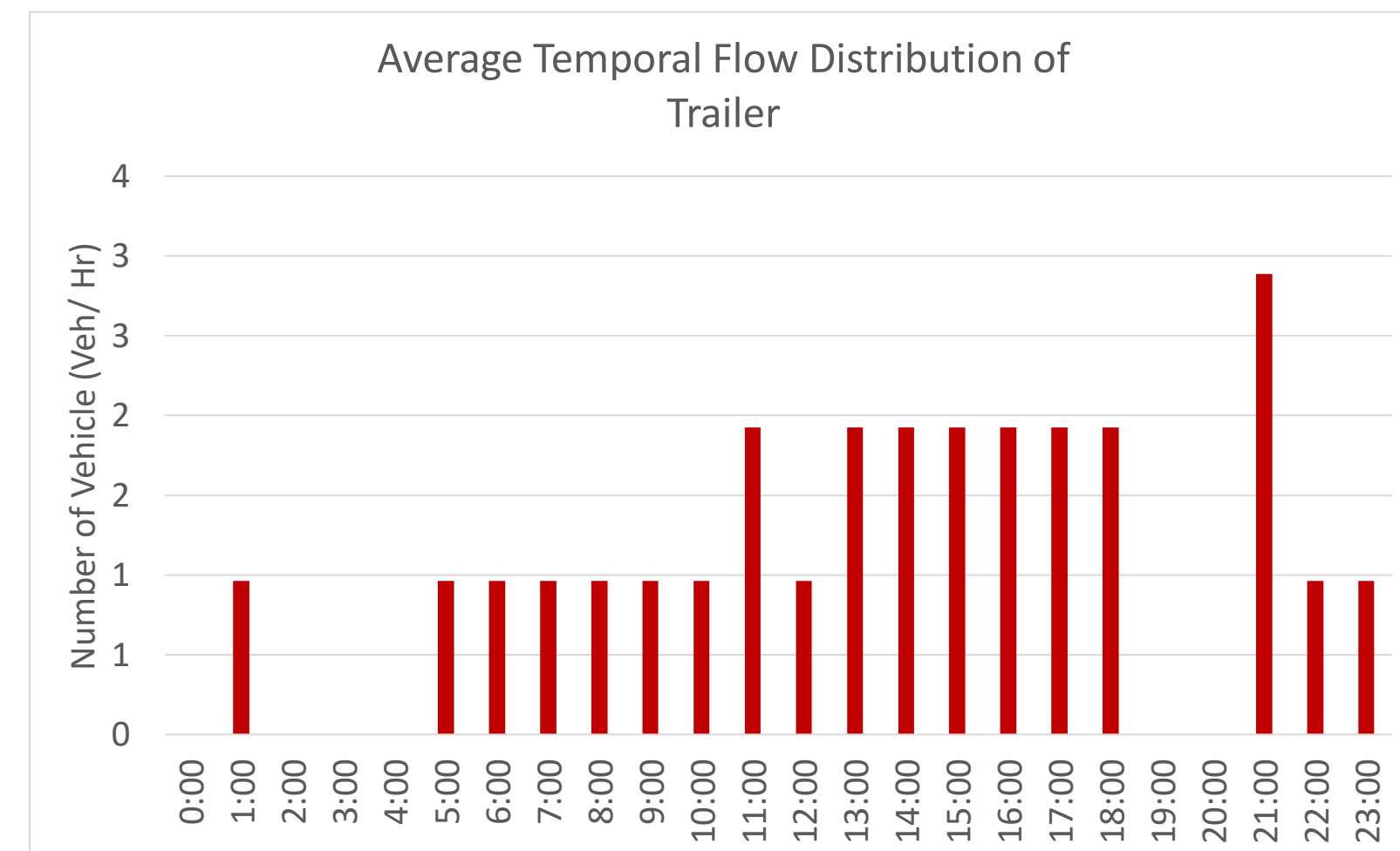
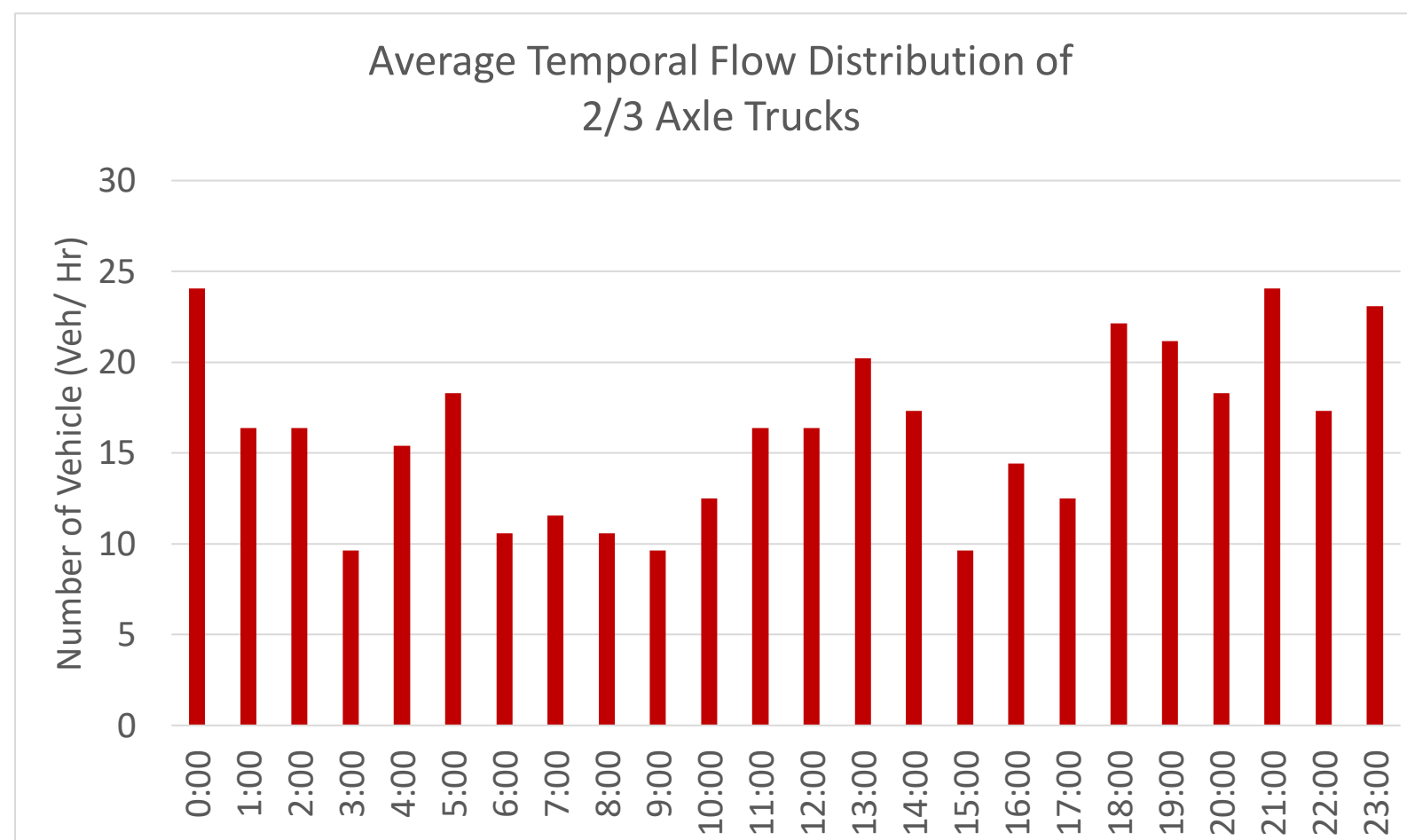
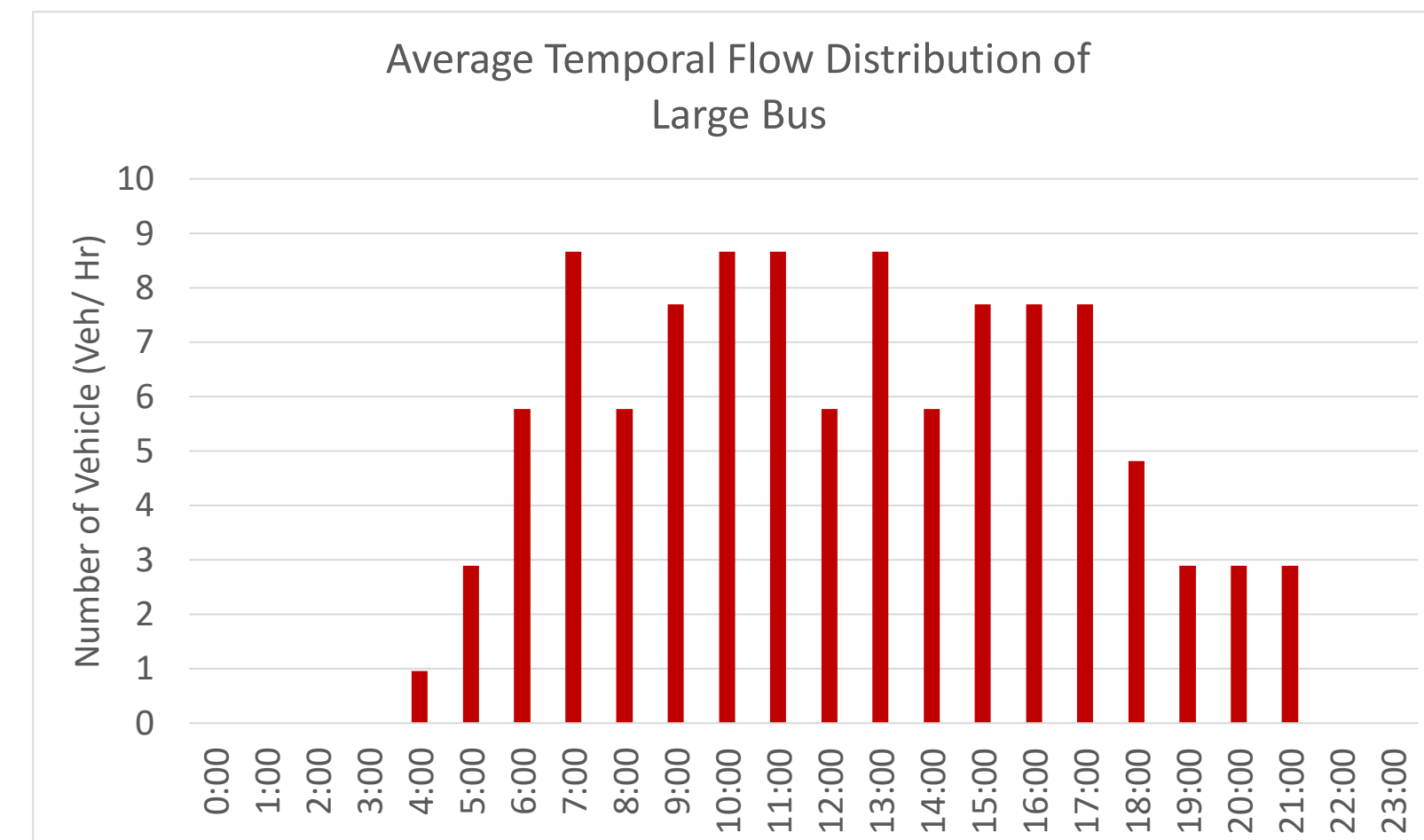
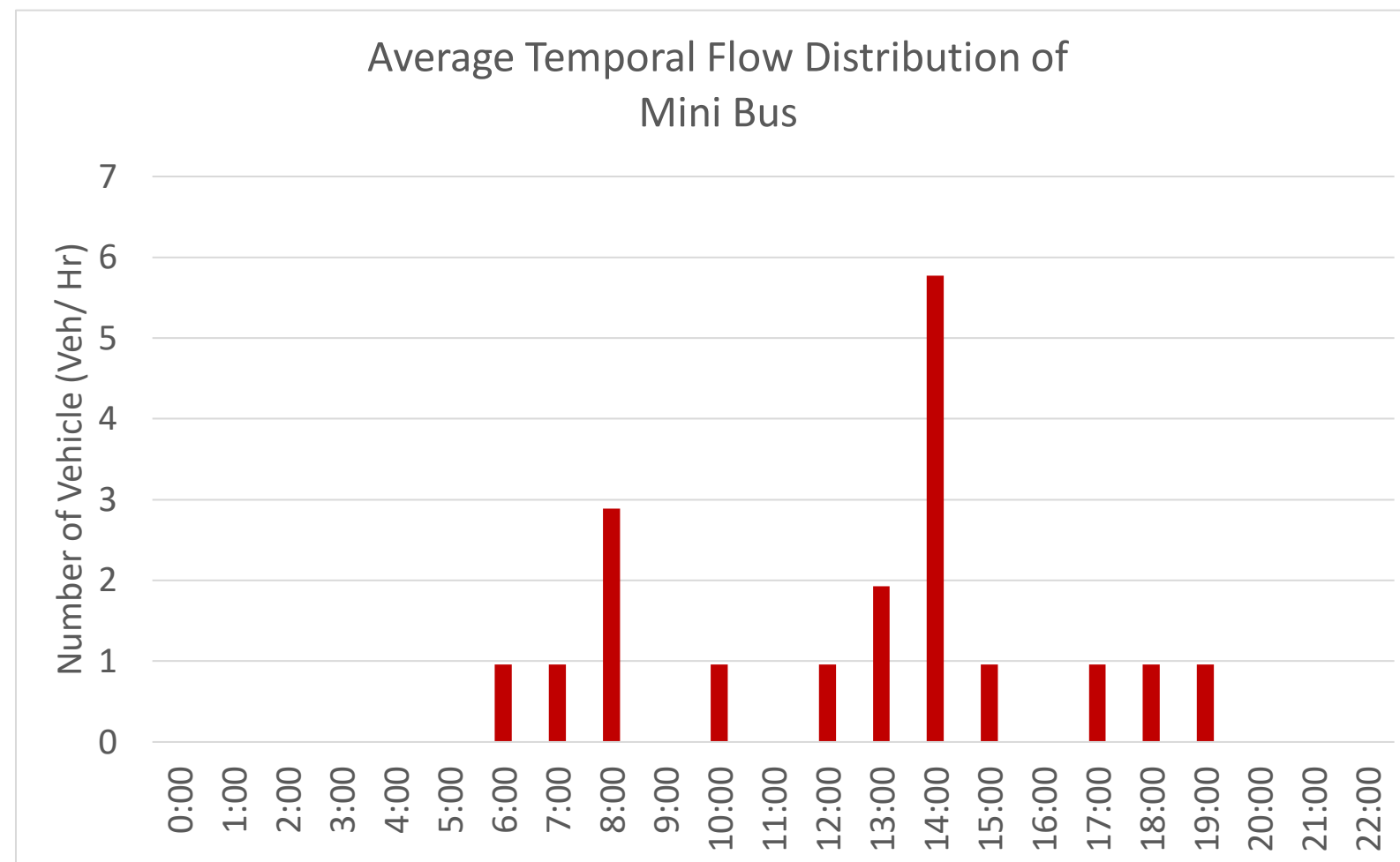
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-2 Narowal						Direction Number				2			
Coordinates		32.1074635, 74.8171722						From	Narowal			Towards	Muridke		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
25	2	Tuesday, October 8, 2024	15:00	16:00	364	46	128	29	1	7	14	3	-	3	595
26	2	Tuesday, October 8, 2024	16:00	17:00	393	40	130	20	-	8	19	-	-	7	617
27	2	Tuesday, October 8, 2024	17:00	18:00	517	44	133	20	-	8	10	-	1	8	741
28	2	Tuesday, October 8, 2024	18:00	19:00	276	46	99	11	-	5	25	3	1	10	476
29	2	Tuesday, October 8, 2024	19:00	20:00	168	15	66	10	1	3	25	-	1	4	293
30	2	Tuesday, October 8, 2024	20:00	21:00	109	10	66	7	-	3	23	-	-	2	220
31	2	Tuesday, October 8, 2024	21:00	22:00	71	3	46	7	-	4	32	2	-	4	169
32	2	Tuesday, October 8, 2024	22:00	23:00	30	1	30	3	-	-	21	1	-	1	87
33	2	Tuesday, October 8, 2024	23:00	0:00	27	3	18	-	1	-	22	-	-	2	73
34	2	Wednesday, October 9, 2024	00:00	1:00	12	-	18	1	-	-	32	-	-	2	65
35	2	Wednesday, October 9, 2024	01:00	2:00	3	-	11	2	-	-	13	-	-	-	29
36	2	Wednesday, October 9, 2024	02:00	3:00	3	-	13	2	-	-	17	-	-	-	35
37	2	Wednesday, October 9, 2024	03:00	4:00	4	-	3	-	-	-	12	-	-	-	19
38	2	Wednesday, October 9, 2024	04:00	5:00	3	2	5	6	-	1	15	-	-	-	32
39	2	Wednesday, October 9, 2024	05:00	6:00	15	2	14	7	-	4	24	1	-	1	68
40	2	Wednesday, October 9, 2024	06:00	7:00	58	11	34	13	2	6	9	-	1	-	134
41	2	Wednesday, October 9, 2024	07:00	8:00	162	28	57	20	-	8	11	-	1	7	294
42	2	Wednesday, October 9, 2024	08:00	9:00	210	58	62	17	2	5	10	2	1	13	380
43	2	Wednesday, October 9, 2024	09:00	10:00	230	50	71	13	-	8	12	3	2	14	403
44	2	Wednesday, October 9, 2024	10:00	11:00	247	41	55	9	-	9	16	-	-	12	389
45	2	Wednesday, October 9, 2024	11:00	12:00	357	39	75	17	-	9	17	2	1	21	538
46	2	Wednesday, October 9, 2024	12:00	13:00	325	51	80	12	2	4	18	2	1	15	510
47	2	Wednesday, October 9, 2024	13:00	14:00	365	50	69	10	2	9	23	4	1	17	550
48	2	Wednesday, October 9, 2024	14:00	15:00	335	35	93	33	6	5	25	-	4	16	552

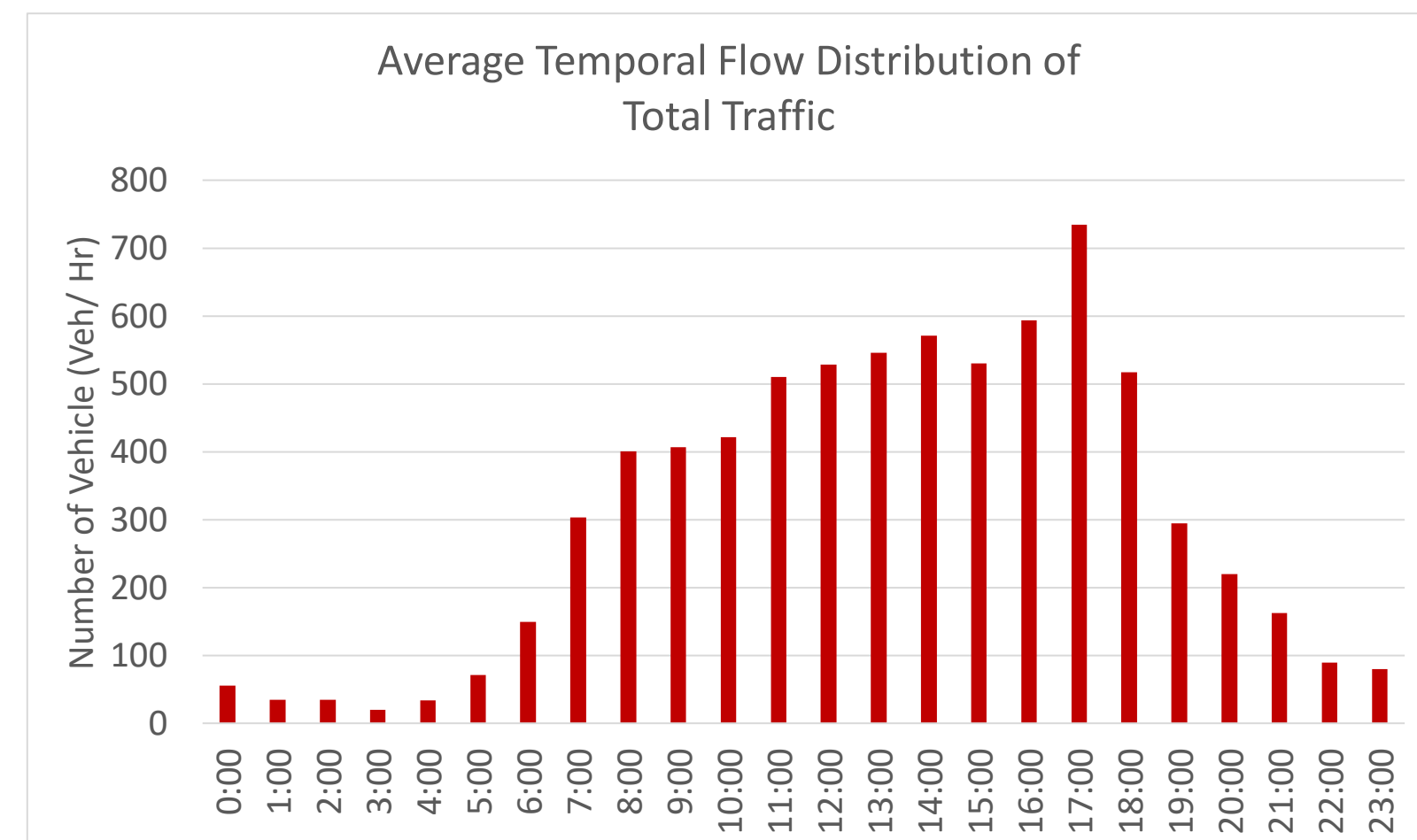
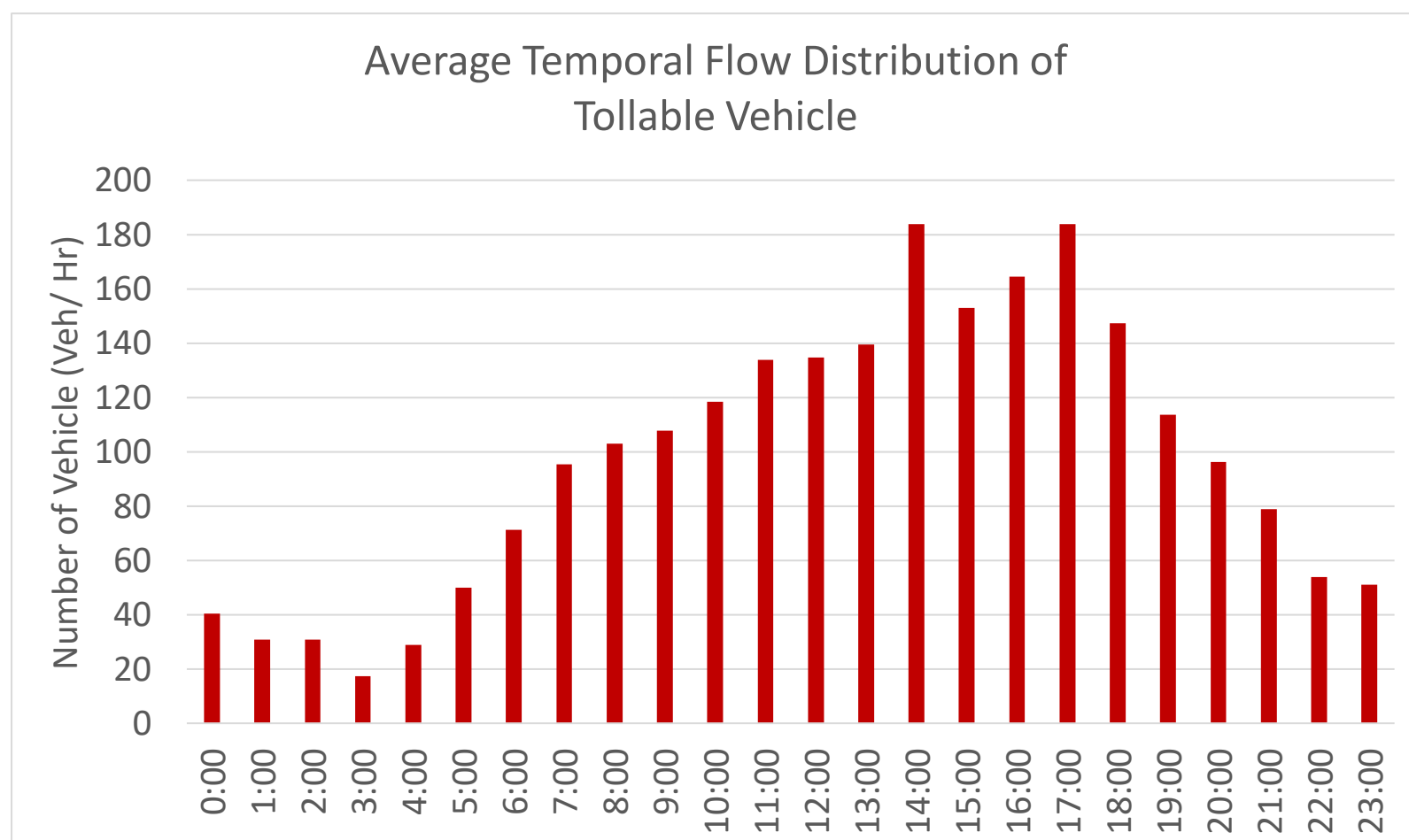
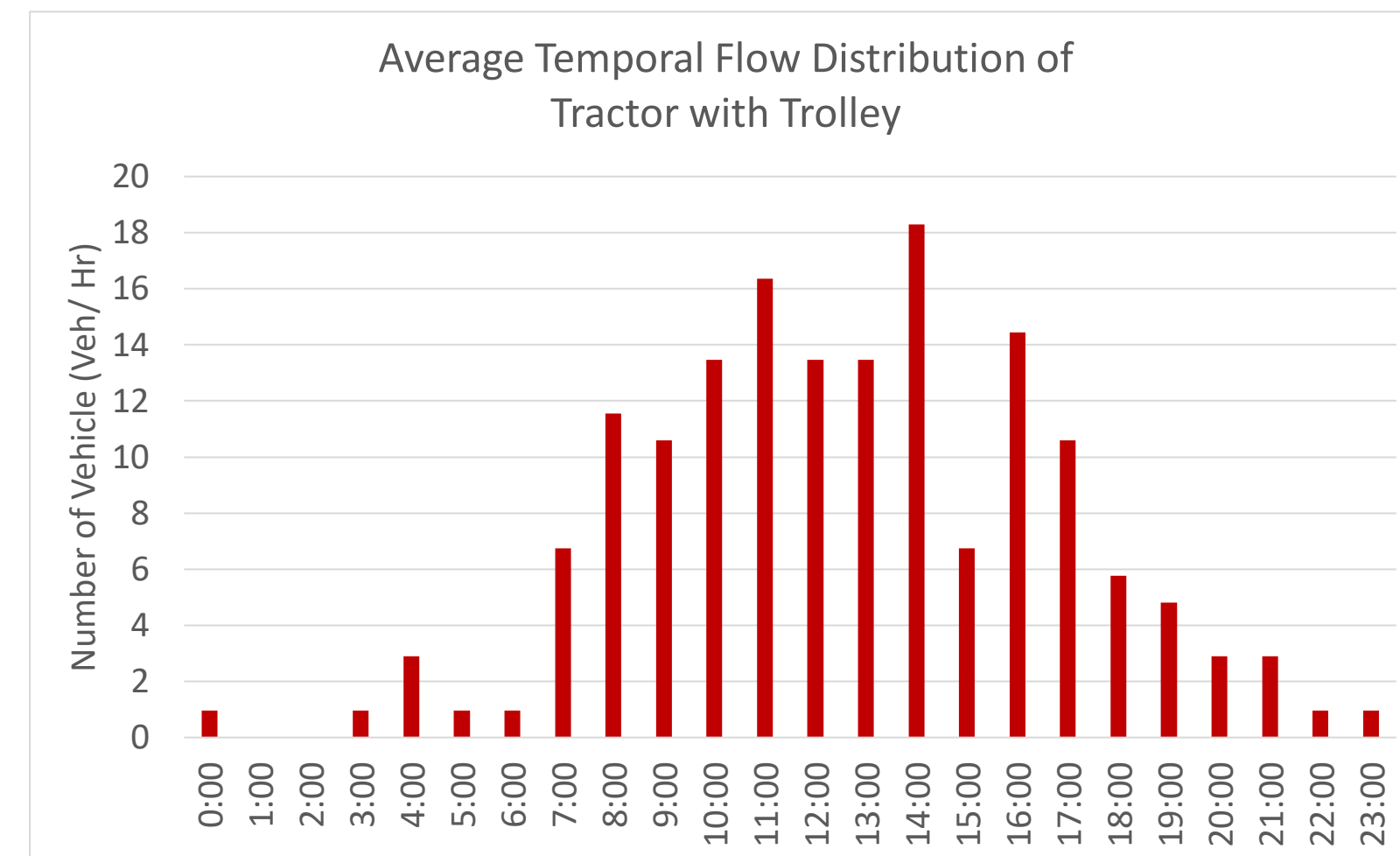
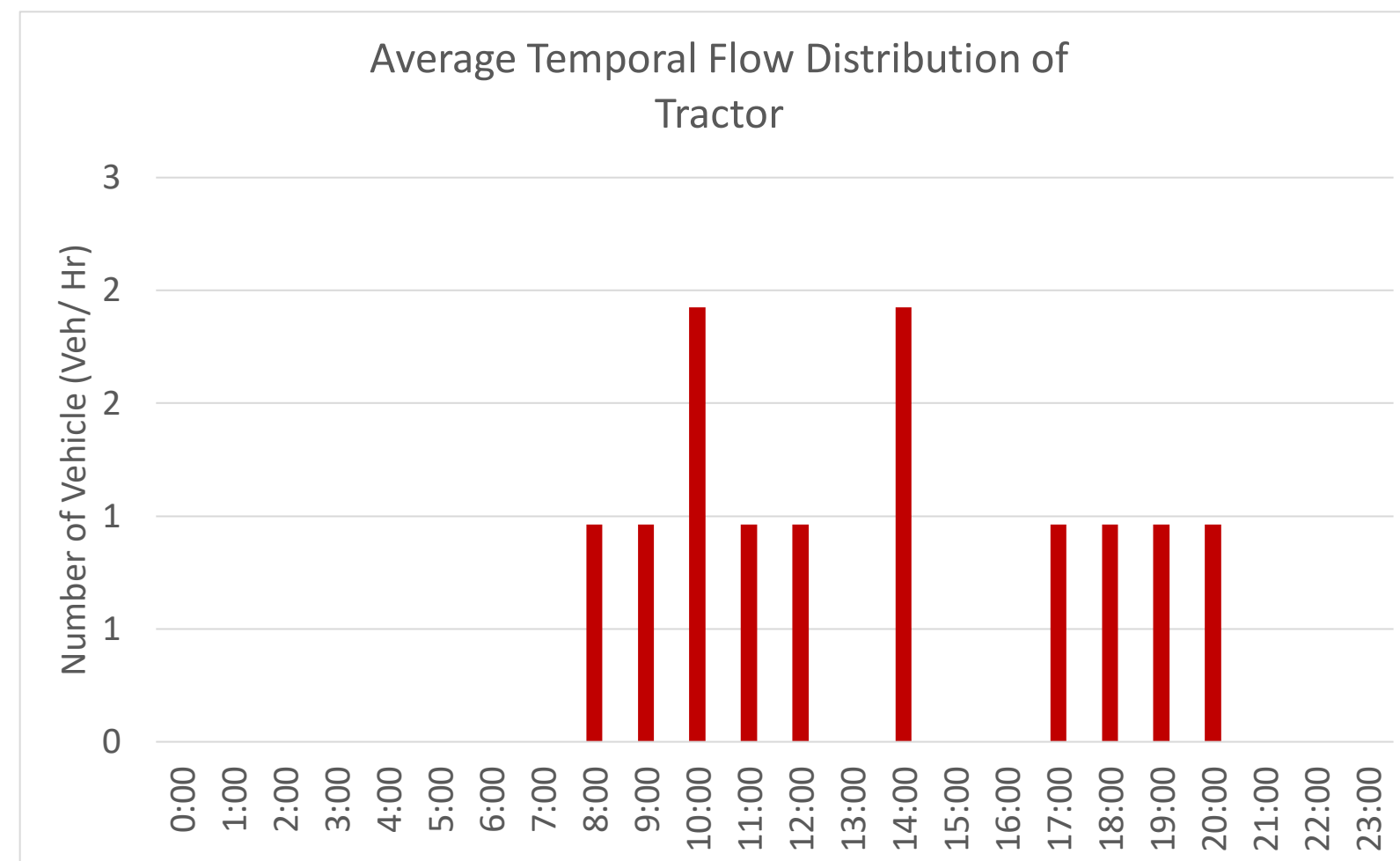


Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-2 Narowal						Direction Number					2		
Coordinates		32.1074635, 74.8171722						From	Narowal			Towards	Muridke		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
49	2	Wednesday, October 9, 2024	15:00	16:00	271	37	99	23	-	9	10	3	1	12	465
50	3	Tuesday, September 10, 2024	16:00	17:00	384	57	101	18	-	8	10	4	-	23	605
51	3	Tuesday, September 10, 2024	17:00	18:00	516	64	132	17	1	8	17	3	1	18	777
52	3	Tuesday, September 10, 2024	18:00	19:00	387	44	100	18	-	6	25	3	2	3	588
53	3	Tuesday, September 10, 2024	19:00	20:00	182	16	68	16	1	3	21	-	1	10	318
54	3	Tuesday, September 10, 2024	20:00	21:00	118	6	73	14	1	3	13	1	1	1	231
55	3	Tuesday, September 10, 2024	21:00	22:00	87	6	39	6	-	1	22	2	-	5	168
56	3	Tuesday, September 10, 2024	22:00	23:00	48	1	42	3	-	1	13	-	-	-	108
57	3	Tuesday, September 10, 2024	23:00	0:00	22	-	26	2	-	-	31	-	-	2	83
58	3	Thursday, October 10, 2024	00:00	1:00	10	1	12	2	-	-	23	-	-	1	49
59	3	Thursday, October 10, 2024	01:00	2:00	5	-	18	-	-	-	27	1	-	-	51
60	3	Thursday, October 10, 2024	02:00	3:00	2	-	15	1	-	-	18	-	-	-	36
61	3	Thursday, October 10, 2024	03:00	4:00	2	-	4	1	-	-	8	-	-	2	17
62	3	Thursday, October 10, 2024	04:00	5:00	4	-	5	-	-	1	13	-	-	6	29
63	3	Thursday, October 10, 2024	05:00	6:00	29	2	17	15	-	2	15	1	-	-	81
64	3	Thursday, October 10, 2024	06:00	7:00	64	13	35	9	1	7	11	2	-	-	142
65	3	Thursday, October 10, 2024	07:00	8:00	193	31	37	20	3	9	11	2	-	7	313
66	3	Thursday, October 10, 2024	08:00	9:00	278	59	60	5	5	7	14	2	1	18	449
67	3	Thursday, October 10, 2024	09:00	10:00	283	60	55	13	-	8	9	-	-	17	445
68	3	Thursday, October 10, 2024	10:00	11:00	289	46	75	12	1	9	10	2	3	26	473
69	3	Thursday, October 10, 2024	11:00	12:00	360	49	65	14	-	8	19	2	3	20	540
70	3	Thursday, October 10, 2024	12:00	13:00	380	50	82	22	1	8	16	1	-	22	582
71	3	Thursday, October 10, 2024	13:00	14:00	371	54	94	24	2	10	17	2	-	16	590
72	3	Thursday, October 10, 2024	14:00	15:00	392	59	108	47	5	8	21	4	1	29	674









MB-3 Shakargarh



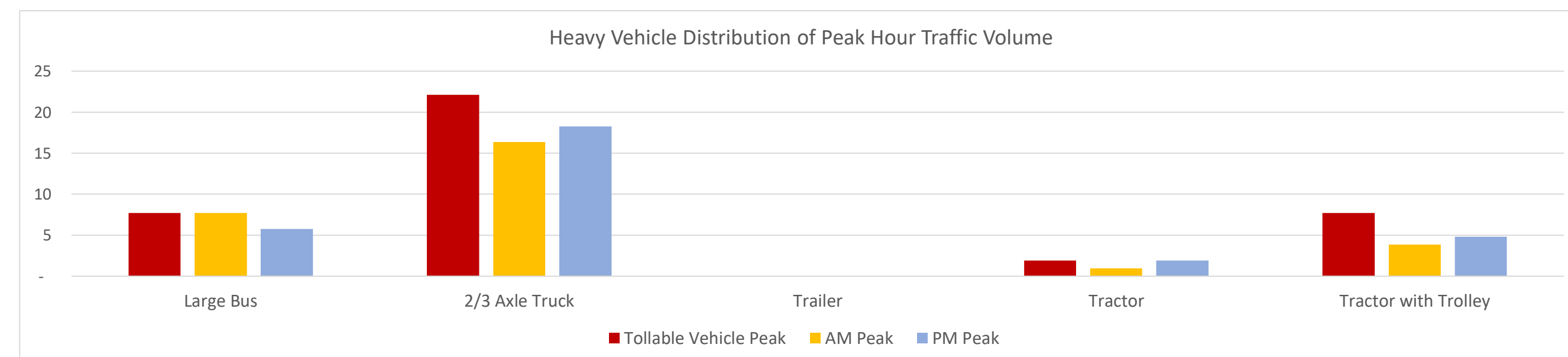
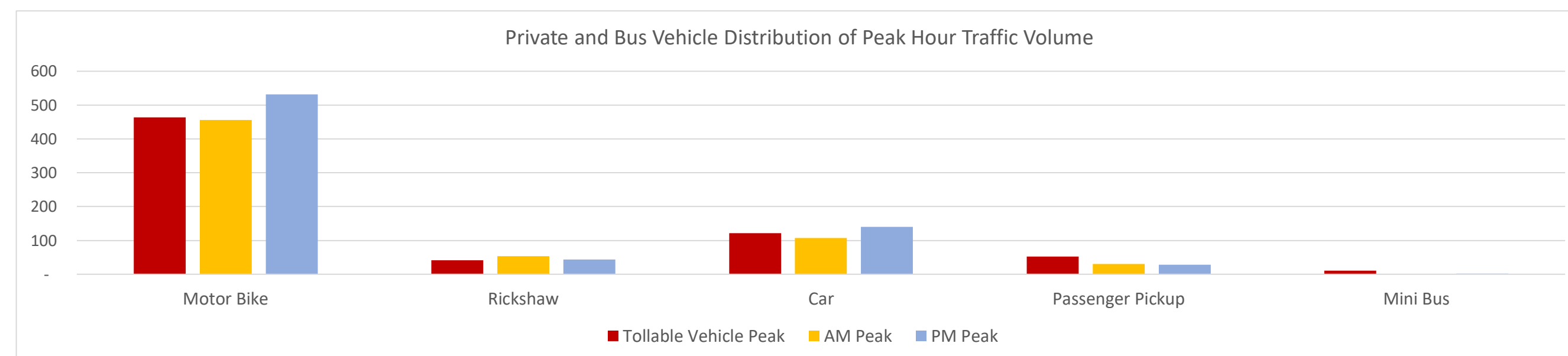
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode
 Vehicles Count Survey
 Summary



Location	MB-3 Shakargarh	Direction Map
Coordinates	32.1743739, 75.0965285	



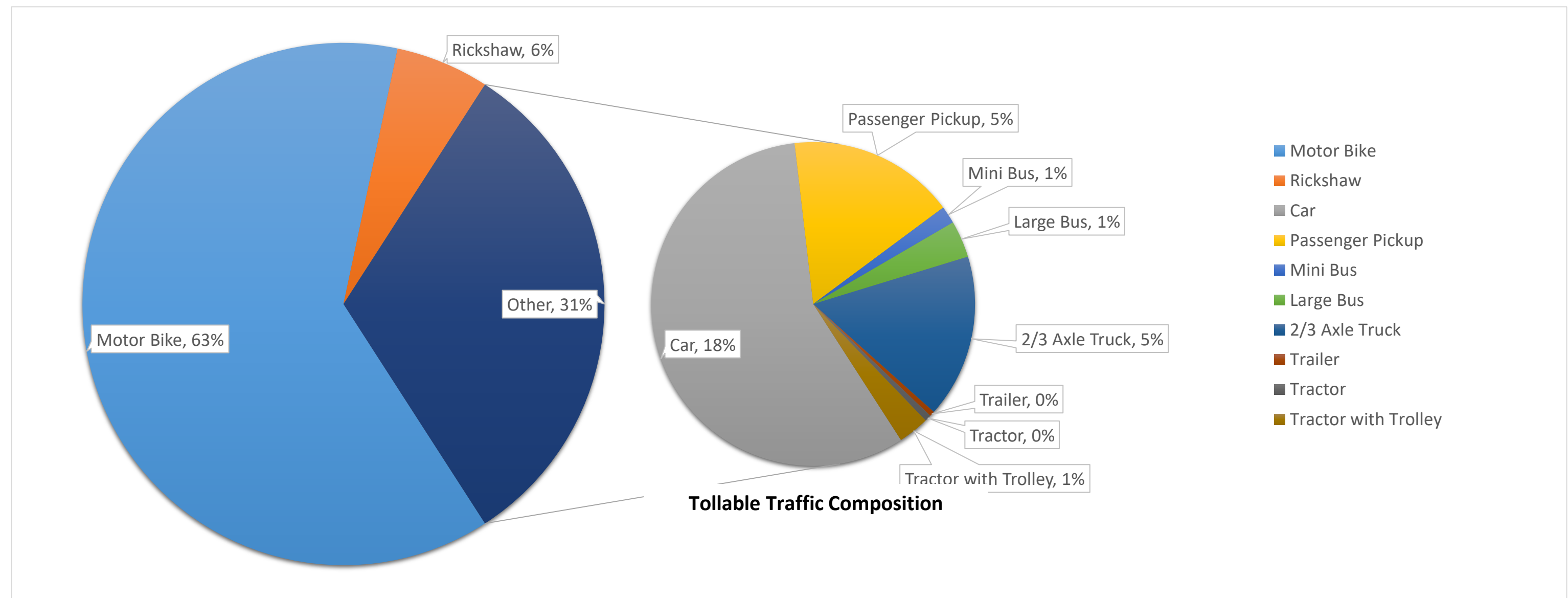
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode															
Vehicles Count Survey															
Summary															
Location		MB-3 Shakargarh				Peekest Hours Summary (Vehicles per Hour in Average Annual Hourly Traffic)									
Coordinates		32.1743739, 75.0965285													
Day	Peak Hour Time	Direction	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable	
Tollable Vehicle Peak	14:00	Total	464	41	121	52	11	8	22	-	2	8	728	223	
		1	225	23	60	21	10	3	11	-	1	4	357	109	
		2	239	18	62	31	1	5	12	-	1	4	371	115	
AM Peak	10:00	Total	456	53	107	31	-	8	16	-	1	4	675	166	
		1	220	29	62	13	-	4	7	-	-	1	335	86	
		2	236	24	45	18	-	4	10	-	1	3	341	81	
PM Peak	17:00	Total	532	43	140	28	2	6	18	-	2	5	777	201	
		1	295	26	72	15	1	2	12	-	1	3	427	106	
		2	237	17	68	13	1	4	7	-	1	2	349	95	



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode												
Vehicles Count Survey												
Summary												
Location	MB-3 Shakargarh		25 Year Traffic Projection of AADT (Both Direction)									
Coordinates	32.1743739, 75.0965285											
Year	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	AADT	Tollable
2024	5,850	543	1,704	497	52	110	486	15	19	92	9,368	2,975
2025	6,001	557	1,748	509	53	113	498	16	20	95	9,610	3,052
2026	6,155	571	1,793	522	54	116	511	16	21	97	9,856	3,130
2027	6,313	586	1,839	535	55	119	524	16	22	99	10,108	3,209
2028	6,475	601	1,886	549	56	122	537	16	23	102	10,367	3,291
2029	6,641	616	1,934	563	57	125	551	16	24	105	10,632	3,375
2030	6,812	632	1,984	577	58	128	565	16	25	108	10,905	3,461
2031	6,987	648	2,035	592	59	131	580	16	26	111	11,185	3,550
2032	7,167	665	2,087	607	61	134	595	16	27	114	11,473	3,641
2033	7,351	682	2,141	623	63	137	610	16	28	117	11,768	3,735
2034	7,540	700	2,196	639	65	141	626	16	29	120	12,072	3,832
2035	7,734	718	2,252	655	67	145	642	16	30	123	12,382	3,930
2036	7,933	736	2,310	672	69	149	658	16	31	126	12,700	4,031
2037	8,137	755	2,369	689	71	153	675	16	32	129	13,026	4,134
2038	8,346	774	2,430	707	73	157	692	16	33	132	13,360	4,240
2039	8,560	794	2,492	725	75	161	710	16	34	135	13,702	4,348
2040	8,780	814	2,556	744	77	165	728	16	35	138	14,053	4,459
2041	9,006	835	2,622	763	79	169	747	16	36	142	14,415	4,574
2042	9,237	856	2,689	783	81	173	766	16	37	146	14,784	4,691
2043	9,474	878	2,758	803	83	177	786	16	38	150	15,163	4,811
2044	9,717	901	2,829	824	85	182	806	16	39	154	15,553	4,935
2045	9,967	924	2,902	845	87	187	827	16	40	158	15,953	5,062
2046	10,223	948	2,977	867	89	192	848	16	41	162	16,363	5,192
2047	10,486	972	3,054	889	91	197	870	16	42	166	16,783	5,325
2048	10,755	997	3,132	912	93	202	892	16	43	170	17,212	5,460



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey Summary														
Location		MB-3 Shakargarh			Average Annual Daily Traffic (AADT) Summary									
Coordinates		32.1743739, 75.0965285												
Direction	From	Towards	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total	Tollable
Total			5,850	543	1,704	497	52	110	486	15	19	92	9,368	2,975
Percentage Composition (%)			62%	6%	18%	5%	1%	1%	5%	0%	0%	1%	100%	32%
1	Shakargarh	Narowal	2,971	276	842	260	34	56	257	10	11	43	4,759	1,512
2	Narowal	Shakargarh	2,879	267	862	237	18	54	229	6	9	49	4,609	1,464



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Average Annual Hourly Interval													
Location Coordinates		MB-3 Shakargarh 32.1743739, 75.0965285				All Directional Count							
S.No.	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	0:00	1:00	5	0	19	2	0	1	32	0	0	1	60
2	1:00	2:00	2	0	14	4	0	1	29	0	0	1	51
3	2:00	3:00	3	0	7	3	0	1	27	0	0	1	41
4	3:00	4:00	4	0	5	5	1	0	20	0	0	2	37
5	4:00	5:00	8	2	10	4	0	1	26	0	0	3	53
6	5:00	6:00	48	8	19	8	0	6	20	0	1	0	110
7	6:00	7:00	141	12	38	25	4	5	22	0	0	3	250
8	7:00	8:00	374	24	64	48	15	12	10	1	0	3	550
9	8:00	9:00	371	38	82	25	2	7	13	0	2	5	545
10	9:00	10:00	402	45	84	30	2	5	15	2	1	3	589
11	10:00	11:00	456	53	107	31	0	8	16	0	1	4	675
12	11:00	12:00	455	54	98	30	0	8	14	2	1	5	667
13	12:00	13:00	476	44	113	31	2	8	16	0	1	7	698
14	13:00	14:00	480	42	114	37	6	6	15	1	1	5	706
15	14:00	15:00	464	41	121	52	11	8	22	0	2	8	728
16	15:00	16:00	440	42	118	34	3	7	14	0	1	7	666
17	16:00	17:00	497	48	127	27	4	7	14	3	2	7	735
18	17:00	18:00	532	43	140	28	2	6	18	0	2	5	777
19	18:00	19:00	357	23	125	26	0	6	20	4	2	6	569
20	19:00	20:00	173	9	90	18	1	4	24	1	1	6	327
21	20:00	21:00	87	6	79	11	0	2	16	1	2	6	209
22	21:00	22:00	48	3	62	9	0	3	21	0	0	2	147
23	22:00	23:00	17	5	44	6	0	0	21	1	0	3	97
24	23:00	0:00	10	1	24	6	0	2	37	0	0	3	82
Average Annual Daily Traffic			5,850	543	1,704	497	52	110	486	15	19	92	9,368



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location Coordinates		MB-3 Shakargarh 32.1743739, 75.0965285						All Directional Count							
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	1	Monday, October 7, 2024	16:00	17:00	570	58	142	35	2	10	24	3	1	8	853
2	1	Monday, October 7, 2024	17:00	18:00	629	47	190	37	2	7	26	-	2	2	942
3	1	Monday, October 7, 2024	18:00	19:00	404	38	147	32	-	5	20	2	2	5	655
4	1	Monday, October 7, 2024	19:00	20:00	181	18	102	23	1	5	38	-	1	8	377
5	1	Monday, October 7, 2024	20:00	21:00	101	12	67	14	-	2	18	-	1	2	217
6	1	Monday, October 7, 2024	21:00	22:00	55	4	68	9	-	5	20	1	-	1	163
7	1	Monday, October 7, 2024	22:00	23:00	21	6	47	4	-	2	18	1	-	6	105
8	1	Monday, October 7, 2024	23:00	0:00	7	1	31	7	1	3	37	-	-	10	97
9	1	Tuesday, October 8, 2024	00:00	1:00	6	-	19	2	-	-	41	1	-	3	72
10	1	Tuesday, October 8, 2024	01:00	2:00	3	-	15	2	-	-	29	-	-	4	53
11	1	Tuesday, October 8, 2024	02:00	3:00	1	-	6	1	-	1	31	-	-	3	43
12	1	Tuesday, October 8, 2024	03:00	4:00	4	1	6	4	-	1	26	-	-	5	47
13	1	Tuesday, October 8, 2024	04:00	5:00	5	1	16	3	-	1	26	1	-	9	62
14	1	Tuesday, October 8, 2024	05:00	6:00	55	11	24	3	-	5	33	-	-	1	132
15	1	Tuesday, October 8, 2024	06:00	7:00	160	12	49	23	6	5	24	-	-	5	284
16	1	Tuesday, October 8, 2024	07:00	8:00	446	29	67	50	21	12	12	-	-	3	640
17	1	Tuesday, October 8, 2024	08:00	9:00	413	46	76	25	1	9	22	-	1	3	596
18	1	Tuesday, October 8, 2024	09:00	10:00	464	57	88	42	1	6	13	1	1	3	676
19	1	Tuesday, October 8, 2024	10:00	11:00	514	62	127	32	-	10	18	-	-	6	769
20	1	Tuesday, October 8, 2024	11:00	12:00	550	53	119	37	1	10	16	-	2	2	790
21	1	Tuesday, October 8, 2024	12:00	13:00	510	50	127	38	1	9	19	-	-	3	757
22	1	Tuesday, October 8, 2024	13:00	14:00	550	47	119	41	5	11	13	-	-	2	788
23	1	Tuesday, October 8, 2024	14:00	15:00	574	34	125	58	12	10	21	-	3	7	844
24	1	Tuesday, October 8, 2024	15:00	16:00	486	39	105	39	3	9	9	-	1	1	692

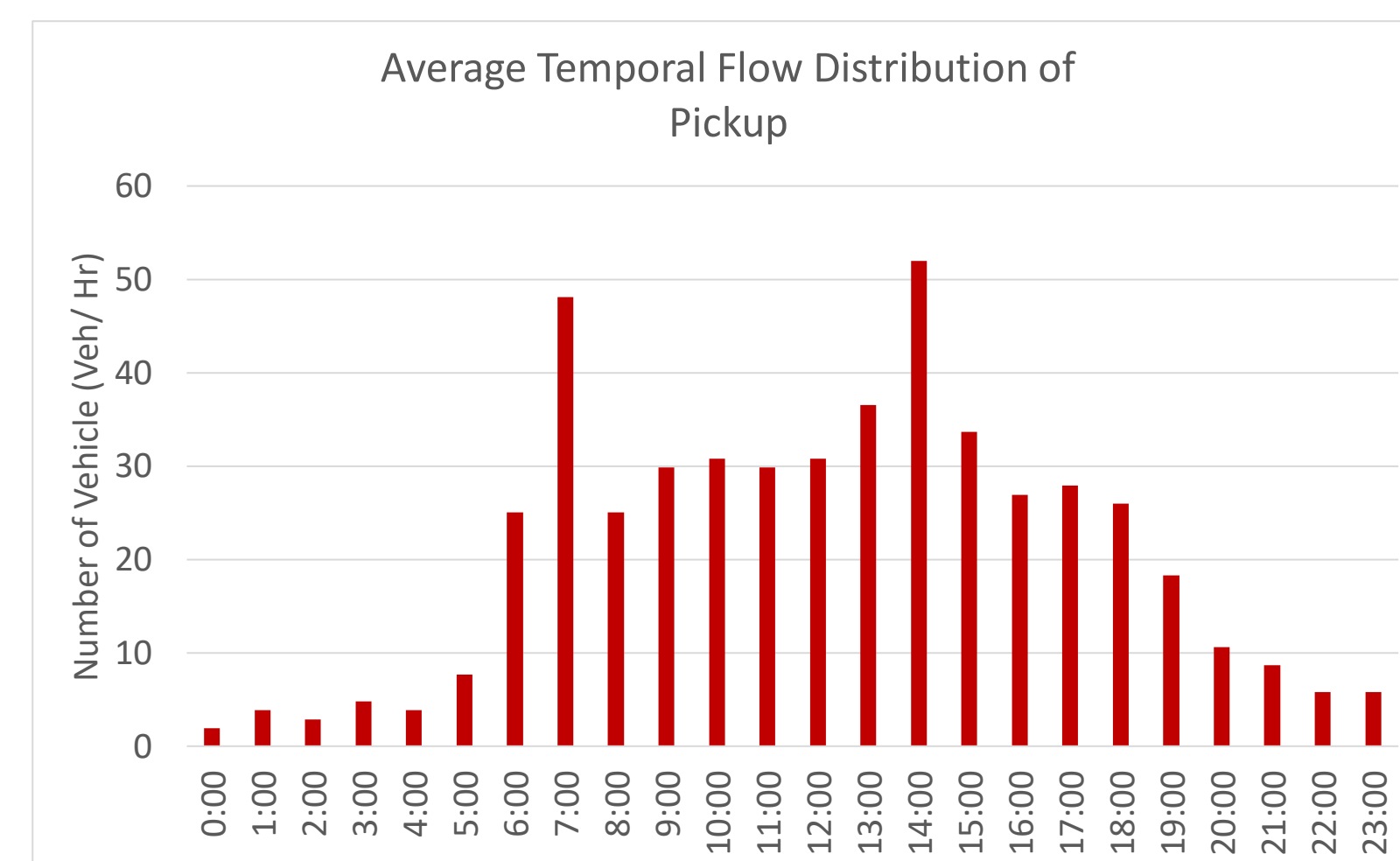
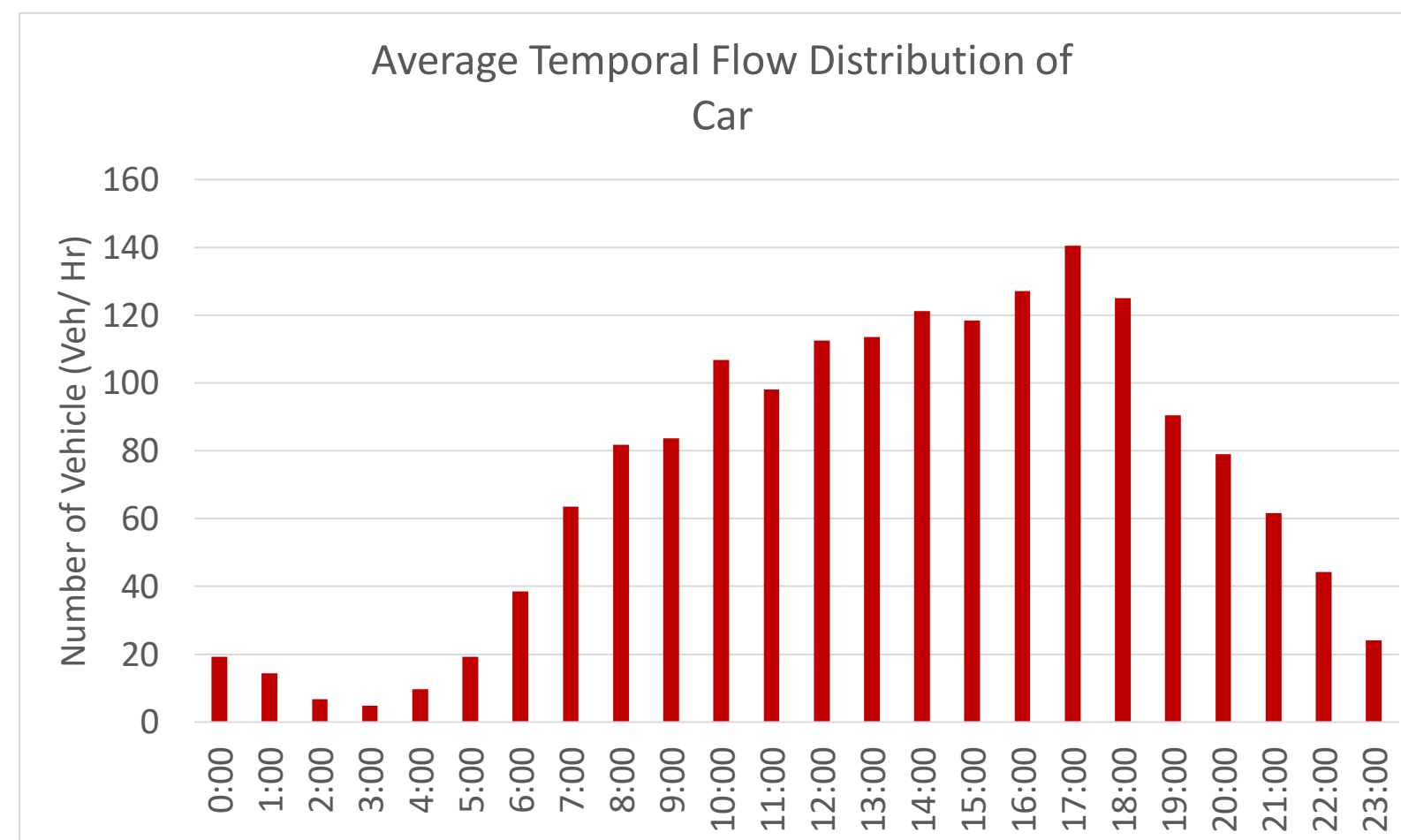
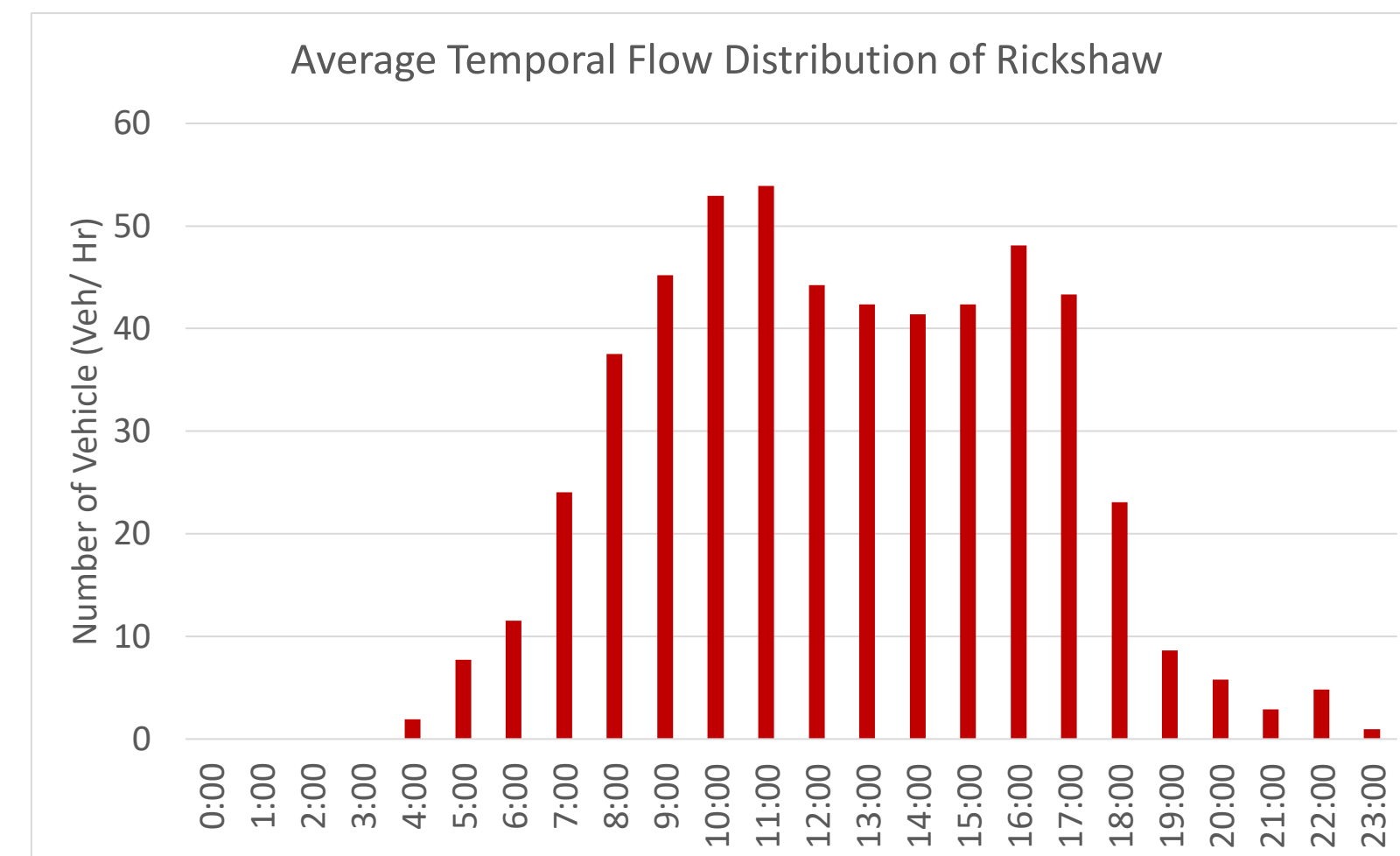
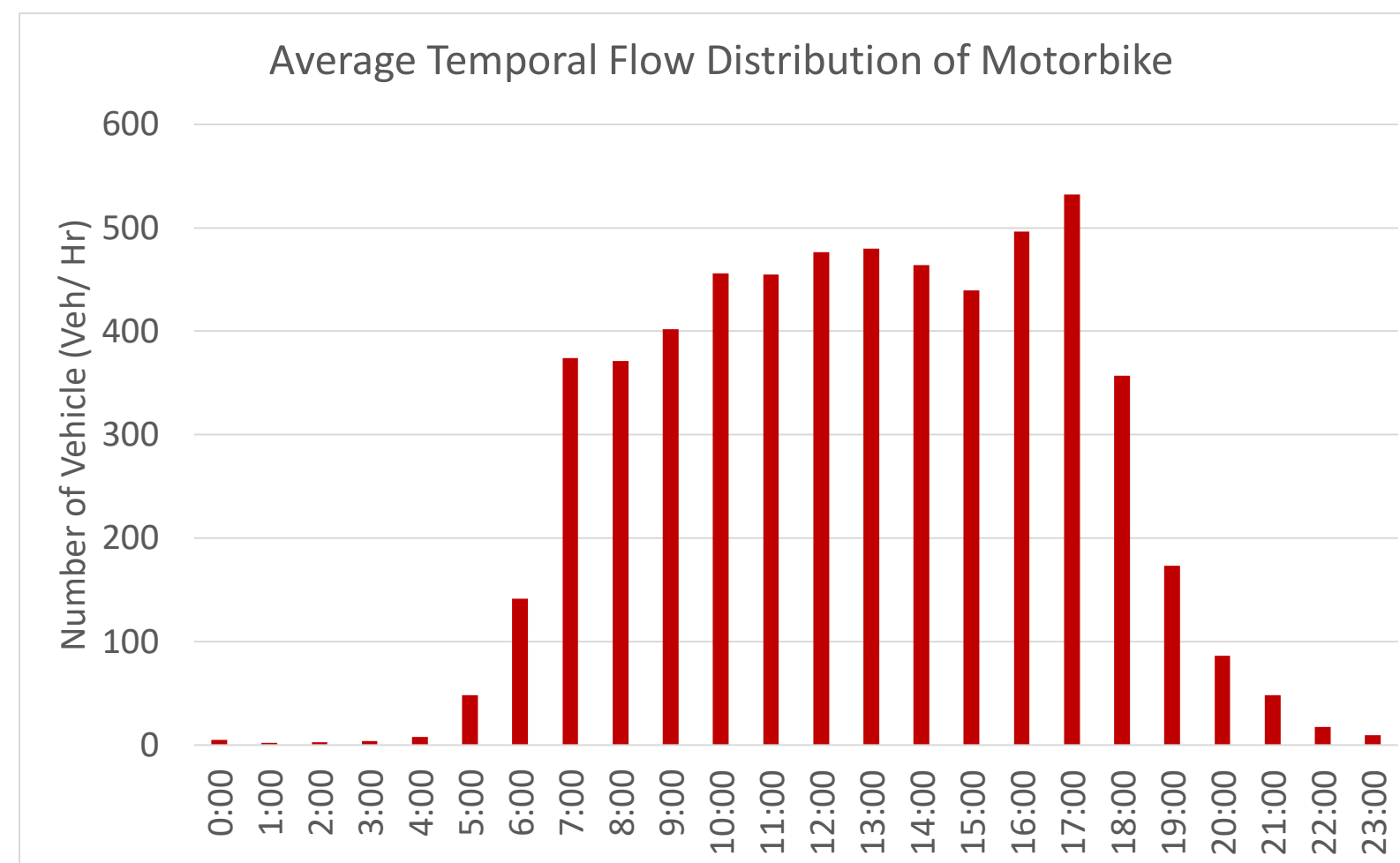


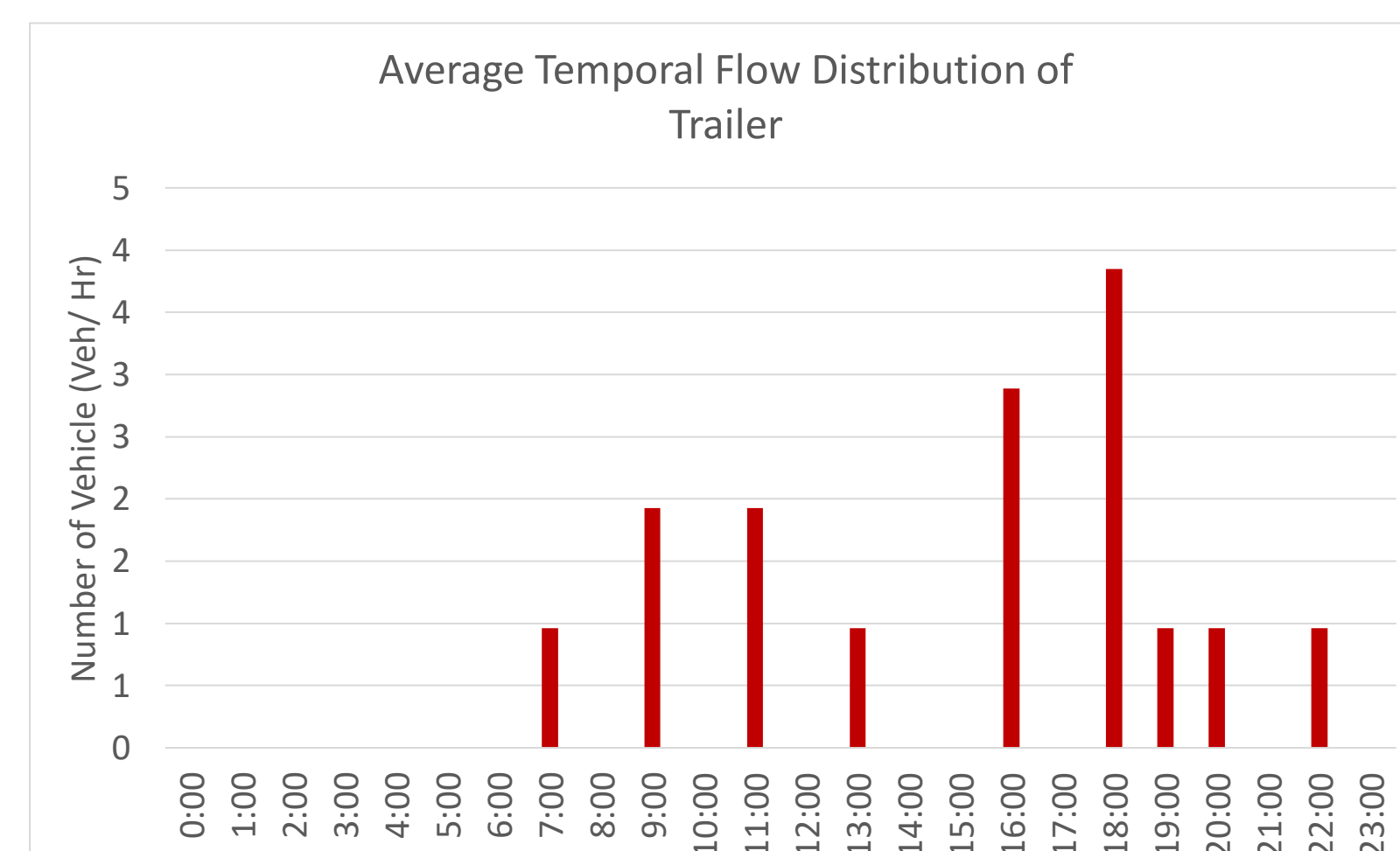
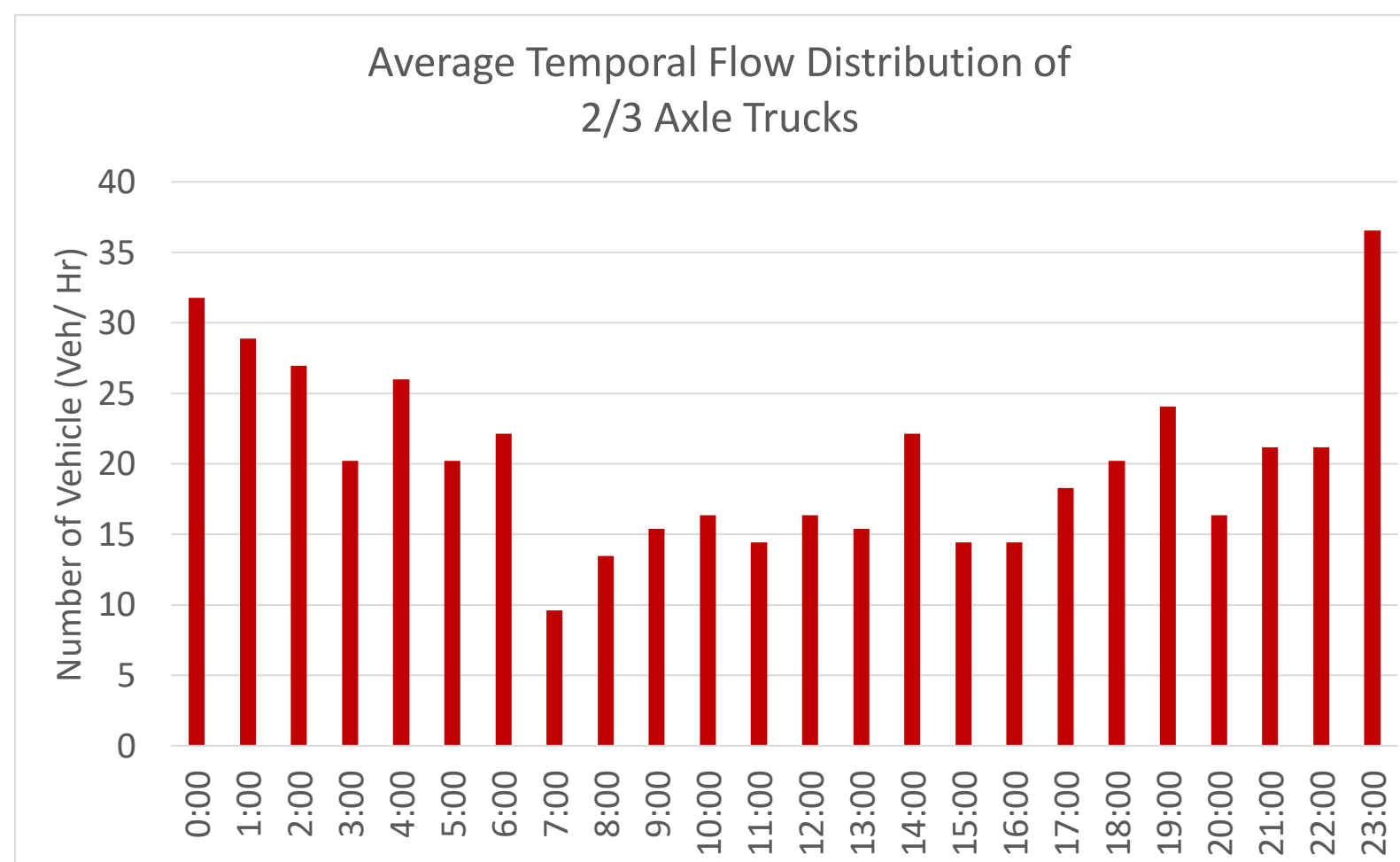
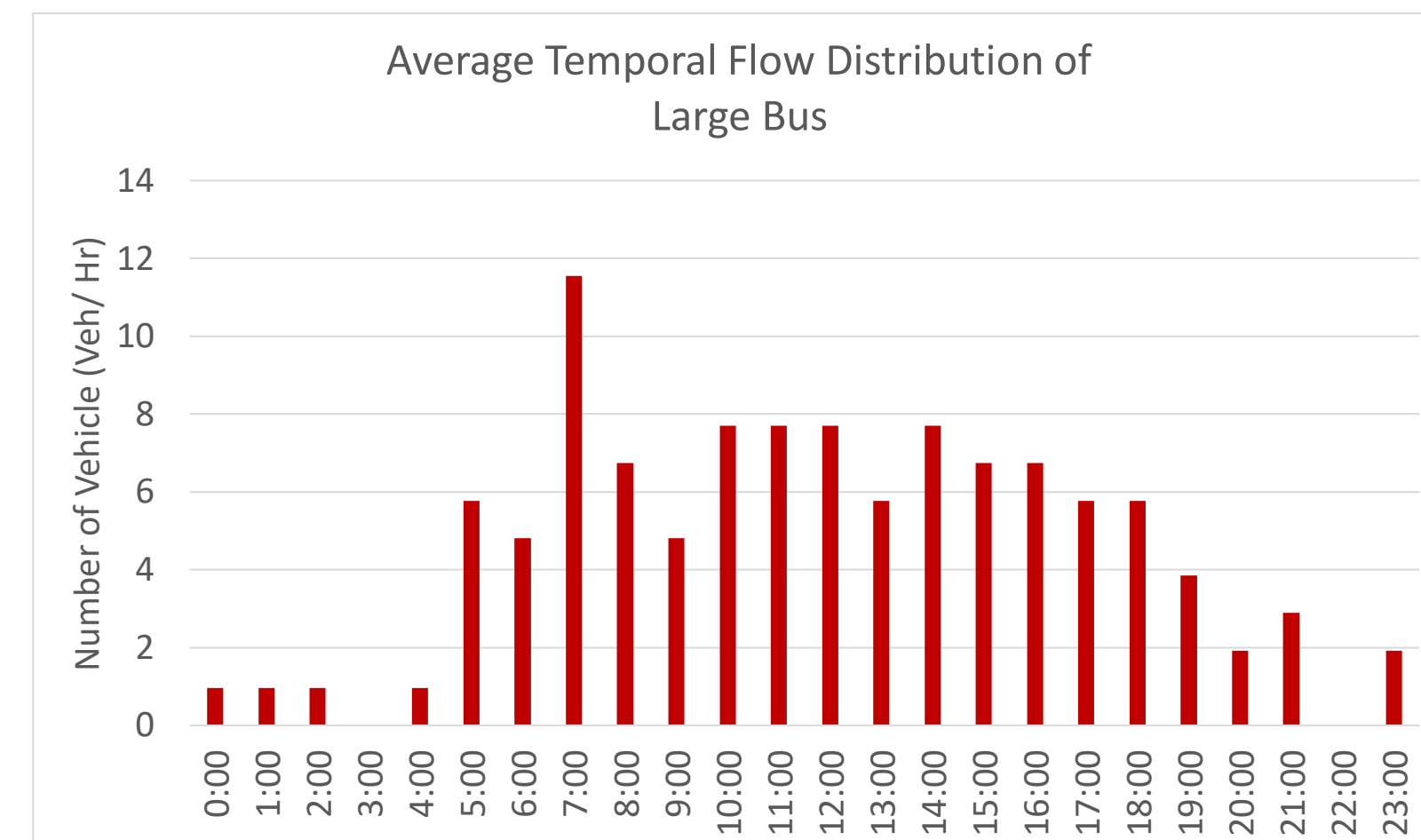
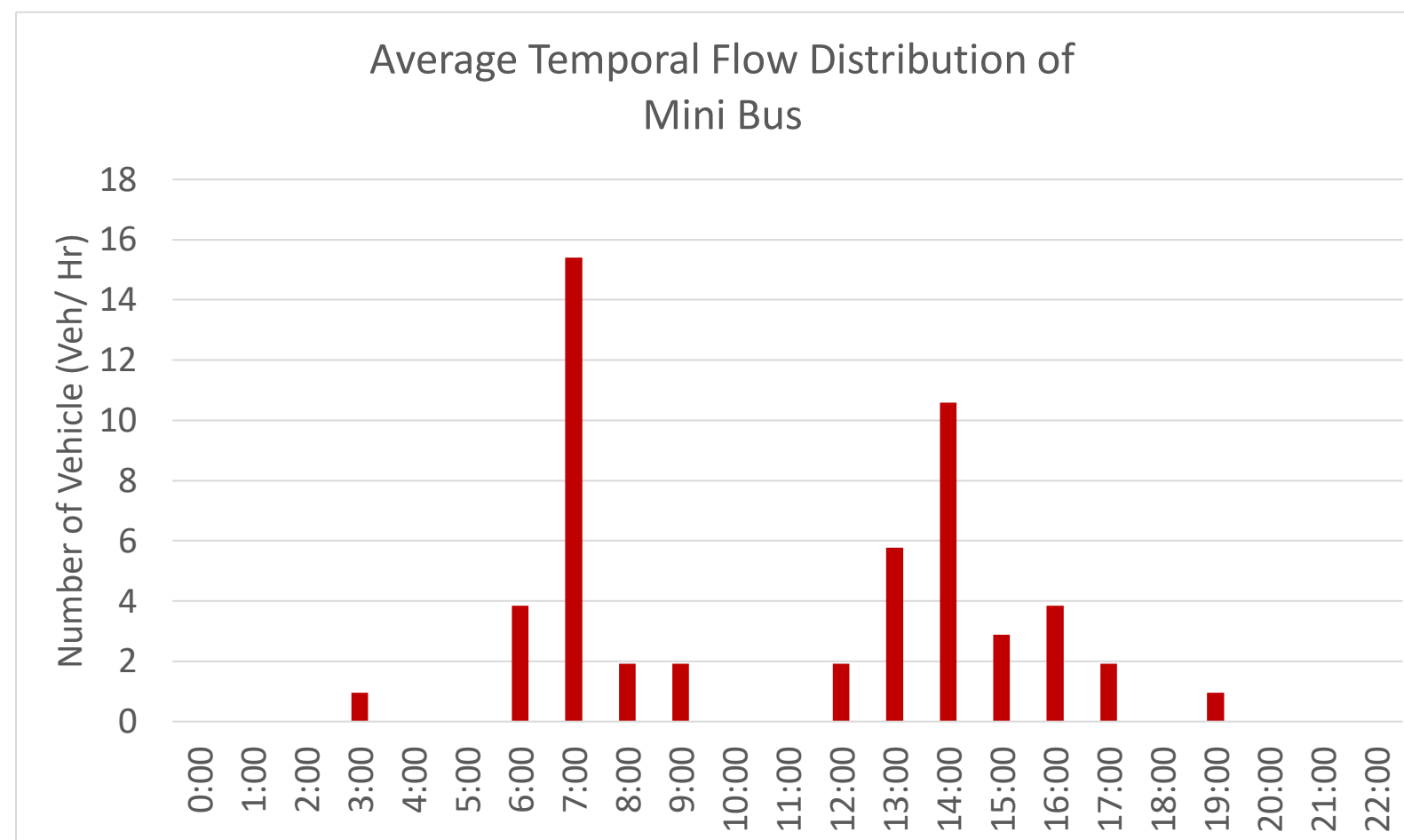
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location Coordinates		MB-3 Shakargarh 32.1743739, 75.0965285						All Directional Count							
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
25	2	Tuesday, October 8, 2024	16:00	17:00	512	50	130	21	4	5	13	2	-	5	742
26	2	Tuesday, October 8, 2024	17:00	18:00	516	34	143	22	2	6	13	-	-	2	738
27	2	Tuesday, October 8, 2024	18:00	19:00	342	17	113	23	1	5	27	7	2	4	541
28	2	Tuesday, October 8, 2024	19:00	20:00	152	8	77	20	-	4	16	3	-	5	285
29	2	Tuesday, October 8, 2024	20:00	21:00	75	4	81	13	1	3	14	1	3	6	201
30	2	Tuesday, October 8, 2024	21:00	22:00	47	1	64	11	-	2	27	-	-	2	154
31	2	Tuesday, October 8, 2024	22:00	23:00	18	5	47	7	-	-	15	3	-	-	95
32	2	Tuesday, October 8, 2024	23:00	0:00	7	1	27	6	-	3	42	-	-	-	86
33	2	Wednesday, October 9, 2024	00:00	1:00	1	-	16	2	-	2	34	-	-	-	55
34	2	Wednesday, October 9, 2024	01:00	2:00	-	1	8	8	-	3	32	-	-	-	52
35	2	Wednesday, October 9, 2024	02:00	3:00	5	-	2	3	-	1	30	-	-	-	41
36	2	Wednesday, October 9, 2024	03:00	4:00	3	-	3	6	-	-	18	-	-	-	30
37	2	Wednesday, October 9, 2024	04:00	5:00	6	4	5	5	-	1	40	-	-	-	61
38	2	Wednesday, October 9, 2024	05:00	6:00	36	10	13	15	-	6	19	1	2	1	103
39	2	Wednesday, October 9, 2024	06:00	7:00	134	11	26	26	4	4	24	-	-	1	230
40	2	Wednesday, October 9, 2024	07:00	8:00	340	28	63	47	12	9	10	2	1	4	516
41	2	Wednesday, October 9, 2024	08:00	9:00	344	35	95	27	5	3	9	2	4	5	529
42	2	Wednesday, October 9, 2024	09:00	10:00	388	39	82	19	4	3	17	3	1	5	561
43	2	Wednesday, October 9, 2024	10:00	11:00	442	52	82	21	-	6	22	2	1	2	630
44	2	Wednesday, October 9, 2024	11:00	12:00	406	52	86	29	-	6	14	4	-	12	609
45	2	Wednesday, October 9, 2024	12:00	13:00	482	42	103	20	1	5	24	-	1	10	688
46	2	Wednesday, October 9, 2024	13:00	14:00	438	40	114	33	6	4	20	2	1	8	666
47	2	Wednesday, October 9, 2024	14:00	15:00	415	44	111	52	10	3	26	1	1	8	671
48	2	Wednesday, October 9, 2024	15:00	16:00	411	41	129	30	5	4	19	2	1	15	657

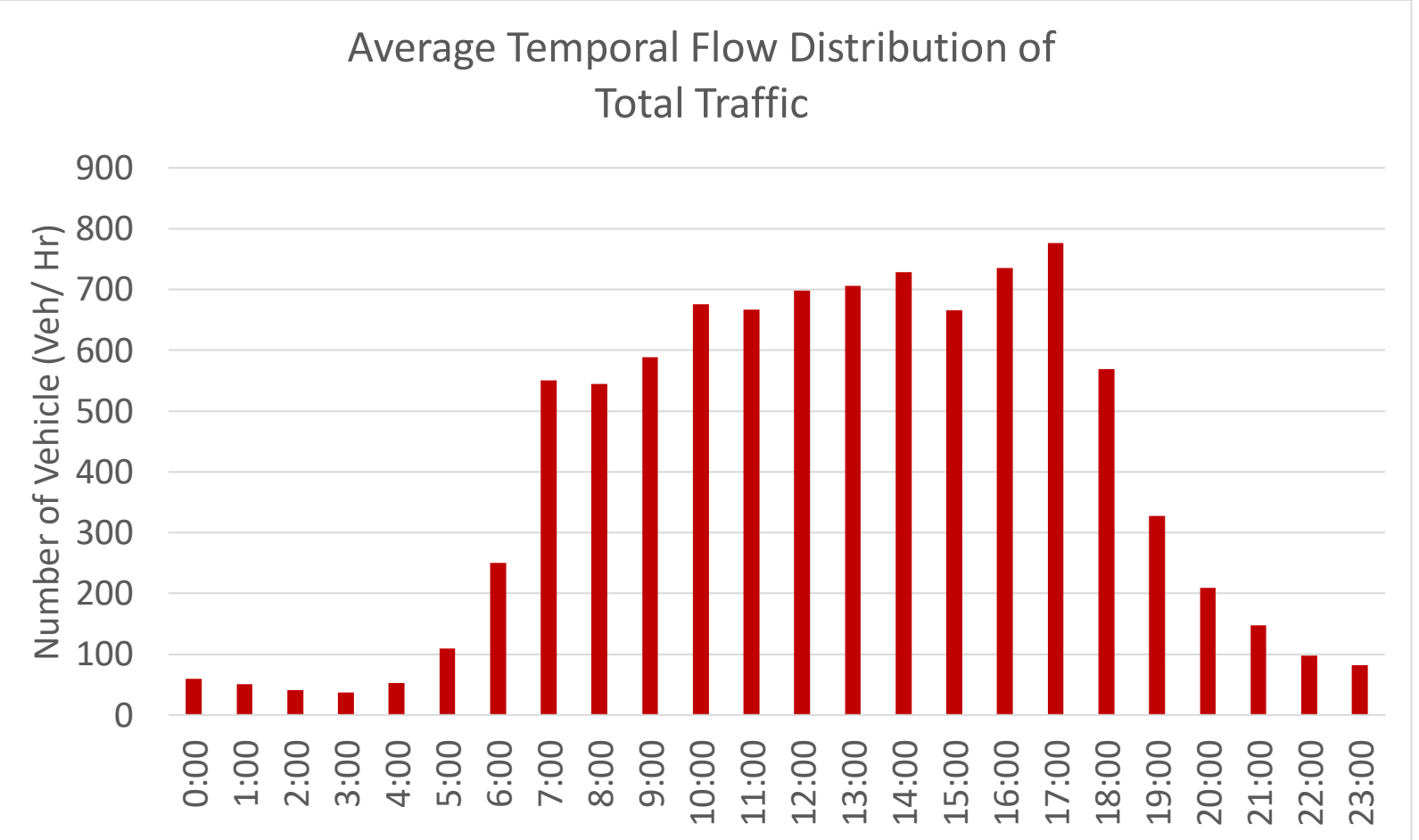
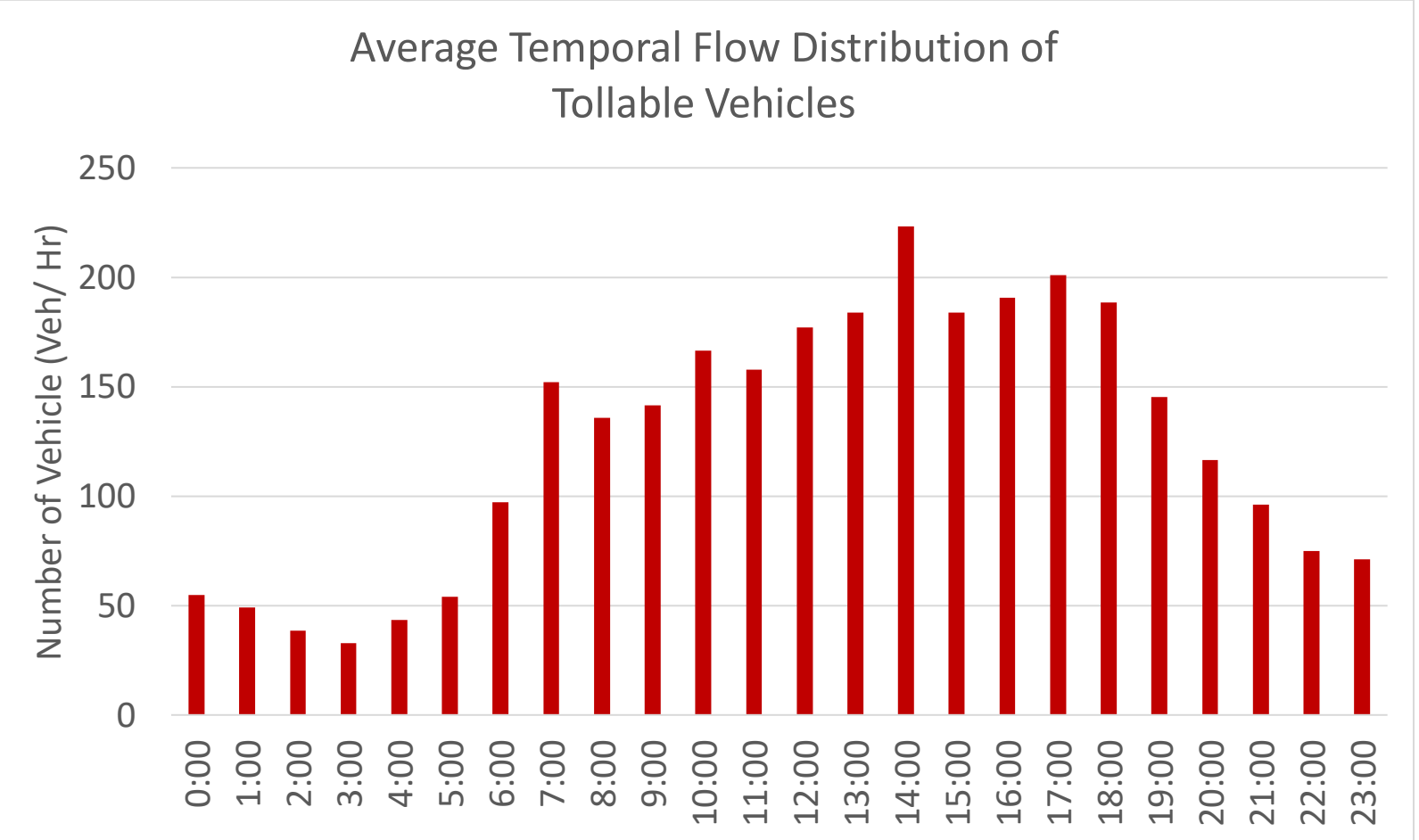
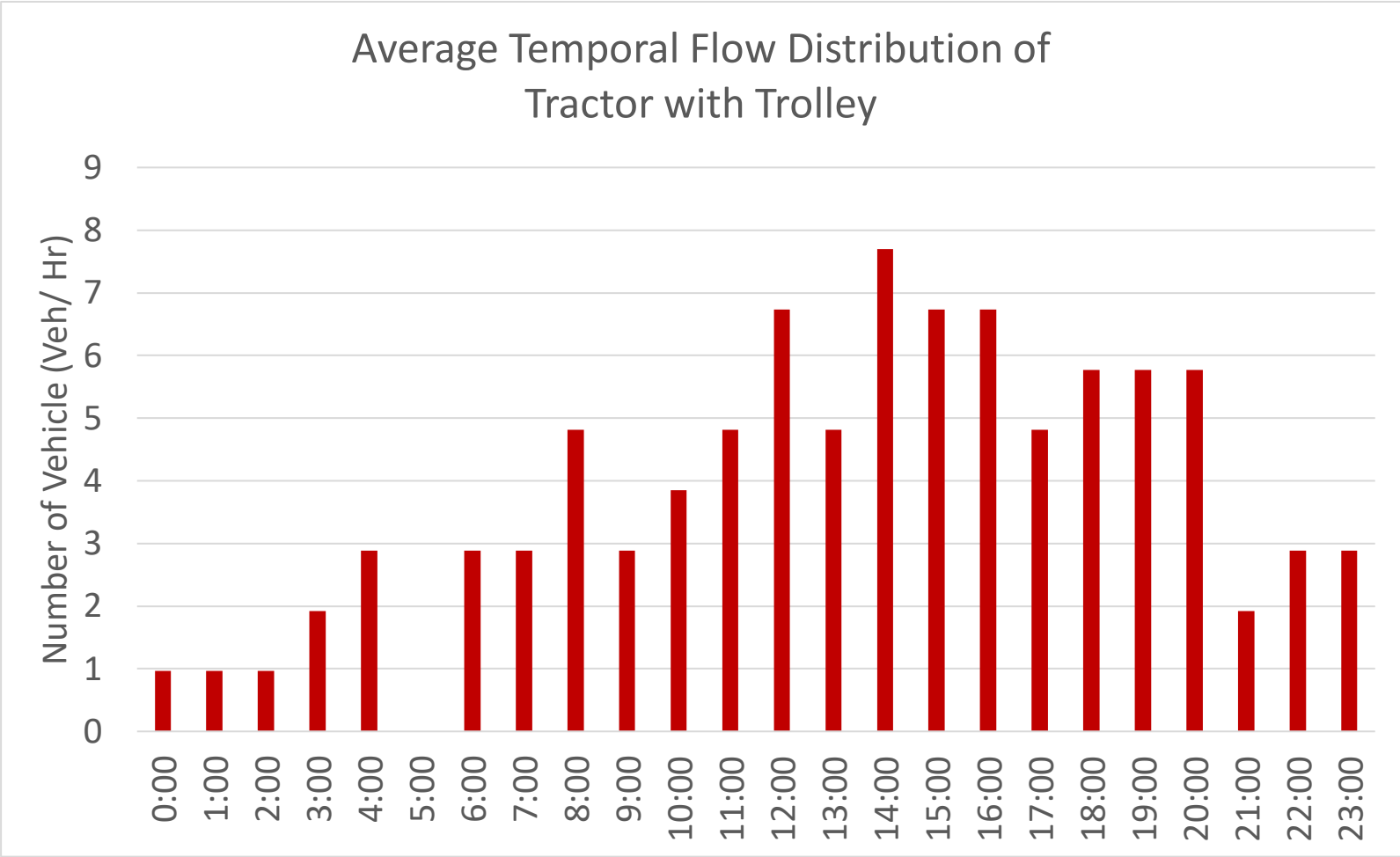
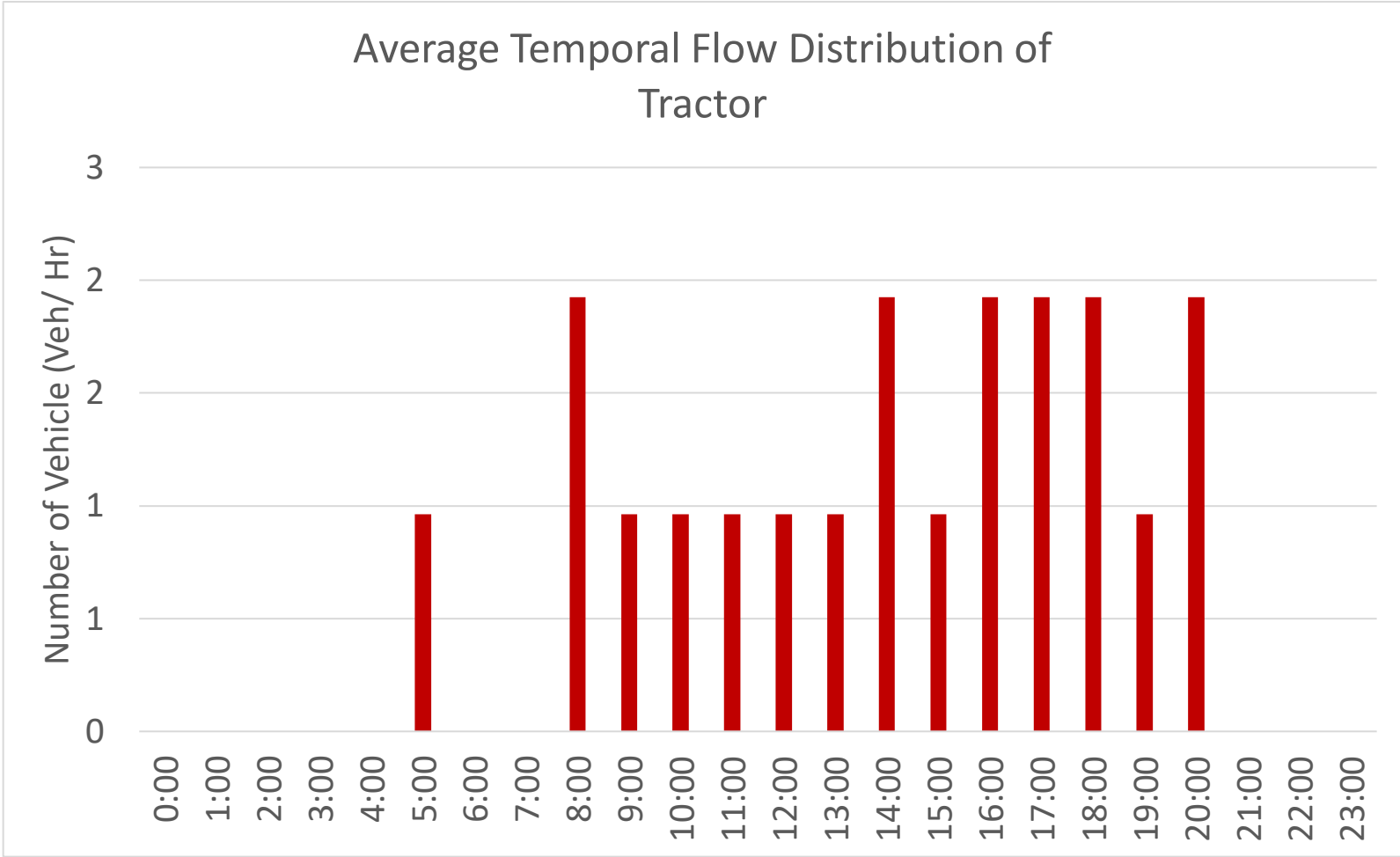


Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location Coordinates		MB-3 Shakargarh 32.1743739, 75.0965285						All Directional Count							
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
49	2	Wednesday, October 9, 2024	16:00	17:00	467	44	124	28	4	5	9	3	3	9	696
50	3	Wednesday, October 9, 2024	17:00	18:00	512	54	107	27	2	5	17	-	4	11	739
51	3	Wednesday, October 9, 2024	18:00	19:00	367	18	130	26	1	9	16	1	2	8	578
52	3	Wednesday, October 9, 2024	19:00	20:00	206	3	102	16	1	3	21	1	1	6	360
53	3	Wednesday, October 9, 2024	20:00	21:00	93	2	98	6	-	1	20	1	2	9	232
54	3	Wednesday, October 9, 2024	21:00	22:00	46	3	59	6	2	1	19	-	1	4	141
55	3	Wednesday, October 9, 2024	22:00	23:00	16	2	45	7	-	-	33	1	-	1	105
56	3	Wednesday, October 9, 2024	23:00	0:00	14	-	17	4	-	1	35	-	-	-	71
57	3	Thursday, October 10, 2024	00:00	1:00	7	1	27	2	-	1	22	1	-	-	61
58	3	Thursday, October 10, 2024	01:00	2:00	2	-	20	2	-	-	28	-	-	-	52
59	3	Thursday, October 10, 2024	02:00	3:00	1	-	12	4	-	1	23	-	-	2	43
60	3	Thursday, October 10, 2024	03:00	4:00	4	-	7	3	3	-	19	-	-	-	36
61	3	Thursday, October 10, 2024	04:00	5:00	12	1	11	6	1	2	17	-	-	-	50
62	3	Thursday, October 10, 2024	05:00	6:00	61	4	24	6	-	6	11	-	-	-	112
63	3	Thursday, October 10, 2024	06:00	7:00	148	11	45	29	2	8	21	1	2	2	269
64	3	Thursday, October 10, 2024	07:00	8:00	382	20	69	52	16	13	7	1	-	2	562
65	3	Thursday, October 10, 2024	08:00	9:00	401	36	84	27	2	7	9	-	1	5	572
66	3	Thursday, October 10, 2024	09:00	10:00	401	45	92	33	2	6	18	2	3	2	604
67	3	Thursday, October 10, 2024	10:00	11:00	466	51	123	42	1	9	10	-	3	4	709
68	3	Thursday, October 10, 2024	11:00	12:00	463	63	100	27	1	8	14	1	1	-	678
69	3	Thursday, October 10, 2024	12:00	13:00	492	46	121	36	3	10	10	-	1	7	726
70	3	Thursday, October 10, 2024	13:00	14:00	508	45	122	38	8	4	14	1	1	6	747
71	3	Thursday, October 10, 2024	14:00	15:00	459	51	142	52	13	12	23	-	4	10	766
72	3	Thursday, October 10, 2024	15:00	16:00	475	53	133	37	3	8	17	-	2	4	732









Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Average Annual Hourly Interval													
Location		MB-3 Shakargarh						Direction Number				1	
Coordinates		32.1743739, 75.0965285						From	Shakargarh		Towards	Narowal	
S.No.	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	0:00	1:00	3	0	6	2	0	1	20	0	0	0	32
2	1:00	2:00	1	0	4	3	0	1	21	0	0	1	31
3	2:00	3:00	2	0	3	2	0	0	15	0	0	1	23
4	3:00	4:00	2	0	2	2	0	0	12	0	0	1	18
5	4:00	5:00	3	0	6	1	0	0	13	0	0	0	23
6	5:00	6:00	21	1	13	3	0	3	8	0	0	0	48
7	6:00	7:00	66	5	25	12	1	2	7	0	0	1	118
8	7:00	8:00	179	12	39	32	11	10	1	0	0	1	284
9	8:00	9:00	179	18	50	13	2	6	3	0	1	3	274
10	9:00	10:00	192	19	50	17	2	2	7	0	1	1	292
11	10:00	11:00	220	29	62	13	0	4	7	0	0	1	335
12	11:00	12:00	219	24	49	14	0	3	8	1	1	2	321
13	12:00	13:00	250	21	60	17	1	4	9	0	0	3	365
14	13:00	14:00	241	21	54	18	3	3	7	0	0	2	348
15	14:00	15:00	225	23	60	21	10	3	11	0	1	4	357
16	15:00	16:00	226	22	57	17	1	4	5	0	1	4	337
17	16:00	17:00	260	26	68	14	3	3	5	3	1	3	386
18	17:00	18:00	295	26	72	15	1	2	12	0	1	3	427
19	18:00	19:00	191	13	57	13	0	2	12	3	1	3	295
20	19:00	20:00	99	7	39	10	0	2	13	1	1	3	175
21	20:00	21:00	49	4	25	7	0	1	12	1	2	5	105
22	21:00	22:00	29	2	18	6	0	1	13	0	0	1	70
23	22:00	23:00	11	3	16	3	0	0	15	1	0	1	50
24	23:00	0:00	7	0	8	5	0	1	23	0	0	1	44
Average Annual Daily Traffic			2,971	276	842	260	34	56	257	10	11	43	4,759



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-3 Shakargarh						Direction Number				1			
Coordinates		32.1743739, 75.0965285						From	Shakargarh			Towards	Narowal		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	1	Monday, October 7, 2024	16:00	17:00	303	30	75	20	2	5	12	3	-	4	454
2	1	Monday, October 7, 2024	17:00	18:00	326	29	92	25	2	3	17	-	1	2	497
3	1	Monday, October 7, 2024	18:00	19:00	212	18	76	20	-	2	11	2	2	2	345
4	1	Monday, October 7, 2024	19:00	20:00	105	12	48	18	-	2	15	-	1	2	203
5	1	Monday, October 7, 2024	20:00	21:00	51	6	18	11	-	-	15	-	1	-	102
6	1	Monday, October 7, 2024	21:00	22:00	31	2	19	8	-	1	11	-	-	1	73
7	1	Monday, October 7, 2024	22:00	23:00	10	2	18	2	-	1	12	1	-	1	47
8	1	Monday, October 7, 2024	23:00	0:00	4	-	12	7	-	2	23	-	-	3	51
9	1	Tuesday, October 8, 2024	00:00	1:00	3	-	3	2	-	-	28	-	-	1	37
10	1	Tuesday, October 8, 2024	01:00	2:00	2	-	2	2	-	-	20	-	-	4	30
11	1	Tuesday, October 8, 2024	02:00	3:00	-	-	3	1	-	-	14	-	-	2	20
12	1	Tuesday, October 8, 2024	03:00	4:00	1	-	4	2	-	-	17	-	-	2	26
13	1	Tuesday, October 8, 2024	04:00	5:00	2	-	10	2	-	-	15	1	-	1	31
14	1	Tuesday, October 8, 2024	05:00	6:00	24	2	16	3	-	3	7	-	-	-	55
15	1	Tuesday, October 8, 2024	06:00	7:00	70	4	34	12	1	4	8	-	-	1	134
16	1	Tuesday, October 8, 2024	07:00	8:00	218	15	44	36	15	11	-	-	-	2	341
17	1	Tuesday, October 8, 2024	08:00	9:00	198	25	49	15	-	8	6	-	-	2	303
18	1	Tuesday, October 8, 2024	09:00	10:00	231	28	60	23	1	4	6	-	1	1	355
19	1	Tuesday, October 8, 2024	10:00	11:00	236	39	74	13	-	5	7	-	-	-	374
20	1	Tuesday, October 8, 2024	11:00	12:00	261	23	60	20	-	4	9	-	1	1	379
21	1	Tuesday, October 8, 2024	12:00	13:00	271	24	67	24	1	4	9	-	-	1	401
22	1	Tuesday, October 8, 2024	13:00	14:00	265	23	58	21	4	4	8	-	-	1	384
23	1	Tuesday, October 8, 2024	14:00	15:00	269	19	64	27	9	4	12	-	2	3	409
24	1	Tuesday, October 8, 2024	15:00	16:00	260	18	50	18	1	4	3	-	1	-	355

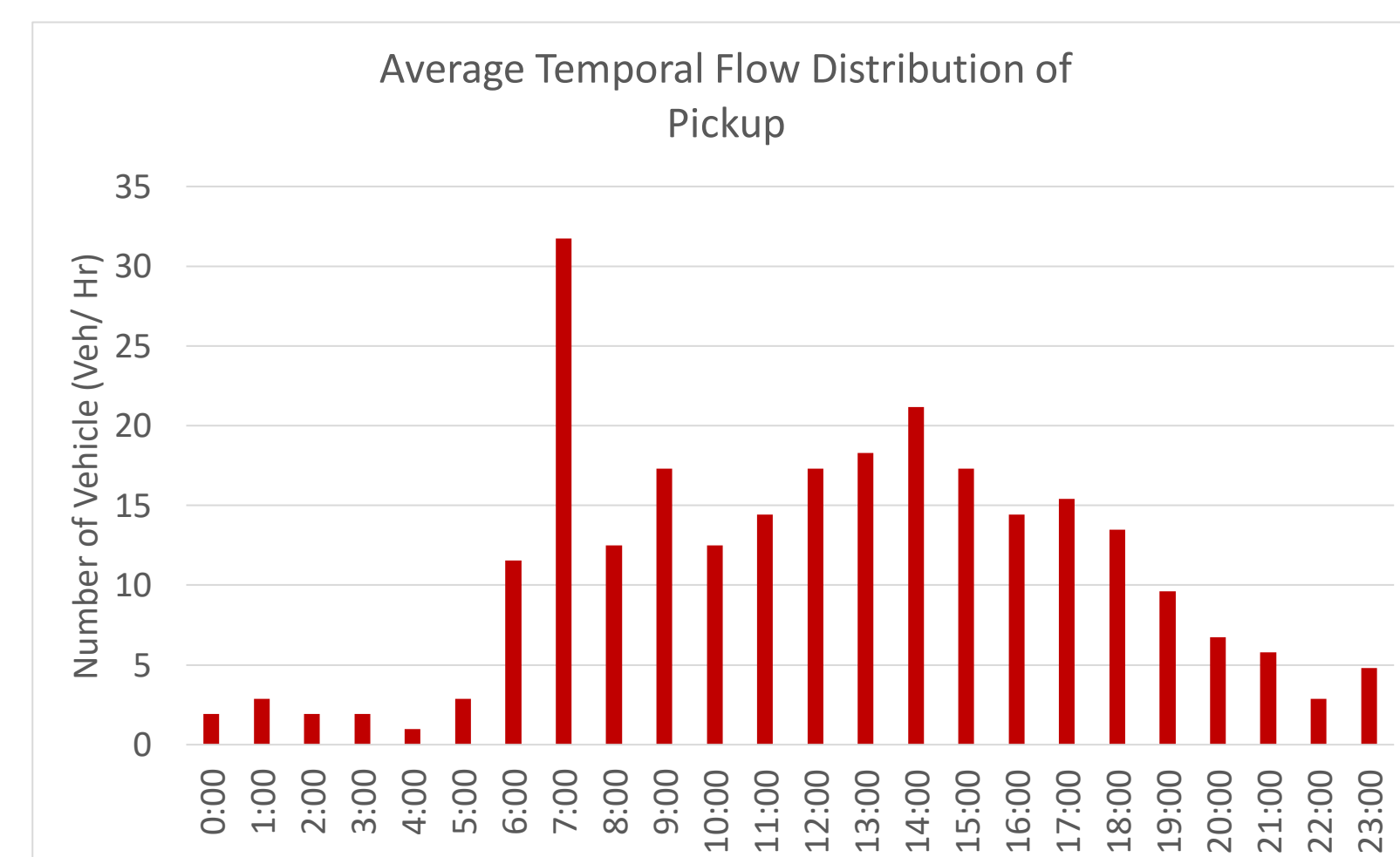
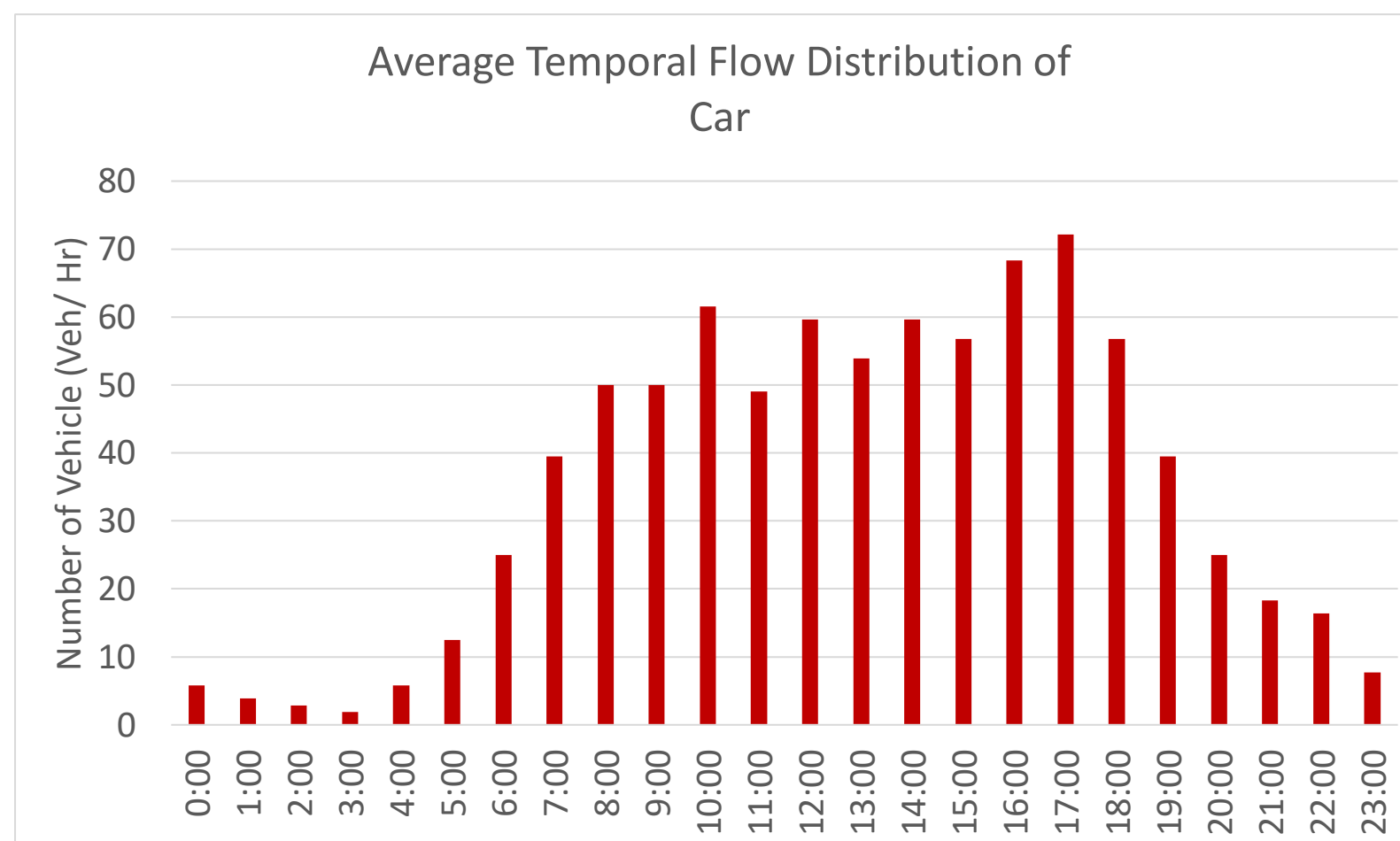
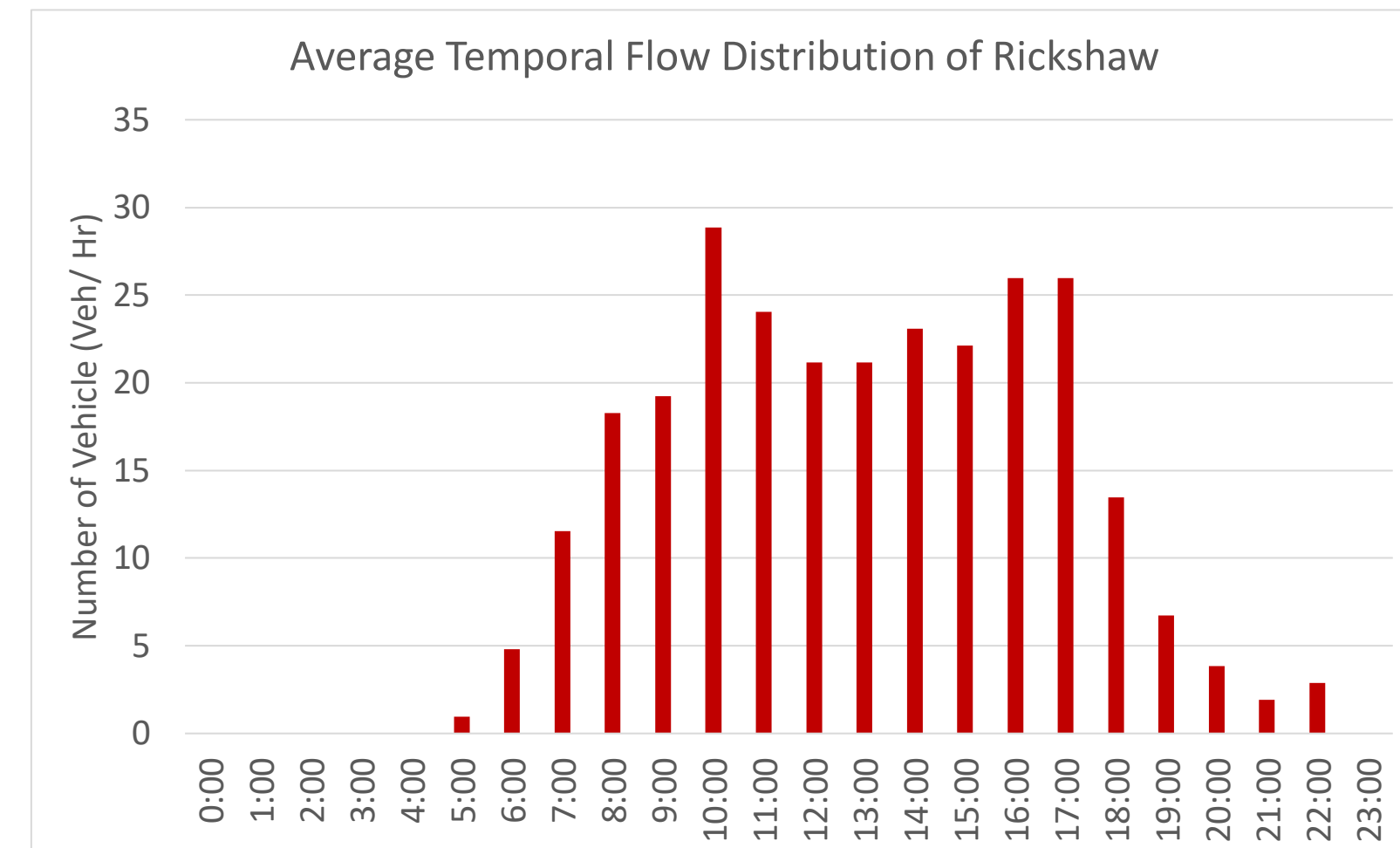
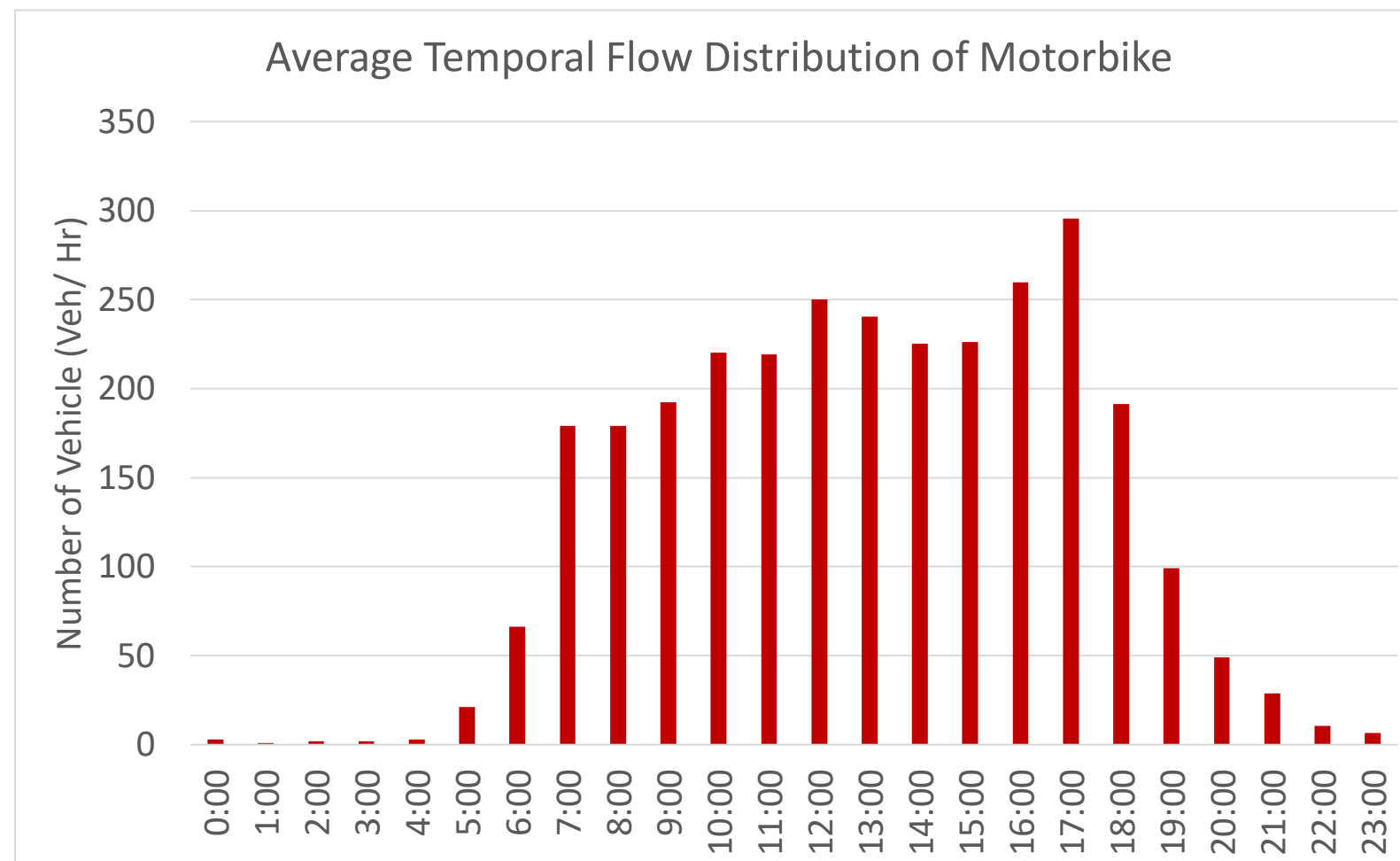


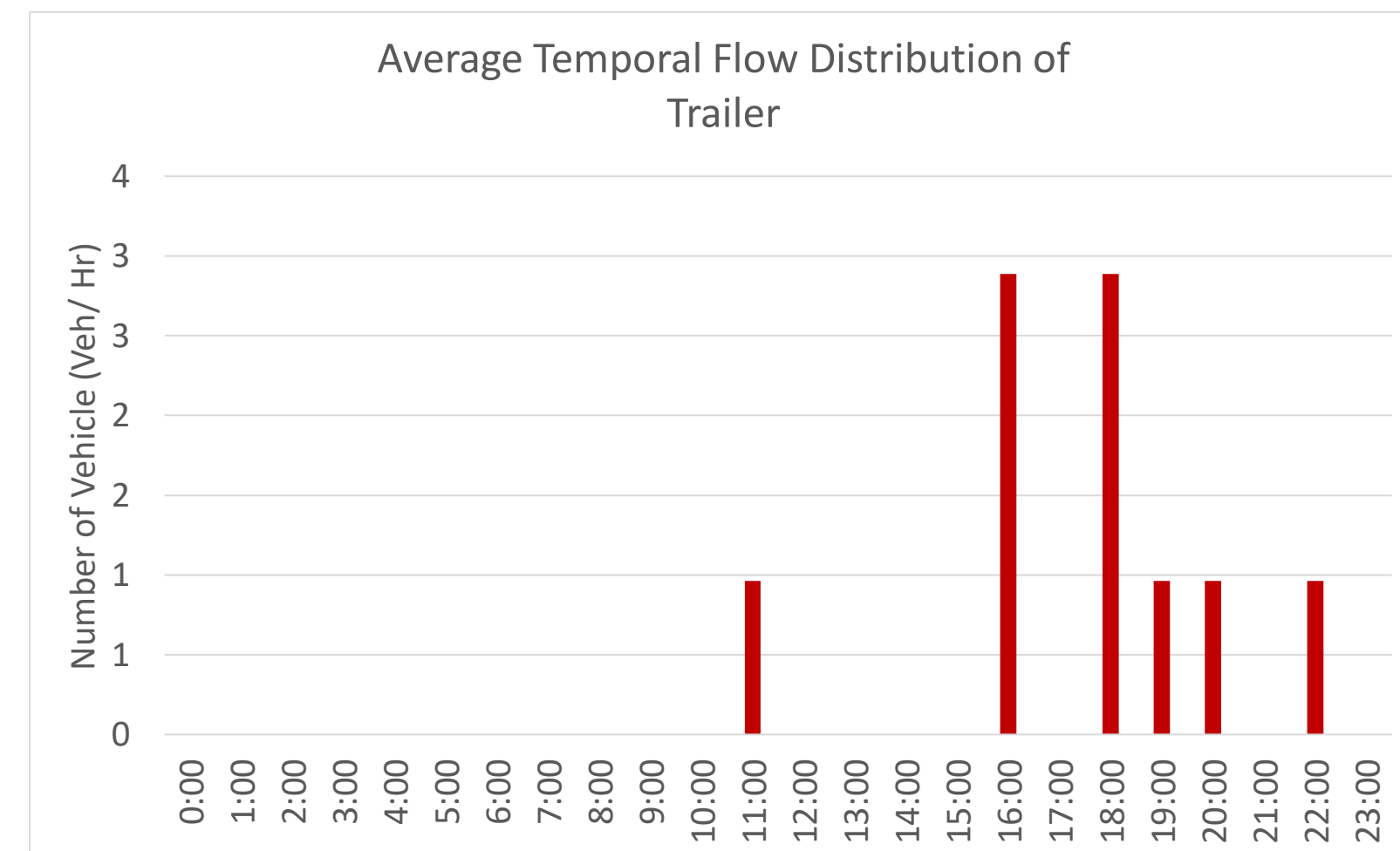
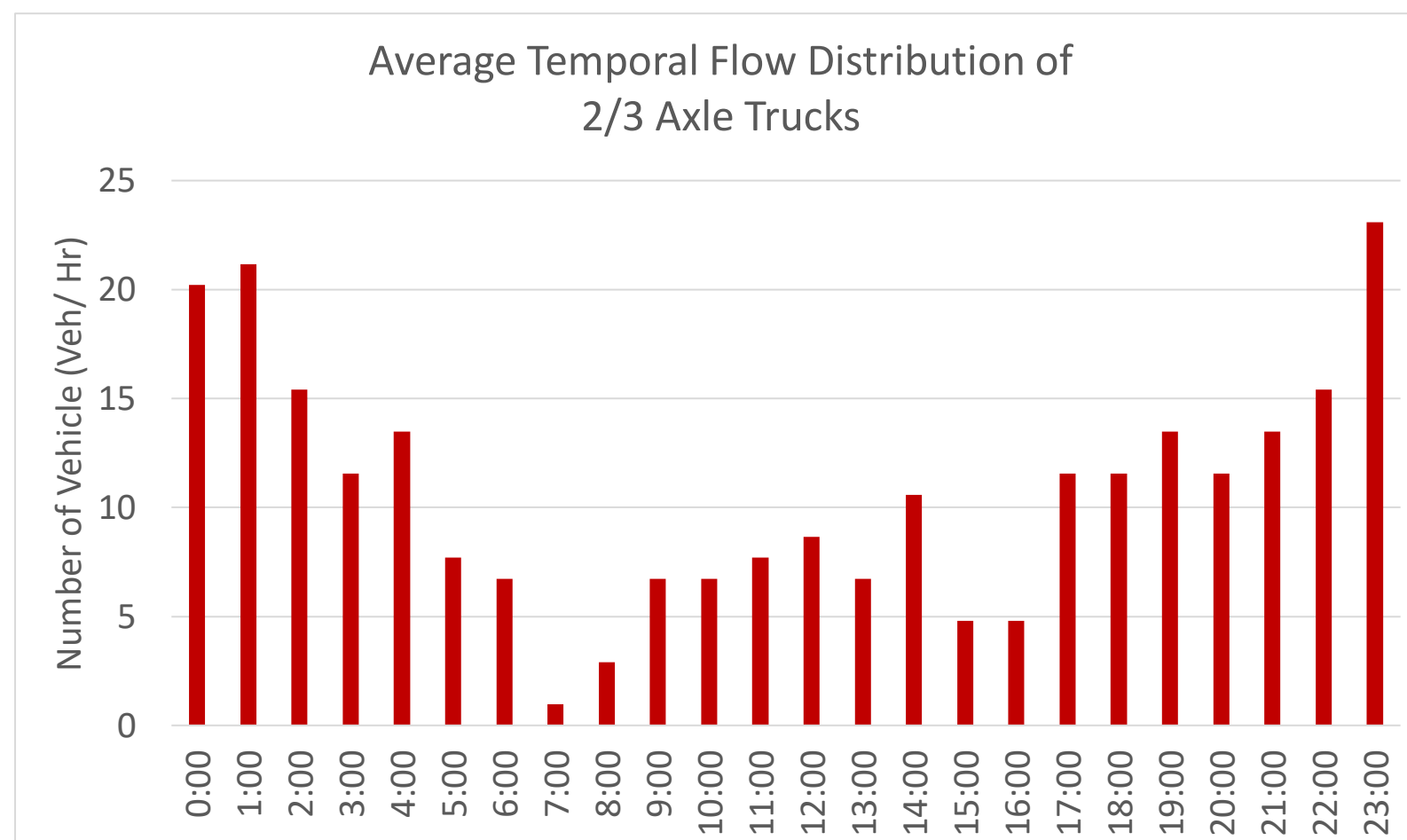
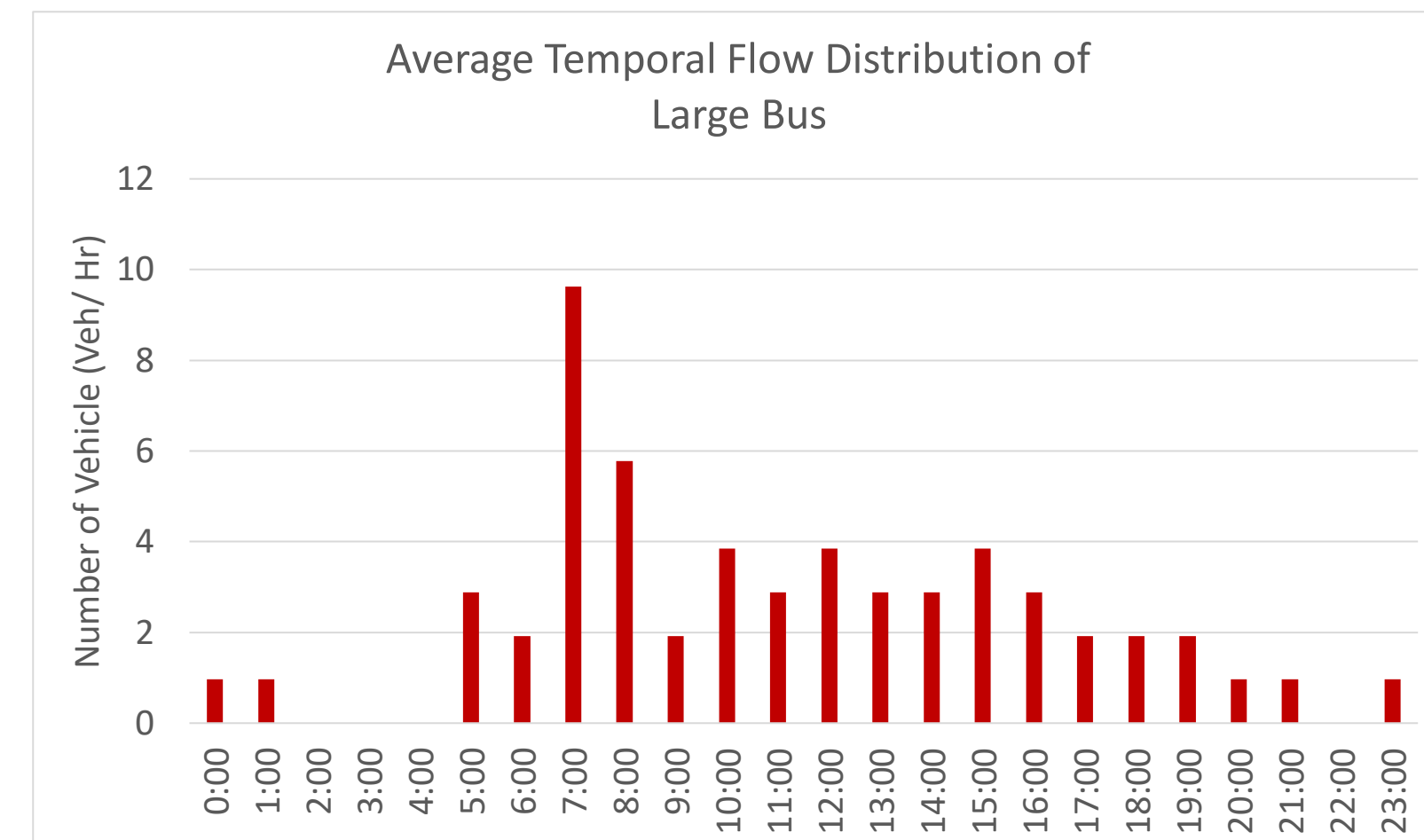
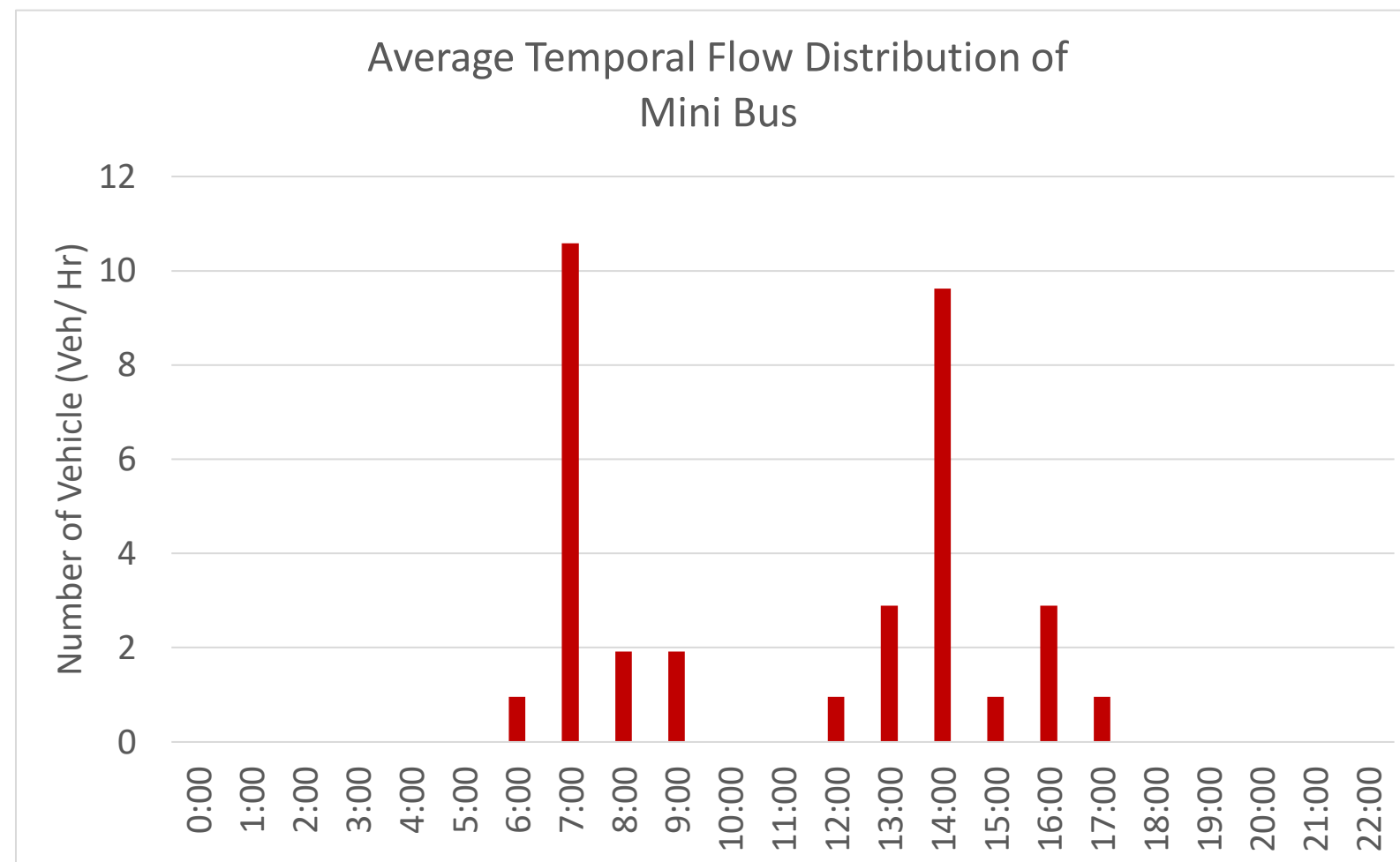
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-3 Shakargarh						Direction Number				1			
Coordinates		32.1743739, 75.0965285						From	Shakargarh			Towards	Narowal		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
25	2	Tuesday, October 8, 2024	16:00	17:00	263	29	70	10	3	2	4	2	-	-	383
26	2	Tuesday, October 8, 2024	17:00	18:00	291	20	79	12	-	3	9	-	-	-	414
27	2	Tuesday, October 8, 2024	18:00	19:00	193	15	50	10	1	2	14	6	2	4	297
28	2	Tuesday, October 8, 2024	19:00	20:00	91	7	36	5	-	1	15	3	-	5	163
29	2	Tuesday, October 8, 2024	20:00	21:00	48	4	26	5	-	1	11	1	2	6	104
30	2	Tuesday, October 8, 2024	21:00	22:00	32	1	20	6	-	1	21	-	-	2	83
31	2	Tuesday, October 8, 2024	22:00	23:00	14	4	17	1	-	-	15	3	-	-	54
32	2	Tuesday, October 8, 2024	23:00	0:00	6	-	10	5	-	1	23	-	-	-	45
33	2	Wednesday, October 9, 2024	00:00	1:00	-	-	11	2	-	2	17	-	-	-	32
34	2	Wednesday, October 9, 2024	01:00	2:00	-	1	-	6	-	3	26	-	-	-	36
35	2	Wednesday, October 9, 2024	02:00	3:00	4	-	1	1	-	1	16	-	-	-	23
36	2	Wednesday, October 9, 2024	03:00	4:00	3	-	-	1	-	-	9	-	-	-	13
37	2	Wednesday, October 9, 2024	04:00	5:00	5	-	2	-	-	-	17	-	-	-	24
38	2	Wednesday, October 9, 2024	05:00	6:00	17	-	7	3	-	2	13	-	-	1	43
39	2	Wednesday, October 9, 2024	06:00	7:00	70	4	18	14	-	1	8	-	-	1	116
40	2	Wednesday, October 9, 2024	07:00	8:00	162	15	36	33	8	9	1	-	-	1	265
41	2	Wednesday, October 9, 2024	08:00	9:00	165	15	59	13	5	2	2	1	2	4	268
42	2	Wednesday, October 9, 2024	09:00	10:00	181	16	40	8	4	-	10	1	1	2	263
43	2	Wednesday, October 9, 2024	10:00	11:00	203	24	56	7	-	3	10	1	-	-	304
44	2	Wednesday, October 9, 2024	11:00	12:00	187	26	43	14	-	2	8	1	-	5	286
45	2	Wednesday, October 9, 2024	12:00	13:00	258	20	54	14	1	3	11	-	-	5	366
46	2	Wednesday, October 9, 2024	13:00	14:00	228	18	64	15	2	3	7	-	-	1	338
47	2	Wednesday, October 9, 2024	14:00	15:00	206	22	58	14	9	2	10	1	1	6	329
48	2	Wednesday, October 9, 2024	15:00	16:00	218	21	65	16	2	3	4	1	1	10	341

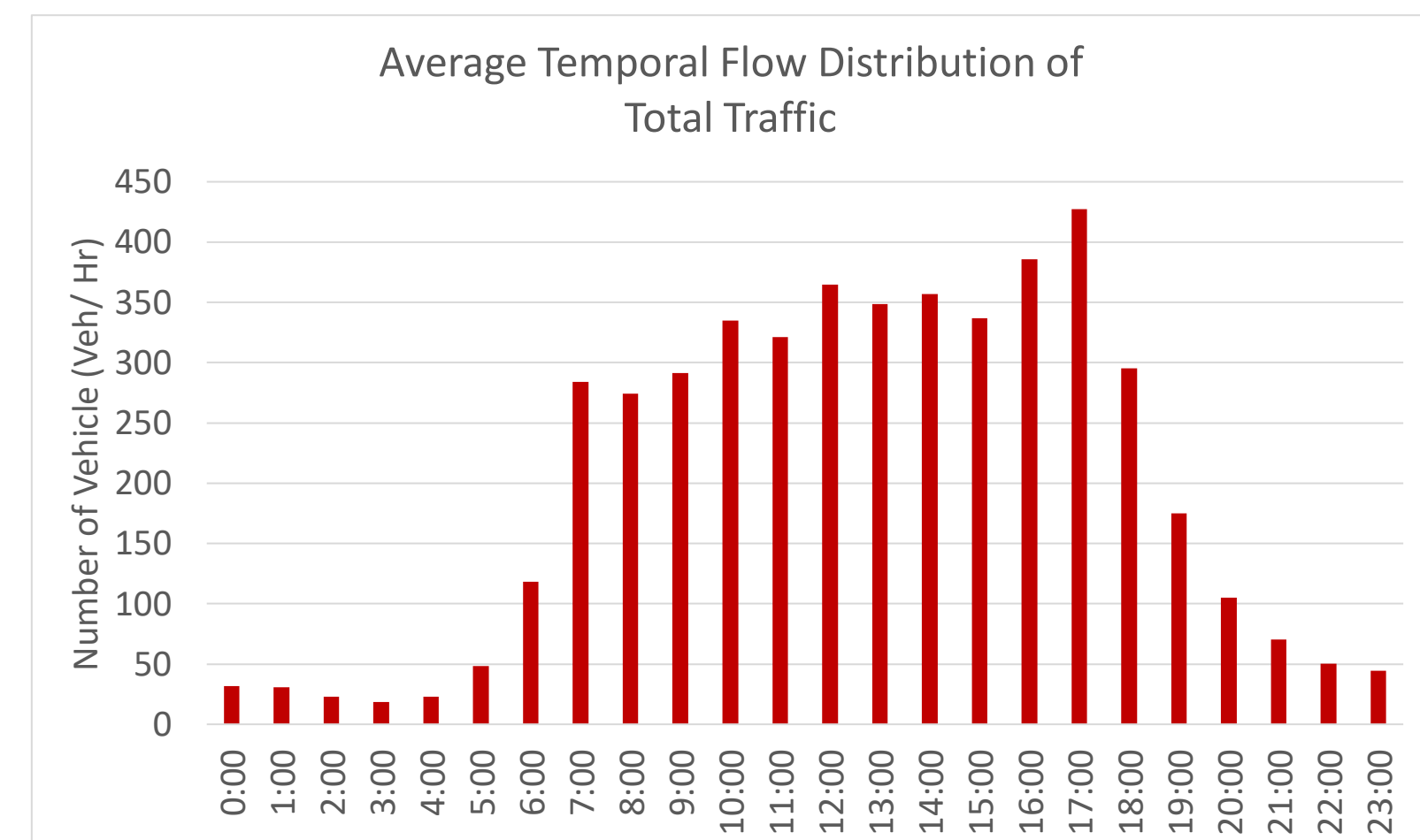
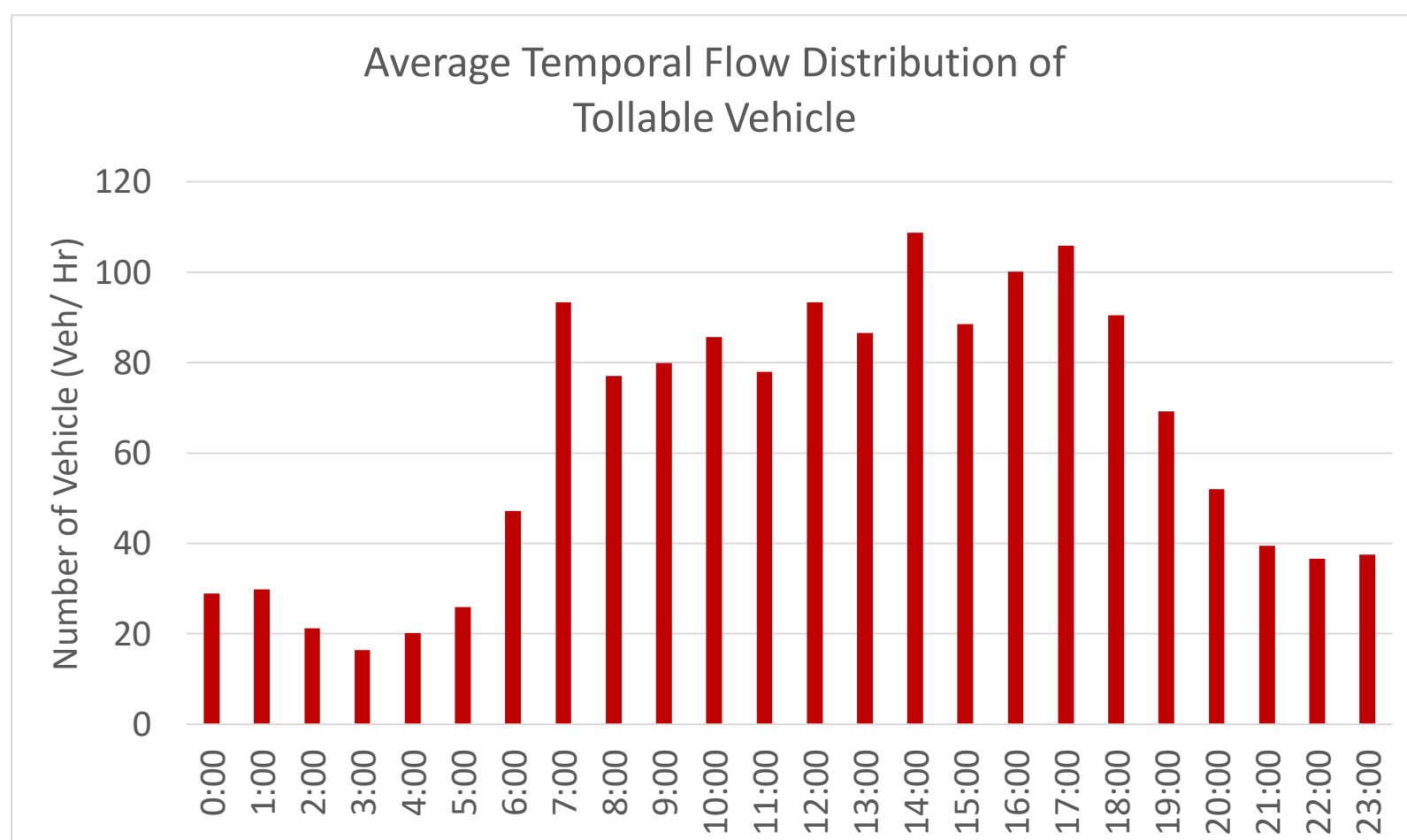
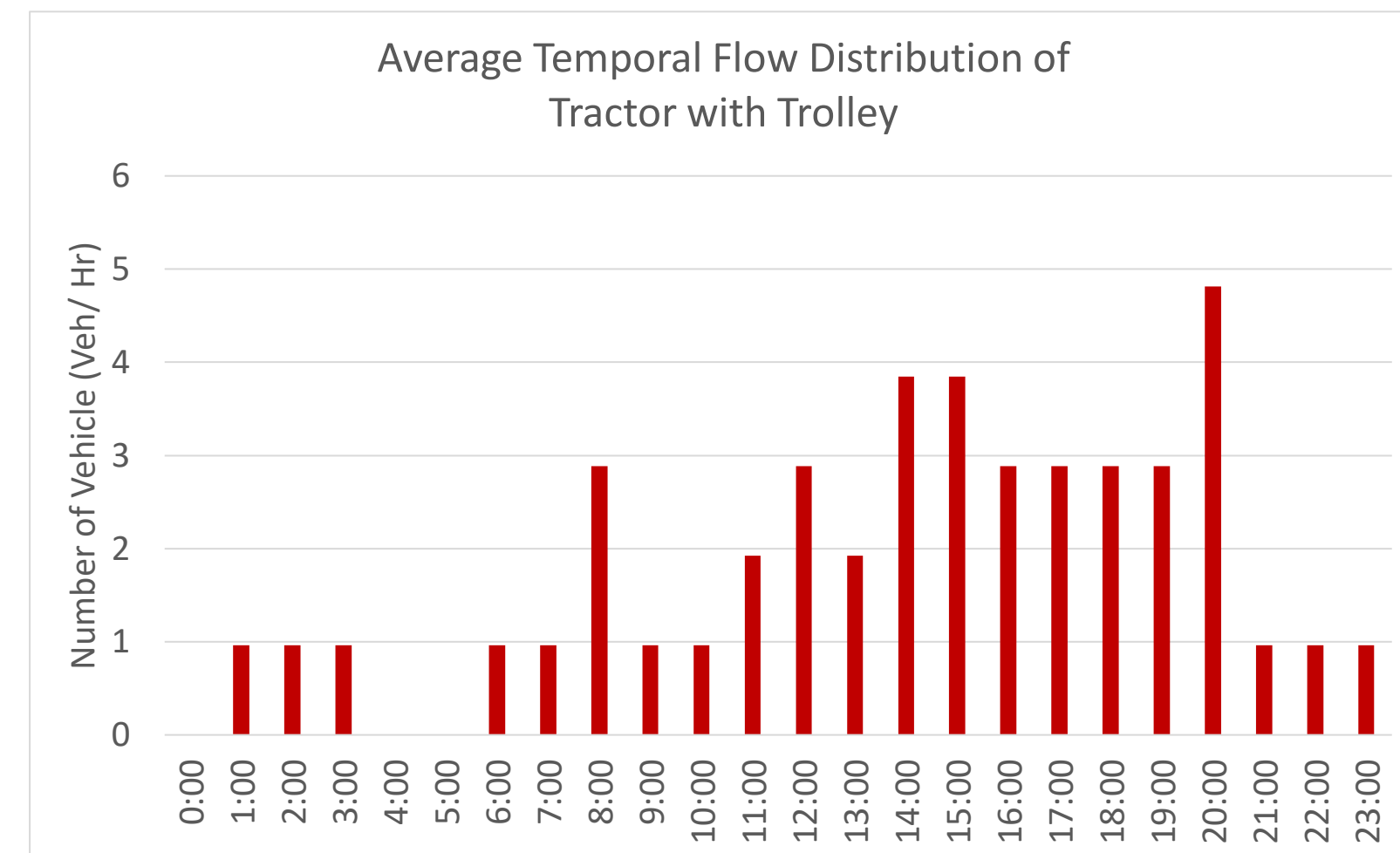
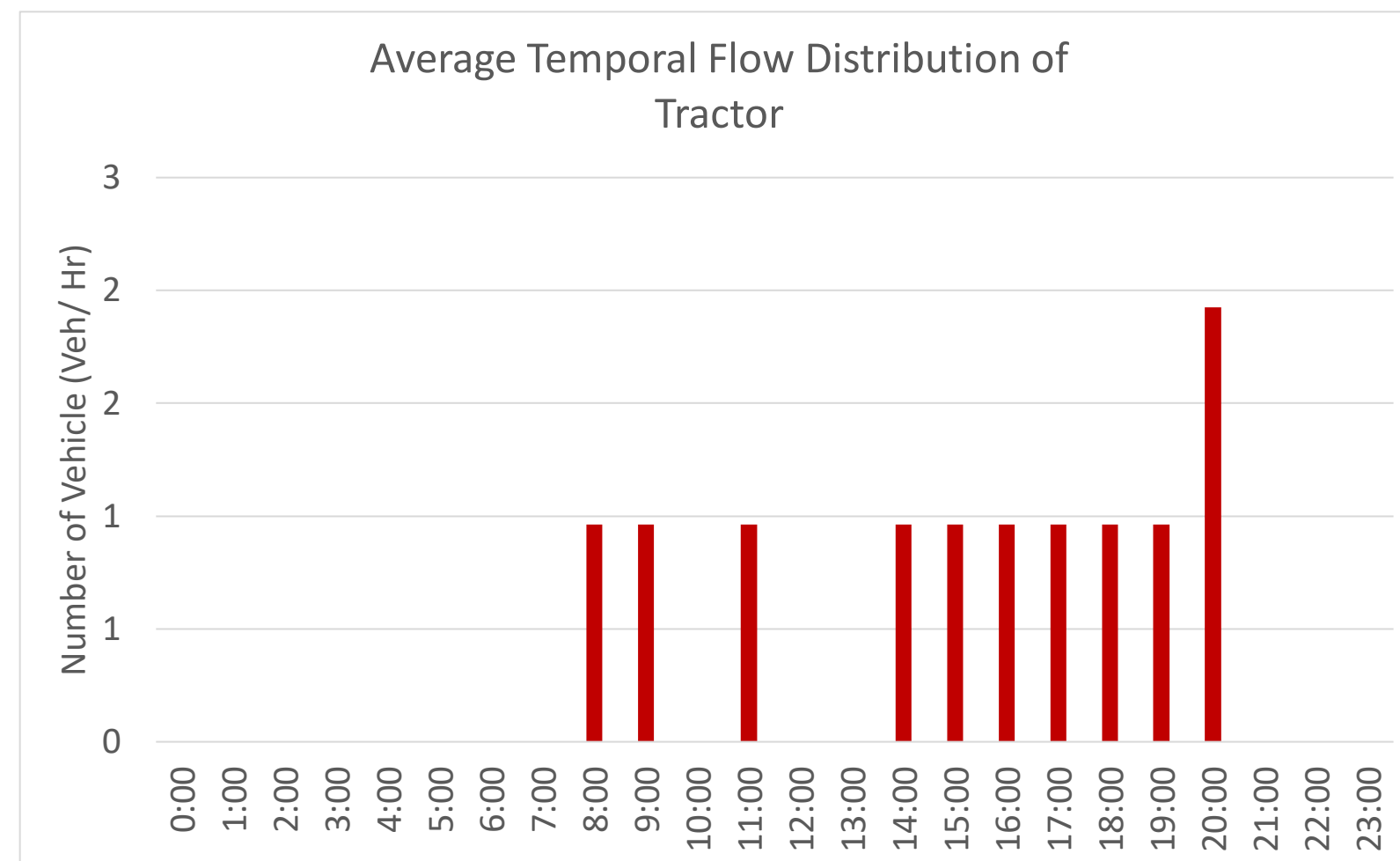


Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode															
Vehicles Count Survey - Hourly Interval															
Location		MB-3 Shakargarh						Direction Number				1			
Coordinates		32.1743739, 75.0965285						From	Shakargarh			Towards	Narowal		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
49	2	Wednesday, October 9, 2024	16:00	17:00	244	23	68	16	3	2	-	3	2	5	366
50	3	Wednesday, October 9, 2024	17:00	18:00	303	33	55	11	2	1	10	-	3	6	424
51	3	Wednesday, October 9, 2024	18:00	19:00	193	9	52	12	-	3	10	-	-	3	282
52	3	Wednesday, October 9, 2024	19:00	20:00	112	3	38	8	-	2	12	-	1	3	179
53	3	Wednesday, October 9, 2024	20:00	21:00	54	2	34	4	-	1	11	1	2	9	118
54	3	Wednesday, October 9, 2024	21:00	22:00	26	3	18	4	1	-	10	-	1	1	64
55	3	Wednesday, October 9, 2024	22:00	23:00	9	2	16	6	-	-	22	-	-	1	56
56	3	Wednesday, October 9, 2024	23:00	0:00	10	-	3	2	-	1	25	-	-	-	41
57	3	Thursday, October 10, 2024	00:00	1:00	6	1	5	1	-	-	17	1	-	-	31
58	3	Thursday, October 10, 2024	01:00	2:00	-	-	9	-	-	-	19	-	-	-	28
59	3	Thursday, October 10, 2024	02:00	3:00	1	-	4	3	-	-	18	-	-	2	28
60	3	Thursday, October 10, 2024	03:00	4:00	2	-	2	2	1	-	11	-	-	-	18
61	3	Thursday, October 10, 2024	04:00	5:00	2	-	7	2	-	1	11	-	-	-	23
62	3	Thursday, October 10, 2024	05:00	6:00	26	1	16	4	-	3	5	-	-	-	55
63	3	Thursday, October 10, 2024	06:00	7:00	68	6	25	9	2	2	4	-	1	1	118
64	3	Thursday, October 10, 2024	07:00	8:00	178	7	43	30	10	9	1	1	-	1	280
65	3	Thursday, October 10, 2024	08:00	9:00	195	18	48	12	2	7	-	-	-	2	284
66	3	Thursday, October 10, 2024	09:00	10:00	188	15	56	23	1	3	6	-	2	-	294
67	3	Thursday, October 10, 2024	10:00	11:00	247	27	62	18	-	5	3	-	1	2	365
68	3	Thursday, October 10, 2024	11:00	12:00	235	26	50	10	1	3	6	1	1	-	333
69	3	Thursday, October 10, 2024	12:00	13:00	250	23	66	15	1	5	8	-	-	2	370
70	3	Thursday, October 10, 2024	13:00	14:00	257	25	46	20	3	2	6	-	-	4	363
71	3	Thursday, October 10, 2024	14:00	15:00	228	30	64	26	13	4	11	-	1	4	381
72	3	Thursday, October 10, 2024	15:00	16:00	227	31	61	21	1	4	8	-	2	2	357









Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Average Annual Hourly Interval													
Location		MB-3 Shakargarh						Direction Number				2	
Coordinates		32.1743739, 75.0965285						From	Narowal		Towards	Shakargarh	
S.No.	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	0:00	1:00	2	0	13	0	0	0	12	0	0	1	28
2	1:00	2:00	1	0	11	1	0	0	8	0	0	0	20
3	2:00	3:00	1	0	4	1	0	1	12	0	0	0	18
4	3:00	4:00	2	0	3	3	1	0	9	0	0	1	18
5	4:00	5:00	5	2	4	3	0	1	13	0	0	3	30
6	5:00	6:00	27	7	7	5	0	3	13	0	1	0	62
7	6:00	7:00	75	7	13	13	3	3	15	0	0	2	132
8	7:00	8:00	195	13	24	16	5	2	9	1	0	2	267
9	8:00	9:00	192	19	32	13	0	1	11	0	1	2	270
10	9:00	10:00	210	26	34	13	0	3	9	2	0	2	297
11	10:00	11:00	236	24	45	18	0	4	10	0	1	3	341
12	11:00	12:00	236	30	49	15	0	5	7	1	0	3	345
13	12:00	13:00	226	23	53	13	1	4	8	0	1	4	333
14	13:00	14:00	240	21	60	18	3	3	9	1	1	3	358
15	14:00	15:00	239	18	62	31	1	5	12	0	1	4	371
16	15:00	16:00	214	20	62	16	2	3	10	0	0	3	329
17	16:00	17:00	237	22	59	13	1	4	10	0	1	4	349
18	17:00	18:00	237	17	68	13	1	4	7	0	1	2	349
19	18:00	19:00	166	10	68	13	0	4	9	1	1	3	273
20	19:00	20:00	74	2	51	9	1	2	11	0	0	3	152
21	20:00	21:00	38	2	54	4	0	1	5	0	0	1	104
22	21:00	22:00	19	1	43	3	0	2	8	0	0	1	77
23	22:00	23:00	7	2	28	3	0	0	6	0	0	2	47
24	23:00	0:00	3	1	16	1	0	1	13	0	0	2	38
Average Annual Daily Traffic			2,879	267	862	237	18	54	229	6	9	49	4,609



Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-3 Shakargarh						Direction Number				2			
Coordinates		32.1743739, 75.0965285						From	Narowal			Towards	Shakargarh		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
1	1	Monday, October 7, 2024	16:00	17:00	267	28	67	15	-	5	12	-	1	4	399
2	1	Monday, October 7, 2024	17:00	18:00	303	18	98	12	-	4	9	-	1	-	445
3	1	Monday, October 7, 2024	18:00	19:00	192	20	71	12	-	3	9	-	-	3	310
4	1	Monday, October 7, 2024	19:00	20:00	76	6	54	5	1	3	23	-	-	6	174
5	1	Monday, October 7, 2024	20:00	21:00	50	6	49	3	-	2	3	-	-	2	115
6	1	Monday, October 7, 2024	21:00	22:00	24	2	49	1	-	4	9	1	-	-	90
7	1	Monday, October 7, 2024	22:00	23:00	11	4	29	2	-	1	6	-	-	5	58
8	1	Monday, October 7, 2024	23:00	0:00	3	1	19	-	1	1	14	-	-	7	46
9	1	Tuesday, October 8, 2024	00:00	1:00	3	-	16	-	-	-	13	1	-	2	35
10	1	Tuesday, October 8, 2024	01:00	2:00	1	-	13	-	-	-	9	-	-	-	23
11	1	Tuesday, October 8, 2024	02:00	3:00	1	-	3	-	-	1	17	-	-	1	23
12	1	Tuesday, October 8, 2024	03:00	4:00	3	1	2	2	-	1	9	-	-	3	21
13	1	Tuesday, October 8, 2024	04:00	5:00	3	1	6	1	-	1	11	-	-	8	31
14	1	Tuesday, October 8, 2024	05:00	6:00	31	9	8	-	-	2	26	-	-	1	77
15	1	Tuesday, October 8, 2024	06:00	7:00	90	8	15	11	5	1	16	-	-	4	150
16	1	Tuesday, October 8, 2024	07:00	8:00	228	14	23	14	6	1	12	-	-	1	299
17	1	Tuesday, October 8, 2024	08:00	9:00	215	21	27	10	1	1	16	-	1	1	293
18	1	Tuesday, October 8, 2024	09:00	10:00	233	29	28	19	-	2	7	1	-	2	321
19	1	Tuesday, October 8, 2024	10:00	11:00	278	23	53	19	-	5	11	-	-	6	395
20	1	Tuesday, October 8, 2024	11:00	12:00	289	30	59	17	1	6	7	-	1	1	411
21	1	Tuesday, October 8, 2024	12:00	13:00	239	26	60	14	-	5	10	-	-	2	356
22	1	Tuesday, October 8, 2024	13:00	14:00	285	24	61	20	1	7	5	-	-	1	404
23	1	Tuesday, October 8, 2024	14:00	15:00	305	15	61	31	3	6	9	-	1	4	435
24	1	Tuesday, October 8, 2024	15:00	16:00	226	21	55	21	2	5	6	-	-	1	337

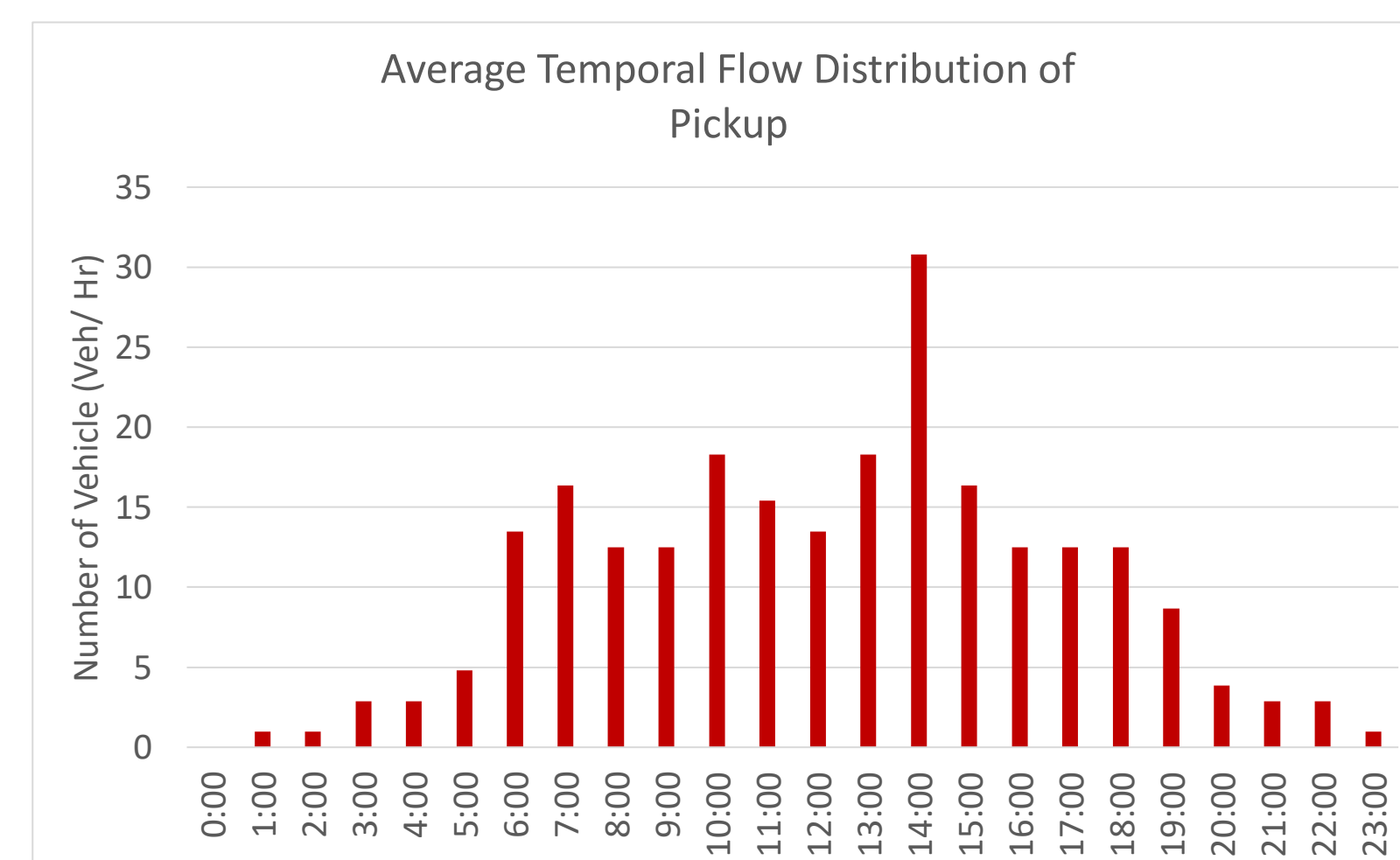
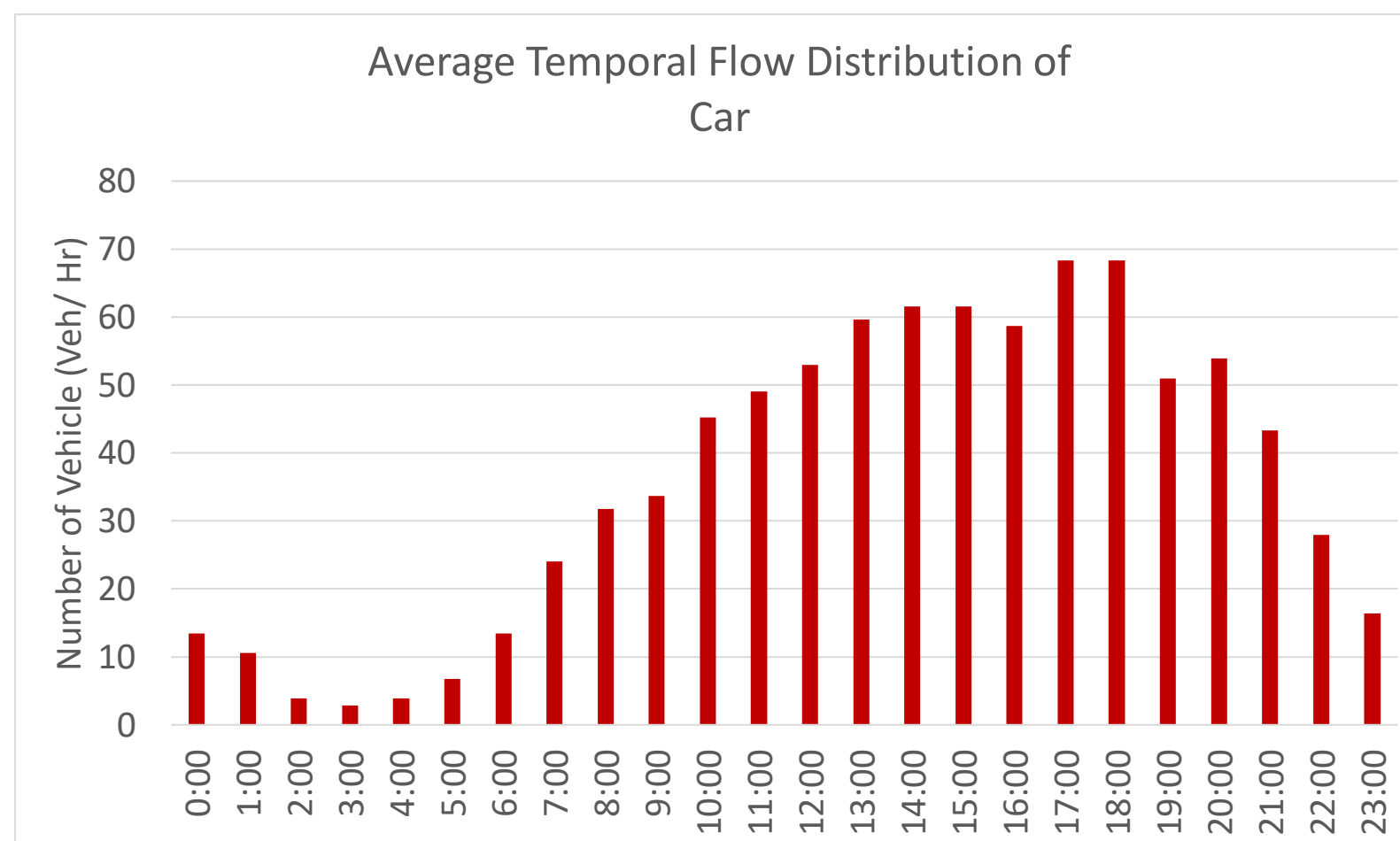
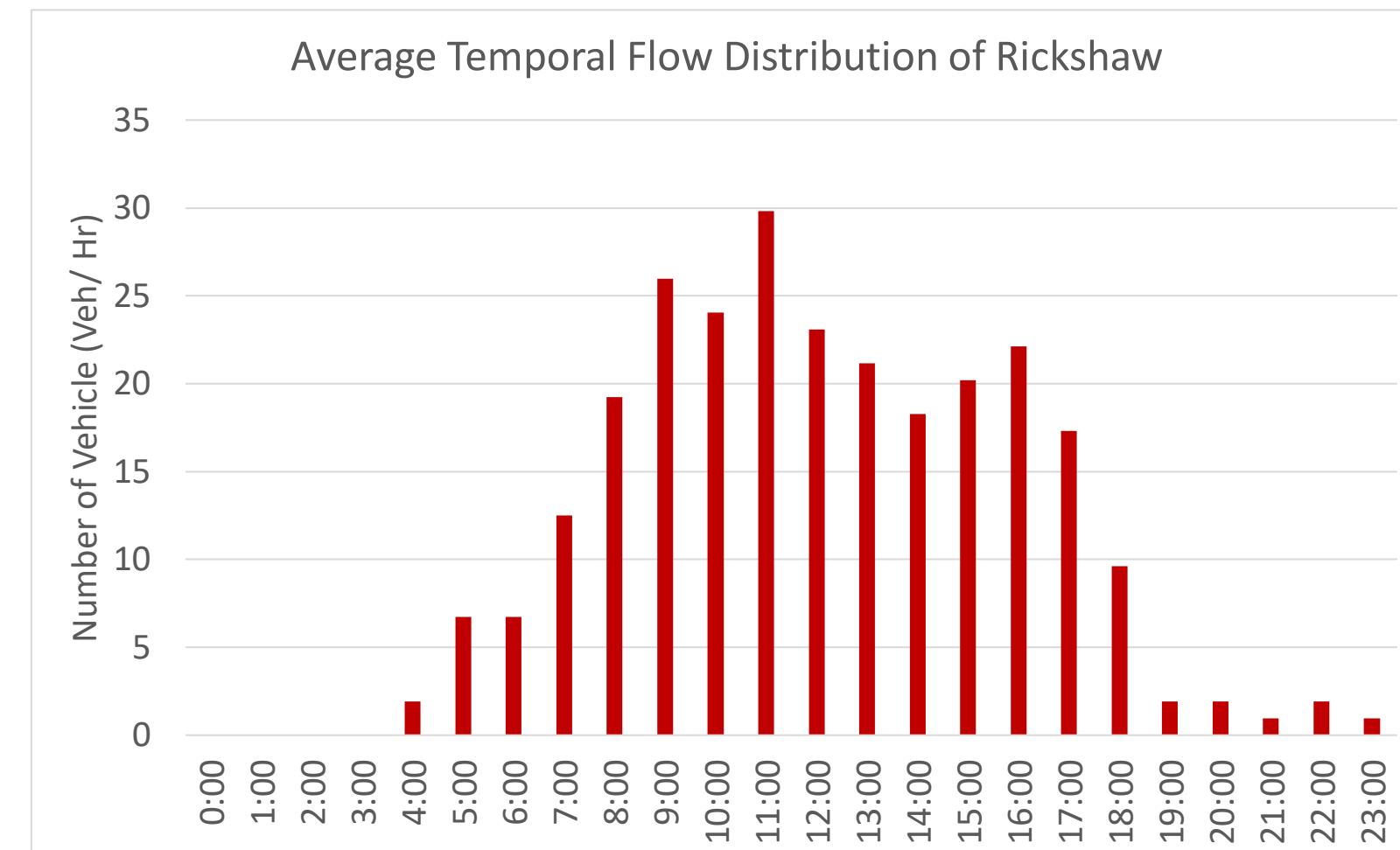
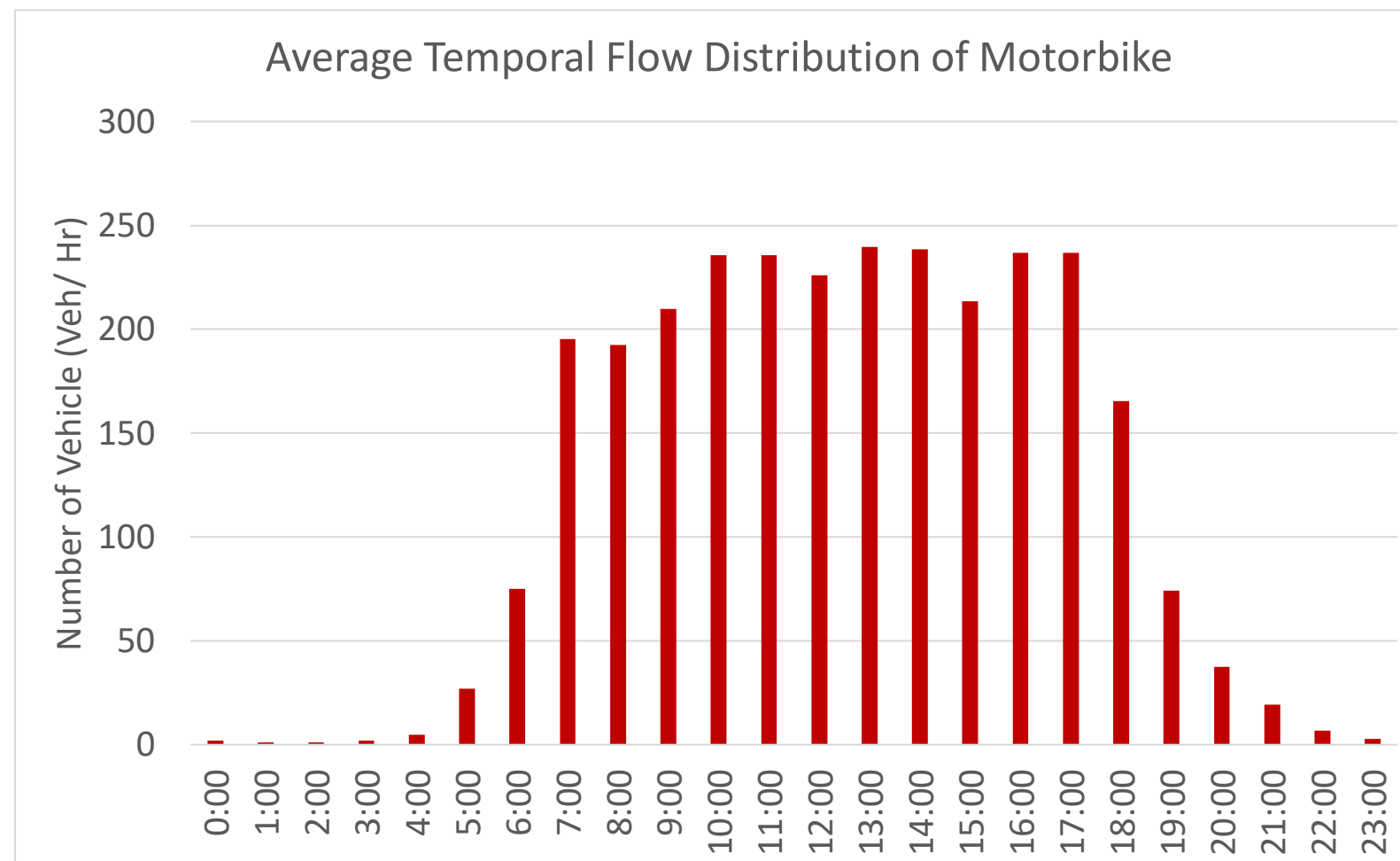


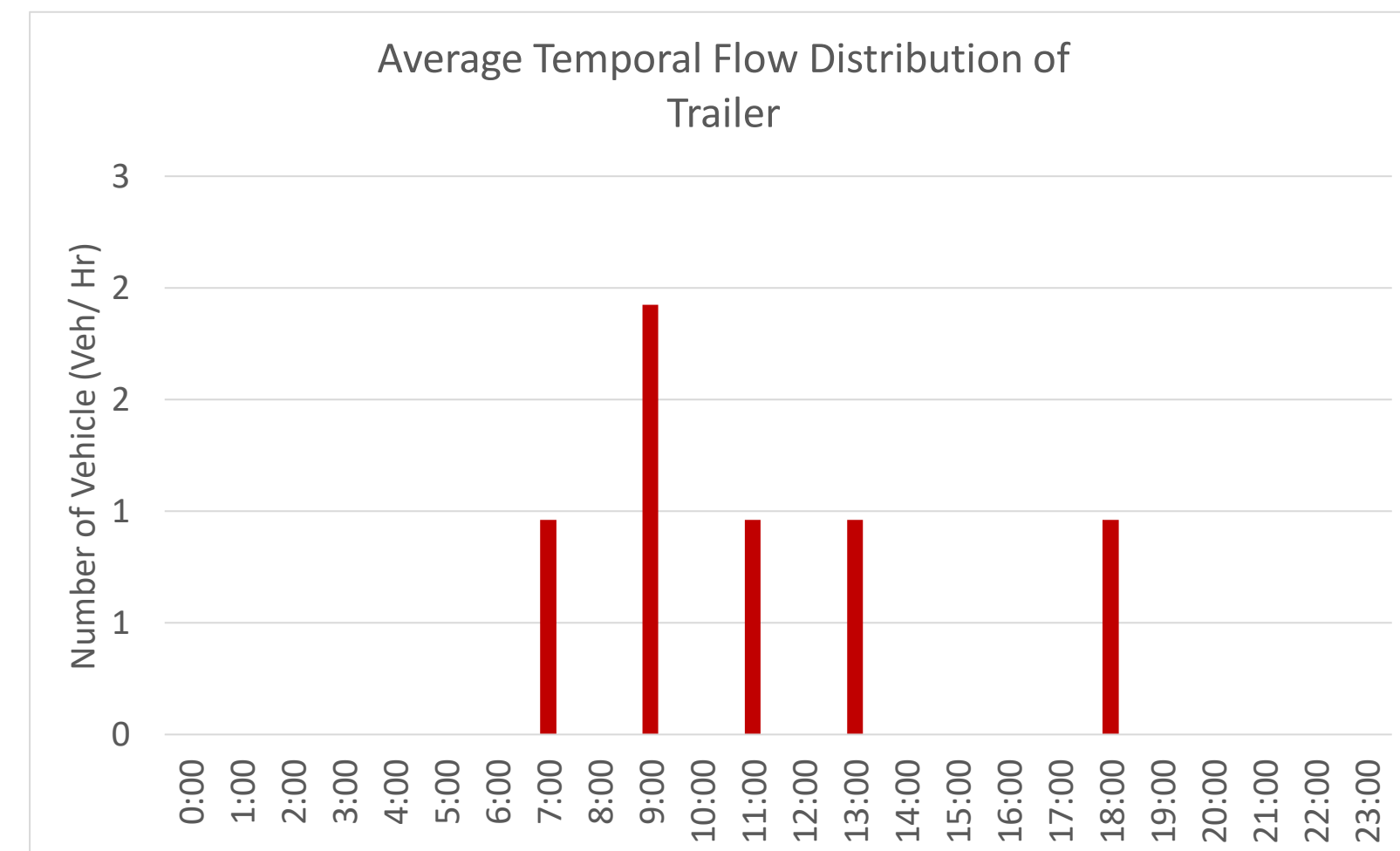
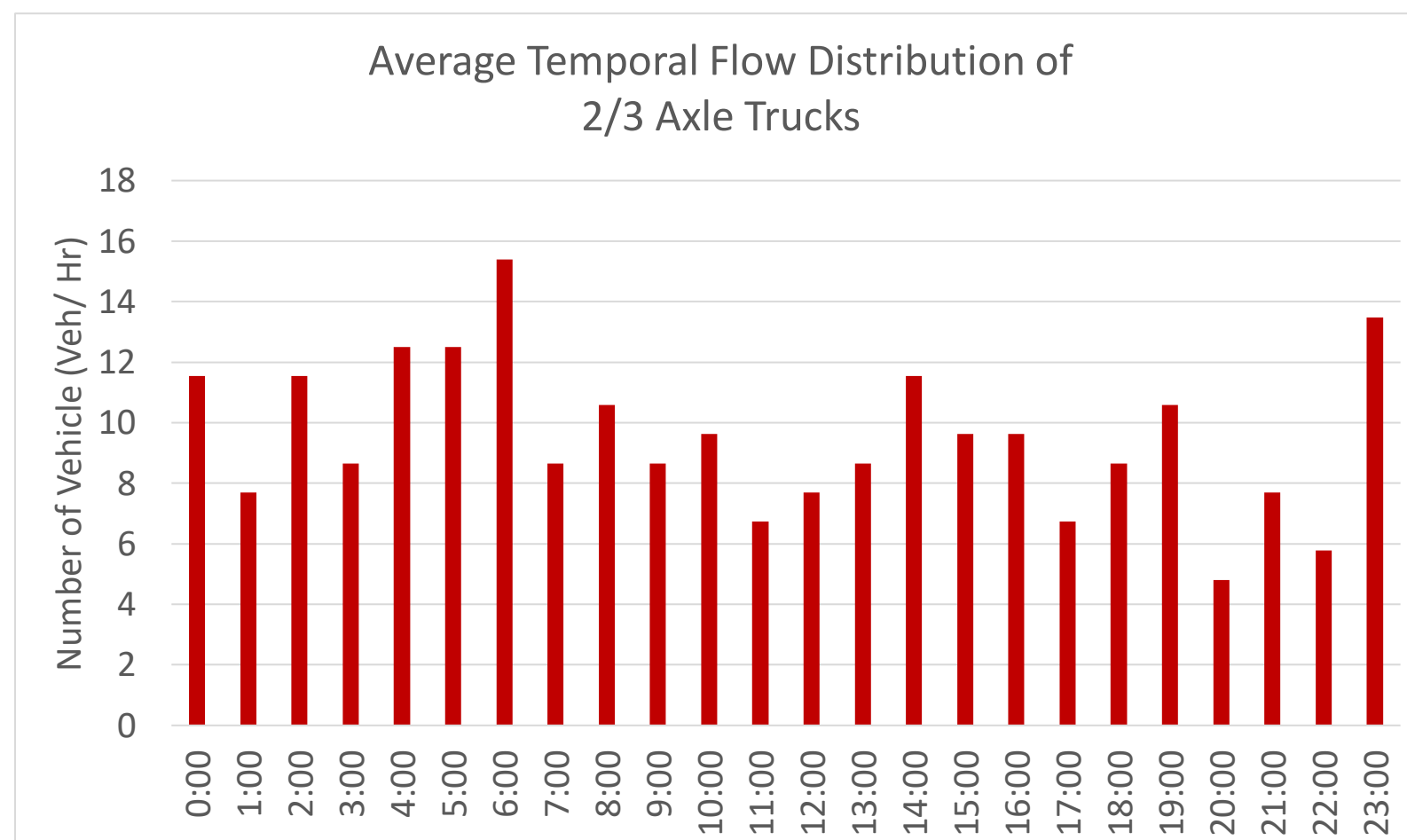
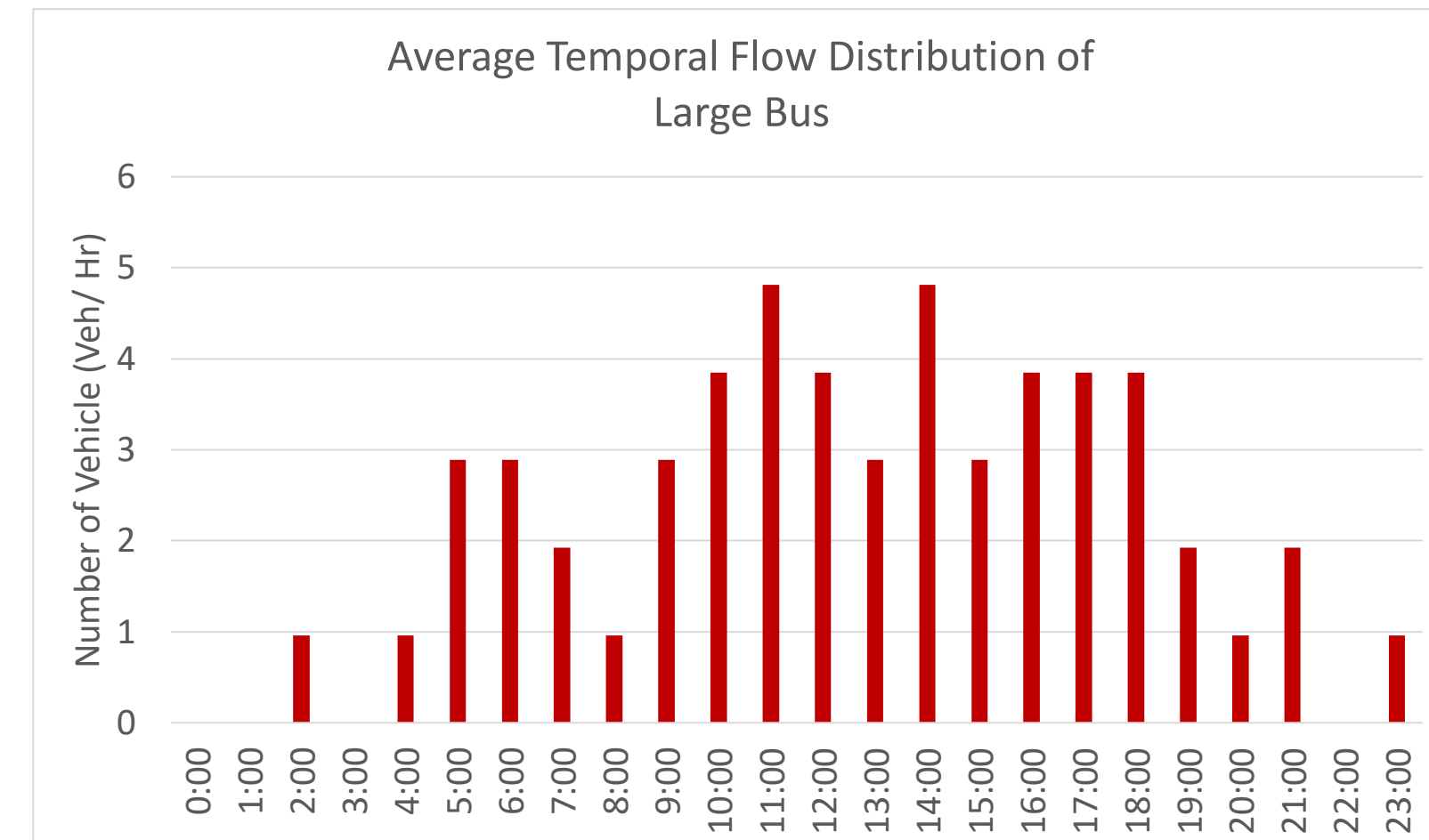
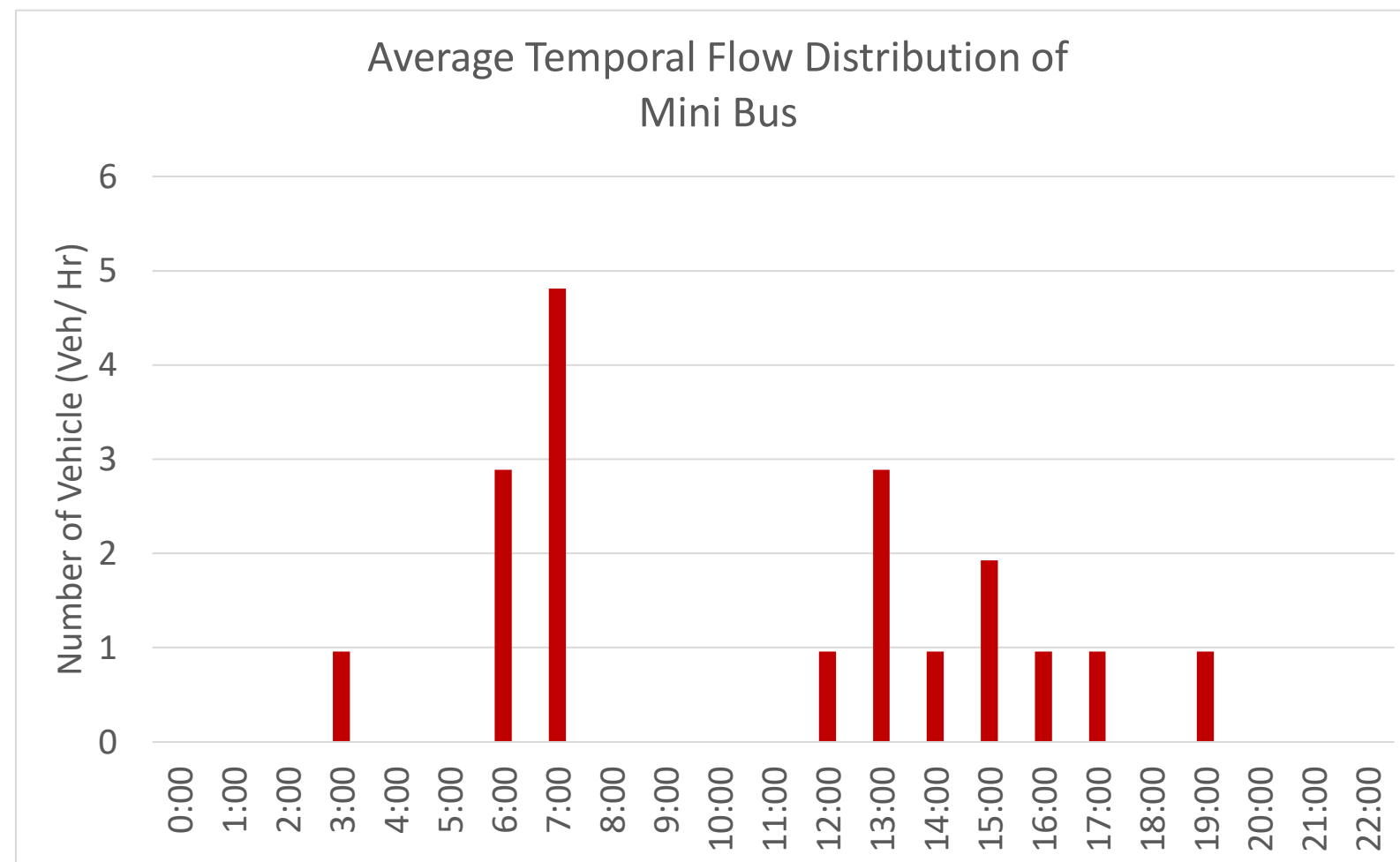
Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode Vehicles Count Survey - Hourly Interval															
Location		MB-3 Shakargarh						Direction Number				2			
Coordinates		32.1743739, 75.0965285						From	Narowal			Towards	Shakargarh		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
25	2	Tuesday, October 8, 2024	16:00	17:00	249	21	60	11	1	3	9	-	-	5	359
26	2	Tuesday, October 8, 2024	17:00	18:00	225	14	64	10	2	3	4	-	-	2	324
27	2	Tuesday, October 8, 2024	18:00	19:00	149	2	63	13	-	3	13	1	-	-	244
28	2	Tuesday, October 8, 2024	19:00	20:00	61	1	41	15	-	3	1	-	-	-	122
29	2	Tuesday, October 8, 2024	20:00	21:00	27	-	55	8	1	2	3	-	1	-	97
30	2	Tuesday, October 8, 2024	21:00	22:00	15	-	44	5	-	1	6	-	-	-	71
31	2	Tuesday, October 8, 2024	22:00	23:00	4	1	30	6	-	-	-	-	-	-	41
32	2	Tuesday, October 8, 2024	23:00	0:00	1	1	17	1	-	2	19	-	-	-	41
33	2	Wednesday, October 9, 2024	00:00	1:00	1	-	5	-	-	-	17	-	-	-	23
34	2	Wednesday, October 9, 2024	01:00	2:00	-	-	8	2	-	-	6	-	-	-	16
35	2	Wednesday, October 9, 2024	02:00	3:00	1	-	1	2	-	-	14	-	-	-	18
36	2	Wednesday, October 9, 2024	03:00	4:00	-	-	3	5	-	-	9	-	-	-	17
37	2	Wednesday, October 9, 2024	04:00	5:00	1	4	3	5	-	1	23	-	-	-	37
38	2	Wednesday, October 9, 2024	05:00	6:00	19	10	6	12	-	4	6	1	2	-	60
39	2	Wednesday, October 9, 2024	06:00	7:00	64	7	8	12	4	3	16	-	-	-	114
40	2	Wednesday, October 9, 2024	07:00	8:00	178	13	27	14	4	-	9	2	1	3	251
41	2	Wednesday, October 9, 2024	08:00	9:00	179	20	36	14	-	1	7	1	2	1	261
42	2	Wednesday, October 9, 2024	09:00	10:00	207	23	42	11	-	3	7	2	-	3	298
43	2	Wednesday, October 9, 2024	10:00	11:00	239	28	26	14	-	3	12	1	1	2	326
44	2	Wednesday, October 9, 2024	11:00	12:00	219	26	43	15	-	4	6	3	-	7	323
45	2	Wednesday, October 9, 2024	12:00	13:00	224	22	49	6	-	2	13	-	1	5	322
46	2	Wednesday, October 9, 2024	13:00	14:00	210	22	50	18	4	1	13	2	1	7	328
47	2	Wednesday, October 9, 2024	14:00	15:00	209	22	53	38	1	1	16	-	-	2	342
48	2	Wednesday, October 9, 2024	15:00	16:00	193	20	64	14	3	1	15	1	-	5	316

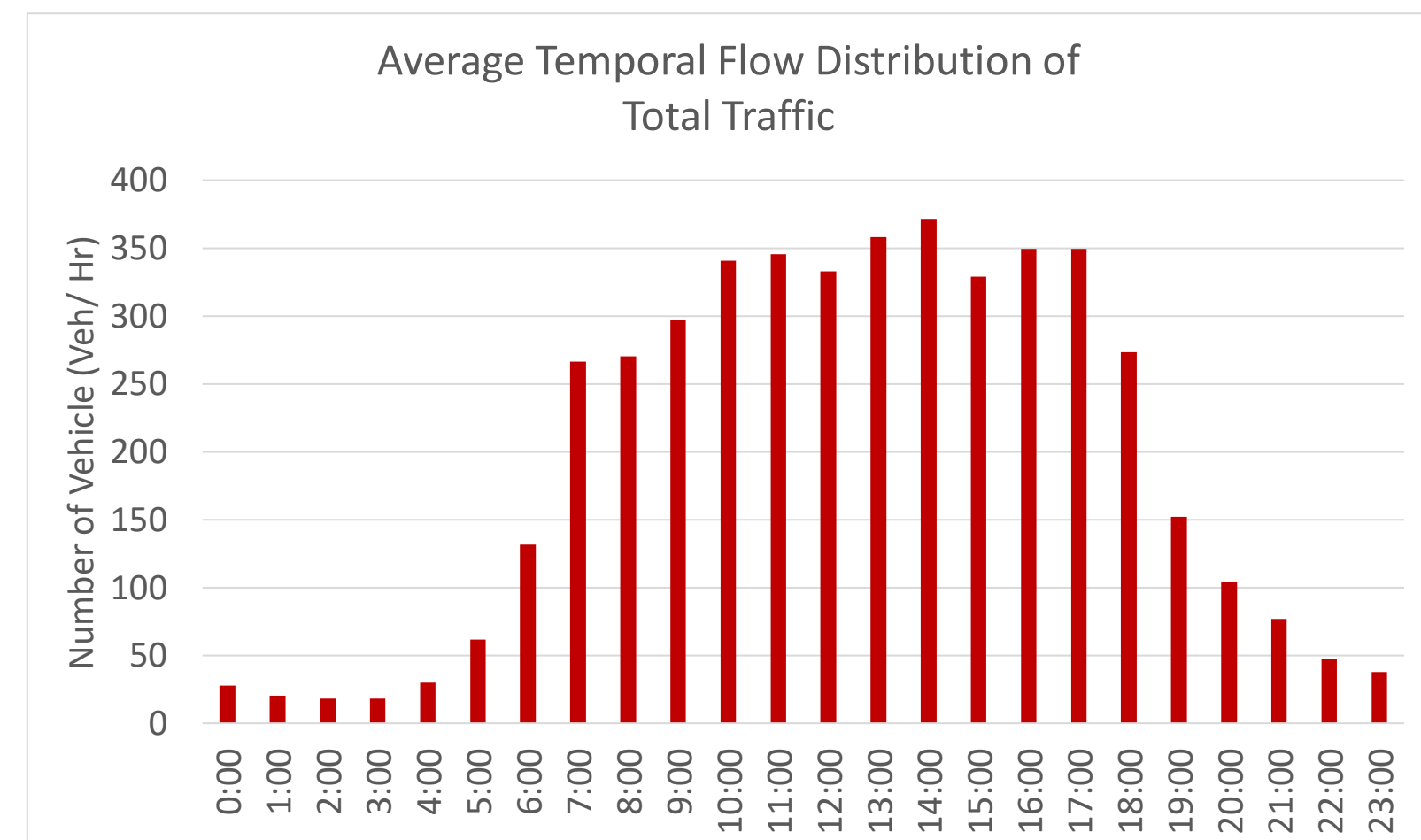
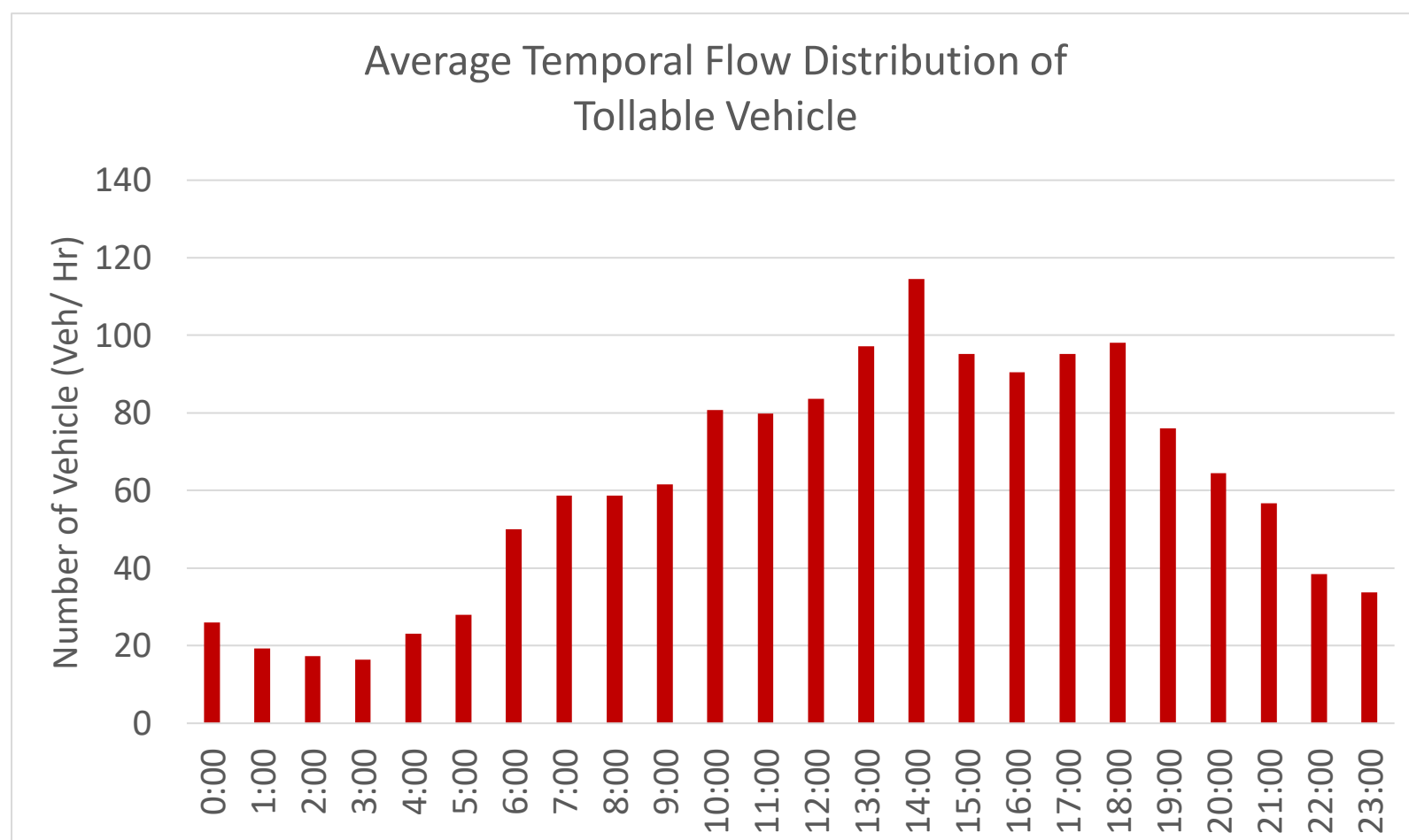
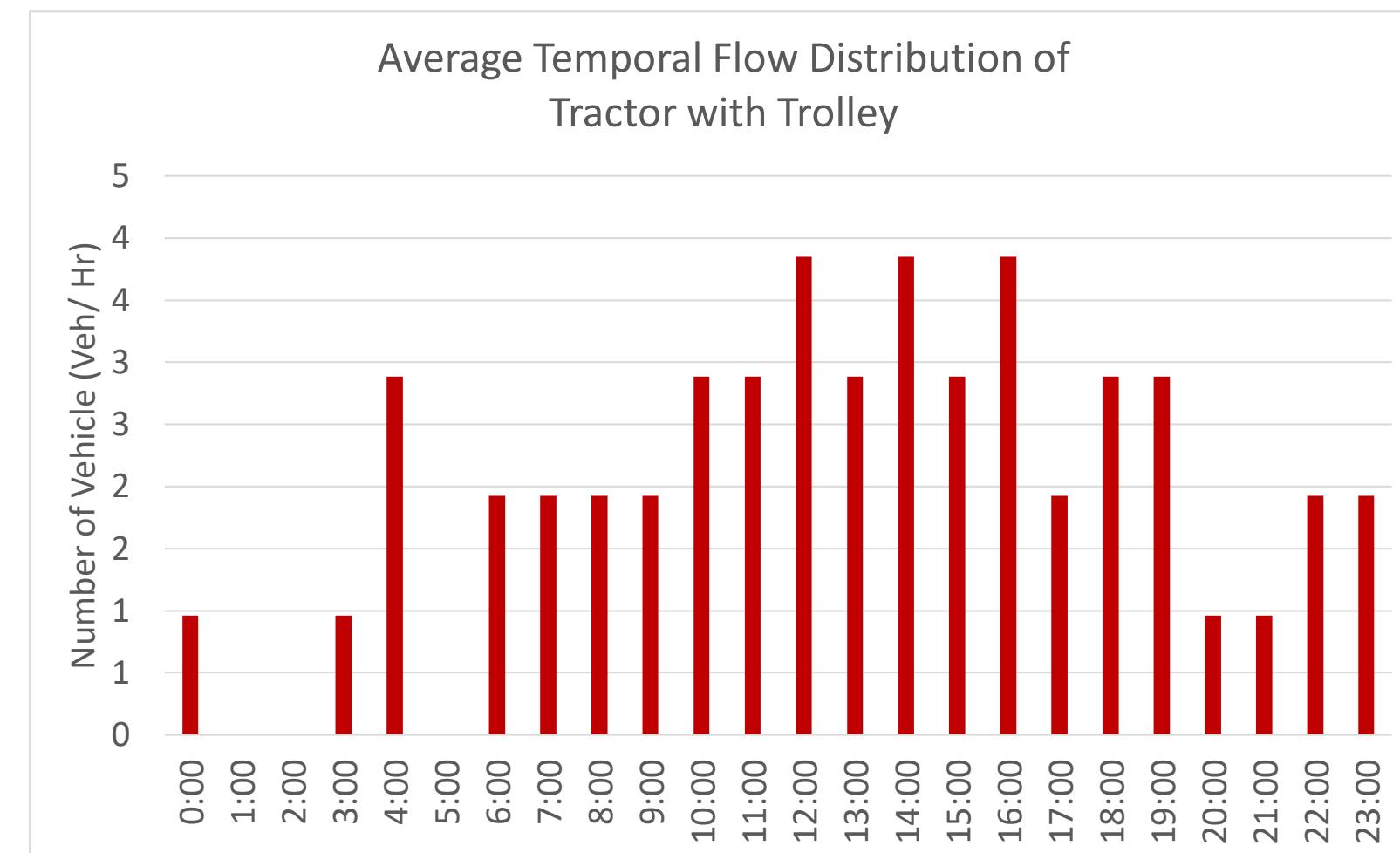
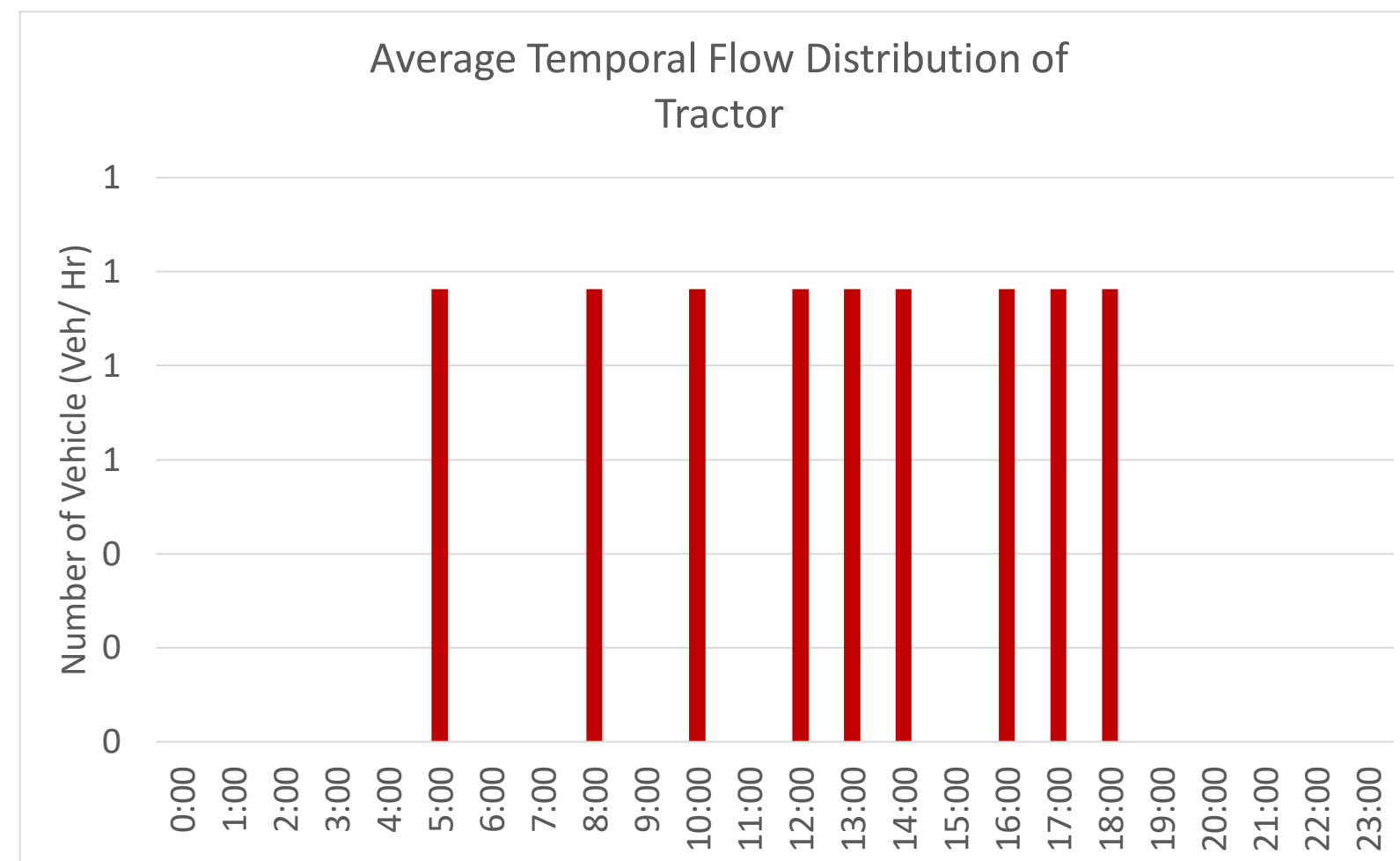


Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode															
Vehicles Count Survey - Hourly Interval															
Location		MB-3 Shakargarh						Direction Number					2		
Coordinates		32.1743739, 75.0965285						From	Narowal			Towards	Shakargarh		
S.No.	Day	Date	Start	End	Motor Bike	Rickshaw	Car	Passenger Pickup	Mini Bus	Large Bus	2/3 Axle Truck	Trailer	Tractor	Tractor with Trolley	Total
49	2	Wednesday, October 9, 2024	16:00	17:00	223	21	56	12	1	3	9	-	1	4	330
50	3	Wednesday, October 9, 2024	17:00	18:00	209	21	52	16	-	4	7	-	1	5	315
51	3	Wednesday, October 9, 2024	18:00	19:00	174	9	78	14	1	6	6	1	2	5	296
52	3	Wednesday, October 9, 2024	19:00	20:00	94	-	64	8	1	1	9	1	-	3	181
53	3	Wednesday, October 9, 2024	20:00	21:00	39	-	64	2	-	-	9	-	-	-	114
54	3	Wednesday, October 9, 2024	21:00	22:00	20	-	41	2	1	1	9	-	-	3	77
55	3	Wednesday, October 9, 2024	22:00	23:00	7	-	29	1	-	-	11	1	-	-	49
56	3	Wednesday, October 9, 2024	23:00	0:00	4	-	14	2	-	-	10	-	-	-	30
57	3	Thursday, October 10, 2024	00:00	1:00	1	-	22	1	-	1	5	-	-	-	30
58	3	Thursday, October 10, 2024	01:00	2:00	2	-	11	2	-	-	9	-	-	-	24
59	3	Thursday, October 10, 2024	02:00	3:00	-	-	8	1	-	1	5	-	-	-	15
60	3	Thursday, October 10, 2024	03:00	4:00	2	-	5	1	2	-	8	-	-	-	18
61	3	Thursday, October 10, 2024	04:00	5:00	10	1	4	4	1	1	6	-	-	-	27
62	3	Thursday, October 10, 2024	05:00	6:00	35	3	8	2	-	3	6	-	-	-	57
63	3	Thursday, October 10, 2024	06:00	7:00	80	5	20	20	-	6	17	1	1	1	151
64	3	Thursday, October 10, 2024	07:00	8:00	204	13	26	22	6	4	6	-	-	1	282
65	3	Thursday, October 10, 2024	08:00	9:00	206	18	36	15	-	-	9	-	1	3	288
66	3	Thursday, October 10, 2024	09:00	10:00	213	30	36	10	1	3	12	2	1	2	310
67	3	Thursday, October 10, 2024	10:00	11:00	219	24	61	24	1	4	7	-	2	2	344
68	3	Thursday, October 10, 2024	11:00	12:00	228	37	50	17	-	5	8	-	-	-	345
69	3	Thursday, October 10, 2024	12:00	13:00	242	23	55	21	2	5	2	-	1	5	356
70	3	Thursday, October 10, 2024	13:00	14:00	251	20	76	18	5	2	8	1	1	2	384
71	3	Thursday, October 10, 2024	14:00	15:00	231	21	78	26	-	8	12	-	3	6	385
72	3	Thursday, October 10, 2024	15:00	16:00	248	22	72	16	2	4	9	-	-	2	375









Annexure-B

Origin Destination



OD Survey Form



Traffic Assessment for
Operation and Management Contracts for Roads in Punjab on PPP Mode
OD Survey Form

Date				Form Start Time		Form End Time	
Surveyor Name				Location			
S.No.	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
	کہاں سے آرہے ہیں۔	کہاں جا رہے ہیں۔	گاڑی کی قسم	مسافروں کی تعداد	سفر کا مقصد	ٹول ادا کرنے کی خواہش	تجویز کردہ ٹول
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Traffic Assessment for
Operation and Management Contracts for Roads in Punjab on PPP Mode
OD Survey Form Instruction

Form Text	Urdu Translation	Instructions / ہدایات
Form Start and End Time	فارم کا آغاز اور اختتامی وقت	سرویئر کو ہر فارم پر AM/PM فارمیٹ میں فارم کا آغاز اور اختتامی وقت ٹائپ کرنے کی ضرورت ہے۔
Origin	کہاں سے آرہے ہیں۔	ڈرائیور سے اس جگہ کے بارے میں پوچھیں جہاں سے انہوں نے اپنا سفر شروع کیا ہے یا کنٹینر اٹھایا ہے۔
Destination	کہاں جا رہے ہیں۔	ڈرائیور سے اس جگہ کے بارے میں پوچھیں جہاں وہ اپنا سفر ختم کریں گے یا کنٹینر اتاریں گے۔
Vehicle Type	گاڑی کی قسم	گاری کی قسم لکھنے کے لیے نیچے دیے گئے کوڈ کا استعمال کرنا ہے۔
		(C) Car (W) Wagon (upto 12 seaters) (MB) Mini Buses (12 to 24 seaters) (LB) Large Buses (24 or more seaters) (T) 2 & 3 Axle Trucks (LT) Articulated Trucks
Number of Passenger in Vehicle	گاڑی میں مسافروں کی تعداد	گاڑی میں مسافروں کی تعداد نوٹ کریں۔ (صرف مسافر گاڑیوں کے لیے)
Trip Purpose	سفر کا مقصد	سفر کا مقصد نوٹ کریں۔ کام، گھر، تفریحی، صحت، سماجی یا تعلیم
Willingness to Pay (Yes/ No)	ٹول ادا کرنے کی خواہش	نوٹ کریں کہ آیا سڑک کی حالت اور سفر کے وقت میں بہتری کی صورت میں مسافر ٹول ادا کرنے کو تیار ہے۔
Suggested Toll (Rs.)	تجویز کردہ ٹول	مسافروں سے پوچھیں کہ اگر سڑک کی حالت بہتر ہو جائے تو وہ پاکستانی روپے میں کتنا ٹول ادا کرنے کو تیار ہیں۔

OD Matrix



OD Matrix for Muridke - Narowal - Shakargarh Road

[illegible]

OD Data



Road Name		Muridke - Narowal - Shakargarh
S.No.	Place Name	Coordinates
1	Muridke	31.8094838, 74.253415
2	Shakargarh	32.257239, 75.1603752
3	Al-Wakeel International	31.8245326, 74.2800461
4	Baddomalhi	31.9868491, 74.6693186
5	Chak Bhulay	31.8831679, 74.4041953
6	Chaura Rajputan	31.8626914, 74.3074213
7	Daharki	28.0377855, 69.6810338
8	Engro Narowal	32.1218555, 74.8751724
9	Faisalabad	31.4503662, 73.1349605
10	Gujranwala	32.1876919, 74.1944529
11	Gulshan Rice Mill	31.8628854, 74.3167407
12	Hafiz Rice Industries Muridke	31.8231258, 74.278968
13	Khan Kot Sheikhpura	31.8612301, 74.3261203
14	Lahore	31.5203696, 74.3587473
15	Narang Mandi	31.901405, 74.5170319
16	Narowal	32.1014067, 74.8799518
17	Qarshi Model Complex	31.8607368, 74.3380602
18	Shahzad Town Muridke	31.8190346, 74.2692839
19	Sialkot	32.4944991, 74.5228916
20	Tapiala Dost Muhammad	31.8708251, 74.3279534
21	Saraj Ada	32.1010303, 74.7906402
22	Bara Manga	32.166234, 75.1530788
23	Chak Aamru	32.3741456, 75.1764262
24	Nainan Kot	32.1835948, 75.2522813
25	Darman	32.4084056, 75.0012365
26	Dehlra	32.3884736, 75.0939651
27	Dudhu Chak	32.267253, 75.0246062
28	Ikhlas Pur	32.2598593, 75.3106062
29	Kali Suba Bus Station	32.0553093, 74.5551086
30	Kamoke	31.9765147, 74.2220167
31	Bahawalpur	29.35435, 71.691066
32	Nurkot	32.2015765, 75.1238896
33	Qila Kalar Wala	32.0924539, 74.5814773
34	Rawalpindi	33.5651107, 73.0169135
35	Suchkochack	32.381009, 75.2048762
36	Sheikhpura	31.7166617, 73.9850243
37	Kasur	31.1137177, 74.4671862
38	Talwandi Bhindran	32.0975375, 74.6898085
39	Bara Bhai Darbaar	32.32635, 75.3012415
40	Zafarwal	32.3370042, 74.903339
41	Bustan Narowal	32.1579076, 75.0662252
42	Bhajna Bus Stop	32.1712005, 75.0930038
43	Islamabad	33.6995086, 73.0362897
44	Sahiwal	30.6681998, 73.111356
45	Wah Cantt	33.7715411, 72.7510921



**Traffic Assessment for
Operation and Management Contracts for Roads in Punjab on PPP Mode
OD Survey Data**

Location		MB-1 Muridke			Date	Tuesday, October 8, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
1	8:30	Narowal	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
2	8:34	Narowal	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
3	8:38	Shakargarh	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
4	8:42	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
5	8:45	Daharki	Muridke	Trailer	2	Work	No	No
6	8:46	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
7	8:48	Daharki	Muridke	Trailer	2	Work	No	No
8	8:51	Khan Kot Sheikhpura	Muridke	Car	2	Work	No	No
9	8:52	Daharki	Muridke	Trailer	2	Work	No	No
10	8:55	Narang Mandi	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
11	8:56	Daharki	Muridke	Trailer	2	Work	Yes	110
12	8:59	Narang Mandi	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
13	8:59	Daharki	Muridke	Trailer	2	Work	Not Answered	Not Answered
14	9:03	Muridke	Muridke	Trailer	2	Work	Not Answered	Not Answered
15	9:03	Narowal	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
16	9:07	Daharki	Muridke	Trailer	2	Work	Not Answered	Not Answered
17	9:07	Narowal	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
18	9:10	Daharki	Muridke	Trailer	2	Work	Not Answered	Not Answered
19	9:12	Narowal	Shahzad Town Muridke	Passenger Pickup	2	Work	Not Answered	Not Answered
20	9:14	Daharki	Muridke	Trailer	2	Work	Not Answered	Not Answered
21	9:16	Qarshi Model Complex	Lahore	2/3 Axle Truck	2	Work	Not Answered	Not Answered
22	9:18	Daharki	Muridke	Trailer	2	Work	Not Answered	Not Answered
23	9:20	Narang Mandi	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
24	9:21	Daharki	Muridke	Trailer	2	Work	Not Answered	Not Answered
25	9:24	Narang Mandi	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
26	9:25	Daharki	Muridke	Trailer	2	Work	Not Answered	Not Answered
27	9:28	Khan Kot Sheikhpura	Muridke	Car	1	Work	No	No
28	9:29	Daharki	Muridke	Trailer	2	Work	Not Answered	Not Answered
29	9:32	Daharki	Muridke	Trailer	2	Work	Not Answered	Not Answered
30	9:33	Narowal	Muridke	Passenger Pickup	2	Work	No	No
31	9:36	Shakargarh	Narowal	Large Bus	64	Work	Not Answered	Not Answered
32	9:37	Shakargarh	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
33	9:40	Muridke	Engro Narowal	Car	1	Work	Not Answered	Not Answered
34	9:41	Shakargarh	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
35	9:43	Muridke	Engro Narowal	Car	1	Work	Not Answered	Not Answered



**Traffic Assessment for
Operation and Management Contracts for Roads in Punjab on PPP Mode
OD Survey Data**

Location		MB-1 Muridke			Date	Tuesday, October 8, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
36	9:45	Narang Mandi	Lahore	Mini Bus	32	Work	Not Answered	Not Answered
37	9:47	Muridke	Narowal	Car	3	Work	Not Answered	Not Answered
38	9:50	Narang Mandi	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
39	9:50	Narowal	Lahore	Large Bus	50	Work	No	No
40	9:51	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
41	9:55	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
42	9:55	Narowal	Muridke	Large Bus	30	Work	No	No
43	10:00	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
44	10:01	Qarshi Model Complex	Gujranwala	Passenger Pickup	10	Work	Yes	Applicable Toll
45	10:03	Lahore	Shakargarh	Car	3	Work	Yes	30
46	10:07	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
47	10:07	Muridke	Narang Mandi	2/3 Axle Truck	4	Work	No	No
48	10:11	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
49	10:13	Shakargarh	Lahore	Mini Bus	32	Work	Not Answered	Not Answered
50	10:15	Chaura Rajputan	Narang Mandi	Car	2	Work	Not Answered	Not Answered
51	10:15	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
52	10:18	Lahore	Narang Mandi	Mini Bus	32	Work	Not Answered	Not Answered
53	10:19	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
54	10:19	Muridke	Sialkot	Car	2	Work	Yes	50
55	10:22	Lahore	Shakargarh	Mini Bus	32	Work	Not Answered	Not Answered
56	10:23	Muridke	Narowal	Mini Bus	28	Work	Not Answered	Not Answered
57	10:25	Narowal	Lahore	Large Bus	35	Work	Not Answered	Not Answered
58	10:26	Muridke	Narang Mandi	Car	2	Work	Not Answered	Not Answered
59	10:27	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
60	10:30	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
61	10:31	Muridke	Narowal	Mini Bus	32	Work	Not Answered	Not Answered
62	10:31	Narang Mandi	Lahore	Car	2	Work	Yes	Applicable Toll
63	10:34	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
64	10:35	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
65	10:37	Shakargarh	Lahore	Large Bus	20	Work	Not Answered	Not Answered
66	10:38	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
67	10:39	Al-Wakeel International	Gulshan Rice Mill	2/3 Axle Truck	2	Work	Not Answered	Not Answered
68	10:42	Muridke	Narang Mandi	Mini Bus	32	Work	Not Answered	Not Answered
69	10:43	Lahore	Narowal	Large Bus	64	Work	Not Answered	Not Answered
70	10:43	Shakargarh	Lahore	Large Bus	50	Work	Not Answered	Not Answered



**Traffic Assessment for
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Location		MB-1 Muridke			Date	Tuesday, October 8, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
71	10:46	Muridke	Shakargarh	Car	5	Work	Not Answered	Not Answered
72	10:47	Shahzad Town Muridke	Shakargarh	Car	2	Work	Not Answered	Not Answered
73	10:49	Shakargarh	Lahore	Large Bus	55	Work	Not Answered	Not Answered
74	10:50	Lahore	Narowal	Mini Bus	32	Work	Not Answered	Not Answered
75	10:51	Chaura Rajputan	Qarshi Model Complex	Car	2	Work	Not Answered	Not Answered
76	10:54	Shahzad Town Muridke	Shakargarh	Car	3	Work	Not Answered	Not Answered
77	10:55	Muridke	Narang Mandi	Passenger Pickup	16	Work	Not Answered	Not Answered
78	10:55	Narowal	Lahore	Mini Bus	30	Work	Not Answered	Not Answered
79	10:58	Muridke	Narang Mandi	2/3 Axle Truck	3	Work	Not Answered	Not Answered
80	10:59	Muridke	Gulshan Rice Mill	2/3 Axle Truck	2	Work	Not Answered	Not Answered
81	11:01	Narang Mandi	Muridke	Car	2	Work	Not Answered	Not Answered
82	11:02	Muridke	Narang Mandi	Car	1	Work	Not Answered	Not Answered
83	11:03	Muridke	Khan Kot Sheikhpura	Car	4	Work	Not Answered	Not Answered
84	11:06	Muridke	Narang Mandi	Car	2	Work	Not Answered	Not Answered
85	11:07	Muridke	Shakargarh	Mini Bus	32	Work	Not Answered	Not Answered
86	11:07	Khan Kot Sheikhpura	Muridke	Car	4	Work	Not Answered	Not Answered
87	11:10	Lahore	Shakargarh	Car	2	Work	Not Answered	Not Answered
88	11:11	Muridke	Narowal	Car	3	Work	Not Answered	Not Answered
89	11:13	Shakargarh	Lahore	Large Bus	40	Work	Not Answered	Not Answered
90	11:14	Muridke	Narowal	Mini Bus	32	Work	Not Answered	Not Answered
91	11:15	Muridke	Shakargarh	Car	2	Work	Not Answered	Not Answered
92	11:18	Lahore	Narang Mandi	Car	3	Work	Not Answered	Not Answered
93	11:19	Narang Mandi	Muridke	Mini Bus	25	Work	Not Answered	Not Answered
94	11:22	Muridke	Shakargarh	Car	4	Work	Not Answered	Not Answered
95	11:25	Qarshi Model Complex	Muridke	Car	2	Work	Not Answered	Not Answered
96	11:26	Muridke	Shakargarh	Car	4	Work	Not Answered	Not Answered
97	11:30	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
98	11:30	Muridke	Shakargarh	Passenger Pickup	16	Work	No	No
99	11:30	Muridke	Narowal	Car	4	Work	Not Answered	Not Answered
100	11:31	Khan Kot Sheikhpura	Muridke	Car	1	Work	Not Answered	Not Answered
101	11:31	Muridke	Shakargarh	2/3 Axle Truck	3	Work	No	No
102	11:33	Faisalabad	Narowal	Large Bus	64	Work	Not Answered	Not Answered
103	11:35	Lahore	Narowal	Large Bus	64	Work	Not Answered	Not Answered
104	11:37	Shakargarh	Lahore	Large Bus	50	Work	Not Answered	Not Answered
105	11:37	Shakargarh	Muridke	Car	2	Work	Not Answered	Not Answered



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S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
106	11:37	Lahore	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
107	11:38	Narang Mandi	Muridke	Car	1	Work	Not Answered	Not Answered
108	11:39	Narang Mandi	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
109	11:39	Muridke	Chaura Rajputan	2/3 Axle Truck	3	Work	Not Answered	Not Answered
110	11:40	Narowal	Muridke	Large Bus	20	Work	Not Answered	Not Answered
111	11:41	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
112	11:41	Gulshan Rice Mill	Muridke	Car	1	Work	Not Answered	Not Answered
113	11:42	Muridke	Narang Mandi	Passenger Pickup	16	Work	Not Answered	Not Answered
114	11:43	Shakargarh	Lahore	Car	2	Work	Yes	30
115	11:44	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
116	11:44	Narowal	Muridke	Car	2	Work	No	No
117	11:46	Shakargarh	Muridke	Car	3	Work	No	No
118	11:46	Lahore	Shakargarh	Car	4	Work	Not Answered	Not Answered
119	11:47	Narowal	Lahore	Large Bus	2	Work	Yes	60
120	11:48	Lahore	Narang Mandi	Car	2	Work	Not Answered	Not Answered
121	11:48	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
122	11:49	Narowal	Muridke	Mini Bus	30	Work	Not Answered	Not Answered
123	11:50	Muridke	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
124	11:51	Shakargarh	Lahore	Mini Bus	25	Work	Not Answered	Not Answered
125	11:52	Muridke	Narang Mandi	2/3 Axle Truck	2	Work	Not Answered	Not Answered
126	11:52	Sialkot	Lahore	Mini Bus	20	Work	Not Answered	Not Answered
127	11:53	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
128	11:54	Qarshi Model Complex	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
129	11:55	Narang Mandi	Muridke	Mini Bus	25	Work	Not Answered	Not Answered
130	11:55	Muridke	Narang Mandi	Passenger Pickup	16	Work	Not Answered	Not Answered
131	11:57	Khan Kot Sheikhpura	Muridke	Car	2	Work	Yes	20
132	11:57	Lahore	Shakargarh	Car	1	Work	Not Answered	Not Answered
133	11:58	Muridke	Narang Mandi	Car	2	Work	Not Answered	Not Answered
134	11:58	Narowal	Muridke	Passenger Pickup	7	Work	Not Answered	Not Answered
135	11:59	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
136	12:00	Narang Mandi	Muridke	Passenger Pickup	15	Work	Not Answered	Not Answered
137	12:01	Muridke	Sialkot	Car	2	Work	Not Answered	Not Answered
138	12:01	Shakargarh	Lahore	Mini Bus	20	Work	Not Answered	Not Answered
139	12:03	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
140	12:03	Shakargarh	Muridke	Passenger Pickup	10	Work	Not Answered	Not Answered



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S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
141	12:05	Muridke	Sialkot	Car	2	Work	Not Answered	Not Answered
142	12:05	Narowal	Shahzad Town Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
143	12:05	Shakargarh	Muridke	Passenger Pickup	15	Work	Not Answered	Not Answered
144	12:07	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
145	12:08	Narowal	Shahzad Town Muridke	2/3 Axle Truck	3	Work	Not Answered	Not Answered
146	12:12	Narang Mandi	Muridke	Passenger Pickup	7	Work	Not Answered	Not Answered
147	12:15	Muridke	Narang Mandi	Car	2	Work	Not Answered	Not Answered
148	12:16	Shakargarh	Lahore	Large Bus	35	Work	Not Answered	Not Answered
149	12:17	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
150	12:18	Muridke	Shakargarh	Car	3	Work	Not Answered	Not Answered
151	12:20	Qarshi Model Complex	Muridke	Car	4	Work	Yes	60
152	12:22	Shahzad Town Muridke	Narang Mandi	Car	2	Work	Not Answered	Not Answered
153	12:23	Narang Mandi	Muridke	Passenger Pickup	12	Work	Not Answered	Not Answered
154	12:26	Muridke	Baddomalhi	Car	2	Work	Not Answered	Not Answered
155	12:26	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
156	12:27	Narowal	Shahzad Town Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
157	12:30	Muridke	Narang Mandi	Car	2	Work	Not Answered	Not Answered
158	12:31	Shakargarh	Muridke	Passenger Pickup	4	Work	Not Answered	Not Answered
159	12:34	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
160	12:35	Shakargarh	Muridke	Passenger Pickup	5	Work	Not Answered	Not Answered
161	12:36	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
162	12:38	Muridke	Narowal	Car	3	Work	Not Answered	Not Answered
163	12:39	Narang Mandi	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
164	12:42	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
165	12:42	Narowal	Muridke	Passenger Pickup	15	Work	Not Answered	Not Answered
166	12:45	Lahore	Narang Mandi	Car	4	Work	Not Answered	Not Answered
167	12:46	Khan Kot Sheikhpura	Shahzad Town Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
168	12:46	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
169	12:50	Gulshan Rice Mill	Muridke	2/3 Axle Truck	1	Work	Not Answered	Not Answered
170	12:50	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
171	12:54	Qarshi Model Complex	Muridke	Car	2	Work	Not Answered	Not Answered
172	12:54	Muridke	Narowal	Car	2	Work	Not Answered	Not Answered
173	12:55	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
174	12:57	Narang Mandi	Muridke	Passenger Pickup	15	Work	Not Answered	Not Answered
175	12:58	Gujranwala	Chak Bhulay	2/3 Axle Truck	2	Work	Not Answered	Not Answered



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Location		MB-1 Muridke			Date	Tuesday, October 8, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
176	13:01	Tapiala Dost Muhammad	Muridke	Car	1	Work	No	No
177	13:02	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
178	13:04	Muridke	Narowal	Car	1	Work	Not Answered	Not Answered
179	13:05	Qarshi Model Complex	Shahzad Town Muridke	Car	3	Work	Yes	20
180	13:06	Muridke	Shakargarh	Car	2	Work	Not Answered	Not Answered
181	13:09	Shakargarh	Muridke	Large Bus	50	Work	Not Answered	Not Answered
182	13:10	Muridke	Narang Mandi	Car	2	Work	Not Answered	Not Answered
183	13:13	Shakargarh	Muridke	Car	2	Work	No	No
184	13:13	Shakargarh	Lahore	Large Bus	50	Work	Not Answered	Not Answered
185	13:14	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
186	13:14	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
187	13:17	Shakargarh	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
188	13:18	Muridke	Baddomalhi	Car	2	Work	Not Answered	Not Answered
189	13:21	Tapiala Dost Muhammad	Muridke	Car	3	Work	Yes	30
190	13:22	Al-Wakeel International	Shakargarh	Car	2	Work	Not Answered	Not Answered
191	13:23	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
192	13:25	Narowal	Shahzad Town Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
193	13:26	Muridke	Khan Kot Sheikhpura	Car	2	Work	Not Answered	Not Answered
194	13:29	Narang Mandi	Muridke	Passenger Pickup	6	Work	Not Answered	Not Answered
195	13:30	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
196	13:33	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
197	13:33	Gulshan Rice Mill	Muridke	2/3 Axle Truck	3	Work	Not Answered	Not Answered
198	13:37	Khan Kot Sheikhpura	Shahzad Town Muridke	Car	2	Work	Yes	30
199	13:41	Shakargarh	Muridke	Passenger Pickup	3	Work	Not Answered	Not Answered
200	13:42	Muridke	Narang Mandi	Passenger Pickup	16	Work	Not Answered	Not Answered
201	13:45	Narowal	Muridke	Passenger Pickup	5	Work	Not Answered	Not Answered
202	13:49	Shakargarh	Muridke	Passenger Pickup	9	Work	Not Answered	Not Answered
203	13:52	Muridke	Chak Bhulay	2/3 Axle Truck	2	Work	Not Answered	Not Answered
204	13:53	Shakargarh	Muridke	Passenger Pickup	12	Work	Not Answered	Not Answered
205	13:57	Narang Mandi	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
206	14:01	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
207	14:01	Tapiala Dost Muhammad	Shahzad Town Muridke	Car	2	Work	No	No
208	14:05	Shakargarh	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
209	14:09	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
210	14:11	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered



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S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
211	14:13	Shakargarh	Muridke	Large Bus	40	Education	Not Answered	Not Answered
212	14:17	Narowal	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
213	14:20	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
214	14:21	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
215	14:25	Narowal	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
216	14:30	Chaura Rajputan	Qarshi Model Complex	Car	1	Work	Not Answered	Not Answered
217	14:30	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
218	14:30	Narowal	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
219	14:30	Shakargarh	Muridke	Large Bus	30	Work	Not Answered	Not Answered
220	14:32	Narowal	Lahore	Large Bus	50	Work	Not Answered	Not Answered
221	14:35	Shakargarh	Muridke	Car	3	Work	Yes	30
222	14:36	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
223	14:38	Tapiala Dost Muhammad	Lahore	2/3 Axle Truck	4	Work	Not Answered	Not Answered
224	14:41	Sialkot	Gujranwala	Car	2	Work	Yes	50
225	14:42	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
226	14:44	Tapiala Dost Muhammad	Muridke	Car	2	Work	Yes	30
227	14:47	Narang Mandi	Muridke	Large Bus	50	Work	Not Answered	Not Answered
228	14:48	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
229	14:50	Shakargarh	Muridke	Passenger Pickup	3	Work	Not Answered	Not Answered
230	14:53	Narowal	Lahore	Passenger Pickup	2	Work	Not Answered	Not Answered
231	14:55	Muridke	Narang Mandi	Passenger Pickup	16	Work	Not Answered	Not Answered
232	14:56	Tapiala Dost Muhammad	Shahzad Town Muridke	Passenger Pickup	10	Work	Not Answered	Not Answered
233	14:58	Khan Kot Sheikhupura	Muridke	Car	2	Work	Not Answered	Not Answered
234	15:01	Muridke	Baddomalhi	Passenger Pickup	16	Work	Not Answered	Not Answered
235	15:01	Shakargarh	Lahore	Large Bus	35	Work	Not Answered	Not Answered
236	15:04	Narang Mandi	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
237	15:07	Narowal	Hafiz Rice Industries Muridke	2/3 Axle Truck	1	Work	Not Answered	Not Answered
238	15:07	Muridke	Narang Mandi	Passenger Pickup	16	Work	Not Answered	Not Answered
239	15:10	Tapiala Dost Muhammad	Muridke	Passenger Pickup	7	Work	Not Answered	Not Answered
240	15:13	Shakargarh	Shahzad Town Muridke	Passenger Pickup	3	Work	Not Answered	Not Answered
241	15:14	Hafiz Rice Industries Muridke	Narang Mandi	2/3 Axle Truck	2	Work	Not Answered	Not Answered
242	15:16	Tapiala Dost Muhammad	Hafiz Rice Industries Muridke	Car	2	Work	Not Answered	Not Answered
243	15:19	Shakargarh	Muridke	2/3 Axle Truck	1	Work	Not Answered	Not Answered
244	15:20	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
245	15:22	Tapiala Dost Muhammad	Muridke	Car	3	Work	Not Answered	Not Answered



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S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
246	15:25	Shakargarh	Lahore	Large Bus	55	Work	Not Answered	Not Answered
247	15:26	Narowal	Muridke	Large Bus	70	Work	Not Answered	Not Answered
248	15:26	Lahore	Chak Bhulay	Car	2	Work	Not Answered	Not Answered
249	15:30	Khan Kot Sheikhpura	Shahzad Town Muridke	Car	2	Work	Yes	Applicable Toll
250	15:33	Muridke	Narang Mandi	Car	1	Work	Not Answered	Not Answered
251	15:34	Gulshan Rice Mill	Lahore	2/3 Axle Truck	3	Work	Not Answered	Not Answered
252	15:38	Narowal	Muridke	Passenger Pickup	15	Work	Not Answered	Not Answered
253	15:39	Muridke	Shakargarh	Car	2	Work	Not Answered	Not Answered
254	15:42	Shakargarh	Lahore	2/3 Axle Truck	2	Work	Not Answered	Not Answered
255	15:45	Gujranwala	Baddomalhi	Car	4	Work	Not Answered	Not Answered
256	15:46	Narang Mandi	Muridke	Passenger Pickup	10	Work	Not Answered	Not Answered
257	15:50	Narowal	Lahore	Large Bus	50	Work	Not Answered	Not Answered
258	15:52	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
259	15:54	Shakargarh	Muridke	Large Bus	40	Work	Not Answered	Not Answered
260	15:58	Narang Mandi	Lahore	Passenger Pickup	9	Work	Not Answered	Not Answered
261	15:58	Muridke	Tapiala Dost Muhammad	Car	2	Work	Not Answered	Not Answered
262	16:02	Shakargarh	Hafiz Rice Industries Muridke	Car	2	Work	No	No
263	16:04	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
264	16:06	Narowal	Muridke	Car	2	Work	Yes	30
265	16:10	Khan Kot Sheikhpura	Muridke	2/3 Axle Truck	3	Work	Not Answered	Not Answered
266	16:11	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
267	16:14	Narang Mandi	Lahore	Large Bus	54	Work	Not Answered	Not Answered
268	16:17	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
269	16:18	Qarshi Model Complex	Hafiz Rice Industries Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
270	16:22	Tapiala Dost Muhammad	Shahzad Town Muridke	Car	2	Work	No	No
271	16:23	Lahore	Narowal	Large Bus	64	Work	Not Answered	Not Answered
272	16:26	Shakargarh	Muridke	Large Bus	60	Work	Not Answered	Not Answered
273	16:30	Lahore	Shakargarh	Car	3	Work	Not Answered	Not Answered
274	16:30	Muridke	Narang Mandi	Car	4	Work	Not Answered	Not Answered
275	16:30	Qarshi Model Complex	Muridke	Car	2	Work	Not Answered	Not Answered
276	16:32	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
277	16:34	Narowal	Muridke	Passenger Pickup	7	Work	Not Answered	Not Answered
278	16:34	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
279	16:37	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
280	16:38	Narang Mandi	Muridke	Mini Bus	30	Work	Not Answered	Not Answered



**Traffic Assessment for
Operation and Management Contracts for Roads in Punjab on PPP Mode
OD Survey Data**

Location		MB-1 Muridke			Date	Tuesday, October 8, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
281	16:39	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
282	16:41	Muridke	Baddomalhi	Car	3	Work	Not Answered	Not Answered
283	16:42	Tapiala Dost Muhammad	Muridke	Car	2	Work	No	No
284	16:42	Narowal	Hafiz Rice Industries Muridke	2/3 Axle Truck	3	Work	Not Answered	Not Answered
285	16:44	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
286	16:45	Narang Mandi	Muridke	Passenger Pickup	9	Work	Not Answered	Not Answered
287	16:46	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
288	16:48	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
289	16:49	Shakargarh	Muridke	Car	2	Work	Yes	30
290	16:51	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
291	16:53	Narang Mandi	Muridke	Car	2	Work	No	No
292	16:53	Muridke	Baddomalhi	Passenger Pickup	16	Work	Not Answered	Not Answered
293	16:56	Lahore	Shakargarh	Mini Bus	64	Work	Not Answered	Not Answered
294	16:57	Narowal	Lahore	Large Bus	64	Work	Not Answered	Not Answered
295	16:58	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
296	17:00	Muridke	Baddomalhi	Passenger Pickup	16	Work	Not Answered	Not Answered
297	17:01	Narowal	Lahore	Large Bus	64	Work	Not Answered	Not Answered
298	17:03	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
299	17:04	Narowal	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
300	17:05	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
301	17:07	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
302	17:08	Shakargarh	Gujranwala	Large Bus	64	Work	Not Answered	Not Answered
303	17:10	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
304	17:12	Shakargarh	Faisalabad	Large Bus	64	Work	Not Answered	Not Answered
305	17:12	Lahore	Sialkot	Passenger Pickup	16	Work	Not Answered	Not Answered
306	17:15	Hafiz Rice Industries Muridke	Narang Mandi	2/3 Axle Truck	2	Work	Not Answered	Not Answered
307	17:15	Muridke	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
308	17:16	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
309	17:19	Muridke	Chak Bhulay	Car	3	Work	No	No
310	17:20	Narang Mandi	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
311	17:23	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
312	17:23	Narang Mandi	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
313	17:27	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
314	17:27	Narowal	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
315	17:31	Al-Wakeel International	Shakargarh	Car	2	Home	Not Answered	Not Answered



 Traffic Assessment for Operation and Management Contracts for Roads in Punjab on PPP Mode OD Survey Data 								
Location		MB-1 Muridke			Date	Tuesday, October 8, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
316	17:31	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
317	17:35	Muridke	Khan Kot Sheikhupura	Car	3	Home	Not Answered	Not Answered
318	17:35	Narowal	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
319	17:39	Sialkot	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered



**Traffic Assessment for
Operation and Management Contracts for Roads in Punjab on PPP Mode
OD Survey Data**

Location		MB-2 Narowal			Date	Thursday, October 10, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
1	8:30	Lahore	Shakargarh	Passenger Pickup	2	Work	Not Answered	Not Answered
2	8:32	Bahawalpur	Narowal	2/3 Axle Truck	2	Work	Not Answered	Not Answered
3	8:35	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
4	8:36	Shakargarh	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
5	8:38	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
6	8:39	Shakargarh	Lahore	Large Bus	62	Work	Not Answered	Not Answered
7	8:41	Lahore	Shakargarh	Mini Bus	25	Work	Not Answered	Not Answered
8	8:42	Shakargarh	Kamoke	Passenger Pickup	17	Work	Not Answered	Not Answered
9	8:44	Lahore	Shakargarh	Mini Bus	25	Work	Not Answered	Not Answered
10	8:46	Narowal	Qila Kalar Wala	Passenger Pickup	1	Work	Not Answered	Not Answered
11	8:47	Lahore	Shakargarh	Mini Bus	25	Work	Not Answered	Not Answered
12	8:49	Narowal	Muridke	Passenger Pickup	6	Work	Not Answered	Not Answered
13	8:50	Muridke	Narowal	Car	3	Work	Not Answered	Not Answered
14	8:53	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
15	8:53	Shakargarh	Faisalabad	Large Bus	62	Work	Not Answered	Not Answered
16	8:56	Sheikhupura	Zafarwal	Trailer	2	Work	Not Answered	Not Answered
17	8:56	Shakargarh	Lahore	Large Bus	62	Work	Not Answered	Not Answered
18	8:58	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
19	9:00	Shakargarh	Muridke	Large Bus	62	Work	Not Answered	Not Answered
20	9:01	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
21	9:03	Narowal	Lahore	Mini Bus	20	Work	Not Answered	Not Answered
22	9:04	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
23	9:07	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
24	9:07	Sheikhupura	Shakargarh	Trailer	2	Work	Not Answered	Not Answered
25	9:10	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
26	9:10	Shakargarh	Lahore	Passenger Pickup	18	Work	Not Answered	Not Answered
27	9:13	Faisalabad	Ikhlas Pur	Large Bus	64	Work	Not Answered	Not Answered
28	9:14	Zafarwal	Muridke	Trailer	2	Work	Not Answered	Not Answered
29	9:16	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
30	9:17	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
31	9:19	Kamoke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
32	9:21	Narowal	Kasur	Passenger Pickup	2	Work	Not Answered	Not Answered
33	9:22	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
34	9:24	Shakargarh	Lahore	Mini Bus	20	Work	Not Answered	Not Answered
35	9:25	Muridke	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered



**Traffic Assessment for
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Location		MB-2 Narowal			Date	Thursday, October 10, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
36	9:25	Muridke	Narowal	Car	5	Work	Not Answered	Not Answered
37	9:28	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
38	9:28	Muridke	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
39	9:31	Narowal	Muridke	Mini Bus	20	Work	Not Answered	Not Answered
40	9:31	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
41	9:35	Chak Aamru	Lahore	Large Bus	64	Work	Not Answered	Not Answered
42	9:35	Narowal	Shakargarh	Passenger Pickup	2	Work	Not Answered	Not Answered
43	9:38	Narowal	Qila Kalar Wala	Large Bus	40	Work	Not Answered	Not Answered
44	9:38	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
45	9:42	Narowal	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
46	9:42	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
47	9:42	Narowal	Shakargarh	Passenger Pickup	2	Work	Not Answered	Not Answered
48	9:45	Bara Manga	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
49	9:45	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
50	9:48	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
51	9:48	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
52	9:51	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
53	9:52	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
54	9:55	Narowal	Muridke	Large Bus	64	Work	Not Answered	Not Answered
55	9:55	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
56	9:58	Narowal	Muridke	Car	2	Work	Not Answered	Not Answered
57	9:59	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
58	10:01	Zafarwal	Muridke	Passenger Pickup	17	Work	Not Answered	Not Answered
59	10:02	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
60	10:05	Shakargarh	Lahore	2/3 Axle Truck	2	Work	Not Answered	Not Answered
61	10:06	Lahore	Shakargarh	Passenger Pickup	2	Work	Not Answered	Not Answered
62	10:08	Narowal	Faisalabad	Large Bus	64	Work	Not Answered	Not Answered
63	10:09	Muridke	Shakargarh	Car	5	Work	Not Answered	Not Answered
64	10:11	Narowal	Qila Kalar Wala	Car	1	Work	Not Answered	Not Answered
65	10:12	Lahore	Dudhu Chak	Large Bus	64	Work	Not Answered	Not Answered
66	10:15	Narowal	Muridke	Car	2	Work	Not Answered	Not Answered
67	10:16	Sheikhupura	Shakargarh	Mini Bus	20	Work	Not Answered	Not Answered
68	10:18	Zafarwal	Talwandi Bhindran	Mini Bus	30	Work	Not Answered	Not Answered
69	10:19	Lahore	Zafarwal	Large Bus	64	Work	Not Answered	Not Answered
70	10:21	Narowal	Lahore	Large Bus	62	Work	Not Answered	Not Answered



**Traffic Assessment for
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OD Survey Data**

Location		MB-2 Narowal			Date	Thursday, October 10, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
71	10:23	Muridke	Shakargarh	Mini Bus	20	Work	Not Answered	Not Answered
72	10:25	Shakargarh	Muridke	2/3 Axle Truck	1	Work	Not Answered	Not Answered
73	10:26	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
74	10:28	Nainan Kot	Muridke	Passenger Pickup	17	Work	Not Answered	Not Answered
75	10:30	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
76	10:30	Muridke	Chak Aamru	Large Bus	64	Work	Not Answered	Not Answered
77	10:31	Shakargarh	Lahore	Large Bus	60	Work	Not Answered	Not Answered
78	10:32	Kamoke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
79	10:35	Narowal	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
80	10:35	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
81	10:38	Muridke	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
82	10:38	Narowal	Lahore	2/3 Axle Truck	2	Work	Not Answered	Not Answered
83	10:40	Kamoke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
84	10:41	Narowal	Muridke	Passenger Pickup	13	Work	Not Answered	Not Answered
85	10:43	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
86	10:45	Zafarwal	Lahore	2/3 Axle Truck	2	Work	Not Answered	Not Answered
87	10:46	Rawalpindi	Shakargarh	Passenger Pickup	2	Work	Not Answered	Not Answered
88	10:49	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
89	10:50	Narowal	Muridke	Passenger Pickup	8	Education	Not Answered	Not Answered
90	10:51	Zafarwal	Lahore	Large Bus	72	Work	Not Answered	Not Answered
91	10:51	Lahore	Narowal	Passenger Pickup	2	Work	Not Answered	Not Answered
92	10:52	Shakargarh	Muridke	Trailer	2	Work	Not Answered	Not Answered
93	10:53	Nurkot	Talwandi Bhindran	Passenger Pickup	2	Work	Not Answered	Not Answered
94	10:54	Muridke	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
95	10:54	Shakargarh	Lahore	Mini Bus	20	Work	Not Answered	Not Answered
96	10:55	Bara Bhai Darbaar	Muridke	Large Bus	50	Work	Not Answered	Not Answered
97	10:56	Zafarwal	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
98	10:57	Kamoke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
99	10:58	Narowal	Lahore	Passenger Pickup	5	Work	Not Answered	Not Answered
100	10:59	Bara Manga	Lahore	Large Bus	45	Work	Not Answered	Not Answered
101	11:00	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
102	11:00	Shakargarh	Qila Kalar Wala	2/3 Axle Truck	1	Work	Not Answered	Not Answered
103	11:01	Narowal	Muridke	Passenger Pickup	2	Work	Not Answered	Not Answered
104	11:02	Narowal	Lahore	2/3 Axle Truck	3	Work	Not Answered	Not Answered
105	11:02	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered



**Traffic Assessment for
Operation and Management Contracts for Roads in Punjab on PPP Mode
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Location		MB-2 Narowal			Date	Thursday, October 10, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
106	11:03	Narowal	Sheikhupura	Passenger Pickup	15	Work	Not Answered	Not Answered
107	11:05	Suchkotchack	Lahore	Large Bus	60	Work	Not Answered	Not Answered
108	11:05	Lahore	Nainan Kot	Large Bus	64	Work	Not Answered	Not Answered
109	11:06	Zafarwal	Lahore	2/3 Axle Truck	1	Work	Not Answered	Not Answered
110	11:07	Nurkot	Faisalabad	Large Bus	54	Work	Not Answered	Not Answered
111	11:08	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
112	11:08	Zafarwal	Lahore	Large Bus	60	Work	Not Answered	Not Answered
113	11:09	Narowal	Talwandi Bhindran	Passenger Pickup	2	Work	Not Answered	Not Answered
114	11:10	Shakargarh	Faisalabad	Large Bus	65	Work	Not Answered	Not Answered
115	11:11	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
116	11:12	Shakargarh	Lahore	Large Bus	62	Work	Not Answered	Not Answered
117	11:12	Narowal	Qila Kalar Wala	Mini Bus	25	Work	Not Answered	Not Answered
118	11:13	Lahore	Nurkot	Passenger Pickup	2	Work	Not Answered	Not Answered
119	11:14	Shakargarh	Lahore	Large Bus	50	Work	Not Answered	Not Answered
120	11:16	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
121	11:17	Ikhlas Pur	Lahore	Large Bus	60	Work	Not Answered	Not Answered
122	11:19	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
123	11:19	Narowal	Narang Mandi	Mini Bus	30	Work	Not Answered	Not Answered
124	11:22	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
125	11:22	Muridke	Narowal	Large Bus	64	Work	Not Answered	Not Answered
126	11:22	Chak Aamru	Lahore	Large Bus	55	Work	Not Answered	Not Answered
127	11:24	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
128	11:24	Narowal	Qila Kalar Wala	Passenger Pickup	1	Work	Not Answered	Not Answered
129	11:27	Lahore	Chak Aamru	Large Bus	64	Work	Not Answered	Not Answered
130	11:27	Zafarwal	Lahore	Large Bus	70	Work	Not Answered	Not Answered
131	11:29	Muridke	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
132	11:30	Shakargarh	Kamoke	Passenger Pickup	16	Work	Not Answered	Not Answered
133	11:32	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
134	11:32	Narowal	Gujranwala	Mini Bus	21	Work	Not Answered	Not Answered
135	11:34	Rawalpindi	Shakargarh	Trailer	2	Work	Not Answered	Not Answered
136	11:35	Shakargarh	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
137	11:37	Lahore	Shakargarh	Trailer	2	Work	Not Answered	Not Answered
138	11:37	Zafarwal	Lahore	2/3 Axle Truck	1	Work	Not Answered	Not Answered
139	11:39	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
140	11:40	Narowal	Lahore	Car	3	Work	Not Answered	Not Answered



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Location		MB-2 Narowal			Date	Thursday, October 10, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
141	11:42	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
142	11:42	Narowal	Qila Kalar Wala	Car	2	Work	Not Answered	Not Answered
143	11:44	Lahore	Shakargarh	Trailer	2	Work	Not Answered	Not Answered
144	11:45	Dudhu Chak	Lahore	Large Bus	39	Work	Not Answered	Not Answered
145	11:47	Lahore	Dehlra	Large Bus	64	Work	Not Answered	Not Answered
146	11:48	Narowal	Talwandi Bhindran	Passenger Pickup	4	Work	Not Answered	Not Answered
147	11:49	Muridke	Shakargarh	Passenger Pickup	2	Work	Not Answered	Not Answered
148	11:50	Narowal	Muridke	Mini Bus	20	Work	Not Answered	Not Answered
149	11:52	Kamoke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
150	11:53	Shakargarh	Lahore	Mini Bus	22	Work	Not Answered	Not Answered
151	11:54	Lahore	Nainan Kot	Large Bus	64	Work	Not Answered	Not Answered
152	11:55	Ikhlas Pur	Lahore	Large Bus	60	Work	Not Answered	Not Answered
153	11:57	Muridke	Narowal	Mini Bus	30	Work	Not Answered	Not Answered
154	11:58	Narowal	Sheikhupura	Mini Bus	20	Work	Not Answered	Not Answered
155	11:59	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
156	12:01	Narowal	Lahore	Passenger Pickup	6	Work	Not Answered	Not Answered
157	12:01	Narowal	Kali Suba Bus Station	2/3 Axle Truck	2	Work	Not Answered	Not Answered
158	12:02	Sheikhupura	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
159	12:04	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
160	12:05	Shakargarh	Narowal	Car	1	Work	Not Answered	Not Answered
161	12:07	Lahore	Ikhlas Pur	Large Bus	64	Work	Not Answered	Not Answered
162	12:09	Shakargarh	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
163	12:10	Kamoke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
164	12:10	Lahore	Dudhu Chak	Large Bus	62	Work	Not Answered	Not Answered
165	12:13	Narowal	Qila Kalar Wala	2/3 Axle Truck	2	Work	Not Answered	Not Answered
166	12:14	Lahore	Zafarwal	Large Bus	62	Work	Not Answered	Not Answered
167	12:17	Shakargarh	Lahore	Mini Bus	22	Work	Not Answered	Not Answered
168	12:18	Muridke	Shakargarh	Large Bus	62	Work	Not Answered	Not Answered
169	12:21	Shakargarh	Faisalabad	Large Bus	57	Work	Not Answered	Not Answered
170	12:22	Lahore	Shakargarh	Mini Bus	20	Work	Not Answered	Not Answered
171	12:25	Nurkot	Gujranwala	Car	4	Social	Not Answered	Not Answered
172	12:26	Sheikhupura	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
173	12:30	Shakargarh	Gujranwala	Car	5	Social	Not Answered	Not Answered
174	12:31	Sheikhupura	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
175	12:34	Zafarwal	Lahore	Large Bus	62	Work	Not Answered	Not Answered



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Operation and Management Contracts for Roads in Punjab on PPP Mode
OD Survey Data**

Location		MB-2 Narowal			Date	Thursday, October 10, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
176	12:35	Kamoke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
177	12:38	Shakargarh	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
178	12:39	Lahore	Narowal	2/3 Axle Truck	2	Work	Not Answered	Not Answered
179	12:42	Narowal	Kali Suba Bus Station	Mini Bus	31	Education	Not Answered	Not Answered
180	12:43	Lahore	Narowal	2/3 Axle Truck	2	Work	Not Answered	Not Answered
181	12:46	Narowal	Muridke	Trailer	3	Work	Not Answered	Not Answered
182	12:47	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
183	12:50	Narowal	Qila Kalar Wala	Mini Bus	25	Education	Not Answered	Not Answered
184	12:52	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
185	12:55	Narowal	Muridke	Large Bus	60	Work	Not Answered	Not Answered
186	12:56	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
187	12:59	Muridke	Lahore	Car	4	Work	Not Answered	Not Answered
188	13:00	Lahore	Ikhlas Pur	Large Bus	62	Work	Not Answered	Not Answered
189	13:03	Zafarwal	Lahore	2/3 Axle Truck	2	Work	Not Answered	Not Answered
190	13:04	Lahore	Shakargarh	2/3 Axle Truck	1	Work	Not Answered	Not Answered
191	13:07	Narowal	Lahore	2/3 Axle Truck	1	Work	Not Answered	Not Answered
192	13:08	Lahore	Ikhlas Pur	Large Bus	62	Work	Not Answered	Not Answered
193	13:11	Shakargarh	Gujranwala	2/3 Axle Truck	2	Work	Not Answered	Not Answered
194	13:13	Lahore	Nainan Kot	Large Bus	62	Work	Not Answered	Not Answered
195	13:15	Narowal	Gujranwala	Passenger Pickup	16	Work	Not Answered	Not Answered
196	13:17	Lahore	Shakargarh	Large Bus	62	Work	Not Answered	Not Answered
197	13:20	Narowal	Narang Mandi	Mini Bus	20	Work	Not Answered	Not Answered
198	13:20	Shakargarh	Lahore	Large Bus	50	Work	Not Answered	Not Answered
199	13:21	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
200	13:25	Suchkochack	Lahore	Large Bus	60	Work	Not Answered	Not Answered
201	13:25	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
202	13:30	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
203	13:30	Kamoke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
204	13:30	Shakargarh	Sheikhupura	Trailer	2	Work	Not Answered	Not Answered
205	13:31	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
206	13:33	Lahore	Shakargarh	Large Bus	62	Work	Not Answered	Not Answered
207	13:34	Lahore	Dudhu Chak	Large Bus	62	Work	Not Answered	Not Answered
208	13:35	Narowal	Lahore	Passenger Pickup	17	Work	Not Answered	Not Answered
209	13:36	Muridke	Narowal	Car	4	Home	Not Answered	Not Answered
210	13:38	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered



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OD Survey Data**

Location		MB-2 Narowal			Date	Thursday, October 10, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
211	13:39	Sheikhupura	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
212	13:40	Narowal	Kali Suba Bus Station	Mini Bus	30	Work	Not Answered	Not Answered
213	13:41	Faisalabad	Ikhlas Pur	Large Bus	62	Work	Not Answered	Not Answered
214	13:43	Muridke	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
215	13:44	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
216	13:45	Narowal	Qila Kalar Wala	Mini Bus	30	Education	Not Answered	Not Answered
217	13:46	Gujranwala	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
218	13:47	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
219	13:49	Faisalabad	Ikhlas Pur	Large Bus	62	Work	Not Answered	Not Answered
220	13:50	Nainan Kot	Lahore	Large Bus	50	Education	Not Answered	Not Answered
221	13:51	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
222	13:52	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
223	13:54	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
224	13:55	Narowal	Lahore	2/3 Axle Truck	1	Work	Not Answered	Not Answered
225	13:56	Kamoke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
226	13:57	Lahore	Zafarwal	Large Bus	62	Work	Not Answered	Not Answered
227	13:59	Faisalabad	Nainan Kot	Large Bus	62	Work	Not Answered	Not Answered
228	14:00	Narowal	Lahore	2/3 Axle Truck	2	Work	Not Answered	Not Answered
229	14:01	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
230	14:01	Lahore	Narowal	2/3 Axle Truck	2	Work	Not Answered	Not Answered
231	14:04	Lahore	Darman	Large Bus	62	Work	Not Answered	Not Answered
232	14:05	Shakargarh	Lahore	Mini Bus	20	Work	Not Answered	Not Answered
233	14:08	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
234	14:10	Zafarwal	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
235	14:11	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
236	14:15	Shakargarh	Lahore	Passenger Pickup	17	Work	Not Answered	Not Answered
237	14:15	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
238	14:19	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
239	14:20	Shakargarh	Kamoke	Mini Bus	20	Work	Not Answered	Not Answered
240	14:22	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
241	14:25	Narowal	Talwandi Bhindran	Mini Bus	25	Work	Not Answered	Not Answered
242	14:26	Lahore	Nainan Kot	Large Bus	62	Work	Not Answered	Not Answered
243	14:30	Narowal	Saraj Ada	Mini Bus	20	Work	Not Answered	Not Answered
244	14:30	Sheikhupura	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
245	14:33	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered



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Location		MB-2 Narowal			Date	Thursday, October 10, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
246	14:35	Shakargarh	Faisalabad	Large Bus	60	Work	Not Answered	Not Answered
247	14:37	Muridke	Narowal	Mini Bus	20	Work	Not Answered	Not Answered
248	14:40	Dudhu Chak	Lahore	Large Bus	62	Work	Not Answered	Not Answered
249	14:40	Faisalabad	Ikhlas Pur	Large Bus	62	Work	Not Answered	Not Answered
250	14:44	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
251	14:45	Narowal	Muridke	Car	2	Work	Not Answered	Not Answered
252	14:48	Lahore	Narowal	Passenger Pickup	2	Work	Not Answered	Not Answered
253	14:50	Narowal	Muridke	Large Bus	50	Work	Not Answered	Not Answered
254	14:51	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
255	14:55	Narowal	Faisalabad	2/3 Axle Truck	2	Work	Not Answered	Not Answered
256	14:55	Narowal	Muridke	Mini Bus	35	Education	Not Answered	Not Answered
257	14:55	Lahore	Narowal	2/3 Axle Truck	2	Work	Not Answered	Not Answered
258	14:59	Lahore	Narowal	2/3 Axle Truck	2	Work	Not Answered	Not Answered
259	14:59	Narowal	Talwandi Bhindran	Mini Bus	20	Education	Not Answered	Not Answered
260	15:02	Muridke	Shakargarh	Large Bus	62	Work	Not Answered	Not Answered
261	15:03	Zafarwal	Lahore	Passenger Pickup	17	Work	Not Answered	Not Answered
262	15:06	Kamoke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
263	15:07	Narowal	Lahore	Car	2	Work	Not Answered	Not Answered
264	15:10	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
265	15:10	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
266	15:11	Dehira	Lahore	Large Bus	50	Work	Not Answered	Not Answered
267	15:14	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
268	15:16	Narowal	Saraj Ada	Passenger Pickup	7	Education	Not Answered	Not Answered
269	15:18	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
270	15:20	Shakargarh	Lahore	Trailer	2	Work	Not Answered	Not Answered
271	15:22	Lahore	Shakargarh	2/3 Axle Truck	21	Work	Not Answered	Not Answered
272	15:24	Shakargarh	Lahore	Trailer	2	Work	Not Answered	Not Answered
273	15:26	Gujranwala	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
274	15:28	Narowal	Talwandi Bhindran	Passenger Pickup	10	Education	Not Answered	Not Answered
275	15:31	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
276	15:32	Narowal	Muridke	Passenger Pickup	12	Work	Not Answered	Not Answered
277	15:35	Lahore	Nainan Kot	Large Bus	62	Work	Not Answered	Not Answered
278	15:37	Shakargarh	Lahore	Mini Bus	20	Work	Not Answered	Not Answered
279	15:39	Muridke	Darman	Large Bus	62	Work	Not Answered	Not Answered
280	15:41	Shakargarh	Lahore	2/3 Axle Truck	1	Work	Not Answered	Not Answered



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Location		MB-2 Narowal			Date	Thursday, October 10, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
281	15:43	Lahore	Ikhlas Pur	Large Bus	60	Work	Not Answered	Not Answered
282	15:45	Narowal	Lahore	2/3 Axle Truck	2	Work	Not Answered	Not Answered
283	15:47	Faisalabad	Chak Aamru	Large Bus	62	Work	Not Answered	Not Answered
284	15:49	Narowal	Lahore	2/3 Axle Truck	2	Work	Not Answered	Not Answered
285	15:52	Lahore	Dudhu Chak	Large Bus	62	Work	Not Answered	Not Answered
286	15:53	Shakargarh	Lahore	Large Bus	63	Work	Not Answered	Not Answered
287	15:56	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
288	15:58	Shakargarh	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
289	16:00	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
290	16:02	Shakargarh	Lahore	Passenger Pickup	18	Work	Not Answered	Not Answered
291	16:04	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
292	16:06	Zafarwal	Lahore	Mini Bus	20	Work	Not Answered	Not Answered
293	16:08	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
294	16:10	Shakargarh	Lahore	Mini Bus	30	Work	Not Answered	Not Answered
295	16:13	Lahore	Narowal	2/3 Axle Truck	2	Work	Not Answered	Not Answered
296	16:15	Shakargarh	Lahore	Large Bus	50	Work	Not Answered	Not Answered
297	16:15	Shakargarh	Lahore	Large Bus	56	Work	Not Answered	Not Answered
298	16:17	Lahore	Narowal	2/3 Axle Truck	2	Work	Not Answered	Not Answered
299	16:20	Zafarwal	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
300	16:21	Kamoke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
301	16:25	Shakargarh	Gujranwala	Mini Bus	20	Work	Not Answered	Not Answered
302	16:25	Lahore	Shakargarh	Large Bus	62	Work	Not Answered	Not Answered
303	16:30	Muridke	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
304	16:30	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
305	16:30	Narowal	Muridke	Passenger Pickup	19	Work	Not Answered	Not Answered
306	16:33	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
307	16:35	Narowal	Muridke	2/3 Axle Truck	2	Work	Not Answered	Not Answered
308	16:36	Gujranwala	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
309	16:40	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
310	16:40	Zafarwal	Muridke	Passenger Pickup	7	Social	Not Answered	Not Answered
311	16:43	Lahore	Shakargarh	Large Bus	62	Work	Not Answered	Not Answered
312	16:45	Zafarwal	Lahore	Large Bus	72	Work	Not Answered	Not Answered
313	16:47	Faisalabad	Chak Aamru	Large Bus	62	Work	Not Answered	Not Answered
314	16:50	Lahore	Zafarwal	Large Bus	62	Work	Not Answered	Not Answered
315	16:51	Narowal	Saraj Ada	Passenger Pickup	10	Education	Not Answered	Not Answered



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OD Survey Data**

Location		MB-2 Narowal			Date	Thursday, October 10, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
316	16:53	Lahore	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
317	16:56	Shakargarh	Lahore	Large Bus	60	Work	Not Answered	Not Answered
318	16:57	Rawalpindi	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
319	17:00	Lahore	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
320	17:01	Narowal	Talwandi Bhindran	Passenger Pickup	15	Education	Not Answered	Not Answered
321	17:04	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
322	17:06	Narowal	Muridke	Passenger Pickup	2	Work	Not Answered	Not Answered
323	17:07	Sheikhupura	Shakargarh	2/3 Axle Truck	2	Work	Not Answered	Not Answered
324	17:11	Kamoke	Narowal	Mini Bus	20	Work	Not Answered	Not Answered
325	17:11	Narowal	Muridke	Passenger Pickup	17	Work	Not Answered	Not Answered
326	17:14	Lahore	Dudhu Chak	Large Bus	62	Work	Not Answered	Not Answered
327	17:16	Shakargarh	Lahore	Large Bus	60	Work	Not Answered	Not Answered
328	17:17	Lahore	Shakargarh	Passenger Pickup	3	Work	Not Answered	Not Answered
329	17:21	Gujranwala	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
330	17:21	Shakargarh	Faisalabad	Large Bus	60	Work	Not Answered	Not Answered
331	17:24	Lahore	Zafarwal	Trailer	2	Work	Not Answered	Not Answered
332	17:27	Shakargarh	Lahore	Trailer	2	Work	Not Answered	Not Answered
333	17:28	Lahore	Shakargarh	Large Bus	62	Work	Not Answered	Not Answered
334	17:31	Lahore	Narowal	Passenger Pickup	2	Health	Not Answered	Not Answered
335	17:35	Gujranwala	Shakargarh	Passenger Pickup	18	Work	Not Answered	Not Answered



Traffic Assessment for
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OD Survey Data

Location		MB-3 Shakargarh			Date	Wednesday, October 9, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
1	9:00	Nainan Kot	Narowal	Car	5	Work	No	No
2	9:00	Ikhlas Pur	Lahore	Passenger Pickup	2	Work	No	No
3	9:00	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
4	9:00	Bustan Narowal	Nurkot	Car	1	Work	Yes	Applicable Toll
5	9:00	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
6	9:02	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
7	9:04	Shakargarh	Gujranwala	Passenger Pickup	16	Work	Not Answered	Not Answered
8	9:04	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
9	9:05	Gujranwala	Shakargarh	2/3 Axle Truck	1	Work	No	No
10	9:07	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
11	9:08	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
12	9:09	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
13	9:10	Muridke	Bhajna Bus Stop	Car	1	Work	No	No
14	9:11	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
15	9:12	Shakargarh	Rawalpindi	Large Bus	64	Work	Not Answered	Not Answered
16	9:14	Bhajna Bus Stop	Shakargarh	Passenger Pickup	15	Work	Not Answered	Not Answered
17	9:15	Faisalabad	Shakargarh	2/3 Axle Truck	1	Work	No	No
18	9:16	Narowal	Shakargarh	Passenger Pickup	15	Work	Not Answered	Not Answered
19	9:16	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
20	9:18	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
21	9:20	Bustan Narowal	Shakargarh	Car	4	Work	No	No
22	9:20	Shakargarh	Lahore	Car	2	Work	No	No
23	9:21	Shakargarh	Bhajna Bus Stop	Passenger Pickup	1	Work	Not Answered	Not Answered
24	9:21	Bhajna Bus Stop	Nurkot	Tractor	1	Work	Not Answered	Not Answered
25	9:23	Sheikhupura	Shakargarh	Passenger Pickup	1	Work	Not Answered	Not Answered
26	9:25	Narowal	Shakargarh	Car	1	Work	Yes	Applicable Toll
27	9:25	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
28	9:26	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
29	9:28	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
30	9:29	Shakargarh	Narowal	Passenger Pickup	1	Work	Not Answered	Not Answered
31	9:30	Muridke	Nurkot	Car	2	Work	No	No
32	9:30	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
33	9:33	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
34	9:33	Shakargarh	Narowal	Passenger Pickup	1	Work	Not Answered	Not Answered
35	9:35	Bhajna Bus Stop	Shakargarh	Car	1	Work	No	No



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OD Survey Data**

Location		MB-3 Shakargarh			Date	Wednesday, October 9, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
36	9:35	Gujranwala	Shakargarh	Passenger Pickup	1	Work	Not Answered	Not Answered
37	9:37	Lahore	Suchkochack	Large Bus	64	Work	Not Answered	Not Answered
38	9:37	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
39	9:40	Narowal	Shakargarh	Car	1	Work	No	No
40	9:40	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
41	9:41	Shakargarh	Lahore	Car	3	Work	Yes	Applicable Toll
42	9:42	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
43	9:42	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
44	9:45	Narowal	Bhajna Bus Stop	Car	2	Work	No	No
45	9:45	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
46	9:45	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
47	9:46	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
48	9:47	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
49	9:49	Lahore	Ikhlas Pur	Large Bus	64	Work	Not Answered	Not Answered
50	9:50	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
51	9:52	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
52	9:54	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
53	9:54	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
54	9:56	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
55	9:58	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
56	9:59	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
57	10:01	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
58	10:02	Shakargarh	Lahore	Car	2	Work	Yes	Applicable Toll
59	10:03	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
60	10:03	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
61	10:06	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
62	10:07	Shakargarh	Narowal	Passenger Pickup	2	Home	Not Answered	Not Answered
63	10:08	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
64	10:11	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
65	10:11	Suchkochack	Lahore	Large Bus	64	Work	Not Answered	Not Answered
66	10:13	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
67	10:15	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
68	10:15	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
69	10:18	Lahore	Bara Bhai Darbaar	Large Bus	64	Work	Not Answered	Not Answered
70	10:20	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered



**Traffic Assessment for
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Location		MB-3 Shakargarh			Date	Wednesday, October 9, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
71	10:20	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
72	10:20	Lahore	Suchkochack	Large Bus	64	Work	Not Answered	Not Answered
73	10:22	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
74	10:23	Shakargarh	Narowal	Car	1	Work	No	No
75	10:23	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
76	10:25	Narowal	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
77	10:27	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
78	10:27	Shakargarh	Narowal	Passenger Pickup	2	Work	Not Answered	Not Answered
79	10:30	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
80	10:31	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
81	10:35	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
82	10:38	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
83	10:39	Shakargarh	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
84	10:41	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
85	10:43	Shakargarh	Gujranwala	Passenger Pickup	16	Work	Not Answered	Not Answered
86	10:43	Shakargarh	Lahore	Car	2	Work	No	No
87	10:45	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
88	10:47	Shakargarh	Rawalpindi	Large Bus	64	Work	Not Answered	Not Answered
89	10:49	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
90	10:51	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
91	10:53	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
92	10:55	Chak Aamru	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
93	10:57	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
94	10:59	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
95	11:01	Narowal	Nurkot	Passenger Pickup	16	Work	Not Answered	Not Answered
96	11:03	Bara Bhai Darbaar	Lahore	Large Bus	64	Work	Not Answered	Not Answered
97	11:04	Nurkot	Narowal	Car	2	Work	Yes	Applicable Toll
98	11:05	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
99	11:07	Shakargarh	Narowal	Large Bus	64	Work	Not Answered	Not Answered
100	11:09	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
101	11:11	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
102	11:13	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
103	11:15	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
104	11:17	Narowal	Shakargarh	Car	1	Work	Not Answered	Not Answered
105	11:19	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered



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Location		MB-3 Shakargarh			Date	Wednesday, October 9, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
106	11:21	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
107	11:23	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
108	11:25	Nurkot	Narowal	Car	1	Work	No	No
109	11:25	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
110	11:27	Chak Aamru	Lahore	Large Bus	64	Work	Not Answered	Not Answered
111	11:29	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
112	11:31	Shakargarh	Faisalabad	Large Bus	64	Work	Not Answered	Not Answered
113	11:33	Wah Cantt	Shakargarh	Large Bus	40	Work	Not Answered	Not Answered
114	11:35	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
115	11:35	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
116	11:37	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
117	11:38	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
118	11:41	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
119	11:42	Shakargarh	Lahore	Car	4	Work	Not Answered	Not Answered
120	11:45	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
121	11:46	Nurkot	Muridke	Car	1	Work	No	No
122	11:46	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
123	11:49	Narowal	Shakargarh	Large Bus	40	Work	Not Answered	Not Answered
124	11:49	Narowal	Shakargarh	Mini Bus	35	Work	Not Answered	Not Answered
125	11:50	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
126	11:51	Narowal	Nurkot	Mini Bus	35	Work	Not Answered	Not Answered
127	11:53	Bustan Narowal	Nurkot	Mini Bus	35	Work	Not Answered	Not Answered
128	11:54	Nainan Kot	Lahore	Large Bus	64	Work	Not Answered	Not Answered
129	11:56	Narowal	Bhajna Bus Stop	Passenger Pickup	3	Work	Not Answered	Not Answered
130	11:58	Nurkot	Bustan Narowal	Car	4	Home	Not Answered	Not Answered
131	11:58	Muridke	Shakargarh	Mini Bus	35	Work	Not Answered	Not Answered
132	12:01	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
133	12:02	Shakargarh	Faisalabad	Large Bus	64	Work	Not Answered	Not Answered
134	12:03	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
135	12:05	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
136	12:06	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
137	12:06	Nurkot	Lahore	Car	3	Work	No	No
138	12:08	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
139	12:10	Nainan Kot	Lahore	Large Bus	64	Work	Not Answered	Not Answered
140	12:10	Kamoke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered



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Location		MB-3 Shakargarh			Date	Wednesday, October 9, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
141	12:13	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
142	12:14	Nurkot	Narowal	Passenger Pickup	2	Work	Not Answered	Not Answered
143	12:15	Lahore	Chak Aamru	Large Bus	64	Work	Not Answered	Not Answered
144	12:18	Lahore	Ikhlas Pur	Large Bus	64	Work	Not Answered	Not Answered
145	12:18	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
146	12:20	Narowal	Nurkot	Mini Bus	35	Work	Not Answered	Not Answered
147	12:22	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
148	12:22	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
149	12:25	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
150	12:26	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
151	12:27	Ikhlas Pur	Lahore	Car	5	Work	Yes	Applicable Toll
152	12:27	Narowal	Nurkot	Passenger Pickup	16	Work	Not Answered	Not Answered
153	12:30	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
154	12:30	Shakargarh	Islamabad	Large Bus	64	Work	Not Answered	Not Answered
155	12:32	Lahore	Nurkot	Large Bus	64	Work	Not Answered	Not Answered
156	12:34	Nurkot	Bustan Narowal	Mini Bus	30	Work	Not Answered	Not Answered
157	12:35	Narowal	Nurkot	Large Bus	64	Work	Not Answered	Not Answered
158	12:35	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
159	12:38	Nurkot	Muridke	Mini Bus	20	Work	Not Answered	Not Answered
160	12:39	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
161	12:42	Nurkot	Muridke	Mini Bus	30	Work	Not Answered	Not Answered
162	12:43	Narowal	Nurkot	Mini Bus	35	Work	Not Answered	Not Answered
163	12:46	Nurkot	Muridke	Mini Bus	30	Work	Not Answered	Not Answered
164	12:48	Shakargarh	Lahore	Car	3	Work	No	No
165	12:48	Narowal	Kamoke	Large Bus	64	Work	Not Answered	Not Answered
166	12:50	Shakargarh	Narowal	Passenger Pickup	2	Work	Not Answered	Not Answered
167	12:50	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
168	12:52	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
169	12:53	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
170	12:57	Lahore	Chak Aamru	Passenger Pickup	16	Work	Not Answered	Not Answered
171	12:57	Nurkot	Muridke	Mini Bus	30	Work	Not Answered	Not Answered
172	13:01	Nurkot	Muridke	Passenger Pickup	15	Work	Not Answered	Not Answered
173	13:01	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
174	13:04	Nurkot	Muridke	Mini Bus	30	Work	Not Answered	Not Answered
175	13:06	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered



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Location		MB-3 Shakargarh			Date	Wednesday, October 9, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
176	13:08	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
177	13:09	Nurkot	Bhajna Bus Stop	Car	2	Work	No	No
178	13:10	Narowal	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
179	13:12	Nurkot	Narowal	Passenger Pickup	2	Work	Not Answered	Not Answered
180	13:15	Lahore	Bara Manga	Large Bus	64	Work	Not Answered	Not Answered
181	13:15	Rawalpindi	Shakargarh	2/3 Axle Truck	1	Work	Not Answered	Not Answered
182	13:16	Nurkot	Sahiwal	Mini Bus	30	Work	Not Answered	Not Answered
183	13:19	Narowal	Chak Aamru	Large Bus	64	Work	Not Answered	Not Answered
184	13:19	Nurkot	Bustan Narowal	Mini Bus	30	Work	Not Answered	Not Answered
185	13:21	Lahore	Suchkochack	Large Bus	64	Work	Not Answered	Not Answered
186	13:23	Shakargarh	Kamoke	Passenger Pickup	16	Work	Not Answered	Not Answered
187	13:23	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
188	13:27	Shakargarh	Gujranwala	2/3 Axle Truck	2	Work	Not Answered	Not Answered
189	13:28	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
190	13:28	Narowal	Shakargarh	Mini Bus	30	Work	Not Answered	Not Answered
191	13:29	Shakargarh	Lahore	Car	3	Work	Yes	Applicable Toll
192	13:31	Nurkot	Muridke	Mini Bus	30	Work	Not Answered	Not Answered
193	13:32	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
194	13:34	Chak Aamru	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
195	13:35	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
196	13:37	Narowal	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
197	13:38	Ikhlas Pur	Lahore	Large Bus	64	Work	Not Answered	Not Answered
198	13:41	Narowal	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
199	13:42	Shakargarh	Kamoke	Passenger Pickup	16	Work	Not Answered	Not Answered
200	13:42	Rawalpindi	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
201	13:46	Nurkot	Muridke	Mini Bus	30	Work	Not Answered	Not Answered
202	13:46	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
203	13:49	Narowal	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
204	13:49	Nurkot	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
205	13:50	Shakargarh	Islamabad	Passenger Pickup	4	Work	Yes	Applicable Toll
206	13:50	Shakargarh	Gujranwala	Passenger Pickup	16	Work	Not Answered	Not Answered
207	13:53	Shakargarh	Gujranwala	Passenger Pickup	16	Work	Not Answered	Not Answered
208	13:55	Lahore	Ikhlas Pur	Passenger Pickup	16	Work	Not Answered	Not Answered
209	13:56	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
210	13:57	Nurkot	Muridke	Passenger Pickup	12	Work	Not Answered	Not Answered



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Location		MB-3 Shakargarh			Date	Wednesday, October 9, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
211	14:01	Nurkot	Muridke	Mini Bus	30	Work	Not Answered	Not Answered
212	14:01	Shakargarh	Kamoke	Passenger Pickup	16	Work	Not Answered	Not Answered
213	14:02	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
214	14:06	Nurkot	Sahiwal	Mini Bus	30	Work	Not Answered	Not Answered
215	14:09	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
216	14:11	Ikhlas Pur	Lahore	Car	5	Work	Yes	Applicable Toll
217	14:12	Shakargarh	Kamoke	Passenger Pickup	16	Work	Not Answered	Not Answered
218	14:16	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
219	14:18	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
220	14:23	Narowal	Shakargarh	Mini Bus	30	Work	Not Answered	Not Answered
221	14:23	Shakargarh	Faisalabad	Large Bus	64	Work	Not Answered	Not Answered
222	14:29	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
223	14:30	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
224	14:32	Nurkot	Muridke	Car	2	Work	No	No
225	14:32	Nainan Kot	Bhajna Bus Stop	Car	1	Work	Yes	Applicable Toll
226	14:32	Shakargarh	Lahore	Car	2	Work	No	No
227	14:35	Nurkot	Muridke	Mini Bus	30	Work	Not Answered	Not Answered
228	14:37	Narowal	Shakargarh	Mini Bus	30	Work	Not Answered	Not Answered
229	14:41	Bara Manga	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
230	14:41	Nurkot	Narowal	Car	4	Work	Yes	Applicable Toll
231	14:43	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
232	14:46	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
233	14:50	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
234	14:51	Shakargarh	Bustan Narowal	Passenger Pickup	1	Work	Yes	Applicable Toll
235	14:52	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
236	14:57	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
237	14:58	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
238	15:00	Nurkot	Narowal	Car	1	Work	No	No
239	15:04	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
240	15:04	Narowal	Shakargarh	Mini Bus	30	Work	Not Answered	Not Answered
241	15:09	Shakargarh	Kamoke	Passenger Pickup	16	Work	Not Answered	Not Answered
242	15:10	Shakargarh	Narowal	Car	4	Work	No	No
243	15:11	Lahore	Rawalpindi	Large Bus	64	Work	Not Answered	Not Answered
244	15:15	Shakargarh	Faisalabad	Large Bus	64	Work	Not Answered	Not Answered
245	15:18	Narowal	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered



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Location		MB-3 Shakargarh			Date	Wednesday, October 9, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
246	15:20	Shakargarh	Muridke	Car	2	Work	Yes	Applicable Toll
247	15:21	Shakargarh	Kamoke	Passenger Pickup	16	Work	Not Answered	Not Answered
248	15:25	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
249	15:25	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
250	15:27	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
251	15:29	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
252	15:29	Shakargarh	Narowal	Car	4	Work	Yes	Applicable Toll
253	15:30	Shakargarh	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
254	15:32	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
255	15:33	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
256	15:34	Shakargarh	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
257	15:37	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
258	15:38	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
259	15:38	Ikhlas Pur	Lahore	Large Bus	64	Work	Not Answered	Not Answered
260	15:39	Shakargarh	Narowal	Passenger Pickup	2	Work	No	No
261	15:41	Nurkot	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
262	15:42	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
263	15:44	Nurkot	Lahore	Car	4	Work	Not Answered	Not Answered
264	15:45	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
265	15:46	Suchkotchack	Lahore	Large Bus	64	Work	Not Answered	Not Answered
266	15:48	Nurkot	Lahore	Passenger Pickup	16	Work	No	No
267	15:49	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
268	15:50	Shakargarh	Gujranwala	Passenger Pickup	16	Work	Not Answered	Not Answered
269	15:50	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
270	15:54	Islamabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
271	15:54	Shakargarh	Muridke	Passenger Pickup	16	Work	Not Answered	Not Answered
272	15:58	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
273	15:58	Shakargarh	Sheikhupura	2/3 Axle Truck	2	Work	No	No
274	15:58	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
275	16:02	Rawalpindi	Ikhlas Pur	Large Bus	64	Work	Not Answered	Not Answered
276	16:02	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
277	16:06	Narowal	Ikhlas Pur	Large Bus	64	Work	Not Answered	Not Answered
278	16:06	Shakargarh	Gujranwala	Large Bus	64	Work	Not Answered	Not Answered
279	16:08	Shakargarh	Lahore	Car	4	Work	No	No
280	16:10	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered



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S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
281	16:11	Nurkot	Bustan Narowal	Passenger Pickup	2	Work	Not Answered	Not Answered
282	16:14	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
283	16:15	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
284	16:17	Nurkot	Lahore	Car	4	Work	Yes	Applicable Toll
285	16:19	Gujranwala	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
286	16:19	Suchkotchack	Lahore	Large Bus	64	Work	Not Answered	Not Answered
287	16:23	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
288	16:23	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
289	16:27	Shakargarh	Bhajna Bus Stop	Car	2	Work	Yes	Applicable Toll
290	16:27	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
291	16:27	Shakargarh	Lahore	2/3 Axle Truck	2	Work	Not Answered	Not Answered
292	16:31	Narowal	Ikhlas Pur	Passenger Pickup	16	Work	Not Answered	Not Answered
293	16:31	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
294	16:35	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
295	16:35	Narowal	Ikhlas Pur	Passenger Pickup	16	Work	Not Answered	Not Answered
296	16:36	Nurkot	Bustan Narowal	Passenger Pickup	2	Work	No	No
297	16:39	Shakargarh	Lahore	Large Bus	64	Work	Not Answered	Not Answered
298	16:39	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
299	16:43	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
300	16:44	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
301	16:44	Lahore	Shakargarh	Passenger Pickup	10	Work	Not Answered	Not Answered
302	16:46	Shakargarh	Muridke	Car	3	Work	No	No
303	16:47	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
304	16:48	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
305	16:48	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
306	16:50	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
307	16:53	Nainan Kot	Lahore	Large Bus	64	Work	Not Answered	Not Answered
308	16:53	Narowal	Shakargarh	Large Bus	14	Work	Not Answered	Not Answered
309	16:56	Nainan Kot	Narowal	Car	2	Work	No	No
310	16:56	Narowal	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
311	16:58	Shakargarh	Narowal	Passenger Pickup	16	Work	Not Answered	Not Answered
312	17:00	Narowal	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
313	17:03	Muridke	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
314	17:03	Shakargarh	Gujranwala	Passenger Pickup	16	Work	Not Answered	Not Answered
315	17:05	Nurkot	Narowal	Car	2	Work	No	No



**Traffic Assessment for
Operation and Management Contracts for Roads in Punjab on PPP Mode
OD Survey Data**

Location		MB-3 Shakargarh			Date	Wednesday, October 9, 2024		
S.No.	Interview Time	Origin	Destination	Vehicle Type	Number of Passenger in Vehicle	Trip Purpose	Willingness to Pay (Yes/ No)	Suggested Toll (Rs.)
316	17:06	Gujranwala	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
317	17:08	Nurkot	Bustan Narowal	Mini Bus	30	Work	Not Answered	Not Answered
318	17:09	Lahore	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
319	17:12	Lahore	Nurkot	Passenger Pickup	16	Work	Not Answered	Not Answered
320	17:14	Shakargarh	Narowal	Passenger Pickup	10	Work	Not Answered	Not Answered
321	17:15	Nurkot	Lahore	Car	1	Work	No	No
322	17:16	Bhajna Bus Stop	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
323	17:19	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
324	17:19	Faisalabad	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
325	17:22	Muridke	Suchkochack	Passenger Pickup	16	Work	Not Answered	Not Answered
326	17:24	Shakargarh	Lahore	Passenger Pickup	16	Work	Not Answered	Not Answered
327	17:25	Shakargarh	Bhajna Bus Stop	Car	2	Work	No	No
328	17:25	Lahore	Nurkot	Passenger Pickup	16	Work	Not Answered	Not Answered
329	17:28	Narowal	Nainan Kot	Passenger Pickup	16	Work	Not Answered	Not Answered
330	17:29	Shakargarh	Narowal	Mini Bus	30	Work	Not Answered	Not Answered
331	17:32	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
332	17:34	Shakargarh	Narowal	Passenger Pickup	3	Work	Not Answered	Not Answered
333	17:35	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
334	17:38	Muridke	Shakargarh	Passenger Pickup	16	Work	Not Answered	Not Answered
335	17:40	Ikhlas Pur	Lahore	Large Bus	64	Work	Not Answered	Not Answered
336	17:41	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered
337	17:45	Lahore	Shakargarh	Large Bus	64	Work	Not Answered	Not Answered

