REQUEST FOR PROPOSAL

for

CONSTRUCTION OF
HYDERABAD – SUKKUR, 299.3 KM (APPROX)
6-LANE DIVIDED MOTORWAY

On

BUILD-OPERATE-TRANSFER BASIS

Issued to: ___________

Issued on: ___________

NATIONAL HIGHWAY AUTHORITY
(Procurement & Contract Administration Section)
28-Mauve Area, Sector G-9/I, Islamabad (Pakistan)
Phone # 92-51-9032727, Fax # 92-51-9260419
REQUEST FOR PROPOSAL
CONSTRUCTION OF HYDERABAD–SUKKUR, 299.3 KILOMETRE
6-LANE DIVIDED MOTORWAY ON BUILD–OPERATE–TRANSFER BASIS

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REQUEST FOR PROPOSAL
CONSTRUCTION OF HYDERABAD–SUKKUR, 299.3 KILOMETRE
6-LANE DIVIDED MOTORWAY ON BUILD–OPERATE–TRANSFER BASIS

PART I: INTRODUCTION

The National Highway Authority ("NHA") hereby disseminates this Request for Proposal ("RFP") to invite all prequalified Bidders to submit technical and financial proposals to compete for “Construction of Hyderabad – Sukkur, 299.3 Kilometres (approx.), 6-Lane Divided Motorway (M-6)” ("the Project") under Public Private Partnership ("PPP") on Build-Operate-Transfer ("BOT") basis. The Project, once completed, shall integrate into Peshawar-Karachi Motorway ("PKM"), which starts from Karachi and connects major cities of Hyderabad, Sukkur, Multan, Khanewal, Faisalabad, Islamabad and Nowshera, terminating at Peshawar. NHA is envisioning and planning extension of the PKM to Peoples Republic of China, Afghanistan and Central Asian States.

NHA envisages and desires private sector to come up with the best, affordable, efficient, cost effective solutions providing value-for-money for the road users without compromising international standards of safety and reliability, as well as to come up with the development and financial arrangements, design, construction, commissioning, operations and maintenance for the road infrastructure without any recourse to NHA under PPP.

*Unless expressly specified otherwise, all capitalized terms used herein shall bear the meaning ascribed thereto in the Draft Concession Agreement attached to this RFP as Appendix–2.*

Subsequent to this Part I: Introduction, the RFP is divided into the following parts:

PART II: "Instructions to Bidders" that include:

A. A description of the Project; including a statement of the objectives, scope, and expected outputs.

B. The minimum Technical Information of Bidders required to be considered responsive.

C. The minimum Financial Data of Bidders required to be considered responsive.

D. The evaluation criteria to be used by NHA to determine the most advantageous proposal; price and consideration of other factors relevant to the Project.

E. Proposal submission procedures; interalia, the date, time, location of proposal submission, proposal validity period and the permissible mode of proposal transmission.
Following Appendices are the integral part of this RFP.

**Appendix – 1**  Project Description, Project Scope of Work, Design Criteria/Standards and Preliminary Design Drawings of Hyderabad – Sukkur Motorway

**Appendix – 2**  Draft Concession Agreement to be negotiated and entered into between the successful Bidder and the NHA

**Appendix – 3**  Board of Investment (“BOI”)’s Investment Policy

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**Appendix – 8**  Project Handback Requirements

**Appendix – 9**  NHA PPP Policy and Regulatory Framework
PART II: INSTRUCTIONS TO BIDDERS

A. PROJECT DESCRIPTION

A.1 Background

In conjunction to Part I above, Pakistan motorway program envisages development of “A PLANNED ECONOMIC CORRIDOR” running in north-south direction facilitating maximum domestic production centers as well as serving international and regional connectivity with the objective to provide a safe, reliable, modernized, high speed and environment friendly motorway. The NHA’s motorway program forms part of trade corridor linking ports of Karachi and Gwadar with China, Afghanistan and Central Asian States. Motorway network starts from Khunjrab (Chinese border), Torkham (Afghan border) and through Peshawar – Islamabad Motorway (M-1), Islamabad – Lahore Motorway (M-2) and Pindi Bhattian – Faisalabad Motorway (M-4) reaches provincial capital Lahore and industrial city Faisalabad.

The Government of Pakistan, Ministry of Communications, National Highway Authority now intends to further extend its motorway program through building Peshawar – Karachi Motorway (“PKM”) to connect port city Karachi with the upcountry and onward to Peoples Republic of China, Afghanistan and Central Asian States.

Following Motorway segments are the part of Peshawar – Karachi Motorway (PKM):

i. **Peshawar–Islamabad Motorway (M-1), 155 Km:** This segment of PKM has already been construction and opened to traffic as 6-lane divided Motorway.

ii. **Islamabad–Pindi Bhattian Motorway (M-2), 235 Km:** This segment of PKM has already been completed as part of Lahore – Islamabad Motorway (M-2), 357 Km long 6-lane divided Motorway.

iii. **Pindi Bhattian–Multan Motorway (M-4), 309 Km:** This segment of PKM is a 4-Lane divided Motorway, which has been divided into following sections:
    a) **Pindi Bhattian–Gojra Motorway (M-4), 124 Km:** This section of M-4 has already been completed and opened to traffic.
    b) **Gojra–Shorkot Motorway (M-4), 62 Km:** This section of M-4 is under construction.
    c) **Shorkot–Khanewal Motorway (M-4), 65 Km:** This section of M-4 is under construction.
    d) **Khanewal–Multan Motorway (M-4), 58 Km:** This section of M-4 has already been completed and opened to traffic.

iv. **Multan–Sukkur Motorway (M-5), 392 Km:** This segment of PKM is under construction through an EPC Contract.

v. **Sukkur–Hyderabad Motorway (M-6), 299.3 Km:** This segment of PKM is being procured by inviting Bids from prequalified Bidders in accordance with the provisions of this RFP.
vi. **Hyderabad–Karachi Motorway (M-9), 136 Km:** The existing Karachi – Hyderabad 4-Lane Superhighway is being converted as 6-Lane divided Motorway on BOT basis that is near completion.

**A.2 The Project**

This RFP is issued for inviting technical and financial proposals from Pre-qualified Bidders to compete for the “Construction of Hyderabad - Sukkur, 299.3 Kilometres, 6-Lane Divided, fenced Motorway” (“the Project”) on BOT basis.

**A.3 Site Location**

The Project starts from Hyderabad, at end point of Karachi – Hyderabad Motorway (M-9) and terminates at Sukkur. Following is location map of the Project.

**A.4 Scope of the Project**

A detailed Project Description and Scope of Work and Design Criteria/Standards are attached at Appendix–1. Preliminary Design Drawings of Hyderabad – Sukkur Motorway are also provided as part of Appendix-1 for reference purpose, however, Bidders are required to carry out detailed survey at their own to confirm the same.
A.5 The Concession

Under the terms of the Concession Agreement, NHA envisages granting a Concession to the selected Bidder to develop, design, finance, construct, insure, commission, manage, operate, maintain and, at the end of the Concession Period, transfer to NHA all the Project Assets, including but not limited to, Service Areas, Allied Facilities and all the superstructures, intellectual property rights, buildings and civil works built on Right of Way (“ROW”) for the purposes of the Project. The Concession will also include the exclusive right, subject to the terms of the Concession Agreement, of the selected Bidder to demand, collect toll from vehicles using the Project, except exempted vehicles. The Concessionaire shall also be allowed to generate revenue from the Service Areas. Commercial Exploitation with reference to Allied Facilities and ROW shall be subject to the prior approval of NHA in accordance with the terms and conditions of the Concession Agreement.

All requirements, terms and conditions of the Concession, other than Section A.6 as detailed below, will be agreed during negotiation with the selected Bidder. The form and content of the negotiated concession are expected to conform closely to the Draft Concession Agreement included here as Appendix–2. Bidders are required to address all the aspects of this RFP as well as the draft Concession Agreement in their submissions.

In case of any discrepancy between this RFP and Draft Concession Agreement, the stipulations of this RFP will prevail.

A.6 Basic Parameter of the Concession

Following basic parameters of the Concession are fixed. Bidders are required to consider, interalia, these parameters for preparing their proposals.

a) **Concession Period**: The Concession will be for a period of twenty-five (25) years, commencing from signing date of the Concession Agreement.

b) **Financial Close Period**: The Concessionaire will have to achieve Financial Close within one hundred and eighty (180) calendar days from signing of Concession Agreement. During this phase the Concessionaire shall keep NHA well posted of its activities / correspondence with potential lenders / financial institutions. The Financial Close period may be extended for another period of one hundred and twenty (120) days subject to approval of NHA upon providing sufficient evidence of efforts made by the Concessionaire for achievement of Financial Close.

c) **Construction Period**: Construction period for the Project will be thirty-six (36) months from achievement of Financial Close.

d) **Total Project Cost**: The bidders are required to submit detail of the Total Project Cost in the form as required under Section C.2 (a) and (b) of the RFP.

e) **Financing Structure**: To achieve Financial Close, within the given timeframe, the Concessionaire shall be responsible to arrange funding for the Project in the following manner:

i. **Government Support**: To improve the viability of the Project, a certain portion of the Total Project Cost will be arranged by the Concessionaire in the form of
Supplier/Buyers Credit. For avoidance of doubt it is clarified that this portion of loan (exact amount of which is to be determined and clearly reflected in the Financial Proposal of the bidders) shall be repaid by the GOP/NHA as per agreed terms and conditions, after construction period. The bidders are required to attach an Amortization Schedule of this Supplier/Buyers Credit facility clearly stipulating the terms and conditions as part of the Bid.

ii. Remaining Project Cost (Total Project Cost – Government Support): The remaining Project Cost shall be financed by the Concessionaire, as follows:

A. Equity Requirement: The successful Bidder (sponsor) will have to invest minimum thirty percent (30%) of the Remaining Project Cost as equity, through a Special Purpose Vehicle ("SPV"), which shall be incorporated specifically to undertake the Project.

B. Commercial Loan: The successful Bidder (sponsor) will have to arrange maximum seventy percent (70%) of the Remaining Project Cost as debt.

f) SPV: The successful bidder shall be required to incorporate a Special Purpose Vehicle ("SPV"), a company to be registered with Securities and Exchange Commission of Pakistan (SECP) to execute the Concession Agreement for undertaking the Project.

g) Land/Concession Area: NHA shall, at its own cost and expense, provide to the Concessionaire the land / Right of Way / Project Site / Concession Area required for the Project and deliver the encumbrance free vacant possession to the Concessionaire at the Financial Close. The width of Concession Area may vary at different locations of the Project according to site requirements. However, all the pre-qualified Bidders will have access to the Project Site for conducting surveys for preparation of their respective Bids.

h) Relocation/Removal of Public Utilities: NHA shall be responsible for relocation / removal of public utilities required for project construction.

i) Riding Quality: The roughness of the pavement level (riding quality) for the Concession Period, in terms of International Roughness Index (IRI – meter/kilometre), over each lane per kilometre of the Project shall be as follows:

i. Upon Construction Completion: IRI less than 1.0

ii. During Operation Phase: IRI less than 2.5

iii. Upon Completion of Overlay: IRI less than 1.5

iv. At Transfer: IRI less than 2.0

j) Level of Service: The Concessionaire shall be responsible for financing and providing additional lanes for any section of the Project between two interchanges, wherever level of service falls below “C” as per Highway Capacity Manual (latest version).

k) Additional Interchange or Flyover/Underpass: Any new interchange or flyover/underpass, which is not part of initial Scope of Work, shall be considered Additional Interchange or Flyover/Underpass.

i. Additional Interchange or Flyover/Underpass by GOP/NHA: In case Government of Pakistan / NHA desires to build any Additional Interchange(s) or
Flyover(s)/Underpass(es) during Concession Period, the GOP/NHA shall be authorized to build the same at its own cost (including cost of land and removal/relocation of public utilities) through the Concessionaire based on prevailing NHA Composite Schedule of Rates (CSR).

ii. Additional Interchange or Flyover/Underpass by the Concessionaire: Concessionaire can build Additional Interchange(s) or Flyover(s)/Underpass(es) during Concession Period subject to prior written approval of NHA, at its own risk and cost (including cost of land and removal/relocation of public utilities). The GOP/NHA shall negotiate terms and conditions for the same, at that point of time.

The Additional Interchange(s) or Flyover(s)/Underpass(es) (either constructed by GOP/NHA or by the Concessionaire) shall become part of Project Assets and shall be operated and maintained accordingly.

i) Additional Pedestrian Bridge or any other Safety Feature: In case need arises, during the Concession Period, for construction of additional Pedestrian Bridge or safety feature, it shall be constructed by the Concessionaire at its own risk and cost. This new Pedestrian Bridge and/or safety feature shall become part of Project Assets and will be operated & maintained accordingly.

m) Development Right: The Concessionaire shall enjoy development rights throughout the Concession Period for any legal commercial utilization of the Concession Area subject to prior written approval of NHA. However, it should not compromise the definition, character, aesthetics, safety, environment etc. of the Motorway. GOP/NHA shall negotiate the terms and conditions of each and every development activity.

n) Bonds and Security Requirements: The Bid Security and all the project Bonds shall be as per stipulations of Section D.5 of this RFP.

o) Trees at the Concession Area: The Concessionaire shall be responsible to cut all the existing trees of Concession Area, during construction period and these trees shall be the property of NHA. However, the Concessionaire shall comply with the prevailing rules and regulations of Environment Department with respect to re-plantation of trees.

p) Public Utilities: The Concessionaire shall be responsible for providing service corridor, within the Right of Way, in order to provide space for cables / utilities and Concessionaire can charge rentals, subject to the approval of NHA and as per rules and regulations of NHA.

q) Operation & Maintenance: The Concessionaire, during operation period, shall be responsible to ensure, interalia, following on the Project:
   - toll operations;
   - routine (preventive) maintenance;
   - periodic (preservative) maintenance;
   - emergency maintenance;
   - periodic safety audit and ensuring safety measures
   - time based recovery; and
   - emergency & rescue services.
r) **Sectional Completion:** Upon any sectional completion, i.e. completion of minimum 60 Km continuous stretch of the Project that shall start and terminate at Project’s interchanges (including completion of fence, interchange(s) for entry/exit, toll plazas and all other safety measures), the Concessionaire shall be allowed to open that stretch to traffic and collect toll on thereof, subject to verification of Quality Assurance Inspector and written approval of NHA.

Following toll rates shall be allowed upon sectional completion:

i. During first (1st) year of Construction Period:

<table>
<thead>
<tr>
<th>Vehicle Category</th>
<th>Base Toll Rate (Rs/Km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1: Car/Jeep/Taxi</td>
<td>1.71</td>
</tr>
<tr>
<td>Class 2: Wagon</td>
<td>2.85</td>
</tr>
<tr>
<td>Class 3: Coaster</td>
<td>4.00</td>
</tr>
<tr>
<td>Class 4: Buses</td>
<td>5.70</td>
</tr>
<tr>
<td>Class 5: Trucks (2 &amp; 3 Axle)</td>
<td>7.41</td>
</tr>
<tr>
<td>Class 6: Articulated Truck</td>
<td>9.55</td>
</tr>
</tbody>
</table>

ii. During second (2nd) year of Construction Period:

<table>
<thead>
<tr>
<th>Vehicle Category</th>
<th>Base Toll Rate (Rs/Km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1: Car/Jeep/Taxi</td>
<td>1.84</td>
</tr>
<tr>
<td>Class 2: Wagon</td>
<td>3.08</td>
</tr>
<tr>
<td>Class 3: Coaster</td>
<td>4.32</td>
</tr>
<tr>
<td>Class 4: Buses</td>
<td>6.16</td>
</tr>
<tr>
<td>Class 5: Trucks (2 &amp; 3 Axle)</td>
<td>8.00</td>
</tr>
<tr>
<td>Class 6: Articulated Truck</td>
<td>10.31</td>
</tr>
</tbody>
</table>

iii. During third (3rd) year of Construction Period:

<table>
<thead>
<tr>
<th>Vehicle Category</th>
<th>Base Toll Rate (Rs/Km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1: Car/Jeep/Taxi</td>
<td>1.99</td>
</tr>
<tr>
<td>Class 2: Wagon</td>
<td>3.33</td>
</tr>
<tr>
<td>Class 3: Coaster</td>
<td>4.66</td>
</tr>
<tr>
<td>Class 4: Buses</td>
<td>6.65</td>
</tr>
<tr>
<td>Class 5: Trucks (2 &amp; 3 Axle)</td>
<td>8.64</td>
</tr>
<tr>
<td>Class 6: Articulated Truck</td>
<td>11.14</td>
</tr>
</tbody>
</table>

Sectional completion/opening is offered to support Concessionaire’s cash flow during construction period, whereas, actual base toll rates and annual toll escalation shall be applied upon completion of whole stretch of 299.3 km, along with allied facilities, of the Project.
s) **Base Year Toll Rates:** The Base Year Toll Rates, applicable from the date of Commercial Operations of the Project, i.e. once the Project is fully operational after completion of full length (299.3 Kms) Motorway along with ancillary facilities, are fixed as under:

<table>
<thead>
<tr>
<th>Vehicle Category</th>
<th>Base Toll Rate (PKR/Km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1: Car/Jeep/Taxi</td>
<td>2.15</td>
</tr>
<tr>
<td>Class 2: Wagon</td>
<td>3.59</td>
</tr>
<tr>
<td>Class 3: Coaster</td>
<td>5.03</td>
</tr>
<tr>
<td>Class 4: Buses</td>
<td>7.18</td>
</tr>
<tr>
<td>Class 5: Trucks (2 &amp; 3 Axle)</td>
<td>9.33</td>
</tr>
<tr>
<td>Class 6: Articulated Truck</td>
<td>12.03</td>
</tr>
</tbody>
</table>

t) **Annual Toll Escalation:** Eight percent (8%) annual toll escalation shall be applied during operation period commencing from second (2nd) year of operation.

u) **Toll Collection Transparency:** The Concessionaire shall ensure the provision of visibility of real-time toll collection revenue in the designated premises of NHA throughout the Concession Period. For the purpose, Joint Auditor would have access to the data and NHA shall receive periodic reports, duly vetted by the Concessionaire. NHA shall be fully authorized to ensure authenticity of these reports.

v) **Police Fines:** NHA and/or National Highways & Motorway Police (NH&MP) shall be authorized to collect and retain all types of police fines. For avoidance of doubt, it is cleared that police fines shall not be considered as the Project Revenue.

w) **Weigh Station Fines:** The Concessionaire shall be authorized to collect and retain the fine money received from the vehicles which are declared as overweight under the prevailing rules and regulations.

x) **Permitted Encumbrance:** The GOP may issue Ijarah Sukuk against, *inter alia*, the Concession Area for purposes of securitization in such manner that does not fetter, impede or obstruct the rights and/or obligations of the Concessionaire under the Concession Agreement.

y) **Exempted Vehicles:** The Concessionaire shall not be required to exempt any specific types or group of road users from the payment of Tolls except the following Exempted Vehicles:

- Provincial and National Highways & Motorway Police (NH&MP);
- Fire brigade vehicles;
- Ambulances;
- Armed forces of Pakistan vehicles bearing broad arrow number plates;
- Vehicles conveying members of the National Assembly, members of the Provincial Assemblies and Senators in person; and
- Vehicles having Supreme Court/High Court Flags/Insignia Plates.

However, Concessionaire can make arrangements with regular users of the facility (either individuals, companies or others), only to reduce the toll charged in individual cases.
z) **Project Risks:** The Concessionaire, *interalia*, shall exclusively bear Demand Risk including: traffic, Forex and cost & time overrun and NHA shall share the risk of change in law, force majeure and political risk. NHA will also support the Project Lenders by giving them step-in-rights.

However, Forex risk of the loan portion, which would be arranged on supplier/buyer credit basis shall be borne by Government of Pakistan / NHA.

aa) **Facilities for NHA Representative:** The Concessionaire shall provide for the NHA Representative an office at the Concession Area (measuring minimum 10,000 sq. feet covered area) with all fitting and fixtures including furnishing (twice during concession period). The Concessionaire shall provide maintenance of this office throughout the Concession Period.

The Concessionaire shall provide transportation, with the cost of operation (i.e. insurance, driver & fuel) and repair/maintenance throughout the Concession Period, that includes:

i. six (6) Nos. Toyota Corolla GLI (or equivalent);
ii. four (4) Nos. Vigo;
iii. four (4) Nos. single cabin Toyota Pickup; and
iv. four (4) Nos. Suzuki Swift (1300 cc).

The Concessionaire shall be responsible to replace the old vehicles with the new vehicles at each interval of ten (10) years within Concession Period. The above facilities shall become NHA property at the end of Concession Period.

bb) **Training to NHA Officials:** The Concessionaire shall arrange training abroad in the following fields for minimum ten (10) officials of NHA out of which at least five (5) shall be from NHA PPP Cell.

- **PPP project structuring / development:** The training level must be equal to or better than that provided by the IP3 Institute USA.
- **PPP project implementation:** Arranging a visit abroad to visit PPP projects to have experience of implementation of PPP projects.

cc) **Rules & Regulations:** The rules and regulations, manuals and standards made by NHA or otherwise adopted by NHA shall be incorporated in the Concession Agreement for the purposes of achieving harmony and uniformity.

dd) **NHA Revenue Share:** Higher revenue share offered to NHA, during Concession Period (in terms of Net Present Value), shall be one of the evaluating criteria for selection of successful bidder.

ee) **Reports during Operation Period:** Concessionaire shall provide real-time traffic visibility to NHA. The Concessionaire will also submit, duly signed and stamped, following monthly reports to NHA by 5th of succeeding month:

i. Hourly traffic data of each day at each toll plaza according to vehicle classification as per passenger car unit (PCU).

ii. Level of service & traffic capacity of each section of Hyderabad - Sukkur Motorway (According to Highway Capacity Manual latest edition).
iii. Revenue stream on Hyderabad – Sukkur Motorway based on Toll collection.

The traffic data on Toll Plazas can be verified / checked by the NHA. In case of any comments on the aforementioned reports by NHA, Concessionaire will incorporate the modifications / changes as per NHA requirement and resubmit the reports within seven (07) days of the issuance of comments by NHA.

ff) **Project Handback:** At the end of the Concession Period, the Project Assets, fitting and fixtures, building and constructions on Right of Way or on any of the NHA land shall be returned to NHA in a well maintained operational condition and meeting the riding quality standards at no cost to the NHA and in accordance with Handback Requirements fully agreed to and detailed in the Concession Agreement.

A.7 **Disclaimer**

All information, assumptions and projections contained in the RFP including its appendices are indicative only and are provided solely to assist in a preliminary assessment of the Project. Nothing in these documents or elsewhere shall create any contractual relationship between the NHA and any Bidder, nor shall it commit the NHA to any policy described in these documents or elsewhere and neither Government of Pakistan nor the NHA or any of its consultants or advisers will have any liability or responsibility if the information, assumptions or projections contained herein or otherwise in respect of the Project prove to be incorrect. It is the responsibility of the Bidder to verify the information, assumptions and projections contained in these documents or elsewhere.

A.8 **Bribery & Collusion**

The NHA shall be entitled to terminate the Concession Agreement and recover from the successful Bidder the amount of any loss resulting from such termination if the successful Bidder shall have offered or given to any person any gift or consideration of any kind as an inducement or reward for doing, or forbearing to do, any action in relation to obtaining, or execution of the Concession or any other contract with the NHA, or for showing favour to any person in relation to the Concession or any other contract with the NHA, or if any of the like acts shall have been done by any person employed by the successful Bidder or acting on its behalf (whether with or without the knowledge of the successful Bidder), or if the successful Bidder shall have come to any agreement with another Bidder or number of Bidders whereby an agreed quotation or estimate shall be offered as a Bid to the NHA by one or more Bidders.
B. MINIMUM TECHNICAL INFORMATION REQUIRED

The minimum technical information NHA requires the Bidders to submit in their Technical Proposal to be considered responsive to the technical requirements are set out in Sections B.1 to B.4 below:

B.1 Mandatory Submission

Following information / documentation, as detailed under Section B.1.1 to B.1.4 below, is mandatory for the Bidders to submit as part of Technical Proposal, to be considered responsive.

B.1.1 Executive Summary

A covering letter identifying the company(s), firm(s), joint venture(s) or consortium, the relationship of the parties, the lead and associated company(s)/firm(s) and an Executive Summary of the Bidder’s Technical Proposal (not to exceed five pages).

B.1.2 Bid Security

Bidders are required to submit a Bid Security as specified in Section D.5.1 below.

B.1.3 Statement of Bid Conformity

A Statement of Bid Conformity, stating whether or not the Bid conforms to all requirements of the RFP. The requirements of bid conformity are set out in Section E.3.4 below.

Bidders should note when preparing their submissions that all deviations from the Conforming Scheme should be listed. Such deviations may include, but not limited to:

i) any changes to the layout, form or scope of the Conforming Scheme;

ii) any changes to the land requirement plan; and

iii) any proposed changes to the Draft Concession Agreement, Appendix-2 of RFP.

B.1.4 Statement of Proposed Technical Changes to the Conforming Scheme

In the event that the bidder shall conclude, as a result of its methodology, or otherwise, that it wishes to modify the proposals contained in the Conforming Scheme, either materially or otherwise, the Bidder shall provide supporting drawings and calculations to justify the proposed deviations from the Conforming Scheme.

Such deviations shall be designed and evaluated, by the Bidder, in sufficient detail as to indicate, as a minimum:

- any changes in the horizontal and/or vertical alignment;
- any changes in the land requirements for the proposal;
- any changes in the choice of the materials; and
- any consequential changes in the terms of the design life, operational characteristics and maintenance needs of the facility.

The results of these studies shall be included, by the Bidder, in a Statement of Proposed Technical Changes to the Confirming Scheme.
B.2 BOT Managerial, Technical and Construction Qualifications

A narrative and graphic presentation of the Bidder’s current managerial, corporate, technical, construction and other related qualifications to undertake and successfully design, finance, construct, commission, develop, manage, operate, maintain, insure and transfer at the end of the Concession Period, the Project under BOT arrangement. It should also highlight the organizational chart of the Bidder. It should further elaborate in detail the relevant experience of the Bidder for similar road projects that includes, but not limited to: financial close, design, construction, maintenance and toll & Intelligent Transport System (ITS) operations etc. The narrative must explain the Bidder’s BOT institutional arrangements; including its proposed project organization, particularly during the construction, operation and maintenance phases.

The Technical Proposal must contain the curriculum vitae (CV) of proposed key personnel for the Project detailing their relevant experience and qualifications. Within this section, the Bidder may also provide comments to the Draft Concession Agreement.

The following shall be the critical evaluation factors within this section:

a. Proposed SPV and Project Implementation Structure

b. Relevant Experience of the Bidder for similar road Projects:
   i. Financial Close
   ii. Design
   iii. Construction
   iv. Maintenance
   v. Toll and ITS Operations

c. Proposed key personnel for the Project:
   i. Chief Executive Officer / Managing Director
   ii. Finance Manager/ Financial Consultant
   iii. Construction Manager
   iv. Operations Manager
   v. Maintenance Manager

B.3 Project Appreciation

Project Appreciation based upon the Bidder’s survey and technical studies conforming to Scope of the Project, minimum design criteria and construction performance standards as outlined in Appendix-1 and Appendix-6 of the RFP. The Bidders are expected to conform their Bids/Proposals to the minimum requirements of the Appendix-1 but at the same time, subject to Section E.3.4, are encouraged to propose better, innovative, cost effective, efficient and safe solutions for the Project, provided further that such design/construction solutions/requirements are not in deviation of the overall Scope of the Project and Project Deliverables.

Project Appreciation shall, among other topics, include the following information / submissions, which carry weightage for evaluation:

a. Linear plan, indicating all important features of the Project and the Bidder’s concept
b. Traffic study: analysis and projections
c. Preliminary design, typical cross-section & typical drawings of:
B.4 Project Implementation Methodology

A narrative and graphic presentation of the Bidder’s Project Implementation Methodology to execute the works is required.

During the operational phase of the Project, the NHA shall measure the Concessionaire’s compliance with operations and maintenance standards included as part of Draft Concession Agreement.

Propose innovations and other state-of-the-art Motorway features to help ensure public safety and convenience for the Project. The Bidders are encouraged to propose performance indicators for the Project based on international standards, keeping in view safety, congestion, environmental (noise pollution, air pollution etc.), user comfort, response time for recovery/ambulance etc. Bidders proposing innovative approaches, concepts or other features for general public welfare acceptable to the NHA shall receive score as detailed in the Technical Evaluation Criteria.

The Bidder shall explain project implementation methodology, clearly elaborated in layout plans, which shall include, but not limited to:

a. Construction methodology for Motorway and Intelligent Transport System
b. Project Implementation Activity Plan supported by CPM
c. Shortest Timeframe, Plan and Methodology for:
   i. Financial Close
   ii. Readiness to commence Work
d. Structures and Erection Technology
e. Machinery, plant and labour needs of the Project
f. Anticipated construction problems and measures to overcome
g. Work zone safety plans
h. Operation & maintenance plan, procedures and systems
i. Innovations
C. MINIMUM FINANCIAL INFORMATION

C.1 Financing Structure

To achieve Financial Close, within the given timeframe, the Concessionaire shall be responsible to arrange funding for the Project in the following manner:

i. **Government Support:** To improve the viability of the Project, a certain portion of the Total Project Cost will be arranged by the Concessionaire in the form of Supplier/Buyers Credit. For avoidance of doubt it is clarified that this portion of loan (exact amount of which is to be determined and clearly reflected in the Financial Proposal of the bidders) shall be repaid by the GOP/NHA as per agreed terms and conditions, after construction period. The bidders are required to attach an Amortization Schedule of this Supplier/Buyers Credit facility clearly stipulating the terms and conditions as part of the Bid.

ii. **Remaining Project Cost (Total Project Cost – Government Support):** The remaining Project Cost shall be financed by the Concessionaire, as follows:

   a. **Equity Requirement:** The successful Bidder (sponsor) will have to invest minimum thirty percent (30%) of the Remaining Project Cost as equity, through a Special Purpose Vehicle (“SPV”), which shall be incorporated specifically to undertake the Project.

   b. **Commercial Loan:** The successful Bidder (sponsor) will have to arrange maximum seventy percent (70%) of the Remaining Project Cost as debt.

C.2 Minimum Financial Information Required

The minimum financial information required of each Bidder to submit, in its Financial Proposal as a mandatory requirement, is as under:

a. **Construction Cost:** Total Project Cost in a Work Breakdown Structure (“WBS”) including detailed Bill of Quantities (“BOQ”) along with rates. Further, a breakup of capital/construction costs on yearly basis, shall also cover the Scope of Work as mentioned in Appendix-1 of the RFP.

b. **Total Project Cost:** Total Project Cost shall be given as part of Financial Proposal.

c. Total amount of loan(s) to finance the Project; including, type, sources, term, grace period, interest and any other relevant factors.

d. The total amount of Bidder’s equity to be committed to finance the Project. **Bidders proposing less than the minimum equity shall be declared non-responsive.**

e. Cash flow projections during the Concession Period:

   i. Minimum amount of Government Support, if any, required by the Bidder from NHA, in terms of Net Present Value; and

   ii. Maximum amount of NHA Revenue Share, if any, offered by the bidder in terms of Net Present Value.
f. **Financial Model:** The Bidders are required to prepare detailed Financial Model and provide an unprotected (without any pass word on all sheets) soft copy on Microsoft Excel format. The detailed Financial Model will include, but not limited to, the following:

   i. Projections: Detailed Revenue sheets, Expenditure sheets, Loan Amortization Schedule, Financing structure sheets, Tax calculations & Return on Investment Analysis.
   
   ii. Cash Flow Statement
   
   iii. Project Balance Sheet
   
   iv. Project Profit & Loss Statement
   
   v. Toll Charge computation and traffic computation with rationale; including minimum base toll rates (as has been provided) and escalations / projections (as has been provided) in toll rates.
   
   vi. NHA Revenue Share: NHA Revenue Share, if offered, may clearly be reflected in the Financial Model.

   g. The Bidder’s audited financial statements (Balance Sheet, Income Statement and Cash Flow Statements) for the last three (03) years.

   h. Intent(s) of bank(s) / financial institution(s) for project debt financing support.

   It should be clearly understood that all the above documents, especially the proposed / projected financial model, are sought, *inter alia*, for the purposes of evaluation only and mere submission does not amount to acceptance by NHA of the data, projections or analysis in any way whatsoever.

   **C.3 Currency**

   Bidders are required to express all financial calculations in Pakistan Rupees.
D. EVALUATION PROCESS, CRITERION AND PROCEDURES

D.1 The Overall Evaluation Process

The NHA will use the evaluation criteria described in this Section of the RFP to determine the highest evaluated Bid. The evaluation process will consist of a three-step approach, that includes:

a. responsiveness;

b. technical evaluation; and

c. financial evaluation.

D.1.1 Responsiveness

The NHA shall ensure that following requirements are met in order to ascertain responsiveness of the bid:

a. All the permissions / certificates issued by the relevant department(s) are attached, as required under Section B.1.2 of the RFP.

b. A Bid Security is attached in the amount and format as prescribed in the RFP;

c. Bid is submitted by the Proposal Due Date including any extension thereof;

d. Bid is accompanied by the power of attorney authorizing a representative to sign the Bid;

e. Each page of the proposal, along with a copy of RFP, is signed by the authorized representative; and

f. Bid contains number of copies (complete in all respects) as required in this RFP.

D.1.2 Bid Opening

At the date, time and location specifically announced by the NHA, proposal packages received from the Bidders shall be opened in the manner described in Section E.5.

The NHA shall first determine whether or not the Bidders' Technical and Financial Proposals are contained in separately sealed envelopes. The NHA shall announce to those persons present at the Proposal Opening (and upon request to a Bidder who submitted a proposal but is not present or represented at the Proposal Opening), the name and address of each Bidder whose package is opened. Such announcement shall be recorded immediately in the record of the tendering proceedings.

In order to objectively evaluate Technical Proposals without being influenced by financial data, Bidders failing to separate Technical and Financial Proposals shall be deemed non-responsive and will be so recorded in the record of the tendering proceedings.

The NHA shall then determine whether or not Bidders have included Bid Securities in their Technical proposals. The NHA shall announce, to those persons present at the Proposal Opening (and, on any request by a Bidder who submitted a proposal but is not present or represented at the Proposal Opening), the name and address of each Bidder whose Technical proposal is opened. Such announcement shall be recorded immediately in the
record of the tendering proceedings. Bidders failing to provide the required Bid Security shall be deemed non-responsive and so recorded immediately in the record of the tendering proceedings.

The NHA shall not evaluate either the Technical or the Financial Proposal from any Bidder determined to be non-responsive, as reflected in the record of the tendering proceedings.

The public portion of the Proposal Opening will then be closed.

The NHA shall separately, and privately, evaluate responsive proposals in accordance with the evaluation criteria detailed in this Section D.2 & D.3 of the RFP.

D.2 Technical Proposal Evaluation Criteria

The NHA shall first evaluate and score each Technical Proposal on a scale up to one hundred (100) points. In the event the NHA has evaluated and assigned the score of less than seventy (70) points to a Technical Proposal, the NHA shall not open/evaluate the Financial Proposal submitted by that Bidder. Where NHA has evaluated and assigned the score of seventy (70) points or more of a Technical Proposal, the NHA shall then individually evaluate and individually score the Financial Proposal submitted by that Bidder.

The NHA has developed a list of evaluation factors that will be used to evaluate each Technical Proposal based on assessments to determine which factors were of critical importance to the selection of the Bidder. The following is a list of the quantitative factors and their associated maximum Technical score which will be used for the evaluation of Technical Proposal(s):

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Evaluation Factor</th>
<th>Max. Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BOT Managerial, Technical &amp; Construction Qualifications</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Proposed SPV &amp; Project Implementation Structure</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>b. Relevant Experience of the Bidder for similar road Projects</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>(each item carries maximum 05 marks):</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i. Financial Close</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. Design</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii. Construction</td>
<td></td>
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<td></td>
<td>iv. Maintenance</td>
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<tr>
<td></td>
<td>v. Toll and ITS Operations</td>
<td></td>
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<tr>
<td></td>
<td>c. Proposed key personnel for the Project (each CV carries maximum 01 mark):</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>i. Chief Executive Officer / Managing Director</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. Finance Manager/ Financial Consultant</td>
<td></td>
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<tr>
<td></td>
<td>iii. Construction Manager</td>
<td></td>
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<td></td>
<td>iv. Operations Manager</td>
<td></td>
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<tr>
<td></td>
<td>v. Maintenance Manager</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. Marks</th>
</tr>
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<tbody>
<tr>
<td>Individual</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td>Sr. No.</td>
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<tr>
<td>2</td>
</tr>
<tr>
<td>a.</td>
</tr>
<tr>
<td>b.</td>
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<tr>
<td>c.</td>
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<td>i.</td>
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<td>ii.</td>
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<td>iii.</td>
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<td>iv.</td>
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<td>d.</td>
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<td>e.</td>
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<td>f.</td>
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<tr>
<td>3</td>
</tr>
<tr>
<td>a.</td>
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<tr>
<td>b.</td>
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<tr>
<td>c.</td>
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<tr>
<td>i.</td>
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<td>g.</td>
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<tr>
<td>h.</td>
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<tr>
<td>i.</td>
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Minimum seventy (70) marks are mandatory to score for each bidder to qualify for opening of Financial Proposal.
D.3 Financial Proposal Evaluation Criteria

The Financial Proposals of only those bidders shall be opened who will qualify by scoring minimum 70 marks, out of total 100 marks, in technical evaluation. All the bidders who will technically qualify shall become at par and final ranking shall be determined based upon the evaluation of Financial Proposals.

The bidders shall be awarded points based upon the following financial criteria, which will determine the ranking of the bidders in evaluation process:

<table>
<thead>
<tr>
<th>SI #</th>
<th>Evaluation Factor</th>
<th>Max. Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minimum repayments of supplier/buyer credit in Net Present Value (NPV) term, at discount rate of ten percent (10%)</td>
<td>75</td>
</tr>
<tr>
<td>2</td>
<td>Minimum Total Project Cost</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Maximum NHA Revenue Share in NPV terms at discount rate of ten percent (10%)</td>
<td>05</td>
</tr>
<tr>
<td></td>
<td><strong>Total:</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

1. The Bidder requiring minimum payments of supplier/buyer credit in NPV term (as specified above) shall be awarded full marks (i.e. 75 marks) and other bidders shall be awarded proportionately lower marks.

2. The Bidder quoting lowest Total Project Cost (as specified above) shall be awarded full marks (i.e. 20 marks) and other bidders shall be awarded proportionately lower marks.

3. The Bidder offering highest amount of NHA Revenue Share (in terms of NPV) shall be awarded full marks (i.e. 05 marks) and other bidders shall be awarded proportionately lower marks.

D.4 Final Evaluation Results

(a) The results of Financial Evaluation shall be considered as final results of the evaluation process to determine the final ranking of each proposal.

NHA may ask Bidder(s) for clarifications or presentation or additional information of their proposals in order to assist in the scrutiny, evaluation and comparison of proposals. No change in a matter of substance in the proposal, including changes in price and changes aimed at making a non-responsive Bid responsive, shall be sought, offered or permitted.

When clarification or presentation or additional information of proposals requires, the NHA shall maintain a written "Minutes of Clarification" report. Adequate notice will be given to the Bidder prior to conducting the meeting.

(b) It may be necessary for the NHA to reject all proposals:

i. Subject to approval by the Chairman NHA, the NHA may reject all Bids at any time prior to signing of the Concession Agreement.
ii. Notice of the rejection of all Bids shall be given promptly to all Bidders who submitted proposals. The NHA shall upon request communicate to any Bidder which submitted a Bid, the grounds for rejection of all the bids.

iii. The NHA shall not bear any liability (legal, financial etc.), solely by virtue of its invoking this provision and rejecting all submitted Bids.

(c) It may be necessary for the NHA to reject a responsive Bid. Subject to approval by the Chairman NHA, the NHA shall reject a Bid if the Bidder offers, gives or agrees to give, directly or indirectly, to any officer or employee of the NHA or any other governmental authority a gratuity in any form, an offer of employment or any other thing of service or value, as an inducement with respect to an act or decision of, or procedure followed by, the NHA in connection with this tendering process. Such rejection of the Bid and the reasons thereof shall be recorded in the record of the proceedings and promptly communicated to the Bidder.

D.5 Bond and Security Requirements

D.5.1 Bid Security

For a Bid to be responsive, each Bidder is required to provide as a part of its Technical Proposal a Bid Security in the amount of **PKR 250,000,000.00 (Rupees Two hundred and Fifty Million only)**. The Bid Security shall be denominated in Pakistani Rupees, and shall be in the form of:-

(a) a cash deposit; or

(b) a pay order or demand draft drawn on a scheduled bank having a branch in Islamabad; or

(c) a confirmed irrevocable letter of credit, payable at sight of a request from Chairman NHA requiring payment there under, issued by a bank located in the Islamic Republic of Pakistan or a country abroad acceptable to the NHA and confirmed by a bank having a branch in Islamabad; or

(d) a bank guarantee in the form specified in **Appendix–4**.

(e) In case Bid Security is arranged in the form of Bank Guarantee issued by a bank abroad, the same shall be counter-guaranteed by a local scheduled bank.

Bidders are cautioned that no other format will be acceptable and will result in their Bid being declared as non-responsive.

The Bid Securities specified in (c), (d) and (e) above should be valid for a period of at least eighteen (18) calendar months from the date of opening of Technical Proposals. The NHA shall return Bid Securities of all Bidders, once the successful Bidder (as the Concessionaire) has achieved Financial Close or in the event the NHA has rejected all Bids. The Bid Security may be forfeited if the Bidder withdraws its Bid during the period of bid validity or, if it is the successful Bidder, fails to fulfil the obligations specified in **Section D.4** above or having satisfied them fails to provide the required construction phase bond specified in the Concession Agreement.
D.5.2 Financial Close Bond

The successful bidder shall extend the validity of its Bid Security prior to signing of Concession Agreement. This extended Bid Security shall be treated as financial close bond, which will guarantee that financial close will be achieved as agreed. The financial close bond shall be valid for at least eleven (11) months from signing of the Concession Agreement and will be returned once financial close is achieved and Construction Performance Bond is provided by the Concessionaire.

D.5.3 Construction Performance Bond

Prior to commencement of construction activities after financial close, the successful Bidder (as Concessionaire) shall provide to the NHA a Construction Performance Bond to ensure the completion of the construction of the Project in accordance with the Bid Offer. The Construction Performance Bond shall have a face amount equal to Five percent (05%) of the Project's Construction Cost. The Construction Performance Bond shall answer for, and guarantee the completion of the Project in accordance with the Performance Standards and the Timetable, and the payment of Liquidated Damages, which Concessionaire may be required to pay pursuant to the Concession Agreement. The Construction Performance Bond shall be valid for a period of at least forty-eight (48) calendar months from the date of issuance.

D.5.4 Operation Bond

Three (3) months prior to the completion of construction Date, the Concessionaire shall deliver to the NHA an Operation and Maintenance Bond with a face amount equal to Two Percent (02%) of the Projected Gross Revenue for forthcoming year of the Operation Phase. The Operation Bond shall answer for, and guarantee the timely Operation and Maintenance of the Project in accordance with the Performance Standards and the Timetable.

D.5.5 Transfer Bond

Eight (8) months prior to the Transfer Date, the Concessionaire shall deliver to the NHA a Transfer Bond with a face amount equal to Two Percent (02%) of the Total Project Cost. The Transfer Bond shall answer for, and guarantee the timely transfer of the Project in accordance with the Performance Standards and the Timetable as per Concession Agreement.

D.6 Award and Notice to Proceed

The NHA shall announce the highest evaluated Bid as successful. Thereafter:

(a) Whether or not it successfully passed prequalification proceedings, the NHA may require the successful Bidder to certify that its prequalification data have not significantly changed since the Bidder's original submission. When reasonable circumstances require, the NHA may require the successful Bidder who has been prequalified and executed the aforesaid certification to demonstrate again its qualifications in accordance with the same criteria used to prequalify such Bidder. The criteria and procedures to be used for such further demonstration shall be the same as those used in the prequalification proceedings.
(b) If the Bidder submitting the successful proposal is requested to demonstrate again its qualifications but fails to do so, the NHA shall reject that Bid and shall select the next highest ranking Bid, subject to the right of the NHA to reject all remaining Bids.

(c) The NHA shall promptly notify all Bidders of the Bidder submitting the highest-evaluated Bid. As stipulated in this RFP, the NHA shall then request the successful Bidder to negotiate and execute a Concession Agreement. Accordingly, the successful Bidder is required to negotiate and execute the agreements within a reasonable period of time.

(d) If the successful Bidder and NHA fail to agree or execute the Concession Agreement, the NHA may, at its discretion, announce the next highest evaluated Bidder as successful, subject to the right of the NHA to reject all remaining Bids.
E. PROPOSAL SUBMISSION PROCEDURES

E.1 Introduction

This RFP invites prequalified Bidders to submit technical and financial proposals to compete for the Project on a limited recourse basis under a BOT arrangement. To be considered for this award, Bidders are required to submit responsive Technical and Financial proposals for the Project.

E.2 General

E.2.1 Cost of Bidding

The Bidder shall be responsible for all fees, costs and expenses incurred in preparing and negotiating any proposal submitted by it, and under no circumstances shall the NHA become liable to reimburse any Bidder for any such fees, costs or expenses regardless of the conduct or outcome of the bidding process.

E.2.2 Site Visit

The Bidder is advised to visit and examine the Project Site/Concession Area and its surroundings and to obtain for itself on its own responsibility, all information that may be necessary for preparing the Bid and entering into a Concession Agreement. The costs incurred in visiting the site shall be at the Bidder’s own expense.

E.2.3 Amendment of RFP

At any time prior to the Bid Submission Date, NHA may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP by amendment.

The amendment will be notified in writing or by e-mail, telex, cable or facsimile to all prospective Bidders who have purchased the RFP, and will be binding upon them.

In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their Bids, NHA may, at its discretion, extend the deadline for the submission of Bids.

E.2.4 General Considerations for Bidding

a. No Bidder shall submit more than one Bid for the Project. A Bidder bidding individually or as a member of a Consortium shall not be entitled to submit another bid either individually or as a member of any Consortium, as the case may be.

b. Notwithstanding anything to the contrary contained in this RFP, the detailed terms specified in the draft Concession Agreement shall have overriding effect; provided, however, that any conditions or obligations imposed on the Bidder hereunder shall continue to have effect in addition to its obligations under the Concession Agreement.

c. Any condition or qualification or any stipulation contained in the Bid shall render the Bid liable to rejection as a non-responsive Bid.

d. A Bidder shall be liable for disqualification and forfeiture of Bid Security if any legal,
financial or technical adviser of NHA in relation to the Project is engaged by the Bidder, its members or any associate thereof, as the case may be, in any manner for matters related to or incidental to such Project during the Bidding Process, preparation of Bid, evaluation or award of the Concession Agreement.

e. This RFP is not transferable.

f. Any award of Concession pursuant to this RFP shall be subject to the terms of this RFP.

E.2.5 Change in composition of the Consortium

E.2.5.1 Where the Bidder is a Consortium, change in composition of the Consortium may be permitted by NHA during the Bid Stage, only where:

(a) the Lead Member continues to be the Lead Member of the Consortium;

(b) the substitute is at least equal, in terms of Technical Capacity or Financial Capacity, to the Consortium Member who is sought to be substituted and the modified Consortium shall continue to meet the pre-qualification and short-listing criteria during pre-qualification process; and

(c) the new Member(s) expressly adopt(s) the Application already made on behalf of the Consortium as if it were a party to it originally, and is not an Applicant Member/Associate of any other Consortium bidding for this Project.

E.2.5.2 Approval for change in the composition of a Consortium shall be at the sole discretion of NHA and must be approved by NHA in writing. The Bidder must submit its application for change composition of the Consortium no later than 15 (fifteen) days prior to the Proposal Due Date.

E.2.5.3 The modified/reconstituted Consortium shall submit a revised Power of Attorney, prior to the Proposal Due Date.

E.3 Preparation of Bid

E.3.1 Proposal Validity Period

The NHA will award the Project to the Bidder submitting the most acceptable proposal for the Project. The NHA will negotiate and grant to the successful Bidder an exclusive concession for a maximum period of twenty-five (25) years to design, finance, construct, insure, commission, develop, manage, maintain, operate and transfer at the end of the Concession Period, the Project. Due to the nature of the process relating to internal approvals in the NHA, each Bidder's proposal is required to be valid for a period of at least two hundred and forty (240) days from the last submission date.

E.3.2 Two Envelope System of Tendering

The NHA will separately evaluate all Technical and Financial proposals; therefore Bidders are required to submit their Technical and Financial proposals in two separately sealed "envelopes". The NHA requires the first envelope, marked TECHNICAL PROPOSAL, to contain the original and five copies of the Bidder's technical proposal. The NHA requires the
second envelope, marked FINANCIAL PROPOSAL, to contain the original and five copies of the Bidder’s financial proposal. Bidders are cautioned to ensure that their Technical and Financial proposals are contained in separately sealed envelopes clearly marked as indicated above. The NHA requires Bidders to submit the separately sealed envelopes in one bound package. In the event of any discrepancy between the original and copies, the original shall govern.

The original and copies of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorised to bind the Bidder to the offer. Proof of authorisation shall be furnished in the form of a written Power-of-Attorney (along with the authorising board resolution if the Bidder is a corporate entity), which shall accompany the Bid. All pages of the bid, except for unamended printed material, shall be initialled by the person or persons signing the Bid.

The complete Bid shall be without alterations, interlineations or erasures, except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the Bid.

The Bidders are required to submit, along with their bid(s), a CD or USB containing soft copy of Technical and Financial Proposals in pdf format and also soft copy of Financial Model in the MS Excel format for evaluation. The CD or USB shall be attached with the respective proposals.

E.3.3 Language

All proposals shall be presented in the English language.

E.3.4 Conformity with the RFP

The Bidder must submit a Conforming (Bona Fide) Bid that conforms in all respects with the requirements of the RFP. In addition, the Bidder may submit one or more Alternative Conforming (Bona Fide) Bids, if it so wishes.

E.3.4.1 Conforming Bids

A Conforming Bid is a bid that conforms in full, both in engineering and operational terms with the NHA’s Conforming Scheme set out in Sections A.5 & A.6 and Appendix-1 of the RFP, and in financial, organisational and obligation terms with the Draft Concession Agreement, except for minor departures that do not materially affect the design, financing, construction method or operational characteristics of the Project or the financial, organisational or obligation regime under which the Concession will be conducted. All such minor departures, if they exist, must be clearly identified and fully described in the Bid. If the Bid contains no deviations from the Conforming Scheme a positive statement to this effect must be made.

The NHA reserves the right to determine whether a Bid is a Conforming (Bona Fide) Bid. The NHA’s decision will be final and not subject to appeal.
E.4 Proposal Due Date

The Bidders are required to transmit Technical and Financial proposals, in two separately sealed envelopes in one bound package to be received by NHA on or before **February 14, 2017 by 1200 hours** at the following address:

**General Manager (P&CA)**
National Highway Authority
28 – Mauve Area, G-9/1
Islamabad, Pakistan

E.5 Processing of Proposals before Evaluation

(a) The NHA intends to facilitate and sustain an environment of competitiveness, transparency and fairness in the procurement process by, among other means, fairly and impartially processing and evaluating Bidders’ Technical and Financial proposals in accordance with the procedures and pre-established evaluation criteria specified in this RFP.

(b) The NHA shall receive and keep secure all Bids submitted before the Proposal Due Date specified in Section E.4 above. Any and all Bids received by the NHA after the above stipulated date and time for Proposal Closing will be returned unopened to the submitting Bidder.

(c) The NHA shall keep, secure and unopened, all timely submitted proposals until Bid Opening at **1230 hours on February 14, 2017**, when only Technical Proposals will be publicly opened. The Financial Proposals shall remain secure and unopened for later private opening, scrutiny and evaluation.

(d) The Bidders’ representatives who are present shall sign a register evidencing their attendance. NHA will examine the Bids to determine:

   i. whether they are complete;
   ii. whether the requisite Bid Securities have been furnished;
   iii. whether the bid documents have been properly signed; and
   iv. whether the Bids are otherwise in order.

(e) The Bidders’ names, bid withdrawals (if any), the presence of the requisite Bid Security and such other details as the NHA, at its discretion, may consider appropriate will be announced after the Bid Opening takes place. NHA shall prepare minutes of Bid Opening for its own record. The public portion of the Bid Opening Session will then be closed.

(f) NHA shall separately, and privately, evaluate each Bidder’s Technical and Financial proposals in accordance with the evaluation criteria specified in this RFP.

(g) From the date and time of Bid Opening until the time the Concession Agreement is executed, any Bidder wishing to contact the NHA on any matter related to this RFP must do so in writing at the NHA’s address specified in Section E.4 above. Any effort by any Bidder to influence the NHA in its evaluation of Technical and/or Financial proposals is a violation of the laws of Pakistan, shall result in the rejection of that Bidder’s Bid(s) and may lead to necessary action under law.
E.6 Pre-Bid Conference

Bidders are invited, and strongly encouraged, to attend a pre-bid conference organized, and to be conducted, by the NHA:

Date:     January 16, 2017  
Time:     1100 hours  
Location:  NHA Auditorium, Islamabad

Prior to the Pre-Bid Conference, Bidders are invited to submit written questions concerning the Project, this RFP, the Proposal Due Date or other related matters. All such questions should be submitted to General Manager (P&CA), NHA, by January 10, 2017. The NHA will conduct the Pre-Bid Conference, record all questions, both oral and written, posed by Bidders, record all answers provided thereto, and provide a written Pre-Bid Conference Memorandum or, if required, RFP amendment to each Bidder. The NHA will not, during the Pre-Bid Conference, modify in any material respect any provision or term of this RFP unless such modification is made as a written amendment hereto prepared by the NHA and disseminated to all Bidders.

E.7 Confidentiality

After the Bid Opening, information relating to the examination, clarification, evaluation and comparison of Bids and recommendations concerning the award of a Concession shall not be disclosed to Bidders, or other persons not officially concerned with such process, until the award of the Concession is announced.

Any effort by a Bidder to influence the NHA in the process of examination, clarification, comparison and evaluation of Bids, or decisions concerning award of a Concession is contrary to the laws of Pakistan, shall result in the rejection of that Bidder's Bid(s) and may lead to action under law.

E.8 Negotiations

Subsequent to the detailed evaluation of the Bids and announcement of the successful Bidder as set out in Section D.6 above, the NHA shall issue a revocable Letter of Intent ("LOI") to such Bidder and carry out negotiations for the purposes of finalizing the detailed terms and conditions of the Concession Agreement.

As a part of this negotiation process the NHA may, if it deems appropriate, require the Bidder to submit one or more revised Bids in accordance with revised requirements put forward by the NHA. At this stage the NHA will issue a Letter of Support ("LOS") to the successful Bidder stipulating the meeting of certain requirements within a specified time.

Upon finalization of the negotiations, NHA shall issue Bid Acceptance Letter to the successful Bidder. Thereafter, the Concessionaire through a Special Purpose Vehicle ("SPV"), will be required to enter into a Concession Agreement with the NHA and renew the Bid Security (if required by the NHA). The successful Bidder will be required to achieve the financial close within a period of one hundred and eighty (180) (excluding allowable extensions under the terms of the Concession Agreement) days from Effective Date of Concession Agreement.
Failure to fulfil any of the above requirements as contained in the LOI or LOS within the time specified, as the case may be, may, result in the forfeiture of the Bidder’s Bid Security. Whether Bid Security is forfeited or not NHA may, at its discretion, withdraw the LOI or LOS, as the case may be, either invite the Bidder scoring next highest to the successful Bidder in the evaluation carried out by the NHA to negotiate, or terminate the Bidding Process without accepting any Proposal.

In the event of the successful Bidder forfeiting its Bid Security the NHA may, at its discretion, either invite the Bidder scoring next highest to the successful Bidder in the evaluation carried out by the NHA to negotiate, or terminate the Bidding Process.

**E.9 NHA Right to Annul**

NHA reserves the right to annul the process at stage, at its sole discretion, prior to signing of the Concession Agreement and can invite the bids afresh.

* * * * * * * * * *
Appendices
Appendix – 1
Project Description, Scope of Work, Design Criteria
/Standard and Preliminary Design Drawings
SCOPE OF WORK

FOR

HYDERABAD- SUKKUR MOTORWAY
(299.27Km Approx)
SCOPE OF WORK

1. GENERAL

The Government of Pakistan envisages the transformation of the country's economy through the construction of the China Pakistan Economic Corridor (CPEC). The Karachi-Lahore Motorway, which is part of this Corridor, is divided into following three (3) sections:-

- Hyderabad - Sukkur Section-I (299.27 Km)
- Sukkur - Multan Section-II (392 Km)
- Abdul Hakeem - Lahore Section-III (229 Km)

This document pertains to Hyderabad-Sukkur Section-I (299.27 Km).

The Feasibility Study for the project was carried out by M/s China State Construction Engineering Corp. Ltd. (CSEC).

The Outline Design for this section has been prepared by M/s Associated Consulting Engineers-ACE (pvt) Ltd in association with M/s ACC Consultants Pvt. Ltd. M/s Assign Engineering Consult International (pvt) LTD.

2. SCOPE OF WORK

The Project shall be fenced facility covering maximum possible width to secure the future extension of the roadway. It envisages construction of 299.27Km long 6-lane motorway between Hyderabad and Sukkur including all earthworks, pavement works, structural works including bridges, interchanges, culverts, cattle walk and etc., drainage & erosion protection works, ancillary works, electromechanical works and landscaping/greening works as described below.

The location map of the project is attached at Annex 2. Typical Cross Section of the Motorway is given in Fig-1 below. Thicknesses given Cross Section are provisional.
The success of the project is dominantly dependent upon the perception of the volume of different components/elements of work spread linearly along about 299.27 kilometre. Contractor’s proposed Methodology of performing the various component/element of work and the implementation of the Methodology is crucial to the success of the Contract, as such the proposed Methodology must be pragmatic.
Summary of Project components/elements but not limited to*, are listed below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Elements</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Earthwork, Pavement And Their Related Works</td>
<td>As required</td>
</tr>
<tr>
<td>2</td>
<td>Interchanges Including Main Line Bridges</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Short Bridges on Main Line</td>
<td>35</td>
</tr>
<tr>
<td>4</td>
<td>Long Bridges on Main Line</td>
<td>13</td>
</tr>
<tr>
<td>5</td>
<td>Long Bridge on Indus River</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Flyover Bridges For Crossing Roads</td>
<td>23</td>
</tr>
<tr>
<td>7</td>
<td>Bridge Over Railway Track on Main Line</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>R.C.C Pipe Culverts 1.5m Dia.</td>
<td>808</td>
</tr>
<tr>
<td>9</td>
<td>Box Culverts - 3.0m x 2.0m (Single Cell)</td>
<td>23</td>
</tr>
<tr>
<td>10</td>
<td>Box Culverts - 4.0m x 3.0m (Single Cell)</td>
<td>8</td>
</tr>
<tr>
<td>11</td>
<td>Multiple Cell Culverts</td>
<td>15</td>
</tr>
<tr>
<td>12</td>
<td>Cattle Creep</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>Subways - 4.0m x 4.5m</td>
<td>252</td>
</tr>
<tr>
<td>14</td>
<td>UnderPass (Different Sizes)</td>
<td>69</td>
</tr>
<tr>
<td>15</td>
<td>Main Line Toll Plaza</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>Slip Road / Ramp Toll Plaza</td>
<td>30</td>
</tr>
<tr>
<td>17</td>
<td>Service Areas</td>
<td>10</td>
</tr>
<tr>
<td>18</td>
<td>Parking Rest Areas (Typical Plan is at Annex 2)</td>
<td>14</td>
</tr>
<tr>
<td>19</td>
<td>Roadside Facilities</td>
<td>As required</td>
</tr>
<tr>
<td>20</td>
<td>ITS Including Surveillance, Monitoring, Electric Tolling, Weigh Bridge And Communication</td>
<td>As required</td>
</tr>
</tbody>
</table>

*Above inventory is based on outline design. Bidder is requested to carry out the detailed survey and confirm the actual requirement, which may exceed the number and dimensions of above inventory list.* In addition to above, copies of outline design drawings prepared by M/s Associated Consulting Engineers-ACE(pvt)Ltd in association with M/s ACC Consultants Pte.Ltd. M/s Assign Engineering Consult International (pvt)LTD are also attached for the only purpose of bidder's reference in order to supplement the above inventory detail. These drawings are showing the tentative chainage of aforementioned inventory.

### 3. SURVEY, INVESTIGATION AND DETAILED ENGINEERING DESIGN

This section describes the limits of design parameters and criteria that the Contractor is required to adhere to for the purpose of carrying out the Detailed Engineering Design.

#### 3.1 Scope of the Field Survey, Investigation and Detailed Design

The Contractor shall carry out *inter alia* the following activities in order to prepare a meaningful design:
- Topographic Survey
- Traffic Studies
- Soil Investigations (for pavement & structural design)
- Survey and testing of construction material for embankment, pavement, culverts and structures to identify the acceptable source.
- Hydrological/Hydraulic Studies.
- Pavement Design
- Geometric Design
- Structural Design for Interchanges, Bridges, Underpasses, Cattle Creeps, Culverts etc.
- Intelligent Transportation System (ITS) – Design
- Design of Service Area and Rest Area/Parking with necessary components
- Road Safety and Road Furniture Design
- Construction Schedule (including Resource Allocation with respect to Key Personnel, Material, Equipment and Machinery).
- Design Report
- Construction Equipment & Machinery Report
- Construction Drawings
- Computation of Quantities
- Utilities Folder
- Horticulture and Landscaping

These activities are described briefly in the following section.

3.2 Field Survey, Investigation and Detailed Design Activities

3.2.1 Topographic Survey

The Contractor will carry out detailed topographic survey so as to provide all the necessary data and information required for undertaking the detailed engineering design. It should be carried out at horizontal scale of 1:1000 and vertical scale of 1:100 within a corridor of 200m along the centre-line of the motorway. It shall be linked with Survey of Pakistan (SOP) monuments for MSL elevations.

For streams and rivers, survey shall extend to the following minimum distances
on either side of the centreline:
- Major rivers exceeding 10 m width 250 m
- Rivers/streams between 5-10 m width 150 m
- Water course less than 5 m 50 m

For interchanges/intersections, survey widths shall be as per the proposed design. It shall be on a scale of 1:500.

3.2.2 Traffic Survey, Analysis and traffic network modelling

The Contractor shall collect relevant data from concerned agencies and will carry out minimum 48 hours traffic volumes counts, O&D Survey, journey time travel survey, tyre pressure and axle load survey etc. on existing roads crossing the alignment to get an estimate of current traffic volumes. Generated / diverted traffic volumes shall be worked out. Origin-Destination Surveys shall be carried out as and where required. Weekly and monthly correction factors will be worked out to arrive at Annual Average Daily Traffic (AADT). Growth factors will be worked out based on which the traffic will be forecasted for 10 & 20 years.

Network modelling shall also be carried out by the Concessionaire as it is important study to avoid future congestion and bottlenecks in a system.

3.2.3 Soil Investigation

The Contractor shall carry out 1m deep test pits at every change of strata but not limited to a maximum of 2km spanning (staggered) along the centre line of the motorway and shall perform laboratory testing to arrive at the classification of the soil.

At every bridge site, minimum one bore hole (30 m deep in dry) shall be carried out in additional to the shallow pits of 2.5 m depth to arrive at the bearing capacity of the soil and to determine the hard strata where the load is to be transferred. All necessary tests shall be carried out to ascertain the safe Bearing Capacity and associated parameters for subbase design.

The Contractor shall also carry out the survey and testing of construction materials for embankment fill as well as for pavement and concrete structures. It shall cover CBR, Atterberg, Limits, moisture content, gradation, classification, soundness of aggregate etc.
3.2.4 Survey and testing of construction material

Survey and testing of construction materials for embankment, pavement, culverts and structures shall be carried out by the Contractor to identify the acceptable source(s).
3.2.5 Hydrological Studies

Wherever streams are encountered, following hydrology information shall be studied. The design return period shall be 100 years. Complete hydrology report shall be prepared covering the following aspects:

- Waterway
- Location & extent of the catchments area
- Max. peak flood discharge
- High flood levels
- Scour estimates for 100 year and 500 year
- Type of bed material
- Max. velocity
- Clearance
- Structure Profile
- Protection Works, Guide banks, Spurs and bank protection
- Using the latest software the sizes of the structures will be worked out.

3.2.6 Embankment Design

In areas of high water table, filter cut off shall be provided to protect the pavement structure. This should include provision of day lighting drainage gallery at bottom of pavement over sub grade top. Surface drainage should also be designed properly with defined disposal points with special consideration in the built-up area. The design CBR for the embankment shall not be based on minimum NHA Specifications if potentially high strength material is available within easy lead of the project vicinity.

3.2.7 Pavement Design

Pavement design shall be done as per AASHTO Guideline for Pavement Design 2004 and confirm the Design with mechanistic design methodology. The pavement design will be based on existing traffic keeping overload factors in view. Design life 10 years and overlay for another 10 years shall be proposed.

3.2.8 Geometric Design
Geometric Design shall be done as per latest AASHTO Interim Guideline and using the latest computer software programme and as per the design criteria mentioned above. In no case design limitations should be exploited.

3.2.9 Structural Design

This shall comprise structural design for interchanges, bridges, underpass, cattle creep, culverts and etc. falling along the alignment.

a) General
   i. Bridge shall be designed for full carriageway width with full shoulders as per Motorway in each direction.

   ii. Culverts shall be designed for full formation width. For Culverts having skew angle \( > 135^\circ \) or skew angle \( < 45^\circ \) with respect to Motorway Axis shall preferably Box Culverts.

b) Loading
   AASHTO (LRFD) Bridge Design Specifications shall be used for bridge design. For Live Loads, in addition to AASHTO (LRFD) Live loads, (West) Pakistan Highway Code (1967) Loading shall be adopted with calibration factor of 1.35. Additionally the bridge deck slab shall also be checked in Punching Shear for a wheel load of 21,000 pounds (95kN).

c) Seismic Design
   AASHTO analysis and design with latest seismic zoning Map for Pakistan published by United States Department of Geological Survey shall be followed.

d) Structural Analysis
   Structural analysis shall preferably be performed using latest software. All input files (electronic) shall be provided in the Design Report.

e) River Training Works
   Guide Banks, spurs and protection works will be designed for high flood discharge and flow pattern determined by design calculations and hydraulic model study. Detail Drawing of River training works will form part of Design Report.

3.2.10 Design Standards
The design prepared by the Contractor shall comply with the following design standards:

1) For Geometric and Pavement Design
   a) AASHTO - American Association of State Highway and Transportation Officials
   b) British Road Note 31 (latest edition) for pavement design.

2) For Material and Testing
   a) ASTM - American Society for Testing and Materials
   b) AASHTO - American Association of State Highway and Transportation Officials.

3) For Structures
   a) AASHTO - American Association of State Highway and Transportation Officials.
   b) ACI - American Concrete Institute

4) Carriageway Standards
   The carriageway cross-section for the proposed Motorway is:
   • Carriageway 3-lanes @ 3.65 m wide lane each direction
   • Concrete curbed Shoulder 3 m useable TST outer and 1 m inner paved
   • Service road where required 3.65 m with 1.5 m shoulders either side TST
   • All the lay-by, acceleration and deceleration lanes shall be pigmented with colored aggregates and chrome base pigment.
   • Anti-glare shield at required locations on median barrier. The screen shall be flexible PVC. All bridges, interchanges, curves etc.
   • Controlled drainage along curbed shoulders with chutes and water inlets in inner shoulders at super-elevated sections.
   • Acceleration & Deceleration lanes as per AASHTO.
   • Road way furniture complete in all respect; whatsoever, Pavement marking shall be Thermoplastic reflective paint for lane dividers, shoulder line, chevron, acceleration and deceleration dividers.
- Cat-eyes white on carriageway lines, green on bridges yellow on shoulders and red on dead ends shall be fixed.
- Reflective tape beacons/reflectors shall be fixed on new-jersey barrier top.
- Metallic beam guardrail shall be installed where required.
- Embankment side slopes shall be designed with side slope protection as required having minimum slope for embankment as 2H:1V.

5) **Road user Facilitation Requirements**

For the road user facilitation following facilities; but not limited to shall be provided in the design and shall be constructed as part of the Motorway Contract.

- Provision of breakdown and accident response system
- Provision of vehicle fitness checking system on applicable international standards;
- Provision of solar fog lighting system for vehicular guidance in identified area of fog
- Emergency call service along the Motorway
- Provision of UPS/Generator (2 sets, one in use and other in backup) for ITS control center as well as the Toll plazas and service areas (in-case service area is part of the contract).
- State of the art and fully automated 24/7 (Electronic Toll Collection system) Toll Plazas shall be established with multimodal and express lanes. The main line toll plaza shall have 24-bays (12 for each direction). It shall be supported by, inter alia, an administration building, un-interrupted power supply (UPS, Solar and Generator (2 sets) against appropriate load calculation and power factor . Installation of state of the art electronic Toll, overloading fine and police fine collection system(E-system) & Automatic Vehicle Classification(AVC), Automatic Vehicle Identification, Automatic Number Plate Recognition with necessary
hardware, software and back-up support. The E-system shall have automatic vehicle Classification (AVC), with multimodal transaction facility i.e. cash, contact-less smart card, E-tag, Fleet Cards etc. The Toll collection system shall operate through a central clearing House (CCH) on the Motorway which shall be linked to an operations centre at NHA Headquarters and project office, NHA.

- The automated vehicle detection system using video technology; Automatic License Plate Reader (ALPR) using high-resolution high-speed cameras and image recognition software that can detected and read the license plate passing over the facility and supplemented by buried loop detection and other latest technology shall be employed at every bay.

- Weigh-in-motion (WIM) station shall be established at every interchange. Over weight vehicles shall be guided out without interfering the main traffic. The WIM must conform to ASTM E 13180-02. The system should be Quartz Sensor based with commercial standard; coupled with peripheral equipment handling following info:
  
  o Off-scale sensor installed on either side to align the vehicle path for correct data recording,
  
  o Over-height detector; a pole-mounted receiver/transmitter on the instrumentation side of the travel lane and a pole-mounted reflector on the opposite side of lane. Infrared beam is transmitted across the travel lane and reflected back across to the receiver. When a passing vehicle breaks the beam, the information is displayed on console,
  
  o Traffic Control Systems: Facilitates control of vehicles within the facility
  
  o Vehicle Identification: Using RF tags on the screen, Vehicle ID can be recorded,
  
  o Automatic License Plate Reader: The Automatic License Plate Reader (ALPR) using high-resolution high-speed cameras and image recognition software can detected and read the license plate passing over the facility.
• Overview Camera: Cameras to record the overall activity of the facility day & night,

• Remote Displays: Remote displays to be used for driver information. The display character should not be less than 5 inches.

• Loop Detectors: Inductive loop detectors shall be installed in travel lane to sense the presence of a vehicle.

• All activities to be controlled by software to record and transmit data.

• Lighting of the Motorway Interchange, Major Bridges and Critical areas i.e. Toll Plazas, weigh stations and vicinity of interchanges 5 km either side and 10 Km at terminal points.

  • LEDs lamps shall be used throughout the Motorway Project lighting as these can significantly reduce the electricity energy savings - up to 85%, provide good colour rendering, making it easier for users to orientate themselves, these are long life - upto 100,000 hours resulting in less maintenance, uniform, high quality white light with good opportunities to dim light when not needed.

  • Latest technology LED Road luminaire "Speedstar" specification or equivalent shall be employed on all project components (out door).

  • BGP323 or equivalent large version, Integral LED-Module, Green Line (GRN) 169W or equivalent, Luminous flux >17,000 lm, luminaire efficacy > 100 lm/W, Maintenance of lumen > than 90,000 hours

  • Must have dimming options; 6 to 8 hours setup, RF Antenna, Mains dimming, NEMA Socket, Photocell provision and 20 m cable.

  • The luminaire shall have a full die cast housing to provide rigidity and strength and heat dissipation. It should be IP66 compliance (ingress protection).

  • Working temperature -5°C to 50°C
• Uniform white light dissipation and not black spots on the carriageway.
• LED lamps to uniformly illuminate all traffic sign plates.

6. **Interchanges:**
Minimum fifteen (15) interchanges are to be provided to support populations, town's industrial zones and other isolated pockets enabling them to commute on the Motorways after fencing. Although at some locations volume of traffic does not justify an interchange, the isolation of roadside development and population warrants connectivity, as there is no other route available for transport. Interchanges with close systems to have entry and exit four (4) lane toll plazas are to be provided. The locations of the new interchanges are shown in outline drawings at Appendix-2.
• The Concessionaire shall also facilitate any futuristic development requirements of any additional Interchanges.

7. **Horticulture**
The Alignment of the Motorway runs on the most fertile land of the country. It's a prime agriculture land. Therefore a well-organized sustainable horticulture along the motorway as well as at interchanges, layby and service areas are required. The embankment slopes shall be green The ROW should be cleared from all earlier plantation, area graded and green grass planted. The new plantation shall be in accordance with requirement as stated in the following paragraphs.

More obvious benefits of tree plantation include but not limited to:-

• Noise reduction
• Control of airborne pollutants
• Improvements to energy efficiency
• Benefits for wildlife
• Aesthetically pleasing and reduces driving stresses

Three rows of trees in step height shall be planted adjacent to the ROW fence. It shall be ensured that the soil is rich enough to support the tree from plantation to maturity. If required the support for early stages shall
be provided. To see the soil richness following tests shall be carried out:

- **pH** the soil pH should be between 5.5 - 7.8
- **Organic matter** which should be greater than 5%
- **Nitrogen (N)** which should be greater 0.2% 
- **Phosphorous** which should be greater than 45 mg/kg
- **Potassium** which should be greater than 240 mg/kg
- **Magnesium** which should be greater than 80 mg/kg

The tests must be undertaken by a recognized testing laboratory and presented to the client prior to importing topsoil to the site. Any deficiency shall be corrected by required additives.

If topsoil is not rich, the deficiency shall be removed by adding required fertilizers. More involved tests for phytotoxic elements (e.g. copper, nickel, zinc) and zootoxic elements (e.g. arsenic, lead, mercury) need only be undertaken if there is any doubt regarding the origin of the topsoil.

The volume of soil required to support a mature tree depends on type and ultimate size of the tree, water availability and ground water storage, particularly during drier seasons. While formula are available to calculate the volume of soil required, 20 cu m appears to be required to maintain reasonable growth in a paved situation.

Where possible a minimum soil volume of 5 cu m should be provided. The shape of the soil area need not be regular and can be altered to suite site conditions.

Volume cannot be achieved by providing extra depth. The maximum useful depth of topsoil for tree planting is 900 mm. It is acceptable for more than one tree to utilize the same soil. For example, a tree pit 900 mm deep x 3m wide x 8 m long containing 21 cu. m. of soil could support two trees planted at 6 m centers. A similar pit 16 m long containing 43 cu. m. would support three trees, and so on.

The following issues must consideration when making a choice of trees for planting adjacent to the Motorway:

Ultimate mature height:
I. Small to approximately 10m
II. Medium to approximately 15m
III. Large greater than 15m

Flowerbeds 10 m x 10 m staggered interval shall be developed with flowers planted. At required interval, water bores with complete setup in small-enclosed unit shall be constructed to water the plantation.

3.2.11 Design Criteria

a. For Highways
   • A policy on the Geometric Design of Highways & Streets 2012 or latest shall be used to derive the design standards for the Geometric design.
   • The Design vehicle shall be Truck trailer 6-Axle.
   • The Motorway facility shall be Rural Freeway.

Some of the important design parameters; but not limited to be stated as below:-

<table>
<thead>
<tr>
<th>S#</th>
<th>Design Elements</th>
<th>Units</th>
<th>Design Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plain Terrain</td>
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<tr>
<td>1</td>
<td>DESIGN SPEED</td>
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<tr>
<td>2</td>
<td>ROAD CROSS-SECTION</td>
<td>m</td>
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</tr>
<tr>
<td></td>
<td>i) Lane Width</td>
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<td></td>
<td>ii) Number of Lanes</td>
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<td></td>
<td>iii) Paved Shoulders</td>
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<tr>
<td></td>
<td>a) Outer</td>
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<td>b) Inner</td>
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<td>CARRIAGEWAY CROSS-SLOPE</td>
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<td></td>
<td>i) Pavement</td>
<td>%</td>
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<td>ii) Shoulders</td>
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<td>a) Outer</td>
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<td>b) Inner</td>
<td>%</td>
<td>2</td>
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<tr>
<td>4</td>
<td>HORIZONTAL ALIGNMENT</td>
<td>m</td>
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<tr>
<td></td>
<td>i) Minimum Radius</td>
<td>m</td>
<td>90</td>
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<td></td>
<td>ii) Maximum Superelevation</td>
<td>%</td>
<td>6</td>
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<td></td>
<td>iii) Minimum Radius with no</td>
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<td>Superelevation</td>
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<td>iv) Radius above which no Spiral</td>
<td>m</td>
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<td>Curve is required</td>
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<td>v) Desirable minimum spiral</td>
<td>m</td>
<td>70 for R=1000</td>
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<td></td>
<td>length</td>
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<td>70 for R=1000</td>
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<tr>
<td>S/No</td>
<td>Design Elements</td>
<td>Unit</td>
<td>Main Carriageway</td>
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<td>4</td>
<td>vi) Minimum Turning Radius</td>
<td>m</td>
<td>15</td>
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<td></td>
<td>vii) Minimum Stopping Site Distance</td>
<td>m</td>
<td>250</td>
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<td></td>
<td>viii) Acceleration Length Entrance</td>
<td>m</td>
<td>410</td>
</tr>
<tr>
<td></td>
<td>ix) Deacceleration Length to 50 kph</td>
<td>m</td>
<td>155</td>
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<tr>
<td>5</td>
<td>VERTICAL ALIGNMENT</td>
<td></td>
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<td></td>
<td>i) Maximum Gradient</td>
<td>%</td>
<td>1.5</td>
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<td></td>
<td>ii) Minimum Vertical Gradient</td>
<td>%</td>
<td>0.3%</td>
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<td></td>
<td>iii) Absolute Min K Value</td>
<td></td>
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<tr>
<td></td>
<td>a) For Sag Curves</td>
<td>k/%A</td>
<td>63</td>
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<td></td>
<td>b) For Crest Curves</td>
<td>k/%A</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>iv) Ramping Grade</td>
<td>%</td>
<td>0.38%</td>
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<td>6</td>
<td>MINIMUM VERTICAL CLEARANCE</td>
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<tr>
<td></td>
<td>i) Over Roadway</td>
<td>m</td>
<td>5.3*</td>
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<td></td>
<td>ii) Over Railway Track/Rail</td>
<td>m</td>
<td>6.5*</td>
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<td></td>
<td>iii) Flyover Bridge</td>
<td>m</td>
<td>5.5*</td>
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<td></td>
<td>iv) Subway Clearance</td>
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<td>v) Underpass/Standard Road Underpass</td>
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<td>5.3*</td>
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<td></td>
<td>vi) Cattle Creep/Pedestrian Clearance</td>
<td>m</td>
<td>2.8*</td>
</tr>
</tbody>
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* The clearance may be increased by 0.3 meter to take care of further asphaltic overlay.

b. For Structures
The design criteria to be adopted by the Contractor for structural design are given below:

Design Codes
For analysis and design of structures following codes, standards and loads will be adopted.

i. AASHTO (Latest Edition):
For analysis and design for all loads and load combinations with calibration factor of 1.35.

ii. Pakistan Highway Code of practice for Bridges 1967:
For vehicular loads, their spacing.

iii. UBC/IBC 2003:
For seismic zoning in addition to the revised seismic risk map of Pakistan.

iv. ASTM:
For material specifications & testing.

v. **ACI:**

For analysis, design and detailing, only in case such details are not specified in **AASHTO**.

vi. **Vehicles live load:**

West Pakistan Code of Practice for Highway Bridges 1967 (WPCHB) specifies more severe loads to be considered in combination with other loads such as dead load etc.

vii. **Class AA loading:**

The 70-Ton tracked military vehicle to be placed in accordance with WPCHB to give maximum stresses.

viii. **Class A loading:**

The 54.5 Ton train of trailers (with different axle loads) to be placed in accordance with WPCHB to give maximum stresses.

ix. **Check Deck Slab for Punching Shear:**

Additionally the bridge deck slab shall be checked in Punching Shear for a Wheel Load of 21,000 Pounds [95 KN] with calibration factor of $1.35$ on $0.25 \times 0.5m^2$ tire contact area.

**Other Loads**

x. **Side walk live load:**

A load of $5 \text{ KN/m}^2$ (100 psf) of walkway between side barrier/railing and shoulder, to produce maximum stresses in the member under consideration.

xi. **Horizontal live load on railing/posts of side barrier:**

These depend upon the configuration of the railing/posts/barrier system. The position and the magnitude of the horizontal loads are taken according to Article 2.7 of AASHTO.

xii. **Impact load**

Impact loading on the bridge superstructure is taken in accordance with WPCHB.

xiii. **Wind loads**

Wind loads are taken in accordance with the provision of WPCHB.

xiv. **Seismic design**
International Building Code (IBC-2003) and Earthquake forces are calculated according to article 3.21 of AASHTO, keeping in view the recent earthquake of October 8, 2005, the earthquake zones will be considered accordingly.

**Structural Analysis:**
Structural Analysis shall preferably be performed using Staad Pro or Staad III. All input files shall be provided in the design report.

c. **Roadside Design Manual (AASHTO Standard)**
The Bidder/Contractor shall provide Safety Treatment as per Roadside Manual (AASHTO Standard) within ROW to minimize serious injuries when a motorist goes astray.

d. **Highway Safety Manual:**
The document provides guidance to analyze the Highway safety standard by determining the crash predictive model for free way and ramps. Safety performance functions and calibration factors can be determined. Analysis of Detailed design using Highway Safety Manual shall be done and submitted to Client.

e. **Highway Safety Audit (HSA):**
It is required to undertake the HSA of the Project under a qualified team as per best international practices. The Audit shall be carried out at four stages specified below: Formal proceeding shall be recorded and submitted to the Client.

- **Stage-I**: Completion of preliminary design
- **Stage-II**: Completion of Detailed Design
- **Stage-III**: Completion of Construction
- **Stage-IV**: 4, 12 Month performance report

f. **Design of Structures:**
For design of bridges and flyovers, AASHTO Guide Specifications for LRFD Seismic Bridge Design, 2nd Edition, and latest revisions shall be used. A load factor of 1.35 or 1.65 shall be considered for the loading as specified for AASHTO or West Pakistan Code for Highway & Bridges.
respectively, whichever is critical. Additionally the bridge deck slab shall be checked in Punching Shear for a Wheel Load of 21,000 Pounds [95 KN] on 0.25 x 0.5m² tire contact area. UBC/IBC 2003 in addition to the revised seismic risk map of Pakistan shall be used for seismic design for all relevant structures.

g. Material Specification & Testing:
ASTM, AASHTO & NHA General Specifications shall be referred.

h. Intelligent Transport System (ITS):
State of the Art Yell integrated ITS system shall be installed on the Motorway on its entire route. Providing ITS on long haul motorways is challenging to manage because they’re geographically dispersed and has to cover hundreds of kilometres of Motorway. Not only do they serve as a critical information backbone, they must have enough bandwidth to connect thousands of devices and support hundreds of real-time video feeds, along with data gathered from roadway sensors. If network goes down, the impact is significant to motorway operators, reducing their ability to effectively manage and respond to an event. Therefore high reliability and operation in extreme environments is a must. A solution therefore has to be installed to provide optic fiber cable coupled with wide area networks of reliable quality and high bandwidth connectivity in challenging environments. It should exceed environmental conditions as defined by the NEMA TS2 industry standard (ranging from -10°C and +74°C).

Long-haul fiber optics that shall be laid down along a utility duct; well-constructed as per international standards. It shall provide high-bandwidth connectivity for multiservice backbone with 10 GigE uplinks, advanced layer 3 and MPLS routing services along with wireless RUGGEDCOM WIN and SCALANCE-W will complete the link by connecting locations that are too difficult or expensive to reach with fiber optics. The system should seamlessly connect message boards (VMS), CCTV (HI definition), and roadway sensors, using high capacity, long haul fiber optics, and then deliver all that information to a
centralized traffic management control center (part in this Contract). All these things, but not limited to shall be part of the Contract. High speed Wi-Fi Internet for road-users shall be made available at speed not less than 4G technologies.

Given the wide range of intelligent transportation systems, the under stated list is not inclusive of all possible ITS applications, it includes the most prominent ones, which are the focus of this document. ITS applications are grouped within three primary categories:

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<td></td>
<td>Automatic Incident Detection (AID). The AID enabled cameras shall be installed not more than 5 km interval (as per efficient working)</td>
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| 3. ITS Enabled Vehicle Pricing System  | Electronic Toll Pricing System |

Some of the Technologies that support the ITS is described hereunder, that will be investigated and shall be used for integrated ITS systems:

Global Positioning System (GPS) Embedded GPS receivers in vehicles on board units (OBUs, a common term for telematics devices) receive signals from several different satellites to calculate the device’s (and thus the vehicle’s) position. This requires line of sight to satellites, since the Motorway environment is in open are use of such technology shall not be a problem. Location can usually be determined to within ten meters. GPS is the core technology behind many in-vehicle navigation and route guidance systems. Only OBU’s equipped vehicles shall get facilitation with satellite-based GPS devices to record miles traveled by automobiles
and get real-time information while travelling on the Motorway (like location of services and traveled distance and time of journey etc.).

Dedicated-Short Range Communications (DSRC) DSRC is a short to medium-range wireless communication channel, operating in the 5.8 or 5.9GHz wireless spectrum, specifically designed for automotive uses. Critically, DSRC enables tow-way wireless communications between the vehicle (through embedded tags or sensors) and roadside equipment (RSE). DSRC is a key enabling technology for may intelligent transportation systems, including vehicle-to-infrastructure integration, vehicle-to-vehicle communication, adaptive traffic signal timing, electronic toll collection, congestion charging, electronic road pricing, information provision, etc. DSRC is a subset of radio frequency identification (RFID) technology. The technology for ITS applications works on the 5.9 or 5.8 GHz band shall be adopted on this project. The supplier at cost, shall provide the supporting chips to the road users.

Wireless Networks. Similar to technology commonly used for wireless Internet access, wireless networks allow rapid communication between vehicles and the roadside, but have a range of only a few hundred meters. However, this range can be extended by each successive vehicle or roadside node passing information onto the next vehicle or node. Some country such as South Korea is increasingly using WiBro, based on WiMAX technology, as the wireless communications infrastructure to transmit traffic and public transit information throughout its transportation network.

Mobile Telephony. ITS applications can transmit information over standard third or fourth generation (3G or 4G) mobile telephone networks. Advantages of mobile networks include wide availability in towns and along major roads. However, additional network capacity may be required if vehicles are fitted with this technology, and network operators might need to cover these costs. Mobile telephony may not be suitable for some safety-critical ITS applications since it may be too slow.
Radio wave or Infrared Beacons. Japan's Vehicle Information Communication System (VICS) uses radio wave beacons on expressways and infrared beacons on trunk and arterial roadways to communicate real-time traffic information. VICS uses 5.8GHz DSRC wireless technology.

Roadside Camera Recognition. The cameras use Automatic License Plate Recognition (ALPR), based on Optical Character Recognition (OCR) technology, to identify vehicle license plates; this information is passed digitally to back-office servers, which assess and post charges to drivers for their use of roadways.

Probe Vehicles or Devices. Several countries deploy so-called “probe vehicles” (often taxis or government-owned vehicles equipped with DSRC or other wireless technology) that report their speed and location to a central traffic operations management center, where probe data is aggregated to generate an area-wide picture of traffic flow and to identify congested locations. Extensive research has also been performed into using mobile phones that drivers often carry as a mechanism to generate real-time traffic information, using the GPS-derived location of the phone as it moves along with the vehicle. As a related example, in Beijing, more than 10,000 taxis and commercial vehicles have been outfitted with GPS chips that send travel speed information to a satellite, which then sends the information down to the Beijing Transportation Information Center, which then translates the data into average travel speeds on every road in the city.

3.2.12 Submittals to Employer and QAI
At the end of the detailed design activity, the Contractor shall make the following minimum submissions to the Employer, for his perusal and approval:-

(i) Detailed Design Report

The Contractor shall prepare a Detailed Design Report covering the following design aspects:-

a) Topographic Survey
b) Traffic Studies
c) Pavement Design
d) Hydrological/Hydraulic Studies
e) Soil and Material Investigations
f) Construction Material Survey Report and identification of source
   of material
g) Geometric Design
h) Structural Design
i) Road Safety Design
j) Environmental Management Plan
k) Intelligent Transportation System (ITS)
l) Service Areas, Toll Plazas and etc.

(ii) Construction Drawings in the prescribed scale

The Contractor shall prepare following (minimum) construction
drawings in a clear, concise and uniform manner and present to the QAI
and the Employer both in hard form (A2 sheets) and in digital format in
AutoCad.

- General Drawings showing typical details
- Typical cross-sections for roads
- Plan & Profile Drawings on A3 sheets
- Structural Details and Plans for Interchanges, Bridges,
  Underpasses, Cattle-Creeps & Culverts
- Details of Drainage & Erosion Control Works
- Details of Ancillary Works including Road Safety Works
- Intelligent Transportation System (ITS)
- Service Areas, Toll Plazas and etc.
- Utilities Folder
Appendix – 2
Draft Concession Agreement

To be disseminated later.
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INVESTMENT POLICY 2013
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**ABBREVIATION**

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<th>Description</th>
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<tr>
<td>AEDB</td>
<td>Alternate Energy Development Board</td>
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<td>ARE</td>
<td>Alternate and Renewable Energy</td>
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<td>BCO</td>
<td>Banking Companies Ordinance</td>
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<td>Bilateral Investment Treaties</td>
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<td>BOA</td>
<td>Board of Approvals</td>
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<td>BOI</td>
<td>Board of Investment</td>
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<td>BVL</td>
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<td>CAF</td>
<td>Corporate Agriculture Farming</td>
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<td>ECC</td>
<td>Economic Coordination Committee</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>GoP</td>
<td>Government of Pakistan</td>
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<td>IA</td>
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<td>IPAs</td>
<td>Investment Promotion Agencies</td>
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<td>Intellectual Property Organization</td>
</tr>
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<td>IPRs</td>
<td>Intellectual Property Rights</td>
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<tr>
<td>MIGA</td>
<td>Multilateral Investment Guarantee Agency</td>
</tr>
<tr>
<td>PPD</td>
<td>Public Private Sector Dialogue</td>
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<tr>
<td>SBP</td>
<td>State Bank of Pakistan</td>
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<td>SECP</td>
<td>Securities and Exchange Commission of Pakistan</td>
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***
I. INTRODUCTION

A distinguishing feature of the era of globalization is cross-border flows of foreign direct investment (FDI) and creation of production networks by multinational companies. During last decades investment liberalization has been the strongest driver of growth, giving a significant boost to economies in developed and developing countries. The global integration of economies and related gains is compelling. Around the world countries are adopting liberalized policies to attract FDI.

1.1 Investment Liberalization in Pakistan

The first Investment Policy by Board of Investment (BOI) was given in 1997 which opened services, social, infrastructure and agriculture sectors for foreign and local investors. It was a major step forward for integration of Pakistan’s economy into international markets as prior to this policy; foreign investment was restricted to manufacturing sector only. The 1997 Policy laid a solid foundation for the gains in FDI inflows experienced over the subsequent decade.

1.2 Evolutionary Enhancement of 1997 Investment Policy

Investment Policy 2013 is a logical evolutionary enhancement of the 1997 Policy. The new document reinforces the components of the old Policy, consolidates existing policies promulgated by the related line ministries, and introduces further liberalized policy along with futuristic strategic programs to implement the policy.

The revision of Investment Policy has been done keeping in view the global investment trends, regional trends and experiences, Pakistan investment data/flows over time and present day economic challenges.

1.3 Goal of Investment Policy 2013

The goal of Investment Policy 2013 is to address and adjust economic priorities in the face of changing global scenario of economic slowdown coupled with domestic difficulties of power outages and continued pressure on economy due to war on terror. It is an endeavor to address the changed economic realities and to achieve the targets given in National Policy Document, Vision 2030.

The Policy will be instrumental to achieve progressive increase in net FDI inflows of US $ 2 billion in the first year then growing by about 25% in subsequent years taking it to US $ 2.5 billion in 2014, $ 2.75 in 2015, $ 3.25 in 2016 and $ 4 billion in 2017 and thereafter at least $5.5 billion per year.
Assuming average annual GDP growth of 5%, the FDI stock would account for 20% of GDP, which is close to the current global average.

The Policy has been designed to provide a comprehensive framework for creating a conducive business environment for the attraction of FDI. For implementation of the policy, FDI Strategy for Pakistan, 2013-2017, outlining a detailed plan for structuring the platforms has been dovetailed with it.

The Policy 2013 is supported by FDI Strategy for 5-year (2013-2017), outlining enhanced facilitation procedures and role of BOI as one-window-operation.

1.4 Guiding Principles

Following basic principles provide theme of the Policy

- a) Reducing the cost of doing business in Pakistan,
- b) Reducing the processes of doing business,
- c) Ease of doing business with creation of industrial clusters and Special Economic Zones,
- d) Linkages of trade, industrial and monetary policies for greater convergence.

1.4 (a) Reducing the cost of doing business in Pakistan

To facilitate market entry of Small and Medium Sized Enterprises (SMEs) steps have been taken to reduce the cost of doing business (money and time) SBP and SECP have removed equity caps on Banking and non-banking financial services.

BOI has under taken an incremental process aiming at to reduce cost of doing business. Investment opportunities and information vital to start business in Pakistan and online visa registration has been introduced.

1.4 (b) Reducing the processes of doing business (one-window operations)

BOI is moving towards one-window operations. The aim is to offer constructive policy parameters for removing unnecessary regulations (deregulation) and minimizing the cost to business by necessary regulations (streamlining). Creation of Special Economic Zones (SEZs) is a step towards this direction.
1.4 (c) Ease of doing businesses with creation of industrial clusters and Special Economic Zones (SEZs)

World over, SEZ has contributed towards national economies. The phenomenal economic development in the neighboring countries is motivating. Introduction of industrial clusterization with promulgation of SEZ Act 2012, BOI has endeavored to establish forward and backward linkages in the market with supply chain availability. Adequate business infrastructure coupled with BOI one window facilitation services will make doing business easy and more profitable.

1.4 (d) Linkages of trade, industrial and monetary policies for greater convergence

Linkages of macro and micro economic policies will bring all stakeholders: Line Ministries, Provincial Governments, Regulators and other relevant Departments in unison for greater convergence on important nation public policy agenda. This will enhance transparency, predictability and consistency in the system.

1.5 Creation of Special Economic Zones throughout the Country

The Guiding Principles necessitate the provision of setting up of SEZs throughout the country to meet global competitiveness effectively and efficiently. The law to establish SEZs has been promulgated which is the capstone of the Investment Policy 2013. The incentives and exemption granted for creation of these industrial clusters are beyond the political divide being protected by law and cannot be withdrawn. The SEZ will play a pivotal role in the socio-economic development of the country as has been witnessed in case of China, Malaysia, Thailand and in other courtiers. Pakistan though was the first country in the region in offering a liberal and market oriented investment regime, but lagged behind in creation of such cost effective and efficient industrial clusters.

Therefore, the challenge was primarily to redraw national policy and, do investment architecture in a manner that would create a more conducive environment for generation of economic opportunities and promotion of FDI in the country. BOI, after undertaking, a benchmarking study of the best practices in SEZs in regional countries developed a policy framework for SEZs in Pakistan.
1.6 Approach of the Investment Policy

The current policy document is designed to align Federal Policy for foreign Investment to further easing out all sectors for foreign and domestic investors through specific interventions for ease of doing business with reduced processes.

a) From comparative advantage to competitive advantage

Strategically located between the Middle East, East Asia, Central Asia, and South Asia, Pakistan has a great potential to become regional trade and investment hub with more connectivity through land, sea, and air routes.

The country has a large and growing domestic consumer market, which could become a powerful draw with enhanced buying power parity and can skilled and semi skilled work force. There is no dearth of abundance of natural resources. Vast tracks of agricultural land can make Pakistan the food basket of the region.

The Policy thereby has a forward looking and out-reach approach and thereby designed to keep “what an investor looks for” in a preferred investment location;

- Level of relative risk – including economic, political, currency, and natural disaster;
- Market access – including size of local market and access to international markets;
- Cost/availability/quality of inputs – including land, labor, raw materials, components, energy, and taxes;
- Connections to global transportation and communication networks – includes time, cost, reliability of sea, road, rail, and communications; and
- Openness of regulatory regime – includes approvals process, regulations, and rule of law.

The Policy seeks to remove obstacles and impediments for foreign and domestic investment while instituting supporting programs that can put Pakistan’s investment environment on a more level ground with its international competitors.

b) Intergovernmental and Interagency Context

The Investment Policy takes a horizontal approach to improving the underlying investment climate in Pakistan. Policies governing investment in all sectors are equally liberal and favorable towards investor and conditions in specific sectors are applicable to all investors, domestic and foreign. Investment and sectoral policies are in tandem and does not differentiate between the two. Policies for sector verticals promulgated by various related economic ministries are transparent. BOI
coordinates with all stake holding ministries so that investors get timely, accurate and quality information.

The New Growth Framework launched by the Planning Commission focuses on four areas that intersect closely with the Investment Policy:

- **Productivity** – Increased factor productivity is important for attracting foreign investors into Pakistan; conversely, the presence of foreign investors will play a large role in increasing productivity by introducing new technologies and management practices.
- **Better governance** – Improved public service delivery is required to attract and allow investors to succeed in Pakistan. Reducing interventions that distort markets will also create space for investors to enter and thrive as will the streamlining of regulations, laws, and enforcement.
- **Competitive markets** – Foreign companies, like all companies, should be able to enter and exit the market as freely as possible without overly burdensome regulation or distortive policies.
- **Innovation and entrepreneurship** – Foreign investors bring valuable experience and resources to spur innovation and entrepreneurship. Their presence in the market also creates competitive pressures that spur innovation from domestic firms.

The BOI is working closely with the Planning Commission, Provincial Governments and all other Ministries & Departments to ensure that there is a mutual feedback loop so that conditions are improved to attract foreign investment and investment is leveraged to achieve the national growth objectives.

The Investment Policy has been prepared in consultation with all relevant ministries and agencies at the federal and provincial levels. Input from the Private Sector was also taken to make document a comprehensive one.
II. LIBERAL INVESTMENT REGIME

A fundamental issue for foreign investors is their freedom to enter a market and conduct business without burdensome restrictions. Historically, since 1997, Pakistan has established and maintained an open investment regime, which serves as a strong advantage compared to regional competitors.

In order to increase its competitiveness as an investment destination, the Investment Policy 2013, maintains the open policies and continues to expand the opening and liberalization process to all sectors and generalizes the policies across all sectors to have uniformity and openness across the economy.

2.1 Free Entry for Foreign Investors:

2.1.1 All sectors and activities are open for foreign investment unless specifically prohibited or restricted for reasons of national security and public safety.

   a) Specified restricted industries include arms and ammunitions; high explosives; radioactive substances; securities, currency, and mint; and consumable alcohol.

2.1.2 There is no minimum requirement for the amount of foreign equity investment in any sector.

2.1.3 There is no upper limit on the share of foreign equity allowed, except in specific sectors including airline, banking, agriculture and media.

2.1.4 Foreign investors in any sector shall at any time repatriate profits, dividends, or any other funds in the currency of the country from which the investment was originated. As per clause 6 of the Foreign Private Investment (Promotion & Protection) Act 1976, and subject to procedural requirements set under the Foreign Exchange Manual 2002 of the State Bank of Pakistan.

2.2 Ease of Registration and Entry

2.2.1 Pakistan has an open-admission system that does not require pre-screening and approval for entrants. However, foreign companies must fulfil the conditions of corporate registration under the Companies Ordinance, 1984.

2.2.2 Foreign companies that are in compliance with the Companies Ordinance 1984, Competition Act 2010, and
the laws of Pakistan do not require any separate approvals for their investments, with the exception of certain banking, finance, and insurance sectors as regulated by the SECP and State Bank of Pakistan. For Acquiring or Merging with a company operating within Pakistan are required to apply to the Competition Commission of Pakistan and also follow the procedures under the Companies Ordinance 1984.

2.2.3 The BOI has instituted an online registration¹ procedure for foreign companies entering and operating in Pakistan. Registration serves as a notification to the Government of Pakistan of the presence of the investor and guarantees the investor to entitlements specified in the Investment Policy, but is not an approval mechanism. For rendering efficient services, BOI charges a nominal fee as well.

2.2.4 Requirements for approvals of branch, representative, or liaison offices of foreign companies shall continue to be permitted by BOI. The application process will take seven weeks after giving other relevant agencies opportunity for consultation. If comments from agencies are not received within the allocated period, the application will be considered approved on a “no objection” basis. Approvals shall be granted for a period of maximum five years and renewals/ extensions shall be granted after fulfilment of all requirements involved in the rules and BOI will charge the fee charges on rendering of the services.²

2.2.5 Permission for opening of branches of foreign banks will continue to be granted by the State Bank of Pakistan.

2.2.6 Foreign investors shall be entitled to sell shares, transfer ownership, and de-register under Companies Ordinance 1984 and Banking Companies Ordinance 1962.

2.2.7 Winding up of the companies takes place under Companies Ordinance 1984 and Banking Companies exit takes place under BCO 1962. SECP and SBP have further streamlined the process for filling of bankruptcy and liquidation.

2.3 Flexibility in Financial Procedures:

2.3.1 The BOI will work with the SBP, SECP and Ministry of Finance to open up and promote foreign investment in the insurance, banking and financial sectors.

¹ www.pakboi.gov
² ibid
2.3.2 SBP and SECP have relaxed equity caps for setting up of banks, life and non-life insurance business and for insurance brokerage companies to bring foreign and local investors at par.

2.3.3 Foreign investors shall have the right to exchange the local currency into any other freely convertible foreign currency, subject to Foreign Exchange Regulations of SBP.

2.3.4 There shall be no restrictions on the use of foreign private loans within three major loan categories as defined in SBP Foreign Exchange Manual 2002 or the debt-to-equity ratios used to finance the foreign investment projects. The use of the funds if received from foreign loans shall be extended to any purpose, not limited to imported plant and machinery.

2.3.5 Foreign Investors in all sectors shall be allowed to access domestic borrowing subject to prevailing rules/ regulations of SECP and SBP and observance to Debt-Equity ratio.

2.3.6 Venture capital and private equity funds are regulated by the Private Equity and Venture Capital Fund Regulations, 2008 promulgated by the SECP. Foreign funds and fund managers are allowed to invest under these regulations.

2.4 Flexibility in Land and Real Estate Procedures:

2.4.1 Foreign investors shall be entitled to lease land without limitation under the rules & regulations of the concerned authority.

2.4.2 There will be no limitation on the transfer of any land held by a foreign investor unless contractually specified in an agreement between the land holder and subject to the Federal or Provincial regulations.

2.4.3 Restrictions on foreign real estate developers have been removed and now they will be subject to the same rules and treatment as domestic real estate developers.

2.5 Agriculture Policy:

2.5.1 The foreign investor is allowed to hold 60% stake in agriculture projects.

2.5.2 For Corporate Agriculture Farming (CAF), foreign investor shall be allowed to hold 100% equity.
2.6 Pioneer Industry:

2.6.1 Industrial Units bringing in technology for the first time that is not available in Pakistan shall be declared pioneer industry\(^3\) avail incentives at par with special Economic Zones (SEZs).

2.7 Sector Specific Policies:

2.7.1 The Investment Policy seeks to uniformly improve the conditions for investment across all sectors. It is necessary and prudent to promote or restrict activities in specific industries. To this extent, BOI is working closely with the relevant line ministries in Sectors like Infrastructure-Communication, Manufacturing (Textile, Food Processing, Consumer Goods, and Engineering), Energy, Mining & Exploration, Construction & Real Estate, Automotive, and Agriculture-Livestock-Dairies-Fisheries.

2.8 Small & Medium Sized Enterprises (SMEs):

2.8.1 BOI shall promote SMEs and their projects with a view to attract investment. To overcome constraints of domestic SMEs on availability of capital fund and pursuing their rights, a level playing field will envisage.

2.9 Alternate and Renewable Energy:

2.9.1 Pakistan has significant potential in tapping alternative energy sources including geothermal, wind, solar, biomass, and bio fuels. The Alternative Energy Development Board Act, 2011 to develop policies, facilitate projects, and provide technical expertise in increasing the generation of alternative energy.

2.9.2 The Alternative and Renewable Energy (ARE) Policy of 2011 is being developed by Alternative Energy Development Board (AEDB) as an update of the ARE Policy 2006. The policy has a goal of generating 5% of the country’s power through ARE sources by 2030. The ARE Policy provides for incentives, tariffs, guarantees, and facilitation for investors in ARE.

2.9.3 In view of the technology and know-how that foreign investors can bring to ARE projects, the BOI shall strengthen its cooperation with Ministry of Water & Power,

\(^3\) Details available websites of BOI and Ministry of Industries
AEEDB and other line ministries in respect to promoting and facilitating projects with foreign investors.

2.10 Research and Human Resource Development:

2.10.1 BOI shall promote investment in research/ education and human resource development. BOI shall also support linkages between foreign investors and universities/ research institutes or design the training programs to introduce innovation and upgrade the skills of staff according to their needs.
III. INVESTMENT PROTECTION

The main consideration for foreign investors is their ability to protect their investments from risks. Investors avoid entering a market if risks are difficult to ascertain and mitigate.

BOI is cognizant that the role of the government is to eliminate or reduce the level of risk and provide tools for to mitigate/ alleviate them. Though law and order and macro-level risks are difficult to control, there are many means for the government to create mechanisms for risk management. This can be achieved through assurance of basic rights of due process, enforcement of laws and contracts, and provision of security. Investment Policy 2013 reinforces the commitment to investors regarding security and safety of their investments.

3.1 Investor Rights:

3.1.1 All foreign investors in relation to the establishment, expansion, management, operation, and protection of their investments shall be accorded fair and equitable treatment without discrimination. They shall have the right to due process of law as per the Foreign Private Investment (Promotion & Protection) Act 1976 and Protection of Economic Reforms Act of 1992.

3.1.2 All foreign investors in relation to the establishment, expansion, management, operation, and protection of their investments shall be entitled to treatment “no less favorable” than that granted to national investors in like circumstances as per the Foreign Private Investment (Promotion & Protection) Act 1976 and Protection of Economic Reforms Act of 1992.

3.1.3 Pakistan has signed\(^4\) Bilateral Investment Treaties (BITs) with 47 countries, of which 26 are in force. A further 27 are under negotiations. Foreign investors look favourably upon the existence of a BIT between their home and host country as a means to have stronger protections of their investments. However, the existing BITs have been negotiated over a period of 50 years by various ministries and there are great inconsistencies between them, which create legal uncertainty for both investors and the government. BOI will develop a model text with assistance of Law & Justice Division, which will ensure protection to investment on reciprocity basis and that model BIT will replace the existing to possible extent while all new BITs will be negotiated on new templates.

\(^4\)ibid
3.1.4 PPIB has developed a security package consisting of an Implementation Agreement (IA) to be signed between the Government of Pakistan (GoP) and the project sponsors, a Power Purchase Agreement (PPA) to be signed between the power purchaser and the project sponsors and a Guarantee from the GoP backstopping the payment obligations of the power purchaser. This security package has already been approved by the Economic Coordination Committee (ECC) of the Cabinet. The aforesaid security/investment protection instruments are well-accepted by the market and 12 power projects have been completed, utilizing the same.

3.1.5 The Multilateral Investment Guarantee Agency (MIGA) of the World Bank provides guarantees and insurance for investors’ projects in developing countries. Ministry of Finance and BOI will make sure that investors in Pakistan have cost effective access to these risk management products.

3.2 Right to due process of Law

3.2.1 Commercial Arbitration Act 2011 has been promulgated that gives right to investors to go to Higher Courts. Recognition and Enforcement (Arbitration Agreements and Foreign Arbitral Awards) Act 2011 is also in place.

3.2.2 An investor can go for international arbitration in case of disputes arising from an agreement if that provision is provided in the contract and after exhaustion of the local remedies for a period of 6-months.

3.3 Enhancement of Physical Security

3.3.1 The BOI, in coordination with Provincial Investment Promotion Agencies (IPAs) provides coordination for “airport-to-airport” security for foreign investors. To avail this service, registered foreign investors or bona fide potential investors shall make the request to the BOI with adequate notice and the details of the itinerary. The service includes coordination with local police for escort and advice on making secure lodging and transportation arrangements.

3.4 Intellectual Property Rights Protection:

3.4.1 The Intellectual Property Organization (Cabinet Division) established in 2005 and has upgraded IPR policies.
3.4.2 Statutory penalties for violations are enhanced, particularly for copyright and patent infringements and other measures have been taken to enforce the policies.

3.4.3 Recognizing the role of foreign investment in innovation, IPO will establish a window for facilitation with foreign investors. The foreign investment window would assist companies in obtaining patents, trademarks, and copyrights as well as respond on an expedited basis to requests for enforcement of infringements.
IV. ESTABLISHMENT OF SPECIAL ECONOMIC ZONES

Special Economic Zones (SEZ) Act 2012, the center piece of Investment Policy 2013 will encourage industrial clusterization, and bring Pakistan on international economic radar offering liberal investment regime and adequate physical infrastructure. The investment and incentives will stand fully protected to stay through this Law\(^5\). BOI will provide secretariat services to different approval forums for establishment of SEZ clusters in the country. Within the Zones, BOI will offer one- window – facilitation- services to investors. The SEZs will reduce the cost of doing business, enhance productivity and will help in economic development and poverty reduction.

4.1 SEZ Policy

4.1.1 The SEZ policy approved by the Parliament is designed to stimulate the provision of industrial areas with quality infrastructure. The policy provides for incentives for developers and enterprises, transparent governance, and clear standards for compliance.

4.1.2 SEZ rules and regulations\(^6\) framed under clause 40 of the SEZ Act 2012 are sets of standard procedures for implementation of the policy and ensure quality and quantity of investment in the Zones.

4.2 Salient Features of SEZ Act 2012

4.2.1 The SEZ Act that allows minimum of 50 acres to be qualified as SEZ and with no upper limits have following features;

   i. It extends to the whole of Pakistan and overrides other laws (anything contrary)

   ii. The Government shall establish SEZs by itself, or in collaboration with private parties under various modes of collaboration including public- private partnership or accord recognition to the privately established economic activity zones as SEZ to be governed under this Act;

   iii. Board of Approvals (BOA) shall be headed by the Prime Minister of Pakistan with the Minister for Finance as the Vice Chairman and includes the Chief Minister of each Province, heads of economic Ministries, executive heads

\(^5\) ibid
\(^6\) ibid
of the Provincial Investment Boards and representatives of Private sector;

iv. BOA may grant additional benefits to a Developer, Zone Enterprise, Region and Sector with respect to a particular SEZ, or to all or certain Zone Enterprises in a particular SEZ, Region and Sector if justified;

v. Approvals Committee shall be chaired by the Chairman of the BOI and comprises of the representatives of the Federal/ Provincial economic Ministries, Private sector representatives;

vi. Every Province shall have its own SEZ Authority which shall be a legal entity headed by Chief Minister or a person nominated by the Chief;

vii. Any Existing Zone at its desire may apply to the SEZ Authority in which they are located to become eligible for SEZ but can avail only one set of incentives;

viii. Incentive / exemptions once granted to SEZ clusters, SEZ Developers and Zone Enterprises cannot be withdrawn.

4.3 Incentive/ Exemption/ Policy Package

a) Zone developers and Zone Enterprises to have duty free import of capital goods for establishment, maintenance of Zones and projects therein.
b) Income tax exemption for Zone Developers and Zone Enterprises for a period of ten years.
c) All utilities and infrastructure till zero point of the Zone.
d) Captive power generation allowed to zone developers, and excess can be sold.
e) One -Window -Facilities by BOI
f) Dry Ports Facilities
g) Security arrangements by the provincial government
V. FACILITATION

5.1 Visa Facilitation
Easy access to counselor services plays an important role in investment attraction. Pakistan has adopted a comprehensive and investor friendly visa policy.

5.1.1 Pakistan Missions abroad are authorized to grant five years validity (multiple entry) visa within 24 hours to businessmen of 69 countries of Business Visa List (BVL), with the duration of each stay restricted to three months on production of required documentation. Allowed documentation will be expanded to include invitation from Pakistani companies, BOI, or Provincial IPAs.

5.1.2 Visa-On-Arrival for 30 days validity and stay will be given to the businessmen of 69 countries of Business Visa List (BVL) mentioned above on production of any of the documents as for entry business visa by Missions for businessmen.

5.1.3 Pakistan Missions abroad are also authorized to grant Work Visas to foreign technical and managerial personnel as defined by BOI for the purpose of imparting technical know-how and skills to the local population. The duration of work visa is one year and extendable on yearly basis. As per Visa Policy cases of grant or extension of Work Visas and conversion of Business Visas to Work Visas are processed within 4 weeks by BOI.

5.1.4 All foreigners who have been issued work visas shall be exempt from registration with the police, except for nationals of countries on the negative list.

5.2 Pakistani Diaspora

5.2.1 BOI has established a dedicated cell to facilitate and support Pakistani Diaspora in their efforts to invest in the country.

5.3 Women Entrepreneurs

5.3.1 BOI is cognizant of role of women in economic development of Pakistan and offers support and encouragement to Women Entrepreneurs and their Associations to do successful business.

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7 ibid
VI. STRATEGIZING THE POLICY FOR IMPLEMENTATION AND DEVELOPMENT

The Investment Policy is a dynamic document and subject to revisions and improvements to meet evolving challenges both within Pakistan and with its competitors. In order to effectively implement the Investment Policy measures and framework, a strategic institutional platform has been created to coordinate with the various actors involved.

A 5-year Investment Strategy has been evolved to implement the Policy with the following operational windows:

- Policy Formulation & Public-Private Sector Dialogue (PPD);
- FDI Promotion Campaign;
- Investment Facilitation (one window);
- Development of Special Economic Zones (SEZs);
- Coordination Networks with Stakeholders Ministries;
- Re-organization & Capacity Development of the BOI and
- BOI as self Financing Organization.

Investment Policy making is a moving target as the goal post (economic development) keeps changing and more is less. However, BOI has made an attempt to create enabling environment in the county through Policy interventions and strategic approaches.
Appendix – 4

Form of Bid Security
IRREVOCABLE AND UNCONDITIONAL BID BOND GUARANTEE

BANK GUARANTEE No:  

DATE:  

To,  
The Chairman,  
National Highway Authority,  
27-Mauve Area, G-9/1,  
P.O Box 1205,  
Islamabad,  
Pakistan.  

Dear Sir,  

Ref:  
Bid Security for [the Project name]  

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 to design, finance, construct, commission, develop, manage, operate, maintain, insure and transfer, at the end of the Concession Period, the [the project name] on a Build, Operate, Transfer basis (hereinafter referred to as the “Bid”), a requirement of which is that the Bidder submit a bid bond in the amount of Rs _________ (Rupees ____________________ Only).  

AND WHEREAS to satisfy the aforesaid requirement, this Deed of Bid Bond Guarantee (hereinafter referred to as the “Guarantee”) is made on this __ day of ____, 2011 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 favour of the National Highway Authority, a statutory body established pursuant to the National Highway Authority Act, 1991 (hereinafter referred to as “NHA”)  

NOW THEREFORE in consideration of NHA accepting the Bank’s obligations contained in the following paragraphs for the due discharge of the Bidder’s obligation to provide a Bid Bond, 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 NHA, without any caveat, demur, protest or contest and without reference or recourse to the Bidder or any other person, organization or authority, pay NHA within three (3) working days, in clear funds, without any deduction or withholding on any account whatsoever, a sum of Rs. _______________ (Rupees ____________________ Only).

2. The obligation of the Bank to NHA 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 NHA proceeding against the Bidder and notwithstanding any security or other guarantee NHA may have in relation to the Bidder’s liabilities.
3. Any demand specified in paragraph 1 above, made by NHA on the Bank, will be conclusive and binding between NHA and the Bank notwithstanding any dispute or difference between NHA and the Bidder or any dispute or lis pending before any court, tribunal, arbitrator or any other judicial, quasi-judicial or other authority. The Bank hereby affirms that it shall pay NHA the amount specified in paragraph 1 above within the time and in the manner specified therein, without NHA needing to prove or show grounds or reasons for NHA’s demand. The Bank further affirms that it shall support and uphold the right of NHA to make a demand specified in paragraph 1 above and be paid the sum specified therein, if a dispute relating to the same is raised by the Bidder before any court, tribunal, arbitrator or any other judicial, quasi-judicial or other authority.

4. The Bank hereby waives, to the fullest extent possible by law, any defence whether in law or equity, that may be raised to prevent or delay NHA from making a demand specified in paragraph 1 above or being paid the sum specified therein.

5. NHA shall be at liberty, without affecting the Bank’s obligations to NHA contained in this Guarantee, to postpone for any time or from time to time, the enforcement of any rights accruing to NHA 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 NHA against the Bank or the Bidder. The Bank accepts that it shall not be released of its obligations to NHA contained in this Guarantee by any exercise by NHA 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.

6. The Bank hereby undertakes not to revoke this Guarantee during its currency without the prior written approval of NHA 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 organisation of the Bank, the Bidder or NHA until all dues of NHA have been paid by the Bank in full or until NHA discharges this Guarantee in writing.

7. The Bank hereby affirms that it has the power and authority under its Memorandum and Articles of Association and all necessary consents and authorisations, 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 favour of NHA 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 ____________.

8. Notwithstanding anything contained in paragraphs 1 to 7 above, the Bank’s liability to NHA under this Guarantee is restricted to and shall remain in force upto and including __ day of ______ 20 __ and shall be extended for such period as may be desired by the Bidder.

9. 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 authorised representative(s), has executed this Guarantee on the date first written above in the presence of the witnesses mentioned below.

[Name (s) and Designation (s) of signatory (ies)]

WITNESSES:

1. [name, address and CNIC number]
2. [name, address and CNIC number]
Appendix – 5

Financial Data Forms
### Table 1: Project Cost Breakup

<table>
<thead>
<tr>
<th></th>
<th>Rupees Million</th>
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<tr>
<td></td>
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<tr>
<td>Breakdown of the total project cost</td>
<td></td>
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<tr>
<td></td>
<td>years</td>
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<tr>
<td>Construction Cost</td>
<td></td>
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<tr>
<td>Engineering/Design Costs</td>
<td></td>
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<tr>
<td>Other project Costs</td>
<td></td>
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<tr>
<td>Total cost before contingency</td>
<td></td>
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<tr>
<td>Physical Contingency</td>
<td></td>
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<tr>
<td>Price Contingency</td>
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<tr>
<td>Total project Cost</td>
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*Note: These are the bidders project costs and exclude GOP obligations if any*

### Table 2: Income Statement and Cash flow

<table>
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<th>Rupees Million</th>
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<tr>
<td></td>
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<td></td>
<td>years</td>
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<tr>
<td>Annual Toll Revenue (Reference Table 2a)</td>
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<tr>
<td>Other Revenue</td>
<td></td>
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<tr>
<td>Total Gross Revenue</td>
<td></td>
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<tr>
<td>Operating and Maintenance costs (table 2b)</td>
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<tr>
<td>other Annual Direct costs</td>
<td></td>
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<tr>
<td>Operating surplus or Deficit /Net Revenue</td>
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<tr>
<td>Total Debt Service Reference Table 2C</td>
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<tr>
<td>Tax Depreciation</td>
<td></td>
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<tr>
<td>Surplus/Deficit Before Tax</td>
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<tr>
<td>Tax</td>
<td></td>
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<tr>
<td>Surplus/After Tax</td>
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<tr>
<td>Add Back Depreciation</td>
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<tr>
<td>Surplus available to Equity Holders</td>
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### Table 2a: Basis of Revenue Projection

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<table>
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<tbody>
<tr>
<td></td>
<td>Years</td>
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<tr>
<td>Traffic Vehicles</td>
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<tr>
<td>By categories</td>
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<tr>
<td>Toll Rates-Rps</td>
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<tr>
<td>By categories</td>
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<td>Projected Escalation rates %</td>
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### Table 2b: Basis of the Operating and Maintenance costs

<table>
<thead>
<tr>
<th>Costs by Type /Year</th>
<th>Rupees Million</th>
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<tr>
<td></td>
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<tr>
<td>Routine</td>
<td>years</td>
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<tr>
<td>Periodic</td>
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<td>other</td>
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### Table 2c: Debt Service

<table>
<thead>
<tr>
<th></th>
<th>Rupees Million</th>
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<tr>
<td></td>
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<tr>
<td>Total Project Cost</td>
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<tr>
<td>% Equity</td>
<td></td>
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<tr>
<td>% Debt</td>
<td></td>
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<tr>
<td>Loan 1</td>
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<td>Total Loan</td>
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<td>Loan Repayment Period-Years</td>
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<td>Grace Period</td>
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<td>Principle-Repayment</td>
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<td>Balance Outstanding</td>
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<tr>
<td>Interest</td>
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<td>Total Debt Service</td>
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<tr>
<td>IDC (interest during Construction)</td>
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### Table 3: Financial Performance of the project

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<th></th>
<th>Rupees Million</th>
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<tr>
<td></td>
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<tr>
<td>FIRR%</td>
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<td>Payback</td>
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<td>Cover Ratio</td>
<td></td>
</tr>
</tbody>
</table>
Appendix – 6
Construction Performance Standards
# CONSTRUCTION PERFORMANCE STANDARDS

<table>
<thead>
<tr>
<th>PROJECT ASSETS</th>
<th>MINIMUM REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concession Area Clearance</td>
<td>Concession Area/Project Assets shall be free from debris, surplus material or leftover construction material</td>
</tr>
<tr>
<td>Pavement Including Shoulders and Slopes</td>
<td></td>
</tr>
<tr>
<td>International Roughness Index (IRI) meter/km per lane</td>
<td>Less than 1.0</td>
</tr>
<tr>
<td>Potholes/Depressions</td>
<td>Nil</td>
</tr>
<tr>
<td>Slopes (Pavement, Shoulder)</td>
<td>As per the Approved Detailed Design</td>
</tr>
<tr>
<td>Structural Cracking</td>
<td>Nil</td>
</tr>
<tr>
<td>Rutting</td>
<td>Nil</td>
</tr>
<tr>
<td>Bleeding, Raveling and Stripping</td>
<td>Nil</td>
</tr>
<tr>
<td>Pavement Edge Deformation</td>
<td>Nil</td>
</tr>
<tr>
<td>Pavement Edge Drop</td>
<td>Nil</td>
</tr>
<tr>
<td>Paved Shoulders</td>
<td>No edge step, no reverse slope, no drop off, no raveling and no pothole</td>
</tr>
<tr>
<td>New Jersey Barrier (NJB)</td>
<td>As per Approved Detailed Design (using Slip Form Construction)</td>
</tr>
<tr>
<td>Skid Resistance</td>
<td>As per International Motorway Standards</td>
</tr>
<tr>
<td><strong>Roadside</strong></td>
<td></td>
</tr>
<tr>
<td>Grass/Turfing/Vegetation</td>
<td>Neat with, clear sight distance and no obstruction</td>
</tr>
<tr>
<td>Slopes</td>
<td>Slope is stable as per the approved detailed design</td>
</tr>
<tr>
<td>Slope Pitching</td>
<td>Neat with no disturbed pitching</td>
</tr>
<tr>
<td><strong>Drainage</strong></td>
<td></td>
</tr>
<tr>
<td>Cross Pipes</td>
<td>No erosion, structurally sound, joints are all intact, clear, upstream and downstream side are clear with no blockage and drains properly</td>
</tr>
<tr>
<td>Box Culverts/Slab Culverts</td>
<td>Structurally sound, joints are all intact if any, clear, upstream and downstream side are clear, free of blockage and drains properly</td>
</tr>
<tr>
<td>PROJECT ASSETS</td>
<td>MINIMUM REQUIREMENTS</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Drains/Ditches (Lined or Unlined)</td>
<td>All drains are functional and clean without structural damage</td>
</tr>
<tr>
<td>Drainage Structures</td>
<td>Structurally sound, joints intact, no water standing or any blockage and drains properly</td>
</tr>
<tr>
<td>Kerb and Gutter</td>
<td>Structurally sound and functional</td>
</tr>
<tr>
<td><strong>Structures</strong></td>
<td></td>
</tr>
<tr>
<td>Bridges/Culverts</td>
<td>Smooth ride, structurally sound, substructures free of blockage, no structural crack and functional. Parapet walls and railings if any are in acceptable condition, NJB in acceptable condition, wearing course properly sloped, expansion joints in working condition, bearings are all checked and approved by the Quality Assurance Inspector</td>
</tr>
<tr>
<td>Other Structures like Retaining Wall, Toe Wall, etc.</td>
<td>Structurally sound with all weep holes operational with proper backfill, cleaned and painted where required</td>
</tr>
<tr>
<td><strong>Ancillary Works</strong></td>
<td></td>
</tr>
<tr>
<td>Crash Barriers</td>
<td>Structurally sound, replaced with new one wherever broken, damaged or missing must meet international safety standards</td>
</tr>
<tr>
<td>Road Signs/Markings, Delineators, Road Studs etc. and Other Road Furniture</td>
<td>Good reflectivity, visible, undamaged, replaced with new ones wherever broken, damaged or missing, painted, present in proper location, properly mounted and all are functional must meet NHA standards and specifications</td>
</tr>
<tr>
<td>Illumination/Lighting</td>
<td>All illumination system shall be functional</td>
</tr>
<tr>
<td>Administrative Office, Centralized Operation Center, Toll Plazas, Service Areas and Weigh Stations</td>
<td>Facilities should be functional and structurally sound. All buildings are in good shape and functional, properly painted inside and outside the building, no structural damage inside and outside the building, water supply, drainage system and electrical appliances if any are all functional and in line with the needs of road users, no damage in the internal road pavement and parking area</td>
</tr>
<tr>
<td>ITS Components</td>
<td>As per international Standards, fully functional</td>
</tr>
<tr>
<td>Communication Cabling</td>
<td>As per international Standards</td>
</tr>
</tbody>
</table>
Appendix – 7
Operation & Maintenance Requirements/ Standards
OPERATION & MAINTENANCE REQUIREMENTS

1. **GENERAL**

   It is an implicit requirement of the Concession that the Concession Company shall maintain the facility in good order throughout the Concession Period. It is also a requirement that the Concession Company shall transfer the facility to the NHA, at the end of the Concession period, in an acceptable and well maintained condition.

   Maintenance of the facility can be broadly divided into two specific areas: day-to-day corrective action to remedy faults due to vehicle damage, vandalism and reported malfunctions; and planned maintenance based on regular inspection, assessment of condition against specified performance thresholds.

   For both of these types of maintenance activity, a comprehensive database shall be established by the Concession Company, detailing in date order, all reported faults (whether through planned maintenance inspections or reports from members of the public, police or other government bodies) and the corrective action taken. All such records shall remain available for inspection by the NHA for a period of six years.

   To assist the Bidder in preparing his Bid the following sub-sections set out the minimum levels of monitoring and maintenance performance that will be expected of the Concession Company. It should be noted that in setting these minimum standards the NHA does not relieve the Concession Company of its overall obligations as set out in paragraphs above.

2. **ROAD PAVEMENT**

   The need for periodic maintenance of the road pavement will be determined by the use of annual condition and usage surveys. The function of these surveys will be to record, in both absolute and relative terms, the road pavement’s performance with regard to skid resistance, ride ability and structural integrity.

   - On an annual basis, condition surveys shall be undertaken of the whole road pavement within the Concession Area. These surveys shall be divided into one kilometer sections and shall record:
     - The location, type and magnitude of all cracking in the road pavement (block cracking, alligator cracking, longitudinal and transverse cracking, and edge cracking);
     - The location, condition and magnitude of all existing sealing compound in the road pavement;
     - The extent of all potholes and patching, both within the pavement and at the pavement edge;
     - The structural strength of the road pavement and its sub layers, as indicated by the extent of any depressions, or rutting in the inner and outer wheel tracks of the nearside lane;
     - The extent of any bleeding, stripping or spreading of the road surface;
     - The skidding resistance of the wearing surface; and
The riding quality (roughness) of the pavement.

Based on the findings of these surveys, a planned maintenance programme shall be developed and agreed with the NHA for the following year, the objective of such a programme being to take remedial action at the earliest possible time to both reduce the overall need for maintenance and the consequent disruption to traffic.

In determining this maintenance programme, it will be a mandatory requirement that the condition of the road pavement conforms to the following minimum performance standards throughout the period of the Concession:

3. STRUCTURES

All structures shall be fully inspected at two-yearly intervals as part of a planned monitoring procedure, and any identified defects shall be remedied within a period of six months from the date of inspection.

In addition, any structure that has been the subject of collision or other damage shall be inspected as soon as is practical, and in any event within a period of 24 hours of the incident taking place.

If such an inspection shows that the structure's structural integrity has been compromised, appropriate action shall be taken immediately to ensure the safety of road users. Remedial repairs should then be undertaken, as soon as is practical, to restore the structure to a safe operational condition.

Minor damage that does not in any way compromise the structural integrity of the structure shall be carried out within six months as part of a rolling maintenance programme.

4. EARTHWORKS

All earthworks shall be inspected for signs of deterioration, at three-monthly intervals, and more frequently during the monsoon season, as part of a “rolling planned maintenance programme” and appropriate remedial action shall be taken to make good any identified defects.

In addition, daily inspections of any susceptible areas of earthworks (including rip-rap embankment linings) shall be made during periods when unusually high water levels are identified adjacent to the Concession Area, and appropriate action shall be taken to both safeguard the structural integrity of the facility and to remedy any defects that occur.

5. DRAINAGE

The drainage system shall be inspected and routinely maintained as ongoing activity. The timing of these inspections shall be such as to ensure that the system is fully functional at times of heaviest rainfall and there is no water-ponding, which may cause damage to the road pavement.

The ongoing inspection and routine maintenance shall be designed to ensure that the system is free of silt and other debris, that all covers and manholes are in place and secured, and that all oil interceptors are cleaned and are fully functional. Catch basins and culvert inlets and outlets should also be cleaned regularly to remove accumulated debris.

In addition, at bi-annual intervals the drainage system shall be fully inspected to ascertain its structural integrity, and appropriate remedial action shall be taken as necessary.
6. **ROAD LIGHTING**

Routine maintenance activities shall be undertaken at the intervals specified in Table-1.

**Table-1:** Road Lighting, Maintenance Schedule

<table>
<thead>
<tr>
<th>Interval</th>
<th>Maintenance Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every 14 days</td>
<td>Remedy any defect leading to non-illumination of the lamp fitting</td>
</tr>
<tr>
<td>Every 12 months</td>
<td>Clean all lanterns and examine the water tightness, mechanical, structural and electrical integrity of the installation and carry out all necessary remedial repairs</td>
</tr>
<tr>
<td>Every 36 months</td>
<td>Bulk change all LED Lamps</td>
</tr>
<tr>
<td>Every 10 years or earlier if necessary</td>
<td>Repaint all lamp column/Posts in accordance with United Kingdom Department of Transport Standard BD 18/83 or similar US specifications</td>
</tr>
</tbody>
</table>

In addition to the routine maintenance regime set out in Table-1, bulk changes of all lamps shall be carried at intervals appropriate to the type of lamp used.

All faults that are not rectified at the time of inspection shall be rectified as follows:

- Where the identified fault represents a structural or electrical safety hazard, steps shall be taken to effect a permanent or temporary repair within 24 hours and all temporary repairs shall be permanently rectified within a period of 14 days;
- Where lighting failures constitute a road safety hazard the failure shall be rectified as soon as possible and at least within 14 days of the inspection; and
- Isolated lamp failures that do not constitute a road safety hazard, and any other defects that do not compromise safety, shall be rectified within six months as part of a ‘rolling’ 6-monthly maintenance programme.

7. **ROAD SIGNS**

Routine maintenance of road signs shall be of two types. The first relates to the visibility and safety of the sign installation and the second relates to the overall condition of the sign. Routine maintenance activities shall be undertaken at the intervals specified in Table-2.

The maintenance activities set out in Table-2 shall include the inspection of all signs at the intervals specified, for the purpose of identifying and rectifying the particular category of fault. All faults that are not rectified at the time of inspection shall be rectified as follows:

- Where the identified fault represents a safety hazard, steps shall be taken to effect a permanent or temporary repair within 24 hours and all temporary repairs shall be permanently rectified within a period of 28 days;
- Where the identified fault does not represent a safety hazard, remedial action shall be undertaken as soon as is practical within the next six-month period, as part of a „rolling“ 6-month maintenance programme; and
- Any road sign that is damaged beyond repair shall be replaced at the earliest opportunity and in any event within 7 days of the damage occurring.
Table–2: Road Signs, Maintenance Schedule

<table>
<thead>
<tr>
<th>Interval</th>
<th>Maintenance Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>Visual inspection for damage or vandalism and the effecting of all emergency repair work identified through inspection or reported by the public, police or other body.</td>
</tr>
<tr>
<td>Every 28 days</td>
<td>Remedy any defect resulting in non-illumination of lamps.</td>
</tr>
<tr>
<td>At least every 6 months but more regularly if needed</td>
<td>Clean the surface material of all signs and luminaries and take appropriate action to ensure that unobstructed visibility is maintained in accordance with the design criteria.</td>
</tr>
<tr>
<td>Every 2 years</td>
<td>Maintain all electrical installations and remedy any identified faults in accordance with United Kingdom IEE Wiring Regulations (15th Edition) or similarly US approved standard.</td>
</tr>
<tr>
<td>Every 2 years</td>
<td>Check the structural integrity of all signs including the security of all brackets, bolts and other fittings, the condition of all rivets, welded joints, frames, posts and gantries, and carry out all necessary remedial works.</td>
</tr>
<tr>
<td></td>
<td>Check the appearance and condition of the sign in terms of legibility, luminance, colour and retro-reflective properties, and carry out all necessary remedial works.</td>
</tr>
</tbody>
</table>

8. ROAD MARKINGS

All thermoplastic/ CR road markings shall be subjected to routine inspection at least once every year. These inspections shall be aimed at determining the extent of degradation of the markings due to:

- Normal wear and tear or damage;
- Spread due to movement of the road surface or plasticity of the material;
- Loss of colour;
- Reduction in skid resistance; and
- Reduction in retro-reflective properties.

Apart from subjective inspections of retro-reflective properties, all inspections shall be carried out in daylight conditions.

In all cases where the level of degradation exceeds the limits set out in Table-3 corrective maintenance shall be undertaken within a period of six months.
Table – 3: Road Markings, Maintenance Performance Thresholds

<table>
<thead>
<tr>
<th>Type of Degradation</th>
<th>Threshold for Corrective Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wear (erosion)</td>
<td>70% or less of the thermoplastic material remaining on the road surface</td>
</tr>
<tr>
<td>Spread</td>
<td>10% or greater increase in the dimension of the markings, when compared with specified dimensions</td>
</tr>
<tr>
<td>Colour (luminance factor)</td>
<td>Luminance factor 45% or less</td>
</tr>
<tr>
<td>Skid resistance</td>
<td>For normal longitudinal markings, a skid resistance value of 45 or less</td>
</tr>
<tr>
<td></td>
<td>For markings with a large surface area, e.g. arrows or lettering, a skid resistance value of 55 or less</td>
</tr>
<tr>
<td>Retro-reflectivity</td>
<td>Nominal 100mcd/m²/lux</td>
</tr>
</tbody>
</table>

9. PERIMETER SECURITY FENCING

All perimeter security fencing shall be inspected for damage and vandalism at least on a weekly basis, and necessary repairs shall be affected within a further seven days.

In addition, a condition survey shall be carried out every six months and all necessary repairs, painting and replacement measures that are required to maintain the perimeter security fence in good order shall be carried out as part of a „rolling” 6-monthly maintenance programme.

10. VEHICULAR SAFETY BARRIERS

Maintenance of safety barriers shall be of two types. The first relates to identifying and rectifying collision damage, and the second relates to maintaining the overall condition of the safety barrier.

All vehicular safety barriers shall be visually examined on a daily basis to identify damage. All such damage that is identified shall be made safe at the earliest opportunity, and in any event within a period of 24 hours. In addition, permanent repairs to all damaged sections of safety barrier shall be effected within a period of seven days.

All safety barriers shall be inspected at six-monthly intervals to determine their condition in terms of structural integrity and horizontal and vertical alignment. Any identified defects that relate directly to user safety shall be rectified as soon as is practical, and in any event made temporarily safe within a period of 24 hours and fully rectified within the following seven days.

Other identified defects that do not affect user safety shall be rectified as part of a rolling six-monthly maintenance programme.

11. TOLL COLLECTION AND TRAFFIC MANAGEMENT EQUIPMENT

The Maintenance Programme shall specify procedures for regularly checking the condition of toll collection and traffic management equipment and the planned refurbishment or replacement of equipment in order to minimize losses of revenue due to equipment failure and to ensure levels of service are maintained.
The Maintenance Programme shall also take account of the technology life of the electrical and electronic equipment, which may be expected to be obsolete within 10 years, and shall include provision for system upgrading to ensure that the systems comply with international standards then prevailing.

12. **ITS SYSTEMS**

The Maintenance Programme shall specify procedures for regularly checking the condition of all ITS Systems including weigh bridges (SSWIM and WIM) & equipments and the planned refurbishment or replacement of equipment in order to keep the systems fully functional with 100% performance.

The Maintenance Programme shall also take account of the technology life of the electrical, electronic and computer equipment, which may be expected to be obsolete within 5 to 6 years, and shall include provision for system upgrading to ensure that the systems comply with international standards then prevailing.
<table>
<thead>
<tr>
<th>Asset</th>
<th>Outcome</th>
<th>Performance Target: % of asset that shall be in the outcome</th>
<th>Condition Assessment Acceptance Criteria and Tolerances</th>
<th>Timelines Requirement for Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paved Lanes (Asphalt)</td>
<td>Smooth Safe Adequate Skid Resistance Durable</td>
<td>100</td>
<td>On achieving IRI $\geq$ 2.5 m/km/lane, overlay will be due and IRI to be achieved less than 1.5 m/Km/lane</td>
<td>Potholes causing a threat to safety will be responded to immediately</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IRI less than 2.5 m/km per lane</td>
<td>ruts not more than 10 mm</td>
<td>Others within 2-3 days of notification</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No structural cracks, non-structural cracks between 2mm to 6 mm. Crack sealing (if any) as per O&amp;M Manual.</td>
<td>Bleeding surface to be treated immediately within 5 day</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Potholes free</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No shoving $&gt;$ 7 spot per km</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No bleeding / raveling / stripping</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>no edge deformation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>no shallow depression</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Patching even +/- 15 mm higher or lower</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>no false ditch (shoulder build up causes water to drain back on to the pavement)</td>
<td></td>
</tr>
<tr>
<td>Paved Shoulders (If any)</td>
<td>Safe Smooth (No standing of water) Adequate width</td>
<td>90</td>
<td>No reverse slope, no edge step and no drop off no false ditch (shoulder build up causes water to drain back on to the pavement) no scouring order formation</td>
<td>Shall be corrected within 2-3 days if shoulder are deformed</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------------------</td>
<td>----</td>
<td>---------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
</tbody>
</table>

### 2. Roadside

<table>
<thead>
<tr>
<th>Grass / Turf</th>
<th>Neat Attractive Sight Distance Present Roadway free of obstruction</th>
<th>90</th>
<th>Neat Sight distance is clear in intersections, passing zones and curves etc Neat around crash barrier, headwalls, paved ditches Adequate cover</th>
<th>Respond immediately upon notification Road fill promptly and properly disposed of within 4 hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Debris and Road Fill</th>
<th>Neat Attractive</th>
<th>99</th>
<th>Roadside appears neat and clean</th>
<th>Respond immediately upon notification Road fill promptly and properly disposed of within 4 hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Litter / Malba</th>
<th>Neat Attractive</th>
<th>99</th>
<th>Roadside appears neat and clean</th>
<th>Respond immediately upon notification Road fill promptly and properly disposed of within 4 hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Landscaping</th>
<th>Stable No erosion</th>
<th>95</th>
<th>Neat and clean</th>
<th>Respond immediately upon notification Road fill promptly and properly disposed of within 4 hours</th>
</tr>
</thead>
</table>
| Slope | Stable  
No erosion | 95 | Minimal erosion and no erosion showing a pattern that will endanger the stability of the slope | Respond immediately upon notification  
Road fill promptly and properly disposed of within 4 hours |
|------|---------------|-----|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Slope Pitching | No Disturbed pitching | 95 | The slope of pitching surface should be as per design slope, slight variation | Respond immediately upon notification  
Road fill promptly and properly disposed of within 4 hours |
| Road Blockade | Minimum blockade | 9  
9 | Inform traffic police and remove blockage, if required construct temporary diversion | Respond immediately upon notification  
Road fill promptly and properly disposed of within 4 hours |

### 3. Drainage

| Cross pipes | Structurally sound  
Open  
drains properly  
Joints intact  
Adequate  
Capacity  
No erosion | 95 | <5% deteriorated barrel  
>90% diameter open  
drains properly  
joints intact  
must be free of blockade  
minimal erosion at ends  
end protection intact  
no dip in road over pipe indicating structural problems | repair or reconstruction shall be attended and completed within a week |
<table>
<thead>
<tr>
<th>Category</th>
<th>Condition</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Box Culverts / Slab Culverts</strong></td>
<td>Structurally sound Open Drains properly Joint intact Adequate Capacity No Erosion</td>
<td>95</td>
<td>&lt;5% deteriorated barrel &gt;95% of cross sectional area open drains properly joints intact no evidence of flooding minimal erosion at ends end protection intact no dip in road over pipe indicating structural problems Repair or reconstruction shall be attended and completed within a week</td>
</tr>
<tr>
<td><strong>Ditches Paved / Lined drains</strong></td>
<td>Aligned Structurally sound Clean</td>
<td>95</td>
<td>no undermining or undercut requiring action &lt;25% spalled no obstruction to flow of water that requires action Repair or reconstruction shall be attended and completed within a week</td>
</tr>
<tr>
<td><strong>Ditches, Unpaved / Unlined drains</strong></td>
<td>Drain Functional</td>
<td>95</td>
<td>no siltation <strong>Tolerances / Criteria</strong> repair or reconstruction shall be attended and completed within a week</td>
</tr>
<tr>
<td><strong>Storm Drains Drop inlets</strong></td>
<td>Open No flooding No settlement</td>
<td>95</td>
<td>95% open no evidence of flooding repair or reconstruction shall be attended and completed within a week</td>
</tr>
<tr>
<td><strong>Kerb and Gutter</strong></td>
<td>In line Clean/drain Sound No undermining</td>
<td>95</td>
<td>minimal obstruction no unsealed cracks &gt; 6mm no spalling &gt; ¼ inch deep &lt;25% of surface spalled Repair or reconstruction shall be attended and completed within a week</td>
</tr>
<tr>
<td>Erosion or Scour in upstream/ Downstream</td>
<td>No erosion due to Scour</td>
<td>95</td>
<td>Erosion not to be allowed to continue</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-------------------------</td>
<td>----</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td><strong>4. Bridges/Culverts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall Bridge</strong></td>
<td>Smooth ride, Strong, aesthetic, wide enough and available at legal speed limit</td>
<td>Structurally Sound as per International Motorway Standard</td>
<td>no graffiti on structures</td>
</tr>
<tr>
<td><strong>Traffic Safety Features</strong> (Railings Parapet, Wing walls, Drainage spouts etc)</td>
<td>Percent Functional</td>
<td>As per approved O&amp;M Manual</td>
<td>Functional</td>
</tr>
<tr>
<td><strong>Deck</strong></td>
<td>Smooth Strong Wide enough Drains properly</td>
<td>As per Approved O&amp;M Manual</td>
<td>minimal spalls cracks or scaling clean deck</td>
</tr>
<tr>
<td><strong>Superstructure</strong></td>
<td>Strong Clearance Aesthetic</td>
<td></td>
<td>no loss of section or cracks paint in good shape no spalling proper vertical clearance proper opening</td>
</tr>
<tr>
<td><strong>Sub structure Joints</strong></td>
<td>Strong looks good safe from settlement all components Smooth do not leak</td>
<td></td>
<td>no spalls, cracks, scaling bearing assemblies functional abutment seats cleaned and sound pier seats clean and sound bearings clean, sound and lubricated periodically</td>
</tr>
</tbody>
</table>
### 5. Pavement Markings, Delineators and Reflectors

<table>
<thead>
<tr>
<th>Pavement marking</th>
<th>Object markers and Delineators, Km stone / 5 km stone</th>
<th>As per O&amp;M Manual</th>
<th>Repair or reconstruction or repaint shall be attended immediately and completed within 2 days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bright visible Present Painted in 2 languages intact upright Reflective present in right location</td>
<td>95% clear of debris</td>
<td>&lt;5% of surface damaged placement meets industry standards</td>
</tr>
<tr>
<td></td>
<td>Bench marks reference pillars</td>
<td>90% clear of obstruction Placement meets industry standards &lt;10% damaged</td>
<td>repair or reconstruction or repaint shall be attended immediately and completed within a week</td>
</tr>
<tr>
<td></td>
<td>Painted &amp; printing letters on Road Signs km stone And 5km stone</td>
<td>90% clear of obstruction To match with the existing</td>
<td>repair or reconstruction or repaint shall be attended immediately and completed within a week</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td>95</td>
<td></td>
</tr>
</tbody>
</table>

### 6. Other Facilities

<table>
<thead>
<tr>
<th>Street Lighting</th>
<th>Functional Wiring proper undamaged painting</th>
<th>90</th>
<th>98% lights functional 98% clear obstruction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Remedy the reason of non-functional of lights so that lighting is restored within 6 hours replace any damaged poles, switch box or transformer within 24 hours or reasonable time decided by Independent consultant</td>
</tr>
<tr>
<td>Wayside amenity/ truck lay by</td>
<td>Functional building toilet Water supply drainage pavement lighting landscaping</td>
<td>90</td>
<td>water supply, drainage &amp; lighting always shall be functional 98% lights functional in the building or outside the building 95% of total time the water supply and drainage functional 95% of total paved area are crack free / pot hole free 95% of kerbs and channel are in perfect condition Building to be repainted every year</td>
</tr>
<tr>
<td>Toll equipment Toll Plaza ITS Weigh station</td>
<td>Functional / efficient Clean Lighting Safety</td>
<td>95</td>
<td>95% functional toll equipment / ITS / weigh station 95% lightings power 95 % furnished / painted</td>
</tr>
<tr>
<td>Accident Management recovery</td>
<td>Safety Lane availability</td>
<td>95</td>
<td>100% accident management and vehicle recovery 90% lane availability</td>
</tr>
<tr>
<td>Reporting Roughness Condition Bridge Management System (BMS) Pavement Management System (PMS)</td>
<td>Condition Monitoring</td>
<td>100</td>
<td>100% Required detailed reporting bi-annually</td>
</tr>
</tbody>
</table>
| Project Implementation Unit | Operation and Maintenance buildings including laboratory building toilet water supply drainage lighting pavement Equipment Furniture | Functional clean hygienic structures efficient dry comfortable | 98 | • 100% functional PIU office and laboratory  
• 98% functional laboratory testing equipment and apparatus  
• 100% testing facility of any type of tests  
• 98% lights functional, water supply and drainage functional  
• 98% time equipment (like AC, water cooler, heater) functional  
• 100% furnishing item to be refinished once in every two years  
• 100% furniture functional  
• Total buildings to be painted every year | Repair/replace/refinish within one day |

<table>
<thead>
<tr>
<th>Toll Plazas</th>
<th>Performance Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toll Processing Time</td>
<td>The Toll processing time for each vehicle per lane shall not exceed ten (10) seconds. In the event the Toll processing time at any Toll Plaza exceeds ten (10) seconds for a duration of one (1) Month at any time during the Concession Period (in the ordinary course), the Concessionaire shall forthwith add an additional lane or upgrade the system deployed at the Toll Plazas to ensure that the Toll processing time for each vehicle per lane shall not exceed ten (10) seconds.</td>
</tr>
<tr>
<td>ITS Systems</td>
<td>Remains 100% functional at all times</td>
</tr>
<tr>
<td>Weigh Bridges (SSWIM and WIM)</td>
<td>Remains 100% functional at all times</td>
</tr>
</tbody>
</table>
Appendix – 8

Project Handback Requirements
Subject to the terms of Concession Agreement, on the Transfer Date the Concessionaire shall comply with and conform to the following Handback Requirements in respect of the Project Assets:

<table>
<thead>
<tr>
<th>PROJECT ASSETS</th>
<th>MINIMUM REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concession Area Clearance</td>
<td>Concession Area/Project Assets shall be free from debris, surplus material or leftover construction material</td>
</tr>
<tr>
<td>Pavement Including Shoulders and Slopes</td>
<td></td>
</tr>
</tbody>
</table>
| International Roughness Index (IRI)                      | On the Expiry Date: Less than 2.0 m/km per lane  
If Terminated during the Operations Period: Less than 2.5 m/km per lane |
<p>| Potholes/Depressions                                     | Nil                                                                                  |
| Characteristic Deflection                                | As per Approved Detailed Design +/-0.10%                                             |
| Slopes(Pavement, Shoulder)                               | As per Approved Detailed Design +/-0.10%                                             |
| Cracking                                                 | Nil                                                                                  |
| Rut Depth Not Exceeding 10 mm                            | Length not more than 3% of the Motorway                                              |
| Bleeding, Raveling and Stripping                         | Nil                                                                                  |
| Pavement Edge Deformation                               | Nil                                                                                  |
| Pavement Edge Drop                                       | Nil                                                                                  |
| Paved Shoulders                                          | No reverse slope, no scouring and no drop off from hard shoulder and width as per Design |
| Road Marking                                             | 100% with clear visibility and reflection                                           |
| Roadside                                                 |                                                                                      |
| Grass/Turfing/Vegetation                                 | Neat, sight distance clear intersections, passing zones, curves etc.                |
| Slopes                                                   | No erosion and slope is stable                                                       |
| Slope Pitching                                           | Neat and no disturbed pitching                                                      |
| Drainage                                                 |                                                                                      |
| Cross Pipes                                              | No erosion, structurally sound, joints are all intact, clear, upstream and down streamside are clear and drains properly |
| Box Culverts/Slab Culverts                              | No erosion, structurally sound, joints are all intact, clear, upstream and downstream sides are clear and drains properly |</p>
<table>
<thead>
<tr>
<th>Drains/Ditches (Lined or Unlined)</th>
<th>All drains are clean, no damage and fully Functional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drainage Structures</td>
<td>Structurally sound, joints intact, no crack and drains properly</td>
</tr>
<tr>
<td>Kerb and Gutter</td>
<td>Structurally sound, functional and no spalling</td>
</tr>
</tbody>
</table>

**Structures**

<table>
<thead>
<tr>
<th>Bridges/Culverts</th>
<th>Smooth ride, structurally sound, no crack and fully functional. Parapet walls and railings are in perfect condition and freshly painted, NJB in perfect condition, wearing course perfectly sloped without any defect, expansion joints in perfect condition, bearings are all checked and approved by the Independent Engineer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Structures like Retaining Wall, Toe Wall, etc.</td>
<td>Structurally sound with no cracks, cleaned and painted where required</td>
</tr>
</tbody>
</table>

**Ancillary Works**

<table>
<thead>
<tr>
<th>Crash Barriers</th>
<th>Structurally sound, replaced with new one wherever broken, damaged or missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Signs/Markings, Delineators, Road Studs etc. and Other Road Furniture</td>
<td>Good reflectivity, visible, undamaged, replaced with new ones wherever broken, damaged or missing, painted, present in proper location, properly mounted and all are functional</td>
</tr>
<tr>
<td>Illumination/Lighting</td>
<td>All lighting shall be functional and poles are properly erected and painted</td>
</tr>
</tbody>
</table>

**Administrative Office, Centralized Operation Center, Toll Plazas, Service Areas and Weigh Stations**

| All buildings are in good shape and functional, fresh paintings inside and outside the building, no damage inside and outside the building, water supply, drainage system and electrical are all functional, no damage in the internal pavement, internal road pavement and parking area are resurfaced with road paintings freshly applied, all furniture are in satisfactory condition and broken ones are replaced with new one, furnishing items are replaced with fresh ones, water reservoir is clean, air-conditioners, water coolers, heaters etc. supplied are all in fairly good working condition. |
Appendix – 9

NHA PPP Policy and Regulatory Framework
PRIVATE SECTOR PARTICIPATION IN
NATIONAL HIGHWAYS, MOTORWAYS
TUNNELS AND BRIDGES
IN PAKISTAN

PPP POLICY and
REGULATORY FRAMEWORK

MAY 2009
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A. POLICY OBJECTIVES AND STRATEGY

1. Introduction

The Government of the Islamic Republic of Pakistan (GoP) through its National Highway Authority intends to accelerate National highway, motorway, tunnel and bridge development through increased private sector participation thereby promoting economic growth and reducing poverty. This Policy and Regulatory Framework (hereinafter referred to as the “Policy”) sets forth the reasons for, and the manner in which, private sector participation shall be encouraged and the public sector interest protected.

With sound macroeconomic fundamentals achieved and key sectors strengthened by reforms implemented over the past few years, Pakistan’s economy is continuing to expand and the economy is well positioned to sustain six percent or more annual growth in the medium term.

Transportation is an important sector of Pakistan’s economy, making up 10% of the GDP and over 17% of Gross Capital Formation. The sector consumes 35% of the total energy annually and is the recipient of substantial portion of the annual federal public sector development program.

An efficient transport system is a pre-requisite for Pakistan to become globally competitive, and the growth in capacity must be achieved while increasing service levels and decreasing costs.

The transport sector covers roads, road transport, railways, ports and shipping, and aviation. The sector has direct and indirect linkages with all important sectors of the economy which influence economic and social development.

The National Highway Authority (NHA), under the National Highway Act 1991, and amendment 2001, is responsible for managing the design, development and operation of national highways, motorways, tunnels and bridge infrastructure in Pakistan. The NHA has the task of ensuring that the standards of design, construction and maintenance of the network in the country, including the supporting infrastructure, is continually improved to standards internationally recognized as compliant with the objectives of ensuring public safety and convenience.

Currently, Pakistan's road network is approximately 258,000 kilometers. NHA maintains the national highways, those defined by Article 2 (g) of the NHA Act of 1991, as amended in 2001; motorways; limited access, minimum of four lanes, and such other roads as may be entrusted to it, while the provincial Communications and Works (C & W) Departments are responsible for the provincial road network.

NHA considers that the technical, managerial and financial resources of the private sector can make a useful addition to its own efforts. After carefully evaluating a wide range of alternatives, NHA has decided to encourage the private sector to participate in a significant number of national highways and motorways, as well as a limited number of tunnel and bridge, projects needed to facilitate public safety and convenience, as well as to support and sustain Pakistan's rapid rate of economic growth.
2. **Private Sector Participation Through Public Private Partnership (PPP)**

2.1 **Introduction**

The concept of Public Private Partnership (PPP) covers a wide range of situations and is subject to various interpretations. A now well-known definition is: “a PPP is a risk-sharing relationship between the public and private sectors based upon a shared aspiration to bring about a desired public policy outcome,” typically, the provision of new or improved infrastructure to provide a new public service.

2.2 **Existing Federal Framework for PPP in Infrastructure**

In order to ensure the private sector is attracted to assisting with the country’s infrastructure needs, the Government at all levels has to put in place a combination of policy reforms, institutional support, incentives and financing modalities. These are essential to ensure private sector participation in financing, constructing and managing future infrastructure development projects.

In the early 1990’s, Pakistan established a policy and regulatory framework for PPP in the telecom and energy sectors, sectors which have seen great advances. The framework for PPP infrastructure service procurement in other sectors such as transport and logistics, water supply, sanitation, solid waste management, social sectors, and real estate was developed in the early 2000’s and the policy framework was passed by the Ministry of Finance and subsequently by ECC in November 2007. Its features are described below.

The Ministry of Finance is spearheading the development of PPP, particularly at the federal level and considerable progress has been achieved in developing a conducive PPP environment in Pakistan.

The Government has set up the Infrastructure Project Development Facility (IPDF) under the auspices of the Ministry of Finance (MOF), to promote, help generate and generally assist PPP projects in cooperation with public sector Institutions (line ministries, provincial Government, local bodies, state owned enterprises etc.) that are or want to undertake PPP.

The NHA policy contained herein fills the need for PPP in Highways and related facilities under NHA responsibility and is consistent with the ECC approved PPP policy.

2.3 **PPP in National Highways**

Basically PPP is an extension of public procurement rules, putting the emphasis on output service rather than on input specifications. The Policy shall refer to the PPP acronym for any contractual arrangement, which differs from the traditional contracts awarded under public procurement rules (design & build, outsourcing), including concessions.

For NHA national highways and motorways, PPP generally refer to concessions or Build-Operate-Transfer (BOT) contracts, or any variant of them, i.e. contracts where risks and responsibilities transferred to the private sector are much wider than in traditional public works or service contracts. They usually entail a mix of construction, operation, commercial and financial issues, with a variable degree of risk sharing between public and private partners.
For NHA, and the government, the main attraction is that the private sector can bear part of the financial burden of investing in national highways and Motorways. Since the private sector is expected to be more efficient than the state in running certain concerns and is also likely to charge actual costs of services from customers, the burden of subsidies can be diminished if not eliminated.

The other attraction for the NHA is that resources can be freed to provide funds in areas and sectors needed for the socioeconomic uplift and stabilization of the less advantaged citizens. The state can thus return to its core business of providing good governance, enhancing knowledge and skills, providing their basic health needs, economy, and increasing opportunities and security for its citizens.

PPP involves the investment of private capital to design, finance, construct, operate, and maintain a project for public use for specific term during which a private investment consortium is able to collect revenue from the users of the facility. When the consortium’s limited term of ownership expires, title to the project reverts to the NHA at a cost of one rupee, or, as provided in the tender documents, the NHA may decide to extend the concession or re-tender. By then, the consortium should have collected enough revenue to recover its investment and earn a profit; i.e., made a reasonable return on the investment.

To protect the public interest, the NHA has decided the primary mechanism for the award of concessions to the private sector will involve competitive tendering, where technical and financial bidding conditions shall be made public in advance. However in cases where multilateral financing agencies or bilateral financiers or other external agencies/or governments are involved, requiring a different procurement process, then the NHA may agree to their proposal or otherwise, as deemed appropriate. The process of procurement shall still remain transparent, open, and fair in all cases.

- **Transparency** means that (a) the "rules of the game" are made available to all participants and (b) the "game" will be followed in accordance with those rules. Transparency means that clear and acceptable guidelines for bidding are made available to all participants and that those guidelines are consistently followed.

- **Openness** means free and open competition. The first step to maximize free and open competition is through widely-circulated public advertising, which opens-up and instils greater confidence in the process, encourages more bidders to compete for PPP projects, and results in overall lower prices for the benefit of the public.

- **Fairness** means all participants are treated fairly and consistently over time and as between each other, which will further encourage capable, responsible potential bidders to compete for PPP projects.

### B. FUNDAMENTALS OF PPP PROJECTS

#### 1. Introduction

PPP Projects in the highway sector will involve a number of key steps and procedures to be implemented by the NHA.
These steps include preparing an overall Program of projects suitable for PPP and which for specific projects includes preparatory studies such as Pre-feasibility studies and initial environmental impact studies. It also includes providing design standards and generating sufficient information to enable NHA to assess a PPP proposal.

2. **Developing a PPP Highway Program**

The NHA shall identify and continue to update a programme of national highway, motorway, tunnel and bridge projects that may be suitable for private sector participation.

Motorways will normally be limited access highways of minimum dual 2-lane carriageway standard, with grade separated interchanges and closed toll systems.

The NHA shall carry out all PPP projects, whether solicited or unsolicited\(^1\), using standard bidding procedures described in Section below. The PPP program shall be developed within the national transport policy and sector program for Pakistan within which pre feasibility studies will have determined the characteristics and viability of each PPP project. These pre feasibility studies will be updated on a regular basis as necessary. This is amplified in Section 3, below.

3. **Need for, and Content of the Pre-Feasibility Study**

The first step in the PPP process starts with NHA identifying a road transport need that may be fulfilled as a PPP project. To be processed as a PPP project, the NHA shall satisfy itself (through preparing a detailed pre-feasibility study\(^2\)) that the project is technically, environmentally, economically and financially viable (with or without government support) and in conformity with the principles of this Policy.

The purpose of a pre-feasibility study is to carefully analyze the size, location, technical options, socio economic impact, socio-environmental impacts and the broad potential financial viability of the project. In particular, the NHA shall ensure that each pre-feasibility study shall provide all the key information needed for the proposed implementation of a PPP project including among others the following:

(i) a defined rationale, scope and description of the PPP project
(ii) preliminary project cost estimates based on preliminary engineering designs
(iii) robust traffic forecasts; and revenues analysis from traffic and other sources
(iv) economic cost benefit analysis
(v) full social and environmental analyses including the mitigation costs
(vi) financial and sensitivity analysis

---

\(^1\) A basic principle is that most, if not all projects, will be solicited, that is based on a list of projects developed by NHA. Unsolicited projects are projects proposed by the private sector and will not generally be supported by NHA unless there are clear and overriding advantages such as new technology, opening up disadvantaged areas or other very strong reasons. Unsolicited projects should not come from the NHA’s medium term PPP program already under implementation.

\(^2\) The proponent of an unsolicited tender must itself prepare a full pre feasibility study.
(vii) an assessment of the issues and risks to be included under a risk management plan.

(viii) Market sounding, willingness to pay and other consultation

(ix) Viability gap and need for subsidy analysis

4. Institutional Arrangements

By putting the private sector in charge of the provision of a service the NHA does not waive its responsibility for the public service, it only changes the type of responsibility, which can even bring an increase in its technical and political complexity. Granting the service to the private sector means that the NHA has to adopt legal and institutional mechanisms to ensure that the service is provided efficiently and the responsibilities assumed by the private sector are fulfilled. The responsibility is heightened because the inefficiencies that the public used to accept from the government will not be tolerated from the private sector. The higher the rates the consumer pays for the service, the higher the expectations of improved service.

Attracting Private sector finance is a complex task and such a task dictates a dedicated PPP organization in NHA with skills necessary for management of all the phases in PPP project development. The personnel of this cell should be capable of project development and negotiating with the private sector on equal footing. This requires a level of professionalism and compensation comparable to that of market.

The Public Private Partnership unit of NHA (hereinafter referred to as the “PPP Cell”) shall be established comprising of highly professional and committed staff and shall be responsible for developing and processing all PPP Projects.

For administrative purposes, the PPP Cell shall maintain a list of PPP projects approved by the NHA, include these on an Approved Projects List and advertise same and shall:

(i) verify that all projects before tendering are supported by an adequate pre-feasibility study. In the event the pre-feasibility study is inadequate, the PPP Cell shall liaise with relevant departments of NHA to strengthen and improve the pre-feasibility study; and

(ii) if necessary, the PPP Cell may review or arrange for an independent, professional review and strengthening of pre-feasibility studies, and other documentation accompanying the submission.

The Pre-Feasibility study shall be included in the tender documents provided to all short listed bidders. The NHA, will include alignment, pre-feasibility and preliminary design studies of all of the projects on the Approved Projects List, and these will be made available to prospective bidders only as guidelines for establishing the viability of the projects offered. However, it is the ultimate responsibility of the bidder to prepare its own complete feasibility study, and not rely on the NHA Pre-Feasibility study.

C. TOLL POLICY

It is the NHA’s policy to mobilise the maximum resources possible from the users of new or improved facilities.
Consistent with the Concession Agreement, Concessionaires will be given the right to collect tolls at locations they consider appropriate and are approved by NHA, within their specified Concession Area, using either an “open” or “closed” toll system as contained in the bidding documents. The tolling arrangements at the interface between two Concession Areas shall be agreed between the Concessionaires concerned and NHA in consultation with any other provincial and/or local governments, if involved.

1. **Toll Levels**
   a. **For Financially viable Projects;**

   The tolls charged for use of the national highway, motorway, tunnel or bridge will be one of the key evaluation factors used to decide which bidder is awarded the Concession.

   It should be noted that toll levels estimated by NHA in its pre feasibility study will take into account a number of factors including cost recovery, levels of tolls on other toll roads, affordability, types of traffic and other factors relevant to the specific project.

   b. **For Projects needing Government Financial Support**

   In a few cases, if a project is economically viable but needs financial support to attract the private sector. In this case, tolls will be set by NHA through its pre feasibility study, and the criteria for tender award will be least subsidy/support from NHA and/or GOP. It should be noted that this follows current ECC approved PPP policy which specifies that support may be provided in a number of ways including through the MOF Viability Gap Fund or PSDP.

2. **Toll Structure**

   The PPP Cell will monitor the Concessionaires’ implementation of the contracted toll structure contained in the Concession Agreement and will exercise its powers to penalize or take necessary action against default under the provisions of the Concession Agreements.

3. **Toll Escalation**

   Escalation of toll rates and toll charges will be permitted, using the formula contained in the Concession Agreement. The Concessionaire shall propose to the PPP Cell proposed toll escalation consistent with the formula in the Concession Agreement. The PPP Cell will confirm the mathematical accuracy of the Concessionaire’s proposed toll, consistent with the Concession Agreement, as summarized in Appendix I.

   When applying the above rules, Concessionaires will be allowed to apply a lower level of toll escalation at any time, if they consider that this would improve the overall amount of toll revenue.

4. **Toll Exemptions**

   Concessionaires will not be required to exempt any specific vehicle types or group of road users from the payment of tolls except the following:
Policy and Regulatory Framework

- Provincial and National Highways & Motorway Police
- Fire Brigades
- Ambulances
- Armed Forces of Pakistan vehicles bearing broad arrow number plates
- Vehicles conveying MNA’s/MPA’s and Senators in person
- Vehicles having Supreme Court/High Court Flags/Insignia Plates.

However, Concessionaires can make arrangements with regular users of the facility (either individuals, companies or others), only to reduce the toll charged in individual cases.

5. **Toll Competition**

The introduction of new roads and bridges that depend on user charges (toll revenues) for their financial viability will need to take account of existing non-tolled or partially tolled competing routes, as well as any new routes that are planned. The NHA will endeavour to ensure that competing routes, especially roads of a similar standard, are tolled appropriately.

D. **OPERATIONAL AND ROAD MANAGEMENT POLICY**

1. **Vehicle Type Prohibition**

Concessionaires shall prohibit the use of motorways by pedestrians, non-motorised vehicles and other slow-moving vehicles such as motorcycles and tractors, to promote safety and smooth traffic flow.

2. **Vehicle Weight Limits**

The vehicle weight limits to be applied to any given project will be included in the functional specification and minimum design criteria issued with the bidding documents, and the NHA will undertake to ensure that appropriate legislation, rules and regulations are provided through appropriate agencies of the government to ensure that such vehicle weight limits can be enforced.

Under normal circumstances, Concessionaires shall exercise the power to weigh heavy vehicles if found violating the law of the land, prohibit them from passing through their Concession Area.

3. **Speed Limits**

Design speeds on individual PPP Projects sections will be part of the functional specification that is provided to Concessionaires at the time of bidding.

4. **Provision of Emergency Services**

Concessionaires will be required to arrange for the provision of emergency breakdown facilities as well as a means of liaising effectively with the emergency services. Provisions will be included in the Concession Agreement to accomplish this objective, and the PPP Cell shall monitor the Concessionaires compliance thereto.
5. **Tax Collection**

The collection of local taxes by the government agencies will not be allowed within a Concession Area. Entry and exit slip roads shall not be tolled by any entity other than the Concessionaire within 5 km of concession road entry and exit point and even then (i.e., beyond 5 km) it shall be ensured that wherever tolled, it will carry proper justification.

E. **FINANCIAL AND CONTRACTUAL ARRANGEMENTS**

1. PPP projects will involve limited recourse financing, which means that the funds for a project will be raised without any sovereign guarantee of repayment. The investors in, and lenders to, Concessionaires must therefore look to the revenues earned from toll collection, and other ancillary activities, for the returns on their equity and the servicing of their loans. Pre-financial close costs are non-recoverable, and Concessionaires shall bear all the costs associated with:

   (i) studies carried out by them to establish the financial and environmental viability of the project;

   (ii) legal and other expenses incurred by them in preparing Concession Agreements and arranging finance;

   (iii) construction and maintenance costs of the project (preferably including costs associated with relocation of utilities and construction supervision, where appropriate); and

   (iv) toll collection and operating costs (including the cost of providing breakdown services, and routine maintenance costs).

2. If so provided in the Concession Agreement, Concessionaires will be required to make annual contributions into a Maintenance/Rehabilitation Escrow Account to make provision for periodic maintenance and asset replacement costs.

3. The NHA will support applications of project sponsors in accessing facilities provided by multi-lateral and bi-lateral funding agencies to underwrite country risk for international loans but, without assuming any liability;

4. Where a public sector grant or other support; including but not limited to traffic guarantees, revenue guarantee, equity stake, annuity, a contribution to project cost, and other similar support, is available for selected projects, the extent will be indicated in the relevant bidding documents. However, it may vary depending upon the project viability and payback.

5. Concession Periods will generally be of 25 years. The Concession Period applicable to each individual project will be decided in advance by the NHA, and announced in the relevant bidding documents depending upon the project viability and payback.

6. At the end of the agreed Concession Period, the facility will be transferred to the NHA in a properly maintained and operational condition, at a cost of one Pakistan rupee to NHA.
F. INCENTIVES FOR INVESTMENT

To facilitate the implementation of NHA PPP projects incentives are available according to the regulations of Board of Investment (BOI) the tax regulations of the Federal Board of Revenue (FBR) and the administrative requirements of the Securities and Exchange Commission.

G. SECURITY PACKAGE

1. Model Concession Agreements have been prepared as a basis for privately financed and operated highway, tunnel and bridge projects to facilitate the tendering process. Each Request for Proposal will contain a project specific concession agreement which tenderers are expected to abide by, thus leading to a more efficient process of contract award.

2. The National Highway Authority Act 1991 amended in 2001, ensures that all the powers required by the NHA to initiate, operate and award projects to be undertaken through private sector financing. Further, BOT highway concessions are in place, and that those powers can be transferred to the Concessionaires, as necessary. In addition, details of all national highways and strategic roads, including the main elements of the national toll motorway and expressway system, have been Notified in the Official Gazette under the provisions of the NHA Act.

3. Detailed Rules and Regulations for the management and operation of the National Highway System have also been developed by the NHA. In addition, the location of all existing and proposed toll collection points on national highways and major Provincial roads has been documented by the NHA, and shall be stated in the bid documents.

4. For all PPP projects, the NHA will provide in the Concession Agreement:
   (i) procedures such as time extensions or termination to deal with specific ‘force majeure’ risks; and
   (ii) procedures for dealing with changes in costs and losses caused by changes in laws which are not reflected in the General Consumer Price Index. Such changes will be adjusted through suitable adjustment in the Concession Period.

5. The NHA will also undertake that:
   (i) appropriate assistance will be given to Concessionaires in obtaining the necessary Government Approvals for a project;
   (ii) land for projects will be made available to Concession Companies in a timely manner, clear and free from encumbrances (unless otherwise provided in the bid documents);
   (iii) agreements regarding the methods, costs and time-scales associated with any necessary removal or relocation of public utility services will be obtained from the utility companies, on the Concessionaires’s behalf;
   (iv) appropriate steps will be taken to prevent encroachments onto the right of way, and to control roadside facilities and advertising material, and to limit access to expressways and motorways to specific entry and exit points; and
   (v) the undertakings given in Section D of this document regarding operational and road management matters will also apply.
H. ONE WINDOW OPERATION

Under the new Policy, the NHA, under the direction of the National Highway Council, is being given the responsibility for coordinating and managing all PPP for designated national highway and bridge projects in Pakistan. At the working level, the PPP Cell has been formed within the NHA to interface with the private sector interested in PPP and all Concessionaires. The PPP Cell, on behalf of the NHA, will be responsible for:

1. Promotion of PPP including providing information
2. coordinating with all the agencies and Ministries concerned (including Provincial governments);
3. preparing and negotiating Concession Agreements;
4. monitoring the Concessionaires performance in accordance with the respective Concession Agreements; and
5. generally safeguarding the public interest.

I. PPP TENDERING PROCEDURES

1. PPP Projects to be Tendered

The NHA shall carryout all PPP projects using standard bidding procedures described in this Policy. Standard bidding involves a transparent, open and fair process summarized in this Section I, and to be detailed in a PPP Procedures Manual.

The PPP Cell shall maintain a list of PPP projects to be tendered on an Approved Projects List. To encourage prospective, capable bidders to compete for PPP projects, the PPP Cell shall ensure that the Approved Projects List is widely disseminated through: advertising in the print media [widely circulated newspapers, trade publications and periodicals]; the PPP Cell internet website and a printed copy of the same Approved Projects List shall provided free of charge to any party requesting such a copy.

The PPP Cell may commence to tender PPP projects only after it has been published on the Approved Projects List for a minimum period of thirty (30) days.

2. Prequalification Applications

Upon request by any interested party, the PPP Cell shall provide, for a non refundable fee of Rs 3,000, a prequalification application for any PPP project on the Approved Projects List. The PPP Cell will register all parties requesting prequalification applications after their due evaluation.

Any requirement established by the PPP Cell shall be set forth in the prequalification application and, subsequently in the bid/Request For Proposal documents or other documents for solicitation of proposals and shall apply equally to all bidders. The PPP Cell shall impose no criterion, requirement or procedure with respect to the qualifications of prospective bidders other than those provided for in this Policy.

The prequalification application shall include the manner and place for the submission of applications to prequalify and the deadline for the submission, expressed as a specific date and time and allowing sufficient time for bidders to prepare and submit their applications, taking into account requirements set out by NHA.
3. **Content of Prequalification Applications**

In order to compete for a PPP project, any interested party must timely submit to the PPP Cell a completed Prequalification Application showing that it qualifies by meeting such of the following criteria as the PPP Cell considers appropriate in the particular project:

(a) That they possess the necessary professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience, and reputation, and the personnel, to perform the project.

These criteria include, but are not limited to, the bidder's;

(i) general experience in the sector;

(ii) past performance on similar projects, including references from past clients for such projects;

(iii) experience in similar geographical/topographical/climatic areas;

(iv) capabilities with respect to personnel and equipment; and

(v) financial capability to carry out the project as reflected in its audited accounts, tax returns and bank's certificate

(vi) Legal status of the bidder.

(b) That they have legal capacity to enter into the PPP contract;

(c) That they are not insolvent, in receivership, bankrupt or being wound up, their affairs are not being administered by a court or a judicial officer, their business activities have not been suspended, and they are not the subject of legal proceedings for any of the foregoing;

(d) That they have the required legal status, and the proper tax status i.e. they will show that they have legally fulfilled their obligations to pay taxes to the State and that they are duly registered with the competent registration authority/body;

(e) That they have not, and their directors or officers have not, been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of five (5) years preceding the commencement of the procurement proceedings, or have not been otherwise disqualified pursuant to administrative suspension or disbarment proceedings.

4. **Review of Prequalification Applications**

The PPP Cell shall evaluate the qualifications of prospective bidders in accordance with the qualification criteria and procedures set forth in the prequalification application.

The PPP Cell shall disqualify a prospective bidder if it finds at any time that the information submitted concerning its qualifications was false, materially inaccurate or materially incomplete.
5. **Shortlist of Prequalified Bidders**

The PPP Cell shall make a decision with respect to the qualifications of each prospective bidder submitting an application to prequalify.

6. **Issuance of the Request for Proposal to all Prequalified Bidders**

Upon payment of a non-refundable fee of Rs 10,000, the PPP Cell shall simultaneously issue to all prequalified prospective bidders a comprehensive bid document/Request for Proposal which, among other objectives, establishes the rules of bidding and shall include, among others, the prefeasibility study. Grading criteria will be included in each Request for Proposal/Bidding Document.

At the time of bidding, each bidder will be required to provide a Bid Security, which will be returnable once the successful bidder, as the Concessionaire, has achieved Financial Closure. This Bid Security will be in the form of an irrevocable bank guarantee from a scheduled local bank or from a reputable foreign bank acceptable to the PPP Cell, encashable without recourse to the applicant. Insurance or Corporate Bonds will not be acceptable as Bid Security. The amount of the Bid Security will be specified in the bid documents/Request for Proposal.

After receipt of bids, the proposals will be ranked according to pre-determined criteria, including the extent to which the Outline Design has been met, the proposed level of equity and the proposed toll rates. In cases where GoP and/or NHA financial support is available for a project, a premium evaluation factor, stated in the bid documents, will also be given to the bidder that minimises the extent of the support required. At this stage, the NHA may also wish to re-confirm that the successful bidder has all the skills and experience required to execute the project. Accordingly, at the commencement of the PPP tender process, bidders may find it necessary to form a consortium of organisations to enhance their overall capabilities.

The first ranked bidder will be given 60 (sixty) days to negotiate an acceptable Concession Agreement and a specific timeframe to achieve Financial Closure, usually six months. The definition of financial close will be included in the Concession Agreement. In the event of failure to achieve Financial Close, the first ranked bidder will forfeit his Bid Security and the second ranked bidder will be invited to achieve Financial Closure, and if necessary extend the validity of his Bid Security. Once Financial Closure is achieved, the Bid Security of all remaining bidders will be returned.

7. **Projects in the Pipeline**

(i) The new Policy will not be applied to privately funded highway and bridge projects that are being negotiated by the NHA at the time the Policy comes into force.

(ii) However, it will be applied to all other such projects in the pipeline at that time. The Sponsors of these projects will be issued an Invitation Letter, along with a copy of the new Policy document and Model Concession Agreement, by the PPP Cell.

(iii) The project's Sponsors will be expected to finalise/initial the Concession Agreement within six weeks of their acceptance of the Invitation, and to achieve Financial Close within specified timeframe from initialising the Concession Agreement. In case Financial Close is not achieved within this
time, the Security will be encashed. Under normal circumstances, no extensions will be granted. However, if on the Sponsors’ request for extension, the PPP Cell is satisfied that delays are due to factors beyond the Sponsors’ control, and Financial Close is expected to be achieved very shortly, an extension may be given against an extension of the validity period of the Security.

If the Sponsors decline to proceed further under the new Policy, the NHA will be entitled to allocate the project to any other investor.
TOLL ESCALATION RULES

The maximum toll escalation factor that will be allowed in any year will be calculated as \((1+(r/100))\)

where: \( r \) is the annual rate of growth (%) in the Consumer Price Index, over the most recent 12-month period for which statistics are available.

The Consumer Price Index is maintained by the Federal Bureau of Statistics, and is published regularly.

After revision, all toll charges are expected to be rounded to the nearest Rs5 (toll rates per Km for each vehicle type will be calculated to the nearest 1000th of a Rupee). Any residual amounts (positive or negative) will be carried over to the next toll revision.
FURTHER INFORMATION

For further information, please contact:

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National Highway Authority,
Ministry of Communications
Government of Pakistan
27 - Mauve Area, G-9/1,
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