



**GOVERNMENT OF ODISHA  
WORKS DEPARTMENT**

**Contract for Consultants' Services**

**For**

***Road Sector Institutional Development  
for Government of Odisha***

between

**Chief Engineer, World Bank Projects, Odisha  
on behalf of  
Works Department, Government of Odisha**

and

**Intercontinental Consultants and Technocrats Pvt. Ltd (ICT)**

in Joint Venture with

**Grant Thornton Advisory Pvt. Ltd(GT-APL)**

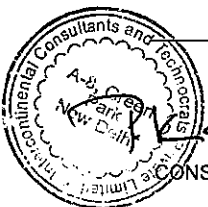
and in association with

**Arkitechno Consultants (India) Pvt. Ltd.**

as Sub-consultants

***Project Management Unit, Odisha State Roads Project  
Office of the Engineer-in-Chief (Civil), Odisha,  
Nirman Soudha, Keshari Nagar, Unit - V, Bhubaneswar - 751 001***

**Dated: 16<sup>th</sup> MARCH, 2012**

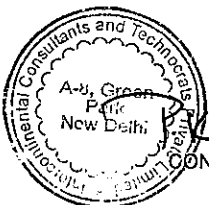


CONSULTANT

16/3/2012

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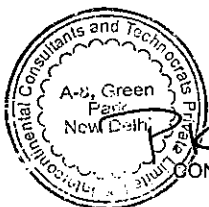


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*[Signature]*  
CONSULTANT 16/3/2012

*[Signature]*  
16/3/12  
Chief Engineer,  
World Bank Projects, Odisha



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## I. Form of Contract

LUMP-SUM

*Consultancy Services for Road Sector Institutional Development for Government of Odisha*

This CONTRACT (hereinafter called the "Contract") is made the 16<sup>th</sup> day of the month of March, 2012, between, on the one hand, Chief Engineer, World Bank Projects, Odisha on behalf of the Works Department, Government of Odisha (hereinafter called the "Client") and, on the other hand, a joint venture /consortium/association consisting of the following entities, each of which will be jointly and severally liable to the Client for all the Consultant's obligations under this Contract, namely,

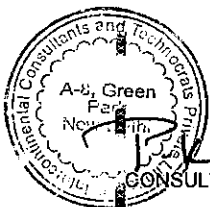
**Intercontinental Consultants and Technocrats Pvt. Ltd (ICT)**

in Joint Venture with

**Grant Thornton Advisory Pvt. Ltd (GT-APL), New Delhi**

and in association with

**Arkitechno Consultants (India) Pvt. Ltd. as Sub-consultants**  
(hereinafter called the "Consultant").



WHEREAS

- (a) the Client has requested the Consultant to provide certain consulting services as defined in this Contract (hereinafter called the "Services");
- (b) the Consultant, having represented to the Client that it has the required professional skills, and personnel and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract;
- (c) the Client has received a loan from the International Bank for Reconstruction and Development (hereinafter called the "Bank") towards the cost of the Services and intends to apply a portion of the proceeds of this loan to eligible payments under this Contract, it being understood (i) that payments by the Bank will be made only at the request of the Client and upon approval by the Bank, (ii) that such payments will be subject, in all respects, to the terms and conditions of the agreement providing for the loan, and (iii) that no party other than the Client shall derive any rights from the agreement providing for the loan or have any claim to the loan proceeds;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:

- (a) The General Conditions of Contract;
- (b) The Special Conditions of Contract;
- (c) The following Appendices:

Appendix A: Description of Services

Appendix B: Reporting Requirements

Appendix C: Key Personnel and Sub-Consultants

Appendix D: Breakdown of Contract Price in Foreign Currency

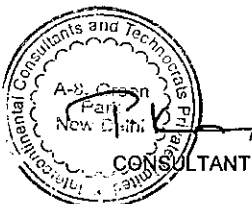
Appendix E: Breakdown of Contract Price in Local Currency

Appendix F: Services and Facilities Provided by the Client

Appendix G: Form of Advance Payment Guarantee \_\_\_\_\_ Not used

2. The mutual rights and obligations of the Client and the Consultant shall be as set forth in the Contract, in particular:

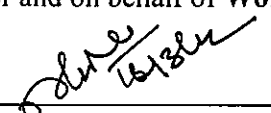
- (a) the Consultants shall carry out the Services in accordance with the provisions of the Contract; and



(b) the Client shall make payments to the Consultants in accordance with the provisions of the Contract.

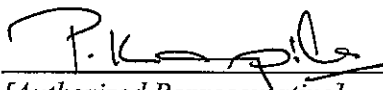
IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of Works Department, Government of Odisha

  
[Authorized Representative]  
Er. Nalini Kanta Pradhan,  
Chief Engineer, World Bank Projects, Odisha

For and on behalf of each of the Members of the Consultant

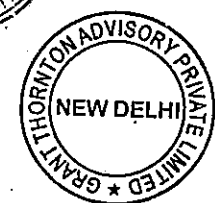
**Intercontinental Consultants and Technocrats Pvt. Ltd (ICT)**

 16/03/2012  
[Authorized Representative]  
Prashant Kapila,  
President

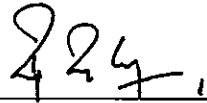


**Grant Thornton Advisory Pvt. Ltd (GT-APL), New Delhi**

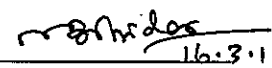
 16/03/2012  
[Authorized Representative]  
Ms. Devyani Singh, Associate Director

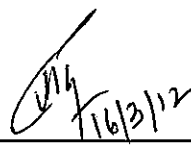


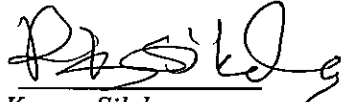
**Arkitechno Consultants (India) Pvt. Ltd.**

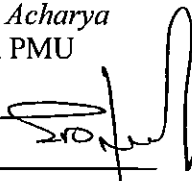
 16/03/2012  
[Authorized Representative]  
Rajesh Roy Choudhury, Managing Director

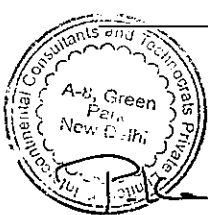



Witness :  16.3.12  
Er. Rashmi Ranjan Bohidar  
Executive Engineer, ISAP Cell

Witness :  16/3/12  
Mr. Manabhanjan Acharya  
Financial Advisor, PMU

Witness :  16.3.2012  
Dr. Prabeer Kumar Sikdar  
ICT Pvt. Ltd

Witness :  16.03.2012  
Col. S. P. Tomar  
ICT Pvt. Ltd



  
CONSULTANT 16/3/2012

  
Chief Engineer,  
World Bank Projects, Odisha

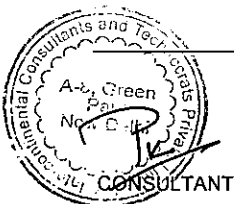
## II. General Conditions of Contract

### 1. GENERAL PROVISIONS

#### 1.1 Definitions

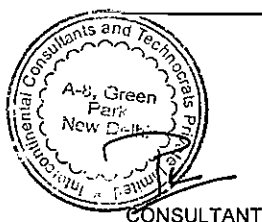
Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

- (a) "Applicable Law" means the laws and any other instruments having the force of law in the Government's country, or in such other country as may be specified in the Special Conditions of Contract (SC), as they may be issued and in force from time to time.
- (b) "Bank" means the International Bank for Reconstruction and Development, Washington, D.C., U.S.A., or the International Development Association, Washington, D.C., U.S.A.
- (c) "Consultant" means any private or public entity that will provide the Services to the Client under the Contract.
- (d) "Contract" means the Contract signed by the Parties and all the attached documents listed in its Clause 1, that is these General Conditions (GC), the Special Conditions (SC), and the Appendices.
- (e) "Contract Price" means the price to be paid for the performance of the Services, in accordance with Clause 6;
- (f) "Effective Date" means the date on which this Contract comes into force and effect pursuant to Clause GC 2.1.
- (g) "Foreign Currency" means any currency other than the currency of the Client's country.
- (h) "GC" means these General Conditions of Contract.
- (i) "Government" means the Government of the Client's country.
- (j) "Local Currency" means the currency of the Client's country.
- (k) "Member" means any of the entities that make up the joint venture/consortium/association, and "Members" means all these entities.
- (l) "Party" means the Client or the Consultant, as the case may be, and "Parties" means both of them.
- (m) "Personnel" means persons hired by the Consultant or by any Sub-Consultants and assigned to the performance of the Services or any part thereof.
- (n) "SC" means the Special Conditions of Contract by which the GC may be amended or supplemented.



- (o) "Services" means the work to be performed by the Consultant pursuant to this Contract, as described in Appendix A hereto.
- (p) "Sub-Consultants" means any person or entity to whom/which the Consultant subcontracts any part of the Services.
- (q) "In writing" means communicated in written form with proof of receipt.

- 1.2 Law Governing Contract** This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.
- 1.3 Language** This Contract has been executed in the language specified in the SC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.
- 1.4 Notices**
  - 1.4.1** Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified in the SC.
  - 1.4.2** A Party may change its address for notice hereunder by giving the other Party notice in writing of such change to the address specified in the SC.
- 1.5 Location** The Services shall be performed at such locations as are specified in Appendix A hereto and, where the location of a particular task is not so specified, at such locations, whether in the Government's country or elsewhere, as the Client may approve.
- 1.6 Authority of Member in Charge** In case the Consultant consists of a joint venture/ consortium/ association of more than one entity, the Members hereby authorize the entity specified in the SC to act on their behalf in exercising all the Consultant's rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.
- 1.7 Authorized Representatives** Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Client or the Consultant may be taken or executed by the officials specified in the SC.
- 1.8 Taxes and Duties** The Consultant, Sub-Consultants, and their Personnel shall pay such indirect taxes, duties, fees, and other impositions levied under the Applicable Law as specified in the SC, the amount of which is deemed to have been included in the Contract Price.





**1.9 Fraud and Corruption**

If the Client determines that the Consultant and/or its Personnel, sub-contractors, sub-consultants, services providers and suppliers has engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices, in competing for or in executing the Contract, then the Client may, after giving 14 days notice to the Consultant, terminate the Consultant's employment under the Contract, and the provisions of Clause 2 shall apply as if such expulsion had been made under Sub-Clause 2.6.1(c).

Should any personnel of the Consultant be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Contract, then that personnel shall be removed in accordance with Sub-Clause 4.2.

**1.9.1 Definitions**

For the purposes of this Sub-Clause, the terms set-forth below are defined as follows:

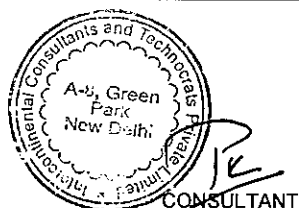
- (i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party<sup>1</sup>;
- (ii) "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation<sup>2</sup>;
- (iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party<sup>3</sup>;
- (iv) "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party<sup>4</sup>;
- (v) "obstructive practice" is
  - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

<sup>1</sup> "Another party" refers to a public official acting in relation to the selection process or contract execution. In this context, "public official" includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

<sup>2</sup> A "party" refers to a public official; the terms "benefit" and "obligation" relate to the selection process or contract execution; and the "act or omission" is intended to influence the selection process or contract execution.

<sup>3</sup> "Parties" refers to participants in the selection process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

<sup>4</sup> A "party" refers to a participant in the selection process or contract execution.



(bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Clause 3.8.

**1.9.2 Measures to be Taken**

(vi) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan were engaged in corrupt, fraudulent, collusive or coercive practices during the selection process or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;

(vii) will sanction a Consultant, including declaring the Consultant ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that the Consultant has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a Bank-financed contract;

**1.9.3 Commissions and Fees**

The Client will require the successful Consultants to disclose any commissions or fees that may have been paid or are to be paid to agents, representatives, or commission agents with respect to the selection process or execution of the contract. The information disclosed must include at least the name and address of the agent, representative, or commission agent, the amount and currency, and the purpose of the commission or fee.

**2. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF CONTRACT**

**2.1 Effectiveness of Contract**

This Contract shall come into effect on the date the Contract is signed by both Parties or such other later date as may be stated in the SC. The date the Contract comes into effect is defined as the Effective Date.

**2.2 Commencement of Services**

The Consultant shall begin carrying out the Services not later than the number of days after the Effective Date specified in the SC.

**2.3 Expiration of Contract**

Unless terminated earlier pursuant to Clause GC 2.6 hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SC.



**2.4 Modifications or Variations** Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party.

## **2.5 Force Majeure**

**2.5.1 Definition** For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

**2.5.2 No Breach of Contract** The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

**2.5.3 Extension of Time** Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

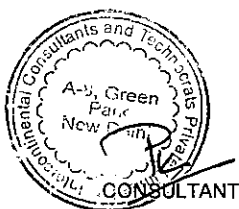
**2.5.4 Payments** During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

## **2.6 Termination**

**2.6.1 By the Client** The Client may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (f) of this Clause GC 2.6.1. In such an occurrence the Client shall give a not less than thirty (30) days' written notice of termination to the Consultant, and sixty (60) days' in the case of the event referred to in (e).

(a) If the Consultant does not remedy a failure in the performance of their obligations under the Contract, within thirty (30) days after being notified or within any further period as the Client may have subsequently approved in writing.

(b) If the Consultant becomes insolvent or bankrupt.



- (c) If the Consultant, in the judgment of the Client has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- (d) If, as the result of Force Majeure, the Consultant are unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- (e) If the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.
- (f) If the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause GC 8 hereof.

**2.6.2 By the Consultant**

The Consultants may terminate this Contract, by not less than thirty (30) days' written notice to the Client, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (c) of this Clause GC 2.6.2:

- (a) If the Client fails to pay any money due to the Consultant pursuant to this Contract and not subject to dispute pursuant to Clause GC 7 hereof within forty-five (45) days after receiving written notice from the Consultant that such payment is overdue.
- (b) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- (c) If the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause GC 8 hereof.

**2.6.3 Payment upon Termination**

Upon termination of this Contract pursuant to Clauses GC 2.6.1 or GC 2.6.2, the Client shall make the following payments to the Consultant:

- (a) payment pursuant to Clause GC 6 for Services satisfactorily performed prior to the effective date of termination;
- (b) except in the case of termination pursuant to paragraphs (a) through (c), and (f) of Clause GC 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel and their eligible dependents.



### 3. OBLIGATIONS OF THE CONSULTANT

#### 3.1 General

**3.1.1 Standard of Performance** The Consultant shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with Sub-Consultants or third Parties.

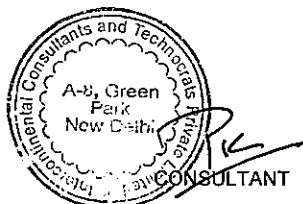
**3.2 Conflict of Interests** The Consultant shall hold the Client's interests paramount, without any consideration for future work, and strictly avoid conflict with other assignments or their own corporate interests.

**3.2.1 Consultants not to Benefit from Commissions, Discounts, etc.** The payment of the Consultant pursuant to Clause GC 6 shall constitute the Consultant's only payment in connection with this Contract or the Services, and the Consultant shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Consultant shall use their best efforts to ensure that the Personnel, any Sub-Consultants, and agents of either of them similarly shall not receive any such additional payment.

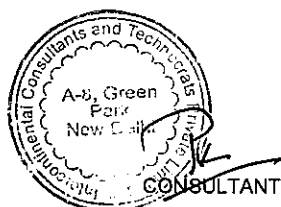
**3.2.2 Consultant and Affiliates not to be Otherwise Interested in Project** The Consultant agrees that, during the term of this Contract and after its termination, the Consultant and any entity affiliated with the Consultant, as well as any Sub-Consultants and any entity affiliated with such Sub-Consultants, shall be disqualified from providing goods, works or services (other than consulting services) resulting from or directly related to the Consultant's Services for the preparation or implementation of the project.

**3.2.3 Prohibition of Conflicting Activities** The Consultant shall not engage, and shall cause their Personnel as well as their Sub-Consultants and their Personnel not to engage, either directly or indirectly, in any business or professional activities which would conflict with the activities assigned to them under this Contract.

**3.3 Confidentiality** Except with the prior written consent of the Client, the Consultant and the Personnel shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Consultant and the Personnel make public the recommendations formulated in the course of, or as a result of, the Services.



- 3.4 Insurance to be Taken Out by the Consultant** The Consultant (a) shall take out and maintain, and shall cause any Sub-Consultants to take out and maintain, at their (or the Sub-Consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverage, as shall be specified in the SC; and (b) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums have been paid.
- 3.5 Consultant's Actions Requiring Client's Prior Approval** The Consultant shall obtain the Client's prior approval in writing before taking any of the following actions:
- (a) entering into a subcontract for the performance of any part of the Services,
  - (b) appointing such members of the Personnel not listed by name in Appendix C, and
  - (c) any other action that may be specified in the SC.
- 3.6 Reporting Obligations**
- (a) The Consultant shall submit to the Client the reports and documents specified in Appendix B hereto, in the form, in the numbers and within the time periods set forth in the said Appendix.
  - (b) Final reports shall be delivered in CD ROM in addition to the hard copies specified in said Appendix.
- 3.7 Documents Prepared by the Consultant to be the Property of the Client**
- (a) All plans, drawings, specifications, designs, reports, other documents and software submitted by the Consultant under this Contract shall become and remain the property of the Client, and the Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof.
  - (b) The Consultant may retain a copy of such documents and software. Restrictions about the future use of these documents, if any, shall be specified in the SC.
- 3.8 Accounting, Inspection and Auditing**
- 3.8.1 The Consultant shall keep, and shall cause its Sub-consultants to keep, accurate and systematic accounts and records in respect of the Contract, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify relevant time changes and costs.
- 3.8.2 The Consultant shall permit, and shall cause its Sub-consultants to permit, the Bank and/or persons appointed by the Bank to inspect its accounts and records relating to the performance of the Contract and the submission of the Proposal to provide the Services, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Consultant's attention is drawn to Clause 1.9.1 which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under



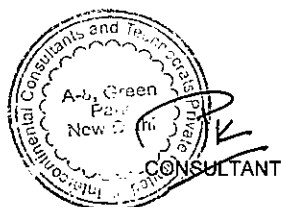
Clause 3.8 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures.).

#### 4. CONSULTANT'S PERSONNEL

- 4.1 Description of Personnel** The Consultant shall employ and provide such qualified and experienced Personnel and Sub-Consultants as are required to carry out the Services. The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Consultant's Key Personnel are described in Appendix C. The Key Personnel and Sub-Consultants listed by title as well as by name in Appendix C are hereby approved by the Client.
- 4.2 Removal and/or Replacement of Personnel**
- (a) Except as the Client may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Consultant, such as retirement, death, medical incapacity, among others, it becomes necessary to replace any of the Key Personnel, the Consultant shall provide as a replacement a person of equivalent or better qualifications.
  - (b) If the Client finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Consultant shall, at the Client's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Client.
  - (c) The Consultant shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

#### 5. OBLIGATIONS OF THE CLIENT

- 5.1 Assistance and Exemptions** The Client shall use its best efforts to ensure that the Government shall provide the Consultant such assistance and exemptions as specified in the SC.
- 5.2 Change in the Applicable Law Related to Taxes and Duties** If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost incurred by the Consultant in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred to in Clauses GC 6.2 (a) or (b), as the case may be.



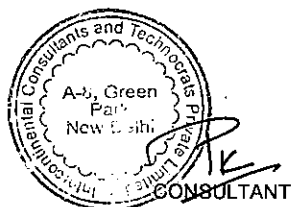
- 5.3 Services and Facilities** The Client shall make available free of charge to the Consultant the Services and Facilities listed under Appendix F.

## 6. PAYMENTS TO THE CONSULTANT

- 6.1 Lump-Sum Payment** The total payment due to the Consultant shall not exceed the Contract Price which is an all inclusive fixed lump-sum covering all costs required to carry out the Services described in Appendix A. Except as provided in Clause 5.2, the Contract Price may only be increased above the amounts stated in Clause 6.2 if the Parties have agreed to additional payments in accordance with Clause 2.4.
- 6.2 Contract Price** (a) The price payable in foreign currency/currencies is set forth in the SC.  
(b) The price payable in local currency is set forth in the SC.
- 6.3 Payment for Additional Services** For the purpose of determining the remuneration due for additional services as may be agreed under Clause 2.4, a breakdown of the lump-sum price is provided in Appendices D and E.
- 6.4 Terms and Conditions of Payment** Payments will be made to the account of the Consultant and according to the payment schedule stated in the SC. Unless otherwise stated in the SC, the first payment shall be made against the provision by the Consultant of an advance payment guarantee for the same amount, and shall be valid for the period stated in the SC. Such guarantee shall be in the form set forth in Appendix G hereto, or in such other form, as the Client shall have approved in writing. Any other payment shall be made after the conditions listed in the SC for such payment have been met, and the Consultant has submitted an invoice to the Client specifying the amount due.
- 6.5 Interest on Delayed Payments** If the Client has delayed payments beyond fifteen (15) days after the due date stated in the Clause SC 6.4, interest shall be paid to the Consultant for each day of delay at the rate stated in the SC.

## 7. GOOD FAITH

- 7.1 Good Faith** The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.





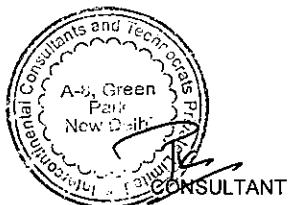
## 8. SETTLEMENT OF DISPUTES

### 8.1 Amicable Settlement

The Parties agree that the avoidance or early resolution of disputes is crucial for a smooth execution of the Contract and the success of the assignment. The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

### 8.2 Dispute Resolution

Any dispute between the Parties as to matters arising pursuant to this Contract that cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party for settlement in accordance with the provisions specified in the SC.

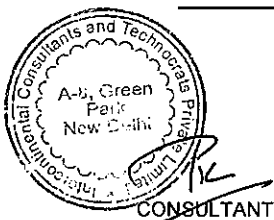


### III. Special Conditions of Contract

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
1.1(a)	The words "in the Government's country" are amended to read "in <b>India</b> ".
1.3	The language is <b>ENGLISH</b> .
1.4	<p>The addresses are:</p> <p>Client: <b>Chief Engineer, World Bank Projects, Odisha</b></p> <p>Attention: Er. Nalini Kanta Pradhan</p> <p>Facsimile: <u>+91 674 239 0080</u></p> <p>E-mail: <u>pmuosrp@gmail.com</u></p> <p>Consultant: <b>Intercontinental Consultants and Technocrats Pvt. Ltd.</b></p> <p>Attention: Mr. Prashant Kapila, President</p> <p>Facsimile: 011-26855252</p> <p>E-mail: <u>business@ictonline.com</u></p>
{1.6}	<p>The Member in Charge is : <b>Intercontinental Consultants and Technocrats Pvt. Ltd. (ICT)</b></p> <p><b>A-8, Green Park, New Delhi-110016, India</b></p>
1.7	<p>The Authorized Representatives are:</p> <p>For the Client: <u><b>Chief Engineer, World Bank Projects, Odisha</b></u></p> <p>For the Consultant: <u><b>Mr. Prashant Kapila, President</b></u></p>



<p>1.8 1.8.1.</p>	<p><b>For domestic consultants/sub-consultants / personnel and foreign consultants/personnel who are permanent residents in India</b></p> <p>The consultants, Sub-consultants and the Personnel shall pay the taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws during life of this contract and the client shall perform such duties in regard to the deduction of such tax as may be lawfully imposed.</p>
<p>1.8.2</p>	<p><b>For foreign Consultancy firms</b></p> <p>The Client warrants that the Client shall reimburse the Consultant, the Sub-Consultants and the Personnel for any indirect taxes, duties, fees, levies and other impositions imposed, under the Applicable Law, on the Consultant, the Sub-Consultants and the Personnel in respect of:</p> <p>(a) any payments whatsoever made by the client directly to the Consultant, Sub-Consultants and the Personnel (other than nationals or permanent residents of the Government's country), in connection with the carrying out of the Services;</p> <p>(b) any equipment, materials and supplies brought into the Government's country by the Consultant or Sub-Consultants for the purpose of carrying out the Services and which, after having been brought into such territories, will be subsequently withdrawn there from by them;</p> <p>(c) any equipment imported for the purpose of carrying out the Services and paid for out of funds provided by the Client and which is treated as property of the Client;</p> <p>(d) any property brought into the Government's country by the Consultant, any Sub-Consultants or the Personnel (other than nationals or permanent residents of the Government's country), or the eligible dependents of such Personnel for their personal use and which will subsequently be withdrawn there from by them upon their respective departure from the Government's country, provided that:</p> <ol style="list-style-type: none"> <li>(1) the Consultant, Sub-Consultants and Personnel, and their eligible dependents, shall follow the usual customs procedures of the Government's country in importing property into the Government's country; and</li> <li>(2) if the Consultant, Sub-Consultants or Personnel, or their eligible dependents, do not withdraw but dispose of any property in the Government's country upon which customs duties and taxes have been exempted, the Consultant, Sub-Consultants or Personnel, as the case may be, (i) shall bear such customs duties and taxes in conformity with the regulations of</li> </ol>



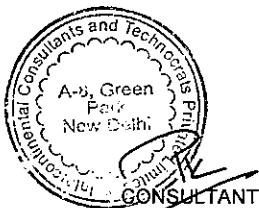
Special Conditions of Contract

	the Government's country, or (ii) shall reimburse them to the Client if they were paid by the Client at the time the property in question was brought into the Government's country.
1.8.3	<p>a) The client shall reimburse Service Tax payable in India as per Applicable Law. The consultant shall register it self for service tax with appropriate authority in India &amp; shall provide the registration Number to the client.</p> <p>b) Tax will be deducted at source as per the prevailing Income Tax Rules.</p>
2.1	The Effective Date is <i>2<sup>nd</sup> April, 2012</i>
2.2	The date for the commencement of Services is <i>9<sup>th</sup> April, 2012</i> .
2.3	The time period shall be <b>30 Months</b> .
3.4	<p>The risks and the coverage shall be as follows:</p> <p>(a) Third Party motor vehicle liability insurance in respect of motor vehicles operated in the Government's country by the Consultant or its Personnel or any Sub-Consultants or their Personnel, with a minimum coverage as per Motor Vehicles Act 1988;</p> <p>(b) Third Party liability insurance, with a minimum coverage of Rs.20,00,000 (Rupees Twenty Lakhs) ( After each occurrence the Consultant shall repay premium necessary to make insurance valid for this amount always);</p> <p>(c) professional liability insurance, with a minimum coverage of Three times the Contract Price;</p> <p>(d) employer's liability and workers' compensation insurance in respect of the Personnel of the Consultant and of any Sub-Consultants, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate; and</p> <p>(e) insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this Contract, (ii) the Consultant's property used in the performance of the Services, and (iii) any documents prepared by the Consultant in the performance of the Services.</p>



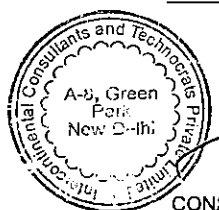
Special Conditions of Contract

3.7 (b)	The Consultant shall not use these documents and software for purposes unrelated to this Contract without the prior written approval of the Client.
5.1	"not applicable."
6.2(a)	The amount in foreign currency or currencies is <b>USD 635,100 plus applicable service taxes.</b>
6.2(b)	The amount in local currency is <b>INR 90,431,000 plus applicable service taxes.</b>
6.4	<p>The accounts are:</p> <p style="text-align: center;"><b>for foreign currency:</b></p> <p>Name of Beneficiary : Intercontinental Consultants &amp; Technocrats Pvt. Ltd.</p> <p>Account No. : 1120002800000044</p> <p>Name of Bank : Punjab National Bank, ECE House Branch, 28-A, K. G. Marg, New Delhi-110 001.</p> <p>Swift Code : MT 103 PUN BIN BB DCG</p> <p>Name of Corresponding Bank : Standard Chartered Bank, New York</p> <p>PNB's A/c No. with Standard Chartered Bank, New York : 3582080785001</p> <p>Swift Code : SCBLUS33</p> <p style="text-align: center;"><b>for local currency:</b></p> <p>Name of the Beneficiary : Intercontinental Consultants and Technocrats Pvt. Ltd.</p> <p>Bank Name : Axis Bank Ltd</p> <p>Address : K-12, Green Park Main, New Delhi-110016</p> <p>Bank Account No. : 015010200012999</p> <p>IFS Code : UTIB 0000015</p> <p>MICR Code : 110211003</p>



*Payments shall be made according to the following schedule by Client after approval of the Review Committee & World Bank:*

<i>Sl.</i>	<i>Deliverable / Output Per Contract</i>	<i>Tentative 'Due Timing'</i>	<i>Quantity Due in each case</i>	<i>Percentage of Payment</i>
1	<b>Inception Report (IR)</b>	End of week 4	10	5%
2	<b>Quarterly Progress Reports (QPR)</b> x 7	End of each calendar quarter	7	(1% each) 7%
3	<b>Workshops:</b> associated Presentations / Working Papers / Materials) – up to ten (10) workshops	Timings to be resolved in IR	10	--
4	<b>Working Paper</b> on Short-to-Medium Term OWD Re-structuring & Reorganization	End of month 6	7	3%
5	<b>Interim Report</b> on Revision of OPWD Code & Manual (Structuring, Content, Issues, Timing)	End of month 6	7	3%
6	<b>Final</b> OPWD Code & Manual	End of month 9	7	2%
7	<b>Report</b> on Training Needs Assessments (TNA) Results, Proposed TNA-Based Program(s) and OWD 'Training' Role	End of month 9	7	5%
8	<b>Draft Report</b> on Odisha Road Sector Policy and requirements for its implementation	End of month 10	7	5%
9	<b>Interim Report</b> on Preparations for Inaugural Master Plan for Main Road Network in Odisha	End of month 10	7	5%
10	<b>Report</b> on Road Infrastructure Safety Management Review	End of month 12	10	5%
11	<b>Final Report</b> on Odisha Road Sector Policy	End of month 12	7	2%
12	<b>Report</b> on Management of Outsourced Road Toll Collection & Maintenance / Operations	End of month 14	7	3%
13	<b>Mid-Term Status Report (MTSR)</b>	End of month 14	7	5%
14	<b>Report</b> on Vehicle Axle Load Regulation & Management	End of month 16	7	3%

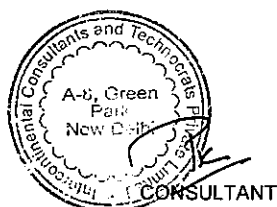


CONSULTANT

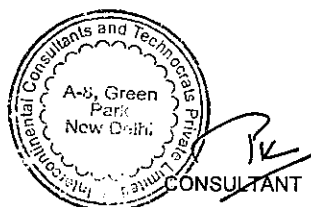
Special Conditions of Contract

<i>Sl.</i>	<i>Deliverable / Output Per Contract</i>	<i>Tentative 'Due Timing'</i>	<i>Quantity Due in each case</i>	<i>Percentage of Payment</i>
15	<b>Preliminary Report</b> on Study of Main Roads Funding Options & Possible Road Fund	End of month 16	7	5%
16	<b>Draft Report</b> on Proposed 'Odisha Road Safety Action Plan'	End of month 16	10	3%
17	<b>Final Report</b> on Proposed 'Odisha Road Safety Action Plan'	End of month 19	10	2%
18	<b>Completion Report</b> on Inaugural Master Plan for Main Road Network in Odisha	End of month 22	7	5%
19	<b>Final Report</b> on Study of Main Roads Funding Options & Recommendations on Road Fund	End of month 22	7	5%
20	<b>Draft Report</b> on Medium-to-Longer Term Strengthening of the Institutional Framework / Structures of Odisha's Roads Sector	End of month 24	7	5%
21	<b>Final Report</b> on Strengthening of the Institutional Framework / Structures	End of month 26	7	2%
22	<b>Draft Final Report (DFR)</b>	End of month 28	7	10%
23	<b>Final Report</b> (after OWD / GOO response to DFR)	End of month 30	7	10%

6.5	<p>The interest rate is:</p> <ul style="list-style-type: none"> <li>- London Inter-Bank On-Lending Rate [LIBOR] plus 2% for foreign currency; and</li> <li>- 8% (Commercial Bank's prime lending rate of interest) for local currency..</li> </ul>
8.2	<p>Disputes shall be settled by arbitration in accordance with the following provisions:</p> <ol style="list-style-type: none"> <li>1. <u>Selection of Arbitrators.</u> Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three arbitrators, in accordance with the following provisions: <ol style="list-style-type: none"> <li>(a) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on</li> </ol> </li> </ol>



	<p>the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to <b>Secretary General, Indian Roads Congress India, New Delhi</b> for a list of not fewer than five nominees and, on receipt of such list, the Parties shall alternately strike names therefrom, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, <b>Secretary General, Indian Roads Congress India, New Delhi</b> shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.</p> <p>(b) Where the Parties do not agree that the dispute concerns a technical matter, the Client and the Consultant shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by <b>Secretary General, Indian Roads Congress India, New Delhi</b>.</p>
	<p>(c) If, in a dispute subject to Clause SC 8.2 1.(b), one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to the <b>Secretary General, Indian Roads Congress India, New Delhi</b> to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute.</p> <p>2. <u>Rules of Procedure.</u> Except as stated herein, arbitration proceedings shall be conducted in accordance with the rules of procedure for arbitration of the United Nations Commission on International Trade Law (UNCITRAL) as in force on the date of this Contract.</p> <p>3. <u>Substitute Arbitrators.</u> If for any reason an arbitrator is unable to perform his function, a substitute shall be appointed in the same manner as the original arbitrator.</p> <p>4. <u>Nationality and Qualifications of Arbitrators.</u> The sole arbitrator or the third arbitrator appointed pursuant to paragraphs (a) through (c) of Clause SC 8.2 1 hereof shall be a recognized legal or technical expert with extensive experience in relation to the matter in dispute.</p>





Special Conditions of Contract

	<p>5. <u>Miscellaneous</u>. In any arbitration proceeding hereunder:</p> <ul style="list-style-type: none"><li>(a) proceedings shall, unless otherwise agreed by the Parties, be held in <b>Bhubaneswar, INDIA</b>;</li><li>(b) the <b>English</b> language shall be the official language for all purposes; and</li><li>(c) the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.</li></ul>
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CONSULTANT

  
Chief Engineer,  
World Bank Projects, Odisha

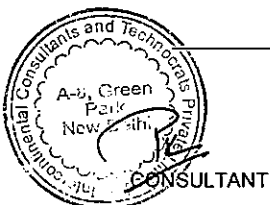
## IV. Appendices

### APPENDIX A – DESCRIPTION OF SERVICES

#### CONSULTANCY SERVICES FOR ROAD SECTOR INSTITUTIONAL DEVELOPMENT

##### Background

1. The State Government of Odisha (GOO) through the Government of India (GOI) has received a loan from the International Bank for Reconstruction and Development (IBRD) for implementation of the Odisha State Roads Project and intends to apply a portion of this loan to finance technical assistance and advisory services for institutional development support to assist GOO to improve its road sector policy, institutional capacities and legal framework to align it with the rapidly changing environment and context.
2. In the roads sector, the GOO is aiming for more effective capabilities and performance, to provide improved services to road users and assist the state's economic development. To achieve this, the GOO is implementing various reforms and modernization measures to strengthen the institutions and policy framework in the sector. The institutional strengthening (IS) strategy being followed by GOO in this sector is based on an incremental approach, in which the scope and pace of changes are carefully matched to the state's priorities, circumstances and resources.
3. The World Bank assisted Odisha State Roads Project (OSRP) will help the GOO to achieve its roads sector objectives by inter alia integrating the main elements of the IS strategy into the Project's overall design and by funding technical and consultancy services for implementation of planned IS activities. An Institutional Strengthening Action Plan (ISAP) for 2008–2018 presented in a matrix format as shown in **Appendix 1** has been endorsed by the State Government to guide implementation of IS activities in the sector and to facilitate monitoring of IS results by the GOO and the Bank. The ISAP includes clear, monitorable targets and milestones for a planned range of policy, capacity and resource improvements in the following fields.
  - Road Sector Strategy (Regulatory & Strategic Context)
  - Core Processes in Roads Management
  - Organizational Structure & Management
  - Financial Management, Audit & Administration
  - Information & Communication Technology and MIS
  - Human Resources Development & Capacity Building



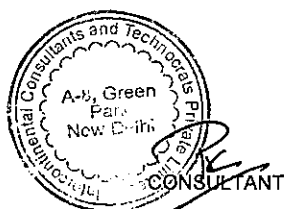
4. The GOO has now decided to seek external technical expertise and inputs to achieve the more substantive and challenging ISAP targets and to provide implementation support to the overall ISAP program. It has also been decided to secure this assistance in the form of consulting services.

#### **Objective & Scope of the Services**

5. The main objective of the *Road Sector Institutional Development* consultancy assignment is to enhance the capacity of the Odisha Works Department (OWD) and where appropriate, other concerned GOO road sector agencies) to carry out road infrastructure development, provision and management efficiently and effectively; to improve the engineering aspects and planning for road safety management in the state, and to initiate mechanisms for sustainable future growth in the resources dedicated to roads infrastructure management.
6. The achievement of this overall objective will at varying stages involve policy and institutional interventions in the roads sector, in accordance with the ISAP. This will require diverse forms of technical assistance, training and capacity building services, policy studies and implementation support (including on legal and statutory aspects).
7. The various targets are to be carried out /achieved by the selected consultants (hereafter referred to simply as 'the consultant') as a set of distinct Tasks integrated into one overall 'package'. The services 'package' shall include broadly-based 'decision-making facilitation and support' to the Client in the process of preparing and presenting recommendations to GOO and (once GOO decisions are made) in subsequent decision implementation action. This is expected to require the consultant to provide some expertise in legislative drafting and/or in the development of documentation of a legal and/or statutory nature.

#### **Specific Tasks Comprising this Assignment**

8. The major specific Tasks to be engaged under these services are as follows.
  - I. **Revision of Works Code and Manual:** Comprehensive revision and updating of the Odisha Public Works Department (OPWD) Code and (procurement) Manual as the framework of policy, standards, responsibilities and powers for planning, preparation, contracting and execution/management of public works in Odisha (including Buildings), then assisting their submission for GOO endorsement and subsequently facilitating their promulgation /



operationalization. Involves inter alia (i) updating of procedures, responsibilities and accountabilities in all works stages from project inception / planning to completion, in conformity / consistency with GOI and GOO accounting and audit requirements; (ii) revision of provisions on dispute redressal mechanism(s) to acknowledge relevant 'complaints handling' and RTI Act aspects; (iii) inclusion of new sections on PPP policy and guidelines, on Environment and Social (safeguards) Management, on e-procurement requirements and processes, on Construction Zone Safety guidelines and on Road Safety Engineering / Design requirements; (iv) assistance to OWD for completion of the (already underway) review / updating of contractual documents for all GOO procurement of goods, works and services, with their integration / cross-referencing in the contents of the revised Code & Manual where appropriate; and (v) facilitating Workshops and other 'consultation' initiatives for the progressive review of the evolving revised draft Code & Manual by both OWD staff and by other concerned GOO agencies at appropriate stages.

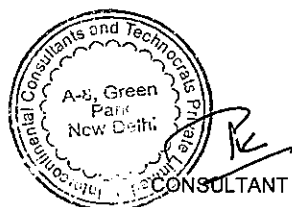
The deliverable under this task shall include (but not limited to) interim report on Revision of OPWD Code & Manual (Structuring, Content, Issues, Timing) followed by the final revised OPWD code , Procurement Manual and all standard Procurement Documents (goods, works & services) after completion of related workshop/ consultation with various stake holders. The key input for this task shall be mainly by the Team Leader-cum-Road Agency Management Specialist, Sector Domain Specialist, Procurement Specialist and Legal Specialist

**Consultant's Indicative Methodology for Task- I**

**REVISION OF WORKS CODE AND MANUAL**

<b>Task 201: Study Works Code and Manuals</b>	<b>8.1</b>
<b>Task 202: Study Present Organization, Structure, Functioning and GOO Legal Endorsements</b>	<b>8.1</b>
<b>Task 203: Update them for any latest Amendments</b>	<b>8.1</b>

As per the existing practice with organizations whether CPWD, Military Engineering services or PWD's they all have their works code and manual which lay down the frame work of policies, standards, responsibilities and powers for planning, preparation, contracting and execution / management of public works. On the similar lines OWD, should have its works code and manual for roads as well as buildings which are required to be revised by the Consultants to meet the requirement of present day scenario as being practiced by MoRT&H / NHAI as well as other restructured PWD's. The Consultants



immediately after arriving at site shall get hold of existing manual and carry out its detailed study relating with existing present organizational structure, their functioning including various levels of head offices and field organizations for their powers for contracting and execution purposes.

The Consultants shall also go through the latest correspondence files of clients related with policies and other organization matters to check on any amendments having been issued by GOO for implementation by OWD. These amendments shall also be incorporated in the existing manuals for their review.

The existing works code and manual shall be divided into various sub parts in accordance with the different roles / functioning the OWD, which it has been practicing, and given to the concerned Consultants for their respective fields. These key professionals shall be given a particular time frame for studying the particular section of manual and submit their reports by the time frame in accordance with targets of deliverables such as inception report.

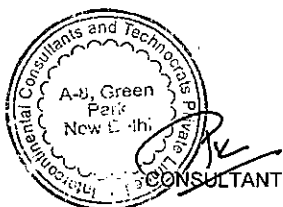
While studying the manual, it shall also be seen that, have the existing policies / regulatory frameworks been legally endorsed by GOO or not. In case any procedure requirement, being practiced so far has no legal validity, may not be taken into consideration and looked into afresh.

**Task 204: Conceptualization for Updating Procedures, Responsibilities and Accountabilities from 8.1 inception till Completion of Projects by OWD**

When such kind of reviews, reorganization and restructuring of an organizations concerned it involves five sets of attributes to the organization setting.

- a) The set of values
- b) Set of assumption of people
- c) Various levels of organizations, i.e. head quarters and fields
- d) Inter departmental transactional functions
- e) Inter personnel relationship for the set of goals and structured activates of that organization

For this institutional strengthening purposes the Consultants shall meet the organizational hierarchy and its members to get their views to systematically address the problems and opportunities as foreseen by OWD, its already structured ISAP (2008-18) and based on experience of various key



professionals on the issues related with modern day organization structures / their functioning, which could be set as a template for restructured OWD. The concept of restructuring / strengthening / revision of OWD manual shall be based on team building, survey feedback, role analysis and inter group conflict resolutions being practiced by other infrastructure organizations which already been in existence / restructured to meet the changed scenario of infrastructure sector.

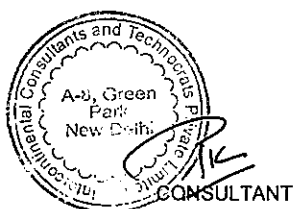
The revised works manual shall also address the quality of work life, work redesign using socio-technical system theory, collateral organizational working behaviors and strategic planning methods for the HO and field units.

**Discuss Existing Policies at Appropriate Levels of  
Task 205: Client for its Shortcomings as per their 8.1  
Observations**

During discussions with OWD officials at various levels i.e. right from lowest field units to highest head quarters i.e. Engineering-in-Chief, the Consultants shall try to find out various short comings in the existing policies and functioning as well as their views on addressing those problems. This will facilitate the Consultants to summarize their views on perceived flaws in the system as viewed by OWD employees and their way of trouble shooting, so that democratized method of problem resolution is adhered by Consultant. This concept shall also facilitate in getting the final documents cleared without much of difficulties.

**Review and Updating of Procedures, Responsibilities  
Task 206: and Accountabilities for various Stages of Project 8.1  
Works**

With an all round development in infrastructure / highway sector, the procedures / functioning of all PWDs is being aimed by MoRT&H, that all the Infrastructure organization of the country and state are at same pedestal with each other for their organizational structure, procedure, power and other functional parameters. This has become prerequisite from the point of view of lending agencies i.e. domestic as well as international banks. While updating the procedures of OWD, the Consultants shall take this point into consideration. The procedures, the responsibilities and accountability shall be so worked out, set and established that OWD is at par with GoI / GOO for accounting and auditing procedures. It shall help the organization and its staff to be compatible with National / International infrastructure policies / procedures.



These revised procedures shall be applicable for

- a) Delegation of parts, planning, contracting and execution / management of works;
- b) Responsibilities of the staff at each level for their accountability;

**Review of Existing Channel of Submission of Task Documents for Endorsement by GOO for their 207: Promulgation and Operationalization as well as Implementation 8.1**

The revised procedures as devised by consultants shall also be applicable to the documentary procedures and correspondences to be taking place between various offices for management and execution of contracts / works at ground. As well as their management for post execution handling of projects. These procedures shall also require endorsement by GOO for smooth functioning of OWD.

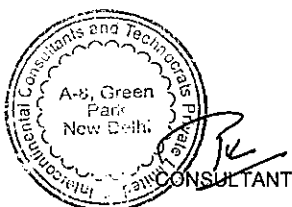
**Task Review of Dispute Review Mechanism in line with 208: Legal Framework 8.1**

The Consultants appreciate the need of projects for their post execution management. With the international agencies taking part for bidding process as well as investments in domestic projects, it has become mandatory that the dispute review mechanism followed is as per the procedures being practiced by FIDIC, DRB and Arbitration Rules / Regulations.

The work procedures established for OWD by Consultants shall be in conformity with above framework. These procedures of redressal mechanisms shall also form part of training syllabus / schedules to be taken up by Consultants for the benefit of OWD and their staff.

**Task Redressal of Complaints and RTI Act related 209: Queries and Linked Aspects 8.1**

With the awareness of public at all levels, and pro activeness of media the works related with public always fall under scrutinizing of every one. The Consultants shall take due care that the RTI mechanism being practiced at national and state levels are incorporated into the revised work procedure of OWD. While drafting the manual these procedures are well laid out, so that each office of OWD is in position to handle these issues effectively and to the satisfaction of public.



<b>Review of PPP Policies and Guidelines in Task 210: Consonance with Environmental and Social Management, E-procurement and Road Safety Engineering</b>	<b>8.1</b>
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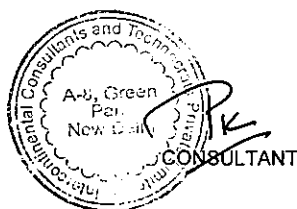
The PPP concept is an accepted norm by the GOI / Planning Commission as well as at state levels. In this new format the private players / organizations participate an infrastructure development at national / state level, the projects taken up under this format are of very large size, involving large investments. At planning commission level, the Model Concession Agreement has already been formulated and circulated to all organizations taking part in developmental procedures. At the state level, the policies related with PPP have to be tailored to fit in into the state level scenarios. Though the state level scenario shall not have much dissimilarity with nation PPP scenario but still could be some changes in terms of planned outlay levels / supervision modes, which shall be addressed by the Consultants for formulating the fresh rules and regulations. The MCA for state shall also be revised accordingly. This shall also the funding policy as applicable at state level.

The revised PPP policies shall also address the procedures to be adopted for E-procurement as being practiced internationally / nationally.

As per the PPP formats of development of infrastructure, there is a procedure for concessionaires to operate and maintain the road constructed by them. During this period they collect the toll as part of their accepted / contracted revenue model as jointly agreed between Client / Concessionaire. The Road safety engineering if not followed properly at the time of construction of road could play a major deterrent during O&M period if riding quality, road signages / furniture to be fixed for the guidance of commuters / users of the road for day and night purposes has not been followed properly. Any accident on the road could result into blocking of particular lane / traffic jam and ultimately the loss of revenues / of public life. Thus PPP policy / guidelines framed shall take due note of this aspects.

<b>Task 211: Review of Contractual Procedures and Documents for all Categories of Works i.e., Goods, Works and Services to Support GOO and OWD</b>	<b>8.1</b>
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The revised contractual procedure formulated by Consultant shall be so framed that it covers the wide spectrum for OWD / GOO for their procurements. Since construction of highways as well as buildings involves





large number of goods / services to be incorporated in the ultimate finish products, the contractual procedures shall be applicable for procurement of all capital goods and services.

**Task 212: Conduct of Workshops / Submission of Interim Report of OPWD Code & Manual (Structuring, Content, Issues, Timing) 8.1**

The Consultants shall organize the discussions, presentations and conduct of properly organized workshops involving all the manuals of review committee in accordance with ToR para 18 for their comments and observations if any. The observations and their comments shall be incorporated in the revised work procedures as drafted so far. Having incorporated the observations of review committee, it shall again brought to their notice prior to submission of interim report on revised OPWD code and manual by the end of Six months.

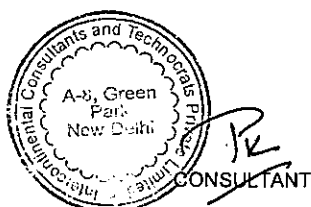
In accordance with milestones laid down for deliverables, the interim report on revised OPWD.

**Task 213: Phased and Progressive Integration of all the above Tasks by Organizing Workshops and Consultations at various levels of GOO to Evolve Revised Draft Codes & Manuals for OWD 8.1**

Having submitted the interim report to OWD, it is most likely that this interim report shall be circulated by GOO to all the concerned departments for their comments / observations. Since it involves the procedures and financial powers at various levels. During the period of interim report to final submission i.e. it gap of Seven months shall be utilized for phased and progressive integration of these procedures with all the departments transacting with OWD on infrastructure development matters. All their observations shall finally be incorporated into the revised draft of Interim Report on OWD Manual.

**Task 214: Submission of Final Report Prepared by Team Leader-cum-Road Agency Management Specialist , PWD Sector Domain Specialist, Procurement Specialist and Legal Specialist 8.1**

In accordance with milestone of deliverables and the key inputs given by Team Leader-cum-Road Agency Management Specialist, Sector Domain Specialist, Procurement Specialist and Legal Specialist, the final report on revised Works Code and Manual shall be submitted to OWD by the Consultant by the end of Thirteenth month as per schedule.





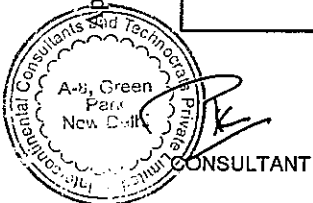
Appendix A: Description of Services

Task No.	Description of Activity	Activity Duration (in Months)	Assignment Duration (Months)																																	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
<b>TASK GROUP I: COMMENCEMENT OF PROJECT ASSIGNMENT</b>																																				
101	Mobilization of Team Leader-cum-Road Agency Management Specialist and Key Professionals	0.50	■																																	
102	Collection of existing Works Code and Manual of OWD	AW		■																																
103	Introductory Briefing and Meeting with Client	AW			■																															
104	Visit to select Nodul Centres / Roads of Orissa Road Network	1.0, AW				■																														
105	Prioritization of Activities and Workshops in Consultation with Client	AW					■																													
<b>TASK GROUP II: REVISION OF WORKS CODE AND MANUAL</b>																																				
201	Study Works Code and Manuals	2.0, AW	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
202	Study Present Organization, Structure, Functioning and GOO Legal Endorsements	1.5, AW	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
203	Update them for any latest Amendments	1.5, AW	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
204	Conceptualization for Updating Procedures, Responsibilities and Accountabilities from inception till Completion of Projects by OWD	5.00, AW								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
205	Discuss Existing Policies at Appropriate Levels of Client for its Shortcomings as per their Observations	2.0, AW								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
206	Review and Updating of Procedures, Responsibilities and Accountabilities for various Stages of Project Works	2.0, AW								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
207	Review of Existing Channel of Submission of Documents for Endorsement by GOO for their Promulgation and Operationalization as well as Implementation	2.0, AW								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
208	Review of Dispute Review Mechanism in line with Legal Framework	2.0, AW								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
209	Redressal of Complaints and RTI Act related Queries and Linked Aspects	2.0, AW								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
210	Review of PPP Policies and Guidelines in Consonance with Environmental and Social Management, E-procurement and Road Safety Engineering	2.0, AW								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
211	Review of Contractual Procedures and Documents for all Categories of Works i.e., Goods, Works and Services to Support GOO and OWD	2.0, AW								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
212	Conduct of Workshops / Submission of Interim Report of OPWD Code & Manual (Structuring, Content, Issues, Timing)	6.00								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
213	Phased and Progressive Integration of all the above Tasks by Organizing Workshops and Consultations at various levels of GOO to Evolve Revised Draft Codes & Manuals for OWD	AW								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
214	Submission of Final Report Prepared by Team Leader-cum-Road Agency Management Specialist, PWD Sector Domain Specialist, Procurement Specialist and Legal Specialist	13.00								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Legend  
 ■ Continuous Activity  
 ■ ■ ■ ■ ■ Intermittent Activity (as and when required)  
 AW As and when required

Chief Engineer,  
 World Bank Projects, Odisha

Appendix A: Description of Services



Task No.	Description of Activity	Activity Duration (In Months)	Road Agency Management Specialist-cum- Team Leader	Organizational Development Specialist-cum- Deputy Team	Financial Analyst & Business Planning Specialist	Transport Planning (Roads) Specialist	Transport Economics Specialist	Senior Highways Engineer (Pavements Management & GIS Applications (Master Planning) Specialist	Road Safety (Infrastructure Design & Management) Specialist	PWD Sector Domain Specialist	Procurement Specialist	Training & Human Resources Development (HRD) Specialist	Human Resources Management (HRM) Specialist	Legal Specialist
<b>TASK GROUP II: REVISION OF WORKS CODE AND MANUAL</b>														
201	Study Works Code and Manuals	2.0, AW	P							P				P
202	Study Present Organization, Structure, Functioning and GOO Legal Endorsements	1.5, AW		P								P		P
203	Update them for any latest Amendments	1.5, AW	P	S			S			P				P
204	Conceptualization for Updating Procedures, Responsibilities and Accountabilities from inception till Completion of Projects by OWD	5.00, AW	P	S				S		P				P
205	Discuss Existing Policies at Appropriate Levels of Client for its Shortcomings as per their Observations	2.0, AW	P	S				S		P				P
206	Review and Updating of Procedures, Responsibilities and Accountabilities for various Stages of Project Works	2.0, AW	P	P				S		P				P
207	Review of Existing Channel of Submission of Documents for Endorsement by GOO for their Promulgation and Operationalization as well as Implementation	2.0, AW	P	P				S		P				P
208	Review of Dispute Review Mechanism in line with Legal Framework	2.0, AW	P	P				S		P				P
209	Redressal of Complaints and RTI Act related Queries and Linked Aspects	2.0, AW	P	P				S		P				P
210	Review of PPP Policies and Guidelines in Consonance with Environmental and Social Management, E-procurement and Road Safety Engineering	2.0, AW	P	P				S		P				P
211	Review of Contractual Procedures and Documents for all Categories of Works i.e., Goods, Works and Services to Support GOO and OWD	2.0, AW	P	P	P			S		P				P
212	Conduct of Workshops / Submission of Interim Report of OPWD Code & Manual (Structuring, Content, Issues, Timing)	2.0, AW	P	P				S		P				P
213	Phased and Progressive Integration of all the above Tasks by Organizing Workshops and Consultations at various levels of GOO to Evolve Revised Draft Codes & Manuals for OWD	6.00	P	P				S		P				P
214	Submission of Final Report Prepared by Team Leader-cum-Road Agency Management Specialist, PWD Sector Domain Specialist, Procurement Specialist and Legal Specialist	AW	P	P				S		P				P
214	Submission of Final Report Prepared by Team Leader-cum-Road Agency Management Specialist, PWD Sector Domain Specialist, Procurement Specialist and Legal Specialist	13.00	P	S				S		P				P
<b>Legend</b>														
P Primary Responsibilities														
S Secondary Responsibilities														

- II. **Road Sector Policy & Strategy:** Establishment of a state-level strategic policy and vision document for the Odisha road sector and determination of related measures to better align the policy, legal and institutional framework and organizational capacities in Odisha with the needs of the road sector. Involves *inter alia* (i) review and assessment of the current main policies relating to roads development and management and the range of associated legislation, regulation and/or other statutory mechanisms; (ii) analysis of known and projected road sector demands, challenges and declared GOO aims / targets in the sector; (iii) identification of any significant limits and/or critical 'gaps' in the authority / powers / policies now available to GOO for the evolving road sector circumstances; (iv) determination of GOO options and opportunities in strengthening the road sector framework for future requirements; and (v) preparation of draft proposed 5-10 years' Policy and Vision document(s).

The deliverable under this task shall include ( but not limited to ) draft report on Odisha Road Sector Policy followed by the final one after completion of related workshop/ consultation with various stake holders. The key input for this task shall be mainly by by the Team Leader-cum-Road Agency Management Specialist, Transport Planning Specialist Transport Economics Specialist and Legal Specialist

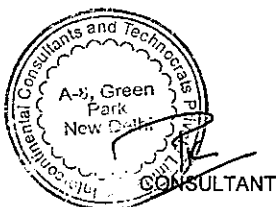
#### Consultant's Indicative Methodology for Task- II

#### ROAD SECTOR POLICY & STRATEGY

**Task Study Existing Road Sector Policy Based on 8.II  
301: Organization Structure and Works**

To carry out the institutional strengthening and capacity building of OWD, to meet the socio-economic demands of Orissa, the Consultants shall study the existing policies and the organization structure of road sector. The study shall also involve inter departmental functional and policy framework to be recommended for its review so that the road sector development does not suffer for any impediments in future. The studies shall also delve on legislation framework of GOO before recommending any review of policies. While drafting the policies for future, the organizational structure framework and its capacity to take up the task / projects in field shall also be assessed.

The Consultant study of existing framework shall also encompass the existing socio-economic development processes and their inter dependence on road sector. Because the development processes differ from state to state since each state has its own embedded cultural profiles. The studies carried out shall



make the basis for its review and formulate the road sector strategies for future.

<b>Task 302:</b>	<b>Establish Strategy and Vision Document of OWD Road Sector with Matching Resources to Meet the Targets of Vision Documents</b>	<b>8.II</b>
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Based on studies carried out by the team of key professionals and also having studied the development plans of Orissa in various sectors i.e. industry and tourism, etc., the strategy for road sector shall be developed by Consultants. The development of strategy shall be based on

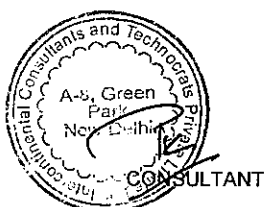
- Models and theories of planned change
- Existing systems i.e. policy, legal and institutional frameworks
- Existing organization capacities
- Participation and empowerment
- Normative-reeducative strategy of change
- Applied behavioural science and pattern of department
- Action research

The strategy shall include

- Maintenance and rehabilitation of existing road network
- Strategic importance of economic and social development plans and targets of GOO
- Enhancing capacities of road based transport
- Improvement of traffic management policy with their regulatory framework
- Improvement the road safety engineering and regulatory framework
- Resource mobilization in terms of funds and skilled human resource

<b>Task 303:</b>	<b>Study of Existing Legal, Institutional Frame Work and Organizational Capacities with Required Needs of Road Sector</b>	<b>8.II</b>
<b>Task 304:</b>	<b>Review Framework of Road Development and Management, Formulation of Associated Legislation, Regulatory and other Statutory Mechanisms</b>	<b>8.II</b>

While developing the strategy for road sector the existing legal framework, institutional structures and their capacities shall also require the detailed assessment for their review. The strategy so developed shall have to be in conformity of GOO legal framework. If the legal framework needs the review, the legal expert of Consultant shall closely interact of concerned GOO departments to stream line the legal framework for future.



The revised legal framework of GOO and its concerned departments shall also cover the statutory mechanisms related with road development and its management in line with vision statement for road sector. These legal provisions shall be so framed that there are no obstacles in execution of the road project in future. So that the development of state follows the encumbrance free path.

<b>Task 305:</b>	<b>Analysis of Current and Projected Road Sector Demands</b>	<b>8.II</b>
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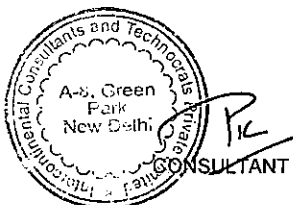
The current and projected road sector demands shall be based on the economic development plans of the state. It has to be analysed by the Consultants that the state has been lagging behind in various sectors of economic development. Because the transport based on roads has to ferry the commercial goods from place A to B for their market potential. Since Orissa is a land locked state from three sides and the fourth side being towards sea, its economic development has to totally depend on road sector.

The Consultants advise the client to get the forecast of development plans of the government / various ministries related with various industries, development of various commercial hubs of the state, tourism sector, mining and the agriculture, so that a forecast of traffic, commercial as well as personnel can be worked out. The type of commercial transport and the transfer of goods interstate as well as in the state shall also guide the Consultants for the capacity and the pavement strength of the roads to be developed.

Based on these inputs the Transport Planning and Economic Specialist can forecast the requirement of development of road sector and accordingly the vision statement for the state can be established.

<b>Task 306:</b>	<b>Assessment of Risks and Challenges in Meeting the GOO Targets for Road sector</b>	<b>8.II</b>
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For development of the road sector and the targets of vision statement to be achieved, largely depends how the finances are going to be made available by the GOO. Besides the financial made available by GOO, it will also depends how the investment flows into the industry and road sector going take place in future. All this is linked with state policies. A pro-active policy by the state shall be beneficial to the overall development. The Consultants in coordination with Client shall interact with finance and transport department of the state to



get their inputs as well as rendered the advise which could be in the interest of the state for its socio-economic development as well as road sector.

<b>Task 307:</b>	<b>Identification of Weaknesses, Limitations, 'Gaps' in Authority, Delegation, Powers inclusive of Financial, Contractual and Executive with regard to Current Policies of GOO</b>	<b>8.II</b>
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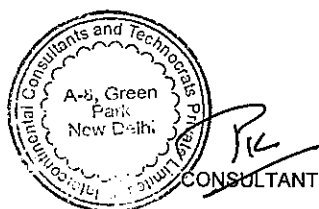
For the overall development of the state, not only the OWD, but all departments of GOO shall have to jointly coordinate their functions in laid down regulatory framework so that development of state goes on uninterrupted. For this purpose the policies, the powers, institutional and structural arrangements with their legislative framework are in place to meet the demands of road sector. The departments of government vested with powers for regulations of development taking place in roads and bridges shall have to be reviewed and modified in due consultation with GOO.

The contractual legislative as well as financial powers for its delegation and execution on ground shall also require review and to be framed to meet the present as well as future scenario of road sector.

Another important aspect of GOO shall be related with land acquisitions, environmental clearance and rehabilitation / resettlement policies of the state since all these three aspects are critical legal point of view for the development of road sector. The gaps, the limitations and any weaknesses in existing legal frameworks or these issues shall be addressed by the Consultants and GOO advised accordingly.

<b>Task 308:</b>	<b>Work Out Various Options for Modification and Review of Policies of GOO to Strengthen the Existing Framework and Future Requirement</b>	<b>8.II</b>
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The draft road sector policy and strategy, at the stage is based on data collected as it stands today for the state. It has to be analysed with a typical management based system of SWOT analysis. By factoring the SWOT analysis with likely unforeseen situations and their likely implications, the Two / Three options shall be presented to OWD / GOO for their approval. The various options could be based on factors related with cohesive / non-cohesive alignment of various stakeholders taking part in development of the state. This could be coming from available and likely financial outlay, investment profile, industrial profile and also the political situation as on today and likely in



future. A broad based option with inbuilt flexibility for its modifications could be a viable option to be finally adopted.

<b>Task 309:</b>	<b>Work Out various Options for Modification and Review of Policies to Meet the Needs of Vision Document</b>	<b>8.II</b>
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Based on policies of Government and the analyses carried out at Task 309, the vision document for road sector shall also be developed with inbuilt flexibility for its modification at any given time. However the Consultants shall endeavor that more stress is given on PPP models for development of road sector, so that government policies with change of political scenario do not come in the way of road sector development.

<b>Task 310:</b>	<b>Preparation of Draft "Vision Statement for 5 &amp; 10 Years" and Linked Policies</b>	<b>8.II</b>
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The Consultants based on data prepared above, keeping in view the various options in mind, a vision statement for 5 and 10 Years shall be prepared, highlighting various implications related with each option, for the acceptance of OWD. The policies enabling the successful implementation of the vision statement shall also be highlighted in this document and recommended for their legislative acceptance by GOO.

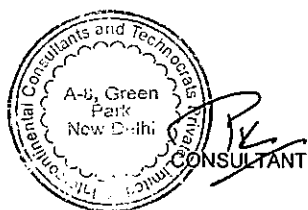
<b>Task 311:</b>	<b>Organize Phased Consultations and Workshop to Discuss Draft with OWD and Review Committee</b>	<b>8.II</b>
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This entire process of development of road sector policy, strategy and vision statement shall be gone through with conduct of discussions and workshops at a draft stage for the comments / observations of OWD and the Review Committee.

<b>Task 312:</b>	<b>Submission of Draft Report by Integrating the Activities/Inputs of Transport Planning, Transport Economics and Legal Specialist</b>	<b>8.II</b>
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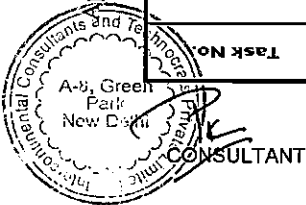
<b>Task 313:</b>	<b>Submission of Final Report</b>	<b>8.II</b>
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By the end of based on inputs by Team Leader-cum-Road Agency Management Specialist, Transport Planning Specialist, Transport Economics Specialist, Legal Specialist. The Draft Report on Orissa Road Sector Policy and requirements for its implementations shall be submitted by the end of month 10 and the Final Report by end of month 12.





Appendix A: Description of Services

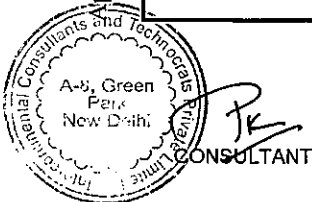


Task No	Description of Activity	Activity Duration (in Months)	Assignment Duration (Months)																													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<b>TASK GROUP III: ROAD SECTOR POLICY &amp; STRATEGY</b>																																
301	Study Existing Road Sector Policy Based on Organization Structure and Works	1.0, AW	■	■	■	■	■																									
302	Establish Strategy and Vision Document of OWD Road Sector with Matching Resources to Meet the Targets of Vision	1.0, AW	■	■	■	■	■																									
303	Study of Existing Legal, Institutional Frame Work and Organizational Capacities with Required Needs of Road Sector	3.00		■	■	■	■	■																								
304	Review Framework of Road Development and Management, Formulation of Associated Legislation, Regulatory and other Statutory Mechanisms	4.00		■	■	■	■	■	■																							
305	Analysis of Current and Projected Road Sector Demands	5.00		■	■	■	■	■	■	■																						
306	Assessment of Risks and Challenges in Meeting the GOO Targets for Road sector	2.0, AW	■	■	■	■	■																									
307	Identification of Weaknesses, Limitations, 'Gaps' in Authority, Delegation, Powers inclusive of Financial, Contractual and Executive with regard to Current Policies of GOO	2.0, AW	■	■	■	■	■																									
308	Work Out Various Options for Modification and Review of Policies of GOO to Strengthen the Existing Framework and Future Requirement	2.0, AW	■	■	■	■	■																									
309	Work Out various Options for Modification and Review of Policies to meet the Needs of Vision Document	4.0, AW	■	■	■	■	■	■	■	■																						
310	Preparation of Draft Vision Statement for 5 & 10 Years* and Linked Policies	6.00		■	■	■	■	■	■	■	■																					
311	Organize Phased Consultations and Workshop to Discuss Draft with OWD and Review Committee	3.0, AW		■	■	■	■	■	■																							
312	Submission of Draft Report by Integrating the Activities/Inputs of Transport Planning, Transport Economics and Legal Specialist																															
313	Submission of Final Report																															

**Legend**  
 ■ Continuous Activity  
 ■■■■ Interim Activity (as and when required)  
 AW As and when required

Chief Engineer,  
 World Bank Projects, Odisha

Appendix A: Description of Services



Task No.	Description of Activity	Activity Duration (in Months)	Specialist-cum- Team Leader	Organizational Development Specialist-cum- Deputy Team	Financial Analyst & Business Planning Specialist	Transport Planning (Roads) Specialist	Transport Economics Specialist	Senior Highways Engineer (Pavements Management & GIS Applications Master Planning) Specialist	Road Safety (Infrastructure Design & Management) Specialist	PWD Sector Domain Specialist	Procurement Specialist	Training & Human Resources Development (HRD) Specialist	Human Resources Management (HRM) Specialist	Legal Specialist
<b>TASK GROUP III: ROAD SECTOR POLICY &amp; STRATEGY</b>														
301	Study Existing Road Sector Policy Based on Organization Structure and Works	1.0, AW	P		S	P	P		S					P
302	Establish Strategy and Vision Document of OWD Road Sector with Matching Resources to Meet the Targets of Vision	1.0, AW	P		S	P	P		S					P
303	Study of Existing Legal, Institutional Frame Work and Organizational Capacities with Required Needs of Road Sector	3.00	P		S	P	P		S					P
304	Review Framework of Road Development and Management, Formulation of Associated Legislation, Regulatory and other Statutory Mechanisms	4.00	P		S	P	P		S					P
305	Analysis of Current and Projected Road Sector Demands	5.00	P		S	P	P		S					P
306	Assessment of Risks and Challenges in Meeting the GOO Targets for Road sector	2.0, AW	P		S	P	P		S					P
307	Identification of Weaknesses, Limitations, 'Gaps' in Authority, Delegation, Powers inclusive of Financial, Contractual and Executive with regard to Current Policies of GOO	2.0, AW	P		S	P	P		S					P
308	Work Out Various Options for Modification and Review of Policies of GOO to Strengthen the Existing Framework and Future Requirement	2.0, AW	P		S	P	P		S					P
309	Work Out various Options for Modification and Review of Policies to Meet the Needs of Vision Document	4.0, AW	P		S	P	P		S					P
310	Preparation of Draft "Vision Statement for 5 & 10 Years" and Linked Policies	6.00	P		S	P	P		S					P
311	Organize Phased Consultations and Workshop to Discuss Draft with OWD and Review Committee	3.0, AW	P		S	P	P		S					P
312	Submission of Draft Report by Integrating the Activities/Inputs of Transport Planning, Transport Economics and Legal Specialist		P		S	P	P		S					P
313	Submission of Final Report		P		S	P	P		S					P
<b>Legend</b>														
P Primary Responsibilities														
S Secondary Responsibilities														

- III. **OWD Staff Training & HRD:** Completion of an OWD-wide Training Needs Assessment (TNA) followed by implementation of an OWD-centered TNA-based multi-year 'rolling' Staff Training program supported by an overarching Human Resources Development (HRD) policy statement for the Department. Involves *inter alia* (i) planning and execution of a comprehensive Training Needs Assessment (TNA) both at head quarter and field level for all OWD staff and officers centered on the foreseeable OWD functions, operating challenges and skills priorities; (ii) identification of an integrated set of "core technical and management skills and knowledge" required in the OWD technical staff for future effectiveness; (iii) developing and facilitating the implementation of a viable multi-year 'rolling' Staff Training program covering the main staff categories and levels (both at head quarter and field) with realistic prioritization of individual and Departmental skills / capacity needs; (iv) Evaluation of the imparted training as per TNA for any further improvement (v) identifying desirable changes and enhancements to OWD organizational documentations on positions and establishments to improve their communication of skills and competency requirements; (vi) preparation and facilitation of HRD policy for OWD alongwith strategy and action plan (vii) Establishment of an effective Training / HRD functions and capacity in OWD to sustain the delivery and management of new Staff Training and HRD activities, based on an efficient combination of internal HR roles and external training program/course providers; and (viii) facilitation of a pilot "ISO certification" process (inclusive of training) for staff and managers in ongoing OWD core functions such as Quality Management, Contracts/Procurement, Planning, Design and/or Environment & Social Management.

The deliverable under this task shall include ( but not limited to ) report on Training Needs Assessments, proposed TNA-based program(s), Training documents/ materials for implementation of first round training programme, Training Evaluation Report, HRD Policy Document and action Plan for the core functionaries of OWD at head quarter and field level and other related documents highlighting OWD 'Training' Role, HRD functions and capacity etc. The key input for this task shall be mainly by the Organizational Development Specialist-cum-Deputy Team Leader, Training & Human Resources Development Specialist, Human Resources Management Specialist and Legal Specialist



### Consultant's Indicative Methodology for Task- III

#### OWD STAFF TRAINING & HRD

<b>Task 401: Assessment of Current Professional Competence of Staff of OWD at Various Levels</b>	<b>8.III</b>
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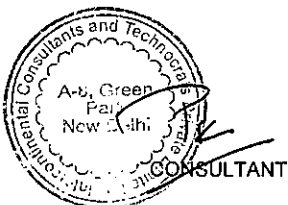
For effective and efficient plan formulations and project implementation it is vital that there is congruity of purpose among all concerned organs of an organization. Convergence of their aims and objectives however requires that the activities of all the varied functionaries working in different organizations, departments, agencies, institutions, laboratories etc. are cumulatively found reinforcing the realization of road map prepared for the development of infrastructure / highway sector.

At this stage it is very important that Consultants will have to assess, where the OWD and its human resources stand for their professional competencies and executive skills. This assessment shall be carried out from the lower most field department to the senior most HO level. Of course their professional competency assessment shall be different at different structural layers of the organization.

To carry out these assessments an interaction by various key professionals shall be carried out with the staff of OWD at ground and office levels. The Human Resource Development Specialist alongwith Client staff shall visit various field / HQ offices and prepare his report and brief the OWD alongwith Team Leader-cum-Road Agency Management Specialist as a takeoff point for training and HR development.

<b>Task 402: Carry out Training Needs Assessment (TNA)</b>	<b>8.III</b>
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The modern concept of training and development needs, emphasizes on leaner organization and individuals contribution towards achievement of objective, have made the training and development needs a critical element in determining the organization's success. Training is important but question is, what kind of training and to what level of details? The answer to these questions are sought by conducting Learning Needs Analysis (LNA) and Training Needs Analysis (TNA). There are three levels of training needs within an organization namely organizational, occupational and individual.



The Training Needs Assessment shall involve the Training Needs Analysis based on the following:

- (a) Overview of system to gain understanding;
- (b) Analyzing the system;
- (c) Discovering Training Needs;
- (d) Compiling Task Inventory at each level;
- (e) Analyzing the task;
- (f) Needs analysis of the Task;
- (g) Developing Performance measures;
- (h) Selecting instructional setting; and
- (i) Estimating forecast and training cost.

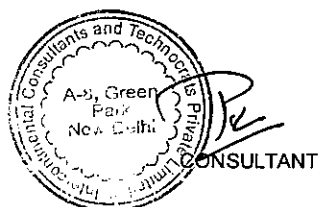
All the above shall be carried out by carrying out survey an interaction with various departments / structural organization of OWD at various levels i.e. field to the senior HO.

<b>Task 403:</b>	<b>Prepare Phased TNA based Multiyear Rolling Staff Training Programme Covering each Segment of Organizational Structure</b>	<b>8.III</b>
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To prepare TNA based Multiyear Rolling Staff Training Programme, the Consultants shall have to take into a account the larger spectrum of organizational goals, changing roles, future needs, political trends and availability of resources. This kind of information shall be obtained from the policy and vision statements prepared as part of Task 310, reports, interviews, with senior officers of OWD, staff records, surveys of employee and their behavior pattern including the job satisfaction levels in their respective positions and departments.

In addition the job description, job analysis, performance standards, skills and abilities required to carry out a particular assignment at various levels of organization shall also require to be assessed and the training program developed accordingly for the restructured organization of OWD.

The program developed shall also address an integrated set of “core technical and management skills and knowledge” required by the OWD technical staff for effective functioning at ground / field and office levels for techno-managerial skills in various positions.



**Develop HRD Policy Statement Linking with  
Task Training Needs to Cover Planning and Execution  
404: for Foreseeable OWD Functional Requirement for  
the OWD Staff at Head Office & Field Level** 8.III

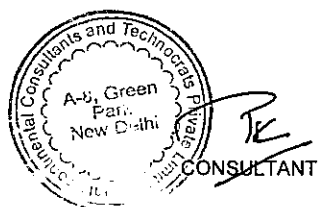
As part of the HRD functions, the job description, the job analysis, the job empowerment and developing the individual to meet his present and future functional requirement, an integrated HRD policy shall be developed by the Consultants. That policy statement shall include the evaluation of performance standards of an individual in various capacities and the performance appraisal for upwardly mobility in the department. This will also have the financial implications, that shall also be addressed by the Consultants.

The policy statement with training needs shall also cover the inter departmental functional requirement with an eye on deputation postings to other organizations / government departments within the states as well as outside the state. E.g. departments like NHAI accept the personnel from various PWDs. Such inter departmental transfers shall be a motivational and rewarding factor for an employee.

The policy statement shall also cover the skill development plans and capacity enhancement at individual as well as organization structure levels. The incentive for technical educational upgradations shall also go a long way as a Morale Booster to the employees of OWD. This shall not only help the department but also the individuals.

**Task Identification of Skill and Operational Requirement  
405: of Field Staff with Priorities for Phased Training  
Programmes and Challenges Linked, if any?** 8.III

The identification of skills at various levels shall depend on, that how the restructuring of OWD structure have been planned as part of the road sector policy and vision statement. The job design at various levels shall accordingly be worked out by Consultants. In this case a care shall be taken that the existing staff shall continue to be with the department and their capacities / job structure could be enhanced. If this factor is not taken in to account, the entire HRD exercise could go into negative direction.



<b>Task 406:</b>	<b>Develop, Facilitate, Execute, Implement of Rolling Staff Training Programme Covering all Categories of Staff</b>	<b>8.III</b>
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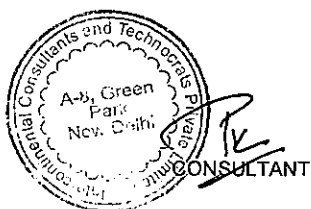
The staff training program covering all categories of staff shall be prepared in consultation with Client, since it involves the availability of staff for various training schedules. The syllabus of training program shall be based on training needs assessments for various field and HO jobs at different levels. The Consultants shall organize the training staff/ instructors from its pool of professionals and if need be take the faculty from outside depending on need of the subject. The conduct of shall be on standard training methodologies i.e. on the job training or lectures or workshops. Some of these methods of technology transfer have also been covered in the chapter of Training.

<b>Task 407:</b>	<b>Evaluation and Mid-course Assessment of Imparted Training to Apply Corrections</b>	<b>8.III</b>
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The Consultants shall workout the methodology to carryout mid-course assessment of the training carried out at various levels. This shall be done with the standard methods of imparting the training and conduct of assessment exercises e.g. for the field staff

- a) Conduct of Benkelman beam deflection test for pavement evaluation;
- b) Field / MDD test for field staff;
- c) Evaluation of borrow areas etc.,
- d) Working out the bidding document / quantification of BoQ items;
- e) Similarly conductor laboratory test for soil, bitumen and concrete etc.;
- f) For the senior level, it shall be in the form of interpretation of contract clauses for any given situation;
- g) Conduct of escalation exercises for making payment of invoices in case of quantity surveyors;

By this way for every level an evaluation Performa format course assessment shall be worked out and individuals as well as the programs conducted so far assessed for the weaknesses or any gaps in the training for its improvement for the future part of the training.



**Task 408: Prepare HRD Policies, Activities for its Sustenance, Movement/Promotions, Retention, Output/Delivery Linked Performance Management, Internal HR Roles, i.e. Grievance, Appraisal, Supported with Internal/External Training Programmes 8.III**

For the present HRD functions, one of the most important requirements is the retention and continuity of trained staff with organizations. Any disgruntledness or dissatisfaction with the job profile / satisfaction and working environment can affect the efficiency of an individual as well as organization. To check on such issues a grievance redressal methods shall we suggested in HR policies of the department.

On the similar lines a performance appraisal policy shall also be worked out and made part of the HR policy for the promotion and performance management of the department. This shall be based, what is being practiced by the established organizations of CPWD / Defense as well as PSUs.

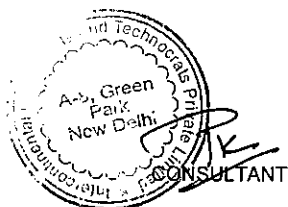
While as part of the training program these issues shall also be covered for the knowledge of the staff at various levels, since every one today or tomorrow shall be involved with writing of performance appraisals or grievance handling mechanism.

**Task 409: Prepare ISO Certification Processes to include Quality Management, Contracts / Procurement, Planning, Design, Environment and Social Management to Enable OWD to get ISO Certified Status 8.III**

The Consultants shall organize the 'Pilot' ISO certification "ISO 9001:2008" for OWD by providing Consultancy Services covering engineering, financial management, project management and institutional strengthening for various infrastructural sectors such as highways, bridges, airports, transportation, tourism, urban development, water supply and sanitation, water resources and energy.

The salient features of upgradation requirement of ISO 9001:2008 shall be

- Quality Management System
- Management Responsibility
- Resource Management
- Product Realization
- Measurement, Analysis and Improvement





The ISO certification shall enable the OWD to be part of national / international acceptance levels for their policies / documentary processes and procedures. This shall also benefit the OWD in terms of contractual and procurement procedures. The private investors shall feel comfortable procedurally as well as from regulatory framework point of view for their investments.

**Task 410: Prepare HRD Policy Documents and Action Plan of Core Functionaries of OWD at Head Quarter and Field Level 8.III**

The various HRD policy document prepared by Consultant shall also cover the various levels for HR management right from field level establishments to senior most HOs. This policy document shall also require the legal endorsements.

**Task 411: Organize Phased Consultations and Workshop to Discuss Draft HR Policies with OWD and Review Committee 8.III**

The Consultant shall organize discussions / interactions at various levels of OWD to discuss the Draft HR policies prior to preparation of draft documents. This shall be followed with presentations and workshops to the review committee to get their comments and observations for its improvement. The same shall be incorporated prior to submission to OWD.

**Task 412: Timely Submission of Deliverables Duly Integrating Inputs from HRM Specialist, Training & HRD Specialist & Legal Specialist 8.III**

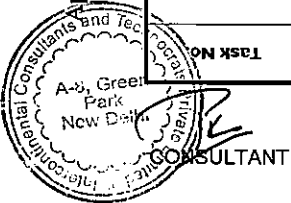
The Consultants shall prepare the HRD policy statement covering

- Comprehensive OWD Training Needs Assessment
- Needs-based Training and Staff Development strategy
- Training evaluation report
- Policy document highlighting OWD training role at field and head quarter level
- HRD policy functions and capacity building
- OWD staff performance appraisal, management policy and processes

The Consultant shall also assist OWD to get legal endorsement from GOO.



### Appendix A: Description of Services

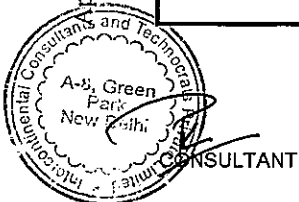


Task No	Description of Activity	Activity Duration (in Months)	Assignment Duration (Months)																													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<b>TASK GROUP IV: OWD STAFF TRAINING &amp; HRD</b>																																
401	Assessment of Current Professional Competence of Staff of OWD at Various Levels	3.0, AW	■	■	■	■	■	■	■																							
402	Carry out Training Needs Assessment (TNA)	3.0, AW	■	■	■	■	■	■	■																							
403	Prepare Phased TNA based Multiyear Rolling Staff Training Programmes covering each Segment of Organizational Structure	3.0, AW	■	■	■	■	■	■	■																							
404	Develop HRD Policy Statement Linking with Training Needs to Cover Planning and Execution for Foreseeable OWD Functional Requirement for the OWD Staff at Head Office & Field Level	3.0, AW	■	■	■	■	■	■	■																							
405	Identification of Skill and Operational Requirement of Field Staff with Priorities for Phased Training Programmes and Challenges Linked, if any?	3.0, AW	■	■	■	■	■	■	■																							
406	Develop, Facilitate, Execute, Implement of Rolling Staff Training Programme covering all Categories of Staff	12.0, AW	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
407	Evaluation and Mid-course Assessment of Impacted Training to Apply Corrections	1.00								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
408	Prepare HRD Policies, Activities for its Sustenance, Movement/Promotions Retention, Output/Delivery Linked Performance Management, Internal HR Roles, i.e. Grievance, Appraisal, Supported with Internal/External Training Programmes	12.00								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
409	Prepare ISO Certification Processes to include Quality Management, Contracts / Procurement, Planning, Design, Environment and Social Management to Enable OWD to get ISO Certified Status	12.00								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
410	Prepare HRD Policy Documents and Action Plan of Core Functionalities of OWD at Head Quarter and Field Level	12.00								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
411	Organize Phased Consultations and Workshop to Discuss Draft HR Policies with OWD and Review Committee	AW								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
412	Timely Submission of Deliverables Duly Integrating Inputs from HRM Specialist, Training & HRD Specialist & Legal Specialist.	18.00								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

**Legend**

- Continuous Activity
- - - Intermittent Activity (as and when required)
- AW As and when required

Appendix A: Description of Services



Task No.	Description of Activity	Activity Duration (in Months)	Road Agency Management Specialist-cum- Team Leader	Organizational Development Specialist-cum-Deputy Team	Financial Analyst & Business Planning Specialist	Transport Planning (Roads) Specialist	Transport Economics Specialist	Senior Highways Engineer (Pavements Management & GIS Applications (Master Planning) Specialist	Road Safety (Infrastructure Design & Management) Specialist	PWD Sector Domain Specialist	Procurement Specialist	Training & Human Resources Development (HRD) Specialist	Human Resources Management (HRM) Specialist	Legal Specialist
<b>TASK GROUP IV: OWD STAFF TRAINING &amp; HRD</b>														
401	Assessment of Current Professional Competence of Staff of OWD at Various Levels	3.0, AW	S	P	S									
402	Carry out Training Needs Assessment (TNA)	3.0, AW	S	P	S									
403	Prepare Phased TNA based Multiyear Rolling Staff Training Programme Covering each Segment of Organizational Structure	3.0, AW	S	P	S									
404	Develop HRD Policy Statement Linking with Training Needs to Cover Planning and Execution for Foreseeable OWD Functional Requirement for the OWD Staff at Head Office & Field Level	3.0, AW	S	P	S									
405	Identification of Skill and Operational Requirement of Field Staff with Priorities for Phased Training Programmes and Challenges Linked, if any?	3.0, AW	S	P	S									
406	Develop, Facilitate, Execute, Implement of Rolling Staff Training Programme Covering all Categories of Staff	12.0, AW	S	P	S									
407	Evaluation and Mid-course Assessment of Imparted Training to Apply Corrections	1.00	P	P	S									
408	Prepare HRD Policies, Activities for its Sustenance, Movement/Promotions, Retention, Output/Delivery Linked Performance Management, Internal HR Roles, i.e. Grievance, Appraisal, Supported with Internal/External Training Programmes	12.00	P	P	S									
409	Prepare ISO Certification Processes to Include Quality Management, Contracts / Procurement, Planning, Design, Environment and Social Management to Enable OWD to get ISO Certified Status	12.00	P	P	S									
410	Prepare HRD Policy Documents and Action Plan of Core Functionaries of OWD at Head Quarter and Field Level	12.00	S	P	S									
411	Organize Phased Consultations and Workshop to Discuss Draft HR Policies with OWD and Review Committee	AW												
412	Timely Submission of Deliverables Duly Integrating inputs from HRM Specialist, Training & HRD Specialist & Legal Specialist	18.00	S	P	S									
<b>Legend</b>														
P Primary Responsibilities														
S Secondary Responsibilities														

- IV. **Reorganization & Strengthening of OWD:** Provision of advice and implementation support to OWD management in the finalization and operationalization of current Departmental plans for enhancement of technical / professional staffing structures and some related re-organization of OWD structures and establishments. Involves *inter alia* (i) review and confirmation of the short-to-medium term OWD organization and its main determinants; (ii) development of a medium-to-longer term organizational vision / model for the OWD and its key functional and operational features; (iii) 'mapping' the scope and distribution of administrative, financial and technical powers and authorizations for the OWD's main functions matching with the revised OPWD code/Manual, and advising on their adequacy for intended roles / responsibilities / accountabilities; (iv) facilitation of OWD and GOO action on measures required to complete the transition within OWD into the changed arrangements and structures; and (v) ensure the new Staff Training program and HRD strategy are compatible with the organizational changes.

The deliverable under this task shall include ( but not limited to )report on Medium-to-Longer Term Strengthening of the Institutional Framework / Structures of Odisha's Roads Sector and other related documents highlighting key functional and operational features of OWD, staff performance appraisal and management policy and policy documents with transition measures for organizational change etc. The key input for this task shall be mainly by the Team Leader -cum- Road Agency Management Specialist, Organizational Development Specialist-cum-Deputy Team Leader, Human Resources Management Specialist and Financial Analyst-cum-Business Planning Specialist

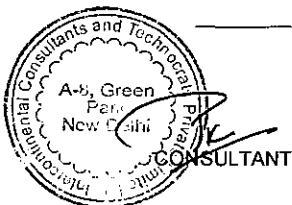
**Consultant's Indicative Methodology for Task- IV**

**RE-ORGANIZATION & STRENGTHENING OF OWD**

**Task Study Existing OWD Management, Establishments  
501: & their Technical & Professional Staff 8.IV**

The Consultant shall study the existing OWD management, its establishment for their technical and professional competencies to perform various projects for its procedural, executional, post-executional management and operations at field level. The study of OWD and its establishment shall include its structures and staffing pattern at various levels of field and HOs.

While carrying out the study, a review of certain cases of project managements i.e. successful as well as involved in arbitration / litigation shall also be carried out to assess the professional competence / capacities to handle



such issues at various levels. This shall give fair and indepth analysis that how the department has been functioning.

For this purpose a visit to various head quarters and interaction with senior officials shall be carried out both at district and state levels to assess the project appraisals and functional attributes of various offices of OWD. All this shall be kept confidential and shared with decision makers of OWD and Review Committee for further restructuring.

<b>Task 502:</b>	<b>Study Current Departmental Plans for Restructuring of OWD Establishments at Various Levels</b>	<b>8.IV</b>
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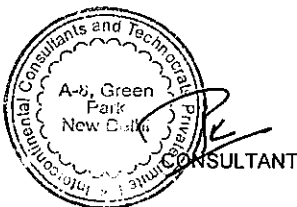
The Consultant also get the inputs from department about development plans and restructuring, if any has been prepared so far. The individual officers / staff shall also be interviewed to get their feedback, that how they are viewing their own departments in the years to come. Similarly various Bureaucrats of Secretariat shall also be interacted to get their views on OWD, its functioning so far and how they want it to be in future.

Since some of the PWDs of the country have also been restructured, their template shall also be discussed with OWD so that the best of those PWDs can be picked and incorporated and restructuring plans of OWD.

<b>Task 503:</b>	<b>Review and Confirmation of Short to Medium Term OWD Organization and its Main Determinants, Linking them with Staffing Pattern of Establishments</b>	<b>8.IV</b>
<b>Task 504:</b>	<b>Development of a Medium to Long Term Organizational Vision/Model for OWD including its key Functional and Operational Parameters and Features</b>	<b>8.IV</b>
<b>Task 505:</b>	<b>Mapping the Scope and Distribution of Administrative, Financial and Technical Powers of Key Functionaries at Different Levels</b>	<b>8.IV</b>

Based on studies carried out, the Consultants shall prepare a draft restructuring plan of OWD for short term as well as medium term. This shall cover

- Organizational structure;
- Functions, roles and responsibilities at various levels of the structures;
- Staffing and skill requirements for various offices in ladder i.e. AE office to EinC office level;



- Recruitment, promotion and skill up-gradation policies;
- Staff training and development plans;
- Performance appraisal policies;
- Deputations and inter departmental transfer policies;
- Administrative, Financial and technical powers at various levels of the organizations on contractual and HR issues;
- PPP and Private Sector Participation.

This short to medium term restructuring, strengthening of OWD shall also define the functional and operational requirement for various offices from field to senior most HO. These restructuring plans shall also be in consonance with Task Group II and III which cover the review of Work Codes and Manual of OWD and Road Sector Policy / Vision Statement discussed respectively.

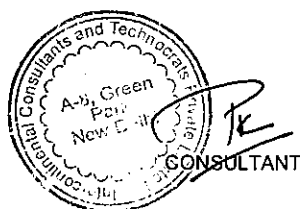
**Delegation and Authorization of OWD's Main  
Task Functions Matching the Revised OWD Structure,  
506: Code and Manuals for Intended Roles / Responsibilities / Accountabilities 8.IV**

While working out the administrative, financial and technical powers at various levels of organizations on various contractual and HR issues, the delegations and authorizations of roles / duties to be performed on behalf of certain departments / senior functionaries shall also be reviewed. This review shall be inclusive of responsibilities and accountability linked with delegation for performance of that particular assignment.

Such a system devised by Consultant shall enable the OWD to acquire the image of open and transparent for the public scrutiny. It shall also benefit the OWD in getting private investments for socio-economic development and road sector.

**Work Out Methodology to Facilitate OWD and  
Task 507: GOO Actions on Measures and Steps Required to Complete the Transition of Present Structures of OWD to Changed Structural / Organizational / Operational needs, Requirement and Functions 8.IV**

Based on review and restructuring plans of OWD, the work culture at various establishment levels shall also require the transition from the present scenario to the improved high performance standard levels. This shall not only be applicable to the new entrants but also the existing staff has to be motivated to accept the new change and perform accordingly. This change shall also be



applicable to new staffing pattern, systems, modernization of equipment and organizational ethos.

This shall involve the transformation for the following:

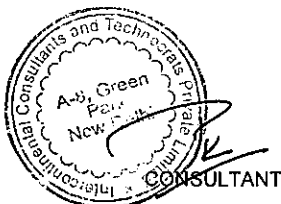
- Vision and values at various levels of staff and establishments;
- Functions and structure;
- Delegation of authority;
- Staffing and other resources;
- Job descriptions and assignments;
- Duty descriptions at various levels;
- Individual and establishment assessment policies;
- Change over from manual documentation to IT
- Quality Assurance and Quality Control Management;
- Planning procedures;
- Documentary and office management procedures;
- Salary structures at various levels;
- Training development programs;
- Development of short and long-term policies and strategy;
- Integration of public, community and government, functional and operational requirement in road sector;
- Inter relationship between OWD and other related departments.

**Task 508: Organize the Revised Training Programmes for Various Levels, Compatible with New Organizational Changes and Structure 8.IV**

The Consultant shall organize the training to cover all above i.e. given at Tasks 505 and 508 for the staff for their adaptability in the restructured OWD.

**Task 509: Develop HRD Strategy and HRM Functional Map Compatible with Forecasted Organizational Changes for Short, Medium and Long Term to Manage the Road Network and Infrastructure Sector of GOO Effectively 8.IV**

Having jointly agreed on restructuring concept of OWD, they shall be main requirement to organize the HR resources on a short, medium and long term basis. The Consultants with their HRD and HRM key experts shall develop the strategies for OWD, so that at no stage the OWD faces the crunch of shortage of skilled HR resources to manage the road network in the present shape as well as for its development phase in the future. The strategy for HR resources



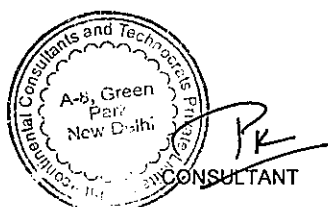
should be developed not only for OWD but GOO also for development of other infrastructure sector i.e. power, telecom and IT. For any state to go for major economic development programs, the HR strategies are required to focus for an all round resource management. Since socio-economic development is a complementary and parallel function of number of organs of GOO. The HR strategies developed by Consultants shall also require the GOO endorsement with the advise of Legal Expert. This shall be worked out by Consultants by way of organizing discussions and workshop with OWD / GOO.

**Task 510: Prepare Master Document on Strengthening, Restructuring and Capacity Building along with its Financial Implications 8.IV**

The Master document prepared on reorganization of strengthening of OWD shall also have a tentative forecast of financial outlay to be incurred on shaping the present organization to the revised format of restructures. This shall involve recasting / capacity building / development of human resources and restructuring of establishments right from field level to senior most HO. Once restructured has been carried out even the major HR component of restructuring of the salaries shall have to be carried out in line with other works departments of the country and the pay commission norms of the center. This master document shall also work main guiding document for OWD another departments to plan phased restructuring exercise depending on availability of funds.

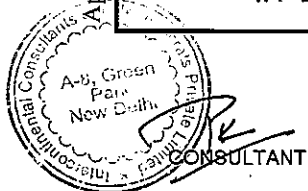
**Task 511: The Deliverables to be the Synthesis of Efforts /Inputs of Dy. TL/OD Specialist, HRM, Financial and Business Specialist besides Team Leader-cum-Road Agency Management Specialist 8.IV**

The working paper on short-to-medium term OWD restructuring and reorganization shall be submitted by the end of six months and other draft and final reports for strengthening and capacity building of OWD shall be submitted by the end of Twenty Four and Twenty Six months respectively. Prior to submission a deliberate and phased exercise for discussions with OWD and review committee shall be carried out to get their comments and observations so that the points observed by them are properly analysed for their incorporation in the master document.









Appendix A: Description of Services

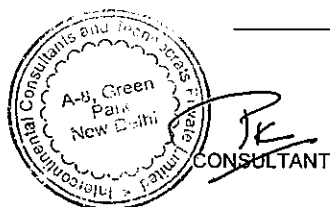
Task No.	Description of Activity	Activity Duration (in Months)	Road Agency Management Specialist-cum- Team Leader	Organizational Development Specialist-cum- Deputy Team	Financial Analyst & Business Planning Specialist	Transport Planning (Roads) Specialist	Transport Economics Specialist	Senior Highways Engineer (Pavements Management & GIS Applications (Master Planning) Specialist	Road Safety (Infrastructure Design & Management) Specialist	PWD Sector Domain Specialist	Procurement Specialist	Training & Human Resources Development (HRD) Specialist	(HRM) Specialist	Legal Specialist
<b>TASK GROUP V: RE-ORGANIZATION &amp; STRENGTHENING OF OWD</b>														
501	Study Existing OWD Management, Establishments & their Technical & Professional Staff	1.0, AW	P	P	P									
502	Study Current Departmental Plans for Restructuring of OWD Establishments at Various Levels	2.0, AW	P	P	P									
503	Review and Confirmation of Short to Medium Term OWD Organization and its Main Determinants, Linking them with Staffing Pattern of Establishments	2.0, AW	P	P	P									
504	Development of a Medium to Long Term Organizational Vision/Model for OWD including its key Functional and Operational Parameters and Features	3.0, AW	P	P	P									
505	Mapping the Scope and Distribution of Administrative, Financial and Technical Powers of Key Functionaries at Different Levels	3.0, AW	P	P	P									
506	Delegation and Authorization of OWD's Main Functions Matching the Revised OWD Structure, Code and Manuals for Intended Roles / Responsibilities / Accountabilities	3.0, AW	P	P	P									
507	Work Out Methodology to Facilitate OWD and GOO Actions on Measures and Steps Required to Complete the Transition of Present Structures of OWD to Changed Structural / Organizational / Operational needs, Requirement and Functions	3.0, AW	P	P	P									
508	Organize the Revised Training Programmes for Various Levels, Compatible with New Organizational Changes and Structure	3.0, AW	P	P	P									
509	Develop HRD Strategy and HRM Functional Map Compatible with Forecasted Organizational Changes for Short, Medium and Long Term to Manage the Road Network and Infrastructure Sector of GOO Effectively	12.00	P	P	P									
510	Prepare Master Document on Strengthening, Restructuring and Capacity Building along with its Financial Implications	12.00	P	P	P									
511	The Deliverables to be the Synthesis of Efforts /Inputs of Dy. TJOD Specialist, HRM, Financial and Business Specialist besides Team Leader-cum-Road Agency Management Specialist	25.00	P	P	P									
Legend														
P Primary Responsibilities														
S Secondary Responsibilities														

- V. **Road Safety Engineering & Planning:** Assess and advise on the Engineering elements of road safety management practices and capacities in Odisha, Legal and institutional framework for road safety and facilitate progressive GOO planning for more strategic road safety management initiatives. Involves *inter alia* (i) executing a Road Infrastructure Safety Management review of relevant OWD engineering functions and of a limited sample survey of road network sections / corridors; (ii) provision of technical capacity building in road safety Design to OWD units; (iii) clarification and preliminary assessment of the current Road Safety responsibility framework in the state; (iv) facilitation of a high-level Workshop (with WB and ADB participation) to explore the GOO's concerns, aims and priorities in relation to improving road safety management; and (v) facilitation of GOO planning for more strategic externally-assisted multi-sectoral measures to improve overall road safety management strategy, capacity and outcomes in Odisha.

The field work under this task shall primarily include collection & compilation of road crash and injury database which are the indispensable tool for drafting road safety action plan and a strategy. The potential sources of data shall include mainly the police crash data, hospital and medical data, insurance data, data from vehicle operators and through special sample surveys for road network sections covering at least selected stretch of 2000 Km of roads in rolling/plain/ mountainous terrains besides major urban roads .

This task also include capacity building measures with field visit/interaction for a group of at least 10 GOO officials to the nationally reputed organizations dealing with road safety aspects such as Central Road Research Institute, New Delhi, Central Institute of Road Transport (CIRT), Pune, Automotive Research Association of India (ARAI), Pune, Vehicle Research and Development Establishment (VRDE), Ahmednagar, National Institute of Mental Health and Neuro Sciences (NIMHANS), Institute of Road Traffic Education (IRTE) etc.

The deliverable under this task shall include ( but not limited to ) compilation report with analysis of crash data/ accident root courses, identification of high risk/problem groups, identifications of high risk/ hazardous locations etc. alongwith design for road safety countermeasures, safety campaigns materials, new legislation, formulation of enforcement plans, road improvements etc. besides detail report on Road Infrastructure Safety Management Review, proposed 'Odisha Road Safety Action Plan' after completion of related workshop/ and suggestive proposal on capacity building measures.



The key input for this task shall be mainly by the Team Leader-cum-Road Agency Management Specialist, Senior Highways Engineer (Pavements Management & Planning), Road Safety (Infrastructure Design & Management) Specialist and Legal Specialist

**Consultant's Indicative Methodology for Task- V**

**ROAD SAFETY ENGINEERING AND PLANNING**

<b>Task 601:</b>	<b>Review Engineering Functions for Existing Road Infrastructure Safety, Regulatory and Legal Set Up, as well as Institutional Framework of OWD/GOO</b>	<b>8.V</b>
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The Government of Orissa (GOO) and OWD's present project aiming at institutional strengthening of its road sector would require a thorough understanding by the consultants with respect to provisions laid down in the statutes regarding road safety as well as current safety practices within the regulatory, legal and institutional frameworks, as well as existing engineering functions of OWD in this respect. The consultants, therefore, will undertake a review of all the relevant processes concerning road transport and safety.

As the success of road safety depends on the extent of regulation and enforcement, a review involving study of traffic regulatory and enforcement mechanisms will be carried out. Rules covering transport operations, issuing of licenses, overloading of vehicles, permits and other aspects coming under the purview of Transport Department Authorities will be reviewed in detail. Similarly, the consultants will undertake a study on limited sample sections of road network/corridors regarding information related to traffic regulations at intersections in urban areas, penalties for traffic violations on urban and non-urban roads and other aspects falling under the jurisdiction of Police Department. Consultants will also study the legal provisions in the statutes supporting regulatory and enforcing systems. It is essential that enforcing authorities are equipped with requisite legal support systems in order to achieve desired results.

Having undertaken an extensive review of necessary regulatory frameworks, the consultants will study provisions that are catering to road safety. The adequacy or otherwise of the safety related provisions will be recorded forming the basis for subsequent steps towards formulating road safety strategy and action plan.



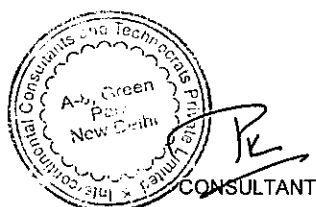
**Review Road Infrastructure Safety Management  
Task Initiatives and Engineering Functions for Pre-  
602: Selected Corridors of OWD in accordance with  
Codal Provisions** 8.V

The Orissa state government has been the custodian of its road network sprawling over the entire state in different terrains and locations. The network consists of urban arterials/sub-arterials, highways (SH), district and village roads, grade separated intersections and road furniture along the roads. It is often observed that certain accidents cause damage to road infrastructure and its components.

It is important to appreciate the engineering functions of OWD as this would help the consultants to plan their further course of action with the help of this input. It is the engineering personnel of OWD who will be accountable for delivery of safe road infrastructure to the people of Orissa, and hence a review of the organizational structure and engineering functions of OWD will have a major influencing role in the new road infrastructure safety management strategies to be proposed.

The consultants will undertake a review of systems that GOO and OWD have put forward to ensure infrastructure safety. Apart from reviewing the systems, the consultants, with the help of OWD, will identify road stretches and corridors and carry out on-field investigations to study the engineering interventions that they have put in place for road safety. This investigation will check engineering aspects related to safety as per Indian Roads Congress/MoRT&H Codal provisions as well as the safety norms prescribed by global agencies like International Road Federation/AASHTO etc. A detailed checklist enumerating points to be considered while conducting safety audit is given below:

- 1) Does the actual function of the road correspond to its intended purpose?
- 2) Are the prevailing speed levels within desirable limits?
- 3) Do road users park in ways that could constitute hazards?
- 4) Do plantations obscure visibility or the view of signs?
- 5) Are the surface and carriageway markings in good condition?
- 6) Are there any signs that prevent road users to drive over islands or kerbs?
- 7) Are the routes taken by motorists through junctions and bends are less than ideal?
- 8) Are there signs of other conflict situations and minor accidents?

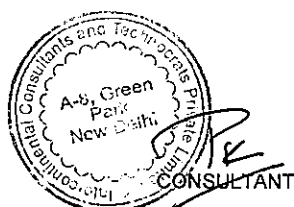


Appendix A: Description of Services

- 9) Are the specified distances to rigid obstacles maintained for all groups of road users?
- 10) Are medians and islands of adequate width for the likely users?
- 11) Are there signs of pedestrian traffic in places that seem hazardous to pedestrians?
- 12) Does there appear to be a need for more or better crossing facilities for pedestrians?
- 13) Does there appear to be a need for more or better facilities for cyclists?
- 14) Has due consideration been given to children, the elderly, persons with disabilities?
- 15) Are bus stops and bus bays safely located with adequate visibility and clearance to the traffic lane?
- 16) Any provisions for parking satisfactory in relation to traffic operations and safety?
- 17) Are all locations free of construction or maintenance equipment?
- 18) Are there any signing or temporary traffic control devices that are no longer required?
- 19) Are overtaking opportunities available for heavy vehicles where volumes are high?
- 20) Are the road boundaries free of any activities that are likely to distract drivers?
- 21) Is the location of rest areas and truck parking areas along the route appropriate and adequate?
- 22) Is sufficient warning provided in advance of breaks in service roads and openings in medians for traffic using multilane highway?
- 23) Are there reasonable traffic calming measures in place for the road stretches passing through habitations and built up areas?
- 24) Other checks can be made at the request of OWD

**Conduct of Workshops with OWD, GOO, World  
Task Bank and Review Committee Participation to  
603: Explore Concerns, Aims, Priorities on Road Safety  
Management for its Implementation on Ground** 8.V

The consultants, after a thorough review of the documents related to road safety, will develop an understanding of various provisions which need to be implemented. However, it is the personnel on the ground who need to translate safety provisions in the documents to make them realistic and operational in the field by ensuring that they are executed well. It is possible that each individual may perceive these provisions differently and some of them, who will be comfortable with explicit provisions, may not always be in a position to appreciate implicit implications. It is necessary to take note of concerns, constraints and priorities of relevant stakeholders responsible for



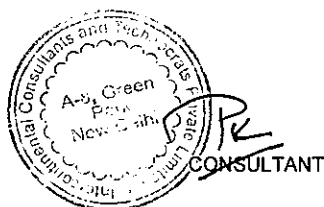
implementation of road safety aspects so that the consultants will be in a position to appreciate their perspective while formulating draft road safety strategies. This will be achieved by conducting workshops during the course of the project.

A workshop on road safety will be conducted in association with the World Bank and Asian Development Bank with active support from GOO and OWD. Identified officers from the departments dealing with road safety from all over Orissa will be invited to take part in the workshop. During the workshop, the contributions from participants' group activities will present the basis of their understanding of road safety initiatives of OWD and GOO. The consultants, who are familiar with national and international road safety practices, safety audit procedures and various regulations stipulated by the Government of India and the Ministry of Road Transport & Highways on road safety, will consider the input from the participants to the extent possible. Thus, the workshop will facilitate formulation of strategies for implementation of road safety on the road network of Orissa by incorporating the viewpoint of relevant stakeholders and will provide a basis for carrying out road safety studies by collecting relevant data from various sources.

<b>Task 604:</b>	<b>Collection of Data on at least 2000 km of Identified Roads in Different Urban and Non-urban Roads and various Terrains</b>	<b>8.V</b>
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The consultants will collect data on identified road stretches of at least 2000 km in the state of Orissa from different sources. It is essential to carry out extensive studies on road safety issues related to accidents and collect data from all sources of information including police records, data from hospital and medical sources, insurance agencies and vehicle operators (as far as possible) as it will enable to formulate road safety policies. The Consultant shall also carryout required engineering surveys over a 2000 km of network in consultation with the Client which shall be finalized at the inception stage. It is important to compile this collected data and prepare a strong database that will form an indispensable tool for preparation of road safety strategies and action plans.

Road safety studies are systematic methods of checking the safety features of roads. The main objective of these studies is to identify potential safety problems and ensure that, wherever possible, the interventions are suggested to eliminate or reduce risks. Regular road safety auditing of existing roads helps to identify hazards leading to accidents and suggest remedies to avoid such situations. Even though road safety audit is an engineering intervention, a



road with all safety features installed would cultivate a safety culture among road users, and is expected to yield positive impacts in the years to come.

The consultants will collect and analyze accident details of all causality accidents occurred for preceding years. A casualty accident is an accident where one or more persons is either killed or seriously injured.

#### Data from Police Records

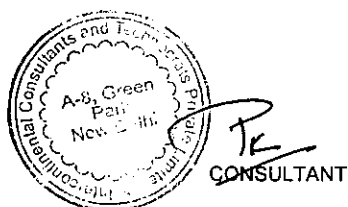
Accident recording form will be developed aligning with latest IRC accident form (Form A-1 and A-4), but will be modified to cater to specific requirements. The proposed form will be discussed with OWD for concurrence and would generally contain the following details:

- FIR No.
- Police Station jurisdiction
- Section of law
- Accident severity
- Accident date and time
- No of vehicles involved
- No of driver/ passenger/ pedestrian casualties
- Collision type
- Road type and Category
- Junction Type
- Junction Control
- Road and surface condition
- Carriageway/shoulder/roadway width
- Traffic movement
- Accident location sketch
- Accident location (nearby landmark) with km/ chainage
- Cause of accident
- Vehicle details
- Driver details
- Injured passenger/pedestrian details
- Collision diagram

The consultants will obtain formal authorization from OWD to verify the FIR from police stations and extract required details from their records. They will visit police stations in whose jurisdiction the road alignment passes through and will collect FIR of each accident case occurred. OWD is expected to facilitate liaising with police stations and for introducing the consultants' team to police. The exact location as mentioned in FIR case file and collision diagram will be noted to cross verify during the site visit.

#### Data from Hospital and Medical Sources

Data from medical records at the time of admission of accident victims helps to evaluate the extent of physical suffering that people involved in accidents go through. Though the police records are believed to be representing comprehensive information covering almost all the aspects related to





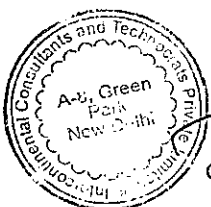
accidents, there will be situations where the accident victims may reach hospitals in search of speedier medical attention and may not find a mention in the police records. The consultants will be collecting information from government run hospitals as well as private hospitals and health centres to collect information to ascertain the extent of victims' injuries. The categorization in the police records is limited to whether injury is serious or minor whereas the medical records can be more detailed. Collection of accident data from medical records helps to fill the gaps in the police records as well as giving detailed information on victims' state of injuries as well as recuperating periods that they have undergone. The intangible losses that the families suffer may not form part of accident database but collection of accident data from hospital and medical sources will throw up human side of accidents. This would help the consultants to formulate road safety policies that would take into account an aspect that is hitherto considered as an unimportant one.

#### **Data from Insurance Agencies**

The claims disbursed by insurance agencies are indicative of costs of accidents and hence it becomes crucial to collect information from agencies handling accident claims. The police records may not always include information related to the costs of damages to people or infrastructure. Data from insurance agencies will help to fill this gap and help to estimate accident costs by type of accident. This information will be a useful input for budgetary allocations and long-term plan preparations.

#### **Data from Vehicle Operators**

While data from police, medical and insurance agencies will help to establish various factors related to accidents, data from vehicle operators enables to ascertain details regarding vehicles involved in accidents. It is observed that trucks occupy a major share of accidents – fatal/ overturning/ collisions among all categories of vehicles on non-urban roads. The consultants will be collecting information from the vehicle operators – government and private. The vehicle operators will be directly affected by accidents, as the accidents involving vehicles will impact their fleet strength and subsequent scheduling and operations. In the case of trucks affected by accidents, there will be delay in goods being delivered on time. Classified and categorized information related to freight will be collected in order to ascertain freight demand and its transportation on the roads of Orissa.



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CONSULTANT

The data will be analysed to establish various factors causing accidents on the road network of Orissa. The analysis will be used to establish black spots that cause fatalities and grievous injuries. Relationship between traffic volumes and other attributes relating to accidents would be established. For each site, a summary analysis will be developed which will be helpful for the consultants to get clues regarding predominant collision types, severity and time of accident, and the surface condition of accident location. This will enable the consultants to evaluate causal factors of accidents and the extent to which they contribute to the crashes. This will help the consultants to arrive at corrective mechanisms aimed at mitigating road accidents in the state of Orissa.

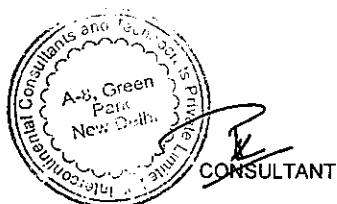
<b>Task 605:</b>	<b>Review and Establish the requirements of Technical Capacity Building on Road Safety Design; Develop Institutional Framework for Technical Capacity Building on Road Safety Norms, Designs and Training of Staff and various Sections of Road Users</b>	<b>8.V</b>
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The consultants, in their effort to help OWD's technical capacity building measures on road safety design to its different units, will aim at achieving the task by carrying out the following initiatives:

- a) Develop a conceptual framework on road safety design for OWD and GOO
- b) Create a vision for establishing safety on the road network in Orissa
- c) Enhance skills of OWD personnel associated with road safety designs
- d) Facilitate OWD staff training on road safety designs

The consultants are conscious that the main objective of capacity building is to tackle problems related to road safety while taking in to account the potential, limitations and needs of OWD personnel dealing with road safety. The engineering interventions on the road network will increase the safety to a great extent. In order to achieve higher road safety levels, engineering and technical skills of personnel involved will be enhanced. Skill gaps will be identified, constraints of the system will be noted and the officials of OWD will be empowered on all technical and engineering aspects related to road safety design through training and knowledge dissemination processes:

- help OWD to fix targets aimed at reduction of accidents through education, enforcement and engineering initiatives and monitor how well these initiatives are understood by the staff of OWD throughout the organization
- review OWD processes that help individuals with understanding of road safety aspects, and facilitate development of skills to conduct road



- safety audit, knowledge on road safety practices and training required by them on road safety that will enable them to perform effectively
- develop institutional and legal framework and propose legal and regulatory changes to enable OWD to enhance their capabilities at all levels

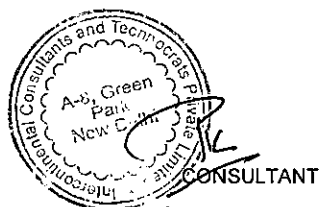
**Task Organize Field / Institutional Visit of GOO Officials  
606: to various Organizations dealing with Road Safety 8.V**

As the consultants go through the exercises involving regular consultations, review processes, workshops and capacity building efforts; concerned OWD staff responsible for road safety would have developed a fair amount of expertise on road safety related issues. It may be mentioned that an accident covers a wide spectrum of issues ranging from aspects related to roads to vehicles to hospitals to road traffic. Hence, it would help the officers of OWD, if they can visit the institutions handling road safety to appreciate various facets of road safety. The OWD staff would get the first hand experience on aspects related to road, road users and vehicles through these visits. They will be in a position to appreciate efforts of the agencies that have been carrying out studies aimed at road safety covering the vehicles and victims involved in road accidents. The consultants will facilitate field trips to some of the following institutions to help OWD road safety staff to familiarize themselves with various aspects of safety.

- a) Central Road Research Institute (CRRI), Delhi
- b) Central Institute of Road Transport (CIRT), Pune
- c) Automotive Research Association of India (ARAI), Pune
- d) Vehicle Research and Development Establishment (VRDE), Ahmed Nagar
- e) National Institute of Mental Health and Neuro Sciences (NIMHANS), Delhi
- f) Institute of Road Traffic Education (IRTE), Delhi
- g) NITHE, NOIDA

In addition to above listed institutes, the consultants will also facilitate field trips to States like Tamilnadu and Kerela where significant work on Road Safety issues have already been under taken.

At the end of familiarization and institutional visits, the OWD officials will have an insight into various agencies' functioning and their efforts towards road safety aspects and the people involved in road accidents. This will help OWD to orient the focus to road safety by streamlining their experiences in a holistic perspective.

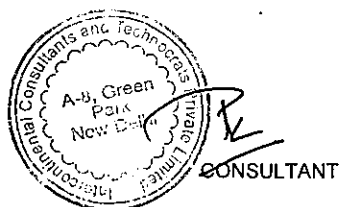


<b>Task 607:</b>	<b>Assessment of Current Road Safety Framework and Development of New Regulatory System Framework for Road Safety responsibility for OWD and GOO</b>	<b>8.V</b>
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The consultants are aware that it is not possible to prevent all accidents and hence any regulatory road safety framework document for OWD would have to necessarily be conscious of this fact in spite of the best efforts, that the accidents will stay, and their effect is to be minimized. However, Consultants would like to prepare an institutional responsibility framework aiming at minimizing the road accidents so that fatalities and serious injuries are reduced. This will be carried out by the consultants after undertaking preliminary assessment and review of road safety responsibility framework that is being currently followed by OWD and GOO. They would incorporate a vision statement that will envisage substantial reduction in number of deaths on Orissa roads by the year 2020. This regulatory document will underline the principle that human life takes precedence over mobility and other objectives of road transport. It will mention that those who provide and regulate road safety systems must share the responsibilities collectively with users of the system so that Orissa roads are safer than before. On the safety front, it will be emphasized that road safety must be accorded the highest priority notwithstanding the fact that there will be human errors and every effort must be made to reduce them. Moreover, personnel of OWD, private transport operators, traffic police and other stakeholders will be urged to strive towards safety of all road users and must co-operate with road users. All the stakeholders of OWD will be expected to accept suggested changes to achieve higher safety on the roads of Orissa.

<b>Task 608:</b>	<b>Facilitation of GOO in Planning for more Multi-sectoral Measures Aimed at Enhanced Road Safety Management in Orissa</b>	<b>8.V</b>
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The consultants are conscious of the fact that road safety is such an important and complex issue that to achieve any semblance of success, it needs a comprehensive and multi-pronged approach from each and every sector. This needs coordinated efforts and GOO is expected to spearhead this all important initiative through a number of engineering measures that are expected to be suggested by the consultants through their findings at relevant stage of project study. The consultants will collate and compile inputs from the relevant stakeholders and suggest measures that would facilitate GOO to plan a unified strategy. The consultants would have carried out in-depth studies with agencies involved in road safety as part of their efforts, thereby gaining a



valuable insight for steps to realize the needed coordination. This will help them to prepare a blueprint that will facilitate the Government of Orissa to enhance road safety management measures with input from all sectors (players/stakeholders) dealing with road safety.

<b>Task 609:</b>	<b>Prepare Comprehensive Document on 'Orissa Road Safety Strategy and Action Plan' through Evolved Processes</b>	<b>8.V</b>
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The consultants, after having undertaken a series of initiatives with respect to institutional strengthening, will formulate an action plan that would help OWD to work towards achieving higher levels of safety on the road network of Orissa. The 'Orissa Road Safety Strategy and Action Plan' document will be the resultant of the consultants' efforts comprising review of the processes and frameworks of OWD, extensive field surveys, conducting of workshops, engaging the stakeholders in evolving the policy formulation and other interventions. The 'Strategy and Action Plan' document will cover an in depth analysis of crash data, causes of road accidents, identification of high risk locations, along with road safety countermeasures, safety campaign materials, road improvements measures, etc. The key objective is to look for pattern(s) in accidents which might help to identify one or more contributory factors that can be addressed directly with most appropriate countermeasures.

Encompassing the major inferences from the site investigation and the accident patterns evolved in the study of accidents, an accident analysis report will be prepared. Since accident pattern is drawn from an in-depth analysis, the report will throw up clear indications regarding deficiencies in the road environment. This will enable the consultants to diagnose the problems at accidents spots and in turn verify from the designs whether adequate remedial measures were included or not.

The comprehensive Road Safety Strategy and Action Plan document developed by the consultants will provide a policy framework for the decision makers at GOO to lay down procedures for implementation of the strategies and action plan to ensure higher level of road safety in Orissa. This guiding document will equip OWD with necessary processes to adopt for better execution of road safety norms and procedures and help save lives of people of Orissa.



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<b>Task 610:</b>	<b>Assist GOO to Legally Endorse the Regulatory Framework for its Implementation by OWD and other Institutions</b>	<b>8.V</b>
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The 'Road Safety Strategy and Action Plan' is a document that will be evolved through long drawn processes and procedures that would involve wide ranging consultations with senior functionaries of OWD and GOO from time to time. The evolved document is likely to propose certain recommendations that may be overriding the present regulations in the statutes of the government. This would necessitate changes to be brought forward to certain provisions in order to achieve better regulation and implementation of road safety initiatives across many departments and ministries (Home, Public Works, Finance, Transport, Education, Law, Health, Urban Development, Panchayat Raj, Tourism and others) within the legal framework of the Government of Orissa. The consultants will assist GOO in its efforts to prepare notes for discussion among the ministries and will help to clarify questions raised thereon by any of the stakeholder ministries or departments. This would strengthen GOO's efforts to get Road Safety Strategy and Action Plan to get legally endorsed across the ministries for its effective implementation by OWD. It would also facilitate the Government of Orissa's progressive planning for more strategic road safety initiatives.

<b>Task 611:</b>	<b>Submission of Deliverables</b>	<b>8.V</b>
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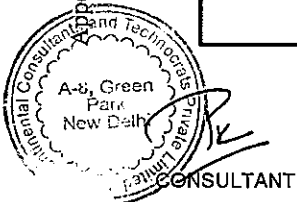
The following deliverables based on inputs from Team Leader-cum-Road Agency Management Specialist, Financial Analyst & Business Planning Specialist, Transport Planning (Roads) Specialist, Transport Economist and Legal Specialist shall be submitted to OWD. These submissions shall be preceded by services of discussions with all stakeholders, including OWD and Review Committee to get their views for incorporation in final document on Road Safety Engineering.

- a) Draft Report on Proposed 'Orissa Road Safety Action Plan by end of 16<sup>th</sup> month
- b) Final Report on Proposed 'Orissa Road Safety Action Plan by end of 19<sup>th</sup> month





Appendix A: Description of Services



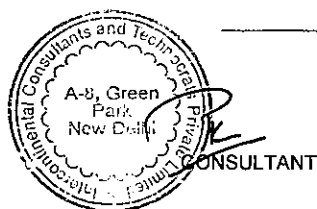
Task No.	Description of Activity	Activity Duration (in Months)	Road Agency Management Specialist-cum- Team Leader	Specialist-cum- Deputy Team	Financial Analyst & Business Planning Specialist	Transport Planning (Roads) Specialist	Transport Economics Specialist	Senior Highways Engineer ( Pavements Management & GIS Applications (Master Planning) Specialist	Road Safety (Infrastructure Design & Management) Specialist	PWD Sector Domain Specialist	Procurement Specialist	Training & Human Resources Development (HRD) Specialist	Human Resources Management (HRM) Specialist	Legal Specialist
<b>TASK GROUP VI: ROAD SAFETY ENGINEERING AND PLANNING</b>														
601	Review Engineering Functions for Existing Road Infrastructure Safety, Regulatory and Legal Set Up, as well as Institutional Framework of OWD/GOO	3.00	P	S	S	S	S	P	P	S	S			P
602	Review Road Infrastructure Safety Management Initiatives and Engineering Functions for Pre-Selected Corridors of OWD in accordance with Codal Provisions	3.00	P	S	S	S	S	P	P	S	S			P
603	Conduct of Workshops with OWD, GOO, World Bank and Review Committee Participation to Explore Concerns, Aims, Priorities on Road Safety Management for its Implementation on Ground	6.0, AW	P	S	S	S	S	P	P	S	S			P
604	Collection of Data on at least 2000 km of Identified Roads in Different Urban and Non-urban Roads and various Terrains	3.0, AW	P	S	S	S	S	P	P	S	S			P
605	Review and Establish the requirements of Technical Capacity Building on Road Safety Design; Develop Institutional Framework for Technical Capacity Building on Road Safety Norms, Designs and Training of Staff and various Sections of Road Users	2.0, AW	P	S	S	S	S	P	P	S	S			P
606	Organize Field / Institutional Visit of GOO Officials to various Organizations dealing with Road Safety	2.0, AW	P	S	S	S	S	P	P	S	S			P
607	Assessment of Current Road Safety Framework and Development of New Regulatory System Framework for Road Safety responsibility for OWD and GOO	3.0, AW	P	S	S	S	S	P	P	S	S			P
608	Facilitation of GOO in Planning for more Multi-sectoral Measures Aimed at Enhanced Road Safety Management in Orissa	2.0, AW	P	S	S	S	S	P	P	S	S			P
609	Prepare Comprehensive Document on 'Orissa Road Safety Strategy and Action Plan' through Evolved Processes	1.5, AW	P	S	S	S	S	P	P	S	S			P
610	Assist GOO to Legally Endorse the Regulatory Framework for its Implementation by OWD and other Institutions	12.00	P	S	S	S	S	P	P	S	S			P
611	Submission of Deliverables	19.00	P	S	S	S	S	P	P	S	S			P
<b>Legend</b>														
P Primary Responsibilities														
S Secondary Responsibilities														



- VI. **Road Network Master Planning:** Development of comprehensive master planning for Odisha road network with multi-year plans and annual plans for roads development and management, capitalizing on the GIS-based main road network information system and database being established via a separate Asset Management System consultancy. Involves *inter alia* (i) preparation of a draft inaugural Master Plan (consistent with the new Road Sector Policy) that takes into account the current network status and road conditions, emerging state-level trends in road transport demand, developments in other transport modes, the roads investment and funding outlook in Odisha, and relevant aspects of the state's plans and priorities for socio-economic development; (ii) targeted capacity building measures within OWD; and (iii) development of a proposed new 'road classification' system and 'responsibility framework' for GOO endorsement and assistance to OWD with its implementation.

The task for development of road master plan shall primarily include (a) compilation of data and information from various secondary sources on the physical, social, economic, transport system, traffic characteristics, environmental and social characteristics of the State, (b) conducting field surveys on selected stretches over road network length of approximately 3000 Km spread over all categories of roads in the State for obtaining data on road network inventory, pavement condition, sub grade investigation, traffic volume and movement pattern surveys, axle load survey, bus and truck operator survey, limited environmental and social screening etc. (c) interaction with the Governmental and public sector agencies, Chambers of Commerce & Industries, Transport Operators and other Non-Government organizations, (d) building up the socio-economic profile of the region, analyzing present and future prospects, (e) situation analysis and diagnosis of existing road network and identification of capacity constraints, network evaluation, (f) development of strategic options using parameters such as: Volume/Capacity Ratio, Road/Route serving inter-state traffic, backward area linkages, high commercial traffic, strategic/ industrial linkages, road condition, traffic growth rate, road connectivity, alternative route, environmental aspects, tribal areas (g) improvement strategies and preliminary costing, prioritization as per economic appraisal, ranking of roads under selected network and financing plan

The main deliverable under this Task shall include ( but not limited to ) the Final Master Plan for Odisha Road Network, Road Reclassification system and Capacity Building measures consistent with other related tasks.



The key input for this task shall be mainly by the Team Leader-cum-Road Agency Management Specialist, Senior Highways Engineer (Pavements Management & Planning), Transport Planning Specialist, Transport Economics Specialist, GIS Applications (Master Planning) Specialist

#### Consultant's Indicative Methodology for Task- VI

#### ROAD NETWORK MASTER PLANNING

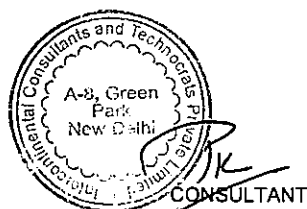
**Study Current Road Network based on Asset  
Task 701: Management Data, the Condition of Roads and Existing Data Entry Systems for the State 8.VI**

A thorough review will be undertaken by the consultants on the current road network of Orissa as well as on the system of network planning being practiced by OWD. The evaluation would cover the status of entire network of Orissa roads that will be reviewed in terms of classification (e.g. National Highways, State Highways, MDRs, ODRs, village roads, urban roads and others), in terms of pavement surface (concrete, bituminous, metaled, non-metaled roads and others), in terms of ownership (OWD, Forest Department, Rural Development, Urban Development and Panchayat Raj / Block Development Roads, etc.) and other categories.

The consultants will review the current practices adopted by the Orissa government in planning their road network based on data prepared by Consultants for Asset Management System. It is appreciable that the Government of Orissa has established Orissa Space Applications Centre and is extensively using GIS and satellite remote sensing in their efforts to prepare digital road network database for rural connectivity planning. The consultants will analyze the limitations in the current practices of network planning that hamper continuous update of road records through digital technology for multi-purpose use of road information to improve road management and administration. A review of the current database generation techniques featuring satellite data acquisition, ground control point identification, road map and GIS data set generation among others will be carried out so that the process will set the basis for subsequent network planning mechanisms.

Consultants will refer to the Road Sector Policy of the Government of Orissa and also the strategic development plan for socio-economic upliftment of the population, especially the tribals and lower income categories. This will have a bearing in the road master plan to be developed as part of this project.

While carrying out the reconnaissance survey of the state, the Consultants would also collect the data on the connectivity status of villages and districts



for its percentage coverage. This is required for development of master plan, since the aim of master plan shall be the phased 100% connectivity to all villages of the road. The aim of Consultant shall be to provide an integrated road network system for the entire state. Since the development of road network shall also be dependent on availability of funds to be made available by GOO.

**Task 702: Collection of Data for Master Plan from various Sources i.e. Primary and Secondary 8.VI**

The development of master plan is an integrated exercise involving number of factors i.e.

- socio-economic profile of the state
- The demographic profile and the density of population pattern of the state
- Present traffic data and likely traffic demand pattern in the state
- Traffic characteristics
- Social and environmental linkages with road network
- Axle load survey
- Existing road inventory

To collect the above data the methodology adopted by Consultant shall be as below:

- To conduct field survey on selected stretches on approximately 3000 km road network of state
- The road network selected shall comprise of all categories i.e. state roads, district roads, other district roads as well as NHs linking various main commercial / tourist hubs of state.
- Since GOO is already carrying out the collection of data through separate asset management consultancy, the Consultant shall maintain regular liaison to collect the data from them also.
- Socio-economic survey of state.

The collected data shall be :

- Present road network
- The Ongoing projects for additional roads as on date;
- The development in other transport modes at urban and village levels i.e. rail network etc.
- The pavement condition,
- Subgrade condition,
- Axle load profile by carrying out interaction with bus and truck operators
- The demand for roads to meet the requirement of industry.



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The collected data shall also require further authentication, which shall be done by interacting with the following:

- Public sector and Government agencies covering social and environmental details
- Carry out public and village level meetings
- Chamber of Commerce and Industries
- NGOs
- Transport agencies and operators
- Forest department

**Task 703: Conduct Extensive Field Surveys on Pavement Conditions and Traffic Components on approximately 3000 km of Existing Road Network of State and Collect Data regarding Social and Environmental linkages with Road Network** **8.VI**

The consultants will conduct the following field surveys over 3000 kms of selected road stretches in Orissa. This selected network of 3000 kilometers of roads of different categories will be identified in consultation with the OWD.

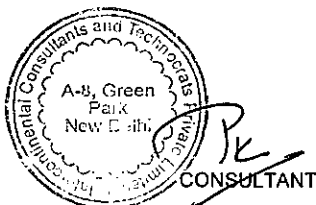
#### **Road Network Inventory**

A broad level network inventory shall be carried out on the roads in the state of Orissa. The inventory shall be conducted to identify the alternate routes (roads/railways) with their configuration, missing links of the network, pavement condition, road width and other relevant parameters useful to assess the impact of the alternate route(s) and transport alternatives. This will further help in assessment of potential diversion to/from the identified road corridors.

#### **Pavement Condition Survey**

It shall be carried out for pre-selected areas / sectors in consultation with OWD / Client with the help of BBDT. Based on the report, an assessment shall be made for proposed Road Network i.e.

- Rehabilitation
- Maintenance
- New Roads



### **Classified Traffic Volume Counts**

Classified traffic volume surveys will be conducted on road sections of different terrain conditions as well as urban roads and arterials with each location representing mid-block count section for major roads in the network. Actual number of locations will be decided in consultation with OWD and based on the network of 3000 km roads identified by OWD. The counts will be conducted in both directions for successive 15 minute periods over 24 hours of the day and will be carried out at identified locations.

For the purpose of counts, a day will be divided into two shifts of 12 hours each and different groups of enumerators with supervisors will be assigned for each shift. Trained enumerators will be deployed for counting and recording the data by making tally-marking system.

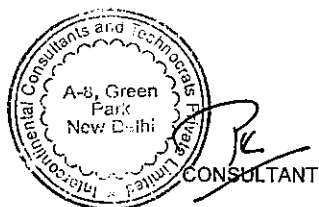
### **Bus and Truck Operator Surveys**

As major players in transporting men and material, the role of bus and truck operators assumes significance in planning any system related to road transport. The consultants will collect information from the bus and truck operators as this would help them to understand the travel desires, maximum number of passengers and commuters from bus operators and freight characteristics from truck operators. The information to be collected from bus operators may include the following details:

- i) fleet size
- ii) crew strength
- iii) total vehicle – kms operated per day by all the fleet
- iv) average vehicle – kms operated per bus
- v) no of passengers transported per day by all fleet
- vi) average no of passengers transported per day per bus
- vii) average trip length per bus
- viii) total revenue collections per day
- ix) average revenue collections per day per bus
- x) vehicle operating costs
- xi) no of vehicles involved in accidents

The information collected from the bus and truck operators will enable the consultants to duly consider the freight and passenger demand in the preparation of inaugural road network draft master plan.

All the surveys will be conducted following the standard norms of data collection as per IRC and MoRT&H guidelines, and standard data collection and classification formats will be used.



**Build Socio-economic Profile at District Level  
Task 704: through an Analysis of Present and Future Prospects 8.VI**

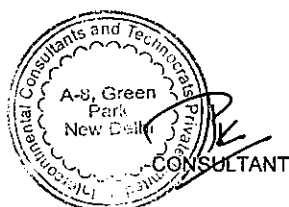
A socio economic profile taking present and future prospects in to account would be prepared by the consultants as the profile will form the basis in formulating the road network master plan. The data with respect to present profile will be crucial as the master plan will largely depend on existing network facilities, their adequacy, shortcomings and other information. There may be large number of tribal hamlets and other scarcely inhabited pockets that need access interventions in terms of inclusion in the network of master plan as they need to be made accessible. Similarly, the industrial growth, investment plans from centre and state governments, private sector and other relevant stakeholders will be taken into consideration as the future expansion plans need to be catered for. The present growth in terms of demographic and economic patterns will be studied and projected for future horizon year prospects. The profile built on these strong fundamentals will be used in preparation of the draft master plan in terms of the spread of the network in the state with legitimate hierarchy of the network.

**Review, Critically and Analytically, Diagnose the existing Road Network in Light of Social Economic Profile and Capacity Constraint of Road Network 8.VI**

The existing road network before being taken up for the proposed future master plan has to be reviewed critically and analytically keeping in view the socio-economic profile of the state as it exist today and how the GOO is viewing it in future. It shall depend that how the road map of the overall development of the state is being foreseen by OWD. It shall be based on

- The development of main economic sectors i.e. agriculture, commerce, industrial and tourism;
- The development of other modes of transport i.e. shipping, rail and the NH/ Expressways being proposed by MoRT&H;
- The likely economic opportunities coming up in future eg. Vedanta as of now;

The maintenance plans of OWD for existing road network.



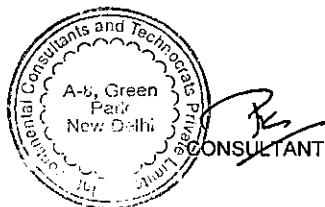
<b>Task 706:</b>	<b>Development of Draft Master Plan, consistent with new Road Sector Policy, Road Classification System, Investment Opportunities and Matching Capacity Building with Responsibility Framework for Implementation</b>	<b>8.VI</b>
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### **Develop Preliminary Draft Master Plan**

The consultants, with the input from different sources, will prepare a draft master plan taking in to account all the attributes that influence movement of men and material on the road network of Orissa. This evolved draft master plan will be closely aligned with new road sector policy that is expected to be a guiding instrument for the draft inaugural master plan. This extensive exercise will ensure that the every section of the society is well catered for in terms of provision of accessibility, connectivity and mobility in that order. The draft master plan will identify the new habitats to be made accessible, increase the levels of connectivity of villages and small towns to more centres of activity and make provision for higher levels of mobility to men and material needing greater degrees of agility. The draft master plan will also reflect the socio economic profile of the state so as to equip the Government of Orissa of requisite input to formulate policies for growth that will benefit different sections of the society.

### **Develop Year-wise Responsibility Framework**

An exercise of this magnitude undertaken by the Government of Orissa needs a defined and definitive strategy for successful implementation. The plan has to roll through respective stakeholders responsible for the actual implementation and operations. Therefore, the consultants will develop a framework under which each task will be clearly defined and the personnel for its successful execution will be identified and entrusted with the responsibilities. The principles of Performance Management Systems will be adopted so that tasks and their progress can be monitored. The consultants will broadly categorize the responsibilities in terms of Key Performance Indicators, Strategic Objectives, Strategic Goals, and Annual Performance Plans for long-term, mid-term and short-term plan periods. The entire gambit of the responsibility will be taken as one unit for a horizon year and goals will be set in that direction. Once the goal is clearly defined, the year-wise, objectives



and measurable targets will be formulated and entrusted to the person(s) responsible for their implementation. As every employee will be made clear and aware through this project of the task to be accomplished and measurable year-wise target that needs to be achieved on annual basis, higher productive results will be systematically achieved. Thus, the performance management document prepared by the consultants will not only spell out year-wise responsibility framework, but will also help to achieve higher productivity through an organized mechanism that allows a regular monitoring and evaluation.

### **Develop Road Classification System**

The roads in India are broadly classified as Expressways, National Highways, State Highways, District Roads (Major and Minor) and Village Roads as per the Indian Roads Congress classification system. It is expected that any other categorization of roads should be broadly aligned along these lines. At the same time, it may be observed that each state would like to prioritize its roads in terms of their importance or otherwise. This would mean that that Orissa may prefer to classify roads of its network in terms of its priorities. The consultants would elicit the expectations and the categories based on which the roads will be expected to be categorized and will then develop a system as per the Government of Orissa's priorities keeping the broad classification principles of the Government of India. The consultants will try to incorporate important urban roads, major arterials and corridors and all other roads in its proposed classification system suiting the requirements of the state. If, on the basis of its importance, any link needs prioritization for faster development, it may be upgraded to the next level or category of road. Further categorization can be considered once the parameters for classification system are extensively discussed by the Consultants with OWD in relation to the status of the roads. Primarily, the road network developed for the new master plan may require re-designation of state level roads to provide necessary hierarchy as well as their equitable distribution in the whole state, which will be achieved through the master plan.

### **Develop Matching Capacity Building**

It is essential that an institution must aim at equipping itself with a capacity building mechanism in order to sustain the progress in a dynamic environment. The consultants will develop a broad framework that would help OWD to put in place a system that will enable to achieve desired results in a systematic and methodical manner. This capacity building exercise for OWD at an institutional level will encompass all the requisite attributes that are





essential for achieving higher productivity and sustenance. This will primarily be in updating the road master plan from time to time, and managing the network performance, investment planning as well as responsibly delivering the maintenance for sustainability.

**Task 707: Match the Draft Plan with Social Economic Development Policy of GOO 8.VI**

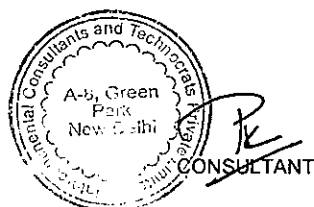
The consultants will prepare the draft master plan after considering all the attributes that influence passenger travel and movement of goods. This exercise involves large-scale data collections from many sources. How much ever care that the consultants may take in preparing the master plan while incorporating all the necessary parameters, it need not necessarily match with envisioned socio-economic development plan prepared by Orissa government, whose priorities may not be exactly reflected in the inputs provided by different stakeholders or even by the data. As the consultants' devising of inaugural draft master plan is largely dependent on the quality of input, it is necessary that the socio-economic parameters as per GOO's laid down policies are covered and brought into the draft plan. The shortfalls, if any, will be covered and the areas that are required to be supplemented will be strengthened. Thus, the consultants will ensure that the prepared draft master plan does not deviate much from socio-economic development policies of the Government of Orissa.

**Task 708: Submission of Interim Report 8.VI**

Based on the above data, the Consultant shall prepare an interim report on inaugural master plan for main road network for the state. In the draft stage this report shall be discussed through series of discussions with OWD and review committee to get their views for their incorporation prior to its submission. The report is required to be submitted by the end of tenth month.

Besides the proposed network of the roads the report shall also cover the following:

- Economic objectives of the state to cover all the district / main reasons connected with m commercial and industrial activities;
- The social objectives allowing maximum coverage and linkages with all the districts / villages of the state;
- Provide linkages with the tourism industry as on date and covering future development plans in this sector;
- The safety and management of environment.



The interim report shall also take into account the ISAP (2008-18) framework as targeted by 2011 which of course shall now be changed to the revised targets of ISAP in view of the revised bidding process taken up by OWD.

**Task 709: Development of Master Road Network Plan with Strategic Options 8.VI**

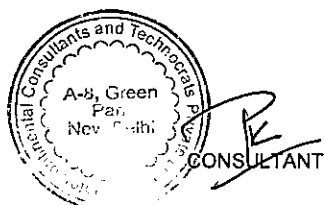
The development of road network shall be based on the analysis of various strategic options to be studied by Consultant. It shall be based on the following:

- a) The new road sector policy as framed in accordance with Task 301;
- b) The reviewed road investment and fund outlook of GOO;
- c) The draft plan to match with social economic development policy of GOO;
- d) The reviewed road classification system;
- e) Matching volume / capacity building of roads analysing the present constraints and development plans of OWD with respect to road sector policy and the strategy of GOO / OWD;
- f) Inter-state traffic linkages;
- g) Heavy commercial traffic and its build up in future;
- h) Ranking of the roads for proposed development in terms of availability of financial plans of the state;
- i) Social policies of state with respect to tribal and backward areas.

The Consultants based on above factors will carry out SWOT analysis of various options taking into account the factors detailed above for preparation of Draft Master Plans of proposed road network for its presentation to OWD.

**Development of Road Classification System, GIS based Information Data on Roads and Responsibility Framework for Implementation by the OWD and other Government Entities for the Total Road Network of Orissa 8.VI**

As brought out above the master plan of road network shall take into account all the categories of road network existing as well as proposed to be coming up in future. For this purpose the Consultant shall interact with other Government departments and stakeholders of the state to collect the information that how the policies of GOO are being framed to take up parallel build up in road network e.g. the PMGSY concept.



The purpose of classification of roads is to be in line with IRC standards as being practiced at by NHAI as well as other state PWDs for various categories of roads. The classification of different types of roads shall be based on IRC parameters to include the width of the road, pavement and shoulder width, pavement type, acceptable roughness and the road furniture, etc. The classification shall also depend on its load bearing capacity, ie. Class AA, A, B, C, etc. In terms of defense classification the roads, the roads are classified as class 70, 50, 40, 30 and 18, etc.

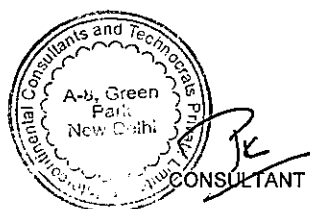
The development of the road network and its classification is also linked that what kind of connectivity network it is going to sustain in the state. The higher category of roads is for those which provide the primary links that sustain economic and regional development. Typically they are the more heavily trafficked roads which link major centers of trade, commerce, manufacturing and population. They also link major centers of production and manufacturing with export hubs.

The data on road network shall also be supported GIS based information system. The Consultant shall make efforts that the information system is also linked to the department of Survey of India with its head quarter at Delhi and for the maps at Dehradun. This shall also enable to have details summarized on various permanent benchmarks of the state which may be missing at this stage.

<b>Task 711:</b>	<b>Organize Approval and Endorsement of Road Network Master Plan by Way of Organizing Workshops and Consultation Framework at various Levels of OWD and GOO</b>	<b>8.VI</b>
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The consultants would put forward a draft road master plan in accordance with new road sector policy, road investment opportunities and fund outlook of GOO. In addition, year-wise responsibility framework for GOO for implementation of the plan, road classification system, matching capacity building of OWD as well as compatibility of draft master plan with socio-economic development policy of GOO will be evolved. The next stage involves rolling out the plan to stakeholder organizations and subject it to rigorous scrutiny & examination of all the ideas used for its development. This will be carried out through organising workshops jointly with the GOO organizations whose capacity development has been done through the project.

The success of any plan solely depends on the people who are directly responsible for its implementation on the ground. It is, therefore, essential that

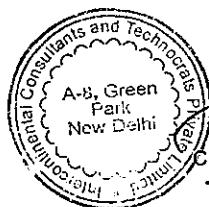


the personnel involved in network planning are familiar with the road master plan that they need to drive and steer through to the future years. The plans and proposals prepared by the consultants must be cascaded through the ranks of OWD.

The consultants will conduct workshops after preparation of the final draft of the Master Plan in order to help Orissa PWD and GOO personnel responsible for implementation to fully understand all the aspects of network planning and the proposed changes that may be required to be adopted as a change from what they may have been practicing thus far. This workshop will focus at an in-depth familiarization process for OWD personnel on changes in proposed road network master plan and related strategies. Concerned staff from various government departments involved in master plan preparation, GIS data processing, etc will take part in the workshop. The workshop will help in preparing the OWD and GOO staff to fully understand the implementation requirements of the new road network Master Plan for Orissa.

**Submission of Master Plan prepared by Senior Highway Engineer (Pavement Management & Planning), Transport Economist Specialist & GIS Application Specialist besides Team Leader-cum-Road Agency Management Specialist**

The development of road sector master plan shall be based on key inputs put in by Senior Highway Engineer, (Pavement Management & Planning), Transport Economist Specialist and GIS Application Specialist besides Team Leader-cum-Road Agency Management Specialist . This shall include the road classification system and capacity building consistent with master plan.

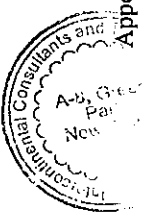


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Appendix A: Description of Services



TASK No.	Description of Activity	Activity Duration (in Months)	Assignment Duration (Months)																																		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					
<b>TASK GROUP VI: ROAD NETWORK MASTER PLANNING</b>																																					
701	Study Current Road Network based on Asset Management Data, the Condition of Roads and Existing Data Entry Systems for the State	2.0 AW	█	█	█	█	█	█																													
702	Collection of Data for Master Plan from various Sources i.e. Primary and Secondary	3.0 AW	█	█	█	█	█	█																													
703	Conduct Extensive Field Surveys on Pavement Conditions and Traffic Components on approximately 3000 km of Existing Road Network of State and Collect Data regarding Social and Environmental linkages with Road Network	3.00		█	█	█																															
704	Build Socio-economic Profile at District Level through an Analysis of Present and Future Prospects	3.00			█	█	█																														
705	Review, Critically and Analytically, Diagnose the existing Road Network in Light of Social Economic Profile and Capacity Constraint of Road Network	7.0 AW						█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█		
706	Development of Draft Master Plan, consistent with new Road Sector Policy, Road Classification System, Investment Opportunities and Matching Capacity Building with Responsibility Framework for Implementation	3.00								█	█	█																									
707	Match the Draft Plan with Social Economic Development Policy of GOO	2.00								█	█																										
708	Submission of Intrim Report	10.00																				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
709	Development of Master Road Network Plan with Strategic Options	6.0 AW																				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
710	Development of Road Classification System, GIS based Information Data on Roads and Responsibility Framework for Implementation by the OWD and other Government Entities for the Total Road Network of Orissa	10.0 AW																																			
711	Organize Approval and Endorsement of Road Network Master Plan by Way of Organizing Workshops and Consultation Framework at various Levels of OWD and GOO	10.0 AW																																			
712	Submission of Master Plan prepared by Senior Highway Engineer (Pavement Management & Planning) Transport Economist Specialist & GIS Application Specialist besides Team Leader-cum-Road Agency Management Specialist.	22.00																																			
Legend																																					
	Continuous Activity		█																																		
	Intermittent Activity (as and when required)		█																																		
	AW As and when required																																				



Appendix A: Description of Services

Task No.	Description of Activity	Activity Duration (in Months)	Road Agency Management Specialist-cum- Team Leader	Organizational Development Specialist-cum- Deputy Team	Financial Analyst & Business Planning Specialist	Transport Planning (Roads) Specialist	Transport Economics Specialist	Senior Highways Engineer (Pavements Management & GIS Applications (Master Planning) Specialist	Road Safety (Infrastructure Design & Management) Specialist	PWD Sector Domain Specialist	Procurement Specialist	Training & Human Resources Development (HRD) Specialist	Human Resources Management (HRM) Specialist	Legal Specialist
<b>TASK GROUP VII: ROAD NETWORK MASTER PLANNING</b>														
701	Study Current Road Network based on Asset Management Data, the Condition of Roads and Existing Data Entry Systems for the State	2.0, AW	P		S	P	P	P	P	S	S			
702	Collection of Data for Master Plan from various Sources i.e. Primary and Secondary	3.0, AW	P		S	P	P	P	P	S	S			
703	Conduct Extensive Field Surveys on Pavement Conditions and Traffic Components on approximately 3000 km of Existing Road Network of State and Collect Data regarding Social and Environmental linkages with Road Network	3.00												
704	Build Socio-economic Profile at District Level through an Analysis of Present and Future Prospects	3.00												
705	Review, Critically and Analytically, Diagnose the existing Road Network in Light of Social Economic Profile and Capacity Constraint of Road Network	7.0, AW	P		S	P	P	P	P	S	S			
706	Development of Draft Master Plan, consistent with new Road Sector Policy, Road Classification System, Investment Opportunities and Matching Capacity Building with Responsibility Framework for Implementation	3.00												
707	Match the Draft Plan with Social Economic Development Policy of GOO	2.00												
708	Submission of Interim Report	10.00	P		S	P	P	P	P	S	S			
709	Development of Master Road Network Plan with Strategic Options	6.0, AW	P		S	P	P	P	P	S	S			
710	Development of Road Classification System, GIS based Information Data on Roads and Responsibility Framework for Implementation by the OWD and other Government Entities for the Total Road Network of Orissa	10.0, AW	P		S	P	P	P	P	S	S			
711	Organize Approval and Endorsement of Road Network Master Plan by Way of Organizing Workshops and Consultation Framework at various Levels of OWD and GOO	10.0, AW	P		S	P	P	P	P	S	S			
712	Submission of Master Plan prepared by Senior Highway Engineer (Pavement Management & Planning), Transport Economist Specialist & GIS Application Specialist besides Team Leader-cum-Road Agency Management Specialist	22.00	P		S	P	P	P	P	S	S			
<b>Legend</b>														
P Primary Responsibilities														
S Secondary Responsibilities														

CONSULTANT

Chief Engineer,  
World Bank Projects, Odisha

- VII. **Future Roads Management Funding:** Study the options available (or likely to become available) to the GOO to generate new or increased funding for road maintenance and asset development, and assist the GOO in deciding and implementing the preferred institutional arrangement(s) and mechanisms for the administration of new roads-dedicated revenues, such as a dedicated Road Fund. Involves *inter alia* (i) review of existing funding sources and 'road user charges' mechanisms available to GOO to meet the financial requirements of the state's main road network infrastructure; (ii) assessing the adequacy of the resulting funds for objectively-determined 'road asset management' needs and priorities; (iii) identification of realistic new measures available to GOO to improve resource mobilization for roads financing in the state, projection of the funding volumes potentially mobilized via such measures (individually and cumulatively), and comparison of the efficiency of each such measure; (iv) identification of viable institutional options to 'channel' road user charges and other new roads-dedicated revenues onto road infrastructure purposes, via (e.g.) possible creation of a state-level Road Fund; (v) identifying the structuring, powers and resources needed for (e.g.) an effective and sustainable Road Fund; and (vi) facilitating the implementation of the GOO-preferred mechanism(s).

The deliverable under this task shall include ( but not limited to ) preliminary report on study of roads funding options for possible creation of a State Road Fund followed by final report after completion of related workshop and recommendations with legislative documentations, if any. Key input for this task shall be mainly by the Team Leader-cum-Road Agency Management Specialist, Financial Analyst & Business Planning Specialist, Transport Planning (Roads) Specialist, Transport Economist and Legal Specialist

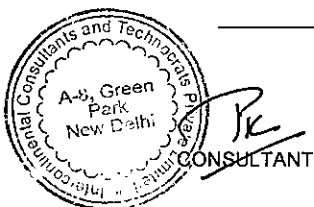
#### Consultant's Indicative Methodology for Task- VII

#### FUTURE ROADS MANAGEMENT FUNDING

**Task 801: Study, Road Development Programmes for the last 5 and 10 Years and the Financial Commitment during this Period by OWD / GOO**

Before working out on future road fund management for the state, the Consultants shall carry out the study that what has been the pattern of financial expenditures made by GOO during last 5 to 10 years on

- New Roads
- Strengthening & Widening of Roads
- Maintenance



By this data an assessment can be made that what has been the overall policy and thinking of GOO in this sector. It can further be assessed that from what sources these funds have been made available to OWD. Why this point is being discussed, it is important that the private investments and the allotment of funds by the center to the state for such an activity depends on political environment.

In addition the ISAP (2008-18) matrix shall also be studied by the Consultants since the target fixed in accordance with ISAP are to be matched upto 2012 as per the previous scenario for the financial management of future funds requirement.

**Task 802: Review of Existing Funding Sources and Road User Charges, Mechanism available with GOO to Meet Financial Needs of Road Sector 8.VII**

The existing funding resources for the state largely depends on following:

- Allotment of funds by GOO as per their financial plans earmarked for road sector;
- Allotment by Center for maintenance of NHs passing through the state;
- Participation by private sector;
- Local developments carried out under the state policy i.e. at District level, Ministers / MPs quota for their discretionary development funds;
- Road user charges as levied by the state;
- Other indirect taxes imposed on industry and public for this purpose;
- The Cess funds in accordance with state policy;
- The borrowings from various lending agencies, i.e. National / international banks.

The Consultant shall interact with GOO / OWD to get the inputs on the fund state and its sources as given above that how the development has taken place in the last few years and what could be the financial model to be developed for the future. As brought out above it shall again depend on the initiative taken by the state, the structure of OWD / GOO and the political environment. Of course the consultants shall certainly put up their proposed plans for funding source management as per requirements of the road sector policies and development plans of the state.

The concept of 'Dedicated Road Fund / Autonomous Road Fund' shall be a better option for the state. The mechanism for creating this fund could be based on 'Local Cess' imposed on various state controlled items / taxation





policies. In addition this concept could further be extended to the new industry being setup in the state and a provision of recurring infrastructure development fund linked with revenue / profit generations by that industry could be one of the option.

**Task 803: Assess adequacy of Funds for Objectively Determined Road Asset Management to Match with Needs and Priorities 8.VII**

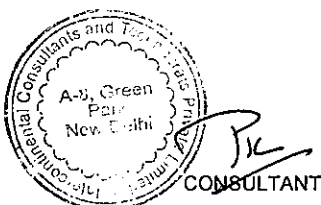
Based on various funding sources highlighted above the Consultants shall workout the funds requirement in accordance with road sector policy and road network master planning as well as ranking of the roads for their development. The forecast of the requirement of the funds shall be matched with generation of the funds in next 5 to 10 years from various sources. For the increased fund requirement the Consultants shall suggest new mechanism / revenue generating methods to the GOO.

**Task 804: Identification of New Measures and Option to Improve Funds Resource Mobilization for Roads Financing in State 8.VII**

It is an established fact at national / state levels that the way infrastructure sector development is gaining the momentum, there shall never be the adequate funds available to meet the requirement of this sector. The new methods have already been developed at national level in terms of PPP mechanism and its approval by the Planning Commission by developing the Model Concession Agreement to take up large size projects. This mechanism involves a development of road asset by inviting funds from private sector and the developer / concessionaire then gets his invested funds regenerated by way of toll collection and RoW revenue generation system.

For this purpose the BJP government under Shri Atal Bihari Vajpai had come out with a concept of the Fuel Cess, i.e. Cess funds directly going to the road sector development pool at national level. The same kind of concept can be developed at state level. Based on above national policy some of the sources to improve funds mobilization could be as below:

- The road user charges levied across the board without any social discriminations;
- State level PPP Models on the lines of Planning Commission Concept;
- Development of autonomous road fund by way of certain indirect taxation policies;



- Local Cess funds depending on format of development of GOO in terms of industry and tourism, the state of Orissa being rich for mining and tourism potential;
- Proposal of transferring certain state roads to NHs thus creating additional funds for state roads for their maintenance and development;
- Inviting private sector to invest heavily in industrial and tourism industry of the state by preparing conducive political environment supported by regulatory framework of state. This could indirectly result of some of the roads being developed by these industrialist in their own interest. Further some indirect taxes could be levied on these industrialists for road sector purposes;
- Borrowing from lending agencies nationally / internationally.

Some of the new sources suggested above shall depend on how GOO looks at this proposal in overall policy framework and the prevailing political and social environment of the state. Since the indirect taxation and road user charges at times may invite certain negative criticism from common people. Even at times certain select individuals refused to pay at toll booths though they are not exempted as per central government policies.

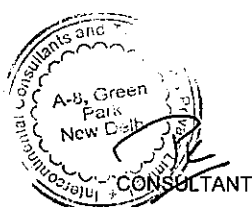
**Task 805: SWOT Analysis of each Option for Generation of Funds Mobilized with New Options, their Cash Flow Status and available to State on Rolling Plan Basis 8.VII**

The Consultants shall analyse the each option for fund generations given above with a scientific management method of SWOT analysis and work out which is the best option available for better cash flow available for road sector development without much of impediments at ground level. The funds so generated shall also be matched with the requirement in accordance with road sector policy and ranking of roads for development as per approved master plan.

This analysis shall also be matched with ISAP (2008-18) plans and targets.

**Task 806: Identify Structure, Powers and Resources Needed to Create Sustainable and Effective Road Fund 8.VII**

The generation of funds with new GOO policies is a double edged weapon. The indirect and direct taxation on the industry and the public when imposed and its recovery is not an easy task. There are instances that the moment new taxation policies are brought out, there shall always be representations. While suggesting the new measures, Consultants shall also advise the OWD / GOO on various mitigation measures. In consultation with bureaucracy and the legal department it is suggested that the regulatory framework along with creation of new official structures / establishment shall also required to be created. While creating such structure the proposed regulatory framework should be



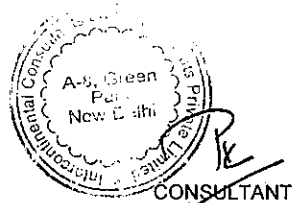
planned in such a way that it has proper transparency mechanism by way of organized audits by authorized government / private audit authorities.

**Task 807: Conduct of Workshops to Develop Mechanism, Methodologies, for viable Economically and Socially Acceptable Option to Create / Generate Additional Dedicated Road Funds 8.VII**

The Consultant shall organize discussions / interactions at various levels of GOO inclusive of financial institutions / Ministry to discuss the draft proposals on new measures developed for generation of road fund by way of various methods suggested above. This shall be followed with presentations and workshops to the Review Committee to get their comments and observations for their incorporation and final approval for its implementation on ground.

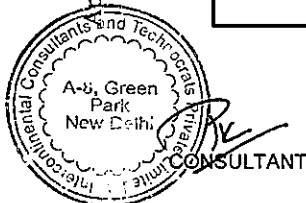
**Task 808: Preparation of Preliminary and Final Report related with Road Fund and its Final Implementation 8.VII**

Based on conduct of discussions and workshops the Preliminary and Final Report on main road funding options with this recommendations shall be submitted at the end of 16<sup>th</sup> and 22<sup>nd</sup> months. The key inputs shall be prepared by Team Leader-cum-Road Agency Management Specialist, Financial Analyst & Business Planning Specialist, Transport Planning (Roads) Specialist, Transport Economist and Legal Specialist.





Appendix A: Description of Services



Task No.	Description of Activity	Activity Duration (in Months)	Road Agency Management Specialist-cum- Team Leader	Organizational Development Specialist-cum- Deputy Team	Financial Analyst & Business Planning Specialist	Transport Planning (Roads) Specialist	Transport Economics Specialist	Senior Highways Engineer (Pavements Management & GIS Applications (Master Planning) Specialists	Road Safety (Infrastructure Design & Management) Specialist	PWD Sector Domain Specialist	Procurement Specialist	Training & Human Resources Development (HRD) Specialist	Human Resources Management (HRM) Specialist	Legal Specialist
<b>TASK GROUP VIII: FUTURE ROADS MANAGEMENT FUNDING</b>														
801	Study, Road Development Programmes for the last 5 and 10 Years and the Financial Commitment during this Period by OWD / GOO	2.0, AW	P		P	P	P	S			S			P
802	Review of Existing Funding Sources and Road User Charges, Mechanism available with GOO to Meet Financial Needs of Road Sector	2.0, AW	P		P	P	P	S			S			P
803	Assess adequacy of Funds for Objectively Determined Road Asset Management to Match with Needs and Priorities	2.5, AW	P		P	P	P	S			S			P
804	Identification of New Measures and Option to Improve Funds Resource Mobilization for Roads Financing in State	1.5, AW	P		P	P	P	S			S			P
805	SWOT Analysis of each Option for Generation of Funds Mobilized with New Options, their Cash Flow Status and available to State on Rolling Plan Basis	2.0, AW	P		P	P	P	S			S			P
806	Identify Structure, Powers and Resources Needed to Create Sustainable and Effective Road Fund	4.00	P		P	P	P	S			S			P
807	Conduct of Workshops to Develop Mechanism, Methodologies for viable Economically and Socially Acceptable Option to Create / Generate Additional Dedicated Road Funds	6.0, AW	P		P	P	P	S			S			P
808	Preparation of Preliminary and Final Report related with Road Fund and its Final Implementation	4.0, AW	P		P	P	P	S			S			P
<b>Legend</b>														
P Primary Responsibilities														
S Secondary Responsibilities														

- VIII. **Road Toll Collection & Management:** Develop for GOO endorsement, a framework for effective Road Toll Collection & Management to be implemented by the Transport Department, based on the recently enacted Tolling Act and focused primarily on out-sourcing of road toll collection under performance-based contracts. Involves *inter alia* (i) facilitating improvements in current road toll collection processes and systems; (ii) the development of draft guidelines on toll-setting and tolling operations; (iii) preparation of model Tolling contract agreements and associated documents for implementation of contracting-out of combined “road toll collection plus road maintenance plus operations” packages on selected road network sections (including on OSRP-funded roads); (iv) preparation of an action plan for progressive GOO implementation of the new “road toll collection and maintenance” management model; and (v) facilitation of the initial implementation stages.

The main deliverable under this task shall include ( but not limited to ) the final report on Management of Out-sourced Road Toll Collection & Maintenance / Operations. This task also include field visit/interaction for a group of at least 10 GOO officials to various project sites outside the State for demonstrating efficacy of various toll collection/management system. Key input for this task shall be mainly by the Team Leader-cum-Road Agency Management Specialist, Financial Analyst & Business Planning Specialist, Procurement Specialist and Legal Specialist

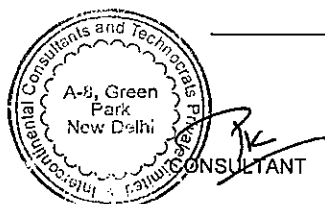
#### Consultant’s Indicative Methodology for Task- VIII

#### ROAD TOLL COLLECTION & MANAGEMENT

<b>Task 901:</b>	<b>Assess Traffic Growth Pattern of State</b>	<b>8.VIII</b>
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As brought out at Task Group VIII, one of the source available for fund generation is of levying the road user charges on every section / social strata of society, using the road for its own purposes whether commercial or personal. This method is incremental directly related with pattern of traffic growth and development of economy of state. The most important study, the Consultants got to carryout in this regard shall be to assess that traffic growth pattern of state. This shall reflect how the funds are going to be generated through this source. Needless to state the growth of traffic is also dependent on availability of roads and their riding quality linked with safety measures.

The Consultants shall study the existing traffic for main roads linking various commercial hubs in the state and also workout the traffic growth pattern linked



with development plans with an aim to have general assessment that how could this growth be of benefit for increased toll collection.

<b>Task 902:</b>	<b>Work Out various Options on Toll-able and Non-toll able Roads</b>	<b>8.VIII</b>
<b>Task 903:</b>	<b>Link Toll-ability with socio-Economic &amp; Demographic Panorama of State</b>	<b>8.VIII</b>

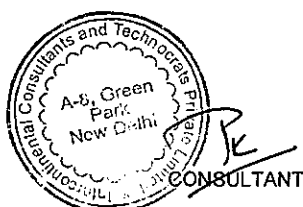
While carrying out the study for traffic growth pattern, the Consultant shall also carryout assessment for Toll-able and Non-toll able roads. As experienced even by NHAI based on BoT projects awarded / executed in last 4 to 5 years that every road where the project has to be taken up on PPP (BOT) models may not yield the expected revenue generation for recovery of invested money by the concessionaire. To overcome this problem, the concept of Annuity Basis projects is being taken up. Keeping in view this concept in mind the Consultant shall carry out the study, that which are the roads which could be beneficial for the state in terms of revenue generation by way of toll collection.

The toll collections / revenue generations by the state also has to be linked with socio-economic and demographic panorama of the areas where the road shall pass through. To be specific certain areas of Orissa though they require immediately and the state does not have enough funds to construct them. Thus go for PPP (BOT) models but yet cannot have the toll collection for the regions of socio-economic profile, i.e. the Tribal and extremely backward areas.

<b>Task 904:</b>	<b>Review Current Toll-Collection System and Revenues received from various Toll Booths so far</b>	<b>8.VIII</b>
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The Consultant shall review the existing toll collection methodology adopted by the state and the revenues collected in last 2 to 3 years. This shall enable to assess various leakages and gaps in the existing system. This assessment shall also be waste on traffic census of that area and linking at with toll collection.

As brought out by ToR the new Tolling Act has been enacted by the GOO for toll collection. The study carried out by consultant shall also be linked with the regulatory framework of this new act and suggest improvements, if could be.



**Organize Visits of Minimum of 10 GOO Officials  
Task to Various Government or Concessionaire  
905: Tolling Sites/Booths Outside State for  
Understanding the Toll Collection Management 8.VIII**

In order to strengthen the toll collection system and its policies for the state the Consultants shall organize the visit of 10 GOO officials to various Tolling booths / sites outside the state so as to demonstrate the latest toll collection equipment / methodologies being practiced by the concessioners.

It is suggested that the composition of these 10 GOO officials should be from various departments i.e. Finance, Transport and OWD. This team shall be accompanied by key professionals of the Consultants to explain the methodology at ground.

**Development of New Draft Guidelines to Facilitate  
Task Improvement on Toll-setting, its Operation, and  
906: Collection of Toll Revenue with Outsource  
Operations under New Tolling Act 8.VIII**

**Task Prepare Model Tolling Contract Agreements and  
907: Documents 8.VIII**

Based on the visit of the government officials and studies carried out by Consultants the new draft guidelines for toll collection shall be developed by Consultants. The draft guide lines shall be discussed with same government officials / OWD who have been part of the visit programs to get their feedback and inputs.

The advantages and disadvantages of outsource arrangements vs. centralized control by PWD for toll collection shall also be analysed and be part of the report prepared for OWD. As per the experience gain so far, though NHAI devised the method of giving the toll collection responsibility to the third party organizations sponsored by Director General of Resettlement (Defense Organization) but that also has not proved to be successful. The Consultants while making their recommendations shall also be highlighting such issues.

**Task Prepare Action Plan for Toll Collection and its  
908: Implementation by GOO Legislatively and Legally 8.VIII**

As of now there is enough experience available on successful toll collection management being practiced by various concessionaires as part of PPP (BOT) projects executed by NHAI and state governments such as Maharashtra,

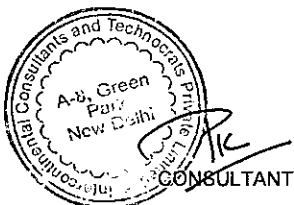


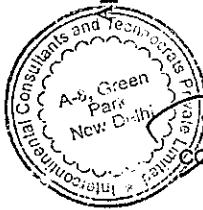


Karnataka, Rajasthan and Punjab, etc. The action plan prepared by Consultants shall be based on data collected from these states, visit organized with GOO officials and present arrangements being followed by Orissa. The plan shall also envisaged the operation and maintenance methodology for roads coming under toll collection ambit. Lots of new contracts under this concept a being taken out by state PWDs / NHAI lately. This facilitates the development of roads / maintenance of that assets while toll collection continuous for years. The GOO shall be assisted by Consultants for its legal endorsements for the toll collection action plan.

**Task 909: Submission of Report based on Inputs to be by Financial Analyst, Procurement Specialist, and Legal Specialist besides Team Leader-cum-Road Agency Management Specialist 8.VIII**

In accordance with delivery schedule the report on Management of Out-sourced Road Toll Collection & Maintenance / Operations prepared by Financial Analyst, Procurement Specialist, and Legal Specialist besides Team Leader-cum-Road Agency Management Specialist by at the end of 14<sup>th</sup> month.



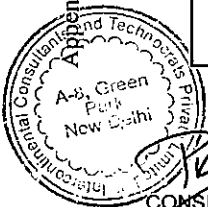


Appendix A: Description of Services

Task No.	Description of Activity	Activity Duration (in Months)	Assignment Duration (Months)																																			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
<b>TASK GROUP IX: ROAD TOLL COLLECTION &amp; MANAGEMENT</b>																																						
901	Assess Traffic Growth Pattern of State	2.0, AW	■	■	■	■	■																															
902	Work Out various Options on Toll-able and Non-toll able Roads	2.0, AW	■	■	■	■	■	■	■																													
903	Link Toll-ability with socio-Economic & Demographic Parameters of State	2.0, AW	■	■	■	■	■	■	■																													
904	Review Current Toll-Collection System and Revenues received from various Toll Booths so far	2.0, AW	■	■	■	■	■	■	■																													
905	Organize Visits of Minimum of 10 GOO Officials to Various Government or Concessionaire Tolling Sites/Booths Outside State for Understanding the Toll Collection Management	3.0, AW								■	■	■	■	■																								
906	Development of New Draft Guidelines to Facilitate Improvement on Toll-setting, its Operation and Collection of Toll Revenue with Outsource Operations under New Tolling Act	3.0, AW								■	■	■	■	■																								
907	Prepare Model Tolling Contract Agreements and Documents	3.0, AW								■	■	■	■	■																								
908	Prepare Action Plan for Toll Collection and its Implementation by GOO Legislatively and Legally	3.0, AW								■	■	■	■	■																								
909	Submission of Report based on Inputs to be by Financial Analyst, Procurement Specialist, and Legal Specialist besides Team Leader-cum-Road Agency Management Specialist	3.0, AW								■	■	■	■	■																								
		14.00																																				
<b>Legend</b>																																						
■ Continuous Activity ■ ■ ■ ■ ■ Intermittent Activity (as and when required) AW As and when required																																						

Chief Engineer,  
World Bank Projects, Odisha

Appendix A: Description of Services



CONSULTANT

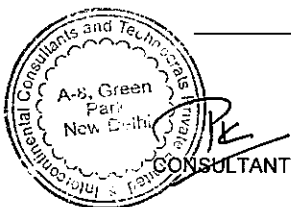
Task No.	Description of Activity	Activity Duration (in Months)	Road Agency Management Specialist-cum- Team Leader	Organizational Development Specialist-cum- Deputy Team	Financial Analyst & Business Planning Specialist	Transport Planning (Roads) Specialist	Transport Economics Specialist	Senior Highways Engineer (Pavements Management & GIS Applications (Master Planning) Specialist	Road Safety (Infrastructure Design & Management) Specialist	PWD Sector Domain Specialist	Procurement Specialist	Training & Human Resources Development (HRD) Specialist	Human Resources Management (HRM) Specialist	Legal Specialist
<b>TASK GROUP IX: ROAD TOLL COLLECTION &amp; MANAGEMENT</b>														
901	Assess Traffic Growth Pattern of State	2.0, AW	P		P	S	S	S			P			P
902	Work Out various Options on Toll-able and Non-toll able Roads	2.0, AW	P		P	S	S	S			P			P
903	Link Toll-ability with socio-Economic & Demographic Panorama of State	2.0, AW	P		P	S	S	S			P			P
904	Review Current Toll-Collection System and Revenues received from various Toll Booths so far	2.0, AW	P		P	S	S	S			P			P
905	Organize Visits of Minimum of 10 GOO Officials to Various Government or Concessionaire Tolling Sites/Booths Outside State for Understanding the Toll Collection Management	3.0, AW	P		P	S	S	S			P			P
906	Development of New Draft Guidelines to Facilitate Improvement on Toll-setting, its Operation, and Collection of Toll Revenue with Outsource Operations under New Tolling Act	3.0, AW	P		P	S	S	S			P			P
907	Prepare Model Tolling Contract Agreements and Documents	3.0, AW	P		P	S	S	S			P			P
908	Prepare Action Plan for Toll Collection and its Implementation by GOO Legislatively and Legally	3.0, AW	P		P	S	S	S			P			P
909	Submission of Report based on Inputs to be by Financial Analyst, Procurement Specialist, and Legal Specialist besides Team Leader-cum-Road Agency Management Specialist	14.00	P		P	S	S	S			P			P
Legend														
P Primary Responsibilities														
S Secondary Responsibilities														

Chief Engineer,  
World Bank Projects, Odisha

- IX. **Vehicle Axle Load Regulation & Management:** Review the situation concerning existing road transport axle load control practices in Odisha and develop proposals for new realistic, sustainable Axle load control policy and strategy, for implementation by the Transport Department. Involves *inter alia* (i) making an assessment (with OWD, Transport Department and Police inputs) of the prevalence and main features of excessive loading by truckers and other categories of vehicles in the state; (ii) review of the range of methods, resources and institutional arrangements objectively available to the GOO for more effective regulation, monitoring and management of vehicle axle loading in heavy road transport on the main road network; (iii) providing an assessment of relevant experiences elsewhere to inform GOO considerations; (iv) preparation of options for an effective sustainable regime and 'responsibility framework', for GOO decision; and (v) facilitation (after relevant GOO decisions) of a phased, trial-based implementation plan for the Transport Department on the selected option(s), including assistance with procurement of essential equipment / resources and in establishing appropriate performance monitoring processes.

Field level assessment should cover axle load survey over 50 selected locations spread over the State, focus group discussions and workshops, calibration / demonstration with portable weighbridges and weighbridge controls on the road network.

The main deliverable under this task shall include ( but not limited to ) report on Vehicle Axle Load Regulation & Management besides development of a Vehicle Overload Management Information System containing state level database on overload control / decision making. Key input for this task shall be mainly by the Team Leader-cum-Road Agency Management Specialist, Senior Highways Engineer (Pavements Management & Planning), Road Safety (Infrastructure Design & Management) Specialist and Procurement Specialist



**Consultant's Indicative Methodology for Task- IX**

**VEHICLE AXLE LOAD REGULATION & MANAGEMENT**

<b>Task 1001:</b>	<b>Study Existing Road Transport Axle Load Control Practices as Prevalent in Orissa</b>	<b>8.IX</b>
<b>Task 1002:</b>	<b>Carry Out Axle Load Survey over 50 Selected Locations Spread Over State</b>	<b>8.IX</b>

In our country it has been a common practice that no Trucker shall ever load his truck for commercial purposes as per his specified capacity. With certain unstated prevailing norms in most of the states the trucks shall always be overloaded and yet pass through every check post.

To establish this statement as suggested by ToR also, a field level assessment of 50 selected locations in consultation with OWD shall be carried out by Consultants to prepare a report of existing practices in the state. This report shall also have the inputs that what is the regulatory frameworks existing in the state to control the over loading of trucks.

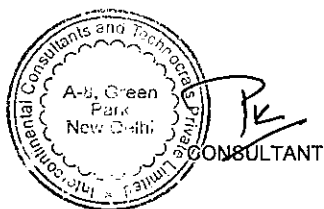
To demonstrate these irregular practices, the Consultants shall also carry out review of Weigh Bridges at select places for their calibration and the inter relationship between the truckers and the owners of Weigh Bridges for certification of their loads.

The report prepared by Consultants on above facts shall make the basis for recommendation of vehicle axel load regulation management of the state.

<b>Task 1003:</b>	<b>Review and Assess Existing Methods, Resources and Institutional Arrangements available with GOO for Effective Regulatory Monitoring and Management</b>	<b>8.IX</b>
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For these ongoing over loading practices and its control, the Consultant shall also study the existing regulatory framework and institutional arrangements available to the state. For this purpose the Consultants shall interact with police and transport departments of GOO. During interaction try to get their views for establishment of better controlled regulatory system for the state. While examining the institutional arrangements following areas shall be covered.

- Current regulatory framework and legislation with respect to responsibilities and authority;
- Institutional arrangements and co-ordination arrangements between concerned authorities;
- Current loading limits for various type of vehicles;
- License and Permit system of the state;



- The system of penalties for overloading;
- Follow up and enforcement methodologies once a trucker has been charged with offence;
- The availability of enforcement equipment – static or mobile in the state;
- Existing trend of fund generated in previous years by Vehicle Axle Load Regulations;
- Interaction with transport agencies to get their inputs in this field;
- Public awareness in this field.

<b>Task 1004:</b>	<b>Compare and Assess the Ongoing Regulatory Regime of Other States and Develop it into Draft Regulatory Framework for GOO's Considerations</b>	<b>8.IX</b>
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The Vehicle Axle Load Management is being effectively practiced in some of the other developed states of country. The template of their regulatory framework shall be presented to the GOO with its improved version prior to preparation of draft regulatory framework for Orissa by Consultants.

The draft prepared by Consultant shall include

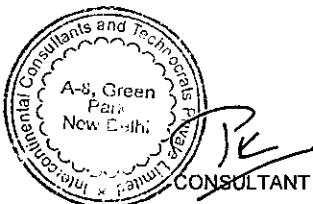
- The regulatory framework with properly defined roles and responsibilities;
- The institution structures for management of Vehicle Axle Load Management;
- The guidelines for co-ordination between departments such as police and transport;
- The available database on road accidents resulted from overloading;
- Vulnerable road user groups – pedestrians, cyclists, children, elderly people;
- Enforcement agencies and their organizations in field, i.e. traffic police, transport department of state;
- Monitoring and evaluation mechanisms;
- Road safety assessment with respect to the accident data;
- Suggested improvement by way of Research and development program for the state;
- Training and education for the drivers to be made prerequisite;
- Role of media for public and community awareness;
- Driver training schemes;
- Community road safety groups;
- Establishment plans for emergency rescue and trauma centers;
- Insurance policies of the state in this field;
- Recommendation for procurement of new equipment for this purpose.

**Task 1005: Advise / Discussions with GOO on the Regulatory Framework a Legislative and Legal Nod to Form Part of Government Legislation for its Efficacy and Control 8.IX**

The draft document prepared by Consultants shall be put through various discussions and conduct of workshops with GOO officials / OWD for getting their feedback / comments for its improvement as well as feasibility for its legal endorsement. The discussions / workshops shall be inclusive of private transport organizations involved for freight carrier activities in the state. Since no regulatory framework shall be effective until and unless it is prepared taking every stakeholder into consultation and confidence.

**Task 1006: Submission of Final Report on Vehicle Axle Load Regulation and Management 8.IX**

Based on conduct of discussions and workshops on Draft Report with various stakeholders of GOO. The Final Report based on key inputs prepared by Team Leader-cum-Road Agency Management Specialist, Financial Analyst & Business Planning Specialist, Transport Planning (Roads) Specialist, Transport Economist and Legal Specialist shall be submitted to OWD / GOO for its legal endorsements and final implementation on ground by the end of 16<sup>th</sup> month.



Appendix A: Description of Services



CONSULTANT

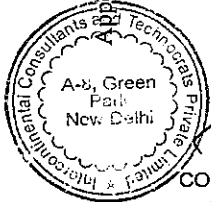
Task No.	Description of Activity	Activity Duration (in Months)	Assignment Duration (Months)																																	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
<b>TASK GROUP X: VEHICLE AXLE LOAD REGULATION &amp; MANAGEMENT</b>																																				
1001	Study Existing Road Transport Axle Load Control Practices as Prevailing in Orissa	2.00																																		
1002	Carry Out Axle Load Survey over 50 Selected Locations Spread Over State	4.0, AW																																		
1003	Review and Assess Existing Methods, Resources and Institutional Arrangements available with GOO for Effective Regulatory Monitoring and Management	AW																																		
1004	Compare and Assess the Ongoing Regulatory Regime of Other States and Develop it into Draft Regulatory Framework for GOO's Consideration	AW																																		
1005	Advise / Discussions with GOO on the Regulatory Framework a Legislative and Legal Nod to Form Part of Government Legislation for its Efficacy and Control	AW																																		
1006	Submission of Final Report on Vehicle Axle Load Regulation and Management	16.00																																		

Legend  
 — Continuous Activity  
 ■■■ Intermittent Activity (as and when required)  
 AW As and when required

Chief Engineer, World Bank Projects, Odisha



Appendix A: Description of Services



CONSULTANT

Task No.	Description of Activity	Activity Duration (in Months)	Road Agency Management Specialist-cum- Team Leader	Specialist-cum- Deputy Team	Financial Analyst & Business Planning Specialist	Transport Planning (Roads) Specialist	Transport Economics Specialist	Senior Highways Engineer & Pavements Management & GIS Applications (Master Planning) Specialist	Road Safety (Infrastructure Design & Management) Specialist	PWD Sector Domain Specialist	Procurement Specialist	Training & Human Resources Development (HRD) Specialist	Human Resources Management (HRM) Specialist	Legal Specialist
<b>TASK GROUP X: VEHICLE AXLE LOAD REGULATION &amp; MANAGEMENT</b>														
1001	Study Existing Road Transport Axle Load Control Practices as Prevalent in Orissa	2.00	P	S	S	S	S	P	P	P	P	P		S
1002	Carry Out Axle Load Survey over 50 Selected Locations Spread Over State	4.0 AW	P	S	S	S	S	P	P	P	P	P		S
1003	Review and Assess Existing Methods, Resources and Institutional Arrangements available with GOO for Effective Regulatory Monitoring and Management	AW	P	S	S	S	S	P	P	P	P	P		S
1004	Compare and Assess the Ongoing Regulatory Regime of Other States and Develop it into Draft Regulatory Framework for GOO's Considerations	AW	P	S	S	S	S	P	P	P	P	P		S
1005	Advise / Discussions with GOO on the Regulatory Framework a Legislative and Legal Nod to Form Part of Government Legislation for its Efficacy and Control	AW	P	S	S	S	S	P	P	P	P	P		S
1006	Submission of Final Report on Vehicle Axle Load Regulation and Management	16.00	P	S	S	S	S	P	P	P	P	P		S
Legend														
P Primary Responsibilities														
S Secondary Responsibilities														

- X. ***Future Road Sector Institutional Options:*** Review the present institutional structures and arrangements in the state’s roads sector with various ownership (including OWD) and recommend the most effective options for strengthened sector performance in ‘services’ delivery and governance. Involves inter alia (i) providing an outline-level ‘mapping’ of the established range of entities, functions and resources involved in roads sector outputs and operations; (ii) clarifying the distribution and adequacy of powers, authority and accountability in the sector relative to current and newly emerging priorities facing the GOO and the community in the sector; (iii) addressing the more important weaknesses and/or gaps in the existing institutional arrangements in the roads sector; (iv) identifying and ranking / prioritizing the more realistic options for medium-to-longer term strategic improvements in the sector’s institutional framework and structures in terms of enhanced roads management, support for GOO objectives and overall governance; and (v) in that context, provide recommendations on the merits and ‘domain’ of, and funding requirements and implementation timeframe for, a new Road Development Corporation charged with facilitation of increased private sector participation in road infrastructure provision and management in Odisha.

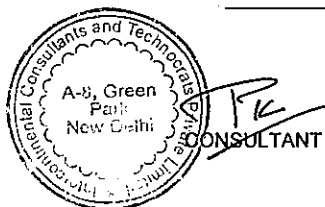
The main deliverable under this task shall include ( but not limited to ) report on Medium-to-Longer Term Strengthening of the Institutional Framework / Structures of Odisha’s Roads Sector both in draft & final form (taking input from relevant workshop). Key input for this task shall be mainly by the Team Leader–cum-Road Agency Management Specialist, Financial Analyst & Business Planning Specialist

**Consultant’s Indicative Methodology for Task- X**

**FUTURE ROAD SECTOR INSTITUTIONAL OPTIONS**

<b>Task 1101:</b>	<b>Study and Assess Present Institutional Structure / Establishment, its Capacities, for their Functions, Powers and available Resources for Road Sector Output and Operations and Arrangements in Road Sector</b>	<b>8.X</b>
<b>Task 1102:</b>	<b>Assessment of Adequacy of Powers, Authority, Accountability Relevant to Current and Emerging trends in Road Sector, being Faced and Exercised by GOO / OWD</b>	<b>8.X</b>

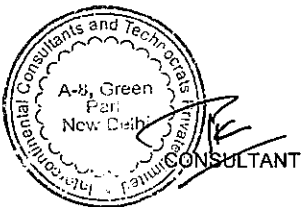
While asking for the consultancy proposals one of the main requirement of GOO / OWD has been the institutional strengthening / restructuring inclusive of capacity building for the organization as it stands today and subsequently to fit in to the modernized framework of infrastructure development to be taken



up in the future for the state as well as have matching compatibility at national and international levels so that the GOO / OWD has a business / legal environment for private sector to freely participate in development of the state.

For recommendation of any proposal on institutional strengthening and capacity building of existing OWD structure, it involves a detailed and comprehensive study of every institution for its strategically, directional, executional and ground level functional professional competencies at the level of organization as well as individuals. Some of the aspects which shall be required to be studied and reviewed are as below:

- Study the organizational establishment of the OWD from field to the senior most HO level for their capabilities to perform the task as discussed from main Task Group II to X above. Since the entire restructuring / institutional strengthening exercise has to take into account the requirement and execution of these tasks by OWD and its staff.
- For restructuring and capacity building purposes of the OWD, the socio-economic development plans of GOO shall also require its integration into the institutional strengthening framework proposed to be developed by Consultants
- Taking into account the socio-economic development plans of GOO, the Consultants shall propose rehabilitation and maintenance of existing road network to connect regions of strategic importance to economic and social development aims, besides the new road network planned as per in accordance with Road Sector Policy and Road Network Master Planning
- Review the existing performance of road based transport and the proposal for its capacity building in terms of public and private
- Redefining the organizational structure at various functional levels of OWD and rules and responsibilities with revised / delineated powers and authorities of staff to perform in various capacities of restructured organization
- Study, review and restructure the traffic management plans and policies for the state with respect to the revised Vehicle Axle Load Regulation and Management
- The revised traffic management policy to also look into restructured road safety policies and engineering aspects of GOO / OWD;
- Institutional options for future road funds management, to meet the targets of revised road network planning and road sector policy
- Environment safety and protection;
- The restructured PPP and MCA more applicable to the state
- Capacity building and empowerment of existing construction industry / stakeholders;



- Matching and compatible legislative framework for restructured OWD;
- Suggested model of restructuring to also cover certain fundamentals for better governance with transparency, values and Ethics for the restructured organization.

**Task Assess Weakness and Gaps in Existing Road Sector 8.X**  
**1103: Institutions**

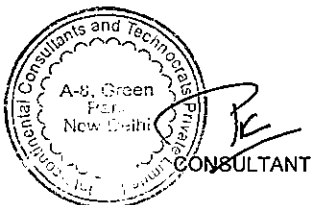
Based on above assessment, the Consultants shall identify the Gaps and weaknesses for the Roles, Responsibilities, Authorities and Powers vested at various levels to perform for required and targeted capacities in accordance with revise road sector strategies, road network master planning and ISAP (2008-18) framework established by GOO / OWD. The restructured organization of OWD shall have to align with other states and national legislative and regulatory framework to be at par with everyone in this sector.

**Task Work Out various Options on Institutional 8.X**  
**1104: Strengthening and Improvement for a Medium to Long Term Strategic Review**

The Consultants shall develop various options for institutional strengthening and capacity building for medium to long term Strategic Review and its implementation on ground covering all the aspects as brought out a Tasks 1101 and 1102 as well as Task Group II to IX.

The option of restructuring of OWD shall also take into account that how the PWDs of other states have gone about it where restructuring exercise has already taken place, eg. Madhya Pradesh, Andhra Pradesh, Karnataka and Rajasthan. To state further that PMGSY programs being executed by the state are being executed by the organization called as Road Development Authority and the state road projects are being executed by the Road Development Corporation recently formed in these states.

While working out various options, the economic objectives of the state to be supported by infrastructure development shall also have to be looked into. Besides economic objectives the social angle since Orissa has large social base of tribal areas, shall also need due consideration.



**Task 1105: Conduct of Workshops to take Inputs from various Departments of OWD and GOO to Arrive at Acceptable Option on Restructuring, Institutional Strengthening and Capacity Building 8.X**

To prepare various draft options on institutional strengthening and capacity building for OWD and its linked departments at GOO level, the Consultants shall carry out the regular interaction / discussion with OWD and review committee by way of conducting presentations and workshops so as to get their views to improve the methodology and submission of draft document for this requirement to GOO for their approval and finally for its legal endorsement before it can be recommended for its implementation on ground.

**Task 1106: Assist GOO/OWD in Drafting of Documents related with Restructuring, Capacity Building and Institutional Strengthening 8.X**

Having submitted the draft document on institutional strengthening and capacity building and having got its approval from OWD, the Consultant shall assist the OWD in preparation of the documents for the OWD to submit the GOO for its legal endorsement and gazette notifications for the restructured organizations with its new roles responsibilities, job designs, accountabilities, powers and authorities to be implemented at ground, i.e. for various establishments and departments. The legislative and legal endorsements by GOO are obligatory since it involves financial implications inclusive of revised salary framework for the restructured organizations.

**Task 1107: Assist in Overall Coordination and Monitoring of ISAP Implementation Process 8.X**

In accordance with ToR para 10 of Section 5, the Consultant are required to give broad-based support to the OWD management in the overall coordination and monitoring of the ISAP implementation process, to help OWD-led ISAP Working Group and OWD senior management to control and monitor ISAP-driven activity and associated inputs.

In this regard the Consultants at this stage like to bring out that follow-up of ISAP driven activities, execution plans on the ground if required to be assisted by Consultants, then the duration of Consultancy services with respect to certain key professionals have to go beyond 30 months of already specified consultancy period. This aspect has already been projected by this



organization in overall interest of OWD and achievement of accepted objectives.

<b>Task 1108:</b>	<b>Knowledge Sharing and Skill Transfer</b>	<b>8.X</b>
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For Knowledge sharing and skill transfer the Consultants have develop a technical paper on Training and Transfer of Technology given at *Appendix -2 to Appendix A.*

<b>Task 1109:</b>	<b>Establishment of Orissa Road Development Corporation, Merits / Demerits</b>	<b>8.X</b>
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With the enhanced scope of infrastructure development specifically the road sector, the existing structure of state PWDs has not been able to cope up with the increased work load these days. Certain states have already established the organization of Road Development Corporation. This newly established structure of PWD has been organized on the lines of corporate sector. There offices and appointments are framed as managers, DGMs, GMs, etc. Though no comments can be offered on functioning this organization in those states but in general some merits and demerits could be as below:

#### Merits

- The corporate functioning differs from traditional working of erstwhile PWDs;
- By putting the designations of GMs and DGMs to the executive and superintend engineers, the mindset immediately changes to modern day culture and the way of achieving the goals and targets;
- The corporate culture takes pride on following:
  - Modern office accommodation and latest equipment;
  - Full time air-condition environment, such an environment certainly increases the working capacity of an individual;
  - Attractive employment conditions;
  - More dependence on IT than manual recording procedures;
  - A better dedicated and committed philosophy as being practiced by MNCs, when coming to PWD sector shall be an added advantage;
  - Enthusiastic young and motivated staff with zeal to achieve more and more;
  - Target based achievements;
  - The inclination towards self improvement and upgradations for latest technology and concept;



With such a professional culture when brought to the PWD environment by way of establishing a development corporation, it should prove to be positive step towards restructuring / institutional strengthening.

**Demerits**

- No point towards demerits as of now, can not be extended till such time certain inputs are collected by Consultants from other states based on their experience are analysed and then submitted to OWD for its discussion;

Finally in this regard the Consultants would like to submit the establishment of Orissa Development Corporation could be considered.

<b>Task 1110:</b>	<b>The Schedule of various reports on Medium-to-Longer Term Strengthening of the Institutional Framework / Structures of Orissa's Roads Sector</b>	<b>8.X</b>
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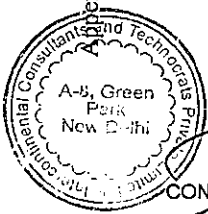
In accordance with tentative due timings for deliverables on medium- to-long term strengthening of the institutional framework / structures of Orissa's road sector, based on key inputs given by Team Leader-cum-Road Agency Management Specialist, Financial Analyst and Business Planning Specialist shall be as below:

- Draft Report by end of 24<sup>th</sup> month
- Final Report by end of 26<sup>th</sup> month









Appendix A: Description of Services

CONSULTANT

Task No.	Description of Activity	Activity Duration (in Months)	Road Agency Management Specialist-cum-Team Leader	Organizational Development Specialist-cum-Deputy Team	Financial Analyst & Business Planning Specialist	Transport Planning (Roads) Specialist	Transport Economics Specialist	Senior Highways Engineer (Pavements Management & GIS Applications (Master Planning) Specialist	Road Safety (Infrastructure Design & Management) Specialist	PWD Sector Domain Specialist	Procurement Specialist	Training & Human Resources Development (HRD) Specialist	Human Resources Management (HRM) Specialist	Legal Specialist
<b>TASK GROUP XI: FUTURE ROAD SECTOR INSTITUTIONAL OPTIONS</b>														
1101	Study and Assess Present Institutional Structure / Establishment, its Capacities, for their Functions. Powers and available Resources for Road Sector Output and Operations and Arrangements in Road Sector	3.0, AW	P		P	S	S	S			S			S
1102	Assessment of Adequacy of Powers Authority, Accountability Relevant to Current and Emerging trends in Road Sector, being Faced and Exercised by GOO / OWD	3.0, AW	P		P	S	S	S			S			S
1003	Assess Weakness and Gaps in Existing Road Sector Institutions	4.0, AW	P		P	S	S	S			S			S
1104	Work Out various Options on Institutional Strengthening and Improvement for a Medium to Long Term Strategic Review	5.0, AW	P		P	S	S	S			S			S
1105	Conduct of Workshops to take Inputs from various Departments of OWD and GOO to Arrive at Acceptable Option on Restructuring, Institutional Strengthening and Capacity Building	AW	P		P	S	S	S			S			S
1106	Assist GOO/OWD in Drafting of Documents related with Restructuring, Capacity Building and Institutional Strengthening	AW	P		P	S	S	S			S			S
1107	Assist in Overall Coordination and Monitoring of ISAP Implementation Process	AW	P		P	S	S	S			S			S
1108	Knowledge Sharing and Skill Transfer	AW	P		P	S	S	S			S			S
1109	Establishment of Orissa Road Development Corporation, Merits / Demerits	AW	P		P	S	S	S			S			S
1110	The Schedule of various reports on Medium-to-Longer Term Strengthening of the Institutional Framework / Structures of Orissa's Roads Sector	24.00	P		P	S	S	S			S			S
<b>Legend</b>														
P Primary Responsibilities														
S Secondary Responsibilities														

Chief Engineer,  
World Bank Projects, Odisha

9. In each of the abovementioned parts of these services, the consultant shall be required to provide expert drafting assistance to the OWD and the GOO in developing submissions and/or finalizing outputs such as draft Policy statements, draft legislation, draft rules and/or other statutory documents where these are needed by the client to achieve GOO decisions on recommendations arising from these services and on their subsequent implementation.

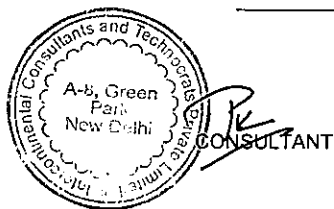
10. The consultant shall also give broadly-based support to the OWD management in the overall coordination and monitoring of the ISAP implementation process. This will mainly involve the consultant's lead personnel in (i) helping the OWD-led ISAP Working Group and OWD senior management with periodic oversight of the various ISAP-driven activities and the associated inputs, with a view to optimizing the capacity-building, knowledge-sharing and skills-transfer benefits for OWD staff through proactive coordination and (where appropriate) integration, and (ii) assisting with monitoring and reporting of ISAP implementation progress.

Such ISAP implementation support is required from the Consultant only during the contracted period of the services. The Consultant in its draft Final Report, which is expected to be delivered in the 28th Month of its service, shall indicate in what areas and forms the further involvement of the Consultant's Key Staffs and other supporting staffs may be warranted and/or necessary in assisting with monitoring and reporting of the ISAP implementation process, beyond the contract period. This shall then be reviewed by the Client for consideration of any possible extension of contract with skeletal arrangement of some key/support staff, if required.

#### *Approach to Delivery of the Services*

11. During the Inception Period (immediately following mobilization) the consultant will be expected to finalize a firm Work Program based on the abovementioned Tasks I-X in consultation with the client, and to then also raise any other significant issues considered likely to affect the execution of these tasks and/or the quality of execution, for decision and resolution by the client.

12. Given the GOO's commitment to accountability, transparency and facilitation of the rights to information (RTI) of civil society in Odisha, the consultant will be expected to help facilitate timely and effective OWD and/or GOO interactions with relevant stakeholders and civil society entities during the respective task elements, as determined progressively by the OWD. The consultant shall similarly also help facilitate OWD-based communication processes with affected staff in the OWD and other involved GOO agencies. This shall include presentation of draft reports (etc.) in each Study at workshops / seminars to be convened by the OWD, and shall typically also include the lodging of such documents and information (when finalized) on the relevant OWD and/or GOO internet websites.



13. The consultant's personnel shall in performing these services also specifically aim at progressive and substantive 'skills transfer' to relevant OWD / GOO counterpart staff in each main field of these services, via training, demonstrations and other practical 'on-the-job' methods.

The Consultant shall bear all cost of organizing the workshop, stakeholder consultations and training.

For this purpose Consultant shall assumed to conduct about 25 workshops with 30 participants in each in its overall assignment. The Consultant may also assume conducting about 20 stakeholder consultations.

### **Exposure Visits**

The Consultant shall also arrange and bear all the expenses required for Field Exposure Visits, for a week as described in Cl. 8 V (Road Safety Engineering & Planning) and Cl. 8. VIII (Road Toll Collection & Management ) for the respective visits on above fields.

The Consultant has included all expenses for such Exposure Visits as economy class air travel, lodging, boarding, inland transportation etc. as applicable alongwith a counterpart person of the Consultant as accompanying guide-cum-facilitator. However, no per diem / daily allowance is to be paid by the Consultant.

The cost for the entire training and exposure visits as above shall be borne by the Consultant.

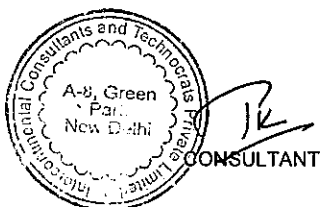
### **Duration of Services**

14. The services are expected to be completed over *approximately thirty (30) calendar months*, with phasing of personnel and other inputs over that time according to the different task elements.

## **15. ORGANIZATION AND STAFFING SCHEDULE**

### **15.1 General**

This section contains a suitable organization arrangement which has been developed to ensure smooth and effective performance of Consultancy Assignment. Staffing schedule of Key personnel and Support Staff have also been positioned on the basis of the Organization chart and the Work Plan. The Consultants' group is backed by dedicated, highly qualified team of full time and multi-disciplined professional staff,



all with latest experience, in their respective fields and proficiently working to the highest international standards.

## 15.2 Project Organization

Project organization has been structured taking into account the functional and operational hierarchical structure of OWD / GOO and approvals for deliverables and decision making during the course of performance of Consultancy Assignment.

At operation level, the Team Leader-cum-Road Agency Management Specialist shall report to chief Engineer World Bank projects PMU and ISAP, Review Committee, which shall provide and assist technical, administrative and logistic guidance support. The PMU shall be the main link between Consultant & OWD. In addition, the Professionals / Key Experts shall directly liaise with concerned GOO departments for discussions queries and information specific to their field and services.

The Consultants' proposed Organization Chart is presented in Fig. 5.1, which shows inter-linkages between all relevant stakeholders of the project.

The Project Organization has been based on Key Professionals only. However, certain Technical Support Staff e.g. Assistant Highway Engineer (2 Nos.), Road Safety and Survey Engineers shall be deployed for collection of ground data in terms of road inventory, field survey, pavement survey and axle load assessment, etc. Their man-months are part of 400 man-months of support staff only. Their deployment is considered essential in the interest of performance of assignment. It has been reflected as part of Staffing Schedule.

The team is also supported by adequate technical and administrative support staff.

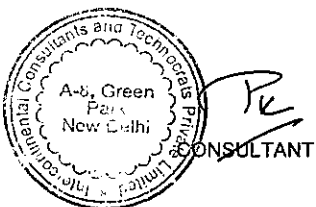
## 15.3 Staffing Schedule

### 15.3.1 Rationale for Selection

The staffing has been done in accordance with scope of services and laid down man-months for each key professionals. The 10 nos. of Adhoc man-months shall be utilized as per the requirement on ground. With regards to 400 support man-months, the man-months have been optimally divided for certain inescapable Technical and Administrative Staff. This aspect shall also be discussed with Client for its modifications if any.

### 15.3.2 Proposed Task Assignments

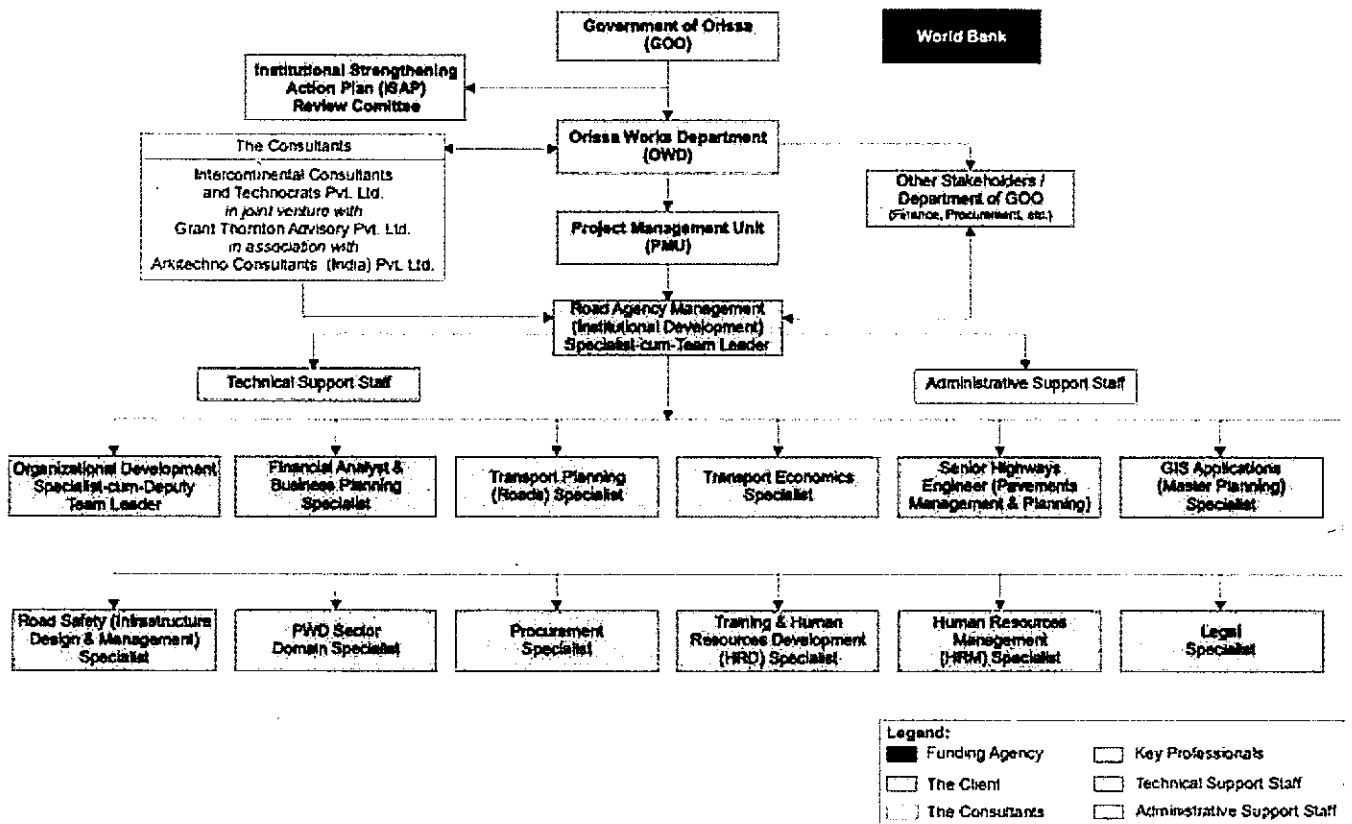
The task assignments of the key professional staff are given in Task Matrices in Appendix C.



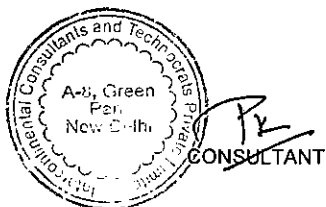
15.3.3 Proposed Staffing Schedule

The Staffing Schedule for the Key Professionals, Technical and the Administrative Support Staff is enclosed.

Fig. 5.1: ORGANIZATION CHART



5 - 2





Appendix A: Description of Services

**Fig. 5.2 : STAFFING SCHEDULE**

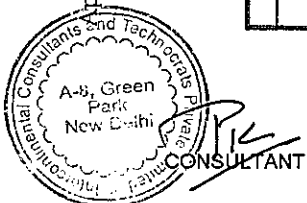
Sl. No.	Name of Staff	Position	Home / Field	Duration (30 Months)																														Total Staff Month Input		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Home	Field	Total
<b>Key Personnel</b>																																				
<b>Foreign</b>																																				
1	T.Chelliah	Road Agency Management (Institutional Development) Specialist-cum- Team Leader.	Home																															-	25.00	25.00
<b>Local</b>																																				
2	Dr. Chandra Prakash Bohra	Organizational Development Specialist-cum-Deputy Team Leader	Home																															-	18.00	18.00
3	Anilava Basu	Financial Analyst & Business Planning Specialist	Home																															-	6.00	6.00
4	Chandi Ganguly	Transport Planning (Roads) Specialist	Home																															-	6.00	6.00
5	Boominathan Muthuvar	Transport Economics Specialist	Home																															-	6.00	6.00
6	Dr. P. K. Nanda	Senior Highways Engineer (Pavements Management & Planning)	Home																															-	6.00	6.00
7	D. Vasudevan	GIS Applications (Master Planning) Specialist	Home																															-	3.00	3.00
8	Dr. Prabeer Kumar Sikdar	Road Safety (Infrastructure Design & Management) Specialist	Home																															-	6.00	6.00
9	Deepak Narayan	PWD Sector Domain Specialist	Home																															-	6.00	6.00
10	Baldev Raj Suri	Procurement Specialist	Home																															-	6.00	6.00
11	Sandeep Jagota	Training & Human Resources Development (HRD) Specialist	Home																															-	9.00	9.00
12	Sachchida Nand Swaroop	Human Resources Management (HRM) Specialist	Home																															-	9.00	9.00
13	Dipak Rao	Legal Specialist	Home																															-	6.00	6.00
14	To be named	Other Adhoc Technical Specialist	Home																															-	10.00	10.00
																														<b>Sub Total</b>	<b>0.00</b>	<b>122.00</b>	<b>122.00</b>			

Page 1

**Legend:**  
 ——— Continuous Input  
 - - - - - Intermittent Input (as and when required)

Chief Engineer,  
 World Bank Projects, Odisha

Appendix A: Description of Services



Page 2

Technical Support Staff		Home	Field	Sub Total	
1	To be named	Assistant Highway Engineer (Codes / Manuals / Policy)	Field	30.00	30.00
2	To be named	Assistant Highway Engineer (Road Network & Master Plan)	Field	30.00	30.00
3	To be named	Road Safety Engineer	Home	26.00	26.00
4	To be named	Surveyor	Home	20.00	20.00
5	To be named	CAD Engineer - 1	Home	30.00	30.00
6	To be named	CAD Engineer - 2	Home	15.00	15.00
7	To be named	HR Manager (OD, HRM & Training)	Home	9.00	9.00
				0.00	160.00
				0.00	160.00
Administrative Support Staff		Home	Field	Sub Total	
1	To be named	Office Manager-cum-Accountant	Field	30.00	30.00
2	To be named	Computer Operator (4 nos.)	Field	120.00	120.00
3	To be named	Draftsman	Home	30.00	30.00
4	To be named	Office Boy and Security (2 nos.)	Home	60.00	60.00
				0.00	240.00
				0.00	522.00

Legend:  
 Continuous Input  
 Intermittent input (as and when required)

**Appendix -1 to Appendix A****Summary of Institutional Strengthening Action Plan (ISAP) 2008 – 2018**

	<b>Objective</b>	<b>Key Result Area</b>
<b>Road Sector Strategy</b>		
1	Effective sector institutional framework, powers and capacities	Implementation of GOO-endorsed Roads Policy (development & management) framework. [March-2010] Determine the Core Road Network (CRN) and implement new dedicated OWD capacity for CRN management. [December-2009] Well-defined legal 'Right of Way' (ROW) and asset management powers established by GOO legislation and rules. [December-2010]
2	Adequate road sector funds mobilization	Autonomous <i>Road Fund</i> for road maintenance needs in place. [December-2012]
3	Satisfactory sector information, consultation, governance and accountability mechanisms	Implementation of GOO-endorsed Governance & Accountability Action Plan (GAAP) for OWD. [June-2012] Annual and multi-year plans and public reporting in place. [December-2012]
4	Comprehensive master planning for main roads	Master Plan for Odisha road network development in place. [June-2011] Multi-year plans and Annual Plans for roads development and management in place, in line with master plan(s). [December-2011]
5	Effective Road Safety policy, resources & action	Endorsed and funded Road Safety policy and Action Plan in place, with updated responsibility framework and capacities. [June-2011]
6	Private sector participation in road sector infrastructure	State-level PPP/BOT policy, guidelines and model concession agreements in place and projects being facilitated. [June-2012]
7	Sound road construction industry capacity	Odisha-based contractors more capable of winning and executing roads contracts satisfactorily, here and across India. [March-2012]
<b>Core Processes</b>		
8	Transparent, effective and accountable <i>procurement</i> policy / processes in OWD	Clear and effective procurement delegations to OWD staff. [December-2009] <i>E-procurement</i> in place as standard for OWD roads contracting. [March-2011]
9	Effective performance monitoring by OWD	Performance monitoring and evaluation (M&E) system in place. [December-2010]
10	Rationally prioritized Road Maintenance funds planning & commitment	OWD asset management system (RAMS) in place for network asset database, and for prioritization of road maintenance (RM) funds annually. [June-2010]



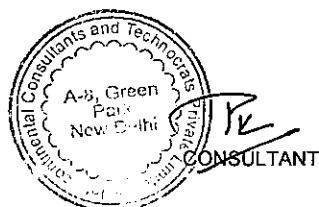
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Appendix A: Description of Services

11	Improve quality in construction and maintenance	Better quality roads at optimum price with minimal maintenance needs in future. [December 2012]
12	Environment and Social aspects of roads activities are properly resolved.	OWD processes and capacity in place to manage Environment and Social factors and impacts in road projects/ works effectively. [June 2011]

	<i>Objective</i>	<i>Key Result Area</i>
<b>Organizational Structure &amp; Management</b>		
13	Efficient management of Core Road Network	Determine the Core Road Network (CRN) and implement its management within OWD [June-2009] ; and subsequently establish Odisha Road Development Corporation (ORDC) [December-2011]
14	Effective OWD organization for performing the new roles and responsibilities in managing the road network.	Strengthened, updated OWD organization in place for roads policy, planning and programming roles and functions. [December-2011]
<b>Financial Management, Audit &amp; Administration</b>		
14	Effective OWD finance, budget management and accounting	Comprehensive IT-based Financial Management System and Asset Register in place in OWD [March-2012] Updated, adequate administrative and financial powers, authorizations and delegations in place in OWD [December-2010]
<b>Information &amp; Communications Technology (ICT), MIS &amp; GIS Applications</b>		
15	Comprehensive and efficient IT & ICT support for OWD roads sector planning & management	Effective <i>IT-ICT-MIS Strategy</i> and implementing capacity in place in OWD [June-2010] Efficient, sustainable IT-based MIS resources and capabilities in place, supporting OWD decision-making [December-2011]
<b>Human Resources (HR) Development &amp; Capacity Building</b>		
16	Sustainable and effective OWD capabilities and performance in roads functions	Comprehensive OWD Training Needs Assessment (TNA) completed and findings being implemented. [December-2009] Needs-based Training and Staff Development strategy, programs and supporting capacity in place in OWD. [June-2011] Improved OWD staff performance appraisal and management policy and processes in place. [December-2012]



**TRAINING & TRANSFER OF KNOWLEDGE**

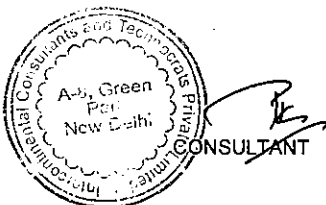
**1. General**

The Consultants have taken due cognizance of the fact that RFP / Data Sheet / ToR and ISAP (2008-2018) have laid emphasis on Transfer of Training as one of the main objective of services. As appreciated by Consultants, it is certainly required for the organization and its staff to fully understand the restructured organization and the new functional aspects with Revised Code / Manuals, Policies, Funding, Structure Road Engineering, Network and all related aspects of Road Sector fully. To achieve the objective, the concept and methodology given in succeeding paragraphs describes, that how the Consultants have analysed it and broadly defined the concept of its conduct during Consultancy assignment phase.

**2. The organization & Training**

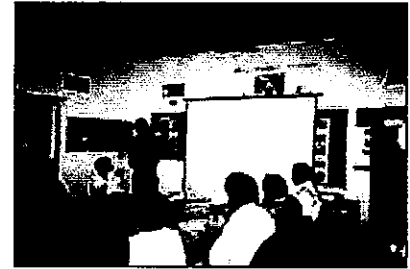
For effective and efficient plan formulations and project implementation it is vital that there is congruity of purpose among all concerned organs of an organization. Convergence of their aims and objectives however requires that the activities of all the varied functionaries working in different organizations, departments, agencies, institutions, laboratories etc. are cumulatively found reinforcing the realization of road map prepared for the development of infrastructure sector of GOO. This calls for creating a synergy among various stakeholders associated with Road Sector, viz. the Planning and Funding agencies at the Government level, implementation agencies at the Govt. level, Contractors/Concessionaires, Consultants/Independent engineers, Equipment manufacturers, suppliers of other materials, suppliers/manufacturers of various patented products relevant to the sector. This mutually reinforcing synergy is required for the promotion of a conducive environment and good work ethos for the overall economic growth of the State. Fourth Road Development Plan has laid emphasis on the capacity building of various stockholders' organization which among others includes strengthening of decision support system by way of stronger database development, specialization of professionals, re-engineering of organization for sound decision making, synchronization of working in the organizational set up and development of skilled man power.

The highway sector in India is facing positive and proactive challenges, not witnessed at any time in the past. The highway as well as state's development sector is poised for fast development and has already taken quantum jump with regard to availability of funds. Accordingly physical target are being set and sought to be achieved with the expectation of international standards. The Govt. of Orissa has accepted this challenge and going ahead with capacity building of its Road Sector by way of organizational development and training of its Engineers and Professionals.



### 3. Training of Engineers/Professionals and other Manpower of Road Sector

Appropriate training arrangements are required to be made for meeting the required number of Highway Engineers and other professionals in the infrastructure sector. It is also essential to create awareness among the highway engineers regarding the technological developments world over. The training needs, involving training in engineering disciplines, project management techniques,



financial management, operation and management of highways, etc., should be imparted from the entry level in services, at job sites and as a continued process through periodic in-service refresher courses as well as by deputing engineers to other Departments to learn inter-disciplinary skills.

### 4. The Training and GOO/OWD

GOO/OWD is looking towards future. The Institutional Strengthening and the capacity building of the Department involves a major Restructuring of Organization in getting its fundamental strength reinforced by its well developed and trained Human Resource. Who with their re-designed job profiles, focused commitments, meaningful, well motivated with participative involvements shall provide a powerful and durable process for organization's strength for its sustainable objectives and targets.

GOO/OWD have specifically made Training a pre-requisite evaluation criteria for their Consultants, realizing that Gun/restructured OWD cannot successfully fire, if the men behind are not fully trained and equipped to propel it. (An Army Quote, "The gun itself does not fire, but it is the man behind it").

### 5. The Consultants & Training

ICT have always as a matter of Policy considered the transfer of technology and training of counterpart staff of that organization, the pre-requisite and most essential compliment of their consultancy assignment in India as well as abroad. Since in this case, being a specifically defined requirement of consultancy assignment, the Consultants shall organize and design it more deliberately and objectively in consultation with OWD to achieve the desired aims.



### 6. Proposed Transfer of Knowledge/Training

The Consultants define the Transfer of Knowledge and technology, as the process by which professionals develop and acquire new job and skill proficiencies through training programme from other professionals.



It is the Consultants' experience that the most effective way of transferring technology is that a professional for the required skills working closely together over a period of time with the counterparts consultants' engineers in the field. This is also termed as "on-the-job training". But since, the scope of training skills required to be developed for OWD Engineers, have a wider scope, as specified in the ToR by GOO/OWD, a proper training process has been developed by the Consultants for this purpose.

For graphic definition and the complete transfer cycle refer Sketch Nos. 1 and.2.

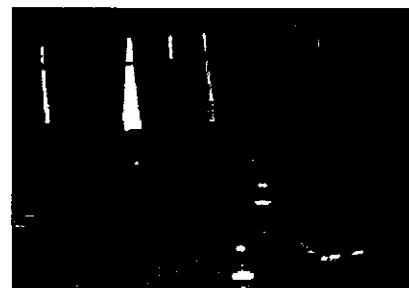
### 7. The Training need Assessment

The modern concept of training and development needs, emphasizes on leaner organization and individuals contribution towards achievement of objective. This has made the training and development needs a critical element in determining the organization's success. Training is important but question is, what kind of training and to what level of details? The answer to these questions are sought by conducting Learning Needs Analysis (LNA) and Training Needs Analysis (TNA). There are three levels of training needs within an organization namely organizational, occupational and individual.

### 8. Training Needs Analysis

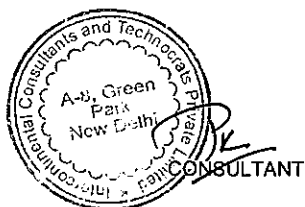
The Analysis phase is often called a 'Front-End Analysis' because it is in this phase, that the task of training needs identification or problem identification is performed. For this purpose, following actions are taken:

- (a) Overview of system or process to gain understanding (if needed);
- (b) Analyzing the system;
- (c) Discovering Training Needs;
- (d) Compiling Task Inventory (if needed);
- (e) Analyzing the task;
- (f) Needs analysis;
- (g) Templating;
- (h) Document analysis;
- (i) Building Performance measures;
- (j) Selecting instructional setting and
- (k) Estimating training cost.



### 9. Designing the Training Needs

To design the training needs for an employee to be trained and developed, some of the fundamental question required to be asked and answered by the organization designing it are as below:



- i) What are the employees doing that they shouldn't be doing?
- ii) What specific things would be expected from the employees that they should do, but they don't do?
- iii) When we envision employees performing their job properly, what do we envision them doing?
- iv) What prevents the employee from performing a prescribed task to standards?
- v) Are job aids available and if so, are they accurate? Are they being used?
- vi) Are the standards reasonable? If not, why?
- vii) If the employee could change one thing in the task he performs the, what would it be?
- viii) What subject would we like to see the employee/workers trained on
- ix) What new technology would benefit the employee/worker the most, in the performance of his job?

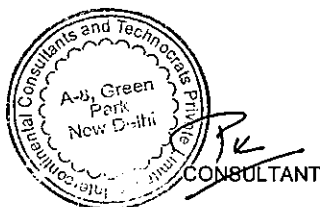
Based on above Questionnaire, the data collected shall accurately reflect the specific tasks now being performed and to design the tasks that need to be trained and performed in future in a restructured scenario of the organization

## 10. Training Strategy

### 10.1 Content and Process Modalities: Six Orientations

Training strategies vary depending on the learning outcomes being sought to be achieved. It shall be formulated based on various layers and structures of the organization and the tasks are required to be performed at various levels by the individuals. The strategy should focus that it is not a one time exercise but a continued process to empower the individuals to perform multi-disciplinary task at any stage.

The other aspect of strategy should be the training for new or improved proficiency in carrying out a particular task, such as checking the alignment of a highway, its levels as designed by DPR Consultants for its correctness and the construction work to be taken up by contractor. For the middle and higher levels of structure of the organization, the process of learning should focus on, such as improved teamwork or leadership, heightened readiness and ability to mobilize organizational support for a planned innovation, better morale, or a more effective consultant-client relationship.

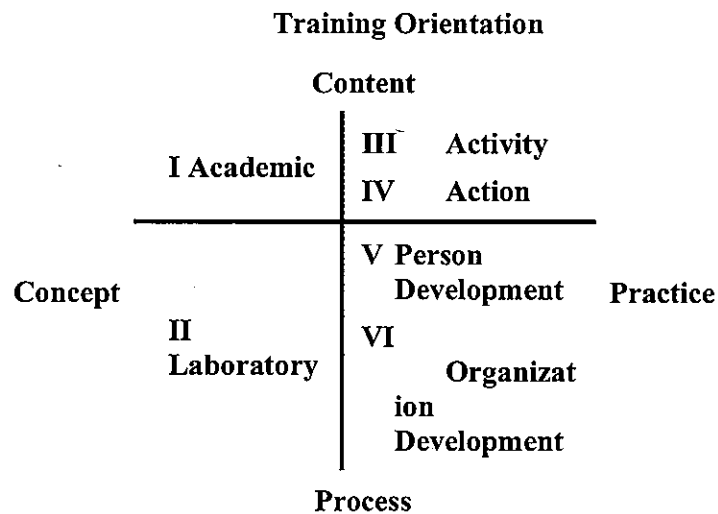


**Planning Strategy: Strategic steps prior to Training**

The Training System	The Work Organization
	1. Decides on a change. Specifies inputs required including new knowledge, understanding skills
2. Responds by specifying what can be acquired through training	←
	→
	3. Studies who exactly is involved numbers and levels - and when, all this in relation to other inputs, for example, technological, financial and organizational
4. Offers help in working out minimum concentration of trained personnel required for change	←
5. Works out and communicates training Specifications, for example, kinds and Duration of training for different people sequences, follow-up services, and contributions required from the organization and other agencies	
	→
	6. Decides to go ahead
7. Collaborates with the work organization in Drawing up a training plan for implementation.	
8. Collaborates in selecting individuals for particular kinds of training	↔
	↔



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The above graphic representation of training strategy and orientation clearly brings out the distinctions on a two-dimensional paradigm together with the familiar boundaries between theory and practice.

### 11. The Training Process

The training process involves three phases of its complete cycle i.e. "preparation", "training" and "follow up".

#### 11.1 Pre-training

An operational description is needed of each person's job which reflects how it is to be carried out with improved effectiveness and scope of the proposed job profile. This covers:

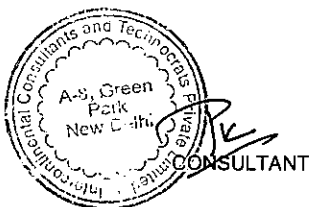
- a) The kinds of personal contact, the job requires between the supervisor and the performer.
- b) The pressures on the job, such as quick decisions and the kind of responsibilities
- c) The quantum/quality of work and the time required to complete them

#### 11.2 Training

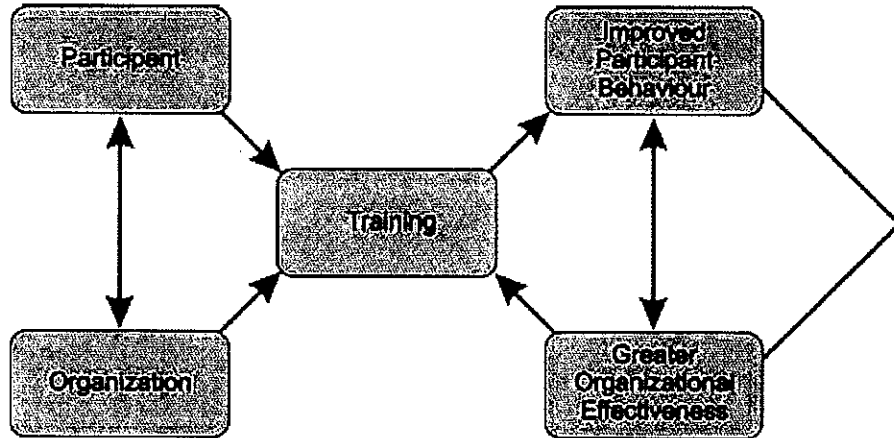
The actual conduct of training on the job/classroom/workshop/seminar or any other mode as per designed structure.

#### 11.3 Post-training

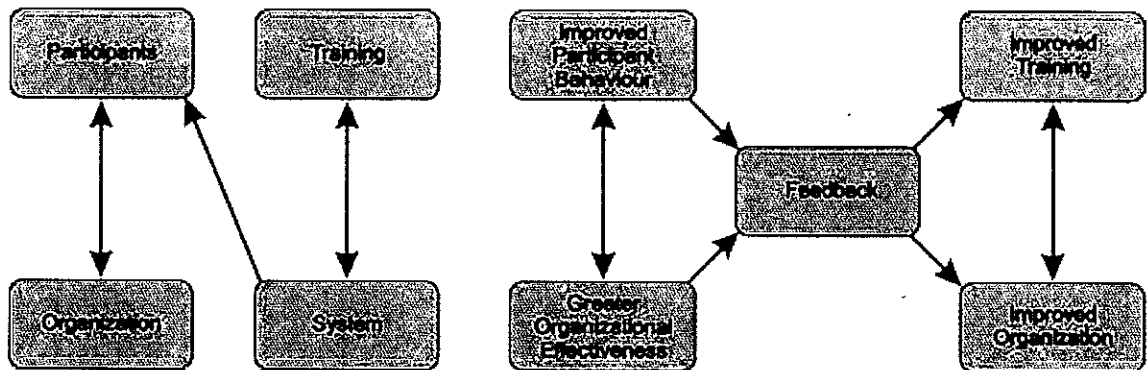
The effectiveness and degree of success of executed programme of training shall be reflected by post-training evaluation, carried out by Department, by assigning specific training related tasks to the individuals and degree of professionalism achieved by them.



Simple Model of Training Process



Elaborated Model of the Training Process



Comparison of Six Training Orientations

Orientation	Emphases	Characteristic methods	Assumptions	Action Steps
1. Academic	Transmitting content and increasing conceptual understanding	Lecture Seminar Individual Reading	1. Contact and understanding can be Passed on from those who know to those who are Ignorant 2. Such knowledge and understanding can be translated into practice	Building a syllabus to be covered in the program Examination to test retained knowledge and understanding



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<i>Orientation</i>	<i>Emphases</i>	<i>Characteristic methods</i>	<i>Assumptions</i>	<i>Action Steps</i>
2. Laboratory	Process of function and change process of learning	Isolation Free exploration and discussion Experimentation	1. It is useful and possible to pay attention to psychological factors for separate attention. 2. Understanding of Own and others' behavior helps in Job performance	Unfreezing participants from their usual expectations and norms. Helping participants to see and help others to see their own behavior and develop new habits.
3. Activity	Practice of specific skill	Work on the job under supervision. Detailed job analysis and practice with aids	1. Improvement in particular skill leads to better job performance 2. Production and training can be combined rather simply	Analyzing skill and dividing it into parts Preparing practice task, standards, and aids
4. Action	Sufficient skills to ensure organizational action	Field work, setting and achieving targets	1. Working in the field Develops people 2. Individual skills and Organizational needs will fit together	Preparation of field programs Participation according to schedule.
5. Person development	Improved individual competence in a wide variety of tasks and situations	Field training, simulation methods, incident and case sessions, and syndicate discussion	1. Training in job requirements with emphasis on process will help participants develop general skills and understanding 2. Organization will support Individuals in using understanding and	Identifying training needs Preparing simulated data



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<i>Orientation</i>	<i>Emphases</i>	<i>Characteristic methods</i>	<i>Assumptions</i>	<i>Action Steps</i>
			skillsacquired	
6. Organizational development	Organizational improvement	Study of organizational needs Work with small groups from the organization	1. Attention to organizational needs as process develops understanding 2. Organizational change will result in individual change	Survey of organizational needs. Determining strategic grouping for training. Working on organization requirements.

## 12. Designing the Training

Designing through successive approximations, i.e. outlining objectives and expectations as per ToR / OWD.

1. Development of syllabus in consultation with OWD
2. Phasing the program in accordance with the Learning process methods
3. Relating to program to required expectations
4. Deviding the Training Groups as per proposed structural organization of OWD
5. Motivating the Group towards Training for their Development and promotional prospects
6. Striving for consistency in Training
7. Conduct of Programs as per schedules



### 13. Training Methods to be adopted by Consultant

- Field/on-the-job training
- Laboratory
- Field visit to major structures for their assessment and review for their strengthening, if required
- Incidents, cases and conducting group discussion on them
- Individual instruction
- Lecture
- Visits to Training Institutions
- Workshops and Seminars
- Conduct of case studies
- Quality Circles
- Review of specific topics of IRC Codes and subsequent joint discussions with Consultant and OWD staff
- Assigning the specific short projects and home assignments
- Study and review of FIDIC, Concessionaire Projects and certain contracts of OWD
- Visits to Consultant Corporate Office at New Delhi for computerized capsule training
- Equipment Training for e.g. Total Station, GPS and familiarization with AutoCAD

### 14. ISO Training

The Consultants shall organize the 'Pilot' ISO certification "ISO 9001:2008" for OWD by providing Consultancy Services covering engineering, financial management, project management and institutional strengthening for various infrastructural sectors such as highways, bridges, airports, transportation, tourism, urban development, water supply and sanitation, water resources and energy.



The salient features of upgradation requirement of ISO 9001:2008 shall be

- Quality Management System
- Management Responsibility
- Resource Management
- Product Realization
- Measurement, Analysis and Improvement

This ISO training shall be conducted at the HO of Consultants.



## 15. Additional provision

### A. Training Co-coordinator

During the progress of assignment, a project coordinator shall be nominated to co-ordinate the overall training requirement.

### B. Training of Restructured OWD

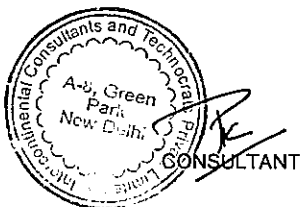
Based on the newly structured organs of OWD, the training needs assessment (TNA) shall be analyzed and subsequent training of the OWD staff shall be organizing accordingly.

### C. Additional requirement of training components.

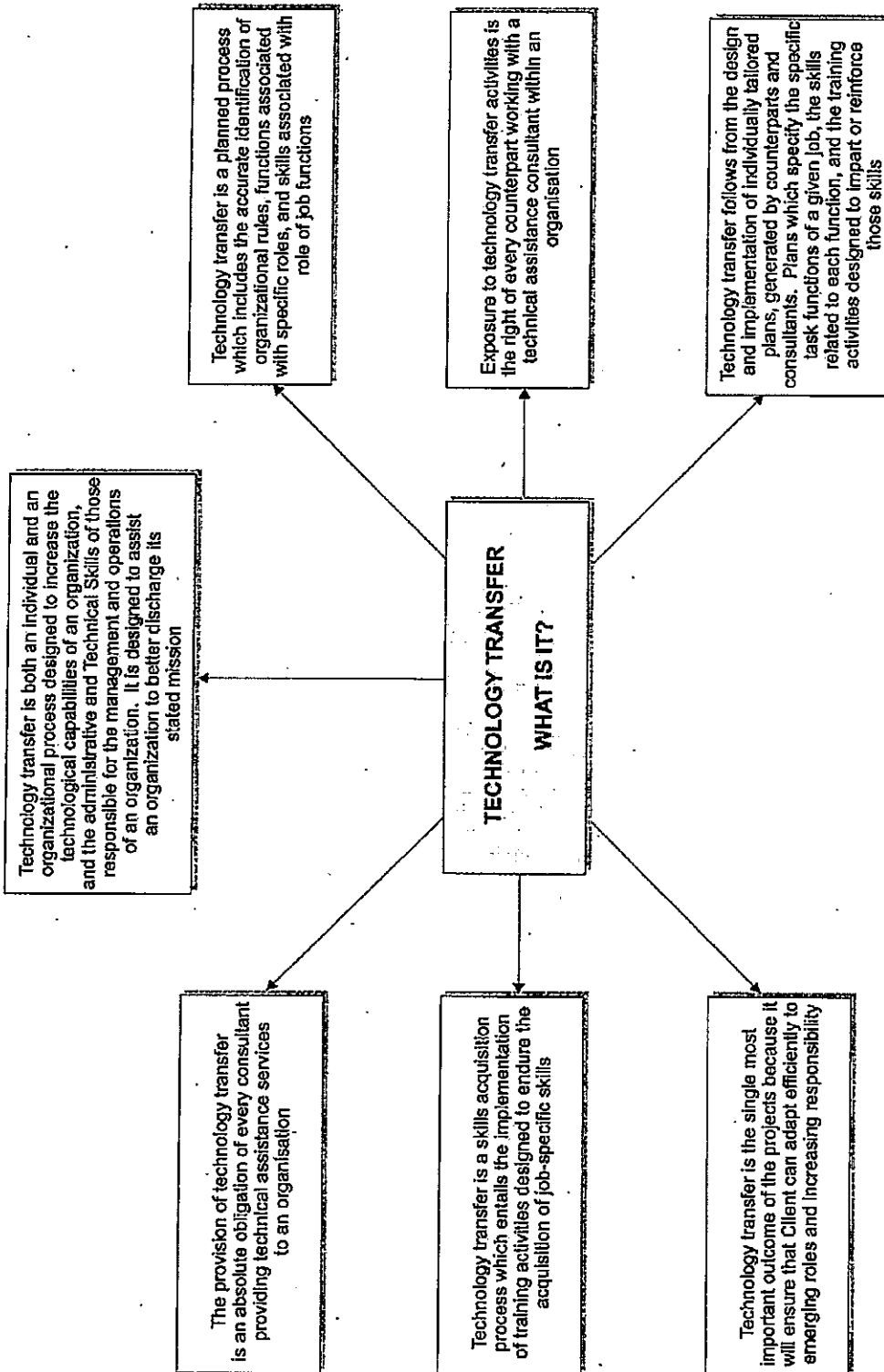
During the course of assignment, it shall be discussed with client and organized.

## 16. Conclusion

Based on above technical concept, the actual training modalities, and the program shall be structured in joint consultation with OWD/PMU, so as to achieve the desired objectives as expected by the Client.



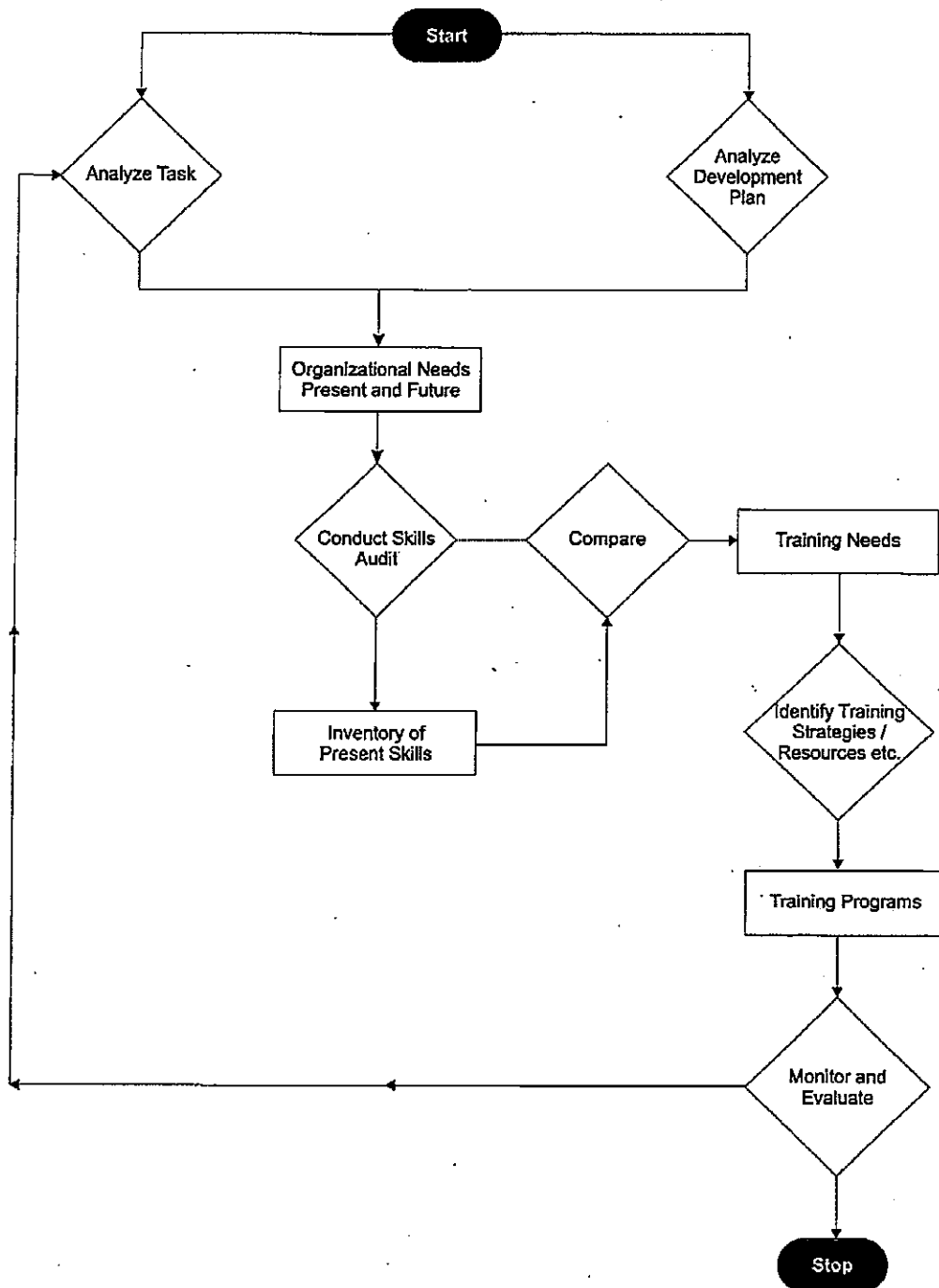
**Definition Diagram for Technology Transfer**



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Sketch 2

Training Strategy Flow Chart ✓



## APPENDIX B - REPORTING REQUIREMENTS

### Main Deliverables & Milestones

In addition to completion of the substantive task elements outlined at Para. 8 (Tasks I-X) of Description of Services, the following 'standard' deliverables are also required from the consultant during these services.

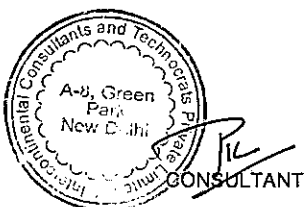
- An ***Inception Report***, presenting the Consultant's post-mobilization approach to the requirements of the main task elements, finalization of both the phasing of inputs and the overall work program for the services period, and outlining any key issues needing further resolution by the client for efficient execution of the overall assignment.

The Inception Report shall also include :

- Identification and meetings with all Project Stakeholders and brief comments on their observation on existing OWD structure and their expectations.
  - Initial assessment on Policies, strategies and structure of OWD for Administration, Technical and Regulations.
  - Initial Assessment of Training needs.
  - Identification of Nodal Centre for Road safety and excess Axle loading assessments.
  - Conduct of informal Presentation / Discussion on our suggested modification on Work Plan / Staffing Schedule and Methodology to give it a final shape.
- ***Quarterly Progress Reports (QPR)*** in standard format, due at the end of each quarter during the services.

The Quarterly Progress Report shall also include :

- Observed impediments in progress of assignment and recommended solutions
- Forecast of activities for next quarter.
- Highlighting the observed points of OWD and actions taken by the Consultant.



- A **Mid-Term Status Report** (MTSR) outlining the results and achievements in each major element of these services and detailing (i) any significant unforeseen challenges or problems for OWD / GOO consideration and (ii) any need for further refinement to (e.g.) the inputs and/or the work schedule in these services for overall efficiency and effectiveness.
- Various **Workshops** to be facilitated on OWD's behalf by the consultant at important stages in each task element, involving OWD staff, OWD senior management, representatives of other concerned GOO agencies, major sector stakeholders and civil society representatives (as appropriate in each case), to present 'draft' or preliminary outputs from the services for awareness, feedback, guidance and/or decisions.
- A **Draft Final Report** (DFR) to be submitted one month before the completion date of the services as per contract, which shall report comprehensively on the consultant's services, results and achievements against the substantive requirements in these TOR.
- A **Final Report** (FR) which shall take account of and be submitted within two weeks of receipt of OWD / GOO comments on the DFR, upon completion of the services.

#### Reporting, Review and Payment Schedule

I. The Odisha Works Department (OWD) will be the contractual client for the services. The client has established a Project Management Unit (PMU) to be exclusively in charge of the Odisha State Roads Project. This organization is headed by a Chief Engineer, World Bank Project, who is assisted by appropriate professional and support staff.

II. The assigned tasks of the Consultant and outputs of its services shall be reviewed by the ISAP Review Committee/Working Group (as listed below) who will give effective guidance to the consultant during the consultancy period. The consultant is required to give power point presentation on the draft outputs / draft reports before the Review Committee / World Bank team prior to their submission. The Review Committee / World Bank will recommend any modification/changes considered necessary in the outputs submitted by the consultant. The consultant shall incorporate these changes in the corresponding reports and other outputs. The Review Committee comprises of senior officials from the OWD with following members:





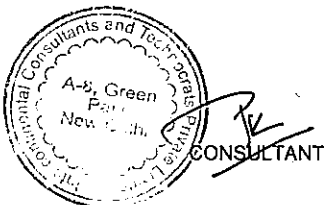
- |                                                            |   |                 |
|------------------------------------------------------------|---|-----------------|
| a. Engineer-in-Chief-Secretary,                            | - | Chairperson     |
| b. Engineer-in-Chief (Civil)                               | - | Member          |
| c. Representative of Govt. Finance Dept                    | - | Member          |
| d. Representative of Govt. Law Dept.                       | - | Member          |
| e. Representative of Govt. Transport Dept.                 | - | Member          |
| f. Representative of Govt. Planning & Co-Ordination Dept.- | - | Member          |
| g. Chief Engineer ( DPI &Roads)                            | - | Member          |
| h. Chief Engineer, National Highways, Odisha               | - | Member          |
| i. Chief Engineer ( RD&QP)                                 | - | Member          |
| j. Chief Engineer, Rural works-I                           | - | Member          |
| k. Managing Director, OB&CC                                | - | Member          |
| l. Chief Engineer, World Bank Project                      | - | Member Convenor |

III. The consultant shall closely lease with the AMS consultant and the consultant dealing with IT, ICT and MIS related issues besides closely interacting with different units of the OWD, and with policy and decision-making authorities of Government as and when required with advice from the Client.

IV. As a minimum, the required co-ordination will involve monthly meetings with the Client and quarterly meetings with the Review Committee/Working Group by the Team Leader and other key personnel of the consultant team. The standard-format Quarterly Progress Report (QPR) mentioned at Para. 17 (above) due at the end of each quarter from the consultant, shall be prepared sufficiently in advance to enable its tabling at a meeting of the Review Committee/Working Group, who will review the progress to date/over last quarter, any problems outlined and the activities proposed for the next quarter, prior to the QPR being submitted to the World Bank as required under the OSRP monitoring arrangements.

V. Overall, the total of the outputs and deliverables due in these services from the consultant and the tentative 'due timing' for these, are as follows.

<i>Deliverable / Output Per Contract</i>	<i>Tentative 'Due Timing'</i>	<i>Quantity Due in each case</i>	<i>Percentage of Payment</i>
<i>Inception Report (IR)</i>	End of week 4	10	5%
<i>Quarterly Progress Reports (QPR) x 7</i>	End of each calendar quarter	7	(1% each) 7%
<i>Workshops: associated Presentations / Working Papers / Materials) – up to ten (10) workshops</i>	Timings to be resolved in IR	10	--



<b><i>Deliverable / Output Per Contract</i></b>	<b><i>Tentative 'Due Timing'</i></b>	<b><i>Quantity Due in each case</i></b>	<b><i>Percentage of Payment</i></b>
<b><i>Working Paper</i></b> on Short-to-Medium Term OWD Re-structuring & Reorganization	End of month 6	7	3%
<b><i>Interim Report</i></b> on Revision of OPWD Code & Manual (Structuring, Content, Issues, Timing)	End of month 6	7	3%
<b><i>Final</i></b> OPWD Code & Manual	End of month 13	7	2%
<b><i>Report</i></b> on Training Needs Assessments (TNA) Results, Proposed TNA-Based Program(s) and OWD 'Training' Role	End of month 9	7	5%
<b><i>Draft Report</i></b> on Odisha Road Sector Policy and requirements for its implementation	End of month 10	7	5%
<b><i>Interim Report</i></b> on Preparations for Inaugural Master Plan for Main Road Network in Odisha	End of month 10	7	5%
<b><i>Report</i></b> on Road Infrastructure Safety Management Review	End of month 12	10	5%
<b><i>Final Report</i></b> on Odisha Road Sector Policy	End of month 12	7	2%
<b><i>Report</i></b> on Management of Out-sourced Road Toll Collection & Maintenance / Operations	End of month 14	7	3%
<b><i>Mid-Term Status Report</i></b> (MTR)	End of month 14	7	5%
<b><i>Report</i></b> on Vehicle Axle Load Regulation & Management	End of month 16	7	3%
<b><i>Preliminary Report</i></b> on Study of Main Roads Funding Options & Possible Road Fund	End of month 16	7	5%
<b><i>Draft Report</i></b> on Proposed 'Odisha Road Safety Action Plan'	End of month 16	10	3%

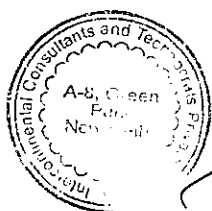


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<b><i>Deliverable / Output Per Contract</i></b>	<b><i>Tentative 'Due Timing'</i></b>	<b><i>Quantity Due in each case</i></b>	<b><i>Percentage of Payment</i></b>
<b><i>Final Report</i></b> on Proposed 'Odisha Road Safety Action Plan'	End of month 19	10	2%
<b><i>Completion Report</i></b> on Inaugural Master Plan for Main Road Network in Odisha	End of month 22	7	5%
<b><i>Final Report</i></b> on Study of Main Roads Funding Options & Recommendations on Road Fund	End of month 22	7	5%
<b><i>Draft Report</i></b> on Medium-to-Longer Term Strengthening of the Institutional Framework / Structures of Odisha's Roads Sector	End of month 24	7	5%
<b><i>Final Report</i></b> on Strengthening of the Institutional Framework / Structures	End of month 26	7	2%
<b><i>Draft Final Report (DFR)</i></b>	End of month 28	7	10%
<b><i>Final Report</i></b> (after OWD / GOO response to DFR)	End of month 30	7	10%

The acceptance by the OWD as the Client and World Bank of the abovementioned deliverables and outputs will mark completion of the primary phase of those requirements in the consultant's Work Program. Such completion / acceptance events may also be selected as payment milestones under the contract.

All due documents, presentations, materials and associated files being submitted to the Client are to be supplied in at least the quantities indicated above, together with full electronic 'soft' copies of the material in each case in CD / DVD formats (rendered in Microsoft WORD, PowerPoint and/or EXCEL formats, or via other software to be specifically confirmed during contract negotiations).



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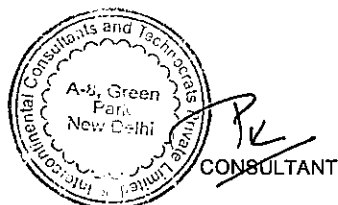
## APPENDIX C - KEY PERSONNEL AND SUB-CONSULTANTS

### *Key Personnel Requirements*

The consultant shall mobilize and maintain a team of qualified and high-quality personnel, consistent with the requirements of a complex work program commencing (on present indications) in early-2012 and lasting **approximately 30 months**. The consultant's on-site team shall mainly comprise suitable professional and technical 'core' staff plus support / administrative staff. These core staff are indicated in the 'key personnel' table below, with a *non-binding* estimate there of for the likely man-month inputs in each case. The consultant will provide **122 person months of key personnel** inputs in the following expertise **over the 30 months' services period**. The estimate of the key person requirements is only indicative and could be construed as skill mix requirements for these services. During the services, the consultant may also require extra specialist inputs on an ad hoc basis, within the indicative provision made below.

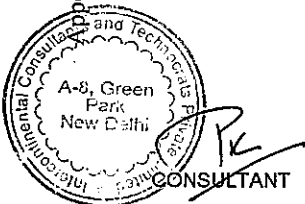
Key Personnel	Estimated Inputs* (person-months)
Road Agency Management (Institutional Development) Specialist -cum- Team Leader	25
Organizational Development Specialist-cum-Deputy Team Leader	18
Financial Analyst & Business Planning Specialist	6
Transport Planning (Roads) Specialist	6
Transport Economics Specialist	6
Senior Highways Engineer (Pavements Management & Planning)	6
GIS Applications (Master Planning) Specialist	3
Road Safety (Infrastructure Design & Management) Specialist	6
PWD Sector Domain Specialist	6
Procurement Specialist	6
Training & Human Resources Development (HRD) Specialist	9
Human Resources Management (HRM) Specialist	9
Legal Specialist	6
<b>Estimated Inputs For Key Personnel</b>	<b>112</b>
Other Ad Hoc Technical Specialists (to be confirmed progressively)	10
<b>Overall Estimated Inputs For Technical Personnel</b>	<b>122</b>

The Task Assignment of these Key Personnel are placed at **Appendix 1**. The expected qualifications for the "key personnel" positions are summarized at **Appendix 2**.



TASK ASSIGNMENT

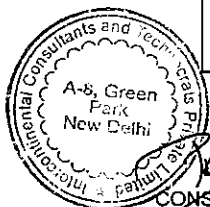
Name of Staff	Firm	Area of Expertise	Position Assigned	Task Assigned
T.Chelliah	ICT	Team leadership, Institutional Strengthening and Capacity Building	Road Agency Management (Institutional Development) Specialist-cum-Team Leader	<ul style="list-style-type: none"> <li>• Mobilize and organize office and site establishments with key professionals, support and administrative staff.</li> <li>• Collect and study existing OWD codes and manuals.</li> <li>• Study and assess Institutional frame work by Interacting with officials of GOO and OWD to discuss present organizational structure, policies, powers, regulatory frame work, procurement procedures and role / responsibilities at various levels of staff and field establishments.</li> <li>• Visit select OWD Nodal centres of Orissa Road and Infrastructure sector, to study / assess existing Road Safety, Traffic, Pavement conditions, Axle Load &amp; Toll management for recommendations of review and reforms.</li> <li>• Regulatory frame work and legal controls.</li> <li>• Study social and demographic panorama of Orissa State.</li> <li>• Study ISAP 2008 – 2018 and existing OWD work Plans, Funding arrangement / process, GOO policy frame work for Road and other Infrastructure sectors.</li> <li>• Interact with GOO &amp; OWD managerial and field technical staff to assess present professional competence levels to assess training needs.</li> <li>• Study organisational development and HRM operational and functional restructuring needs.</li> </ul>





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	<ul style="list-style-type: none"><li>• Assessment of existing business and financial structure, resources, capacities of OWD for execution of works, PPP management and recommend reforms to meet targets of ISAP 2008 – 18 for OWD &amp; GOO.</li><li>• Study and review existing Dispute Review Mechanism &amp; RTI act working to recommend reformed processes.</li><li>• Study, review existing environment &amp; Rehabilitation / Resettlement policy frame work of GOO for its Reforms.</li><li>• Ensure HRD and HRM policies are framed in consultation with OWD / GOO by organising workshops and identifying limitations and gaps.</li><li>• Preparation of vision statement for Road Sector on Five, Ten years &amp; long term basis.</li><li>• Preparation of Road Network and pavement management based on HDM Tools.</li><li>• Organise Skill Transfer structure and management with the help of HRD / Training Specialist for OWD / GOO officials.</li><li>• Assist OWD / GOO in evaluation of Performance Monitoring mechanism at various levels of staff at head quarter and field levels.</li><li>• Assist OWD / GOO by preparing drafts / documents for government legal endorsements for restructured institutional strengthening, capacity building, and its regulatory frame work.</li><li>• Regular inter action with OWD &amp; GOO &amp; Review Committee by organizing presentations, consultations, field visits demonstrations &amp; visit to various Technical Institutes to arrive at final and acceptable documents related with each task of consultancy assignment.</li><li>• Organise and ensure timely submission of deliverables based on inputs from each key professional in accordance with milestones / schedule</li></ul>
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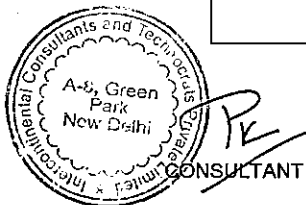
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<p>Dr. Chandra Prakash Bohra</p>	<p>GTA</p>	<p>Organizational Development</p>	<p>Organizational Development Specialist-cum- Deputy Team Leader</p>	<p>given vide para 18-V of section-5 of TOR.</p> <ul style="list-style-type: none"> <li>• Study existing organisational structure, its operational, managerial functional features covering establishments including head quarter / field offices.</li> <li>• Review the scope and distribution of administrative financial, technical powers, roles / responsibilities / accountabilities at each level of organizational structure.</li> <li>• Study existing HRD &amp; HRM policies with focus on Recruitment / Retention / Promotions / Training, grievances redressal system, performance appraisal system for their limitation / gaps for Restructuring / Reforms.</li> <li>• Induction policies related with futuristic road sector needs.</li> <li>• Study linkages between organizational structure of road / infrastructure sector with social fabric of state i.e. General / OBC / SC / Tribal etc.</li> <li>• Review professional competency levels, training needs for Capacity Building of road / infrastructure sector.</li> <li>• Study existing department professional / technical staffing structure for its reforms in relation with ISAP 2008 – 18.</li> <li>• Assist Team Leader and other key professional in administrative executive and technical functions in performance of consultancy assignment.</li> <li>• Suggest innovative and effective organizational structure for OWD based on study of parallel Road / Infrastructure organization of other state (domestically) and of Abroad and to development.</li> <li>• Suggest methods / programmes for organizational development to focus on</li> </ul>
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<ul style="list-style-type: none"> <li>a) Easter decision making</li> <li>b) Decentralization of powers</li> <li>c) Structural job design ad job assignment process</li> <li>d) Cross and horizontal deputation policies</li> <li>e) Record keeping methodology</li> <li>f) Inter departmental coordination</li> <li>g) Writing of Performance Appraisal and Evaluation Reports.</li> <li>h) Progressive use of IT in all phases of project is Planning, Design, Procurement of services, implementation, monitoring, operation and maintenance.</li> </ul>				
<ul style="list-style-type: none"> <li>• Progressive and healthy participating atmosphere for working of contracting consulting industry</li> <li>• Advise OWD / GOO on integration of two important functions of organization design i.e. HRM &amp; HRD covering             <ul style="list-style-type: none"> <li>- Operating core of employers for delivery of projects and services.</li> <li>- Strategic Apex. High level techno managers having organizational responsibility</li> <li>- Middle level executives, link between apex operating core.</li> <li>- Field techno structure</li> <li>-- Administrative and support staff.</li> </ul> </li> </ul>				
<ul style="list-style-type: none"> <li>• Study existing financial state / scenario of OWD w.r.to :-             <ul style="list-style-type: none"> <li>- Last five and ten year spending on new roads, Strengthening / Widening of roads and maintenance.</li> <li>- For to Authority, Delegation, Financial Powers and procurements.</li> <li>- Financial resources to meet present and futuristic targets.</li> </ul> </li> </ul>	Financial Analyst & Business Planning Specialist	Financial Management	ICT	Amitava Basu





	<ul style="list-style-type: none"> <li>- Financial mechanisms, accountability system and regulatory controls.</li> <li>• Assessment of professional experience and skill of concerned staff in financial aspects of Road sector of OWD.</li> <li>• Study budgeting allocation of previous years for its financial analysis linked with business planning.</li> <li>• Study ISAP 2008 – 2018 for its Financial Analysis.</li> <li>• Strengthening, Restructuring and Capacity building of OWD, for its assessment and integration with present and proposed financial outlook of state.</li> <li>• Review existing road funding, investments, and dedicated financing / revenues available for development plans of OWD.</li> <li>• Examine financial issues affecting the development and efficiency of contractors / construction industry and consultants vis-a-vis. inflation rates, its effects, credit facilities, foreign exchange, insurance, BGS for Bids and Performance Securities.</li> <li>• Assess existing state PPP methodology and mechanism for its reforms in accordance with MORT&amp;H / Planning Commission rules and regulations.</li> <li>• Study OWD, Road Development programmes for the last 5 years</li> <li>• Review of existing funding sources and road user charges, mechanism available with GOO to meet financial needs of Road Sector</li> <li>• Assess adequacy of funds for objectively determined Road Asset Management</li> <li>• Match the available funds with Needs and Priorities</li> <li>• Identification of new measures and option to improve Funds Resource Mobilization for Roads Financing in State</li> </ul>
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<ul style="list-style-type: none"> <li>• Projection of Funds mobilized with new options, their Cash Flow status and its availability to State on Rolling Plan Basis</li> <li>• SWOT analysis of each option and its effectiveness from GOO point of view.</li> <li>• Based on analytical view, viable option to channel and generate dedicated Road Fund and road user changes for Road Infrastructure Development</li> <li>• Identify structure, powers and resources needed to create sustainable and effective Road Fund.</li> <li>• Conduct of workshops to develop mechanism, methodologies, for viable economically and socially acceptable option to create / generate additional dedicated road funds</li> <li>• Work out the methodology with legal teeth to facilitate and implement GOO preferred mechanism for Road Fund and its utilization</li> <li>• Preparation of preliminary and Final Report related with Road Fund and its final implementation</li> <li>• Assist TL &amp; prepare documents for GOO / Legal endorsement.</li> </ul>				<ul style="list-style-type: none"> <li>• Study existing road network system of OWD / Orissa state.</li> <li>• Review of existing report, and documents of OWD</li> <li>• Collect information on             <ul style="list-style-type: none"> <li>a) Socio-Economic data and demographic profile of state</li> <li>b) Existing modes of transport system related with sector / area wise and socio-economic profile of society</li> <li>c) Traffic study on likely traffic demand pattern of state</li> <li>d) Field survey of approximately 3000 km of existing road network of state covering:</li> </ul> </li> </ul>	Transport Planning (Roads) Specialist	Transport Planning	ICT	Chandi Ganguly
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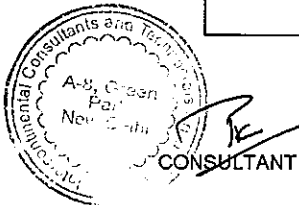


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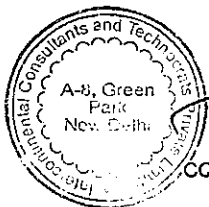
	<ul style="list-style-type: none"> <li>i. Road Inventory</li> <li>ii. Pavement condition</li> <li>iii. Sub-grade investigations</li> <li>iv. Traffic volume</li> <li>v. Axle load survey</li> <li>vi. Bus and Truck operators survey</li> <li>vii. Social and environmental linkages with Road Network</li> </ul> <ul style="list-style-type: none"> <li>• For authentication of data and likely emerging trends interact with:             <ul style="list-style-type: none"> <li>a) Public sector and Government agencies covering social and environmental details.</li> <li>b) Carry out public and village level meetings.</li> <li>c) Chamber of Commerce and Industries.</li> <li>d) NGOs.</li> <li>e) Transport agencies and operators.</li> <li>f) Forest department.</li> </ul> </li> <li>• Develop Data on Socio-Economic Profile of Region</li> <li>• Review, critically and analytically for diagnosing the existing Road Network in light of socio-economic profile and capacity constraint of road network.</li> <li>• Establish economic evaluation procedures</li> <li>• Prepare Travel demand analysis &amp; forecast, linking it Orissa Tourism and Commercial Developments</li> <li>• Land use Transport Model Development in Transport Planning and Modeling</li> <li>• Based on all above, develop –             <ul style="list-style-type: none"> <li>a) Preliminary draft Road Master Plan in accordance with new Road</li> </ul> </li> </ul>
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				<p><b>Sector Policy.</b></p> <ul style="list-style-type: none"> <li>b) Review Road Investment and fund outlook of GOO</li> <li>c) Match the Draft Plan with Social Economic Development Policy of GOO</li> <li>d) Work out reviewed Road Classification System</li> <li>e) Work out matching Capacity Building of OWD</li> <li>f) Develop 'Responsibility Framework' for GOO &amp; OWD for implementation of Road Network annually as well as multiyear wise on 5 to 10 years basis frame work.</li> </ul> <ul style="list-style-type: none"> <li>• Prioritize, investment projects &amp; formulate investment programme linking it with ISAP 2008 – 2010 and its review.</li> <li>• Develop strategies options using parameters e.g., volume / capacity ratio, Road-Route serving inter-state traffic</li> <li>• Strategic options to have linkages with Backward, Tribal areas, high commercial traffic, present industrial panorama and futuristic road connectivity and traffic growth pattern.</li> <li>• Evaluation of alternative transport strategies w.r.to commercially developed sector of state and cities.</li> <li>• Conduct of workshops / consultations / discussion with OWD / GOO on Traffic, Transport Planning and Management.</li> <li>• Prepare Draft Transport Strategy Document.</li> <li>• Assist TL and organize approval and endorsement of Road Network Master Plan for OWD / GOO.</li> </ul> <ul style="list-style-type: none"> <li>• Carryout socio-economic survey and prepare socio economic profile of state based on:             <ul style="list-style-type: none"> <li>a) Socio-Economic data and demographic profile of state</li> <li>b) Existing modes of transport system related with sector / area wise</li> </ul> </li> </ul>
Boominathan Muthuvar	ICT	Transport Economics	Transport Economics Specialist	

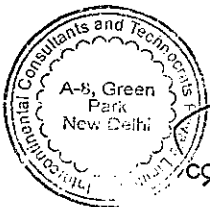


	<p>and socio-economic profile of society</p> <p>c) Traffic study on likely traffic demand pattern of state</p> <ul style="list-style-type: none"> <li>• Analyse demand, choice of Transport and existing performance of Transport sector</li> <li>• Analyse cost-benefit and investment return aspects of present Transport-economic scenario</li> <li>• Study existing Transport Management System of GOO w.r.to Road network of state and its spending in this sector.</li> <li>• Review current Toll-Collection system, revenues received and its review for reforms.</li> <li>• Study present Traffic volumes, revenue generation likely forecast of Traffic volumes based on Traffic surveys of approximately 3000 km of Road to cover traffic volumes linked with OD survey, speed &amp; delays</li> <li>• Carryout Axle Load survey of preselected 50 locations to assess commercial angle of loading pattern of heavy-commercial transport for its fund generation</li> <li>• With the help of HDM-IV tools, assess Traffic volume and investment pattern for PPP scenario / lender's conditions for Debt realizations / recovery models and their linkages with Concession Agreements.</li> <li>• Assess and Link ISAP 2008-2018 with Traffic forecasts / transport demand &amp; fund requirement to meet the targets.</li> <li>• Carry out economic evaluation of the select sample roads with HDM-4 models and the sensitivity analysis for ranking of roads for the recommended alternatives i.e. PPP or State funding.</li> <li>• Have close coordination with Transport Planner and Financial Specialist to arrive at acceptable Road Development Plans.</li> <li>• Assist TL on preparation of documents for legal / GOO endorsements.</li> </ul>
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Dr. P. K. Nanda	ICT	Pavement Management	Senior Highways Engineer (Pavement Management & Planning)	<ul style="list-style-type: none"> <li>• Study works code and Manuel:</li> <li>• Carryout select Recce of Road network covering minimum of 3000 km approximately for               <ul style="list-style-type: none"> <li>a) Axle Load survey</li> <li>b) Pavement conditions</li> <li>c) Road Condition</li> <li>d) Maintenance Management by OWD</li> <li>e) Capacity of Roads vs. Traffic Demand</li> <li>f) For its Road Furniture and Safety measures</li> </ul> </li> <li>• Study assesses road planning design and construction-supervision management for its reforms.</li> <li>• Study existing planning and engineering design factors for road and traffic safety strategies for its improvements and control regulations.</li> <li>• Carryout safety Audit of roads in coordination with Road Safety Expert</li> <li>• Suggest contemporary and prevalent better Road Safety Engineering Practices</li> <li>• Suggest innovative and contemporary methods for institutional strengthening / capacity building of Highway sector</li> <li>• Review existing Quality Control measures in Road Construction Engineering and suggest improvements.</li> <li>• Assist OWD for sustainable Axle Load control Policies and strategy.</li> <li>• Review standard drawings / designs on Pavement in different scenario i.e.               <ul style="list-style-type: none"> <li>- Village Roads</li> <li>- District Roads</li> </ul> </li> </ul>
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				<p>- State Roads for their improvements</p> <ul style="list-style-type: none"> <li>• Study relevant specification for various type of roads for their review, if any?</li> <li>• Study ISAP 2008-18 to assess available road sector construction resources to meet the targets and their review</li> <li>• Carryout assessment of road network planning and pavement management based on HDM and other software tools to suggest improvement.</li> <li>• Visit various roads i.e. minimum of 50 preselected nodal centres of road network to study pavement impacts, suggest controls and management.</li> <li>• Based on collected data on road sector i.e. related with its Designs, ROW Management, Alignments, Medians / Dividers, Junctions and Road Furniture, Surface evenness parameters and compare these road design features with internationally accepted models for reforms.</li> <li>• Assist GIS Expert in collection of Data for Road Network level survey with GPS, GIS &amp; ROMDAS.</li> <li>• Carryout assessment of Pavement with FWD and BBMD test methods for improvement of existing roads.</li> <li>• Assist TL in preparation of documents for GOO endorsement on pavement state and Road Safety Management.</li> </ul>
D. Vasudevan	ICT	GIS Applications	GIS Applications (Master Planning) Specialist	<ul style="list-style-type: none"> <li>• Study existing Data Base management and Road Network Information system of OWD.</li> <li>• Study and assess available resources to collect information and to execute tasks, related with Survey, Road Assets evaluation / management for their upgradation, Procurement and Training to include:</li> </ul>

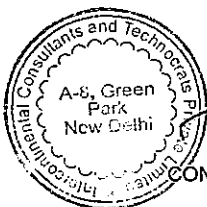


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				<ul style="list-style-type: none"> <li>- Physical, social and economic information</li> <li>- Field surveys, TBM &amp; BM etc.</li> <li>- Subgrade investigation</li> <li>- Soil characteristics</li> <li>- Volume / Capacity Returns of road network</li> <li>- Sub soil / surface / hydrological data for structures.</li> <li>• Develop &amp; prepare comprehensive and efficient IT &amp; ICT support system for OWD road sector planning &amp; management</li> <li>• Identification of appropriate Band Combinations Enhancement, Mosaicking, Rectifications for Geometric &amp; Radiometric corrections with image processing software i.e. Geometrica and Erdas Imagine.</li> <li>• Interpretation of available satellite imagery for road sector use and establish coordination with Satellite and Imagery Department of DRDO / Private sector to get imageries on specific demands for fresh studies</li> <li>• Sample ground surveys to authenticate data on Imagery</li> <li>• Develop IT based mapping of Road Network and associated Data Base of state</li> <li>• Introduce methodologies and advise training of staff on technology and use of GPS, GIS, their applications i.e. Arc view, Arc info &amp; Map 3D etc.</li> <li>• Assist GOO / OWD with GIS technology to identify and work out effective land use of state</li> <li>• Study codes and Manuel on road safety</li> <li>• Carryout existing Road Safety Audit of state</li> <li>• Organize collection of data on at least 2000 km of Roads in various</li> </ul>

  
 Chief Engineer,  
 World Bank Projects, Odisha





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		<p>Management) Specialist</p>	<p>terrains i.e. rolling, plain and mountainous, as below:</p> <ul style="list-style-type: none"> <li>- Road accidents, injuries and fatalities</li> <li>- Police response on various crashes / accidents</li> <li>- Hospital data on admissions</li> <li>- Response on insurance claims on accidents related with vehicles and men</li> </ul> <ul style="list-style-type: none"> <li>• Compiled data to cover urban and village road scenarios</li> <li>• Organize field / institutional visit of a Group of minimum of 10 GOO officials to various organizations, e.g.             <ul style="list-style-type: none"> <li>- CRRRI Delhi</li> <li>- Central Institute of Road Transport, Pune</li> <li>- Automation Research Association of India (ARAI), Pune</li> <li>- Vehicle Research and Development Establishment, Ahmed Nagar</li> <li>- National Institute of Mental Health and Neuro Sciences, Delhi</li> <li>- Institute of Road Traffic Education</li> <li>- NITHE, NOIDA</li> </ul> </li> <li>• To study road engineering features on road safety related aspects.</li> <li>• Based on above data and visits, assess existing Road Safety management practices, being observed by OWD and GOO</li> <li>• Study and assess Legal and Institutional framework of GOO on Road Safety Management.</li> <li>• Assess existing safety provisions being observed by carrying out select sample survey of road network in rural and urban environment.</li> <li>• Review, work out, devise and design, new Road infrastructure Safety Management, its engineering functions for pre-selected corridors as sample and pilot projects being observed by OWD i.e., for VRs, DRs</li> </ul>
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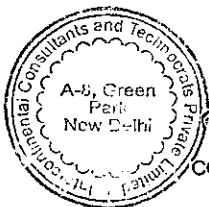


	ICT	PWD Restructuring and Regulatory Framework	PWD Sector Domain Specialist	<p>and State Roads in accordance with National and Codal provisions.</p> <ul style="list-style-type: none"> <li>• Based on pilot project on select corridors, work out existing available resources for technical capacity building onroad safety for various establishments of OWD</li> <li>• Assess existing regulatory framework on road safety being in vogue with GOO</li> <li>• Conduct of workshops inclusive of OWD, GOO, ADB &amp; World Bank officials to explore concerns, aim, priorities on Road Safety Management for its implementation on ground</li> <li>• Develop Institutional framework for technical capacity building on road safety norms, designs, training of staff and various sections of road users.</li> <li>• Prepare comprehensive document on 'Orissa Road Safety Action Plan' through evolved process of related workshops on Road Safety Capacity Building Measures.</li> <li>• Assist and facilitate GOO on overall Road Safety Management Strategy, externally-assisted multi sectoral measures to improve the Capacity and Measures for its key Result outcomes for the State of Orissa</li> <li>• Assist GOO to legally endorse the Regulatory Framework for its implementation by OWD and other institutions</li> <li>• Develop regulatory Road Safety Responsibility Framework documents for OWD and GOO for its observance and ground implementation</li> </ul>
Deepak Narayan				<ul style="list-style-type: none"> <li>• Study OWD works manual for its:-               <ul style="list-style-type: none"> <li>- Organizational structure</li> <li>- Policy and procedures on procurement and execution of works</li> <li>- Construction Supervision methodologies</li> </ul> </li> </ul>



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				<ul style="list-style-type: none"> <li>- Quality control procedures</li> <li>- Roles, responsibilities and accountability procedures</li> <li>- Planning design and sanctioning procedures.</li> <li>• Assessment of existing PWD resources for existing Asset Management, execution of new works and futuristic needs.</li> <li>• Analysis of current and projected road sector demands.</li> <li>• Identification of Weaknesses, Limitations, gaps in Authority, Delegation, Powers inclusive of Financial Contractual and executive with regard to current policies of GOO &amp; suggest reforms.</li> <li>• Review ISAP 2008-2018 with regard to Resource Management Plans.</li> <li>• Review existing documentary procedures of OWD</li> <li>• Present &amp; future Training Need Assessment at various levels of OWD structure.</li> <li>• Study current departmental plans for restructuring of OWD establishments at various levels and suggest modifications.</li> <li>• Assess existing capacities at various field level offices and head quarter establishment for execution of present and forecasted needs of capacity building of road sector.</li> <li>• Compare existing administrative, technical information and Governance system of OWD with other Works Organizations of States / Centre for its reforms.</li> <li>• Suggest restructuring and strengthening options for OWD</li> <li>• Review of Road Safety Engineering for review of Codes and Manuel, their execution and implementation on ground</li> <li>• Review existing construction supervision, quality control and operation / maintenance methodologies for revision of works manual.</li> </ul>
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Baldev Raj Suri	ICT	Procurement and Contracts	Procurement Specialist	<ul style="list-style-type: none"> <li>• Based on World Bank / GOI procedures on Procurement of Goods, Works, and Services, Develop procedures for OWD / GOO</li> <li>• Prepare draft recommendations based on discussions / consultations / workshops in coordination with TL for review of codes &amp; manuals for GOO endorsements.</li> <li>• To study existing methods and procedures on procurement for works, good and services being practiced by OWD &amp; GOO.</li> <li>• Study the contract management and administration including documents being used by OWD / GOO</li> <li>• Carryout their comparative assessment with other States, CPWD, MORT&amp;H, ADB, World Bank and other International Funding Agencies for its upgradation / reforms.</li> <li>• Compare OWD / GOO contractual procedures with FIDIC / GOI conditions of contract.</li> <li>• Study existing capacity of local contractors for renewed regulations and procedures.</li> <li>• Work out methodologies and procedures for cross referencing and integration of Procurement Procedures with revised codes and manuals, where feasible.</li> <li>• Devise E procurement methods on procurement on construction zone safety and Road Safety Engineering and MCA</li> <li>• Study existing PPP &amp; BOT models on development of infrastructure / road sector for procurement and its reforms.</li> <li>• Study existing Dispute Review Mechanism for its reforms and legislative controls.</li> <li>• Review existing toll collection structure and axle road regulations for</li> </ul>
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Sandeep Jagota	GTA	Training and Human Resource Development	<p>their review and integration with procurement procedures, contract management and legal frame works.</p> <ul style="list-style-type: none"> <li>Organize consultations &amp; discussion through workshops and presentations with concerned stakeholders to prepare Standard Procurement Documents for its approval by Review committee and GOO endorsement.</li> </ul>
	Training and Human Resources Development (HRD) Specialist		<ul style="list-style-type: none"> <li>Study existing OWD structure and its design for specifically defined various staff responsibilities with respect to :             <ul style="list-style-type: none"> <li>Job analysis</li> <li>Job description</li> <li>Job specifications</li> <li>Job design</li> </ul> </li> <li>Job redesign for midcourse corrections and application</li> <li>Study existing HR Planning to achieve optimum staff levels for road sector</li> <li>Assessment of current professional competence of staff of OWD at various levels</li> <li>Carry out Training Needs Assessment (TNA) covering             <ul style="list-style-type: none"> <li>Overview of systems / process as prevalent in department</li> <li>Analyzing in system</li> <li>Complaining task inventory job descriptions</li> <li>Analysis of tasks</li> <li>Needs analyses</li> <li>Existing "on the job training" programmes.</li> </ul> </li> <li>Prepare course / training curriculum and syllabus for approval by</li> </ul>



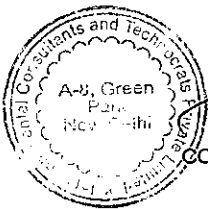
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<p>OWD / GOO</p> <ul style="list-style-type: none"> <li>• Prepare phased TNA based Multiyear Rolling Staff Training Programme covering each segment of organizational structure</li> <li>• Develop HRD Policy statement and its linkages with Training Needs</li> <li>• Prepare policy statement, covering planning, execution of TNA taking into account foreseeable OWD functional requirement and established objectives for the OWD staff at Head quarter &amp; Field Level</li> <li>• Identification of Skill and operational requirement of Field Staff with priorities for phased Training Programmes and Challenges linked, if any?</li> <li>• Identification of an integrated core techno-management skills and required knowledge spectrum at various structural layers of organization</li> <li>• Develop, facilitate, execute and implementation of Rolling Staff Training Programme covering all categories of staff of OWD</li> <li>• Prepare Capacity Needs of organization, priorities required and matching Individual and Departmental skills to meet the futuristic needs of department</li> <li>• Evaluation and mid-course assessment of imparted training to apply corrections. For evaluation, work out departmental yardsticks and parameters based on Field as well as Staff requirement</li> <li>• Identify required changes in training Programme</li> <li>• Identify weaknesses in official documentation, procedures and ways to modernize, upgrade and improve it</li> <li>• Focus on departmental competency and communication skills</li> <li>• Review and prepare official procedures with emphasis on essential and critical documentation work of department at various levels</li> <li>• Documentary Procedures to relate with various Departmental Positions</li> </ul>			
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				<p>and Establishment requirement</p> <ul style="list-style-type: none"> <li>• Prepare HRD strategy and Action Plan for OWD taking into account futuristic trends and likely technological developments in OWD</li> <li>• Prepare HRD Policies, activities for its sustenance, movement / promotions, retention, output / delivery linked performance management of Newly inducted Staff, internal HR Roles, i.e. Grievance, Appraisals, supported with Internal / external training programmes</li> <li>• Prepare ISO certification processes and procedures to enable OWD to get ISO certified status &amp; its upgradations</li> <li>• ISO Certification to relate with established procedures on Quality Management, Contracts / Procurement, Planning, Design, Environment and Social Management</li> <li>• Develop monitoring and evaluation techniques to assess performance at various levels</li> <li>• Prepare HRD policy statement documents / vision and Action Plan of core functionaries of OWD at Head Quarter and field level.</li> <li>• Performance Management / measures to assess performance feeds into career development.</li> </ul>
Sachchida Nand Swaroop	ICT	Human Resource Management	Human Resources Management (HRM) Specialist	<ul style="list-style-type: none"> <li>• Study existing Human Resource Plans of Road sector i.e. Policies on Induction, Retention, Promotion &amp; postings / transfer etc.</li> <li>• Study ISAP 2008 – 2018 and other Development Plans for Road sector</li> <li>• Compare OWD HR policies &amp; management structure with other PSUs, state and CPWDs</li> <li>• Assess and study             <ul style="list-style-type: none"> <li>– Technological changes</li> <li>– Organization changes</li> </ul> </li> </ul>



<ul style="list-style-type: none"> <li>- Demographic panorama of state</li> <li>- Skill strategies</li> <li>- Systems concept</li> <li>- Lead time required to develop skills.</li> <li>- Legislative controls on HR policies</li> </ul>	<ul style="list-style-type: none"> <li>• for proposed HRM spectrum of department.</li> <li>• To work out Human Resource Planning (HRP), work out details with OWD on             <ul style="list-style-type: none"> <li>- Demand forecasting</li> <li>- Supply forecasting</li> <li>- Determining Human Resource Requirement</li> <li>- Action Planning</li> <li>- Monitoring and control</li> </ul> </li> <li>• Link HRP with capital / financial plans / outlay of State.</li> <li>• Ensure staff structure of OWD specifically defined with job analysis, description, specification, analyses, design and redesign applied during mid course if any.</li> <li>• Link HRP action plans with             <ul style="list-style-type: none"> <li>- Recruitment</li> <li>- Retention</li> <li>- Redundancy</li> <li>- Productivity &amp; Performance</li> <li>- Man-power flows in &amp; out</li> <li>- Transfer</li> <li>- Terminations</li> </ul> </li> </ul>

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World Bank Projects, Odisha





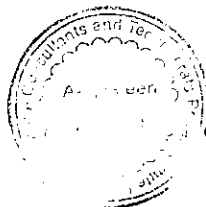
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				<ul style="list-style-type: none"> <li>- Resignations</li> <li>- Retrenchment</li> <li>- Promotion Graphs</li> <li>• Introduce a system of measurement and monitoring of man-power of road and infrastructure sector linking it with:-             <ul style="list-style-type: none"> <li>- Development activity</li> <li>- Capital expenditure</li> <li>- Cost on induction / recruitment / training and replacement if any</li> <li>- Development and promotional prospects</li> <li>- Compensations</li> <li>- Integration and maintenance of staff</li> <li>- Separations i.e. postings / transfers and cross movements i.e. deputations</li> </ul> </li> <li>• Set up HRIS i.e. Human Resource Inventory Systems / Data Base Management / MIS like Defence Organisations &amp; other PSUs.</li> <li>• Introduce systems on Human Resource accounting / auditing i.e. (functional &amp; work analysis and job documentations)</li> <li>• HRM &amp; HRD to be linked with Short, Medium to Long Term Planned Development of OWD for staffing purpose</li> <li>• Develop compatibility between HRP, HRM, HRD, strategies and training development plans for road and infrastructure sector of state along with financial outlays / implications for state.</li> </ul>
Dipak Rao	ICT	Legal	Legal Specialist	<ul style="list-style-type: none"> <li>• Study existing legal frame work for OWD w.r.to             <ol style="list-style-type: none"> <li>a) Organizational structures and its Gazette notification etc.</li> <li>b) HRM &amp; HRD policies</li> <li>c) Contractual / Procurement Management</li> <li>d) Dispute Resolving Mechanisms</li> </ol> </li> </ul>



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	<ul style="list-style-type: none"> <li>e) Authorities, powers &amp; delegations</li> <li>f) RTI facilities.</li> <li>• OWD and GOO legislative policies on Ro.</li> <li>• Legislative Policies w.r.to Govt. Road funding and Private Investments (PPP)</li> <li>• Legislative and regulatory controls frame work for road sector.</li> <li>• Study, asses Statuary Mechanism for Road Policies and strategies for its reforms.</li> <li>• Study, assess and suggest legal reforms w.r.to             <ul style="list-style-type: none"> <li>- Road safety</li> <li>- Toll collection management</li> <li>- Vehicle axle load regulations.</li> </ul> </li> <li>• Study and assess previous concluded MACT cases for the review and reforms</li> <li>• Organize joint discussion with OWD and GOO officials alongwith concerned key professional to suggest Review / Reforms on Legal frame work on all issues related to Road sector listed above.</li> <li>• Carryout comparative study of our legal frame works with other state PWDs / MORTH / Commercial / Corporate laws and foreign prevalent practices on issues such as land acquisition and related Road work / organizational strengthening issues.</li> <li>• Prepare drafts based on consultations with OWD / GOO / Review committee for Government Legal endorsements.</li> <li>• Link road safety action plan with legislative approvals of GOO after carrying out due consultations through discussions / workshops.</li> <li>• Assist TL and other key professional for assessment, evaluation and finalization of drafts linked with their assignments for legal endorsement.</li> </ul>
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To be named	--	--	Other Adhoc Technical Specialist	<ul style="list-style-type: none"><li>• These man-months shall be adjusted during the course of execution of consultancy assignment based on requirement of additional key experts to advise on certain issues related with institutional strengthening and capacity building coming up during the course of discussion with OWD and Review Committee.</li></ul>
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**Appendix 2 to Appendix C**

**Qualification and Experience Requirements for Key Personnel**

**1. Road Agency Management (Institutional Development) Specialist –cum-  
Team Leader**

**Educational Qualification**

- a) Minimum : Graduate in Civil Engineering with Post- graduate qualifications in Management or Business Administration
- b) Desirable : Post Graduation in any field of Civil Engineering

**General Experience**

- a) Total Experience : Total Professional Experience :  
Minimum Experience : 20 Years  
Desirable Experience : 25 Years
- b) Relevant Experience : (a) Experience in Projects relating to Institutional Development in any position - 5 Projects
- (b) Experience in a senior managerial and technical roles in a Developed Country Road Agency : 5 Years
- (c) Experience of comparable assignments as Team Leader : 3 Projects

**Knowledge/Expertise in the following fields:**

- (i) Design / Development / Implementation of modernized Road Transport Infrastructure Policy
- (ii) Road Agency Technical and Management Reforms
- (iii) Associated agency Capacity Building
- (iv) Road network planning and pavements management based on HDM or similar tool.
- (v) Pavement impacts (vehicle axle loading) control / management.

- c) Language : Communication fluently in English is minimum



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## 2. Organizational Development Specialist -cum- Deputy Team Leader

### I Educational Qualification

- a) Minimum : Graduate in Management, Business Administration and/or Engineering with specialization in Organizational Development, (or equivalent)
- b) Desirable : Doctoral (Ph.d) / Fellow in any relevant subject of Management

### II General Experience

- a) Total Experience : Total Professional Experience :  
Minimum 15 Years  
Desirable 20 Years
- b) Relevant Experience : (a) Experience in Projects relating to Institutional Development in any position - 3 Projects  
(b) Organisational Development Specialist – 5 year  
(c) Experience of comparable assignments  
(i) in a similar position : 2 Projects

#### Knowledge/Expertise in the following fields:

- (i) Extensive high-level advisory / consulting experience and skills in Management, Human Resources and Organizational Development functions.
- (ii) Extensive experience in the development and facilitation of capacity-development strategies and reorganization plans in the public sector context in India.
- (iii) Proven capacity for innovation in 'organizational development' assignments.

- c) Language : Communication fluently in English is minimum

## 3. Finance Analyst & Business Planning Specialist

### I Educational Qualification

- a) Minimum : Graduate qualifications in Accounting, Finance, Business Management / Administration (or equivalent)
- b) Desirable : Post Graduate / higher specialisation course in any relevant subject

### II General Experience

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- a) Total Experience : Total Professional Experience :  
Minimum 12 Years  
Desirable 15 Years
- b) Relevant Experience : (a) Experience in Projects relating to Institutional Development in any position - 3 Projects
- (b) in Transport sector - 5 year
- (c) Comparable assignments in transport sector
- (i) in a similar position : 2 Projects

**Knowledge/Expertise in the following fields:**

- (i) Extensive professional experience and skills in the Finance aspects of road infrastructure maintenance planning and management, particularly in public sector contexts.
- (ii) Experience in financial analysis, modeling, budget development and business planning.
- (iii) Sound knowledge of typical road maintenance funding in India and revenue-raising via road user charges.
- (iv) Experience in advising on and preparation of business plans and frameworks for corporate entities in India.

- c) Language : Communication fluently in English is minimum

**4. Transport Planning (Roads) Specialist**

**I Educational Qualification**

- a) Minimum : Graduate qualifications in Civil Engineering
- b) Desirable : Post Graduate specialization in Planning and/or Transportation

**II General Experience**

- a) Total Experience : Total Professional Experience :  
Minimum 15 Years  
Desirable 20 Years
- b) Relevant Experience : (a) Experience in Projects relating to Institutional Development in any position - 3 Projects
- (b) in Transport sector - 8 year



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(c) Comparable assignments in transport sector

(i) in a similar position : 2 Projects

**Knowledge/Expertise in the following fields:**

- (i) Extensive professional skills and experience in road transport analysis, modeling and planning,
- (ii) Inter-modal optimization, corridor /network development
- (iii) Road master planning.

c) Language : Communication fluently in English is minimum

**5. Transport Economist**

**I Educational Qualification**

- a) Minimum : Post Graduate qualifications in Economics
- b) Desirable : Specialization in Transportation and /or Econometrics

**II General Experience**

- a) Total Experience : Total Professional Experience :
  - Minimum 15 Years
  - Desirable 20 Years
- b) Relevant Experience : (a) Experience in Projects relating to Institutional Development in any position - 3 Projects
  - (b) in Transport sector – 8 year
  - (c) Comparable assignments in transport sector
    - (i) in road sector : 2 Projects

**Knowledge/Expertise in the following fields:**

- (i) Extensive professional skills and international-level experience in undertaking economic studies for road transport infrastructure assessment & planning
- (ii) Analyses of demand, choice, performance
- (ii) cost-benefit and investment-return aspects / sound knowledge in HDM-IV or similar tool for road sector economic analysis

c) Language : Communication fluently in English is minimum



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**6. Senior Highway Engineer-cum- Pavement Management & Planning Specialist:**

**I Educational Qualification**

- a) Minimum : Graduate in Civil Engineering  
b) Desirable : Post Graduation is desirable either in Highway / Pavement Engineering; or Transportation Planning / Engineering

**II General Experience**

- a) Total Experience : Total Professional Experience :  
Minimum 15 Years  
Desirable 20 Years
- b) Relevant Experience : a) Experience in Projects relating to Institutional Development in any position - 3 Projects  
b) Experience as Sr. Highway Engineer/ Pavement Management &or Planning Specialist \_ : 7 Years  
c) Experience of comparable assignments  
(i) in a similar position : 2 Projects

**Knowledge in following fields are essential:**

- (i) Road network planning and pavements management based on HDM or similar tool.  
(ii) Pavement impacts (vehicle axle loading) control / management.  
(iii) Road sector related data management and data acquisition, design and specifications as per IRC/AASHTO /TRL  
(iv) International accepted economic models such as HDM-4/ dTims etc with knowledge on region based calibration of the model.  
(v) Network level survey with GPS and GIS, ROMDAS, Axle Load Pad, FWD

- c) Language : Communication fluently in English is minimum





## 7. GIS Applications (Master Planning) Specialist

### I Educational Qualification

- a) Minimum : Masters Degree in Science / Graduate in Civil Engineering
- b) Desirable : Specialisation in any relevant field relating to GIS

### II General Experience

- a) Total Experience : Total Professional Experience :  
Minimum 10 Years  
Desirable 15 Years
- b) Relevant Experience : (a) Experience in Projects relating to Institutional Development in any position - 3 Projects
- (b) Experience as GIS Specialist: 5 Years
- (c) Experience of comparable assignments  
(i) in a similar position : 2 Projects

#### Expertise / Knowledge in following fields are essential:

- (i) GIS applications with IT-based mapping and planning and associated databases for roads and road networks. system development
- (ii) GPS-based technology and GIS-linked data-capture via contemporary applications such as ArcView, ArcInfo, Civil 3D and Map 3D.
- (iii) GIS integration and analysis

- c) Language : Communication fluently in English is minimum

## 8. Road Safety (Infrastructure Design & Management) Specialist

### I Educational Qualification

- a) Minimum : Graduate in Civil Engineering with specialization in Traffic & Road Safety
- b) Desirable : Post graduation in Transport / Highway Engineering/ Infrastructure Design & Management

### II General Experience

- a) Total Experience : Total Professional Experience :  
Minimum 10 Years  
Desirable 15 Years
- b) Relevant Experience : (a) Experience in Projects relating to Institutional Development in any position - 5 Projects



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- (b) Road Safety Specialist : 5 Years  
 (c) Experience of comparable assignments  
 (i) in a similar position : 1 Projects

**Expertise / Knowledge in following fields are essential:**

- (i) Roads planning, design, construction and management  
 (ii) Engineering factors in road and traffic safety strategies and outcomes.  
 (iii) Proven ability to execute effective Road Infrastructure Safety 'audits' and to advise on audit-based strategies and interventions.  
 (iv) Contemporary road safety engineering 'best practice'.  
 (v) Demonstrated skills at capacity building and training

c) Language : Communication fluently in English is minimum

**9. PWD sector Domain Specialist:**

**I Educational Qualification**

- a) Minimum : Graduate in Civil Engineering  
 b) Desirable : Post Graduation is desirable in relevant field of Civil Engineering

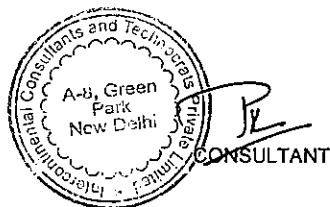
**II General Experience**

- a) Total Experience : Total Professional Experience :  
 Minimum 15 Years  
 Desirable 20 Years

- b) Relevant Experience : a) Experience in Projects relating to Institutional Development in any position - 2 Projects  
 b) At a Sr. level in typical Govt. Organization such as PWD : 5 Years  
 c) Experience of comparable assignments  
 (i) in a similar position : 1 Projects

**Knowledge in following fields are essential:**

- (i) Extensive knowledge of, the typical framework,



machinery and processes of government agencies, particularly those having technical and service responsibilities such as Public Works Departments

- (ii) Through exposure to the typical administrative and technical management information requirements and governance responsibilities
- (iii) Exposure to planning, design and execution of projects
- (iv) Knowledge on procurement of goods, works and services as per World Bank / Govt of India standard documents.

c) Language : Communication fluently in English is minimum

#### 10. Procurement Specialist:

##### I Educational Qualification

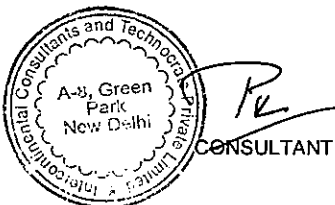
- a) Minimum : Graduate in any discipline with specialisation in any relevant field of procurement.
- b) Desirable : Post Graduation specialisation in management or any specific field of procurement

##### II General Experience

- a) Total Experience : Total Professional Experience :  
Minimum 10 Years  
Desirable 15 Years
- b) Relevant Experience :
  - a) Experience in Projects relating to Institutional Development in any position - 3 Projects
  - b) In procurement of works/goods/services as per guidelines of International Funding Agency such as World Bank or for any Government organization : 5 Years
  - c) Experience of comparable assignments
    - (i) in a similar position : 2 Projects

**Expertise/ Knowledge in following fields are essential:**

- (i) Extensive knowledge on procurement of goods,



works and services as per FIDIC / Govt of India conditions of Contract

(ii) PPP contracts and Concession Agreements

(iii) Codal procedures on procurement by typical Govt. agency such as PWD

c) Language : Communication fluently in English is minimum

## 11. Training & Human Resources Development (HRD) Specialist :

### I Educational Qualification

a) Minimum : Graduate qualifications in Management, Education and/or Engineering with specialisation in HR Training.

b) Desirable : Post Graduation / equivalent specialisation in HRD, Adult Learning and/or Organizational Development

### II General Experience

a) Total Experience : Total Professional Experience :  
Minimum 12 Years  
Desirable 15 Years

b) Relevant Experience : a) Experience in Projects relating to Institutional Development in any position - 3 Projects

b) In Training / HRD assignments of any Government organization : 5 Years

c) Experience of comparable assignments

(i) in a similar position : 2 Projects

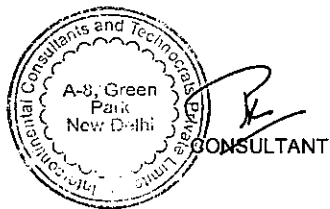
### Expertise/ Knowledge in following fields are essential:

(i) Contemporary Human Resources Development (HRD) functions.

(ii) Business-based training needs assessments (TNA)

(iii) Training / HRD programs for strategic capacity-building and organizational strengthening

c) Language : Communication fluently in English is minimum



## 12. Human Resources Management (HRM) Specialist

### I Educational Qualification

- a) Minimum : Graduate qualifications in Management, Administration, Education and/or Engineering with specialization in HRM or similar field
- b) Desirable : Post Graduation / equivalent specialisation in any of the above field

### II General Experience

- a) Total Experience : Total Professional Experience :  
Minimum 12 Years  
Desirable 15 Years
- b) Relevant Experience : a) Experience in Projects relating to Institutional Development in any position - 3 Projects
- b) Public sector / typical Government organization : 5 Years
- c) Experience of comparable assignments
- (i) in a similar position : 2 Projects

### Expertise/ Knowledge in following fields are essential:

- (i) Contemporary Human Resources Management (HRM) functions in organizational structures establishments
- (ii) functional and work analysis, position / job documentation and staffing plans.
- (iii) development of re-organization / re-structuring plans for public sector agencies and for new corporate entities in the public sector.

- c) Language : Communication fluently in English is minimum

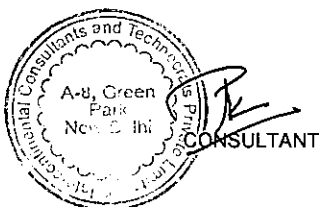
## 13. Legal Specialist

### I Educational Qualification

- a) Minimum : Graduate in Law
- b) Desirable : Postgraduate specializations in Corporate Law and/or Legislative Drafting

### II General Experience

- a) Total Experience : Total Professional Experience :  
Minimum 10 Years  
Desirable 15 Years



b) Relevant Experience : (a) Experience in Projects relating to Institutional Development in any position - 2 Projects

(b) Road Legal Specialist : 5 Years

(c) Experience of comparable assignments

(i) in a similar position : 1 Projects

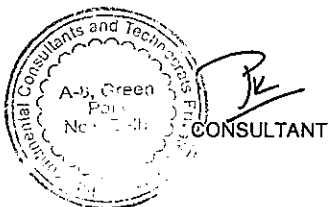
**Expertise / Knowledge in following fields are essential:**

(i) Commercial and corporate law, particularly in incorporation of new entities, corporate restructuring and/or mergers.

(ii) Sound knowledge and experience of India's legal framework, particularly as it relates to change in public legislation and to incorporation of entities in the public sector.

(iii) Proven skills at legal drafting in relation to preparation of new bills, regulations, statutory notices, legislative amendments and corporate documentation

c) Language : Communication fluently in English is minimum



**APPENDIX D - BREAKDOWN OF CONTRACT PRICE IN FOREIGN  
CURRENCY**

**1. Monthly Rates for Personnel**

Sr.No.	Name	Position		Staff Month Rate
	<i>Foreign Staff - Key Professionals</i>			
1	T.Chelliah	Road Agency Management (Institutional Development) Specialist cum Team Leader	<i>Home</i> [USD]	24,000
			<i>Field</i> [USD]	24,000

**2. Reimbursable Expenses**

Sr.No.	Description	Unit	Unit Cost	
1	<b>Per Diem Allowances*</b>			
	Foreign Key Professionals	Months	1,200	[ USD/Month ]
2	<b>International Flights</b>			
	Manila-Bhuaneshwar-Manila	RTs	1,500	[ USD/RT ]
3	<b>Miscellaneous Travel Expenses*</b>	RTs	200	[ USD/RT ]

*These are fixed costs and no receipt / voucher is required for  
\* claiming the payment.*

**THIS APPENDIX WILL EXCLUSIVELY BE USED FOR DETERMINING REMUNERATION FOR ADDITIONAL SERVICES.**



*[Signature]*  
CONSULTANT

## APPENDIX E - BREAKDOWN OF CONTRACT PRICE IN LOCAL CURRENCY

### 1. Monthly Rates for Personnel

Sr.No.	Name	Position		Staff
<i>Local Staff - Key Professionals</i>				
1	Dr. Chandra Prakash Bohra	Organizational Development Specialist cum Deputy Team Leader	Home [INR]	322,000
			Field [INR]	322,000
2	Amitava Basu	Finance Analyst & Business Planning Specialist	Home [INR]	450,000
			Field [INR]	450,000
3	Chandi Ganguly	Transport Planning (Roads) Specialist	Home [INR]	295,000
			Field [INR]	295,000
4	Boominathan Muthuthevar	Transport Economic Specialist	Home [INR]	375,000
			Field [INR]	375,000
5	Dr. P.K. Nanda	Senior Highways Engineer (Pavements Management & Planning)	Home [INR]	295,000
			Field [INR]	295,000
6	D. Vasudevan	GIS Applications (Master Planning) Specialist	Home [INR]	425,000
			Field [INR]	425,000
7	Dr. Prabeer Kumar Sikdar	Road Safety (Infrastructure Design &	Home [INR]	450,000
			Field [INR]	450,000
8	Deepak Narayan	PWD Sector Domain Specialist	Home [INR]	225,000
			Field [INR]	225,000
9	B.R. Suri	Procurement Specialist	Home [INR]	295,000
			Field [INR]	295,000
10	Sandeep Jagota	Training & Human Resources Development (HRD) Specialist	Home [INR]	345,000
			Field [INR]	345,000
11	Sachchida Nand Swaroop	Human Resources Management (HRM) Specialist	Home [INR]	225,000
			Field [INR]	225,000
12	Dipak Rao	Legal Specialist	Home [INR]	800,000
			Field [INR]	800,000
13	To be named	Other Adhoc Technical Specialist	Home [INR]	275,000
			Field [INR]	275,000





1. Monthly Rates for Personnel				
Local Staff - Technical Support Staff				
1	To be named	Assistant Highway Engineer (Codes / Manual / Policy)	Home [INR]	65,000
			Field [INR]	65,000
2	To be named	Assistant Highway Engineer (Network / Master Plan)	Home [INR]	65,000
			Field [INR]	65,000
3	To be named	Road Safety Engineer	Home [INR]	70,000
			Field [INR]	70,000
4	To be named	Surveyor	Home [INR]	55,000
			Field [INR]	55,000
5	To be named	CAD Engineer (2 Nos)	Home [INR]	60,000
			Field [INR]	60,000
6	To be named	HR Manager (OD, HRM & Training)	Home [INR]	80,000
			Field [INR]	80,000
Local Staff - Administrative Support Staff				
1	To be named	Office Manager cum Accountant	Home [INR]	40,000
			Field [INR]	40,000
2	To be named	Computer Operator (4 Nos)	Home [INR]	30,000
			Field [INR]	30,000
3	To be named	Draftsman	Home [INR]	30,000
			Field [INR]	30,000
4	To be named	Office Boy and Security (2 Nos)	Home [INR]	10,000
			Field [INR]	10,000

## 2. Reimbursable Expenses

Sr.No.	Description	Unit	Unit Cost	
1	<b>Per Diem Allowances*</b>			
	Local Key Professionals	Days	3,000	[ INR/Day ]
2	<b>Domestic Travel *</b> (By Air / Train / Road)	LS	750,000	[ INR ]
3	<b>Office Rent, Furniture, Equipment and Supplies*</b>	Month	200,000	[ INR/Month ]
4	<b>Communication costs between New Delhi and Orissa*</b>	Month	15,000	[ INR/Month ]
5	<b>Local Transportation costs*</b>	Veh.Month	50,000	[ INR/Veh Month ]
6	<b>Drafting, reproduction of reports*</b>	LS	900,000	[ INR ]
7	<b>Survey &amp; Investigations*</b>	LS	12,000,000	[ INR ]
8	<b>Training / Workshops / Exposure Visits *</b>	LS	3,500,000	[ INR ]

\* These are fixed costs and no receipt / voucher is required for claiming the payment.

**THIS APPENDIX WILL EXCLUSIVELY BE USED FOR DETERMINING REMUNERATION FOR ADDITIONAL SERVICES.**



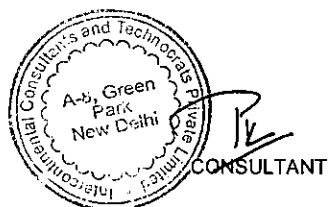
CONSULTANT

## APPENDIX F - SERVICES AND FACILITIES PROVIDED BY THE CLIENT

1. The Client will be represented primarily by the OWD, which will be responsible for providing the consultant's team promptly with necessary documents and materials wherever available, particularly relevant GOO documents related to the structure and functioning of the roads sector in Odisha, on the main GOO policies, plans and/or strategies in the roads sector, on the ISAP and the GAAP, and concerning the Odisha Bridge & Roads Construction Corporation (OB&RCC). The OWD shall also arrange access to other necessary records and data (wherever available) on being so requested with adequate notice by the consultant's Team Leader.
2. The OWD (usually via the ISAP Task Force, in the first instance) shall be responsible for reviewing, providing feedback on and /or advising acceptance of the consultant's reports and submissions. This shall be done as far as possible within the consultant's requested timing, but in any event shall be done by the Client within no more than three (3) weeks of the date of presentation / submission to the Client of materials from the consultant requiring such clearance. Where multi-agency and/or higher-level GOO consideration and responses are required, OWD management will arrange that appropriately, on a case-by-case basis.
3. The Client will nominate suitable counterpart staff for ongoing direct liaison with the consultant's team for these services, and will also arrange for the nomination of similar counterpart staff from the other involved GOO entities for liaison there. The Client will also arrange access to relevant OWD staff in HQ and field units, and shall facilitate introductions for the consultant's personnel to relevant senior officials and staff in other involved GOO entities. Other appropriate operational support may also be provided during the task period, on the basis of case-by-case consultations between the consultant and the Client.

### Responsibilities of the Consultant

4. The consultant shall be fully responsible for all facilities and resources necessary for delivery of the services, such as accommodation, vehicles, equipment, computers, communications, support services, provision of consumables, transportation and other logistics. The consultant shall also be fully responsible for all operational costs and 'overheads' incurred during these services, including utility services and communications costs.
5. The consultant's team shall at all times satisfy the technical expertise and capacity requirements stipulated in these TOR. The consultant will also be expected to apply effective internal 'quality assurance' processes to all outputs under these services.
6. The consultant shall consult with the OWD regarding relevant departmental and GOO systems, procedures and statutory requirements, to inform and guide the delivery of the services under this contract, and to ensure the consultant's team and their operations are able to comply with relevant GOO and OWD policies / provisions / requirements.



7. The Consultant shall bear all cost of organizing the workshop, stakeholder consultations and training.

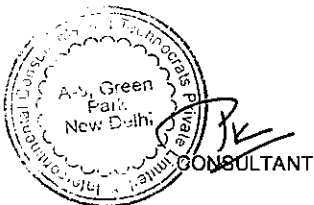
For this purpose Consultant shall assume to conduct about 25 workshops with 30 participants in each in its overall assignment. The Consultant may also assume conducting about 20 stakeholder consultations.

8. **Exposure Visits**

The Consultant shall also arrange and bear all the expenses required for Field Exposure Visits, for a week as described in Cl. 8 V (Road Safety Engineering & Planning) and Cl. 8. VIII (Road Toll Collection & Management ) for the respective visits on above fields.

The Consultant has to include all expenses for such Exposure Visits as economy class air travel, lodging, boarding, inland transportation etc. as applicable alongwith a counterpart person of the Consultant as accompanying guide-cum-facilitator. However, no per diem / daily allowance is to be paid by the Consultant.

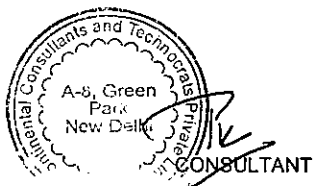
The cost for the entire training and exposure visits as above shall be provided in the financial proposal and this cost shall be considered for evaluation.



CONSULTANT

**APPENDIX G - FORM OF ADVANCE PAYMENTS GUARANTEE**

***NOT APPLICABLE***



OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ODISHA  
NIRMAN SOUDHA, KESHARI NAGAR, UNIT - V, BHUBANESWAR - 751 001

Letter No. PMU - WB - 43 / 10 -

6370

Dt. 29-2-12

From

**Er. Nalini Kanta Pradhan**  
Chief Engineer, World Bank Projects, Odisha  
Tel: +91-674-2396783 / Fax:+91 - 674 -239 0080  
Email: pmuosrp@gmail.com

To

**Intercontinental Consultants and Technocrats Pvt. Ltd (ICT)**  
in Joint Venture with **Grant Thornton Advisory Pvt. Ltd(GT-APL)**, New Delhi  
and in association with **Arkitechno Consultants (India) Pvt. Ltd.** as Sub-consultants

A - 8, Green Park, New Delhi - 110 016

Email: [business@ictonline.com](mailto:business@ictonline.com); [eoic@ictonline.com](mailto:eoic@ictonline.com); [ict@vsnl.com](mailto:ict@vsnl.com); [business@arkitechno.com](mailto:business@arkitechno.com);

Sub: Consultancy Services for "Road Sector Institutional Development for Government of Odisha"  
- **AWARD OF CONTRACT**

- Ref: i.) Request for Proposal issued vide this office letter No. 25825 Dt. 25.05.2011  
ii.) Your Proposal received on 26<sup>th</sup> August, 2011 and Financial proposal opened on 24.10.2011  
iii.) Call for Negotiation issued vide this office No. 50127 Dt. 14.11.2011

Sir,

In inviting a reference to the negotiation held with your authorized representatives from 23<sup>rd</sup> Nov 2011 to 5<sup>th</sup> December 2011 this is to intimate that your proposal for the aforesaid consultancy services submitted by **Intercontinental Consultants and Technocrats Pvt. Ltd (ICT)**, New Delhi in Joint Venture with **Grant Thornton Advisory Pvt. Ltd(GT-APL)**, New Delhi and in association with **Arkitechno Consultants (India) Pvt. Ltd.** as Sub-consultants for an amount of **US\$ 700,515** and **Rs.9,97,45,393/-** (US Dollars Seven hundred thousand five hundred fifteen and Indian Rupees Nine crores ninety seven lakh forty five thousand three hundred ninety three only) including applicable Service Tax @10.3%, is accepted as per the recommendation of the Evaluation Committee in their meeting held on 11th Nov 2011, No Objection received from the World Bank in their Email Dt.24 December 2011 and approval of the Government communicated in Works Department No. EAP (Cell) 1/12 - 2195/w Dt. 28-02-2012. Accordingly in pursuant to Clause 7.1 of ITC, the contract is hereby awarded in favour of above consortium.

You are requested to send the authorized representatives of the respective constituent firms alongwith all supporting documents within a fortnight to sign the Contract.

Yours sincerely,

*[Signature]*  
29/2/12  
Chief Engineer

World Bank Projects, Orissa

Memo No.

6371

Dt. 29-2-12

Copy submitted to the **Engineer-in-Chief-cum-Secretary**, Works Department, Government of Orissa for favour of information. This is with reference to Works Department No. No. EAP (Cell) 1/12 - 2195/w Dt.28-02-2012.

*[Signature]*  
29/2/12  
Chief Engineer

World Bank Projects, Orissa

Memo No.

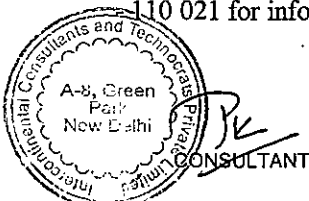
6372

Dt. 29-2-12

Copy forwarded to **Mr. Rajesh Rohatgi**, Senior Transport Specialist & Task Team Leader OSRP, Sustainable Development (South Asia Region), The World Bank, 50-M, Shantipath, Chanakyapuri, New Delhi 110 021 for information.

*[Signature]*  
29/2/12  
Chief Engineer

World Bank Projects, Orissa



By FAX

**GOVERNMENT OF ODISHA  
WORKS DEPARTMENT**

\* \* \*

No. 2195 /W., Bhubaneswar, Dated, the  
EAP (Cell)-1/12

28-02, 2012

From  
Sri P.K. Rout,  
FA-cum-Additional Secretary to Govt.

To  
The Chief Engineer, World Bank Projects, Odisha,  
Nirman Soudha, Bhubaneswar.

**Sub:- Consultancy Services for "Road Sector Institutional Development".**

Sir,

I am directed to invite a reference to your Letter No.56358 dated 24.12.2011 on the subject noted above and convey the approval of Government for acceptance of the offer of M/s Intercontinental Consultants & Technocrats Pvt. Ltd. (ICT) in Joint Venture with Grant Thornton Advisory Pvt. Ltd. (GT-APL), New Delhi and In association with Arkitechno Consultants (India) Pvt. Ltd. as sub-consultant which stands highest rank in combined Technical & Financial Evaluation amounting to Rs.US\$700,515 and Rs.9,97,45,393.00 equivalent to Rs.13,22,70,318.00 (Rupees Thirteen crore twenty-two lakh seventy thousand and three hundred eighteen) only (considering 1US\$=Rs.46.43) including applicable service tax @ 10.3% being 48.21% excess over the corresponding estimated cost of Rs.8,92,45,612.00 subject to the condition that all formalities and other preliminaries should be completed well before issuing of work order.

A copy of the proceedings of the Tender Committee Meeting held on 06.01.2012 for the above work is enclosed for reference.

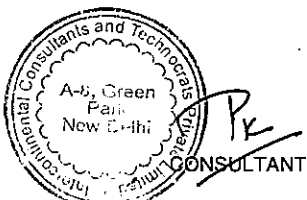
Tender documents received with your letter under reference are returned herewith, the receipt of which may please be acknowledged.

Yours faithfully,

*[Signature]*  
28.2.2012

**FA-cum-Additional Secretary to Govt.**

EAP (60)1-2012/ D. ACHARYA



*Dr. Pal*  
*Process for awarding*  
*this work*  
*judicially.*

Page 183

*[Signature]*  
Chief Engineer,  
World Bank Projects, Odisha

**Chief Engineer, World Bank Projects, Orissa**

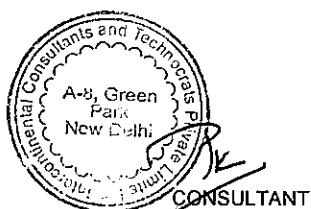
**From:** <rrohhatgi@worldbank.org>  
**To:** "Chief Engineer World Bank Projects Orissa" <piuosrp@gmail.com>  
**Cc:** <ygupta@worldbank.org>; "Sri Kumar Tadimalla" <stadimalla@worldbank.org>; "Neera Bhatia" <nbhatia@worldbank.org>; "Payal Malik Madan" <pmmadan@worldbank.org>; "Ernst Huning" <ErnstHuning@bigpond.com>  
**Sent:** Saturday, December 24, 2011 8:37 AM  
**Subject:** Consultancy Services for Road Sector Institutional Development - No Objection  
Dear Mr Pradhan

Thank you for your letter of December 08, 2011 forwarding the Combined Evaluation Report together with Minutes of negotiations and draft contract with the highest ranked firm and subsequent clarifications provided vide letter of December 20, 2011. We have reviewed and based on the information provided, have no objection to your signing the contract with M/s. Intercontinental Consultants and Technocrats Pvt. Ltd (ICT), India in Joint Venture with Grant Thornton Advisory Pvt. Ltd (GT-APL) ,New Delhi and in association with Arkitechno Consultants(India) Pvt. Ltd as Sub-consultants for an amount not to exceed US\$ 635,100 and INR 90,431,000 excluding service tax.

Please note that after signing of the contract, you need to publish the details on award of contract in UNDB/Development Market in accordance with Para 2.28 of Consultancy Guidelines.

Please forward copy of the signed contract to the Bank at the earliest, along with the checklist for prior review duly filled in for issue of WBR Number .

Regards  
Rajesh Rohatgi





# The Orissa Gazette

EXTRAORDINARY  
PUBLISHED BY AUTHORITY

No. 60 CUTTACK, THURSDAY, JANUARY 15, 2009/PAUSA 25, 1930

No. 20115—EAR-(Cell) 26/08-W.

GOVERNMENT OF ORISSA

WORKS DEPARTMENT

RESOLUTION

The 11th December 2008

The Government after careful consideration have been pleased to constitute a I.S.A.P. Steering Committee with the following members:—

- |                                                                                               |    |                     |
|-----------------------------------------------------------------------------------------------|----|---------------------|
| 1. Development Commissioner- <i>cum</i> -Additional Chief Secretary,<br>Government of Orissa. | .. | Chairman            |
| 2. Secretary to Government, Revenue & D. M. Department                                        | .. | Member              |
| 3. Secretary to Government, Commerce & Transport Department                                   | .. | Member              |
| 4. Secretary/Special Secretary to Government, Finance<br>Department.                          | .. | Member              |
| 5. Secretary to Government, Rural Development Department                                      | .. | Member              |
| 6. Secretary to Government, Law Department                                                    | .. | Member              |
| 7. Special Secretary (Plan), P. & C. Department                                               | .. | Member              |
| 8. E.I.C.- <i>cum</i> -Secretary to Government, Works Department                              | .. | Member              |
| 9. Chief Engineer, World Bank Projects, Orissa                                                | .. | Member<br>Convener. |

The role and responsibility of the I.S.A.P. Steering Committee is as follows :

- (i) Discuss on the multi-modal transport issue
- (ii) Finalise and approve the State Road Policy
- (iii) Advise for devising suitable mechanism for financial arrangement in order to have sustainable funding for road maintenance .



CONSULTANT

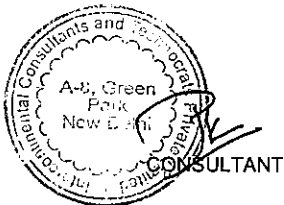
- (iv) Approve the list of Core Roads and recommend for provision of separate budget for the same
- (v) Review implementation of Governance and Accountability Action Plan (GAAP) for Works Department.
- (vi) Review Master Planning of roads
- (vii) Oversee the financial management and audit administration
- (viii) Review formulation of effective Road Safety Policy and give necessary guidance
- (ix) Review progress of private sector participation in the road sector infrastructure building
- (x) Resolving environmental issues in the road construction works
- (xi) Oversee efficient management of Core Road network
- (xii) Oversee comprehensive and efficient implementation of I. I. & I.C.I. support for P.W.D. roads.
- (xiii) Review actions to be taken for capacity building of local construction Industries
- (xiv) Review Procurement Policy through e-Procurement and road contracting
- (xv) Oversee Human Resources Development (H.R.D.) and suggest capacity building measures.

ORDER—Ordered that the Resolution be published in the *Orissa Gazette* and copies thereof be forwarded to all Departments of Government/all Heads of Departments.

By order of the Governor

S. K. RAY

E.I.C.-cum-Secretary to Government



# The Orissa Gazette



EXTRAORDINARY  
PUBLISHED BY AUTHORITY

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No. 8023-EAP (Cell)-52/2009-W.

GOVERNMENT OF ORISSA

**WORKS DEPARTMENT**

**RESOLUTION**

The 27th May 2010

In partial modification of Works Department Resolution No. 20115-W., dated the 11th December 2008, the Government, after careful consideration, have been pleased to reconstitute ISAP Steering Committee under the Chairmanship of Development Commissioner/Additional Development Commissioner.

The membership of the Steering Committee as constituted in the aforesaid Resolution No. 20115-W., dated the 11th December 2008 and their role and responsibilities stipulated therein remain unchanged.

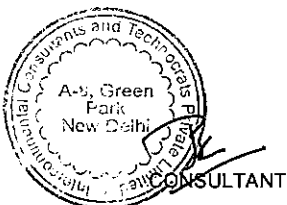
ORDER—Ordered that this Resolution be published in the *Orissa Gazette* and copies thereof be forwarded to all Departments of Government / all Heads of Departments.

By order of the Governor

S. K. RAY

EIC-cum-Secretary to Government

Printed and published by the Director of Printing, Stationery and Publication, Orissa, Cuttack-10  
Ex. Gaz. 429—193+100



GOVERNMENT OF ORISSA  
WORKS DEPARTMENT

\*\*\*

**RESOLUTION**

No. 17040 /W., Bhubaneswar, dated the 23 December, 2009  
EAP(Cell)-52/2009

Government after careful consideration has been pleased to constitute an ISAP Working Group under the Chairmanship of EIC (Civil), Orissa with the following members.

- |    |                                                     |                  |
|----|-----------------------------------------------------|------------------|
| 1. | Chief Engineer, R.W-II                              | Member           |
| 2. | Chief Engineer, RDQP, Orissa                        | Member           |
| 3. | Chief Engineer (DPI & Roads), Orissa                | Member           |
| 4. | Chief Engineer (NHs), Orissa.                       | Member           |
| 5. | Additional Transport Commissioner                   | Technical Member |
| 6. | Director, IT Department                             | Member           |
| 7. | Chief Engineer (Buildings), Orissa                  | Member           |
| 8. | Joint Secretary/Deputy Secretary,<br>Law Department | Member           |
| 9. | Chief Engineer, World Bank Project                  | Member Convener  |

The Working Group will interact with the Consultants and deliberate on their study report that relates to the following major components of ISAP.

- Organizational restructuring and functional strengthening.
- Human Resource Management and Staff Training.
- IT/ICT Strategy.
- Code Revision.
- Procurement Reform.
- Asset Management.

Besides the above, the ISAP Consultant will prepare study report on the following items.

- Road Policy
- Road Master Plan.
- Creation of Road Funding Options.
- Creation of Road Fund.
- Capacity Assessment for Construction Industries.
- Vehicle Axle Load Regulation & Management.
- Road Safety Policy.

The role and responsibilities of the ISAP Working Group are as follows.

- Development of clear realistic proposals which are actionable in short and medium term and meet the ISAP aims and objectives and fully readied for consideration by Government of Orissa.



CONSULTANT

- (ii) Consider specific actions and inputs in a consultative manner on planning and development of any new-up-graded system tools and process for OPWD implementation in order to achieve the aims of technical, operational or management improvement.
- (iii) Consideration of likely impacts on introduction of new process/system and technology in the work environment and transactional measures/actions to achieve the best results.
- (iv) Effective inter agency liaison in the Government of Orissa on environment or any significant matters associated with ISAP actions/Targets that may fall outside the OWD domain.
- (v) Formulate and update more details time based plans for final implementation of any specific ISAP action item.

**ORDER**

Ordered that this resolution be published in the Orissa Gazette and copies those of forwarded to all Departments of Government/all Heads of Department.

By order of Governor

*[Signature]*  
23.12.09  
(S. K. Ray)

EIC-cum-Secretary to Government

Memo No. 17041 / Date 23.12.09

Copy forwarded to the Director, Printing, Stationary and Publication, Orissa, Cuttack with a request to publish this resolution in an extra ordinary issue of Orissa Gazette. He is requested to send 100 copies of the resolution to Works Department at the earliest for necessary action at this end.

Memo No. 17042 / Date 23.12.09 Additional Secretary to Government

Copy forwarded to P.S. to Chief Minister, Orissa/P.S. to all Ministers for favour of information.

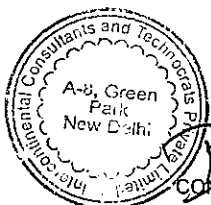
Memo No. 17043 / Date 23.12.09 Additional Secretary to Government

Copy forwarded to P.S. to Chief Secretary, Orissa/P.S. to D.C-cum-A.C.S., Orissa/All Departments of Government for information

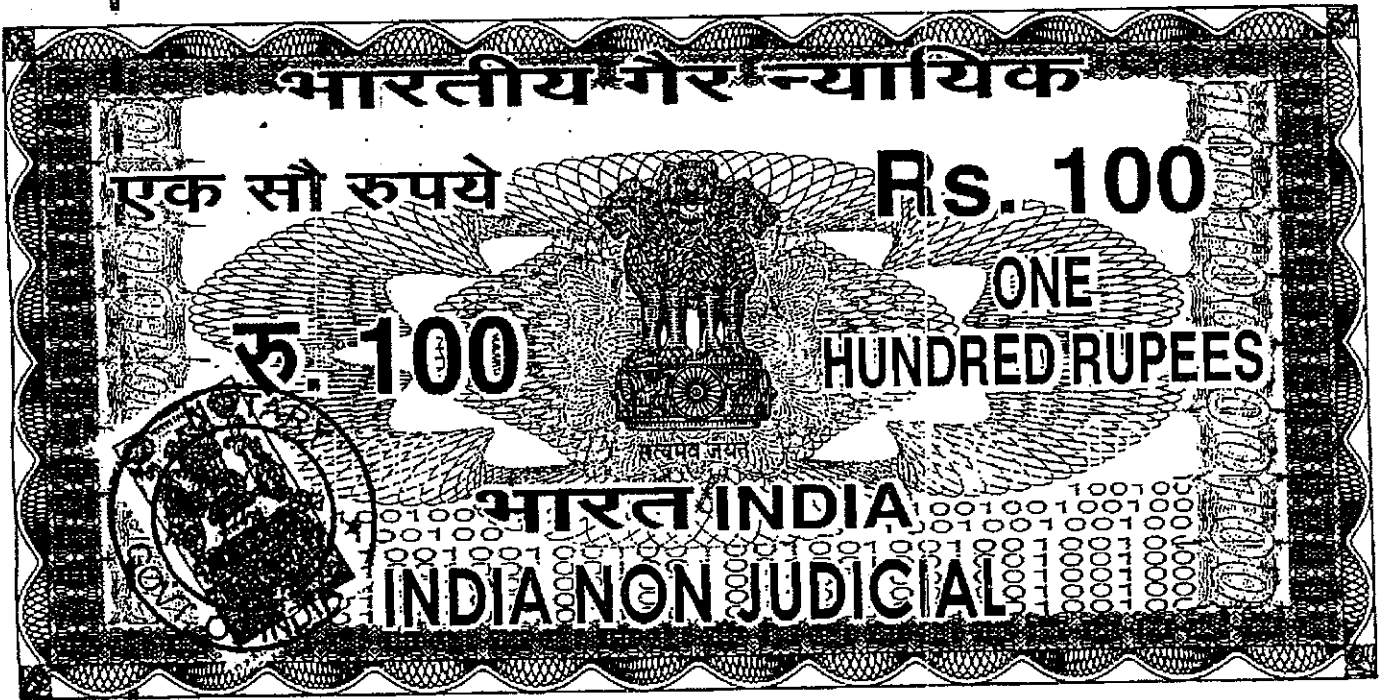
Memo No. 17044 / Date 23.12.09 Additional Secretary to Government

Copy forwarded to EIC (Civil), Orissa/all Chief Engineers of Works Department/all officers of Works Department/20 spare copies for Guard File for information and necessary action.

*[Signature]*  
Additional Secretary to Government



CONSULTANT



दिल्ली DELHI

R 463199

**SPECIFIC POWER OF ATTORNEY**

In its meeting held on 15<sup>th</sup> November, 2011 at New Delhi; the Board after considering the Power of Attorney accorded by M/s Grant Thornton Advisory Pvt. Ltd. (GT-APL), the Joint Venture partner for the following project, decided to authorize Mr. Prashant Kapila (S/o Mr. K. K. Kapila), President of the Company to negotiate and sign the Contract Agreement:

**“Consultancy Services for Road Sector Institutional Development, Odisha”**

It was further resolved that Mr. A. D. Narain, President be authorized to attest the specimen signature of Mr. Prashant Kapila for the purpose of this authorization.

Date: 22<sup>nd</sup> November, 2011



*P. Kapila*

Specimen signature of Mr. Prashant Kapila  
Attested

*A. D. Narain*  
(A. D. Narain)  
President  
Intercontinental Consultants &  
Technocrats Pvt. Ltd.  
A-8, Green Park,  
New Delhi - 110 016, India.



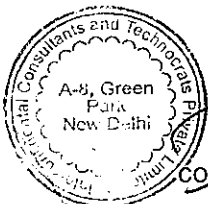
*A. D. Narain*  
(A. D. Narain)  
President



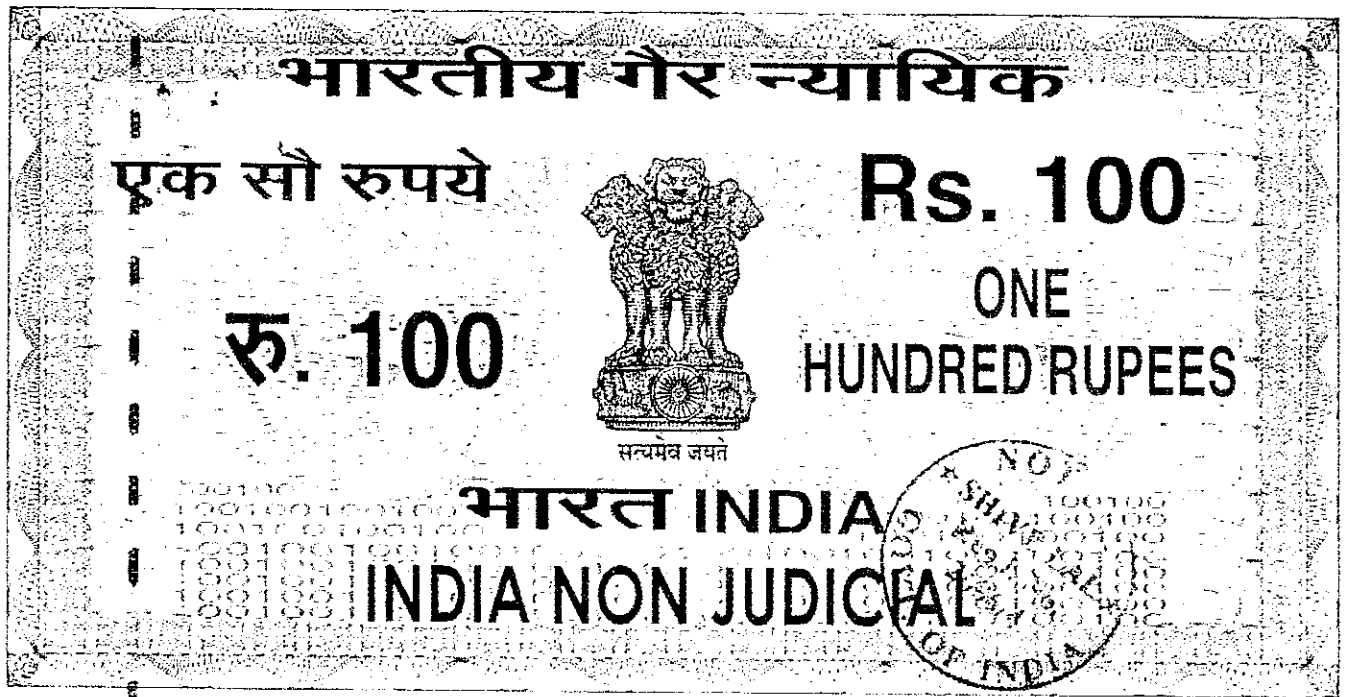
**ATTESTED**

NOTARY PUBLIC (DELHI)

22 NOV 2011



CONSULTANT



दिल्ली DELHI

S 626176

**POWER OF ATTORNEY**

Know all men by these presents, We, Grant Thornton Advisory Private Limited, having our registered office at L 41, Connaught Circus, New Delhi 110001, do hereby constitute, nominate, appoint and authorize Ms. Devyani Singh, presently residing at B-7/110 (Second Floor) Sardarjung Enclave New Delhi 110029, who is presently employed with us and holding the position of Associate Director as our true and lawful attorney hereinafter referred to as the "Authorised Representative", to sign the Contract Agreement with the Client namely Chief Engineer, World Bank Projects, Odisha, for the project "Consultancy Services for Road Sector Institutional Development, Odisha" on behalf of the Company.

AND, we do hereby agree to ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Authorised Representative pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Authorised Representative in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, GRANT THORNTON ADVISORY PRIVATE LIMITED, THE ABOVE NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS 15<sup>th</sup> Day of MARCH 2012.

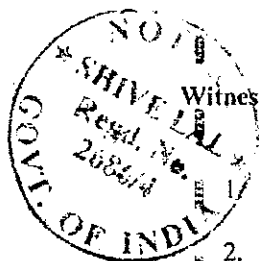
*Devyani Singh*  
For Devyani Singh

*Amit Jain*

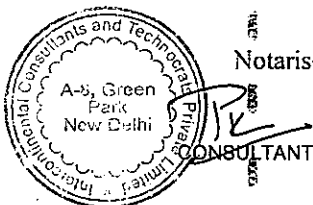
Amit Jain  
Partner

Grant Thornton Advisory Private Limited  
L 41, Connaught Circus, New Delhi - 110001

Witnesses:



- Aashish K...*  
Aashish K... Associate Vice President, Grant Thornton Advisory Pvt. Ltd.
- Swarnima Chouhan*  
Swarnima Chouhan, Senior Consultant, Grant Thornton Advisory Pvt. Ltd.



Notarised

ATTESTED  
*[Signature]*  
NOTARY PUBLIC  
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Accepted

*[Signature]*  
Chief Engineer,  
World Bank Projects, Odisha  
15 MAR 2012

14/3/12



ଓଡ଼ିଶା ओडिशा ORISSA

B. N. Biswal  
NOTARY  
REGD. NO. 242375



**SPECIAL POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENT THAT WE **ARKITECHNO** Consultants having our registered office at N-3/91, IRC Village, Nayapalli, Bhubaneswar-15 through our Board of Directors Rajesh Roy Choudhury ( Managing Director) aged 38 years, S/o Amarendranath Roy Choudhury and Amarendranath Roy Choudhury (Director) aged 66 years, S/o Late Pratap Chandra Roy Choudhury do hereby constitute appoint and nominate as our special attorney Rajesh Roy Choudhury (Managing Director), S/o Amarendranath Roy Choudhury aged 66 years, r/o 22, B.B.J.B Nagar, Bhubaneswar-14.

Rajesh Roy Choudhury is authorized to sign all the documents related to World Bank Project for Consultancy Services for Road Sector Institutional Development. His specimen signature is attested below.

We hereby ratify all lawful acts, deeds and things done by our said attorney and the same shall be constructed as if we would have done the same in person.

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD

Page No 1

  
DIRECTOR

  
DIRECTOR



  
Chief Engineer,  
World Bank Projects, Odisha



*[Handwritten Signature]*  
B. N. BISWAL  
NOTARY  
REGD. NO. ON-01/2000

IN WITNESS WHEREOF we have signed this Power of Attorney on this 14<sup>th</sup> day of March 2012 in presence of the following witnesses.

ARRI TECHNO CONSULTANTS (INDIA) PVT. LTD

Board of Directors

*[Handwritten Signature]*  
Signature of Attorney Holder  
Attested:

DIRECTOR

1. Rajesh Roy Choudhury (Director)

ARRI TECHNO CONSULTANTS (INDIA) PVT. LTD

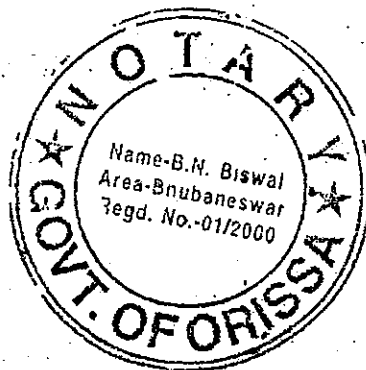
2. Amarendra Nath Roy Choudhury (Director)

Witnesses:

1. Shyamaladevi Prasad  
N-3/91, IRC village  
Bhubaneswar
2. Toshir Kumar Sen  
Plot No- 1285(B), Nayapalli  
BBSR

*[Handwritten Signature]*  
Achu Patra

*[Handwritten Signature]*



BIBKANANDA BISWAL  
CITY NOTARY, BBSR.  
Regd. No.-01/01/2000  
Mobile- 9018019347

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