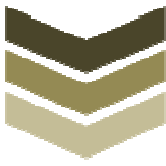


**“Selection of Agency for Fiber Rollout & Deployment for Creation of OFC  
Backbone Link In DURG POLICE FOR I.T.M.S. Project”**

**(DURG POLICE)**  
DURG



**TABLE OF CONTENT**

IMPORTANT NOTE & TENDER NOTICE: .....	4
1. 5	
DISCLAIMER .....	5
INTRODUCTION .....	6
2. FACT SHEET .....	7
3. ELIGIBILITY CRITERIA.....	9
4. INSTRUCTIONS TO THE BIDDERS .....	11
5. SCOPE OF WORK .....	45
ANNEXURE-I .....	93
ANNEXURE-II.....	99
ANNEXURE-III.....	100
ANNEXURE-IV - FORMAT FOR POWEROF ATTORNEY .....	103
ANNEXURE-V.....	105
ANNEXURE-VI- PRE-CONTRACT INTEGRITY PACT .....	107

## **SHORT TITLES USED IN THE TENDER DOCUMENT**

**Contract:** The term contract means, the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the President of India and the contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time, by the engineer in-charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them. The expression works or work shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered or substituted.

**Contractor:** The contractor shall mean the individual, firm or company, to whom work is awarded

**IMPORTANT NOTE & TENDER NOTICE:**

DURG POLICE invite bids for “**Selection of Agency for Supply and Commissioning of OFC Backbone Link and Operation & Maintenance in DURG Chhattisgarh under I.T.M.S. Project**”. All bids should be addressed to:

S.P.  
COLLECTORATE  
DURG

Bids received after the due date will be rejected.

The document can be downloaded from the website <https://cgpolice.gov.in> The parties are advised to study the document carefully. Submission of response to this Request for Proposal shall be deemed to have been done after careful study and examination of this document with full understanding of its implications.

Bidders must ensure that they submit all the required documents indicated in the RFP document without fail. Bids received without supporting documents for the various requirements mentioned in the tender document are liable to be rejected at the initial stage itself. The data sheet for all the components should be submitted by the Bidder for the scrutiny.

**S.P. DURG reserves the right to accept or reject in part or full any or all the offers without assigning any reasons.**

## **DISCLAIMER**

The information contained in this Request for Proposal (hereinafter referred as "RFP") document provided to the Bidders, DURG POLICE, or any of their employees or advisors, is provided to the Bidder(s) on the terms and conditions set out in this RFP document and all other terms and conditions subject to which such information is provided.

The purpose of this RFP document is to provide the Bidder(s) with information to assist in the formulation of Proposals. This RFP document does not aim to hold all the information each Bidder may require. This RFP document may not be appropriate for all persons, and it is not possible for the S.P. DURG, their employees or advisors to consider the business/investment objectives, financial situation and particular needs of each Bidder who reads or uses this RFP document. Each Bidder should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFP document and where necessary obtain independent advice from appropriate sources.

DURG POLICE, their employees and advisors make no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the RFP document.

DURG POLICE may, in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP document.

## **INTRODUCTION**

### **ABOUT THIS REQUEST FOR PROPOSAL (RFP)**

DURG POLICE, Government of Chhattisgarh in the state of Chhattisgarh invites technical and financial proposals from reputed implementation & Management company for Optical Fiber Cable laying through [www.cgpolice.gov.in](http://www.cgpolice.gov.in) to Provide **“Supply and Commissioning of OFC Backbone Link and Operation & Maintenance in DURG Chhattisgarh under I.T.M.S. Project.”** as detailed in the Scope of Work in this RFP. The successful bidder will supply and laying of Optical Fiber Cable as per requirement mentioned in this RFP and O&M up to 5 years.

The bidders are advised to study the tender document carefully. Submission of bids shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications. This section provides general information about the Issuer, important dates and addresses and the overall eligibility criteria for the bidders.

## 2. FACT SHEET

1	<b>Tender No.</b>	
2	Scope of Work	<b>Selection of Agency for Supply and Commissioning of OFC Backbone Link and Operation &amp; Maintenance in DURG Chhattisgarh under I.T.M.S. Project.”</b>
3	Name of the tender issuer	S.P. DURG
4	Date of issue of tender document	01 <sup>st</sup> August 2017
5	Last date for sending Pre Bid Query	07 <sup>th</sup> August 2017 till 12:00am
6	Pre Bid Meeting	07 <sup>th</sup> August 2017 by 03:00pm
7	Last Date for Submission of Bids	31 <sup>st</sup> August 2017 till 03:00pm
8	Date of Opening of Technical Bids	31 <sup>st</sup> August 2017 by 04:00pm
9	Date of Presentation	To be informed later through e-mail and telephone
10	Date of Commercial Bid opening	To be informed later through e-mail and telephone (Bidder should furnish the mobile number and e-mail of one authorized representative)
11	Place of Submission & Opening of Bids	S.P. OFFICE DURG
12	Address of Communication	OFFICE OF THE SUPERINTENDENT OF POLICE ,DURG, CHHATTISGARH Durg, Chhattisgarh ,491001 Phone:0788-232071,9479192021 <a href="mailto:spoficedurg@gmail.com">spoficedurg@gmail.com</a>
13	Cost of Tender Document	Rs 10000 (Rs. Ten Thousand only)
14	Earnest Money Deposit (EMD)	Rs. 300000/- (Rupees Three Lakh only). EMD may be submitted in Demand Draft in the name of S.P. DURG 1) Original copy of the DD should be submitted to DURG POLICE as per bid submission criteria mentioned in the RFP
15	Validity of Proposal	Proposals must remain valid 180 days after the submission date.
16	Bid Submission	
17	Availability of Tender Document	Tender can be downloaded from <a href="http://www.cgpolice.gov.in">www.cgpolice.gov.in</a>
18	Method of Selection	L1

--	--	--



### 3. ELIGIBILITY CRITERIA

The bidder should meet the following Eligibility Criteria and must submit documentary evidence in support of their claim for fulfilling the criteria and they should submit an undertaking on their letter head to the fairness of these documents while submitting the bid. The bids received without the documentary evidence will be rejected outright.

#	Minimum Eligibility Criteria	Proof to be submitted for fulfilling the Eligibility Criteria
1.	<p>The bidder should be</p> <ul style="list-style-type: none"> <li>- registered in India under companies Act 1956 OR a firm registered under the Partnership Act 1932 OR LLP Act 2008 OR proprietary firm</li> <li>-REGISTERED WITH GST.</li> <li>- operating in India for the last Three years</li> </ul> <p><u>Consortium Partner Condition:</u></p> <ul style="list-style-type: none"> <li>a) In case of Consortium (not more than 2 partner including prime bidder) all the partner should full fill above criteria</li> <li>b) In case of consortium, the applicant consortium shall submit a valid agreement among the members.</li> </ul> <p>All the consortium members shall be jointly &amp; severally liable.</p>	<ul style="list-style-type: none"> <li>a) Certificate of registration or firm registration or proprietary registration</li> <li>b) GST Registration COPY</li> <li>c) Copy of annual accounts for the last 3 financial years i.e., FY 2013-14, FY 2014-15 &amp; FY 2015-16,</li> </ul>
2.	<p>The bidder should have a minimum average Annual turnover of Rs.1 Crore from Indian operations in IT/ITeS Services/ Telecom Services/ Fibre Cable Laying Services over the last three Financial years (FY13-14 , FY14-15 and FY15-16)</p>	<p>Extracts from the audited Balance sheet and Profit &amp; Loss Account; OR Certificate from the statutory auditor</p>
3	<p>Bidder should not have been blacklisted by any of the State/Central Government or organizations of the State/Central Government in India in the past three years</p>	<p>Self-Declaration in this regard by the authorized signatory of the bidder.</p>
4.	<p>The bidder/ Consortium Partner should have cumulative experience of underground/ overhead laying and installing optical fiber cable (OFC) for a length of at least 60Kms in India after 1st April, 2009</p>	<p>Bidder should submit the following:</p> <ul style="list-style-type: none"> <li>i. Project Completion Certification from the client</li> <li>ii. Agreement/ PO / Work Order issued by client.</li> <li>iii. Phase Completion/ Ongoing Certificate from the client in case of project is</li> </ul>

#	Minimum Eligibility Criteria	Proof to be submitted for fulfilling the Eligibility Criteria
		<p>ongoing</p> <p>Note:</p> <p>Bidder, in case of single entity bidding shall fulfil the above criteria</p> <p>OR</p> <p>The members of the consortium jointly on cumulative basis, in case the bidder is a consortium shall fulfill the above criteria</p>
5.	A power of attorney /Copy of Board resolution in the name of the person signing the bid.	Copy of Power of attorney/ Board resolution copy
6.	The bidder should furnish, as part of its proposal, an Earnest Money Deposit (EMD) of the Rs. 3,00,000/- (Rs. Three Lakh only) The EMD should be in the form of DD issued by a Nationalized / Scheduled Bank.	EMD should be submitted in Demand Draft as per envelope mentioned in the RFP

## **4. INSTRUCTIONS TO THE BIDDERS**

### **4.1 General**

- a) While every effort has been made to provide comprehensive and accurate background Information and requirements and specifications, Bidders must form their own Conclusions about the services required. Bidders and recipients of this TENDER may wish to consult their own legal advisers in relation to this TENDER.
- b) All information supplied by Bidders may be treated as contractually binding on the Bidders, on successful award of the assignment by the DURG POLICE on the basis of this TENDER.
- c) No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by or on behalf of the SP. DURG. Any notification of preferred bidder status by the DURG POLICE shall not give rise to any enforceable rights by the Bidder. DURG POLICE may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of the DURG POLICE.
- d) This TENDER supersedes and replaces any previous public documentation & Communications, and Bidders should place no reliance on such communications.

### **4.2 Compliant Tenders / Completeness of Response**

- a) Bidders are advised to study all instructions, forms, terms, requirements and other bidders are advised to study all instructions, forms, requirements, appendices and other information in the TENDER documents carefully. Online submission of the bid / proposal shall be deemed to have been done after careful study and examination of the TENDER document with full understanding of its implications
- b) Failure to comply with the requirements of this paragraph may render the Proposal non-compliant and the Proposal may be rejected. Bidders must:
  - i. Comply with all requirements as set out within this TENDER.
  - ii. Include all supporting documentations specified in this TENDER

### **4.3 Pre-Bid Meeting & Clarifications**

#### **Bidders Queries**

- a) S.P. DURG shall hold a pre-bid meeting with the prospective bidders on Date & time

and Address mentioned in Fact Sheet of this document.

- b) Maximum two (2) authorized representative of interested organization may attend pre-bid conference at their own cost after giving prior intimation to S.P. DURG.
- c) Pre-bid queries of only those bidders will be responded who have registered themselves on or before response of pre-bid queries is released.
- d) Bidders are requested to submit the e-mail address and mobile no. of one authorized person for all communications along with the registration.
- e) The Bidders will have to ensure that their queries for Pre-Bid meeting should reach to S.P. DURG by email (Excel File only) on or before last date for sending pre-bid queries mentioned in Fact Sheet of this document through the e-mail of only authorized representative of the bidder.
- f) The queries should necessarily be submitted in the following format:

S. No.	TENDER Document Reference(s) (Section & Page Number(s))	Content of TENDER requiring Clarification(s)	Points of Clarification
1.			
2.			
3.			
4.			
5.			
6.			

- g) DURG POLICE shall not be responsible for ensuring that the bidder's queries have been received by them. Any requests for clarifications post the indicated date and time may not be entertained by the DURG POLICE.
- h) Bidders must confirm their participation in advance.

The purpose of the meeting is to provide Bidders information regarding the TENDER, project requirements, and opportunity to seek clarification regarding any aspect of the TENDER and the project. However, the 'S.P. DURG' reserves the right to hold or re-schedule the Pre-Bid meeting.

#### **4.3.2 Responses to Pre-Bid Queries and Issue of Corrigendum**

- a) The Officer notified by the DURG PLOICE will endeavour to provide timely response to the queries. However, DURG POLICE makes no representation or

warranty as to the completeness or accuracy of any response made in good faith, nor does S.P. DURG undertake to answer all the queries that have been posed by the bidders.

- b) At any time prior to the last date for receipt of bids, DURG POLICE may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the TENDER Document by a corrigendum.
- c) The Corrigendum (if any) & clarifications to the queries from all bidders will be posted on the website [www.cgpolice.gov.in](http://www.cgpolice.gov.in)
- d) Any such corrigendum shall be deemed to be incorporated into this TENDER.
- e) In order to provide prospective Bidders reasonable time for taking the corrigendum into account, DURG POLICE may, at its discretion, extend the last date for the receipt of Proposals.

#### **4.4 Key Requirements of the Bid**

##### **4.4.1 Right to Terminate the Process**

- a) DURG POLICE may terminate the TENDER process at any time and without assigning any reason. DURG POLICE make no commitments, express or implied, that this process will result in a business transaction with anyone.
- b) This TENDER does not constitute an offer by DURG POLICE. The bidder's participation in this process may result DURG POLICE selecting the bidder to engage towards execution of the contract.

##### **4.4.2 TENDER Fees**

Bidder needs to pay INR 10000/- for document processing during bid submission.

##### **4.4.3 Earnest Money Deposit (EMD)**

- a) EMD needs to be submitted in Demand Draft in the name of SP. DURG.:-
- b) EMD of all unsuccessful bidders shall be refunded by DURG POLICE within 60 Days of the bidder being notified as being unsuccessful.
- c) EMD amount is interest free and will be refundable to the unsuccessful bidders without any accrued interest on it.
- d) The EMD may be forfeited:
  - If a bidder withdraws its bid during the period of bid validity.
  - In case of a successful bidder, if the bidder fails to sign the contract in accordance with this TENDER.

#### 4.4.4 Submission of Responses

A Two part Bid System will be followed for this RFP with a L1 Selection criterion. The two parts of the bid are Pre-Qualification cum Technical Bid and Commercial Bid.

All the pages of the Bid must be sequentially numbered and should be indexed properly. Any deficiency in the documentation may result in the rejection of the Bid. The Purchaser will not accept delivery of the Bid by fax/e-mail or any other electronic/non-electronic means other than that in the hard copy as prescribed in this RFP. Late bids i.e. bids submitted beyond the prescribed deadline of submission, shall not be accepted

The Bidder should take into account any Corrigendum to this RFP document that may have been published before submitting their Bids. The Bid should be submitted in five covers as mentioned below:

Cover Number	Cover Name	Content	Number of Copies
One	Authorisation Letter, Tender fees and Earnest Money Deposit (EMD) with the label containing RFP Number, Bidder Name and Cover Name	Letter of Authorisation, Tender Fees (original), EMD (Original documents to be submitted to the Purchaser).	1 in Original
Two	Pre-Qualification cum Technical bid with the label containing “Pre-Qualification cum Technical bid”, RFP Name and Number, Bidder Name and Cover name	Pre-Qualification bid as per Section 3 along with the required supporting documents. Technical proposal as per requirement of the RFP with all datasheet of the products	Two Printed Copies (1 Original and 1 Copy) and 1 Soft Copy in DVD
Three	Commercial bid with the label containing with “Commercial bid”, RFP Name and Number, Bidder Name and Cover name and “CONFIDENTIAL”	Commercial Bid as per Annexure III	1 Printed Copy in original
Four	Outer Cover with the label containing, RFP Number, Bidder Name, “Proposal for <RFP Name and Number> and “DO NOT OPEN BEFORE <Bid Opening Date and Time>, Bidder Name and Address	Cover 1,2,3	N/A

The Bidders are requested to go through the RFP advertisement and the RFP carefully to understand the documents required to be submitted and the process to be followed as a part of the Bid. Any deviations may lead to rejection of the Bid.

The Bidder should try to submit the Bid well before the last date and hence to avoid any inconvenience at the last moment. The Bid submission date and time will be as mentioned in the “Fact Sheet”, of this RFP. The Bidder will not be allowed to submit the Bid after the Bid submission time.

### **Commercial Bid Format**

The Bidder must submit the Commercial Bid in the formats specified. The Bidders shall give the required details of all applicable taxes, duties, other levies and charges etc. in respect of provision of services/equipment under this RFP.

The Bidders shall quote for the entire scope of contract on an “overall responsibility” basis such that the total contract value covers all obligations of the Bidder mentioned in or to be reasonably inferred from the Bidding documents in respect of providing the product / services.

Prices quoted by the Bidder shall remain firm during the entire contract period and shall not be subject to variation on any account except change in tax rates and tax laws. A Bid submitted with an adjustable price quotation will be treated as non-responsive and shall be summarily rejected.

#### **4.4.5 Authentication of Bids**

A Proposal should be accompanied by a power-of-attorney in the name of the signatory of the Proposal as per Annexure mentioned in this TENDER.

### **4.5 Preparation and Submission of Proposal**

#### **4.5.1 Proposal Preparation Costs**

The bidder shall be responsible for all costs incurred in connection with participation in the TENDER process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, in providing any additional information required by DURG POLICE to facilitate the evaluation process, and in negotiating a definitive contract or all such activities related to the bid process. DURG POLICE will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

#### **4.5.2 Language**

The Proposal should be filled by the bidders in English language only. If any supporting documents submitted are in any language other than English, translation

of the same in English language is to be duly attested by the Bidders. For purposes of interpretation of the documents, the English translation shall govern.

#### **4.6 Evaluation process**

- a) DURG POLICE will constitute a Tender Evaluation Committee to evaluate the responses of the bidders.
- b) The Proposal Evaluation Committee constituted by the DURG POLICE shall evaluate the responses to the TENDER and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence, may lead to rejection.
- c) The decision of the Tender Evaluation Committee in the evaluation of responses to the TENDER shall be final. No correspondence will be entertained outside the process of evaluation with the Committee.
- d) The Tender Evaluation Committee may ask for meetings with the Bidders to seek clarifications on their proposals.
- e) The Tender Evaluation Committee reserves the right to reject any or all proposals on the basis of any deviations.
- f) Each of the responses shall be evaluated as per the criteria and requirements specified in his TENDER.

##### **4.6.1 Tender Opening**

Received bids will be opened at S.P. OFFICE DURG.

##### **4.6.2 Tender Validity**

The offer submitted by the Bidders should be valid for minimum period of 180 days from the date of opening of Tender.

##### **4.6.3 Tender Evaluation**

- i) Initial Bid scrutiny will be held and incomplete details as given below will be treated as non-responsive. If Proposals;
  - a) Are not submitted in as specified in the TENDER document.
  - b) Received without the Letter of Authorization (Power of Attorney).
  - c) Are found with suppression of details
  - d) With incomplete information, subjective, conditional offers and partial offers submitted



- e) Submitted without the documents requested in the checklist
  - f) Have non-compliance of any of the clauses stipulated in the TENDER
  - g) With lesser validity period.
- ii) All responsive Bids will be considered for further processing as below.
- Tender evaluation Committee will prepare a list of responsive bidders, who comply with all the Terms and Conditions of the Tender. All eligible bids will be considered for further evaluation by a Committee according to the Evaluation process define in this TENDER document. The decision of the Committee will be final in this regard.
- a) Evaluation committee will examine the bids to determine whether they are complete, whether any computational errors have been made, and whether the bids are generally in order.
  - b) The DURG POLICE may conduct clarification meetings with each or any bidder to discuss any matters, technical or otherwise.
  - c) Further, the scope of the evaluation committee also covers taking any decision with regard to the Tender Document, execution/ implementation of the project including management period.
  - d) Proposal shall be opened in the presence of bidders representatives who intend to attend at their cost. The bidders' representatives who are present shall sign a register giving evidence of their attendance
  - e) Proposal document shall be evaluated as per the following steps.
    - **Preliminary Examination of Pre-qualification/Eligibility Criteria documents:**  
The Pre-qualification document will be examined to determine whether the bidder meets the eligibility criteria, whether the proposal is complete in all respects, whether the documents have been properly signed and whether the bids are generally in order. Any bids found to be non-responsive for any reason or not meeting the minimum levels of the performance or eligibility criteria specified in various sections of this Tender Document will be rejected and will not be considered further.
    - **Evaluation of document:** A detailed evaluation of the bids shall be carried out in order to determine whether the bidders are competent enough and whether the technical aspects are substantially responsive to the requirements set forth in the Tender Document

All supporting document submitted in support of Eligibility and Technical

Evaluation matrix should comply the following:-

- i. Copies of supporting documents to be submitted on o DURG POLICE original document may be required for verification.
- ii. Supporting document should clearly indicate value of the completed project and scope of work/ services should be clearly highlighted.

Bidders failing to comply any of the above, may result in rejection of their bid.

### **Evaluation of Commercial Bid:**

- 1) The commercial bids of only technically successful Bidder(s) will be opened.
- 2) The calculation for L1 will be done on basis of Total Overall Cost proposed by Bidder for including Operation and Maintenance for a period of 5 year as per Financial Proposal submitted by the Bidder.
- 3) The Work will be awarded to overall L1 Bidder for Phase 1 and Phase 2.
- 4) The evaluation will be carried out if Commercial bids are complete and computationally correct.
- 5) The price proposal shall be valid for a period of One year from date of signing of Agreement for Phase 1 work order.

### **4.7 Prequalification and Technical Proposal**

- **Prequalification/ Eligibility Criteria**

Pre-qualification document as per eligibility criteria specified under Section -3 above along with the following documentations:

- a) The profile of the bidder along with required certifications that the period of validity of bids is 180 days from the last date of submission of proposal.
- b) Audited annual financial results (balance sheet and profit & loss statement showing business in India) of the bidder for the last three financial years.
- c) Reference list of major clients
- d) Power-of-attorney granting the person signing the proposal the right to bind the bidder as the 'Constituted attorney of the Directorate'.
- e) A copy of the Tender Document, all pages duly-signed by the authorized signatory towards acceptance of the terms and conditions of the Tender Document.

- **Technical proposal**

- a. Proposal particulars
- b. Proposal letter
- c. Proposed approach and methodology and services offered
- d. Proposed Project Plan and Implementation Schedule
- e. Schedule of delivery

- f. All relevant document for Technical Evaluation
- g. Annexure for Technical Qualification

- **Commercial proposal**

- a. Commercial Quote.

#### **4.8 Modification and withdrawal of Bids**

- i. The Bidder is allowed to modify or withdraw its submitted proposal any time prior to the last date and time prescribed for receipt of bids, by giving a written notice to the DURG POLICE.
- ii. Subsequent to the last date for receipt of bids, no modification of bids shall be allowed.

#### **4.9 Proposal Forms**

- i. Wherever a specific form is prescribed in the Proposal document, the Bidder shall use the form to provide relevant information. If the form does not provide space for any required information, space at the end of the form or additional sheets shall be used to convey the required information.
- ii. For all other cases, the Bidder shall design a form to hold the required information.
- iii. DURG POLICE shall not be bound by any printed conditions or provisions in the Bidder's Proposal.

#### **4.10 Local Conditions**

- i. Each Bidder is expected to become fully acquainted with the local conditions and factors, which may affect the performance of the contract and /or the cost.
- ii. The Bidder is expected to know all conditions and factors, which may have any effect on the execution of the contract after issue of letter of Award as described in the bidding document. The DURG POLICE shall not entertain any request for clarification from the Bidder regarding such local conditions.
- iii. It is the Bidder's responsibility that such factors have been properly investigated and considered before submitting the proposal. No claim, what-so-ever, including that for financial adjustment to the contract awarded under the bidding document will be entertained by the DURG POLICE. Neither any change in the time schedule of the contract nor any financial adjustments arising there-of shall be permitted by the DURG POLICE on account of failure of the Bidder to know the local laws / conditions.

- iv. The Bidder is expected to visit and examine and study the all locations and its surroundings and obtain all information that may be necessary for preparing the proposal at its own interest and cost.

#### **4.11 Contacting the DURG POLICE:**

- Any effort by a Bidder to influence the proposal evaluation, proposal comparison or contract award decisions may result in the rejection of the proposal.
- Bidder shall not approach DURG POLICE officers after office hours and/or outside DURG POLICE office premises, from the time of the proposal opening till the time the Contract is awarded.

#### **4.12 Eligibility Criteria**

The bidder shall meet the criteria for eligibility mentioned in the Tender document. The bidder must have registration certificate, valid sales tax registration certificate and valid GST tax registration certificate, whichever is applicable, for this Tender.

#### **4.13 Tentative Schedule of Events**

Tentative schedule of events regarding this tender shall be as per the dates and time given in the Section-2: Fact Sheet.

#### **4.14 Opening of Proposal**

First, the envelope containing Earnest Money Deposit (EMD) will be opened , and if found, that the bidder has furnished all the documents in the prescribed manner, then the second envelope containing Technical Proposal will be opened .

The commercial proposal would be opened in presence of technically short-listed bidders. The Evaluation Committee or its authorized representative will open the tenders.

Sequence of Bid is as follows:

- a. EMD
- b. Technical
- c. Commercial

#### **4.15 Deciding Award of Contract**

- i. The DURG POLICE reserves the right to ask for a technical elaboration/clarification in the form of a technical presentation from the Bidder on the already submitted Technical Proposal at any point of time before opening the Commercial Proposal. The Bidder shall furnish the required information to DURG POLICE and its appointed representative on the date asked for, at no cost to the DURG POLICE. The

DURG POLICE may at its discretion, visit the office of the Bidder any-time before the signing of Agreement.

- ii. DURG POLICE shall inform those Bidders whose proposals did not meet the eligibility criteria or were considered non-responsive, informing that their Commercial Proposals will be returned unopened after completing the selection process. DURG POLICE shall simultaneously notify those Bidders who qualify for the Evaluation process as described in this Tender Document, informing the date and time set for opening of Commercial Proposals. The notification may be sent by mail or fax.
- iii. The bidder's name, the Proposal Price, the total amount of each proposal and other such details as the Tendering Authority may consider appropriate, will be announced and recorded by the DURG POLICE at the opening of bid.
- iv. DURG POLICE shall inform those Bidders whose proposals are accepted via issuance of Letter of Intent (LoI) in duplicate copy. Bidder shall acknowledge the LoI and return the duplicate copy duly sealed and signed, within seven days from the issue of LoI by DURG POLICE.
- v. After acceptance of LoI the bidder will be conduct site survey for phase 1. After Approving of Site Survey report and Bill of Material (BoM) by DURG POLICE, Performance Security shall be deposited as specified in this document for entering into a Contract with DURG POLICE.
- vi. Special Condition for Awarding the Contract -
  - i. DURG POLICE will issue the LoI to L1 Bidder as per criteria mentioned in award of contract.
  - ii. DURG POLICE will sign the contract after Site Survey report and BoM will be approved by DURG POLICE.
- iii. DURG POLICE will issue work order / purchase order to successful bidder for Phase 2 with the same terms and conditions as specified in the contract/agreement with in 1 Year from date of issuance of Agreement.
- vii. The prices for all the Items shall be valid for one year period from date of Agreement. DURG POLICE may its own discretion extend the validity of prices for one more year after satisfactory performance found in first year.

After acceptance of LoI, Performance Security shall be deposited as specified in this document for signing an Agreement with DURG POLICE. Special Condition for Awarding the Agreement:

**DURG POLICE will sign the Agreement with Successful Bidder for a**

**period of 2 Months Implementation and 5 YEAR O&M support after FAT completion.**

**4.16 Confidentiality**

- As used herein, the term “Confidential Information” means any information, including information created by or for the other party, whether written or oral, which relates to internal controls, computer or data processing programs, algorithms, electronic data processing applications, routines, subroutines, techniques or systems, or information concerning the business or financial affairs and methods of operation or proposed methods of operation, accounts, transactions, proposed transactions or security procedures of either party or any of its affiliates, or any client of either party, except such information which is in the public domain at the time of its disclosure or thereafter enters the public domain other than as a result of a breach of duty on the part of the party receiving such information. It is the express intent of the parties that all the business process and methods used by the Bidder in rendering the services hereunder are the Confidential Information of the Bidder.
- The Bidder shall keep confidential, any information related to this tender, with the same degree of care as it would treat its own confidential information. The Bidders shall note that the confidential information will be used only for the purposes of this tender and shall not be disclosed to any third party for any reason what-so-ever.
- At all time of the performance of the services, the Bidder shall abide by all applicable security rules, policies, standards, guidelines and procedures. The Bidder should note that before any of its employees or assignees is given access to the Confidential Information, each such employee and assignees shall agree to be bound by the term of this tender and such rules, policies, standards, guidelines and procedures by its employees or agents.
- The Bidder should not disclose to any other party and keep confidential the terms and conditions of this Contract agreement, any amendment hereof, and any Attachment or Annexure hereof.
- The obligations of confidentiality under this section shall survive rejection of the contract.
- The successful bidder must maintain absolute confidentiality of the documents/ maps/ tools collected in any form including electronic media and any other data/information provided to him for the execution of the work.
- The bidder should not use the Project data for any purpose other than the scope of work specified in the document and added/ amended before signing the contract.
- The Bidder must remove/ destroy the entire data from his custody after completion

of the contract period. If at any stage it is found that the bidder is using the data provided by the client any time during the contract execution or after completion of the contract for any other purposes, stringent legal action will be initiated as per applicable law of land and the contract will be terminated without assigning any reasons.

- Bidder shall not disclose to any one, any information marked as confidential and communicated or made available or accessible by the firm during execution of the work.

#### **4.17 Execution of Agreement**

After acceptance of LoI, the bidder will have to conduct site survey for Phase 1 mentioned in LoI. After Approving of Site Survey report and Bill of Material (BoM) by DURG POLICE, a performance security of 10% of contract value has to be deposit in the form of FDR/TDR/DD/BG of any nationalized /Scheduled Bank in the name of The DURG POLICE DURG, till the completion of the project and shall sign the Agreement with in Twenty one days from the issue of LoI. After issuance of Purchase order for phase 2 by Durg Police, the bidder shall deposit the performance security of 10% of purchase order

#### **4.18 Duration of the contract:**

The CONTRACT shall be initially valid for a period of 2 months implementation and 5 YEAR operation and maintenance support from the date of FAT completion.

#### **4.19 Terms and Conditions:** Applicable Post Award of Contract

##### **4.19.1 Termination Clause**

##### **i) Right to Terminate the Process**

DURG POLICE reserves the right to cancel the contract placed on the selected bidder and recover expenditure incurred by DURG POLICE under the following circumstances:-

- The selected bidder commits a breach of any of the terms and conditions of the bid.  
The bidder goes into liquidation, voluntarily or otherwise.
- An attachment is levied or continues to be levied for a period of seven days upon effects of the bid.
- If the selected bidder fails to complete the assignment as per the time lines prescribed in the TENDER and the extension if any allowed, it will be a breach of contract. The DURG POLICE reserves its right to cancel the order in the event



of delay and forfeit the bid security a liquidated damages for the delay.

- If deductions of account of liquidated damages /Penalty exceeds more than 10% of the total contract price.
- In case the selected bidder fails to deliver the services as stipulated in the delivery schedule, DURG POLICE reserves the right to procure the same or similar services from alternate sources at the risk, cost and responsibility of the selected bidder.

After award of the contract, if the selected bidder does not perform satisfactorily or delays execution of the contract, DURG POLICE reserves the right to get the balance contract executed by another party of its choice by giving one month notice for the same. In this event, the selected bidder is bound to make good the additional expenditure, which DURG POLICE may have to incur in executing the balance contract. This clause is applicable, if for any reason, the contract is cancelled.

- DURG POLICE reserves the right to recover any dues payable by the selected Bidder from any amount outstanding to the credit of the selected bidder, including the pending bills and/or invoking the bank guarantee under this contract.

## **II) Consequences of Termination**

- In the event of termination of the Contract due to any cause whatsoever, [whether consequent to the stipulated term of the Contract or otherwise], DURG POLICE shall be entitled to impose any such obligations and conditions and issue any clarifications as may be necessary to ensure an efficient transition and effective business continuity of the Service(s) which the Vendor shall be obliged to comply with and take all available steps to minimize loss resulting from the termination/breach, and further allow the next successor Vendor to take over the obligations of the erstwhile Vendor in relation to the execution/continued execution of the scope of the Contract.
- Nothing herein shall restrict the right of DURG POLICE to invoke the DURG POLICE Guarantee and other guarantees, securities furnished, enforce the Deed of Indemnity and pursue such other rights and/or remedies that may be available DURG POLICE under law or otherwise.
- The termination hereof shall not affect any accrued right or liability of either Party nor affect the operation of the provisions of the Contract that are expressly or by implication intended to come into or continue in force on or after such termination.

### **4.19.2 Penalty**

The Bidder shall perform its obligations under the agreement entered into with the DURG POLICE, in a professional manner.

In the event of failure to maintain the SLAs, penalty would be levied up to a maximum of 10% of the total cost.

DURG POLICE may recover such amount of penalty from any payment being released to the Bidder, irrespective of the fact whether such payment is relating to this contract or otherwise.

If any act or failure by the bidder under the agreement results in failure or inoperability of systems and if the DURG POLICE has to take corrective actions to ensure functionality of its property, the DURG POLICE reserves the right to impose penalty, which may be equal to the cost it incurs or the loss it suffers for such failures.

- DURG POLICE may impose penalty to the extent of damage to its any equipment, if the damage was due to the actions directly attributable to the staff of Bidder.
- The DURG POLICE shall implement all penalty clauses after giving due notice to the bidder.
- If the Bidder fails to complete the due performance of the contract in accordance with the specification and conditions of the offer document, the DURG POLICE reserves the right either to cancel the order or to recover a suitable amount as deemed reasonable as Penalty / Liquidated Damage for non-performance.

#### **4.19.3 Dispute Resolution Mechanism**

The Bidder and the DURG POLICE shall endeavor their best to amicably settle all disputes arising out of or in connection with the Contract in the following manner:

- a) The Party raising a dispute shall address to the other Party a notice requesting an amicable settlement of the dispute within seven (7) days of receipt of the notice.
- b) Matter will be referred for negotiation between Officer nominated by DURG POLICE and the Authorized Official of the Bidder. The matter shall then be resolved between them and the agreed course of action documented within a further period of 15days.

In case any dispute between the Parties, does not settle by negotiation in the manner as mentioned above, the same may be resolved exclusively by arbitration and such dispute may be submitted by either party for arbitration within 20 days of the failure of negotiations. Arbitration shall be held in Raipur and conducted in accordance with the provisions of Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof. Each Party to the dispute shall appoint one arbitrator each and the two arbitrators shall jointly appoint the third or the presiding arbitrator.

The “Arbitration Notice” should accurately set out the disputes between the parties,

the intention of the aggrieved party to refer such disputes to arbitration as provided herein, the name of the person it seeks to appoint as an arbitrator with a request to the other party to appoint its arbitrator within 45 days from receipt of the notice. All notices by one party to the other in connection with the arbitration shall be in writing and be made as provided in this tender document.

Each Party shall bear the cost of preparing and presenting its case, and the cost of arbitration, including fees and expenses of the arbitrators, shall be shared equally by the Parties unless the award otherwise provides. The Bidder shall not be entitled to suspend the Service/s or the completion of the job, pending resolution of any dispute between the Parties and shall continue to render the Service/s in accordance with the provisions of the Contract/Agreement notwithstanding the existence of any dispute between the Parties or the subsistence of any arbitration or other proceedings.

#### **4.19.4 Notices**

Any notice given by one party to the other pursuant to this contract shall be sent to the other party in writing, e-mail or Facsimile.

A notice shall be effective when delivered or tendered to other party whichever is earlier.

#### **4.19.5 Force Majeure**

Force Majeure is herein defined as any cause, which is beyond the control of the selected bidder or DURG POLICE as the case may be which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affect the performance of the contract, such as:

- Natural phenomenon, including but not limited to floods, droughts, earthquakes and epidemics.
- Acts of any government, including but not limited to war, declared or undeclared priorities, quarantines and embargos.
- Terrorist attack, public unrest in work area provided either party shall within 10 days from occurrence of such a cause, notifies the other in writing of such causes. The bidder or DURG POLICE shall not be liable for delay in performing his/her obligations resulting from any force majeure cause as referred to and/or defined above. Any delay beyond 30 days shall lead to termination of contract by parties and all obligations expressed quantitatively shall be calculated as on date of termination. Notwithstanding this, provisions relating to indemnity, confidentiality survive termination of the contract.

#### **4.19.6 Failure to agree with Terms and Conditions of the TENDER**

Failure of the successful bidder to agree with the Terms & Conditions of the

TENDER shall constitute sufficient grounds for the annulment of the award, in which event DURG POLICE may award the contract to the next best value bidder or call for new proposals from the interested bidders or invoke the PBG of the most responsive bidder.

#### **4.20 Limitation of Liability**

Limitation of liability shall be as per applicable law. The aggregate liability of the supplier/ selected bidder to the Purchaser, whether under the Contract, in tort, or otherwise, shall not exceed the amount specified in the Contract.

#### **4.21 Service Level Agreement (SLA)**

Penalties shall not be levied on the successful bidder in the event of force Majeure affecting the SLA which is beyond the control of the successful bidder.

The following is the details for the indicative SLA for the project:

##### **4.21.1 Delays in the contractor's performance:**

- a) The time allowed for completion of the work as entered in the tender, shall be strictly adhered by the contractor and shall be deemed to be the most important aspect of the contract on the part of the contractor and shall be reckoned from Seventh day from issue of work order by the DURG POLICE. The work shall, throughout the stipulated period of contract, be proceeded with all due diligence to achieve the desired progress uniformly, and the contractor shall pay as penalty an amount equal to 1.0 (one) percent of the amount (minimum Rs. One thousand per week) of the incomplete work for every one week of delay in completion of work, subject to a maximum of 10 (ten) percent of the cost of the work awarded.
- b) On any date the penalty payable as above, reaches 10 (ten) percent of the estimated cost of the work, the contractor should proceed with the work further only on getting a written instructions from the DURG POLICE that, he is allowed to proceed further with the work. It will be in the discretion of the DURG POLICE to allow the contractor to continue with the work on the basis of any written agreement reached between the contractor and the DURG POLICE, one of the conditions of such agreement may be stipulation for the contractor to agree for realization of penalty for delay at a higher rate as may be agreed between the Divisional Engineer and contractor.
- c) Penalty for delay in completion of the work shall be recoverable from the bills of the contractor and/or adjustment from the security deposit or from the bills of any other contract.

However, adjustment from security deposit will be made only when the contract has been terminated or at the time of final settlement of bills on completion of work.

- d) In case of slow progress of the work in a Link which have been awarded to a particular contractor, and the public interest does not permit extension of time limit for completion of the work, the DURG POLICE will have the full right to order that the scope of the contractor may be restricted to such fraction of the whole of the work and get the balance executed at the risk and cost of the contractor. All such payments shall be recovered from the contractor's pending bills or security deposit.
- e) The DURG POLICE reserves the right of cancel the contract and forfeit the security deposit if the contractor fails to commence the work within 15 days after issue of the Agreement.

#### **4.21.2 Penalty for causing inconvenience to the Public:**

- a) To ensure progress during the execution of work and to cause minimum inconvenience to the public, the contractor shall not dig a trench of more than 200 meters at a stretch in a route at a time. He shall cause to lay cable and close such trenches expeditiously. Under any circumstances a stretch of trench of maximum 200 meters shall not be kept open for more than 4 days in case of cable laying by digging paved surfaces. In the event of contractor falling to comply with, these conditions, a penalty of recovery up to Rs.300/- per day the trench is kept open beyond the time limit allowed may be imposed by the department. This penalty will be in addition to that payable for delay or slow work.
- b) The contractor shall not be allowed to dump the empty cable drums/waste materials in Govt./Public place, which may cause inconvenience to Govt./Public. If the contractor does not dispose off the empty cable drums/waste materials within 3 days of becoming empty, the department is at liberty to dispose off the drum in any manner deemed fit and also recover the amount fixed in this contract for empty cable drums/waste materials from the bill/security deposit/along with the costs incurred by the department in disposing off such materials. The DURG POLICE may also levy a penalty up to Rs. One thousand for each such default.
- c) If any such penalty is levied on a contractor for more than 2 occasions, then his/her contract could be terminated. In this regard the decision of DURG POLICE shall be final and binding.

#### **4.21.3 Penalty for cutting / damaging the old cable:**

During excavation of trench utmost care is to be taken by the contractor, so that the existing underground cables are not damaged or cut. In case any damage/cut is done to the existing

cables, a penalty as per the schedule given below will be charged from the contractor or the amount will be deducted from his running bills;

**Size of existing cables cut / damaged Amount of penalty per cut / damage**

Up to 100 pairs cable Rs.500.00 (Five Hundred)  
Above 100 pairs & up to 400 pairs Rs.1,000 (One thousand)  
Above 400 pairs Rs.2,000 (Two thousand)  
OFC cable per cut/damage Rs 50,000/-(Fifty Thousand)

Besides the above penalty, the contractor shall carry out such repairs for restoration of the damaged cable free of charge. The cost of jointing kit shall also be force by the contractor. If contractor fails to repair the damage, the cost of repair (including cost of labour + Jointing kit) shall be recovered from the contractor.

**4.21.4 Penalty for Depth of OFC underground Cable Laying:**

**Method of measurements:** The measurements of the work shall be done for activity wise as and when the item of work is ready for measurement. The methods of measurement of various items are enumerated as under:

➤ **Measurement of depth of trenches for Underground cable**

The cable routes of one work order shall be divided into a number of segments each of maximum 100 meters length bounded by identifiable landmarks at both the ends of the segments. If landmarks are not available, length of segment may be maintained at 100 meters. One segment shall cover only one type of trench. The measurement of depth shall be recorded at each point of measurement (POM) in the measurement book in meters up to two decimal points. For example, 97 cms. Depth shall be recorded as 0.97m. The points of measurements shall be at a distance of 10 meters starting from 0 (Zero) Meter. For example, if the length of segment is 75 meters, the POMs shall be at 0 M, 10 M, 20 M, 30 M, 40 M, 50 M, 60 M, and 70 M. The last POM shall be at 75th M to be recorded against Residual POM. For each segment average depth shall be worked out by dividing the total depth by number of POMs. The measurements of depth shall be recorded in measurement book.

The efforts required to excavate trenches is not proportionate especially with reference to depth. Therefore, normally the workers tend to dig shallow trenches. As standard depth of the trench is important for future life and protection of cables, this tendency has to be discouraged. In order to encourage the contractor to achieve best possible depth in the face of site constraints, the following scale of payment shall be applied for digging trenches of lesser depths, subject to condition that relaxation has been granted by the competent authority for lesser depths.

**For 01 M standard depth**

Depth between Rates applicable as % of approved rates.

90cms to 99 cms. Proportionate of approved rates

80cms to 89 cms 75% of approved rates

70cms to 79 cms 65% of approved rates

60cms to 69 cms 50% of approved rates

50cms to 59 cms 40% of approved rates

40cms to 49 cms 30% of approved rates

30cms to 39 cms 20% of approved rates

20cms to 29 cms NIL

10cms to 19 cms NIL

Below 10 cms NIL

**For 0.60 M standard depth**

Depth between Rates applicable as % of approved rates.

50cms to 59 cms. Proportionate of approved rates

40cms to 49 cms 75% of approved rates

30cms to 39 cms 65% of approved rates

20cms to 29 cms 50% of approved rates

10cms to 19 cms NIL

Below 10 cms NIL

- Measurement of Lengths and profiles of strata and protection.  
The measurements of length of trenches are on running meter basis for particular category of surface strata viz. non-surfaced strata and surfaced strata irrespective of type of soil encountered while digging.

The length of trenches dug in different strata in a segment shall be measured and recorded item code-wise in the measurement book. The segment length from POMs and total of item code-wise length should match.

The type of protection provided (item code-wise) in a segment shall be recorded in the measurement book in the sheet provided for this purpose.

- Measurement of length of cables laid in trenches, through pipes and through ducts shall be measured by use of RODO Meter/Measuring Tape. The length should be cross verified with the marking of lengths on the cables. The length shall be recorded in sheet provided in the measurement book.
- Measurement of depth of trenches for Optical Fiber Cable

The cable routes of one work order shall be divided into a number of segments each of maximum 200 meters length bounded by identifiable landmarks at both the ends of the segments. If landmarks are not available, length of segment may be maintained at 200 meters. One segment shall cover only one type of trench. The measurement of depth shall be recorded at each point of measurement (POM) in the measurement book in

meters in the multiple of 5cms. For example, 97 CMS. depth shall be recorded as 0.95 m and 103 cms as 105 cms. The points of measurements shall be at a distance of 10 meters starting from 0 (Zero) Meter. For example, if the length of segment is 75 meters, the POMs shall be at 0 M, 10 M, 20 M, 30 M, 40 M, 50 M, 60 M, 70 M. The last POM shall be at 75th M to recorded against Residual POM.

The efforts required to excavate trenches are not proportionate especially with reference to depth. Therefore, normally the workers tend to dig shallow trenches. As standard depth of the trench is important for future life and protection cables, this tendency has to be discouraged. In order to encourage the contractor to achieve best possible depth in the face of site constraints, the following scale of payment shall be applied for digging trenches of lesser depths, subject to condition that relaxation has been granted by the competent authority for lesser depths.

**Depth between Reductions in Rate.**

**<165 cms to >= 150cms 5 % of approved rates**

**<150cms to >=130 cms 12.5 % of approved rates**

**<130 cms to >= 100cms 25 % of approved rates**

**Below 100 cms. 40 % of approved rates**

If the area is predominantly rocky or full of hindrances or there is difficulty in getting permissions from PWD or local agencies involved resulting in difficulty to achieve full depth or for full section/route, it is suggested to call for tenders for curtailed depth 140/120 cms.of trench. The rate reduction schedule is given below:

**The payment for subnormal depth will be calculated as per formulae given below:-**

$$P=(100-ROR) \times RA \times D / 100 \times ND.$$

P= Payment for one meter.

ROR= Reduction in rate in % as given above.

RA= Approved rate of trenching per meter.

D= Actual depth in cms.

ND= Nominal depth of trench 165 cms. For which the tender has been floated.

- Measurement of Lengths and profiles of strata and protection: The measurements of length of trenches are on running meter basis irrespective of type of soil encountered while digging. The type of protection provided (item code-wise) in a segment shall be recorded in the measurement book in the sheet provided for this purpose.
- Measurement of length of cable: The length of cables laid in trenches, through pipes and through ducts shall be measured by use of RODO Meter/Measuring Tape. The length should be cross verified with the marking of lengths on lengths on the cables. The lengths shall be recorded in sheet provided in the measurement book.
- Measurement of other items: The measurement/numerical details of other items shall be recorded in the sheets provided for respective items viz:
  - ❖ Digging of joint pit and preparation of joint chamber along with its type i.e. Brick chamber or pre cast RCC type.
  - ❖ Fixing Painting and sign writing of route/joint indicators.



❖ Termination of cable in equipment room and no. of joints

The contractor shall sign all the measurement recorded in the measurement book. This will be considered as an acceptance by the contractor, of measurements recorded in the MB. In case contractor fails to attend at the measurements or fails to countersign or to record the difference within a week, than in any such events the measurements taken by Acceptance Team as the case may be shall be final and binding on the contractor and the contractor shall have no right to dispute the same.

**4.21.5 SLA & Penalties during Operations Phase and also during Phase Commissioning Period (for the sites that are commissioned)**

1. For the purpose of these calculations the route shall be defined as the section of fiber as unique identifiable route.
2. In case of route failure due to cable cut/damage when the services are disrupted /not available for a period up to 8 Hours, the fault(s) shall be treated as **Severity Level 1**. In such cases, if fault is restored within 8 hours there shall be no penalty.
3. In case the fault restoration time extends beyond 8 hours up to 10 hours, the fault shall be treated as **Severity Level 2**.
4. In case the fault restoration time extends beyond 10 hours, the fault shall be treated as **Severity Level 3**.
5. In case the fault restoration time extends beyond 1 week, the fault shall be treated as **Severity Level 4**.
6. The penalty for each of these Levels shall be as tabulated below. In case there is/are additional fault(s) on the route which are yet to be repaired, the already existing severity level shall be maintained and the severity shall be further raised depending upon the restoration time of the latest fault beginning with the earliest fault since the downtime of the services is in concurrent
7. Partial restoration of fault resulting in deteriorated functioning of the system shall not be treated as a repaired fault under any circumstances and the down time till the proper restoration of fault shall be counted in full.
8. In cases where the fault is restored by replacing the faulty FDMS unit/connectors or by shifting of working ports to spare port in order to expeditiously restore the services, the fault would continue to be treated in Severity Level 4 till such time as the faulty unit/port is rectified. However if the Technical parameters/arrangement provided in the alternate solution are acceptable to the Authority the fault would not be raised to

Severity Level 4 The decision regarding acceptance of the alternate solution shall be at the sole discretion of the Authority.

9. The penalties to be imposed for the restoration of different **severity levels** of faults are defined below:

Severity Level	MTTR	Penalty
Level 1	Up to 8 Hours	Nil
Level 2	8 Hours to 10 Hours	INR 10000 per route fault
Level 3	Beyond 10 Hours	Additional INR 4000 per Hour subject to maximum of INR 15000 per fault per route fault
Level 4	Beyond 1 week	Additional INR 1000 per day or part thereof subject to maximum of INR 50000 per fault per route. Any other concurrent fault on the same route to be treated as separate fault.

**10. Fiber cuts per 10 KM/month**

KPI Value	Penalty
10	Nil
11	INR 2000 per cut
12	Additional INR 500 per cut
13 and above	Additional INR 1000 per cut

*Note: All the operational SLAs are measured on weekly & monthly basis. The penalties will be levied on monthly basis and will be deducted from the payment due to the contractor.*

**Maximum Penalty:** The Maximum penalty should be 10% of the total order value against this agreement

**4.22 RIGHT OF MONITORING, INSPECTION AND PERIODIC AUDIT**

The DURG POLICE reserves the right to inspect and monitor / assess the progress / performance at any time during the course of the Contract, after providing due notice to the Selected Bidder. The DURG POLICE may demand, and upon such demand being made, the selected bidder shall provide with any document, data, material or any other information required to assess the progress of the project.

The DURG POLICE shall also have the right to conduct, either itself or through any another agency as it may deem fit, an audit to monitor the performance by the Selected Bidder of its obligations/functions in accordance with the standards committed to or required by the DURG POLICE and the Selected Bidder undertakes to cooperate with and provide to the DURG POLICE / any other Consultant/ Agency appointed by the DURG POLICE, all documents and other details as may be required by them for this purpose. Any deviations or contravention identified as a result of such audit/assessment would need to be rectified by the Selected Bidder failing which the DURG POLICE may, without prejudice to any other rights that it may have, issue a notice of default.

#### **4.23 DURG POLICE Obligations**

The DURG POLICE representative shall interface with the Selected Bidder, to provide the required information, clarifications, and to resolve any issues as may arise during the execution of the Contract.

DURG POLICE shall ensure that timely approval is provided to the selected Bidder, where deemed necessary, which should include diagram / plans and all specifications related to services required to be provided as part of the Scope of Work.

#### **4.24 Information Security**

The Selected Bidder shall not carry and/or transmit any material, information, layouts, diagrams, storage media or any other goods/material in physical or electronic form, which are proprietary to or owned by the DURG POLICE, out of premises, without prior written permission from the DURG POLICE.

The Selected Bidder shall, upon termination of this agreement for any reason, or upon demand by DURG POLICE, whichever is earliest, return any and all information provided to the Selected Bidder by DURG POLICE, including any copies or reproductions, both hard copy and electronic.

#### **4.25 Indemnity**

The Selected Bidder shall execute and furnish to the DURG POLICE, a Deed of Indemnity in favor of the DURG POLICE, in a form and manner acceptable to DURG POLICE, indemnifying DURG POLICE from and against any costs, losses, damages, expenses, claims including those from third parties owing infringement or misappropriation of a patent, copyright, trademark and trade secret, arising or incurred inter- alia during and after the Contract period arising out of:

- Negligence or wrongful act or omission in connection with or incidental to this Contract; or
- Any breach of any of the terms the Selected Bidder's Proposal as agreed, the Tender and this Contract by the Selected Bidder or its team.

The indemnity shall be to the extent of 100% of project cost in favour of the DURG POLICE.

#### **4.26 Payment Schedule**

##### **4.26.1 Total Cost of Services**

The total cost of the Services payable is set forth as per the successful bidder Agreement and after site survey report and BoM approved by the DURG POLICE. Payments under this Contract shall not exceed the amount specified in Agreement.

##### **4.26.2 Payment Milestones**

The below payment terms should be consider for Phase 1 and Phase 2:

- a) All payments will be made in INR only.
- b) No advance will be paid or no letter of credit will be issued.
- c) Link wise payment will be made to successful bidder after completion of laying for a link and FAT by DURG POLICE/Competent Authority.
- d) Payment will be made on actual length of the Link basis to successful bidder
- e) On every 2 Km Continuous Laying under any one Link, bidder will submit the bill for payment and 50% of the total cost for 2 Km OFC laying will be release after verifying by the competent authority.
- f) 80% of the value for one link after successful FAT from both the end PoP (every Junctions should consider as PoP) will be paid to successful bidder.
- g) The payment will be subject to fulfillment of warranty obligations.
- h) The Duties and Taxes as applicable at the time of supply within the Delivery Schedule specified in the Tender will be paid. In case, the Duties and/or Taxes revised upward/ downward shall be applicable at the time of invoicing.
- i) The Successful Bidder will have full and exclusive liability for payment of all Duties, Taxes and other statutory payments payable under any or all of the Statutes/Laws/Acts etc now or hereafter imposed.
- j) Payment shall be made within 10 days of the submission of invoices.

#### **4.27 Events of Default by the Selected Bidder**

The failure on the part of the Selected Bidder to perform any of its obligations or comply with any of the terms of this contract shall constitute an Event of Default on the part of the Selected Bidder. The events of default as mentioned above may include inter-alia the following:

- The Selected Bidder has failed to perform any instructions or directives issued by the DURG POLICE which it deems proper and necessary to execute the scope of work under the Contract, or
- The Selected Bidder has failed to adhere to any of the key performance indicators

as laid down in the Key Performance Measures / Contract, or if the Selected Bidder has fallen short of matching such standards/targets as DURG POLICE may have designated with respect to any task necessary for the execution of the scope of work under this Contract. The above mentioned failure on the part of the Selected Bidder may be in terms of failure to adhere to timelines, specifications, requirements or any other criteria as defined by DURG POLICE;

- The Selected Bidder has failed to remedy a failure to perform its obligations in accordance with the specifications issued by the DURG POLICE, despite being served with a default notice which laid down the specific deviance on the part of the selected Bidder to comply with any stipulations or standards as laid down by the DURG POLICE; or
- The Selected Bidder / Bidder's Team has failed to conform to any of the Service/Facility Specifications/standards as set out in the scope of work of this Tender document or has failed to adhere to any amended direction, modification or clarification as issued by the DURG POLICE during the term of this Contract and which the DURG POLICE deems proper and necessary for the execution of the scope of work under this Contract;
- The Selected Bidder has failed to demonstrate or sustain any representation or warranty made by it in this Contract, with respect to any of the terms of its Proposal, the Tender and this Contract
- There is a proceeding for bankruptcy, insolvency, winding up or there is an appointment of receiver, liquidator, assignee, or similar official against or in relation to the Selected Bidder.
- The Selected Bidder / Bidder's Team has failed to comply with or is in breach or contravention of any applicable laws.
- Where there has been an occurrence of such defaults inter alia as stated above, the DURG POLICE shall issue a notice of default to the Selected Bidder, setting out specific defaults / deviances / omissions and providing a notice of Sixty days to enable such defaulting party to remedy the default committed.
- Where despite the issuance of a default notice to the Selected Bidder by the DURG POLICE and the Selected Bidder fails to remedy the default to the satisfaction of the DURG POLICE, the DURG POLICE may, where it deems fit, issue to the defaulting party another default notice or proceed to adopt such remedies as may be available to the DURG POLICE.

#### **4.28 Liquidated Damages**

Subject to clause for Force Majeure, if the bidder fails to complete the

services under Project scope of work before the scheduled completion date or the extended date or if the Selected Bidder repudiates the contract before completion of the work, the DURG POLICE, at its discretion, may without prejudice to any other right or remedy available to it under the contract, recover a maximum of 10 percent of the project cost from the Selected Bidder, as Liquidated Damages (LD).

In case it leads to termination, DURG POLICE shall give thirty days' notice to the Selected Bidder of its intention to terminate the contract and shall so terminate the contract unless during the thirty days' notice period, the Selected Bidder initiates remedial action acceptable to the DURG POLICE.

The DURG POLICE may without prejudice to its right to affect recovery by any other method, deduct the amount of liquidated damages from any money belonging to the Selected Bidder in its hands (which includes the DURG POLICE right to claim such amount against Selected Bidder's Bank Guarantee) or which may become due to the Selected Bidder. Any such recovery or liquidated damages shall not in any way relieve the Selected Bidder from any of its obligations to complete the work or from any other obligations and liabilities under the Contract.

#### **4.29 Dispute Resolution**

The DURG POLICE and the Selected Bidder shall make every effort to resolve amicably by direct informal negotiations, any disagreement or disputes, arising between them under or in connection with the Contract.

If even after thirty (30) days from the commencement of such direct informal negotiations, the DURG POLICE and the Selected Bidder are unable to resolve amicably a contract dispute, either party may require that the dispute be referred for resolution to the formal mechanism specified in clauses below.

- In the case of a dispute or difference arising between the DURG POLICE and the Selected Bidder relating to any matter arising out of or connected with this Contract, such dispute or difference shall be referred to the award of Arbitrator as indicated in this TENDER. The award of the Arbitrator shall be final and binding on the parties.
- The Arbitration and Conciliation Act 1996, the rules there under and any statutory modification or re-enactments thereof, shall apply to the arbitration proceedings.
- The venue of arbitration shall be the Raipur, India.
- The DURG POLICE may terminate this contract, by giving a written notice of termination of minimum thirty days, to the Selected Bidder, if the Selected Bidder fails to comply with any decision reached consequent upon arbitration proceedings pursuant to above Clause.

#### **4.30 Continuance of the Contract:**

Notwithstanding the fact that settlement of dispute(s) (if any) under arbitration may be pending, the parties hereto shall continue to be governed by and perform the work in accordance with the provisions under the Scope of Work to ensure continuity of operations.

#### **4.31 Conflict of interest**

The Bidder shall disclose to DURG POLICE in writing, all actual and potential conflicts of interest that exist, arise or may arise (either for the Vendor the Bidder's team) in the course of performing the Service(s) as soon as practical after it becomes aware of that conflict.

#### **4.32 Severance**

In the event any provision of the Contract is held to be invalid or unenforceable under the applicable law, the remaining provisions of this Contract shall remain in full force and effect.

#### **4.33 Governing Language**

The Agreement shall be written in English language. Subject to below Clause, such language versions of the Agreement shall govern its interpretation. All correspondence and other documents pertaining to the Contract that are exchanged by parties shall be written in English language only.

#### **4.34 "No Claim" Certificate**

The Selected Bidder shall not be entitled to make any claim, whatsoever against DURG POLICE, under or by virtue of or arising out of, the contract, nor shall DURG POLICE entertain or consider any such claim, if made by the Selected Bidder after it has signed a "No claim" certificate in favor of DURG POLICE in such form as shall be required by it after the work is finally accepted.

#### **4.35 Publicity**

The Selected Bidder shall not make or permit to be made a public announcement or media release about any aspect of this Contract unless the DURG POLICE first gives its written consent to the selected bidder.

#### **4.36 GENERAL**

- Relationship between the Parties
  - Nothing in the Contract constitutes any fiduciary relationship between the DURG POLICE and Selected Bidder/ Bidder's Team or any relationship of

employer employee, principal and agent, or partnership, between the DURG POLICE and Selected Bidder.

- No Party has any authority to bind the other Party in any manner whatsoever except as agreed under the terms of the Contract.
  - DURG POLICE will not be under any obligation to the Implementation Agency's Team except as agreed under the terms of the Contract.
- No Assignment
- The Selected Bidder shall not transfer any interest, right, benefit or obligation under the contract without the prior written consent of DURG POLICE.
- Survival
- The provisions of the clauses of the Contract in relation to documents, data, processes, property, Intellectual Property Rights, indemnity, publicity and confidentiality and ownership survive the expiry or termination of this Contract and in relation to confidentiality, the obligations continue to apply unless DURG POLICE notifies the Selected Bidder of its release from those obligations.
- Entire Contract
- The terms and conditions laid down in the Tender and all annexure thereto as also the Proposal and any attachments/annexes thereto shall be read in consonance with and form an integral part of the Contract. The Contract supersedes any prior contract, understanding or representation of the Parties on the subject matter.
- Governing Law
- This contract shall be governed in accordance with the laws of India.
- Jurisdiction of Courts
- The High Court of India at Bilaspur, Chhattisgarh has exclusive jurisdiction to determine any proceeding in relation to the Contract.
- Compliance with Laws
1. The Selected Bidder shall comply with the laws in force in India in the course of performing the Contract.
- Notices
- A "notice" means:



- a notice; or
- A consent, approval or other communication required to be in writing under the Contract. All notices, requests or consent provided for or permitted to be given under this Contract shall be in writing and shall be deemed effectively given when personally delivered or mailed by pre-paid certified/registered mail, return receipt requested, addressed as follows and shall be deemed received two days after mailing or on the date of delivery if personally delivered:

To

The S.P.

COLLECTORAT

DURG

To Selected Bidder at:

Attn:

Address:

[Phone:]

[Fax:]

Any Party may change the address to which notices are to be directed, by giving a notice to the other party in the manner specified above. A notice served on a Representative is taken to be notice to that Representative's Party.

➤ **Waiver**

- Any waiver of any provision of this Contract is ineffective unless it is in writing and signed by the Party waiving its rights.
- A waiver by either Party in respect of a breach of a provision of this Contract by the other Party is not a waiver in respect of any other breach of that or any other provision.
- The failure of either Party to enforce at any time any of the provisions of this Contract shall not be interpreted as a waiver of such provision.

➤ **Modification**

- Any modification of the Contract shall be in writing and signed by an authorized representative of each Party.

➤ **TAXES**

- Bidders are required to quote the charges inclusive of all Taxes. The same would be shown as a separate line item in the commercial form as per annexure provided in this RFP.
- Any upward/downward revision of taxes shall be applicable at the time of invoicing. However, to arrive at the bid value of the respective bidder, bidder has to quote the charges inclusive of all taxes mentioning the prevailing tax rates.

➤ **Application**

- These General Conditions shall apply to the extent that provisions in other parts of the Contract do not supersede them.

**4.37 Fraud and Corrupt Practices**

- The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this TENDER, the DURG POLICE shall reject a Proposal without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the “Prohibited Practices”) in the Selection Process. In such an event, the DURG POLICE shall, without prejudice to its any other rights or remedies, forfeit and appropriate the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, inter alia, time, cost and effort of the Authority, in regard to the TENDER, including consideration and evaluation of such Bidder s Proposal.
- Without prejudice to the rights of the DURG POLICE under Clause above and the rights and remedies which the DURG POLICE may have under the LoI or the Agreement, if an Bidder or Systems Implementation Agency, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the issue of the LoI or the execution of the Agreement, such Bidder shall not be eligible to participate in any tender or TENDER issued by the DURG POLICE during a period of < period, suggested 2 (two) > years from the date such Bidder, as the case may be, is found by the DURG POLICE to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.
- For the purposes of this Section, the following terms shall have the meaning

hereinafter respectively assigned to them.

➤ **“corrupt practice” means**

(i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the DURG POLICE who is or has been associated in any manner, directly or indirectly with the Selection Process or the LoI or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the DURG POLICE, shall be deemed to constitute influencing the actions of a person connected with the Selection Process); or

(ii) save as provided herein, engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LoI or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LoI or the Agreement, who at any time has been or is a legal, financial or technical consultant/ adviser of the DURG POLICE in relation to any matter concerning the Project;

➤ **“fraudulent practice” means** a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;

➤ **“Coercive practice” means** impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person participation or action in the Selection Process;

➤ **“undesirable practice” means**

(i) establishing contact with any person connected with or employed or engaged by DURG POLICE with the objective of canvassing,

(ii) lobbying or in any manner influencing or attempting to influence the Selection Process; or

(iii) having a Conflict of Interest; and

➤ **“Restrictive practice” means** forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.

## ii) Arbitration

DURG POLICE and the selected bidder shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract. If, after thirty (30) days from the commencement of such informal negotiations, DURG POLICE and the selected Bidder have been unable to amicably resolve the dispute, either party may require that the dispute be referred for resolution to Secretary, Department of Electronics and Information Technology, Government of Chhattisgarh, Raipur, as single party Arbitrator in accordance with the Arbitration and Conciliation Act, 1996. Decision of arbitrator shall be final and binding to all parties.

All Arbitration proceedings shall be held at Raipur, Chhattisgarh, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be in English.

#### **4.38 Terms of Payment**

The Successful Bidder shall bear their own costs of any Site Survey, Conveyance, audits and inspections etc. The terms of payment are inclusive of any costs of the solution.

#### **4.39 Obligations**

The Successful Bidder shall be obliged to implement any proposed changes once approval in accordance with Article above has been given, with effect from the date agreed for implementation.

#### **4.41 Notification of Award**

Prior to expiration of the period of bid validity, DURG POLICE will notify the successful bidder(s) in writing, that their bid has been accepted.

#### **4.42 Contract Period**

The Successful bidder shall sign contract with the DURG POLICE for a period of 2 Months implementation and 5 YEAR Operation and Maintenance Support from the date of FAT completion.

The bidder should conclude and submit the Survey report with in 15 days from Issuance of LoI. After submission of survey report and accepted by DURG POLICE , DURG POLICE will sign the Agreement with the successful bidder after submission of Performance Bank Guarantee as per requirement of RFP and Deadline for Implementation and O & M Period will start.

## **5. SCOPE OF WORK**

The scope of work necessarily, but not exclusively includes the following activities:-

1. Underground OFC Laying
2. Overhead OFC Laying
3. Operation and Maintenance for a period of 5 years

### **The Scope of work is divided in Phase 1 and Phase 2:**

The project will be complete in two phases. The below are the details of cameras and locations for Phase 1 and Phase 2.

<b>Phase 1 Junction</b>				
<b>No</b>	<b>POLICE STATION</b>	<b>NAGAR NIGAM</b>	<b>PLACE</b>	<b>No-of Roads</b>
1	PULGAON	DURG	ANJORA CHOWK	3
2	SUPELA	BHILAI	GURUDWARA	3
3	CHHAWANI	BHILAI	POWER HOUSE CHOWK	4
4	OLD BHILAI	OLD BHILAI	SIRSAGATE	3
5	KUMHARI	KUMHARI	STATION CHOWK KUMHARI	4
6	MOHAN NAGAR	DURG	KARHIDH CHOWK EXIT DHAMDHA	4
7	BHILAI NAGAR	BHILAI	FAWWARA CHOWK	4
8	PULGAON	DURG	PULGAON CHOWK	4
9	DURG	DURG	PATEL CHOWK	4

10	SUPELA	BHILAI	SUPELA CHOWK	4
11	SUPELA	BHILAI	CHANDRYA MOURYA CHOWK	4

<b>Phase 2 Junction's</b>				
<b>No</b>	<b>POLICE STATION</b>	<b>NAGAR NIGAM</b>	<b>PLACE</b>	<b>No-of Roads</b>
1	CHHAWANI	BHILAI	RAMLU CHOWK (18 NO)	3
2	CHHAWANI	BHILAI	OVER BRIDGE CHHAWANI	2
3	CHHAWANI	BHILAI	TEEN DARSHAN MANDIR	3
4	CHHAWANI	BHILAI	CIRCULAR MARKET	3
5	JAMUL	BHILAI	ACC CHOWK	3
6	JAMUL	BHILAI	BOGDA PULIYA	3
7	JAMUL	BHILAI	CHHAWANI CHOWK	4
8	KHURSIPAR	BHILAI	KHURSIPAR GATE TIRAHA	3
9	KHURSIPAR	BHILAI	DABRA PARA	3
10	KHURSIPAR	BHILAI	TRANSPORT NAGAR CHOWK	3
11	SUPELA	BHILAI	NEHARU NAGAR CHOWK OVER BRIDGE	3
12	SUPELA	BHILAI	AVANTI BAI CHOWK	4
13	SUPELA	BHILAI	BSR CHOWK JUNWANI	4
14	SUPELA	BHILAI	KPS CHOWK NEHARU NAGAR	3
15	SUPELA	BHILAI	JAI HIND CHOWK SMRITI NAGAR	4
16	SUPELA	BHILAI	AKASH GANGA MARKET	4
17	BHILAI NAGAR	BHILAI	GLOBE CHOWK	4
18	BHILAI NAGAR	BHILAI	2.5 MILIYANTAN CHOWK	4
19	BHILAI NAGAR	BHILAI	PANTHI CHOWK	3
20	BHILAI NAGAR	BHILAI	JP CHOWK	4
21	BHILAI BHATTI	BHILAI	MURGA CHOWK	4
22	BHILAI BHATTI	BHILAI	BORIYA GATE	4
23	NEWAI	BHILAI	MAITRI KUNJ CHOWK	4
24	NEWAI	BHILAI	BRP CHOWK	3
25	OLD BHILAI	BHILAI 03	HATHKHOJ	3
26	OLD BHILAI	BHILAI 03	UMDA CHOWK	3

<b>Phase 2 Junction's</b>				
<b>No</b>	<b>POLICE STATION</b>	<b>NAGAR NIGAM</b>	<b>PLACE</b>	<b>No-of Roads</b>
27	OLD BHILAI	BHILAI 03	PURAINA CHOWK	4
28	OLD BHILAI	BHILAI 03	IN FRONT CHARODA HANUMAN MANDIR	3
29	OLD BHILAI	BHILAI 03	BHILAI 03 MARKET	3
30	DURG	DURG	JAIL TIRAHA	3
31	DURG	DURG	UTAI TIRAHA (GHANDHI CHOWK)	3
32	DURG	DURG	MAHARAJA CHOWK	4
33	DURG	DURG	GUNJ PARA CHOWK	3
34	DURG	DURG	BUS STAND CHOWK	4
35	DURG	DURG	SADAR SARAFI MARKET	3
36	DURG	DURG	RAJENDRA PARK CHOWK	4
37	DURG	DURG	TAKIYA PARA CHOWK	3
38	DURG	DURG	KANHIYA PURI CHOWK	3
39	DURG	DURG	PRAGATI MAIDAN TIRAHA BORSI	3
40	DURG	DURG	SOCIATY CHOWK BORSI	3
41	DURG	DURG	CIVIL LINE SAI MANDIR CHOWK NEAR STADUIM	4
42	DURG	DURG	CHANDI MANDIR CHOWK	4
43	MOHAN NAGAR	DURG	MALVIYA NAGAR CHOWK	4
44	MOHAN NAGAR	DURG	Y SHAPE BRIDGE	3
45	MOHAN NAGAR	DURG	GREEN CHOWK	5
46	MOHAN NAGAR	DURG	STATION ROAD (NEAR SCORPIAN BAR)	3
47	MOHAN NAGAR	DURG	AGRSEN CHOWK	4
48	MOHAN NAGAR	DURG	BOGDA PULIYA DHAMDHA ROAD	4
<b>TOTAL</b>				

**Underground OFC Cable Laying details junction wise**

<b>Sr.</b>	<b>Junction From</b>	<b>Sr.</b>	<b>Junction to</b>	<b>Distance</b>	<b>Unit</b>
------------	----------------------	------------	--------------------	-----------------	-------------

No.		No.			
8	PULGAON CHOWK	44	GUNJ PARA CHOWK	2.50	KM
44	GUNJ PARA CHOWK	9	PATEL CHOWK	1.50	KM
45	BUS STAND CHOWK	47	RAJENDRA PARK CHOWK	0.50	KM
47	RAJENDRA PARK CHOWK	54	MALVIYA NAGAR CHOWK	1.80	KM
54	MALVIYA NAGAR CHOWK	55	Y SHAPE BRIDGE	2.50	KM
55	Y SHAPE BRIDGE	2	GURUDWARA	2.50	KM
2	GURUDWARA	22	NEHARU NAGAR CHOWK OVER BRIDGE	0.90	KM
10	SUPELA CHOWK	11	CHANDRYA MOURYA CHOWK	1.30	KM
11	CHANDRYA MOURYA CHOWK	14	TEEN DARSHAN MANDIR	1.00	KM
14	TEEN DARSHAN MANDIR	3	POWER HOUSE CHOWK	1.60	KM
3	POWER HOUSE CHOWK	19	KHURSIPAR GATE TIRAHA	1.70	KM
19	KHURSIPAR GATE TIRAHA	20	DABRA PARA	1.50	KM
20	DABRA PARA	40	BHILAI 03 MARKET	2.50	KM
40	BHILAI 03 MARKET	4	SIRSAGATE	1.20	KM
4	SIRSAGATE	39	IN FRONT CHARODA HANUMAN MANDIR	3.80	KM
39	IN FRONT CHARODA HANUMAN MANDIR	5	STATION CHOWK KUMHARI	9.50	KM
				36.30	

**Overhead OFC Cable Laying details junction wise**

Sr. No.	Junction From	Sr. No.	Junction to	Distance	Unit
9	PATEL CHOWK	42	UTAI TIRAHA (GHANDHI CHOWK)	0.27	KM
27	AKASH GANGA MARKET	10	SUPELA CHOWK	0.23	KM
9	PATEL CHOWK	46	SADAR SARAFI MARKET	0.29	KM
32	MURGA CHOWK	3	POWER HOUSE CHOWK	0.90	KM
9	PATEL CHOWK	48	TAKIYA PARA CHOWK	0.95	KM
3	POWER HOUSE CHOWK	13	OVER BRIDGE CHHAWANI	0.26	KM
46	SADAR SARAFI MARKET	53	CHANDI MANDIR CHOWK	0.70	KM
3	POWER HOUSE CHOWK	15	CIRCULAR MARKET	0.40	KM
42	UTAI TIRAHA (GHANDHI CHOWK)	52	CIVIL LINE SAI MANDIR CHOWK NEAR STADIUM	1.50	KM
13	OVER BRIDGE	18	CHHAWANI CHOWK	1.40	KM



	CHHAWANI				
42	UTAI TIRAHA (GHANDHI CHOWK)	45	BUS STAND CHOWK	0.45	KM
14	TEEN DARSHAN MANDIR	12	RAMLU CHOWK (18 NO)	1.50	KM
48	TAKIYA PARA CHOWK	58	AGRSEN CHOWK	0.85	KM
18	CHHAWANI CHOWK	16	ACC CHOWK	1.20	KM
52	CIVIL LINE SAI MANDIR CHOWK NEAR STADUIM	41	JAIL TIRAHA	1.00	KM
16	ACC CHOWK	17	BOGDA PULIYA	1.30	KM
52	CIVIL LINE SAI MANDIR CHOWK NEAR STADUIM	49	KANHIYA PURI CHOWK	0.70	KM
18	CHHAWANI CHOWK	21	TRANSPORT NAGAR CHOWK	2.00	KM
49	KANHIYA PURI CHOWK	43	MAHARAJA CHOWK	0.85	KM
21	TRANSPORT NAGAR CHOWK	36	HATHKHOJ	0.90	KM
43	MAHARAJA CHOWK	51	SOCIATY CHOWK BORSI	1.10	KM
36	HATHKHOJ	37	UMDA CHOWK	2.60	KM
51	SOCIATY CHOWK BORSI	50	PRAGATI MAIDAN TIRAHA BORSI	0.95	KM
58	AGRSEN CHOWK	56	GREEN CHOWK	0.40	KM
56	GREEN CHOWK	57	STATION ROAD (NEAR SCORPIAN BAR)	0.35	KM
56	GREEN CHOWK	59	BOGDA PULIYA DHAMDHA ROAD	2.40	KM
59	BOGDA PULIYA DHAMDHA ROAD	6	KARHIDH CHOWK EXIT DHAMDHA	0.95	KM
22	NEHARU NAGAR CHOWK OVER BRIDGE	25	KPS CHOWK NEHARU NAGAR	0.80	KM
25	KPS CHOWK NEHARU NAGAR	24	BSR CHOWK JUNWANI	1.10	KM
24	BSR CHOWK JUNWANI	26	JAI HIND CHOWK SMRITI NAGAR	1.00	KM
24	BSR CHOWK JUNWANI	23	AVANTI BAI CHOWK	2.70	KM
22	FAWWARA CHOWK	30	PANTHI CHOWK	1.20	KM
7	FAWWARA CHOWK	34	MAITRI KUNJ CHOWK	0.65	KM
34	MAITRI KUNJ CHOWK	35	BRP CHOWK	2.60	KM
28	GLOBE CHOWK	29	2.5 MILIYANTAN CHOWK	1.80	KM
29	2.5 MILIYANTAN CHOWK	32	MURGA CHOWK	2.70	KM
29	2.5 MILIYANTAN CHOWK	31	JP CHOWK	1.10	KM
				42.05	

**Underground OFC Laying :**

The following are the POINTS covered under Architecture

**KUMHARI-CHARODA-SIRSA GATE-DABARA PARA-KURSIPAR-  
POWERHOUSE-MAURYA CINEMA-SUPELA-NEHRU NAGAR-GURUDWARA  
NN-Y SHAPE BRIDGE-PATEL CHOWK-MINIMATA CHOWK.**

**Link 1 : KUMHARI – CHARODA HANUMAN MANDIR Approx. 10 Km**

**A.: KUMHARI CHOWK TO KUMHARI THANA APPROX. 3KM**

**Link 2 : CHARODA HANUMAN MANDIR – SIRSA GATE – Approx. 2 Km**

**Link 3 : SIRSA GATE – DABARA PARA - Approx. 5 Km**

**A:SIRSA GATE - BHILAI 3 THANA-APPROX 1KM**

**Link 4 : DABARA PARA – KURSIPAR TIRAHA - Approx. 2 Km**

**Link 5 : KURSIPAR TIRAHA – POWER HOUSE - Approx. 3 Km**

**Link 6: POWER HOUSE – MAURYA CINEMA- Approx. 3 Km**

**A: POWER HOUSE – CHAWNI THANA – APPROX .5 KM**

**B:POWER HOUSE – JAMUL THANA –APPROX 3 KM**

**Link 7: MAURYA CINEMA – SUPELA CHOWK – Approx. 2 Km**

**Link 8 : SUPELA CHOWK – NEHRU NAGAR CHOWK - Approx. 3 Km**

**A: SUPELA CHOWK-SUPELA THANA –APPROX 1 KM**

**B: SUPELA CHOWK-CONTROL ROOM SEC-6 –APPROX 5 KM**

**Link 9 : NEHRU NAGAR CHOWK – GURUDWARA NN - Approx. .5 Km**

**Link 10: GURUDWARA NN – Y SHAPE BRIDGE - Approx. 1.5 Km**

**Link 11: Y SHAPE DRIDGE – PATEL CHOWK – Approx. 3 Km**

**A: PATEL CHOWK- MOHAN NAGAR THANA –APPROX 5KM**

**B:PATEL CHOWK – CITY KOTWALI – APPROX .5KM**

**C: PATEL CHOWK-S.P. OFFICE –APPROX 1 KM**

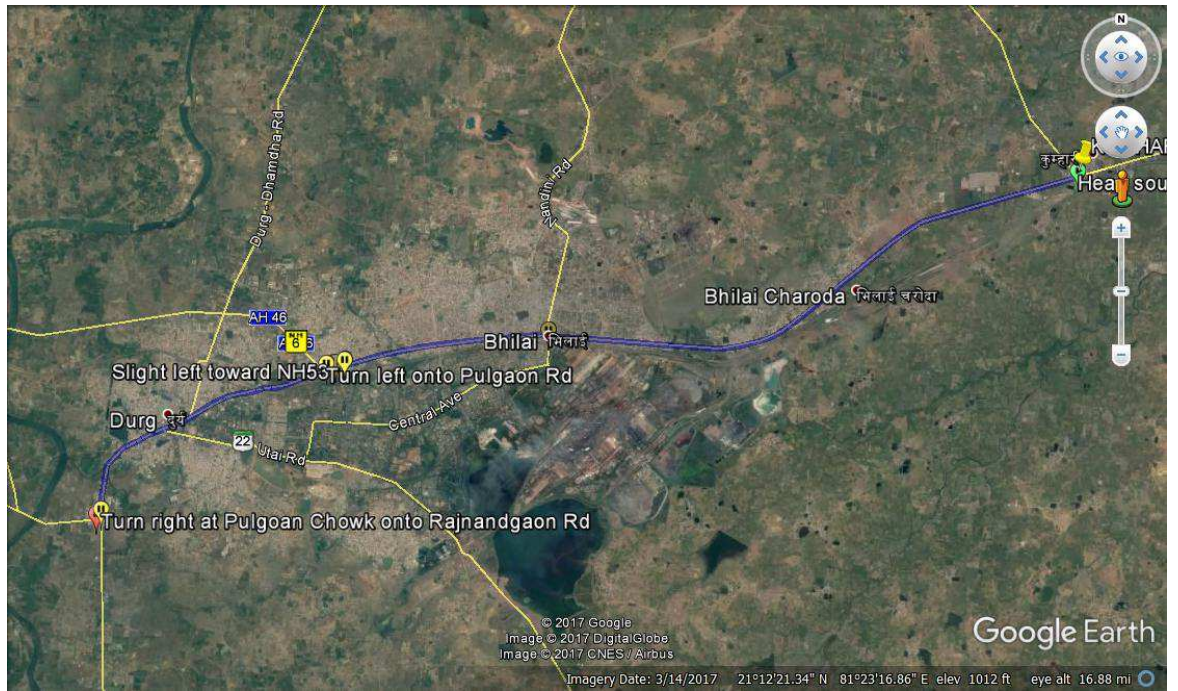
**Link 12: PATEL CHOWK – MINI MATA CHOWK – Approx. 1.5 Km**

**A: MINI MATA CHOWK-PULGAON THANA –APPROX 1 KM**

**Total 40 Km**

**Note: Actual length would be discovered after detailed survey by the successful bidder.**

The following are the pictorial view and details of Link wise installation and commissioning required under this project.



## 5.1 IMPORTANT TERMS AND CONDITION FOR SCOPE OF WORK

Any clarification on the details of the work can be obtained from the DURG POLICE up to one day Prior to the date specified for submitting of the tender.

- 5.1.1 The prospective bidders are advised to make a detailed survey of all Link's sections for which they are bidding and familiarize themselves with the soil and terrain so that the rates quoted takes all factors in to considerations.
- 5.1.2 After acceptance of LoI the bidder will be conduct site survey for Phase Awarded to Bidder. After Approving of Site Survey report and Bill of Material (BoM) by DURG POLICE, Performance Security shall be deposited as specified in this document for entering into a Contract with DURG POLICE.
- 5.1.3 The Cost for Site survey will be include in Financial Proposal.
- 5.1.4 The Network Operation centre (NOC) shall be established and operated from CONTROL ROOM SECTOR 6. The bidder who will participate in this tender is not responsible for establishment of NOC. The bidder is responsible for laying of OFC overhead/underground as per detail provided above and testing of
- 5.1.5 The Total OFC laying is as described in pictorial view above.

- 5.1.6 Phase is also divided in Link as mentioned in the document above (One Junction to another junction is a Link).
- 5.1.7 The bidder should quote for Phase Wise as mentioned above.
- 5.1.8 In case if the awarded bidder fails to perform their services, DURG POLICE reserves the right to terminate the contract and award the contract to other successful bidder.
- 5.1.9 The successful bidder will complete full cable laying within the time period (2 months) mentioned in delivery schedule.
- 5.1.10 Final Acceptance Test (FAT) will be done by DURG POLICE or DURG POLICE nominated agency as per specifications mentioned in this RFP.
- 5.1.11 The bidders are expected to accept all technical/commercial terms & conditions mentioned in the RFP document. Any deviations in the terms and conditions should be clearly mentioned DURG POLICE however, reserves the right to reject any or all of the offers with deviation.
- 5.1.12 Contractors who are confident for executing the work in time by employing the required resources, men and materials, should only participate in this tender offer.
- 5.1.13 It is to be specifically noted that, the DURG POLICE wants the work to be done simultaneously in as many Links, as possible so that the work can be completed in the shortest possible time.

## 5.2 Roles & Responsibilities of Stakeholders

Project is envisaged to be executed in two stages:

- A) Implementation
- B) Operations & Maintenance

The roles and responsibilities of the key stakeholders during the three phases are detailed in the Responsibility Matrix below:

### **Responsibility Matrix**

**Primary:** Entity with primary responsibility for an activity is expected to drive the activity and ensure successful completion.

**Secondary:** Entity with secondary responsibility for an activity is expected to provide support to the primary owner.

<b>Roles &amp; Responsibilities Matrix</b>		
<b>Activities</b>	<b>The Authority</b>	<b>Contractor/ Bidder</b>
<b>Approvals</b>		
Securing Right Of Way (ROW) permissions by Forest, State Rodaways, National Highways	DURG POLICE responsible for providing ROW Permission	The Contractor should submit required document to approving authority for ROW permission
<b>Route Survey &amp; Network Design Validation</b>		
Route Survey after issuance of LoI to successful bidders.	DURG POLICE/Competent Authority will approve the Route survey report /deviation after submission of report by contractor	The Contractor shall validate the route map & network design supplied by the DURG POLICE and submit compliance / deviation summary of the implementation sites, after issuance of LoI to DURG POLICE or any designated agency by the Department of IT, Government of Chhattisgarh
<b>Implementation Schedule</b>		
Submission of preliminary implementation schedule by Contractor	DURG POLICE/Competent Authority will approved the implementation schedule after submission of report by contractor	The bidder should submit final implementation schedule after route survey
<b>Information Sharing</b>		
Designating a Nodal officer/ Officers for all junctions	DURG POLICE	
Designate one senior Contractor official to coordinate with the DURG POLICE office or the Authority		Contractor will depute one senior officer for coordination between DURG POLICE and District officer
Publishing acceptance, testing and sign off procedures	DURG POLICE/ Competent Authority	

<b>Roles &amp; Responsibilities Matrix</b>		
<b>Activities</b>	<b>The Authority</b>	<b>Contractor/ Bidder</b>
Publishing guidelines for maintenance of Contractor warehouse records		Contractor will responsible for issuance of guidelines during implementation/ maintain of OFC network for their officials
Publishing of templates, checklists, data submission formats	DURG POLICE/ Competent Authority	
<b>Implementation of OFC Cable</b>		
Coordination with local authorities for access to site locations	Secondary	Primary
<b>Procurement</b>		
Procurement of OFC Cable, Civil material and Equipments and accessories for Cable Laying as per scope of Work and Technical Specification mentioned in the RFP		Primary
Provisioning of testing tools , Roadometer, Power meter etc.) for field acceptance testing and end-to-end testing	The team approved by DURG POLICE/ Competent Authority will do final acceptance test of the Link	Primary
<b>Material Delivery</b>		
OFC Cable, Civil Construction material, Equipments and accessories delivery at site		Primary
Preparation of ABD's with GIS co-ordinates of the entire route		Primary
Capturing and Uploading GIS data of the entire route in the GIS tool		Primary
Verification of GIS data uploaded by Contractor in the GIS tool	The team approved by DURG POLICE/ Competent Authority will do verification	
Conducting tests as per Field Acceptance Test Procedures for OFC laid		Primary

<b>Roles &amp; Responsibilities Matrix</b>		
<b>Activities</b>	<b>The Authority</b>	<b>Contractor/ Bidder</b>
Provisioning of equipment for photography		Primary
Take site images at designated locations and images of the testing procedures carried out		Primary
Conducting End-to-End Link wise Test as per Test Procedures		The contractor should coordinate with Authority/ Team for Acceptance Test
Link Wise Acceptance Test	The team approved by DURG POLICE/ Competent Authority/will do final acceptance test of the Link	
Approval of End-to-End Link wise Test Reports	DURG POLICE/ Competent Authority	
Request for Commissioning certificate		Primary
Issuance of Commissioning certificate Link Wise	DURG POLICE/ Competent Authority	
Request for Final Completion certificate		Primary
Issuance of Final Completion certificate	DURG POLICE/ Competent Authority	

### **5.3 SCOPE OF WORK for OFC CABLE WORKS**

5.3.1 The Optical Fiber Cable is laid through HDPE/PLB HDPE Pipes buried at a nominal depth of 165 cms. The steps involved in OF cable construction are as under:

- i) Excavation of trench up to a nominal depth of 165 cms, according to Construction specifications along National/State Highways/other roads and also in city limits as mentioned in the notice inviting tender.
- ii) Laying of HDPE/PLB HDPE pipes/coils coupled by HDPE/PLB HDPE sockets in excavated trenches, on bridges and culverts, drawing of 6 mm Polypropylene Para rope (P.P. rope) through the HDPE/PLB HDPE pipes/coils as per Construction Specifications and Sealing of HDPE/PLB HDPE pipe ends at every manhole by HDPE/PLB HDPE end caps of suitable size.

- iii) Providing of mechanical protection by R.C.C. Pipes/GI pipes and/or concreting/chambering according to construction specifications, wherever required.
- iv) Fixing of GI pipes/through with clamps at culvert /bridges and/or chambering or concreting of GI pipes/through, wherever necessary.
- v) Back filling and dressing of the excavated trenches according to construction specification.
- vi) Opening of manholes (of size 3 meters x 1 meters x 1.65 meters depth), replacing existing 6Plg P.P. ropes by 8 mm P.P. rope (from manhole to manhole) for ensuring smooth passage for pulling the cable. Pulling of Optical Fiber Cable with proper tools and accessories as per construction specifications. Sealing of both ends of the manholes by hard rubber bush of suitable size to avoid entry of rodents into the HDPE/PLB HDPE pipes, putting split HDPE/PLB HDPE pipes and split RCC pipes with proper fixtures over cable in the manhole to protect the bare cable in the pulling manhole. Back filling and dressing of manholes.
- vii) Digging of pit of size 2 meter x 2 meter x 1.8 meter (depth) for construction of jointing chamber at approximately every two kilometers of internal size of 1.5 meter x 1.5 meter x 1.2 meter using bricks and mortar or fixing pre-cast jointing chamber of internal diameter of 1.2 meter filling of jointing chamber with clean sand, placing either pre-cast RCC cover or stone of suitable size on jointing chamber to protect the joint and back filling of jointing chamber with excavated soil.
- viii) Digging of pits 1 meter towards jungle side at every manhole and jointing chamber to a depth of 75 cms, fixing of route indicator/joint indicator, concerning and back filling of pits. Painting of route indicators with yellow color and joint indicator by red color and sign writing denoting route/ joint indicator number, as per construction specifications.
- ix) Documentation.

### **5.3.2 ALLIED ACTIVITIES:**

**5.3.2.1 Transportation of Materials:** The bidder will be responsible for purchase of required material and transport up to the site. DURG POLICE will not be responsible for any delay due to material not available on site.

**5.3.3.2 Supply of Materials:** There are some materials required to be supplied by the contractor for execution of works under this contract like plastic casing capping, wall ring/angle wall ring etc. besides using other consumables which do/don't become the part of the asset. The contractor shall ensure that the materials supplied are of the best quality and workmanship and shall be strictly in accordance with the specifications.

### **5.4 OF Cable Construction Specifications:**



The detailed O F construction Specifications are given in document titled as “**Optical Fiber Cable Construction Practice Manual**” issued as a part of tender document. The bidders are advised to go through the Manual before quoting for bid.

### **“Optical Fibre Cable Construction practices – Manual” OPTICAL FIBRE CABLE CONSTRUCTION PRACTICES**

However, the present practices are summarized here under, from the point of view of describing scope of work under various items of work. The document will need revision as and when practices undergo any revision.

The Optical Fiber Cable is planned considering the following objectives of the scheme.

After deciding above-mentioned issues, a detailed measurement of lengths of cable route along with details of rail/road crossings, culverts, causeways, etc. may record in the detailed survey register. The probable locations of joints, terminations and generators may also be decided and marked on the route map. On the basis of survey, general permission from road and all concerned authorities for laying the Optical fiber Cable along the decided routes and permission for rail/road crossings will have to be obtained. Generally, O.F.C. is laid straight as far as possible along the road near the boundaries, away from the burrow pits. The O.F.C. is laid along the roads at minimum distance of 15 meters from the centerline of the road or in accordance with the permission from the concerned road authorities in view of their road-widening plan. As the O.F.C. is laid after obtaining due permission from all the concerned authorities to avoid any change/shifting at a later stage and also disruption of services/revenue loss. In special cases, where it may be necessary to avoid burrow pits or low lying areas, the cable may be run underneath the shoulders at a distance of 0.6 meter from the outer edge of the road embankment provided the same is located at least 4.5 meters away from center line of road and 1.2 meters below the road surface.

The Optical Fiber Cable is laid through HDPE pipes/PLB Blowing/Preinstalled rope type pipe burred at a nominal depth of 165 Cms. The steps involved in OF Cable construction are as under:

#### **5.4.1. THE WORK INVOLVES:**

- a) Excavation of trench up to nominal depth of 165 cms according to Construction Specifications along National / State Highways/other roads and also in city limits as mentioned in the notice inviting tender.
- b) Laying of HDPE Pipe/PLB Blowing Type/Pre-installed ropes, and drawing of nylon rope through the same as per Construction Specification. For PLB Pipes blowing Practice:-  
To lay the pipe place jack stand along the sides of trench and mount the coil with the help of a strong iron shaft passing through the collapsible reel. Drive the reel slowly to avoid over spinning of reel while pulling. Unrolled pipe can be laid to the trench by placing the workers after every 15 to 20 meters. The arrangement for horizontal Jack and associated other accessories shall be arranged by contractor at his cost.
- c) Laying of GI and/or RCC pipes as additional protection for the HDPE Pipe/PLB Blowing Type/Pre-installed ropes at rail/ road crossings built-up area/ city limits, on culverts, bridges and also stretches where depth of the trench is less than 120 cms. As per construction specifications or as per the instructions of Site-In-Charge wherever required.
- d) Chambering or concreting according to construction specification, wherever required.
- e) Reinstatement of the excavated trench according to Construction specifications.
- f) Fixing of MS clamps for suspending GI pipes / GI troughs at culverts, bridges and/or chambering or concreting for GI pipes or troughs wherever necessary.
- g) Fixing of route indicators as per construction specification.
- h) Preparing of A/T pits, and to close them after the A/T is over without any extra payment.
  - i) Horizontal boring to avoid road cutting

#### **5.4.2. DEPTH AND SIZE OF THE TRENCH:**

- a) Depth and size of trench mentioned in this clause are Standardized measurement and applicable to normal site condition where surface is generally uniform. Site Engineer shall be the authority to decide the depth of trench.
- b) The depth of the trench from top of the surface shall not be less than 165 cms unless otherwise permitted. The width of the trench shall be sufficient to lay requisite number of HDPE/ GI/ RCC pipes and also concreting wherever required.
- c) When trenches are excavated in slopes, uneven ground, inclined portion, and the lower edge shall be treated as top surface of land and depth of trench measured accordingly.

- d) In a certain locations, such as uneven ground, hilly areas and all other places due to any reason whatsoever it can be ordered to excavate beyond standard depth of 165 cms. To keep the bed of the trench as smooth as possible, near the culverts, both ends of the culverts shall be excavated more than 165 cms. in depth to keep the gradient less than 15 degrees with horizontal.
- e) If excavation is not possible to the minimum depth of 165 cms, as detailed in sub clauses above, full fact shall be brought to the notice of the Competent Authority in writing giving details of location & reason for not able to excavate that particular portion. Competent Authority in writing under certain genuine circumstances only may grant approval. The decision of Competent Authority shall be final and binding on contractor.

#### **5.4.3. TRENCHING:**

- a) Trenching shall as far as possible be kept ahead of laying of pipes. Contractor shall exercise due care that soil from trenching intended to be loose for back filling is not mixed with loose debris. While trenching, Contractor should not cause damage to any underground installations belonging to others agencies and any damage caused should be made good at his own cost and expense.
- b) The Contractor should provide sufficient width in the trench at all such places, where it is likely to cave in due to soil conditions without any extra payment.
- c) A minimum free clearance of 15 cm. should be maintained above or below any existing underground installations. No extra payment will be made towards this.
- d) In order to prevent damage to HDPE Pipe/PLB Blowing Type/Pre-installed rope over a period of time, due to the growth of trees, roots, bushes, etc., the contractor shall cut them if encountered in the path of alignment of trench without any additional charges with proper permission by Competent Authority.
- e) In large borrow pits, excavation shall be done not less than 165 cms. In depth and both sides of borrow pit shall be excavated more than 165 cms in depth to keep gradient of bed less than 15 degree with horizontal.
- f) If not possible as stated in sub clause above, alignment of trench shall be changed to avoid borrow pit completely.

#### **5.4.4. TRENCHING NEAR CULVERTS/BRIDGES AND CAUSEWAYS**

- a) The HDPE Pipe/PLB Blowing Type/Pre-installed ropes shall be laid below the bed at the depth not less than 165 cms. protected by G.I. Pipes and bricks or concrete chamber as decided DURG POLICE.
- b) Both ends of culverts shall be excavated more than 165cms. in depth to keep the gradient not less than 15 degree with horizon. The bed of trench should be as smooth as possible.

#### **5.4.5. LOCATION AND AUGMENTATION OF THE TRENCH:**

- a) In city areas the trench will normally follow the foot path of the road except where it may have to come to the edge of the carriage way when cutting across road with specific permissions from the authorities responsible for maintenance of that road (such permissions will be obtained by the Competent Authority). Outside the City limits trench will normally follow the boundary of the roadside land. However, where the road side land is full of borrow pits or afforestation or when the cable has to cross culverts, bridges or streams, the trench may be closer to the road edge or in some cases, over the embankment or shoulder of the road (Permissions for such deviations for cutting the embankment as well as shoulder of the road will be obtained by the Competent Authority).
- b) The alignment of the trench will be decided by Competent Authority. While marking the alignment only the centerline will be marked, and the Contractor shall set out all other work to ensure that, the excavated trench is as straight as possible. Contractor shall remove all bushes, undergrowth, stumps, rocks and other obstacles to facilitate marking the centerline without any extra charges.

#### **5.4.6. DEWATERING:**

The Contractor shall be responsible for all necessary arrangements to remove or pump out water from trench. The Contractor should survey the soil condition encountering the section and make his own assessment about dewatering arrangements that may be necessary. No extra payment shall be admissible for this and the tendered rate may take care of this aspect.

#### **5.4.7. METHOD OF EXCAVATION:**

- a) In city limits as well as in built up area, the Contractor shall resort to use of manual labour only to ensure no damage is caused to any underground or surface installations belonging to other public utility services and / or private parties.
- b) However, along the High ways and cross country there shall be no objection to the Contractor resorting to mechanical means of excavation, provided that no underground installation existing in the path of excavation if any, are damaged.
- c) There shall be no objection to resort to horizontal boring to bore a hole of required size and HDPE Pipe/PLB Blowing Type/Pre-installed rope pushed through it at road crossing or rail crossing or small hillocks etc.

#### **5.4.8. LINE-UP:**

The line up of the trench must be such that HDPE Pipe/PLB Blowing Type/Preinstalled rope(s) shall be laid in a straight line except at locations where it has to necessarily take a bend because of change in the alignment or gradient of the trench, subject to the restrictions mentioned elsewhere.

#### **5.4.9. LAYING OF H.D.P.E. PIPES/PLB HDPE PIPE:**

- a) After trench is excavated to the specified depth the bottom of the trench has to be cleared of all stones or pieces of rock & leveled up properly. A layer of ordinary soil of not less than 5 cm. is to be used for leveling the trench to ensure that cable when laid will follow a straight alignment
- b) When trenches are excavated up to specified depth, properly dressed and leveled, representative of Contractor and Site officer shall take joint measurement of trench. Measurement shall be recorded in measurement book with their signature. Trenches for which measurements are recorded in measurement book shall be considered as approved trenches.

- c) HDPE Pipe/PLB Blowing Type/Pre-installed ropes/RCC/GI pipes shall be laid only in approved trenches. The contractor shall exercise due care to ensure that the HDPE Pipe/PLB Blowing Type/Pre installed rope is not subjected to any damage or strain.
- d) The HDPE Pipe/PLB Blowing Type/Pre-installed ropes shall be laid in 50 mm dia RCC spun pipes, at road crossings and through G.I. Pipes on culverts and bridges and also in exceptional cases where the depth of the trench is less than 165 cms. as specified by the concerned officer-In- Charge.
- e) Water present in the trench at the time of laying the HDPE Pipe/PLB Blowing Type/Pre-installed ropes shall be pumped out by the contractor before lowering in the pipes to ensure that no mud or water gets into the pipes.
- f) At road crossings, two HDPE Pipe/PLB Blowing Type/Preinstalled ropes shall be laid as per direction of Site Engineer. The HDPE Pipe shall be jointed by coupler/socket at both ends, Nylon or P.P. rope shall be drawn though HDPE Pipe properly at time of laying pipes.
- h) In cross country routes, where depth of trench is less than 1.20m, HDPE Pipe/PLB Blowing Type/Pre-installed ropes should be laid within GI/RCC pipes. Alternatively, HDPE Pipe/PLB Blowing Type/Pre-installed ropes may be encased in reinforced concrete casing of dimensions 275mm x 275mm. In built up areas, where the depth of trench is not less than 165 cms., HDPE Pipe/PLB Blowing Type/Pre-installed ropes should be laid within GI/RCC pipes. In case of trench depth being less than 165 cms, the HDPE Pipe/PLB Blowing Type/Pre-installed ropes may be encased in reinforced concrete casing of dimensions 275 mm x 275 mm **with the permission of** Competent Authority.
- i) In case of nullahs, which are dry for nine months in a year, the HDPE Pipe/PLB Blowing Type/Pre-installed ropes shall be laid within the RCC pipe laid at a minimum depth of 165 cms. The RCC pipes shall be extended 2 mtrs. beyond the bed of nullah on either side.
- j) Notwithstanding anything contained in clauses k(i) to (v) and 10(a), the site Engineer may admit in any specific case that the HDPE Pipe/PLB Blowing Type/Pre-installed ropes may be encased in reinforced concrete casing only.
- k) The following construction practices are applicable in general:
  - i) Wherever GI pipes are used, rubber bushes shall be used at the two ends of the GI pipes to protect the damages of HDPE Pipe/PLB Blowing Type/Pre-installed ropes.

- ii) Wherever RCC pipes are used, two ends must be properly sealed to bar entry of rodents.
- iii) On road crossings, the HDPE Pipe/PLB Blowing Type/Pre-installed ropes shall be laid a depth 165 cms. encased with RCC pipe. The RCC pipes shall be extended 3 meters on either side of the road.
- iv) On Rail bridges and crossings, the HDPE Pipe/PLB Blowing Type/Pre-installed ropes shall be encased in suitable cast iron/RC pipes as prescribed by the Railway Authorities.
- v) Unloading of PLB HDPE Coil from truck should be done with help of Wooden / Metallic planks and coil can also be dropped from floor of truck on sand or soft soil bed.
- l) For PLB Pipes blowing practice to lay the pipe, place jack stand along the side of trench and mount the coil with the help of strong iron shaft passing through the collapsible reel. Drive the reel slowly to avoid over spinning of reel while pulling, unrolled pipe can be laid to the trench by placing worker after every 15-20 meter.

The arrangement for horizontal Jack and associated other accessories should be arranged by contractor at his cost.

#### **5.4. 10. BACK FILLING AND DRESSING THE TRENCH:**

- a) Provided that the HDPE Pipe/PLB Blowing Type/Pre-installed ropes have been properly laid in the trench at the specified depth, the back filling operation shall follow as closely as practicable. The back filling operation shall be performed in such a manner as to provide firm support under & above the pipes and avoid bend or deformation of the HDPE Pipe/PLB Blowing Type/Pre-installed ropes when the HDPE Pipe/PLB Blowing Type/Pre-installed ropes get loaded with the back filled earth. In locations where the back filling is not done properly by the contractor or done unevenly it shall be redressed and back filled properly by the DURG POLICE at Contractor's expense. No debris shall be allowed in the back fill at any time.
- b) At locations where the back filled material contains hard clods, rock fragments and other materials which may cause injury to HDPE Pipe/PLB Blowing Type/Pre-installed rope & where excavated or rock fragmi are intended to refill the trench in whole or in part, the trench should be initially filled, with a layer of ordinary soil or derocked loose earth of not less than 10 cms. above pipes, without any extra cost.

- c) Back filling on public, private roads, railway crossings, and foot paths in city areas shall be performed immediately after laying the HDPE Pipe/PLB Blowing Type/Pre-installed ropes. Back filling at such locations shall be thoroughly rammed, so as to ensure original condition & made safe to traffic. All excess soil/ material left out on road/footpath/railway crossing shall be removed without any extra cost. However, along the high ways and cross country, the dug up material left out should be kept as heap above the trench while refilling.
- d) In city limits, no part of the trench should be kept open for more than 50 meters length at any time and in all places where excavation has been done, no part of the trench should be kept open over-night to prevent any mishap or accident in darkness.

#### **5.4. 11. STORES:**

- (a) After completing trenching, HDPE/PLB/GI/ RCC Pipe laying and refilling of section.
  - i) For HDPE Pipe in 200 meters section rope is to be replaced by new one.
  - ii) For pre-installed rope type:- The rope is to be replaced in coil length
  - iii) PLB Pipe (blowing type) entire length of section allotted to the contractor should be checked by passing the mandrel of suitable size from one end of section to other end by blowing the air with the help of compressor of suitable capacity. It is the responsibility of the contractor to arrange the compressor and other necessary accessories at his cost.

#### **5.4.12. LAYING PROTECTION PIPES ON BRIDGES AND CULVERTS**

- a) The work involves laying of HDPE pipes /PLB Blowing Type/Pre-installed ropes through GI Pipes of not more than 50 mm dia or GI Troughs of size 50 mm x 50 mm laid on the Bridges/Culverts.
- b) In bridges/Culverts, where proper ducts are already provided, the HDPE Pipe/PLB Blowing Type/Pre-installed ropes will be laid through the ducts.
- c) Normally in the Bridges/Culverts, where there are no ducts and where the cushion on the top of the Arch is 0.5m or more thick the G.I. Pipe/ G.I. Trough carrying HDPE Pipe/PLB Blowing Type/Pre-installed rope & Cable may be burred on the top of the Arch adjoining the parapet wall, by digging close to the wheel guards.
- d) Where the thickness of the Arch is less than 0.5m, the pipes must be buried under the wheel guard masonry and the wheel guard rebuilt.



- e) If any of the above methods is not possible, the G.I. Pipe/G.I. Troughs must be clamped outside the parapet wall with the clamps supplied by the contractor. If necessary, the pipes may be taken through the parapet wall at the ends where the wall diverges away from the road.
- f) In cases where the methods explained in clause **c & d** above are not possible, the G.I. Pipes/G.I. Troughs can be fixed on the top of the road kerb close to the inside face of the parapet wall by means of clamps, supplied, using rawl plugs & wood screws or small diameter bolts, without damaging concrete & limiting external diameter of the bolts to 7.5 mm. The permission for carrying out this work will be obtained from the Road Authorities by the Contractor.
- g) Methods cited in clauses above should be carried out under close supervision of the Road authorities and restoration of any damages to the structures in any of the methods adopted should be done to the entire satisfaction of the road authorities.
- h) When HDPE Pipe/PLB Blowing Type/Pre-installed ropes are laid on bridges/culverts as per clause c to f above, except when pipes are clamped outside of the bridge, cement concreting shall be provided over the protection pipes/troughs.

#### **5.4.13. SPECIFICATIONS FOR CONCRETING:**

- a) The nominal dimension of concreting is of 275 mm x 275 mm. section. However depending on the actual situation, this cross section may be varied to ensure uniformity with any existing structure / base, on which the GI pipes/ GI troughs are placed, as demanded by the road authorities. The work should be carried out at the rates applicable for nominal cross section.
- b) The concreting surface should be thoroughly cleaned and leveled before concreting. Necessary wire mesh of adequate size shall be provided as reinforcement for the concrete.
- c) At both the ends of the Bridges/Culverts, where the GI Pipes/Troughs slope down and get buried, the concreting should be carried out to ensure that no portion of the GI Pipe/Trough is exposed and further down as required by the site in charge to protect the Pipe/Trough from any possible damage externally caused.
- d) Any damages caused to the existing structure such as Foot-Path or base of the Parapet or Kerb wall on which GI Pipes/Troughs are placed should be repaired and original condition restored to the satisfaction of Road Authorities.

- e) Where white wash/color wash exists on the Bridges/Culverts, the same should also be carried out on the concerted portion to ensure uniformity.
- f) Cement Concrete Mixture used should be of 1:2:4 Composition i.e. 1 Cement: 2 Coarse Sand, 4 graded Coarse Stone aggregate of 20 mm. nominal size.
- g) Smooth finishing of exposed surface should be done with a mixture of 1:3: i.e. 1 Cement: 3 Fine Sand. Portions where cement concreting has been done shall be cured with sufficient amount of water for reasonable time to harden the surface.

#### **5.4.14. JOINT CHAMBER**

The joint chamber is provided at every joint normally at a distance of 2 kms to keep the O.F.C. joint well protected and also to keep extra length of cable which may be required in the event of faults at a later date. The joint chambers are made at site using bricks and mortar or are of pre-cast RCC type.

##### **5.4.14.1 Construction of brick chamber at site**

For constructing brick chamber, first a pit of size 2m x 2m x 1.8m depth is required to be dug. Then, base of the chamber is made using concrete mix of 1:5:10 (1: cement, 5: coarse sand, 10: graded stone aggregate 40mm nominal size) of size of 1.7 m x 1.7 m x 0.15 m (thickness). Walls of brick chamber having internal dimensions of 1.2 m x 1.2 m x 1 m (H) should be constructed on this base having wall thickness of 9” using cement mortar mix of 1:5 (1: cement, 5: fine sand). The bricks to be used for this purpose should be of size 9”x4.5”x3”, best quality available and should have smooth rectangular shape with sharp corners and shall be uniform in color and emit clear ringing should when struck. The joint chamber should be so constructed that HDPE pipe/PLB Blowing Type/Pre-installed ropes ends remain protruding minimum 5 cms inside the chamber on completion of plastering. The HDPE pipes should be embedded in wall in such a way so that, the bottom brick should support the pipe and upper brick should be provided in a manner that HDPE pipe remains free from the weight of the construction. The joint chamber should be plastered on all internal surfaces and top edges with cement mortar of 1:3 (1: cement, 3: coarse sand), 12mm thick finished with a floating coat of complete cement as per standard. Pre-cast RCC slab with two handles to facilitate easy lifting, of size 0.7 m x 1.4 m and of thickness of 5 cm having one handle for each half in center and word ‘DP OFC’ engraved on it are to be used to cover the joint chamber. Two numbers of such slabs are required for one joint chamber. This pre-cast slab should be made of cement concrete mix of 1:2:4 (1: cement, 2: coarse

sand, 4: stone aggregate 6mm nominal size) reinforced with steel wire fabric 75 x 25 mm mesh of weight not less than 7.75 Kg per sq. meter. The joint chamber is filled with clean sand before closing. Lastly, back filling of joint chamber pit with excavated soil is carried out.

#### **5.4.14.2 Pre cast RCC chamber**

For fixing pre cast RCC chamber, first a pit of size 2 m x 2 m x 1.8 m depth is required to be dug. Pre cast RCC chamber consists of three parts (i) round base plate in two half of 140 cm dia and 5 cm thickness (ii) full round RCC joint chamber with dia of 120 cm and height of 100 cm and thickness of 5 cm (iii) round top cover will be in two halves with dia of 140 cm and thickness of 5 cm having one handle for each half in centre and word '**DP OFC**' engraved on it.. After, fixing the pre cast RCC joint chamber, the joint chamber is filled with clean sand before closing. Lastly, back filling of joint chamber pit with excavated soil is carried out.

#### **5.4.15. ROUTE/JOINT INDICATOR**

The route/ joint indicators are co-located with each manhole/joint chamber. In addition route indicators are also to be placed where route changes direction like road crossings etc. The route/joint indicators made of pre cast RCC should have the following dimensions:

Base - 250 mm x 150 mm

Top - 200 mm x 75 mm

Height - 1250mm

The word '**DP OFC**' should be engraved on the route/joint indicators. The route indicators are painted yellow and the same are placed at 2 ft. away from the center of the trench towards jungle side. The joint indicators are placed at OFC joints and placed 1 ft. away from wall of the joint chamber facing jungle side and are painted red. The engraved word '**DP OFC**' should be painted in white, on route as well as joint indicators. Numbering of route indicators/joint indicators should also be done in white paint. The numbering scheme for route indicators will be joint No./Route Indicator No. for that joint. For example, 2/6 marking on a route indicator means 6th route indicator after 2nd joint. Additional joints on account of faults at a later date should be given number of preceding joint with suffix A, B, C, D. For example sign writing 2A on a joint indicator means, additional joint between joint No.2 and 3. The numbering of existing route/joint indicator should not be disturbed on

account of additional joints. Enamel paints of reputed brands should be used for painting and sign writing of route as well joint indicators.

#### **5.4.16. WETTING:**

Wherever the soil is hard due to dry weather conditions, if watering is to be done for wetting the soil to make it loose, the same shall be done by the contractor. No extra payment shall be admissible for this.

#### **5.4.17. BLASTING:**

For **excavation in hard rock**, where blasting operations are considered necessary, the contractor shall obtain approval of the Engineer-In-Charge in writing for resorting to blasting operation. The contractor shall obtain license from the competent authority for undertaking blasting work as well as for obtaining and storing the explosive as per the Explosive Act, 1884 as amended up to date and the explosive Rules, 1983. The contractor shall purchase the explosives fuses, detonators, etc. only from a licensed dealer. Transportation and storage of explosive at site shall conform to the aforesaid Explosive Act and Explosive Rules. The contractor shall be responsible for the safe custody and proper accounting of the explosive materials. Fuses and detonators shall be stored separately and away from the explosives. The Engineer-in-Charge or his authorized representative shall have the right to check the contractor's store and account of explosives. The contractor shall provide necessary facilities for this. The contractor shall be responsible for any damage arising out of accident to workmen, public or property due to storage, transportation and use of explosive during blasting operation.

Blasting operations shall be carried out under the supervision of a responsible authorized agent of the contractor (referred subsequently as agent only), during specified hours as approved in writing by the Engineer-in-Charge. The agent shall be conversant with the rules of blasting.

All procedures and safety precautions for the use of explosives drilling and loading of explosives before and after shot firing and disposal of explosives shall be taken by the contractor as detailed in **IS: 4081** safety code for blasting and related drilling operation.

#### **5.4.18. CABLE PULLING AND JOINTING/SPLICING:**

##### **5.4.18.1 CABLE PULLING:**

Manholes marked during HDPE pipe/PLB Blowing Type/Pre-installed ropes laying of approx. size of 3m length x 1.0m width x 1.65m depth shall be excavated for pulling the cables. There may be situations where additional manholes are required to be excavated for some reasons, to facilitate smooth pulling of cable. Excavation of additional manholes will be carried out, without any extra cost. De-watering of the manholes, if required, will be carried out without any extra cost. De-watering/Degasification of the ducts, if required, will be carried out without any extra cost. The existing 6mm PP rope shall be replaced by with PP rope of 8mm dia between the two consecutive manholes. This is to ensure that the HDPE pipes/PLB Blowing Type/Preinstalled ropes are cleaned for pulling the cable without exerting undue tension on the OF cable. While cleaning, excessive pressure should not result in breaking of P.P. rope and which may require opening of additional manholes. However, in case the cleaning rope gets stuck up during pulling, the location of clogging of HDPE Pipe/PLB Blowing Type/Pre-installed ropes should be measured and located accurately. The trench at that location should be opened and the HDPE Pipe /PLB Blowing Type/Pre-installed ropes should be cleaned properly or if not possible it should be changed by a clean new HDPE Pipe /PLB Blowing Type/Pre-installed ropes to facilitate easy cable pulling at a later stage without any breakage. If clogging of HDPE Pipe/PLB Blowing Type/Pre-installed ropes is in the location where the pipes are protected either by RCC Pipe /PLB Blowing Type/Pre-installed ropes or by concreting and the protection is broken for cleaning/changing the HDPE Pipe, the protection thus removed should be brought back to normal by the contractor without any extra cost. However, HDPE Pipes/PLB Blowing Type/Pre-installed ropes, RCC Pipes required for this purpose will be supplied by the Contractor.

#### ***5.4.18.2 Duct integration Test (DIT) for HDPE ducts***

5.4.18.2.1 Ensure that the trench does not have any sharp bend and the couplers are tightened to the maximum.

5.4.18.2.2 Ensure the backfilling and the compaction of the trench are satisfactory prior to start of DIT.

5.4.18.2.3 Pass the compressed air at 8Kg/Sq.cm and clean the duct from deposits like mud and small stones.

5.4.18.2.4 Insert a medium density sponge into the duct and push it with compressed air of 8Kg/Sq.cm. The sponge should eject with full force.

5.4.18.2.5 The mandrill made of hard rubber or polished wood in the shape of cylinder of diameter 0.75 x D in diameter of HDPE duct and 75 mm long shall be used.

5.4.18.2.6 On completion of test seal the ends with end plugs.

5.4.18.2.7 Ensure that there is no pressure leakage during DIT.

### **5.4.18.3 Jointing/Splicing:**

The OFC cable drums are usually of 4 kms in length hence optical fiber joints will be at every 4 kms approx. The 12 Core fibers are to be spliced as per requirement at both ends (Terminations) of the equipment room, as directed by the Engineer-in-charge. The Infrastructure required for cable splicing i.e.

\* Splicing machine

\* Air Conditioned Van

\* OTDR

\* Optical talk set

\* Tool kit etc.

**Will be arranged by the bidder at his own cost and also any additional accessories e.g. engine etc. required at site for splicing will also be arranged by the bidder at his own cost.**

The optical fiber cable thus jointed end-to-end will be tested by an officer of A/T unit for splice losses and transmission parameters as specified by TCHQ and prevalent at that time. The OF cable should meet all the parameters, specified and no relaxation will be granted. It should also be ensured that during jointing no fibers are interchanged or broken. The number of joints should not be more than 10% of the theoretical value calculated by the department.

**Note:** The jointing/splicing of optical fiber cable is mandatory and would be the scope of Bidder.

### **5.4.19 Construction of Jointing Chamber:**

The joint chambers are provided at every joint to keep the O.F.C. joint well protected and also to keep extra length of cable, which may be required to attend the faults at a later date. Jointing chambers are to be prepared normally at a distance of every 2 kms in this this is as per requirement. Actual location of jointing chamber depends on length of cable drum and appropriateness of location for carrying out jointing work. The location is finalized by Engineer-in-charge. The jointing chambers are constructed either of brick masonry work at

site & pre cast RCC slabs for covers or by way of fixing pre-cast RCC chambers and covers as per the instructions from engineer-in-charge.

#### **5.4.20. Documentation:**

**All assets deployed in ITMS including joint chamber, route chamber, major culvert location, bridges, route diversion, PoP location need to be captured with GPS coordinate and same to be mapped by Bidder on GIS map .**

The documentation, consisting of the following shall be prepared exchange to exchange for links.

i) **Route Index Diagrams – General:** This diagram shall consist of Cable Route Details on Geographical Map drawn to scale the prominent land marks and alignment of cable with reference to road. This shall be prepared on A-3 sheets of 80 GSM or more.

ii) **Route Index Diagrams – Profile:** These diagrams will contain:

- \* Make and size of the cable.
- \* Offset of cable from center of the road at every 10 meters
- \* Depth profile of Cable at every 10 meters
- \* Details of protection with type of protection depicted on it
- \* Location of culvert and bridges with their lengths and scheme of laying of HDPE pipe/PLB Blowing Type/Pre-installed ropes thereon.
- \* Important landmarks to facilitated locating the cable in future
- \* Location of joints and pulling manholes.

These diagrams shall be prepared on **A-4 sheets** of 80 GMS or more. On one sheet profile of maximum 400 meters shall be given to ensure clarity.

iii) **Joint location Diagram:** This diagram will show:

- \* Geographical location of all the joints.
- \* Depth of Joint Chamber covers from ground level
- \* Type of chamber (Brick/Pre-cast)
- \* Length of O.F. Cable kept inside the joint chamber from either direction.

This shall be prepared on **A-4 sheets** of 80 GSM or more.

All the diagrams (i), (ii) & (iii) shall bear the signatures of the contractor, the Engineer-in charge as a proof of accuracy of the details. The diagrams shall be bound in A-4 size book with cover. The cover sheets shall be of 110 GSM and laminated. The front cover shall have the following details.

1. Name of the District/ Tehsil/Block.
2. Name of the OFC Link
3. Name of the Contractor
4. Date of commencement of work
5. Date of completion of work

For each route/section 6 sets of above-mentioned document shall be submitted.

#### **5.4.21 SAFETY PRECAUTIONS:**

##### **5.4.21.1 Safety Precautions when excavating or working in excavations close to electric cables**

The Engineer-in-Charge of the work should get full information from Electricity undertaking regarding any electric cables, which are known or suspected to exist near the proposed excavation and unless this is done, excavation should not be carried out in the section concerned. The electricity undertaking should be asked to send a representative and work should proceed with close consultation with them. Only wooden handled hand tools should be used until the electric cables have been completely exposed. Power Cables, not laid in conduits, are usually protected from above by a cover slab of concrete, brick or stone. They may or may not be protected on the sides. It is safer, therefore, always to drive the point of the pickaxe downwards then uncovering a cable, so that there is less chance of missing such warning slabs. No workman should be permitted to work alone where there are electric cables involved. At least one more man should be working nearby so that help can be given quickly in case of an accident. If disconnection of power could be arranged in that section it will be better. No electric cables shall be moved or altered without the consent of the Electric Authority and they should be contacted to do the needful. If an electric cable is damaged even slightly, it should be reported to the Electric Authority and any warning bricks disturbed during excavation should be replaced while back filling the trench. Before



driving a spike into the ground, the presence of other underground properties should be checked. Information on plans regarding the location of power cables needs not to be assumed as wholly accurate. Full precautions should be taken in the vicinity until the power cable is uncovered. All electric cables should be regarded as being live and consequently dangerous. Any power is generally dangerous, even low voltage proving fatal in several cases.

#### **5.4.21.1.1 Electric shock-Action and treatment:**

Free the victim from the contact as quickly as possible. He should be jerked away from the live conductors by dry timber, dry rope or dry clothing. Care should be taken not to touch with bare hands as his body may be energized while in contact. Artificial respiration should begin immediately to restore breathing even if life appears to be extinct. Every moment of delay is serious, so, in the meanwhile, a doctor should be called for.

#### **5.4.21.2 Safety precautions while working in Public Street and along railway lines**

Where a road or footpath is to be opened up in the course of work, special care should be taken to see that proper protection is provided to prevent any accidents from occurring. Excavation work should be done in such a manner that it will not unduly cause inconvenience to pedestrians or occupants of buildings or obstruct road traffic. Suitable bridges over open trenches should be so planned that these are required for the minimum possible time. Where bridges are constructed to accommodate vehicular traffic and is done near or on railway property, it should be with the full consent and knowledge of the competent railway authorities.

#### **5.4.21.2.1 Danger from falling material:**

Care should be taken to see that apparatus, tools or other excavating implements or excavated materials are not left in a dangerous or insecure position so as to fall or be knocked into the trench thereby injuring any workman who may be working inside the trench.

#### **5.4.22. Care when working in Excavations:**

Jumping into a trench is dangerous. If it is deep, workmen should be encouraged to lower themselves. Workers should work at safe distance so as to avoid striking each other accidentally with tools. If the walls of the trench contain glass bits, corroded wire or sharp objects they should be removed carefully. If an obstruction is encountered, it should be carefully uncovered and protected if necessary. Care must be taken to see that excavated

material is not left in such a position that it is likely to cause any accident or obstruction to a roadway or waterway. If possible the excavated material should be put between the workmen and the traffic without encroaching too much on the road.

**5.4.22.1.1 Danger of cave in:**

When working in deep trenches in loose soil, timbering up/shoring the sides will prevent soil subsidence. The excavated material should be kept at sufficient distance from the edge of the trench or pit. Vehicles or heavy equipment must not be permitted to approach too close to the excavation. When making tunneled opening, it would be ensured that the soil is compact enough to prevent cave in even under adverse conditions of traffic. Extra care should be taken while excavating near the foundations of buildings or retaining walls. In such cases, excavation should be done gradually and as far as possible in the presence of the owners of the property.

**5.4.22.2 Protection of Excavations:**

Excavations in populated areas, which are not likely to be filled up on the same day should be protected by barriers or other effective means of preventing accidents and the location of all such openings must in any event be indicated by red flags or other suitable warning signs. During the hours from dusk to dawn, adequate number of red warning lamps should be displayed. Supervisory officers should ensure that all excavations are adequately protected in this manner as serious risk and responsibility is involved. Notwithstanding adoption of the abovementioned precautions, works involving excavations should be so arranged as to keep the extent of opened ground and the time to open it to a minimum.

**5.4.22.3 Precautions while working on roads:**

The period between half an hour after sunset and half an hour before sunrise, and any period of fog or abnormal darkness may also be considered as night for the purpose of these instructions, for the purpose of providing the warning signs. Excavation liable to cause danger to vehicles or the public must at all times be protected with fencing of rope tied to strong uprights or bamboo poles at a suitable height or by some other effective means. Any such temporary erection which is likely to cause obstructions and which is not readily visible should be marked by posts carrying red flags or boards with a red background by day and by continuously lighted lamps at night. The flags and the lamps should be placed in

conspicuous positions so as to indicate the pedestrians and drivers of vehicles the full expanse i.e. both width and length of the obstruction. The distance between lamps or between floors should not generally exceed 1.25m along the width and 6m along length of the obstruction in non-congested areas, but 4 meters along the length in congested areas. If the excavation is extensive, sufficient notice to give adequate warning of the danger, should be displayed conspicuously not less than 1.25m above the ground and close to the excavation. Where any excavation is not clearly visible for a distance of 25m to traffic approaching from any direction or any part of the carriage way of the road in which the excavation exists, a warning notice should be placed on the kerb or edge of all such roads from which the excavation or as near the distance as is practicable but not less than 10m from the junction of an entering or intersecting road in which the excavation exists. All warnings, in these should have a red background and should be clearly visible and legible. All warning lamps should exhibit a red light, but white lights may be used in addition to facilitate working at night. Wherever required a passage for pedestrians with footbridge should be provided. At excavations, cable drums, tools and all materials likely to offer obstructions should be properly folded round and protected. This applies to jointer's tents as well. Leads, hoses etc. stretched and across the carriageway should be guarded adequately for their own protection and also that of the public.

#### **5.4.23. Traffic Control:**

The police authorities are normally responsible for the control of traffic and may require the setting up of traffic controls to reduce the inconvenience occasioned by establishment of a single line of traffic due to restriction in road width or any other form of obstruction caused by the work. As far as possible, such arrangements should be settled in advance. If there are any specific regulations imposed by the local authorities, these should be followed.

#### **5.4.24. Work along Railway Lines:**

Normally all works at Railway crossing is to be done under supervision of the railway authorities concerned, but it is to be borne in mind that use of white, red or green flags by the Contractor staff is positively forbidden to be used when working along a railway line as this practice may cause an accident through ----- drivers mistaking them for railway signals. When working along a double line of railway, the men should be warned to keep a

sharp look on both the “UP” and “DOWN” lines to avoid the possibility of any accident when trains pass or happen to cross one another near the work spot.

#### **5.4.25 TOOLS**

The Contractor shall provide all the necessary tools, trucks, machinery and labour etc. to complete the work in the prescribed time frame as per the defined specifications. If specific tools & machinery are necessary to complete the work, they might be explicitly mentioned in this document. However, ensuring that the work to be performed remains the responsibility of the Contractor; the Company shall not be held responsible for work that has been delayed because of the absence of a given tool/machinery.

Minimal recommended set of tools for civil work:

- Picks
- Shovels
- Hammer 2kg and 4kg
- Crowbars, Axes
- Cable Jacks
- Mechanical jack hammer (for rocky area)
- Compressor 10 bars (for duct pressure tests)
- Compactors - manual or mechanical
- HDD machines, JCB machines, OFC Cable blowing machine, Concrete mixture machine,
- OTDR, Splicing machine & Power meter etc.

Any other tool/machine/tester not referred above but are required to complete the work in time would be responsibility of contractor.

#### **5.4.26. SAFETY AND SECURITY**

On site security remains the full responsibility of the Contractor.

The on-site activity might be stopped by the Company for lack of compliance to these security measures, until actions are taken to remedy the noncompliance to the safety rules.

##### *5.4.26.1 The safety & security for civil works*

The minimal following security measures shall be provided by the contractor while performing civil works:

- The Contractor shall minimize the time during which the trench or any area remains open.
- The deployed manpower should have all necessary safety equipments like

- helmets, torch, fluorescent jackets and all relevant measures etc.
- Hazard tape of red color shall be used for cordoning wherever areas are left opened, especially in city and built-up areas.
- Warning cones and hazard tape shall be used along the trench for proper identification for the incoming traffic from a distance.
- Road signs (e.g. danger, caution, men at work )
- Reflection signs at night
- Flags (red and green) for traffic

#### 5.4.26.2 *The safety & security for duct/ cable work*

The minimal following security measures shall be provided by the contractor while performing duct/ cable work:

- Nobody shall stand in front of the ducts when air/shuttle transmitters are blown.
- Couplers shall not be removed before air is released completely.
- Hazard tape shall be used for cordoning wherever MH/HH are opened, especially in city and built up areas.
- Warning cones and tape shall be used around the compressor for proper identification for the incoming traffic from a distance
- Before entering in MH/ HH, it should be checked for poisonous gases.

#### 5.4.27 PREPARATORY WORK

- (i) The Contractor shall ensure that all the necessary permits have been obtained from the relevant authorities before carrying out the work.
- (ii) Once the job is completed, all drawings given to the Contractor for carrying out the work shall be updated as per the actual.
- (iii) Clearly mark the route for duct/ cable laying and the location of MH's /HH's.

#### 5.4.28 *OFC INSTALLATION & COMMISSIONING.*

5.4.28.1. The contractor should be capable to obtain ROW permission, provide storage, undertake laying & installation, jointing, testing and commissioning including all related civil work of OFC network over a large geographical area. The Contractor is only responsible for documentation and liaisoning part. The DURG POLICE/ Competent Authority will be responsible for providing ROW permission

5.4.28.2 Route Survey: Route survey will be conducted by contractor and route survey report would be provided for obtaining ROW permission.

5.4.28.3 ROW: The DURG POLICE has to obtain the ROW from central/state/local authorities as per the approved route at the earliest.

## 5.5 *Measurement & Inspection*

5.5.1 **Measurement.** The measurement books are to be maintained by the bidder. The entry shall be made in ink. No entry shall be erased. If a mistake is made, it should be corrected by crossing out the incorrect words or figures and inserting the corrections, the corrections thus made shall be initialed & dated by the bidder. The measurement books shall invariably be consulted at the time of making final payments to the bidder.

5.5.2 Method of recording of nomenclature of items Complete nomenclature of items, as given in the agreement need not be reproduced in the measurement book for recording the measurement but corresponding item code as provided, shall be used.

5.5.3 The measurements of various items of work shall be taken and recorded in the measurements book. The measurements shall be taken and recorded by contractor which will be countersigned by the authority appointed by DURG POLICE and the supervision team appointed by the DURG POLICE. Contractor shall be directly responsible for supervision of work, shall be responsible for accuracy of 100% of measurements. The Competent Authority along with the designated project site officers of Client at various regions will be responsible for conducting Acceptance Test (A/T) check of up to **10%** of measurements at different locations on sample basis. **In case the sample measured data does not match with the measurement book entry up to a lesser depth of 5cm, penalty as given in this RFP will be levied on 5% of the length (total OFC for Access station) for each such default instance on the payment due for the link.**

5.5.4 **Method of measurement.** The measurement of the work shall be done activity-wise as and when the Acceptance Tests

5.5.4.1 The works shall be deemed to have been completed only after the same has been accepted by the inspection teams. **The Acceptance Testing will be undertaken jointly by the representative of Contractor, DURG POLICE and Competent Authority.** The acceptance certificate will be jointly issued by DURG POLICE and Competent Authority for release of payment after

successful completion of Joint Acceptance Testing.

5.5.4.2 The Contractor shall make test pits at the locations desired by Inspection Officers for conducting test checks without any extra payment. The Contractor shall restore the pits after test measurements to its original shape. The Contractor shall be responsible to provide test/ measurement tools and testers for conducting various tests. It will be ensured by the Joint Acceptance Teams that there is no compromise on the network attributes with specific reference to mission critical requirements for I.T.M.S. backbone and optical access networks.

5.5.4.3 The Contractor, after having satisfied himself of completion of work, from FDMS at one end to FDMS at other end, shall offer the work to Inspection Officers for conducting Acceptance Testing. The work shall be offered for Inspection as soon as part of work is complete in all respects. The work against any P.O can be offered for Inspection in a number of stages. Scope of Acceptance Testing is as given at clause

5.5.4.4 The Inspection team Officers shall not be responsible for recording of measurements for the purpose of billing and contractual obligations. However, if the measurements taken by Inspection Officers are found to be lesser than the measurements recorded by the contractor supervisor responsible for recording the measurements, the measurement taken by A.T Officers shall prevail without prejudice to any punitive action against the Contractor as per provisions of the contract and the officer recording the measurements.

5.5.4.5 The Contractor shall be obligated to remove defects/deficiencies pointed out by the Inspection Officers without any additional cost. DURG POLICE do not take any responsibility of return of defective used items.

#### **5.5.5 *Miscellaneous***

The supply will be accepted only after Joint Quality Assurance tests are carried out by Quality Assurance Wing of DURG POLICE and Quality Assurance Officers to be nominated by Competent Authority as per prescribed schedule

and material passing the test successfully.

### **5.5.6 Link testing**

5.5.1.1 Once splicing and termination are completed OTDR traces from both terminal station of link shall be taken. Prepare event table, workout event averages and average splice losses of the link event table calculation.

5.5.1.2 Average splice losses at 1550 nm should be  $\leq 0.1\text{dB}$ . Net losses at event = (Sum of splice losses A to B & B to A) / 2 x No of splices.

5.5.1.3 After OTDR testing power meter link testing should be taken.

5.5.1.4 Power loss in link should be less than the value obtained by calculating using the formula given below:

5.5.1.4.1 Value in dB at 1310nm = No. of connectors X 0.5 + No of splices X 0.1 + distance in Km X 0.36.

5.5.1.4.2 Value in dB at 1550nm = No. of connectors X 0.5 + No of splices X 0.1 + distance in Km X 0.22

### **2) Civil AT.**

OFC route constructions and laying practice of Section is to be followed. The following aspects in this regard will be checked by the AT teams for quality of work done.

#### **5.5.2.1 Excavation**

5.5.2.1.1 Ensure that trench is within ROW limits.

5.5.2.1.2 Marking with lime powder before digging for AT.

5.5.2.1.3 Trench depth should be as per the specification.

5.5.2.1.4 In case of low depth, prior permission should have been taken and approval obtained.

5.5.2.1.5 Duct alignment should be as per plan. All the ducts should be laid parallel. Jointing must be done properly by using the couplers.

5.5.2.1.6 Suitable protection should have been applied, wherever required, as per direction of Engineer-in-Charge using RCC/DWC/GI Pipes.



### **5.5.2.2 Warning Tape**

5.5.2.2.1 Warning tape should be placed on the trench at 0.75m depth from the ground.

5.5.2.2.2 Warning tape should be as per specification provided.

### **5.5.2.3 Railway /Road crossings**

5.5.2.3.1 G.I. pipes should be extended for 2m on both sides from the end of the road.

5.5.2.3.2 G.I. pipes should be joined by using G.I. Collars.

5.5.2.3.3 RCC pipes should be extended for 2m on both sides from the end of the road.

5.5.2.3.4 *RCC full round should be joined by using RCC collars.*

### **5.5.2.4 Bridge/culvert crossings**

5.5.2.4.1 G.I. pipes should be extended up to depth of 1.55m in case duct running on bridge.

5.5.2.4.2 G.I. pipes to be extended up to 2m length from both edge of the bridge/culvert in case the trench running through the bed of the bridge.

5.5.2.4.3 RCC pipes should be used parallel to dry culvert. For wet culvert

5.5.2.4.4 G.I. protection and concrete encasement to be provided.

5.5.2.4.5 Collars of RCC pipes to be jointed with RCC pipes with a cement mortar of 1:2:

5.5.2.4.6 In case of duct in G.I. pipe placed on clamps outside the railing the clamps should be made up of strip thickness 6mm and width 50mm. The nuts bolts should be of 12mm diameter. All clamps should be tightened properly. Clamp should be placed at every 2m interval.

5.5.2.4.7 In case of duct in G.I. pipe placed on bridge, the G.I. pipe should be encased with M20 concrete with 1:2:4 mix all around the G.I. pipes.

### **5.5.2.5 Cement Route Markers**

5.5.2.5.1 Route markers should be installed in a span of 200m and at every location where deviation placed. (From left to right of the road or vice versa.)

5.5.2.5.2 Cement Route Markers should be placed alternatively with an electronic route marker as specified by the purchaser.

5.5.2.5.3 Route markers should be straight and facing the road side.

5.5.2.5.4 Route markers should be offset 1m from the trench towards the jungle side.

5.5.2.5.5 Cement concrete dimensions should be as per specifications provided.

5.5.2.5.6 Route markers should be fixed 0.5 m depth below ground level.

5.5.2.5.7 Color separation should be maintained between splice chambers & blowing chambers.

5.5.2.5.8 Route markers should be provided on both sides of bridge/culvert.

### **5.5.2.6 Backfilling**

- 5.5.2.6.1 Every layer of backfill about 25 to 30 cm should be compacted with sufficient quantity of water to achieve adequate compaction.
- 5.5.2.6.2 It is essential to have compaction not less than 90%, when the excavation is carried out along and across the road shoulders and foot paths.
- 5.5.2.6.3 A hump of 15cm shall be maintained over the trench to compensate the settlement of backfilled soil below the ground level.
- 5.5.2.6.4 Housekeeping after removing all the debris should be complete.

### **5.5.2.7 Restoration**

- 5.5.2.7.1 If the trench comes under Asphalt, then 30 cm soil from the trench should have been removed and compacted. 10cm has to be backfilled by 40mm aggregate as first layer and compacted, 10cm has to be backfilled by 20mm aggregate Tar as second layer and compacted, 10cm seal coat as final layer and compacted.
- 5.5.2.7.2 If it is in concrete portion, then 15cm soil should be removed and compacted, pour concrete of M20 grade with the proper mix of 1:2:4.
- 5.5.2.7.3 If it is in Tiles, then 15cm soil should be removed and compacted, the tiles should be laid (of similar tiles and specify) by using the cement mortar in the ratio of 1:2.

### **5.5.2.8 Splice and Pull through Chambers**

- 5.5.2.8.1 Splice chambers shall be placed at an interval as per planning to facilitate optical fiber splicing. One pull through chamber in between every two splice through chambers to facilitate blowing of fiber optical cable through HDPE ducts.
- 5.5.2.8.2 The chamber should be built of bricks with mason work such that it has an inner dimension of at least 1.2m x 1.2m.
- 5.5.2.8.3 In chambers duct entry hole should be sealed as a sealing with cement mortar 1:2 to avoid the entry of water into the chamber after duct laying.
- 5.5.2.8.4 The duct length inside the chamber should be 5 - 10 cm.
- 5.5.2.8.5 Suitable length of cable loops up to 20m should be left in each direction within the chamber.
- 5.5.2.8.6 Chamber cover should not fall down inside the chamber while opening. OFC route constructions and laying practice of Section IV part B is to be followed

### **5.5.2.9 Splicing**

- 5.5.2.9.1 The splice pit made at the time of cable laying shall be emptied of the soil, sand and stone.
- 5.5.2.9.2 **Splicing of Fibers:** The cable ends shall be prepared after the cable entry in to the closure. The strength member shall be fixed to its fixing mechanism provided in the closure. After fixing the cable in the splice closure, the bare fibers shall be guided to the fiber Organizer provided in the closure through transport tubes. The bare fibers shall be taken through transport tubes to the fiber organizer

for splicing. These fibers shall be spliced as per standard procedures. The spliced fibers shall be made to rest on the concerned tray/cassette (fiber organizer).

5.5.2.9.3 **Sealing of Splice Closure:** After completion of splicing, the base and the dome of the closure and the cable entry shall be air sealed. It shall be ensured that the splice closures are air tight and water proof.

5.5.2.9.4 **Re- instatement of Pit:** After completion of splicing arrangements, the pit is to be filled with sand / soil incorporating warning bricks / stone etc. as per standard procedures.

#### **5.5.2.10 Termination**

5.5.2.10.1 All fiber will be terminated on fiber distribution management system (FDMS).

5.5.2.10.2 Proper racking and clamping of cable within the building is to be ensured.

5.5.2.10.3 The fiber optic cable should be properly clamped to the FDMS.

5.5.2.10.4 Fiber optic cable should be properly tagged for identification and every fiber to be identified when spliced to the pigtails and terminated on the frame.

5.5.2.10.5 End to end testing can be carried out from the FDMS to FDMS using the connectors which are mounted on the FDMS.

### **3) Responsibilities & Obligations**

5.5.3.1 **Bidder's Responsibilities and Obligations.** The Bidder's obligations include:

5.5.3.1.1 Studies necessary to identify and develop the installation guidelines and procedures for the excavation, installation, and splicing of all Fiber Optic Cable, including testing and documentation.

5.5.3.1.2 Liaisoning and documentation part for statutory clearances from regulatory bodies, statutory bodies such as municipality, highway authority, electrical utilities, forest department, gas authorities etc. on behalf of DURG POLICE.

5.5.3.1.3 Review of available data at each location to check conformance with local environmental and earthing requirements.

5.5.3.1.4 Monthly project reports documenting progress during the contract period.

5.5.3.1.5 Engineering and technical assistance during the contract period.

5.5.3.1.6 Inspection, delivery at site including trenching and installation, of the Fiber Optic Cable and HDPE pipe including all accessories, and hardwires required for installation of all overhead fiber cable wherever underground cabling is not feasible. Assessment of suitability for installation of OFC on the present

infrastructure, towers etc and requirement of erecting new towers where required.

- 5.5.3.1.7 Facilitate site acceptance testing of all equipment provided.
- 5.5.3.1.8 Staging, maintenance and security of staging area including full responsibility for protection from theft and fire.
- 5.5.3.1.9 All documentation and drawings as specified.
- 5.5.3.1.10 Training of the PICG personnel.
- 5.5.3.1.11 Due diligence in properly planning and executing the work so as to minimize any damage to crop, forestry or vegetation, internal utilities of any private or government party.

**5.5.3.2 Purchaser responsibilities and obligations.** The DURG POLICE and Competent Authority of District will jointly provide the following items and services as part of the procurement project:

- 5.5.3.2.1 Review and approval of the Contractor implementation plan, drawings, survey report and recommendations.
- 5.5.3.2.2 Review and approval of test procedures.
- 5.5.3.2.3 Participation in and approval of Site Acceptance tests.
- 5.5.3.2.4 Review & approval of training plans.
- 5.5.3.2.5 Providing support and access to facilities at the sites.
- 5.5.3.2.6 Provide to the extent possible drawings for existing sites and facilities for which equipment installation are planned.
- 5.5.3.2.7 Providing input / support required from the other package Bidder during testing & commissioning.

4) **Progress Reports**

- 5.5.4.1 During the construction stages the Bidder shall submit to the Purchaser, reports and information on the progress of Construction by himself and by the Sub-Bidders of the execution of the works. The reports shall be based on the construction programs.

5.5.4.2 The detailed procedure and requirements for progress reporting will be agreed with the Purchaser during the early phase of the Contract, as part of regular contract/project status reporting

5) **Operation and Maintenance of OFC laying for 5 year period**

5.5.5.1 **Operations & Maintenance for the entire scope of work**

The CONTRACTOR shall be responsible for the maintenance of the said OFC network in the physical layer to ensure the OFC Network availability of highest order, considering there is no failure in the equipment level of the network. This shall include but not limited to undertake all required preventive measures of the OFC route, rectification of faults due to whatever may be the reasons (Complete cable cut, partial cut, working fiber break, link loss increase, OFC bend, any damage above or underground, sabotage, theft or any other reason may be affecting the OFC link) and restoration jobs required achieving the OFC link availability of highest order.

The scope of work shall include but not limited to the following for the maintenance of OFC network in the physical layer (up to the level of Fiber Termination Closure/ODF) of Operator's network as mentioned under

- i. The Contractor shall undertake the operations and maintenance of the underground Optical Fibre Cable for a period of two 5 year period commencing immediately after the operational acceptance. Operational Acceptance shall be given on successful completion of full acceptance test (FAT).
- ii. The Contractor shall undertake all preventive measures with the information to respective authorities for maintaining the end-to-end continuity of OFC cable, which shall include but not limited to the following:
  - Regular surveillance of OFC route along the road should be carried to have proactive check to prevent OFC link disruptions.
  - Monitoring of jobs undertaken by other agencies in the vicinity of Operator's fiber network to ensure the safety of Operator's OFC cable.
  - Attending to / safe-guarding & rectification against any signs of damage or potential damage of Operator's OFC network.

- Attending breakdown maintenance within minimum time period.  
The preventive maintenance should be carried out with prior approval and during planned shutdown period only granted by Operator. The additional shutdown is not guaranteed as number of customer's traffic will be in operation. The problem of Fibers in ODF at node should be carried out with prior approval and if any replacement of the pigtail is required, contractor to replace the same with the consent of Operator and for which required pigtails be arranged by contractor.
- iii. Collecting information & accordingly, coordinate with other agencies before the execution of work, who shall carry out any OFC laying/maintenance job in the vicinity of Operator's OFC route, to safe-guard against the damages to Operator's OFC cable. The contractor shall effectively co-ordinate with other agencies working along the Operator's OFC route along the road /city (Highways or national Highways) to prevent damage to OFC link and the contractor shall be held accountable for any cut of the link by other agencies and the downtime so ever will be considered for downtime calculations.
- iv. Regular liasioning with various civic authorities like: District Collectorate, Municipality, State Highway Authority, Forest, NHAI departments, Municipal corporations, canal authorities, irrigation department, urban development authorities, Electricity Authority', other Telecom operators like BSNL, Reliance, Airtel, Farmers or any other parties. regarding the permission being given or shall be given to other parties for any type of construction works along Operator's OFC route along Highways, National Highways & Intra-city
- v. The Contractor shall provide the OFC maintenance service on Retention Basis to keep but not limited to the following provisions on round the clock basis for attending & rectifying the OFC fault in minimum downtime (including travel time/ mobilization of maintenance team) from the time of lodging the complaint of fault/OFC cut by the NOC over mobile phone to the representative of Contractor at their designated office / Head Quarter/site maintenance office.

- vi. Contactor shall carry out testing of spare/dark fiber and there-upon the OFC repairs along with testing of OFC route for improvement in the performance with link margin as per standards with the consent of Operator. Contactor will be provided information by 15th of every month regarding OFC loss increase/decrease monthly or on a event basis on all working/live fiber and contractors have to rectify all the faults and require to submit the reports as mentioned above. No extra charges will be payable for this schedule maintenance.
- vii. Contactor shall take insurance for all the workmen engaged under this contract and as per labor laws applicable from time to time. The contractor will also ensure Operator issued material for all risk cover and comprehensive.
- viii. Supply of consumables like: Joint enclosure, RCC Jointing pit, GI pipe, Warning mat, OFC Route marker, DWC pipe, Electronic marker/stone marker etc meeting the specification as detailed under the Technical specification and approval of Operator should be used. Contactor has to keep minimum stock of above items up to the satisfaction and monthly reconciliation of provided supply has to be submitted.
- ix. The CONTRACTOR shall submit the list of manpower (skilled/unskilled), machines, equipments and consumable items with quantities suitable to meet the contractual requirements. Contractors should submit the detail room/address of their team to be deploy at site along with the manpower list within Week and the residence of the team to be deploy at site is to be physically inspected by the Operator's representative.
- x. Under OFC link cut condition, the following minimum activities shall have to be taken up by then CONTRACTOR for the restoration of OFC cut/fault for the end-to- end restoration of the network traffic/service.
  - a) For the identification of exact cut/fault location on immediate basis, the OTDR measurement of spare fiber shall be made from the nearest telecom station/Node. For better clarity, the OTDR measurement on spare fiber shall be taken at nodes / nearest OFC joint situated at both ends of cut and using dummy fiber spool of 1 km, in case required. OTDR should never be

done on working fiber, if required to check the working fiber, consent of NOC and OFC team is required.

- b) After the OTDR measurement, the As-built drawing shall be referred and the physical site of fault on ground shall be located. It may be possible that data in as built document may not be correct for the accuracy purpose. Accordingly, the job of excavation, identification of OFC cable, pulling of cable from both ends, construction of jointing pits, splicing of OFC, back filling of trench & jointing-pit shall be taken up as per the standard procedure.
- c) The splicing of fiber is to be carried out in line with the installed fiber i.e. G.652/G.655 if used and measurements are to be taken on spare fiber. In case the active fiber is to be used, precautions are to be taken with regard to the power launched on to the fiber. Restoration of site shall be done to the entire satisfaction of owner of land, ROW, Forest authorities & Engineer- in-charge.
- d) After the completion of site activities, the CONTRACTOR shall ensure of the restoration of the traffic from the NOC and thereafter fresh OTDR measurement & traces (for 1310nm & 1550 nm) shall be taken for all fiber within 24hrs & submit to Operator OFC team.
- e) After the completion of site activities, OTDR test shall be carried out from the node/nearest Telecom station & reports shall be generated within 24hrs from the time of restoration of fault. The As-built drawing shall be updated by incorporating the new details like: OFC loop used Joint-pit location, etc. Position of OFC should be shown from the center and edge of the road in As-built drawing and the length of loop in joint pit after fault restoration shall be incorporated in As-built drawing.
- f) Any other job required for the restoration of the OFC fault/cut in totality is to be taken up by the Contractor.
- g) If the contractor is attending OFC fault in given route and if there are multiple cut, then contractor should consult with Operator's authority to



decide which fault shall be attended immediately.

- xi. In case the site condition is not favourable for the immediate restoration of the fault, the temporary restoration of the service fiber shall be taken up immediately with the approval of Operator's NOC/OFC Team. Depending upon our customer's traffic on the said link & availability of redundant links, permanent restoration of OFC jointing work may not be considered in breakdown time if the restoration works carried out with the approval of Operator's NOC/OFC team and site in-charge. The decision of Operator authority shall be final in this regard. Permanent restoration of joint pit is to be carried out by contractor within 48 hrs from time of OFC fault/cut with the information to Operator's NOC and OFC Team. In case the site is not conducive for permanent restoration some arrangement of manpower has to be done by contractor for safeguarding exposed OFC till permanent restoration. No extra payment shall be given to contractor on account of deployment of manpower. In case of further cuts at exposed OFC location, no payment will be made to the contractor for that additional cuts/materials and permanent restoration shall be carried out by the contractor at his own cost. Contractor will be accountable for this additional downtime of OFC link
- xii. In case of more than one OFC faults, simultaneously (Maintenance team is busy in restoration of one OFC fault, & in between other fault also occurred) in the respective sections, the contractor has to make an alternate arrangement within One hours at the site, after the second OFC fault occurred. In such cases, the mobilization time maximum up to one hour's duration for the second OFC fault shall not be considered as down time. However if contractor fails to confirm & mobilize his team within one hours, Operator can take up the job at risk (act of Negligence) & Penalize the contractor.
- xiii. Submission of weekly, monthly & emergency report as desired by Operator's OFC Team. The Performa of the reports shall be finalized with mutual understanding.
- xiv. In a situation, where in the vicinity of Operator's OFC network any major construction projects are going on, or about to start, & it is necessary to re-route our OFC/hang the OFC through a new safe route to avoid damage, Contractor shall explore feasibility of alternate routes & provide detailed

route plan for new location, where re-routing is proposed. Operator shall advise to shift/ re-route the OFC cable through the same contract or other contractor depending upon the feasibility for the same.

- xv. OTDR test report (soft copy) is to be submitted on quarterly basis for all routes.
- xvi. No relaxation in downtime or time extension shall be granted due to OFC cuts by agencies working along OFC route, intentional cuts, HDD/boring work, sabotage, and theft, inaccuracy of as built documents or any other site activities at site.
- xvii. During critical conditions, if it is required, the contractor has to arrange JCB / water pump or more manpower including labor, the same shall be arranged by contractor. No extra payment is applicable/ to be paid except as quoted in the commercial contract.
- xviii. Summary of statement comprising of quantity executed or amount of work done shall be submitted as per the given work procedure and reporting format.
- xix. The maintenance of the OFC route along roads is on the retention basis and patrolling of the entire OFC route is mandatory. However for the maintenance of OFC along the provided routes, no retention amount is payable & also the downtime shall not be attributed in the account of the contractor for the purpose of calculation of monthly retention charges.
- xx. The contractor as part of his maintenance contract has to submit a detailed plan for the maintenance of the network including the details of the manpower and equipments proposed to be located at different sites to cover the jurisdiction, the communication facilities, the planned maintenance bases and the detailed plans to fulfil the required CM and PM conditions. Contractor should mobilize the team & the equipment within 7 days from the date of sign of FAT date. The list of minimum man & machine required to constitute one maintenance team shall be but not limited to the list mentioned. The contractor has to provide the manpower for splicing and supervision , labour for excavation, four wheel vehicle, two wheeler motorcycle , equipments like splicing machine , OTDR, Power meter and power source , mobile sets, AC/DC equipments for splicing , lighting arrangement etc. required to carry

out the surveillance and repair of fault round the clock. In case more manpower or set of equipments, any other machines, tools and materials required for early restoration of the OFC cut/fault during critical conditions or to meet the schedule completion, the contractor shall arrange the same without any cost implication to Operator.

- xxi. Manpower and equipments should be available with the maintenance teams round the clock as listed above. However contractor can add more manpower & equipments for speedy maintenance & minimizing downtime without extra cost implication to Operator. All the equipments to be used like OTDR Machine and Power source and power meter shall be calibrated regularly as per the Optical standard requirement
- xxii. Sufficient labor should be provided as and when required round the clock during repair of fault/faults. The number of maintenance team to be deployed for the mentioned OFC sections & placement of the team should be notified to Operator's authority. However, the responsibility of workability of the same with respect to the travelling time, availability of end to end OFC connectivity & the time under which the fault is to be attended lies with the contractor to meet the target.
- xxiii. The Contractor shall deploy sufficient skilled man power for the maintenance & operations of the entire system defined in the scope.
- xxiv. For this period which commences immediately after operational acceptance, the actual outage frequency and the availability achieved during the period shall be calculated periodically, jointly by the Contractor and the Client.

## **5.6 Delivery Schedule**

**The below schedule of delivery is applicable for the successful bidder of Phase 1 and Phase 2 its include ROW permission from various department by DURG POLICE/Contractor.**

**5.6.1 Site Survey Report-** Within 15 Days from issuance of LoI

**5.6.2 Phase 1 OFC Laying (Overhead and Underground)-** Within 60 Days from signing of Agreement

**5.6.2 Phase 2 OFC Laying (Overhead and Underground)- Site Survey** Within

15 Days from issuance of Purchase order and completion of laying within 60 Days from release of Purchase Order.

**5.7 LAYING OF OVERHEAD CABLES:** In case after route survey it is ascertained that the optical fiber cable cannot be laid underground due to terrain constraints or miscellaneous reasons, then the cable may be planned to be laid overhead after obtaining due approval from DURG POLICE reps. In case approval is granted for laying overhead cable for certain sections of the route then the following would be adhered to by the Contractor.

- 1) Construction practice for laying of overhead cables in that region would be followed to include span length, construction of poles, fastening and securing of cables etc.
- 2) The cable to be laid for these sections would be separately designed and manufactured to provide the necessary tensile strength. The essential design specifications for overhead optical fiber cable would include the following:-

## ANNEXURE-I

### TECHNICAL SPECIFICATION AND COMPLIANCE SHEET

(Scanned copy of original to be uploaded online as part of the techno-commercial proposal  
(Envelop B Online))

#### **Minimum Requirement:**

Technical Specifications and requisite Features / Characteristics of various components under the project.

#### **Note:**

- a) Bidder must comply with all the technical specifications given in this tender document. Any deviations from the prescribed specifications shall be mentioned in the deviation statement format given in the “Forms of Tender” under Annexure II.
- b) The quantities mentioned are not fixed and may change during implementation phase depending on the cable laying routes. The Bidders shall consider this fact while submitting the bid.
- c) Vendor is expected to provide adequate Installation accessories and patch cords to terminate the interfaces in the FDF. Patch cords are required to be of 20Mtr length.

## CONSTRUCTION SPECIFICATIONS

### **Soil Classification**

Soil shall be classified under two broad categories Rocky and Non Rocky, The soil is categorized as rocky if the cable trench cannot be dug without blasting and / of chiseling. All other types of soils shall be categorized as Non Rocky including Murrum & soil mixed with stone or soft rock.

#### **1. Rocky soil**

The terrain which consists of hard rocks or boulders where blasting/ chiseling is required for trenching such as quartzite, granite, basalt in hilly areas and RCC (reinforcement to be cut through but not separated) and the like.

#### **2. Kachcha, soils**

This will include all types of soil- soft soil/hard soil/murrum i.e. any strata, such as sand, gravel, loam, clay, mud, black cotton murrum, shingle, river or nullah bed boulders, soling of roads, paths etc. (All such soils shall be sub-classified as **kachcha soil**) and

**3. Pucca soil hard** core, macadam surface of any description (water bound, grouted tarmac etc), CC roads and pavements, bituminous roads, bridges, culverts (All such soils shall be classified as **Pucca soils**)

4. The Optical Fibre Cable shall be laid through PLB HDPE Ducts buried at a nominal depth of 165 cms. The steps involved in OF Cable construction are as under

4.1.1. Excavation of trench up to a nominal depth of 165 cms. **in non-Rocky soil**, according to construction specifications, along National / State Highways / other roads and in built up / rural areas. Under exceptional conditions/ genuine circumstances due to site constraints/ soil conditions, relaxation can be granted by the competent authority for excavation of trench to a depth lesser than 165cm. Such relaxation shall be given as per the laid down norms/ procedures being followed and with the approval of the competent authority. The payment in such cases shall be made on pro-rata basis as per the existing norms adopted.

- a. Laying of PLB HDPE Ducts/coils coupled by sockets in excavated trenches, on bridges and culverts, as per construction specification and sealing of PLB HDPE Ducts pipe ends at every manhole by end-plugs of appropriate size.
- b. Providing additional protection by R.C.C. Pipes/GI pipes and/or concreting/chambering, wherever required. According to construction specifications.

4.1.2. Fixing of GI pipes/troughs with clamps on culverts/bridges and/or chambering or concreting of G.I. Pipes/ troughs, wherever necessary. Normally, RCC/DWC pipes shall be used and use of GI pipes shall be avoided. However, in case it is felt that GI pipe is unavoidable in certain circumstances this should be done with the prior approval of competent authority. This shall be recorded appropriately.

4.1.3. Laying Protection Pipes on Bridges and Culverts. In case trenching and pipe laying is not possible on the culverts, the pipes shall be laid on the surface of the culverts / bridges after due permission from the competent authority as per construction specification

4.1.4. Back filling and Dressing of the Trench according to construction specifications.

4.1.5. Making manhole (of size 2.0 m length x 1.0 m width x 1.65 m Depth) at every Cable pulling location for housing the OF Cable loop & Pulling Optical Fibre Cable using proper tools and accessories. Sealing of both ends of the PLB HDPE pipe in manhole by hard rubber bush of suitable size to avoid entry of rodents into the PLB HDPE Ducts, putting split PLB HDPE Ducts and split RCC pipes with proper fixtures over cable in the manhole to protect the bare cable.

4.1.6. Digging of pit of size 2 meter x 2 meter x 1.8 meter (depth) for fixing of Jointing chamber precast RCC cover of suitable size on Jointing chamber to protect the Joint and back filling of jointing chamber with excavated soil. Digging of pits 500 cm to 1000 cm towards jungle side at every manhole and jointing chamber along the route to a depth of 75 cms. fixing of route Indicator/joint indicator, concreting and back filling of pits. Painting of route indicators with Blue colour and joint Indicator by Grey colour and sign writing denoting route/joint indicator number and marked as "CG Logo", as per construction specification.

## **4.2. Specifications of Materials to be used**

### **4.2.1 PLB HDPE Duct**

Optical Fiber Cables should be pulled through Permanently Lubricated HDPE Duct of 40 mm/33mm size conforming to the specifications as per TEC GR No. TEC/GR/TX/CDS-008/03 / MAR-11 with latest Amendments. The Ducts shall be **blue in color** and have the identification markings as per TEC GR wherein **CG Government** logo shall be marked as purchaser's name.

### **4.2.2. PLB HDPE Duct**

#### **Accessories**

#### **a) Push fit Coupler**

Push Fit couplers shall be used for coupling PLB HDPE ducts/coils. The specifications of the couplers shall be as per TEC GR no TEC/GR/TX/CDS-008/03/Mar11 with latest amendments.

#### **b) PP Rope**

Should confirm to TEC GR No. TEC/GR/TX/CDS-008/03/MAR-11 with latest Amendments. However, this is optional and CPSUs may use the same on need basis. The PP rope can be ordered along with the PLB duct as required. In this case PP rope is drawn through the HDPE/PLB pipes/coils and safely tied to the end caps at either ends with hooks to facilitate pulling of the OF cables at a later stage. The rope used is 3 strands Polypropylene Para Pro rope having yellow colour and size of 6 mm diameter.

It should have a minimum breaking strength of 550 kgs. The length of each coil of rope should be 5 meter more than the standard length of duct (or as ordered) and it should conform to (i) BS 4928 Part- II of 1974 (ii) IS 5175 of 1982. It should be of special grade and should have ISI certificate mark. It should be manufactured out of industrial quality Polypropylene.

#### **c) End Cap**

End Cap shall be used for sealing the ends of the empty ducts, prior to installation of the OF Cable and shall be fitted immediately after laying the duct to prevent the entry of any dirt, water, moisture, insects/rodents etc. It should confirm to TEC GR No. TEC/GR/TX/CDS-008/03/MAR- 11 with latest amendments. The ends of the PLB HDPE ducts/coils laid in the manholes should be closed with End Caps. The End Caps used should be suitable for closing 40mm/33mm PLB HDPE ducts/coils. A suitable arrangement should be provided in the End Cap to tie PP Rope.

#### **d) Cable sealing Plug**

This shall be used to seal the end of the ducts perfectly, after the OF cable is pulled in the duct. For pulling the cable through the ducts, it is necessary to provide man holes at that location and also at bends and corners wherever required. The ends of the PLB HDPE ducts/coils are closed with Cable sealing Plugs. The End Plugs used should be suitable for closing 40mm/33mm PLB HDPE ducts/coils. The Cable sealing plug shall confirm to TEC GR No. TEC/GR/TX/CDS- 008/03/MAR-11 with latest amendments. (Wherever blowing technique is used for laying OF Cable, at the discretion of the DURG POLICE concerned,

the hand holes/manholes required for accessing the cable during cable laying can be at longer distances depending upon requirement.)

#### **4.2.3. Material for Providing Additional Protection**

##### **a) RCC Full Round Pipes**

Reinforced cement concrete pipes (spun type) coupled with RCC collars sealed with cement mortar used to provide additional protection to PLB HDPE Ducts/coils at lesser depths should be of full round, NP-2 class and size 100 mm (internal diameter), conforming to IS standard 458-1988 with latest amendments. The pipes should have a nominal length of 2 meters. The RCC collars should be properly sealed using cement mortar 1:3 (1:53 grade cement of reputed brand, 3: fine sand without Impurities). If case of long spans, every third joint will be embedded in a concrete block of size 60 cms (L) x 40 cms (W) x 25 cms (H) of 1:2:4 cement concrete mix (1: cement, 2: coarse sand, 4: stone aggregate of 20 mm nominal size) so that the alignment of RCC pipes remain firm and intact. Also, both ends of RCC pipes spans will be sealed by providing concrete block of size 40 cm (L) x 40 cm (W) x 25 cm (H) of 1:2:4 cement concrete mix to avoid entry of rodents.

##### **b) RCC Split Pipes**

The split Reinforced cement concrete pipes (spun type) with in-built collars are used to provide additional protection to PLB HDPE Ducts/coils should be of 100mm internal dia.(Spigotted), Class--NP-3, Thickness: 25mm, Length: 2Meters with inbuilt collar at one end, Conforming to ISI Specification IS: 458, 1988 with latest amendment

**c) G.I. Pipes** G.I. pipes should be of medium duty class having inner diameter of 50mm and should conform to specifications as per IS 554/1985 (revised up to date) IS 1989 (Part-I), 1900 Sockets (revised upto date) & IS 1239 (Part-II) 1992 (revised up to date).

##### **d) DWC Pipes**

Use of normal duty DWC (Double walled corrugated) HDPE pipe – confirming to TEC GR no.GR/DWC-34/01 Sep.2007 with latest amendments shall be preferably utilized as first choice for protection of Optical Fiber Cable instead of GI pipes. The DWC pipes used shall be of size 75/61 mm as per table 2 of the said TEC GR.

##### **e) M.S. Weld Mesh**

The PLB HDPE Ducts can also be protected by embedding it in concrete of size of 25 cms x 25 cms reinforced with MS weld mesh. The MS weld mesh used should be of 50 mm x 100 mm size, 12 SWG, 120 cms in width in rolls of 50m each. One meter of MS weld mesh caters to approx. 3 meters of concreting. (See figure „2“ for details) The strength of RCC/CC is dependent on proper curing, therefore, it is imperative that water content of CC/RCC mix does not drain out into the surrounding soil. In order to ensure this, the RCC/CC work should be carried out by covering all the sides by yellow PVC sheets of weight not less than 1 kg per 8 sqm to avoid seepage of water into the soil.

#### **4.2.4. Joint Chamber**

The Joint chamber shall be provided at every joint location to keep the OF cable joint well protected and also to house extra length of cable which may be required in the event of faults at a later date. The Joint chamber shall be of pre-cast RCC type as per construction specification. Brick chamber can also be made with prior permission of DURG POLICE.



#### **4.2.5. Rubber Bush**

To prevent entry of rodents into PLB HDPE DUCTS, the ends of PLB HDPE DUCTS are sealed at every manhole and joint using rodent resistant hard rubber bush (cap) after optical fibre cable is pulled. The rubber bush should be manufactured from hard rubber with grooves and holes to fit into 40 mm PLB HDPE DUCTS pipe, so that it should be able to prevent the entry of insects, rodents, mud, and rainwater into the PLB HDPE DUCTS pipe. It should conform to TEC GR with latest amendments.

#### **4.2.6. Route/Joint Indicator**

The Route/Joint indicators are co-located with each manhole/joint chamber. In addition Route indicators are also to be placed where route changes direction like road crossings etc. Either RCC/Pre-cast or Stone based route indicators can be used. The detailed specification and design of the same shall be as per construction specification. Generally, Stone Route indicators shall be used for BasterNet project.

### **4.3 Optical Fiber Cable & Installation**

A :

12 Core Outside plant Optical Fiber Cable ECCS Armour HDPE Sheath Single tube/ Multi tube Gel-filled, 9/125 Single Mode (OS2), G.652.D Water blocking Manufacturing and testing setup conforms to ISO 9001 quality standards Fiber performance matching or exceeding to ITU-T standards Maximum Tensile Strength-Short Term : 1500N or better Maximum Attenuation: 0.35 @ 1310 nm. Strength Member: Two FRP Rod/ Two Steel Wires / Central strength member FRP Mass: Minimum 95 Kg/Km or better. RoHS Compliant Factory test report

B: LIU/FDMS Rack Mounted (24 Port SC) WITH PIGTAILS

Material: Box-Powder Coated Aluminium Alloy/ Powder Coated Steel. Spool: FR Grade ABS. Cable Grommets: FR Grade Nylon. Fully Loaded with: Splice Tray: Aluminium/ ABS plastic. Loaded with 4 no. of 6 pak adapter plate SC. Single mode OS2 pigtails.

C : LIU Wall Mounted (12 Port SC) WITH PIGTAILS

Material: Box-Powder Coated Aluminium Alloy/ Powder Coated Steel. Spool: FR Grade ABS. Cable Grommets: FR Grade Nylon. Fully Loaded with: Splice Tray: Aluminium/ ABS. 6 SC Adapters singlex/ 3 SC adaptors duplex / 6 pak adapter plate. Single mode OS2 pigtails.

D : HDPE Pipe

The PLB HDPE pipe shall have two concentric layers viz. outer layer and inner layer. The outer layer shall be made of HDPE material and the inner layer of solid permanent lubricant.

1. Color: Orange
2. Suitable Ultra Violet stabilizers
3. Tensile Strength at Yield: 20 N/mm minimum

4. Hardness, Shore- D: Between 60 and 65 units
5. 50°C: 96 hrs., as per ASTM D 1693, No cracks

Dimensions of pipe the nominal size of the pipe shall be 40/33mm ISI/ISO Certified

#### **4.4 Supply of Joint Enclosure & Splicing Features**

- Standard fiber count 2-12 F
- Universal type i.e. suitable for all type of cable (ADSS OFC, Armoured and metal free cable)
- Provide scope for straight / branch joints
- Resistant to chemicals and corrosive atmosphere.
- Easy re-entry and closing with mechanical plastic clamp.
- Shall be water and air proof.
- Ribs on the body for extra strength
- 6 Cable entry port & 1 oval port
- Suitable for cable size upto-30mm
- Dome type

#### **Dimensions**

- Length-395mm  $\pm 5\%$
- Outer diameter-273mm  $\pm 5\%$

*Note: Any proprietary item/ specification needs to be ignored, equivalent or higher specifications are acceptable.*

Device should comply with the guidelines for Indian Standard and other standard mentioned in this RFP.

Dated \_\_\_\_ day of \_\_\_\_\_ 2017

Signature and Seal of the Bidder

**ANNEXURE-II**

**BID FORM**

To,  
S.P.  
DURG POLICE  
DURG

Sir,

Having examined the bidding documents, we undersigned, offer to supply and deliver (description of goods and services) in conformity with the said bidding documents as per the prices given in the price schedule. We undertake, if our bid is accepted, to commence delivery within (number) days and to complete delivery of all the items specified in the contract within (number) days calculated from the date of receipt of your Purchase Order.

We agree to abide by this bid for a period of 180 days from the date fixed for bid opening in instructions to bidders and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof, shall constitute a binding contract between us.

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

Dated \_\_\_\_ day of \_\_\_\_\_ 2017

Signature and Seal of the Bidder

**ANNEXURE-III**  
**PRICE SCHEDULE**

To,  
S.P. DURG  
DURG POLICE

Bid form for bid no. ----- date of opening -----

1. We ----- hereby offer to supply the following items at the prices and within the period indicated below:

<b>Summary for Total Cost of Project</b>		
Sr. No.	Description	Total Cost inclusive of Taxes
1	Financial Proposal for Phase 1	Fill up Total cost of Table A
2	Financial Proposal for Phase 2	Fill up Total cost of Table B
	<b>Grand Total</b>	<b>(A+B)</b>

<b>Table A- Financial Proposal for Phase 1 OFC Cable Laying</b>							
Sr. No.	Item	Qty. (Q)	Unit	Price per Unit (P)	Taxes Per Unit (T)	Unit price inclusive of Taxes U=P+T	Total Amount in (INR) TA= U*Q
1	Supply of OFC Cable including laying as per specification mentioned in Annexure I in the Tender Document to a depth of 165 cms and back filling for all types of soil	35000	Mtr				
2	LIU Rack Mounted (24 Port SC)	12	Nos.				
3	LIU Rack Mounted (12 Port SC)	12	Nos.				

**Table A- Financial Proposal for Phase 1 OFC Cable Laying**

Sr. No.	Item	Qty. (Q)	Unit	Price per Unit (P)	Taxes Per Unit (T)	Unit price inclusive of Taxes U=P+T	Total Amount in (INR) TA= U*Q
4	12 Core ADSS cable including hanging as per specification mentioned in the Tender Document	5000	Mtr				
5	Operation & Maintenance support for period of 5 years from date of Final Acceptance Test for all Link Commissioned and Tested under Phase 1	1	Lum sump				
<b>Total Amount in Figure</b>							
<b>Total Amount in Words</b>							

**Table B- Financial Proposal for Phase 2 OFC Cable Laying**

Sr. No.	Item	Qty. (Q)	Unit	Price per Unit (P)	Taxes Per Unit (T)	Unit price inclusive of Taxes U=P+T	Total Amount in (INR) TA= U*Q
1	Supply of 12 Core OFC Cable including laying as per specification mentioned in Annexure I in the Tender Document to a depth of 165 cms and back filling for all types of soil except Hard Rocky soil	1300	Mtr				
2	LIU Rack Mounted (24 Port SC)	48	Nos.				
3	LIU Rack Mounted (12 Port SC)	48	Nos.				
4	12 Core ADSS cable including hanging as per specification mentioned in the Tender Document	37000	Mtr				
2	Operation & Maintenance support for period of 5 years from date of Final Acceptance Test for all Link Commissioned and Tested under Phase 2	1	Lum sump				
<b>Total Amount in Figure- B</b>							
<b>Total Amount in Words- B</b>							

1. Important Note:

**a) For Underground Cable Laying**

For all above items the per meter quoted rates are inclusive of All material cost mentioned in the tender and labour, laying , duct laying, cable pulling blowing rope insertion, coupler , joint chamber, Route Marker, FMS, and other as per tender Scope of Work.

b) After acceptance of LoI the bidder will be conduct site survey for Phase Awarded to Bidder. After Approving of Site Survey report and Bill of Material (BoM) by DURG POLICE, Performance Security shall be deposited as specified in this document for entering into a Contract with DURG POLICE.

c) The Cost for Site survey will be include in Financial Proposal.

2. All quoted prices should be **inclusive of all taxes and duties** prevailing on the date of proposal submission.

3. Since the price proposal is in INR, DURG POLICE shall not consider any upward variation/ fluctuation on account of any foreign exchange at any time during the currency of the contract.

4. Prices are valid for a period of 180 Days from date of submission of Bid.

5. Other than what is given above, the bidder is expected to account for any other deliverable to make the services successful and will be considered for commercial evaluation.

**Note:-**

a) The Bidders may prepare their bid form as per this Performa mentioned .

b) No change in the Performa is permissible.

c) No erasures or alterations in the text of the Bid are permitted. Any correction made in the Bid shall bear initial by the bidder.

Dated \_\_\_\_\_ 2017

(Signature and seal of manufacturer/ bidder)

**ANNEXURE-IV - FORMAT FOR POWER OF ATTORNEY**

Dated: \_\_\_\_\_

**POWER OF ATTORNEY**

**To Whomsoever It May Concern**

Know all men by these presents, we \_\_\_\_\_ (name and registered office address of the Bidder) do hereby constitute, appoint and authorize Mr. \_\_\_\_\_ (Name of the Person(s)), domiciled at \_\_\_\_\_ (Address), acting as \_\_\_\_\_ (Designation and the name of the firm), as Authorized Signatory and whose signature is attested below, as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Proposal for award of Agreement **“Selection of Agency for Supply and Commissioning of OFC Backbone Link and Operation & Maintenance in DURG POLICE Chhattisgarh under I.T.M.S. Project”** involving the deliverables mentioned in the NIT as per agreement with DURG POLICE, vide Invitation for Tender (Tender Document) Document dated \_\_\_\_\_, issued by The \_\_\_\_\_, DURG POLICE, including signing and submission of all documents and providing information and responses to clarifications / enquiries etc. as may be required by DURG POLICE or any governmental authority, representing us in all matters before DURG POLICE, and generally dealing with DURG POLICE in all matters in connection with our Proposal for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For \_\_\_\_\_

(Signature)

(Name, Title and Address)

Accept

(Attested signature of Mr. \_\_\_\_\_)

(Name, Title and Address of the Attorney)

Notes:

- To be executed by the Bidder
- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the

executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

- Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a resolution / power of attorney in favor of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the executants(s).



**ANNEXURE-V**

**PROFORMA OF PERFORMANCE BANK GUARANTEE**

(To be stamped in accordance with stamp Act)

(To be issued by a Bank \_\_\_\_\_)

This Deed of Guarantee executed at \_\_\_\_\_ by \_\_\_\_\_ (Name of the

Bank) having its Head/Registered office at \_\_\_\_\_ (hereinafter referred to as “the Guarantor”) which expression shall unless it be repugnant to the subject or context thereof include its heirs, executors, administrators, successors and assigns;

In favor of The S.P. DURG , having its office at COLLECTORAT DURG (CG) (hereinafter called “, DURG POLICE ” which expression shall unless it be repugnant to the subject or context thereof include its heirs, executors, administrators, successors and assigns);

Whereas M/s \_\_\_\_\_, a company formed under \_\_\_\_\_ (specify the applicable law) and having its registered office at \_\_\_\_\_ has been, consequent to conduct and completion of a competitive bidding process in accordance with the letter of requirements document No. \_\_\_\_\_ dated \_\_/\_\_/2017 issued by , DURG POLICE , and selected M/s \_\_\_\_\_ (hereinafter referred to as the Bidder) for the Agreement by , DURG POLICE as more specifically defined in the aforementioned Document including statement of work and the Agreement executed between the , DURG POLICE Raipur and Bidder. The Agreement requires the Bidder to furnish an unconditional and irrevocable Bank Guarantee for an amount of Rs. \_\_\_\_\_ /- (Rupees \_\_\_\_\_ only) by way of security for guaranteeing the due and faithful compliance of its obligations under the Agreement.

Whereas, the Bidder approached the Guarantor and the Guarantor has agreed to provide a Guarantee being these presents:

Now this Deed witnessed that in consideration of the premises, we, \_\_\_\_\_ Bank hereby Guarantee as follows:

The Bidder shall implement the Project, in accordance with the terms and subject to the conditions of the Agreement, and fulfill its obligations there under

We, the Guarantor, shall, without demur, pay to , DURG POLICE an amount not exceeding Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) within 7 (seven) days of receipt of a written demand therefore from , DURG POLICE stating that the Bidder has failed to fulfill its obligations as stated in Clause 1 above.

The above payment shall be made by us without any reference to the Bidder or any other person and irrespective of whether the claim of the , DURG POLICE is disputed by the Bidder or not.

The Guarantee shall come into effect from \_\_\_\_\_ (Start Date) and shall continue to be in

full force and effect till the earlier of its expiry at 1700 hours Indian Standard Time on \_\_\_\_\_ (Expiry Date) (both dates inclusive) or till the receipt of a claim, from the DURG POLICE Government of Chhattisgarh under this Guarantee, which is one month after the expiry of performance guarantee, whichever is earlier. Any demand received by the Guarantor from , DURG POLICE prior to the Expiry Date shall survive the expiry of this Guarantee till such time that all the moneys payable under this Guarantee by the Guarantor to , DURG POLICE .

In order to give effect to this Guarantee, , DURG POLICE shall be entitled to treat the Guarantor as the principal debtor and the obligations of the Guarantor shall not be affected by any variations in the terms and conditions of the Agreement or other documents by , DURG POLICE or by the extension of time of performance granted to the Bidder or any postponement for any time of the power exercisable by , DURG POLICE against the Bidder or forebear or enforce any of the terms and conditions of the Agreement and we shall not be relieved from our obligations under this Guarantee on account of any such variation, extension, forbearance or omission on the part of , DURG POLICE or any indulgence by , DURG POLICE to the Bidder to give such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

This Guarantee shall be irrevocable and shall remain in full force and effect until all our Obligations under this guarantee are duly discharged.

The Guarantor has power to issue this guarantee and the undersigned is duly authorized to execute this Guarantee pursuant to the power granted under \_\_\_\_\_.

In witness, whereof the Guarantor has set its hands hereunto on the day, month and year first here-in-above written.

Signed and Delivered by \_\_\_\_\_ Bank by the hand of Shri \_\_\_\_\_ its \_\_\_\_\_ and authorized office.

Authorized Signatory \_\_\_\_\_ Bank

## **ANNEXURE-VI- PRE-CONTRACT INTEGRITY PACT**

### **1. GENERAL**

1.1. This pre-bid contract Agreement (hereinafter called the Integrity Pact) is made on .....day of the month ..... 20..... between, the Government of Chhattisgarh acting through Shri. .... (Designation of the officer, Department) Government of Chhattisgarh (hereinafter called the "TENDERING AUTHORITY", which expression shall mean and include, unless the context otherwise requires, his successors in the office and assigns) and the First Party, proposes to procure (name of the Stores/Equipment/Work/Service) and M/s .....represented by Shri ..... (Hereinafter called the "BIDDER/Seller", which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) and the Second Party, is willing to offer/ has offered.

1.2. WHEREAS the BIDDER is a Private Company/Public Company/ Government Undertaking/ Partnership firm, constituted in accordance with the relevant law in the matter and the TENDERING AUTHORITY is a Ministry/Department of the Government, performing its function on behalf of the Government of Chhattisgarh.

### **2. OBJECTIVES**

NOW, THEREFORE, the TENDERING AUTHORITY and the BIDDER agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the Contract to be entered into with a view to:-

2.1. Enabling the TENDERING AUTHORITY to obtain the desired Stores/Equipment/Work/Service at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

2.2. Enabling BIDDERS to abstain from bribing or indulging in any corrupt practices in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing any corrupt practices and the TENDERING AUTHORITY will commit to prevent corruption, in any form, by its official by following transparent procedures.

### **3. COMMITMENTS OF THE TENDERING AUTHORITY**

The TENDERING AUTHORITY commits itself to the following:-

3.1. The TENDERING AUTHORITY undertakes that no official of the TENDERING AUTHORITY, connected directly or indirectly with the contract, will demand, take promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favor

or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

3.2. The TENDERING AUTHORITY will, during the pre-contract stage, treat BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to the other BIDDERS.

3.3. All the officials of the TENDERING AUTHORITY will report the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the TENDERING AUTHORITY with the full and verifiable facts and the same prima facie found to be correct by the TENDERING AUTHORITY, necessary disciplinary proceedings, or any other action as deemed, fit, including criminal proceedings may be initiated by the TENDERING AUTHORITY and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the TENDERING AUTHORITY the proceedings under the contract would not be stalled.

#### **4. COMMITMENTS OF BIDDERS**

The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-

4.1. The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the TENDERING AUTHORITY, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

4.2. The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage, or inducement to any official of the TENDERING AUTHORITY or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favor or dis-favour to any person in relation to the contract or any other contract with the Government.

4.3. The BIDDER further confirms and declares to the TENDERING AUTHORITY that the BIDDER in the original Manufacturer/Integrator/Authorized government sponsored export entity of the stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the TENDERING AUTHORITY or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid

to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

4.4. The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payment he has made, is committed to or intends to make to officials of the TENDERING AUTHORITY or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

4.5. The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

4.6. The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

4.7. The BIDDER shall not use improperly, for purpose of competition or personal gain, or pass on to others, any information provided by the TENDERING AUTHORITY as part of the business relationship, regarding plans, technical proposal and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

4.8. The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

4.9. The BIDDER shall not instigate or cause to instigate any third person to commit any of the acts mentioned above.

## **5. PREVIOUS TRANSGRESSION**

5.1. The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.

5.2. If the BIDDER makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

## **6. EARNEST MONEY (SECURITY DEPOSIT)**

6.1. Every BIDDER while submitting commercial bid, shall deposit an amount as specified in RFP as Earnest Money/Security Deposit, with the TENDERING AUTHORITY through any of the following instruments:

- (i) Bank Draft or a Pay Order in favor of.....
- (ii) A confirmed guarantee by an Indian Nationalized Bank, promising payment of the guaranteed sum to the ..... (TENDERING AUTHORITY) ..... on

demand within three working days without any demur whatsoever and without seeking any reasons whatsoever. The demand for payment by the TENDERING AUTHORITY shall be treated as conclusive proof of payment.

(iii) Any other mode or through any other instrument (to be specified in the RFP).

6.2. The Earnest Money/Security Deposit shall be valid up to a period of five years or the complete conclusion of the contractual obligations to the complete satisfaction of both the BIDDER and TENDERING AUTHORITY, including warranty period, whichever is later.

6.3. In the case of successful BIDDER a clause would also be incorporated in the Article pertaining to Performance Bond in the Purchase Contract that the provisions of Sanctions for violation shall be applicable for forfeiture of Performance Bond in case of a decision by the TENDERING AUTHORITY to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.4. No interest shall be payable by the TENDERING AUTHORITY to the BIDDER on Earnest Money/Security Deposit for the period of its currency.

## **7. SANCTIONS FOR VIOLATIONS**

7.1. Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the TENDERING AUTHORITY to take all or any one of the following actions, wherever required:-

(i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.

(ii) To forfeit fully or partially the Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/Performance Bond (after the contract is signed), as decided by the TENDERING AUTHORITY and the TENDERING AUTHORITY shall not be required to assign any reason therefore.

(iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.

(iv) To recover all sums already paid by the TENDERING AUTHORITY, and in case of the Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the TENDERING AUTHORITY in connection with any other contract such outstanding payment could also be utilized to recover the aforesaid sum and interest.

(v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the TENDERING AUTHORITY, along with interest.

(vi) To cancel all or any other contracts with the BIDDER and the BIDDER shall be liable to pay compensation for any loss or damage to the TENDERING AUTHORITY resulting from such cancellation/rescission and the TENDERING AUTHORITY shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

(vii) To debar the BIDDER from participating in future bidding processes of the Government of Chhattisgarh for a minimum period of five years, which may be further extended at the discretion of the TENDERING AUTHORITY.

(viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middlemen or agent or broken with a view to securing the contract.

(ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the TENDERING AUTHORITY with the BIDDER, the same shall not be opened.

(x) If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is closely related to any of the officers of the TENDERING AUTHORITY, or alternatively, if any close relative of an officer of the TENDERING AUTHORITY has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender. Any failure to disclose the interest involved shall entitle the TENDERING AUTHORITY to rescind the contract without payment of any compensation to the BIDDER.

The term 'close relative' for this purpose would mean spouse whether residing with the Government servant or not, but not include a spouse separated from the Government servant by a decree or order of a competent court; son or daughter or step son or step daughter and wholly dependent upon Government servant, but does not include a child or step child who is no longer in any way dependent upon the Government servant or of whose custody the Government servant has been deprived of by or under any law; any other person related, whether by blood or marriage, to the Government servant or to the Government servant's wife or husband and wholly dependent upon Government servant.

(xi) The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the TENDERING AUTHORITY, and if he does so, the TENDERING AUTHORITY shall be entitled forthwith to rescind the contract and all other contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the TENDERING AUTHORITY resulting from such rescission and the TENDERING AUTHORITY shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

7.2. The decision of the TENDERING AUTHORITY to the effect that a breach of the provisions of this pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Monitor(s) appointed for the purposes of this Pact.

## **8. FALL CLAUSE**

8.1. The BIDDER undertakes that he has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect

of any other Department of the Government of Chhattisgarh or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Department of the Government of Chhattisgarh or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the TENDERING AUTHORITY, if the contract has already been concluded.

## **9. INDEPENDENT MONITORS**

9.1. The TENDERING AUTHORITY will appoint Independent Monitors (hereinafter referred to as Monitors) for this Pact.

9.2. The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

9.3. The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

9.4. Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Sub Selected Bidder(s) with confidentiality.

9.5. As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the TENDERING AUTHORITY.

9.6. The Monitor will submit a written report to the designated Authority of TENDERING AUTHORITY/Secretary in the Department/within 8 to 10 weeks from the date of reference or intimation to him by the TENDERING AUTHORITY/BIDDER and, should the occasion arise, submit proposals for correcting problematic situations

## **10. FACILITATION OF INVESTIGATION**

In case of any allegation of violation of any provisions of this Pact or payment of commission, the TENDERING AUTHORITY or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information of the relevant documents and shall extend all possible help for the purpose of such examination.

## **11. LAW AND PLACE OF JURISDICTION**

This Pact is subject to Indian Law, the place of performance and jurisdiction shall be the seat of the TENDERING AUTHORITY.

## **12. OTHER LEGAL ACTIONS**



The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the any other law in force relating to any civil or criminal proceedings.

**13. VALIDITY**

13.1. The validity of this Integrity Pact shall be from the date of its signing and extend up to 3 years or the complete execution of the contract to the satisfaction of both the TENDERING AUTHORITY and the BIDDER/Seller whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

13.2. If one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In such case, the parties will strive to come to an agreement to their original intentions.

14. The parties hereby sign this Integrity Pact  
at.....on.....

**TENDERING AUTHORITY**

**BIDDER**

**Name of the Officer**

**Designation**

**Witness**

1).....

2).....

**Witness**

1).....

2).....

**ANNEXURE-VII**  
**DECLARATION FOR NOT BLACK LISTED**

Date .....

To,  
S.P.  
DURG POLICE

Dear Sir,

Ref.: Tender No.

I / We ..... hereby confirm that our firm has not been banned or blacklisted by any government organization/Financial institution/Court /Public sector Unit /Central Government.

Signature of Bidder.....

Place :

Name .....

Date :

Designation .....

Seal

**ANNEXURE-VIII: DEED OF CONSORTIUM**

**TO WHOEVER IT MAY CONCERN**

Whereas we, M/s. \_\_\_\_\_, and M/s. \_\_\_\_\_ (names of members of the consortium of bidders as registered by the relevant registering authority under the deed relating to their respective incorporation) have formed a consortium named \_\_\_\_\_ to compete as a single consortium for the award of the work for which Notice Inviting Tenders (NIT) has been issued by the \_\_\_\_\_, DURG POLICE vide its NIT No. \_\_\_\_\_ dated \_\_/\_\_/\_\_\_\_, M/s. \_\_\_\_\_ as a member of the said consortium and having its registered address as \_\_\_\_\_ is hereby duly authorized to fully represent and act on behalf of, and as 'lead bidder' of the said consortium to sign the tender proposal, conduct negotiation(s), sign agreement(s) / contract(s), incur liabilities and receive communication(s) for, and on behalf of, the consortium, and, further, to transact all other necessary affairs in connection with all matters related to, or arising from, with the said NIT. We hereby confirm that we are jointly and severally liable, together with the other member(s) of the said consortium, to the DURG POLICE for all obligations of the consortium in respect of all matters related to, or arising from, the said NIT.

In witness whereof, we have hereunto set under our respective hands and seals this \_\_\_\_\_ day of \_\_\_\_\_, 2016.

Signing for and on behalf of, and	Signing for and on behalf of, and
-----------------------------------	-----------------------------------

under authority from, M/s. _____ (name of member of consortium)	under authority from, M/s. _____ (name of member of consortium)
_____ (Signature)	_____ (Signature)
Name of signatory _____	Name of signatory _____
Designation of signatory _____	Designation of signatory _____
(Seal of member of consortium for and under whose authorization signing)	(Seal of member of consortium for and under whose authorization signing)
Name of witness _____	Name of witness _____
Signature of witness _____	Signature of witness _____