

# **SCHEDULE– D**

## **Section-IV**

### **Special Conditions of Contract**

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## Special Conditions of Contract

### 1. GENERAL

The Special Conditions of Contract are to be read in conjunction with General Conditions of Contract. If there are any variations or discrepancies or conflicting provisions, the provisions in Special Conditions shall take precedence over the provisions in the General Conditions of Contract.

All additional facilities/equipment/ office etc to be provided by the contractor, as mentioned in the tender, document outside the BOQ shall not be paid separately, and shall be deemed to have been included in the rates quoted by the contractor.

### 2. ACCESS

The Contractors are to verify the work site details including:-

- a) Access,
- b) Availability of water supply and electrical energy,
- c) Space for dumping stores and materials and
- d) Space for erection of site office,

The Contractors are deemed to have catered for all contingencies connected with the site, access, water & electricity.

### 3. SUPPLY OF WATER

Water will not be supplied by NRDA and the Contractor shall make his own arrangements. NRDA will give recommendatory letter to the concerned authority if so requested by the Contractor. However, NRDA shall be in no way responsible for obtaining permission and no claim on account of this will be entertained.

### 4. ELECTRIC SUPPLY

- (a) Electric power both for construction and lighting shall not be made available to contractor. Contractor shall arrange at his own cost power with necessary switch boards, energy meter etc. and shall be responsible for their maintenance.
- (b) Further distribution by the Contractor at his cost shall be done as per approved layout. He shall provide required clearances for overhead lines to facilitate easy movement of heavy machinery such as cranes etc. These shall be shifted and rerouted at Contractors cost during execution of work if the same are found to obstruct any other work of any agency working at site or requires shifting due to unforeseen reasons.
- (c) On completion of the work the Contractor shall remove all wiring installed by him and make good to the satisfaction of Engineer if any disturbance or damage is done.
- (d) The Contractor shall employ an Electrical Agency as approved by the Engineer for carrying out this work.
- (e) The Contractor has to keep alternative arrangement ready at his own cost for any failure/interruption of electric power that takes place and under no circumstances can this be deemed to be reason for any consequential delay in the works.
- (f) Any disputes in sharing of power obtained directly/ indirectly from CSEB with other agencies shall be resolved by the contractor at his risk and cost. NRDA shall not be responsible or a party for such disputes.

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## 5. DEFECT LIABILITY

The Contractor shall be responsible for rectification of defects, during the defect liability period. The defect liability period shall be 3 months and other condition will be as per clause 17 of GCC after the certified date of completion by the NRDA. This period shall be known as Defects Liability period as defined in CL. No. 17 of the General Conditions of Contract. Subsequent to the taking over of the works and after it has been in use, its removal/ correction of defects would be the responsibility of the Contractor. Any defects or failures during this period shall be rectified by Contractor within one week of intimation in writing. If the same is not carried out in the stipulated time, NRDA shall have the right to get it repaired departmentally or through any other agency, entirely at the risk and costs of the Contractor as detailed in the GCC clause. No. 17.

## 6. SAMPLES

### 6.1 Material

(a) The Contractor shall furnish to Engineer for approval, with reasonable promptness and with reasonable time for consideration, adequate numbers of samples of all the materials to be used in the work, irrespective of whether material/product is from approved list given in tender. He shall permit and account for all costs in his quotation toward supply, testing, examination at site or at any approved place by the Engineer. The choice of approval of materials rests with NRDA unless otherwise specified.

(b) All material samples shall be delivered to the Engineer's office at the Contractor's cost. Each sample shall be in duplicate and properly labelled as under-

- Name of Project
- Name of Contractor
- Name of Product
- Name of Manufacturer
- Item reference of BOQ
- Date of Submission

(c) Samples shall be accompanied with technical specifications/ catalogues/ test results of manufacturer.

(d) In case the Contractor intends to keep an approved sample in his possession, he shall submit additional set of samples for Engineer's approval.

(b) The Contractor shall give notice in writing in this respect and shall obtain approval through Engineer in Charge from the CE NRDA. Approval should be taken well in advance so as not to delay execution of work.

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## 7. SUBMISSION OF DETAILED BAR/ PERT CHART OF COMPLETION

The Contractor shall, within the stipulated time in Tender, submit to the Engineer for his approval a detailed programme covering-

- a) Descriptive note explaining sequence of various activities.
- b) Network (PERT/ CPM), bar chart.
- c) Quarterly programme of supply of materials by the Employer.
- d) Quarterly cash flow indicating money to be earmarked by the Employer for the purpose of the contract.
- e) Programme for supply of working drawing.
- f) Phased requirements of plant and equipment to be deployed by the Contractor.

## 8. Method of Working

After Contract award and before starting Work at the site, Contractor, NRDA's representative/ Engineer, and Architect shall together make a thorough survey of the grounds where Work under this Contract will occur and areas to be used as access ways to the Work areas. Contractor shall list, and photograph, if Contractor desires, existing conditions not requiring alterations, shall note discrepancies between Drawings and existing conditions, and shall designate areas of storage and routes of access agreed upon by NRDA.

The Contractor shall, within the stipulated time in Tender, submit to the Engineer for his approval the following information,

- a) A general tentative lay-out plan of construction plant and equipment for the execution of work within time period stipulated in schedule.
- b) Drawings or prints showing the location of major plants and other facilities which he propose to put up at the site, including any changes in the general layout, at least 5 (five) days prior to the commencement of the respective work.
- c) Layout and details of temporary works that the Contractor wants to carry out to fulfill his obligation under the contract.
- d) Indication of shuttering system to be followed.

## 9. Project Monitoring

- 9.1 Within 7 (seven) days the Engineer shall give their approval to proceed with the work, with or without modification. However acceptance of programme and

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method of working as submitted by the Contractor or with any modification there to in the opinion of the Engineer, shall not relieve the Contractor of any of his contractual obligation.

9.2 All these programmes and plans submitted by the Contractor and approved by the Engineer shall become part of the contract.

9.3 The acceptance of programmes as submitted by the Contractor or with any modification thereto in the opinion of the Engineer, shall not relieve the Contractor of any extension of time unless delay, if any, is expressly sanctioned by the Engineer.

9.4 **Construction Photographs-**

A General: Contractor will provide construction photographs taken, developed, printed, and mounted by a recognized commercial photographic studio or reputable photographer acceptable to Owner, in the number and type and at construction stages enumerated below:-

- (i) Before Starting Work: Have photographs taken at site from different points of view sufficient in number to show site (and conditions at existing structures) but not fewer than 30 photographs.
- (ii) During Progress of the Work: Have not fewer than 15 photographs taken at least once a week from points of view (both inside and outside), as necessary to show progress of construction and site development for each part of the Work. Co-ordinate taking photographs with utility Work and back filling. Photograph each buried utility line before back filling. During later stages of the Work, have photographs taken from suitable locations inside the building showing the progress of various stages of the Work, such as piling, centering, reinforcement, water proofing, concreting, etc. Size of photographs will be 125 mm X 250mm. Photographs shall be supplied with negatives/ CD to the Engineer. Each photograph shall be attached with date of photograph and location of work. These photographs shall be from location as fixed by the Engineer at start of work

## 10. QUARRY RELATED DEDUCTIONS

The royalty for Minor minerals used in the work like murrum, stone metals, sand, rubble etc. will be levied as per prevailing practice in PWD of Chhattisgarh and shall be recovered suitably through R.A./ Final bill and will be kept in deposit. The above royalty charges kept under deposit shall be refunded as soon as the Contractor submits relevant NOC from Collector, Raipur, Chhattisgarh.

## 11. CONTRACTORS ALL RISK POLICY (C.A.R. POLICY)

The successful Contractor shall take out a C.A.R. policy from any approved company by IRDA India. Chhattisgarh Govt., administered by Directorate of Insurance. The policy so obtained shall cover the entire period of construction (including all extensions) and also shall cover the defects liability period. The policy shall be for the total contract amount including cost of free supply material by NRDA, if any. All amounts/ charges towards premium etc. on this account shall be borne by the Contractor.

## 12. INDEMNITY BOND

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The Contractor shall require to execute an Indemnity Bond for satisfactory performance of the entire project on stamp paper of Rs.100/- (Rupees Hundred only) in the format approved by the NRDA Ltd. This Indemnity Bond shall remain in force for the Defect Liability period after completion of the project to be furnished in contract form E of GCC.

### **13. ACCIDENTS**

Should any accidents, fatal or otherwise occur, a detailed report about the same shall be made promptly by the Contractor to the Engineer. The Contractor should at all times during execution of work keep the NRDA fully indemnified against all risks, claims, litigations and financial burdens arising out of all incidental operations on work and accidents.

### **14. TRAFFIC**

The Contractor shall have to make all necessary arrangements for regulating traffic day and night during the period of construction and to the entire satisfaction of the Engineer. This includes the construction and maintenance of diversion, if necessary, at no extra cost to the NRDA. The Contractor shall provide necessary caution boards, barricades, flags and lights, watchmen etc. so as to comply with the latest Motor Vehicle Rules and Regulations and for traffic safety. The Contractor shall be responsible for all claims for the accidents which may arise due to his negligence whether in regulating traffic, in stacking materials on the road or by any other reason. The contractor must comply with the following:-

- A. General: Plan and control use of site and access to site in co-operation with Owner and other contractors working at site to minimise disruption of use of other facilities; portions of buildings and site areas affected by this Contract and to remain in use; and the work of other contractors.
- B. Temporary Access Drives: Construct on the premises as necessary, and maintain in good usable condition; remove when no longer needed. Until permanent improvements have been completed, when necessary to prevent excessive dust, periodically water temporary unpaved access roads.
- C. Construction Site Access: Use most direct route from public streets as agreed to by Owner. Construction traffic elsewhere on Owner's property is prohibited.
- D. Driveways Between and Around Combustible Storage Piles: Maintain at least 15 feet wide and free of accumulation of rubbish, equipment, and materials.
- F. Access for Fire-Fighting Equipment: Maintain.
- G. Access: Refer to other sections for requirements to keep access to site and buildings open to Owner, other contractors, and fire-fighting equipment.
- H. Use of Streets and Sidewalks on Public Property: Make arrangements with authorities having jurisdiction for use. Restrictions shall be those of the Municipal Authorities. Be solely responsible for adherence.
- J. Roadways, Driveways, and Walkways: Where outside indicated Contract limit on Owner's property and on public property, keep open to pedestrian and vehicular traffic at all times. When temporary closing of a roadway, driveway, or walkway is absolutely unavoidable, provide alternative access routes. Such temporary closings shall be approved by Owner in each case and

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shall be for the shortest possible time. Strictly adhere to requirements of governmental authorities having jurisdiction.

K Parking: Owner will issue temporary parking permits for use by construction personnel and will make available, at the location shown. Construction personnel shall not park in any other location on Owner's property, even when bearing permits. Access to allocated parking spaces shall be by most direct route from public streets. Construction personnel shall not drive vehicles elsewhere on Owner's property and shall take the most direct pedestrian way along walks and roadways (not on lawns) from parking lot to construction site.

L Barricades and Signs: Should barricades or directional signs for traffic control be necessary, prepare and install such signs and barricades of approved size, colour, and lettering or other markings. Remove signs when no longer needed, or at Substantial Completion, whichever is latest.

M. Restricted Use of Premises: Enforce Contract requirements, local ordinances and Owner's instructions pertaining to signs, fires, smoking, trucking, parking, and other use of premises.

N. On-Site Storage:-

1. General: Extent of Work and site area available limits amount of on-site material and equipment storage. Do not unnecessarily encumber job site with excess materials or equipment and means of delivery of materials, equipment, and supplies, removal of rubbish, and, hours during which deliveries may be made. Determine, and take into account in the Work, limitations on storage space and of times, rates, and means of deliveries to and removals from the job site whether such limitations are imposed by laws, rules, ordinances, or physical conditions. Owner will not pay extra amounts due to such limitations. Co-ordinate arrangements for delivery and storage of materials.

2. Paved Areas: Do not use paved areas on Owner's property to stockpile excavated materials or to store construction materials except where shown. Use of paved areas on public property is subject to requirements of authorities having jurisdiction, and arrangements for such use are solely Contractor's responsibility.

3. Protection and Repair: Protect roadways, walks, and other permanent site improvements, and access ways subject to damage. Satisfactorily repair improvements and surfaces damaged during construction operations, or remove damaged improvements or surfaces and provide new acceptable improvements or surfaces. Except where new Work is required, return areas used for temporary access to original condition.

## **15. ALIGNMENT AND BENCH MARKS**

The alignment of the work to be carried out under the contract shall be marked on the ground as per the drawing and as per the instructions of the Engineer. For the purpose of facilitating the work, the series of temporary bench marks on masonry pillars will have to be established. These pillars will be constructed along with the alignment and such other locations as may be initiated by the Engineer. The temporary bench-marks shall be established for the work line-out and its connections to other proposed roads in Naya Raipur using the DGPS instrument and Total Station software. All expenses involved in the process of marking alignment on ground, checking the alignment, constructing masonry pillars in establishing bench marks thereon, shall be borne by the Contractor. It will be responsibility of the Contractor to ensure that the masonry pillars so constructed are not damaged during the period of work in progress.

## **16. PREVENTION OF MOSQUITO BREEDING AT CONSTRUCTION SITE**

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The Contractor shall on the respective construction site install mosquito proof and accessible water storage tanks or to cover/ protect the present water storage tanks properly. The Contractor shall periodically give larvaecidal treatment to water storage tanks, sites of water stagnation, water collection.

Any expenditure that may be incurred by NRDA to ensure that the above conditions are fulfilled by the Contractor will be debitable to Contractor's account and will be recovered from the bills of the Contractor from time to time.

#### **17. INSPECTION OF SITE AND SUFFICIENCY OF THE TENDER**

If the NRDA is not in a position to deliver to the Contractors the site of the Contract work for any reason whatsoever at the agreed time, delaying the commencement of the contract work, or part thereof not beyond 50 % (fifty percent) of contract period for completion, such omissions of the NRDA shall not be breach of any its obligations under the contractor and the Contractor shall not be entitled to claim from the NRDA for loss or damage, if any, caused thereby, but shall be entitled to a reasonable extension of the period agreed for the completion of contract work. If the contractor shall be obstructed in the execution of the work by any person other than an agent or servant of the NRDA, the Contractor shall exclusively deal with such set by the due process of law but shall not be entitled to attribute thereby the beach of any obligation under the contract to the NRDA compensation for damage or loss, if any, thereby suffered but shall be entitled to an appropriate extension of period agreed for the completion of the contract work, provided that the contractor has reported to the NRDA every such act of obstruction with particular soon after its occurrence and the NRDA has after enquiry found the same to be substantially true and has determined the duration of such obstruction.

#### **18. PROGRESS OF WORK**

The Contractor shall carry out the work as per the programme approved by the Department from time to time. He will also not be allowed to proceed with the work in a scattered manner.

#### **19. FIELD LABORATORY**

The Contractor shall establish a field laboratory for the various field tests for items like concrete cubes, cement, aggregates, sand, blocks for masonry, tiles, wood and for similar items as directed by the Engineer.

The Contractor shall keep all relevant IS/ BIS/ special publications at site lab for various items of works covered in the present Contract.

#### **20. ENGINEER**

**22.1** Engineer for this project shall be the Engineer or the person nominated or appointed by NRDA from time to time and shall include any person duly authorised by them.

**22.2** Engineer shall be responsible for the execution of the project with regards to management and supervision. Instructions issued by the Engineer to the Contractor shall be deemed to be the Employer's instructions in respect of-

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1. Day to day supervision including material testing using ISO formats proforma of which should be got approved from Engineer.
2. Approval of material and workmanship using ISO formats proforma of which should be got approved from Engineer.
3. Matter of urgency involving safety or protection of person or property.
4. Monitoring progress of work using System Application of Projects (SAP). (Refer 3.5 hereunder).
5. Interpretation of drawings
6. Interpretation of specifications
7. Issue of additional drawings
8. Certification of measurements and bills and issue of certificates accordingly for interim and final bills.

22.3 Engineer shall hold fortnightly progress meetings at site for evaluation and execution of works. The Contractor shall assist in providing revised programmes, cash flow charts in the format required by Engineer/ NRDA.

22.4 The Engineer shall coordinate works at site of all agencies appointed by the Employer.

## **21. EXCAVATED OBJECTS**

All the materials obtained during the process of excavation shall remain the property of the NRDA and shall be disposed off as instructed by the Engineer. The Contractor is supposed to use the selected materials for filling in plinth, pipe bedding, and providing embankment where required, filling the trenches and also filling low lying areas. All operations including loading, unloading, transportation of materials where required with all leads and lifts and handling them and leveling at disposal site etc., shall be included in the quoted cost and no extra payment whatsoever shall be made to the Contractor on the account.

## **22. AS BUILT DRAWINGS**

The Contractor shall during the course of execution, prepare and keep updated a complete set of 'as- built' drawings recording all works on the blue prints, which shall be corrected daily, if necessary, to show each and every change from the Contract Drawings as a approved working drawings, shop drawings and the exact 'as-built' location, sizes and kinds of work etc. This set of drawings shall be kept on the site and shall be used for record purposes. Changes recorded shall be countersigned by the Engineer and the Contractor. Copies of 'as-built' drawings shall be supplied to the CE), NRDA/ and the Engineer on request.

The Contractor shall submit complete 'as-built' drawings on reproducible tracings and ammonia prints 10 (ten) sets in form of hard copies and Compact Discs 2 nos. for building work and all services as directed by the Engineer within 30 (thirty) days of the completion of entire work by using AutoCAD facility. Maintenance manuals and original warranties shall be submitted at the time of submitting the As-built drawings. In case the Contractor fails to submit complete 'as-built' drawings as aforesaid [in form of hard copies [10 (ten) sets] and Compact Discs [2 (two) nos.], he shall be liable to pay a sum equivalent to 0.1 percent of the value of work subject to maximum of Rs.10 lakhs (Rupees ten lac only) or as may be fixed by NRDA and this decision shall be final and binding. Pre-final & Final Bill shall not be released until all the as-built drawings are submitted & approved.

## **23. ENGINEER'S SITE OFFICE**

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**24. TRANSPORTATION**

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**25. PROVIDING COMPUTER & OTHER EQUIPMENTS AT SITE OFFICE**

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**26. TELEPHONE CONNECTION**

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**27. TIME SCHEDULE FOR COMPLIANCES**

The tenderers should please note the following time schedule for various compliances and follow the same:

- a) The Initial Security Deposit shall be paid within 5 (Five) days of receipt of Letter of Acceptance.

**28. APPROVAL OF ENGINEER**

The foundation strata as well as steel reinforcement provided in all RCC members shall be got approved from the NRDA/ Engineer or his authorised representative. At every stage of work, approval of the Engineer shall be taken by the Contractor. Before starting any work like concreting, block masonry, water proofing, concrete, etc. detailed information of the work in the prescribed proforma shall be given to the Engineer and his approval shall be taken by the Contractor. It is the responsibility of the Contractor to get all the hidden measurements like foundation work, reinforcement, etc. recorded before covering the same. All the measurements shall be taken jointly by NRDA's representative and the Contractor's authorized representative and then only the measurements will be forwarded by the Engineer, who will forward it for payment to Chief Executive Officer, NRDA through Chief Engineer, NRDA and directions on any matter whether mentioned explicitly or otherwise.

**29. PERMISSION FOR CONSTRUCTION OF SITE OFFICE/ GODOWN/ LABOUR HUTS:**

The Contractor shall be permitted to construct temporary structures such as site office, godown, labour huts, Engineer site office, etc. on the land of NRDA within 1 Km radius of site.

The Contractor will have to submit requirement of land for Godown/ Labour Camp/ Batching Plant etc. with logistic layout in Technical Bid. The land shall be provided to the Contractor on Lumpsum lease rent of Rs. 100/- (Rupees Hundred only) per year with Lease Agreement as per prevailing NRDA format. However the Contractor shall require permission of NRDA for erecting site office, labour huts. In the event the Contractor fail to remove site office/ godown and labour huts from the land immediately after construction is over, NRDA will charge rent as per the rules prevalent at the time. No final bill payment shall be made, unless the site is cleared by the contractor in all respects.

The Contractor shall number the structures and display name of the Company, period for which permission is granted, etc. at such approved sites.

No final bill payment shall be made unless the site is cleared in all respects by the Contractor.

**30. CONDITIONAL TENDER**

The Tenderer shall note that the clarifications shall be obtained in the pretender meeting and the tender should be submitted without any conditions, whatsoever. Clarifications given to

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the various tenderers in the pre-tender meeting would be summarized by NRDA and would be issued to every tenderer as "Minutes of Pre-Tender Meeting". The same will be binding on all the tenderers irrespective of whether they have attended the pre-tender meeting or not. The Minutes of the Pre-Tender Meeting would form part of the Contract Agreement and the Tenderers should submit the Financial Offer taking into consideration the same. The Tender submitted with conditions would be summarily rejected.

**31. SITE ORDER BOOK& OTHER BOOKS REQUIRED**

The Engineer will maintain Site Order Book at the site of work. The Contractor or his authorized representative shall sign all the instructions received therein, in token of having received the same and shall comply with them forthwith.

All other books of record at site shall have to be maintained as required in the CPA Code of works.

**32. POURCARD SYSTEM**

Pour card system/RFI system to be introduced for approval of individual activity. Format to be got approved from engineer before start of work.

**33. CLEANING OF SITE**

- a) All water which may accumulate on the site during the progress of the works or in trenches and excavation shall be removed from the site to the satisfaction of the Engineer at the Contractor's cost. Site shall be maintained free from rubbish. Proper stacking of scaffolding material, shuttering material bricks/ brickbats, steel pieces, etc. needed for work on day to day basis shall be organized in proper stacks. Heaps of material lying around in unplanned manner and disorderly fashion shall not be permitted. Engineer's decision in this matter shall be final.
- b) The Contractor shall not, at any time, do cause or permit any nuisance on the site or do anything which shall cause unnecessary disturbance or inconvenience to Employer, tenants or occupiers of other properties near the site and to the public in general. The Contractor shall install mosquito proof and accessible water storage tanks for construction and drinking water.
- c) The Contractor shall periodically give largasidal treatment to water storage tanks, sites of water stagnation, water collection.
- d) Prior to handing over the contractor shall appoint Professional Cleaning Agency to clean the building works prior to handing over. The Agency shall have minimum 5 (five) years prior experience in the hospitality industry and shall be appointed with the prior approval by the Engineer.
- e) Any expenditure that may be incurred by NRDA to ensure that the above conditions are fulfilled by the Contractor will be debitable to Contractor's account and will be recovered from the running bills of the Contractor from time to time.
- f) Cleaning: Remove staining or reactive materials from new surfaces immediately during course of the Work.
- g) Debris: Remove hazardous accumulations of debris promptly, at least daily.
- h) Dust: Confine dust producing operations during painting and finishing. Vacuum immediately after completion.
- i) TRASH DISPOSAL
- j) General: Keep new buildings and site free from accumulations of waste materials.

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- k) Removal: Remove cartons, crates, wrappings, lunch trash, and other trash from each room daily. Provide trash receptacles on each floor of each building and in convenient locations on the site.
- l) Burning: Do not burn trash or other materials on Owner's property.
- m) EXCESS MATERIAL; General: Remove excess materials, including demolished materials, excess earth, and excess building materials from Owner's property and dispose of legally.
- n) Clean: Keep paved drives on Owner's property and public streets and alleys clean, by cleaning daily, or more often if necessary, of earth and debris spillage from trucking involved in construction operations.

### 34. **FENCING**

During the construction, care shall be taken so that, areas around are not polluted and where required Hessian cloth shall be tied around, while work is in progress.

Further, it is obligatory on the part of the Contractor to fence the area allotted and earmarked by NRDA for labour camp, batching plant of the Contractor within a month of issuance of work order. The temporary fencing shall be provided in the area as directed by Engineer using vertical blinds using corrugated GI sheets about 3m high with necessary metal frame work and staging to cordon off the view of the premises. The Contractor shall maintain the fencing properly throughout the construction period.

### 35. **WATCH AND WARD**

The Contractor shall make necessary watch and ward arrangement for a period of three months from the date of total completion of work. No claim shall be paid to the Contractor towards the watch and ward during this period.

Protection General Requirements:

- a) **Laws:** Comply with applicable laws, ordinances, rules, regulations, and orders of authorities having jurisdiction for safety of people and protection of property from damage, injury, or loss.
- b) **Responsibility:** Be solely responsible for initiating, maintaining, and supervising safety precautions and programs concerning Project security, but obtain Owner's approval of methods to be used and location of safeguards. Submit to NRDA, through Engineer, drawings and written description of methods and devices Contractor intends to use and do not begin Work at the site until such means and methods are mutually agreed on by Owner and Contractor.
- c) **On Public Property:** In addition to other means used in the interest of safety or security, comply with the requirements of governmental agencies having jurisdiction
- d) **Safeguards:** Erect and maintain, as required by conditions and progress of the Work, necessary safeguards, for safety and protection, including temporary fences, guards, railings, barricades, canopies, lighting, shoring, directional and danger signs, signals, and other warnings against hazards.
- e) **Security:** Protect and secure the site, new materials and equipment from theft and damage by whatever reasonable means are effective. Use methods such as the following, singly or together: locks, fences, signs, patrols, radio, alarms, locked storage on-site, and off-site warehousing.

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- f) **Wall Closures:** Unless other acceptable means are provided, provide temporary closures for openings in walls along adjoining to make the building and site secure. Secure temporary closures when Work is not in progress using suitable means such as dead bolts inaccessible from the public side or locks or padlocks construction master keyed in accordance with Section, "Finish Hardware."
- g) **Entrances:** Do not block entrances to premises to remain in use or in any way inhibit access to them.
- h) **Design Live Loads:** Do not permit placing materials or equipment on new to exceed design load of structure or endanger structure or people.
- i) **Trenches:** Do not permit trenches to remain open for prolonged periods without adequate board covering or fencing.
- j) **Broken Glass:** Be responsible for glass broken during construction period; at completion, replace broken glass.
- k) **Weather Protection:** During construction, provide protection against weather (rain, wind, storms, frost, or heat), and maintain work, materials, apparatus, and fixtures free from damage. At end of each workday, cover new work likely to be damaged.
- l) **Dust:** Take precautions necessary to keep Work under this Contract and adjoining property reasonably free of dust.
- m) **Protection of Construction Materials:** Refer to other specification sections for specific requirements.
- n) **Materials Hoist:** Do not permit transporting of people on materials hoisting facilities.
- o) **Removals:** Except for fences, remove temporary construction and protection specified in this section promptly when no longer needed and when removal is approved.
- p) Maintain temporary fences until date of Substantial Completion, unless approval is obtained for earlier removal; then remove the temporary fence.
- q) **Damaged Site Improvements:** Repair and restore to condition at beginning of construction, or better, existing site improvements, such as pavements, curbs, buildings, fences, lawns, plantings, and lighting which are not to be removed under this Contract but are damaged or defaced by Contractor's operations, except where new Work is required by the Contract.
- r) **First Aid Equipment:** Provide at the site. Also provide continually available trained and qualified personnel to render first aid when needed.
- s) **Emergency Signs:** Provide signs posted at telephones listing telephone numbers of emergency medical services, physicians, ambulance services, and hospitals.

### 36. **MOBILISATION PERIOD**

- t) All sort of mobilisation shall be within 5 days

### 37. **METHOD OF CARRYING OUT THE WORKS**

The Contractor shall, within 5 (Five) days of receipt of the Employer's order to commence work under respective clause of General Conditions of Contract submit for his approval a detailed programme and statement with drawings and diagrams showing how he proposes to carry out the works based on the tender programme. The statement shall describe the methods to be employed in carrying out the works, the Constructional Plant and temporary works which the Contractor intends to supply or use and shall include a list, classified into trades of labour force

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envisaged. The programme shall give the estimated dates on which the various sections of the works will commence together with the estimated date of completion and estimated output so that the whole of the works may be completed within the Contract Period.

- a) In addition, the Contractor shall submit to the Engineer drawings and full particulars of Temporary Works he intends to construct at least 8 (eights) days before he intends to commence such works. The Engineer may require modifications to be made if he considers the proposals to be insufficient and the Contractor shall give effect to such modifications at his own cost but shall not be relieved of his responsibility for the sufficiency thereof.
- b) The Contractor shall prepare a detailed survey of existing services on the site which he shall clearly mark up on a drawing for the approval by the relevant service authorities prior to commencement of the works.
- c) The Contractor is to progress the works thoroughly and to take such action as is necessary in order to ensure that the approved programme is strictly adhered to in all its stages. The Contractor shall submit detailed programmes of the various sections of the works as and when required by the Engineer, the Contractor shall take all precautions and cover all contingencies to ensure that adequate spare equipment and materials are available at all times to ensure completion of this work in accordance with the agreed programme.
- d) The acceptance of programmes as submitted by the Contractor or with any modification thereto, in the opinion of Engineer, shall not relieve the Contractor of his responsibility to complete the work within period specified in as per Annexure 'A' unless extension of time limit is expressly sanctioned under respective clause of standard General Conditions of Contract or Special Conditions of Contract.
- e) The Contractor shall prepare the CPM programme on computer and the same to be monitored by proper installation of PC and printer facilities at the site.
- f) The bills shall be on computer and the programme will incorporate the deductions of Mobilisation Advance and other items.

### **38. CONTRACTOR RESPONSIBLE FOR SUFFICIENCY OF MEANS EMPLOYED**

The Contractor shall take upon himself the full and entire responsibility for the sufficiency of plant, centering, scaffolding, timbering, machinery, tools or implements and generally for all means used for the fulfillment of the Contract. In the event of any of these means proving insufficient, the Contractor is still fully and entirely responsible for the sufficiency of these means notwithstanding any previous approval or recommendation that may have been given by the Engineer.

### **39. DRAWINGS**

The Contractor will receive from the Engineer, 2 (two) prints of the tender drawings listed hereof, together or thereafter with any further drawings issued for Road, Water Supply Net Work, Sanitation Electrical, Landscaping Works, etc. Working drawings shall be progressively issued as per the approved construction schedule submitted by the contractor & approved by NRDA.

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**40. STANDARDS**

In various places throughout this specification and the bills of quantities, reference is made to the standards, specifications and byelaws issued by the Indian Standard Institutions and other similar organizations. These references shall in every case be deemed to include the latest edition or issue of such standards, specifications and byelaws including all revisions, amendments and addendum subsequently issued. Where materials are not specified and standard exists in respect of such materials, then the materials shall in all respects comply with relevant and current I.S.I. In such cases where I.S.I. do not exist, the best manufacturers' specification shall be followed; in absence of all these, Engineer's instruction shall be followed.

**41. SUPERVISORY STAFF (As per clause 36 (i) of schedule F of the tender)**

The Contractor shall engage on the work a qualified and experienced Engineers, Supervisor, capable of managing and guiding the work properly as detailed in Cl36(i) of schedule F of the tender Form F-1. This supervisor shall be authorized by the Contractor in writing to receive the orders issued by the Engineer from time to time. The Contractor shall be responsible for carrying out these orders promptly.

**42. FIRE PRECAUTIONS**

The Contractor shall comply with fire regulations of the controlling authority in force at the site of the works relating to the precautions to be taken against fire hazards.

**43. USE OF SITE**

The Contractor shall not use any portion of the site for purpose not connected with the works without the prior written approval of the Engineer. He shall maintain permanent and site access roads free of spillage and shall not interfere with the flow of traffic. Also same shall apply to terraces and other developed areas. This clause shall be read in conjunction with clause no. 15 of the Special Conditions of Contract.

**44. SAFETY ENGINEER**

The Contractor shall employ and depute at site on full time basis a fully qualified Safety Engineer(s) who shall be responsible to ensure observance of safety precautions and measure required to be taken at site. Further he shall make sure stipulations laid down in safety code as provided in GCC.

**45. QUALITY ASSURANCE MANUAL AND SAFETY MANUAL**

Successful tenderers will be required to submit Quality Assurance Manual and Safety manual made as per applicable specification for various items of work and get the same approved from Engineer before start of work and the adhere the same during actual execution of work.

**i. Quality Assurance Manual (QAM)-**

A quality assurance manual constituting a base document outlining quality policy of the agency, procedures, name of action, compliance, acceptance criteria and documentation etc. Shall be prepared by the successful tenderer and submitted to the Engineer for approval within 5 (five) days from the date of receipt of work order. The QAM shall be prepared in such a way that it follows all the applicable

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specifications. The document shall generally cover aspects listed below, but not limited to the same.

#### **Scope of work**

- a) Planning for items to be executed including method statement and resource deployment both physical and financial.
- b) Identification of all parties involved in QA and their inter-relationship.
- c) Execution plan of Quality System giving reference - standard - frequency and acceptance criteria.
- d) Levels of cross checking/ verification in case of multiple verifications/ controls, including systems of inspection and audit, wherever applicable.
- e) Organization of personnel, responsibilities and lines reporting for QA purpose.
- f) Testing and statistical analysis.
- g) Inspection reports at the end and during defect liability period/ maintenance period.
- h) Items to be covered for maintenance manual,
- i) Check list viz. Forms and formats.

#### **ii. Inspection of Works at Factory/ Workshop**

Deleted

#### **46. QUALITY ASSURANCE SYSTEM**

A quality assurance procedure covering all aspects of the work shall be adopted for this work to ensure the desired quality. Details of the procedure shall be decided by mutual consultation between the Engineer and the contractor at the start of the works.

- a) The contractor shall submit within the time stipulated by the Engineer in writing, the details of actual methods that would be adopted by the contractor for the execution of any item as required by the Engineer at each of the locations, supported by necessary detailed drawings and sketches including those of the equipment and machinery that would be used, their locations, arrangements for conveying and handling materials etc., and obtain prior approval of Engineer well in advance of starting of such item of work.
- b) The Engineer reserves the right to suggest modifications or make complete changes in the methods proposed by the contractor, whether accepted previously or not, at any stage of work, to obtain the desired accuracy, quality safety and progress of work which shall be binding on the contractor and no claim on account of such change in method of execution will be entertained by the Employer so long as Specifications of the items remains unaltered.
- c) The Contractor shall furnish within the period of 5 (five) days a detailed programmed schedule using PERT/ CPM technique in quadruplicate including the date of actual start, the monthly progress expected to be achieved and the anticipated completion date of each major item of work to be done by him, also indicating, plant and machinery and material procurement schedule.
- d) The schedule is to be such as is practicable of achievement towards the completion of the whole work in the time limit and of the particular items, if any, on the due date specified in the contract and shall have the approval of

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the Engineer. No revised schedule shall be operative without such acceptance in writing. The Engineer is further empowered to ask for more detailed schedule or schedules say weekly for any item or items, in any case of urgency of work as will be directed by him and the contractor shall supply the same as and when asked for.

- e) The contractor shall furnish sufficient plant, equipment and labour as may be necessary to maintain the progress schedule. The working and shift hours for operations to be done under.
- f) Further, the contractor shall submit the progress of work in forms and statements etc. at periodical intervals in the form of progress charts, forms, statements and/ or reports as may be approved by the Engineer.
- g) The contractor shall maintain proforma, charts, details regarding machinery, equipment, labour, materials, periodical returns thereof as may be specified by the Engineer.

#### **47. EQUIPMENT MAINTENANCE MANUAL**

The Contractor shall mention the list of machinery procured at site for the work in this manual. This manual shall also reflect the name of the manufacturer, age of machinery and the agency entrusted with the maintenance work of the machinery listed in the manual.

#### **48. MINIMUM PLANTS, EQUIPMENTS AND SHUTTERING**

Sr. No	Particulars	Quantity
1	Hydraulic motor grader	1 No.
2	Vibratory Soil Compactor 20 tone capacity	1 Nos.
3	JCB	1 Nos.
4	Poclain	1 No.

Note : The details referred to herein above are only for the purpose of quantitative assessment. The specifications & qualitative aspects of the shuttering material shall be in accordance with the BOQ & Technical specifications. The details are to be provided within 5 days after award of contract.

- 49. SUBMITTALS** Unless otherwise specified or directed by NRDA, the Contractor shall submit to NRDA for his review and approval all Co-ordinated services drawings, shop drawings, samples, materials lists, equipment data, instruction manuals, record documents, manufacturers' equipment manuals, design calculations for proprietary items of work, technical submittals, and other information required by the Contract Documents. Submittals and their contents including deviation shall be properly prepared, identified, and transmitted as provided herein or as the Owner may otherwise direct. Except for record documents and instruction manuals for operation and maintenance, submittals including deviation shall be approved before the material or equipment covered by the submittal is delivered to the site. The contractor shall furnish an authority if required from material suppliers.

#### **50. PLANT, MACHINERY AND SHUTTERING**

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The contractor is required to submit details of plants and machineries to be deployed by him in a Proforma indicating all details such as make, year of manufacture .registration etc be submitted. The details are to be provided with in 5days after award of contract.

## 51. SUB-CONTRACTORS

Deleted

52. Following conditions are the essential conditions of contract for carrying out and completing the subject work in all respect within stipulated time period. The successful agency will be responsible for completing the same as per the directives of Engineer. The charges and expenditure if any required for completing the same should be including in the quoted offer, and no separate payments against this will be made.

1. The contractor shall visit the site to access the actual quantum of work and period required for completing the same before quoting the offer.

2. Scheme specifications and quantity of the material to be used for the subject work under the contract and specified in the tender document is only for guideline purpose. However it will be the responsibility of the successful agency to obtain the measurements and specifications in detail of each and every item before starting the execution of work and complete the work in accordance with the approvals, clearances obtained for the same. All cost required for completion of work as per statutory approval, shall deemed to have included in the offer quoted.

3. The foundation and excavation for feeder pillar and control pillar, grouting of frames in wall/ ground etc, are require to be carried out by the agency, and cost for the same shall be include in the offer quoted.

4. It will be Agency's responsibility to obtain necessary sanctions and permissions by paying necessary charges towards;

a) Obtaining necessary scheme sanctions and permissions for completing the subject work in all respect from any concerned statutory authority.

5. The successful agency will be completely responsible for accidents occurred if any during the execution of work as well as during 24 (twenty four) months defect liability period under this contract. It will also be the responsibility of agency, for making police complaints against any thefts and accidents etc. under intimation to NRDA.

6. Charges against following listed activates should be included in the quoted offer itself and no separate payments will be made against same.

a) Arranging and carrying out the material inspecting at respective manufactures unit as stated in Annexure - I.

b) Arrangements for performing site visits and other connected activities as and when required by Engineer or his representative.

c) Carrying out necessary co-ordination and follow up with concern authorities for obtaining necessary sanctions and permissions as required towards completion of work

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in all respects.

d) Appointing Govt. approved surveyor for carrying out site survey and preparation of computerized shop drawing, Execution drawing, As built drawing etc. with soft copy.

e) Any other incidental charges required towards completion of work in all respect.

7. Bills submitted against the executed and completed works at site, will be processed further by Engineer, after necessary scrutiny and verification.

53. The services/ tasks/ works as referred to under clauses shall be suitably applicable to all Utility services executed by the contractor, whether specifically mentioned herein above or no.

**54. Safety, Security and Protection of the Environment**

The Contractor shall, throughout the execution and completion of the Works and the remedying of any defects therein:

(a) have full regard for the safety of all persons entitled to be upon the Site and keep the Site (so far as the same is under his control) and the Works (so far as the same are not completed or occupied by the Employer) in an orderly state appropriate to the avoidance of danger to such persons,

(b) provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when and where necessary or required by the Engineer or by any duly constituted authority, for the protection of the Works or for the safety and convenience of the public or others, and

(c) take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

**55. HANDING OVER PROCESS:-**

The handing over process shall be based on a performance comprising individual activities. The process shall be approved by the Engineer.

**56. EROSION AND SEDIMENTATION CONTROL**

i. **General:** Prevent pollution of land, air, and water; control erosion, washout, and surface runoff of earth and stockpiled materials. Preclude sedimentation in general and especially in existing on-site and public storm-water system and public right of way.

ii. **Procedures:** Perform erosion, sedimentation and temporary storm-water control. Follow procedures stipulated in local laws and regulations and as shown on Site work drawings.

iii. **Maintenance:** Maintain controls in place until permanent controls are functioning. Remove when no longer needed.

**57. NOISE AND VIBRATION CONTROL**

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Noise and Existing Building Structure Vibration Generated by Construction Procedures, Equipment, Tools, and Operations: Keep to minimum practicable during demolition and removal from building and site, including loading and removing storage containers. Equipment generated noise levels shall not exceed the following in decibels:-

1. Concrete mixer: 85
  2. Concrete pump: 82
  3. Crane: 83
  4. Materials elevator:
  5. Pumps: 76
  6. Generators: 78
  7. Compressors: 81
  8. Pneumatic tools: 86
  9. Saws: 78
  10. Vibrators: 76
  11. Other tools: 85
- i. Operation of Air Hammers, Compressors, and Reciprocating Equipment: Not permitted inside existing buildings unless specifically approved in writing by Owner.
  - ii. Laws: Comply with applicable noise control laws, ordinances, and regulations.
  - iii. Acoustical Enclosures: Stationary equipment may be enclosed to produce required sound attenuation subject to continued maintenance of such enclosures to ensure that specified sound levels are not exceeded.
  - iv. Violations: Where field sound measurements reveal sound levels exceeding those specified, cease operating such equipment and repair or replace it with equipment that complies with the sound levels specified.
  - v. Cutting and Drilling Concrete: Use only rotary or core drilling for holes through concrete. Do not use impact tools to cut or otherwise remove concrete or to install inserts.
  - vi. Power-Activated Tools: Not permitted in or immediately adjacent to existing buildings, except with Owner's written approval in each specific case, except where such use is specifically specified.

#### 58. EXISTING CONDITIONS

- i. Contractors Examination of Site:-
  1. By executing Contracts, Contractor and subcontractors represent that they have:
    - a. Visited the site and made due allowances for difficulties and contingencies;
    - b. Compared Contract documents with existing conditions and informed themselves of conditions to be encountered, including work by others, if any, being performed; and
    - c. Notified Architect of ambiguities, inconsistencies, and errors they have discovered within Contract documents or between Contract documents and existing conditions.
  2. Failure to visit the site and become familiar with conditions shall

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not relieve Contractor or a subcontractor from furnishing materials or equipment or completing the Work in accordance with Contract documents at no additional cost.

3. Contractor or subcontractors will not be given extra payment for Work related to conditions they can determine by examining the site and Contract Documents.

4. Contractor or subcontractors will not be given extra payment for work related to ambiguities, inconsistencies, or errors within Contract documents, or between Contract documents and existing conditions, when such ambiguities, inconsistencies, or errors are known to Contractor or subcontractor before Contract execution unless Contractor or subcontractor has notified Architect in writing of such condition before execution of Agreement Between Owner and Contractor.

- ii. Make use of public property and make arrangements for that use. No extra compensation will be paid due to costs associated with using public property.
- iii. Access by Contractor to portions of Owner's property beyond the actual area of Work under this contract is denied, except where necessary to perform the Work, and then only with specific written approval in each case. Refer to other sections for additional requirements.
- iv. Contractor shall accept the site in the condition in which they exist at the time Contractor is given access to begin the Work.
- v. Damage caused by Contractor to existing structures, grounds plants, pavements, utilities, work by others, fixtures, or furnishings, shall be repaired by Contractor and left in as good condition as existed before the damaging, unless such existing work is shown to be removed or replaced by new Work.
- vi. Immediately upon entering the site for purposes of beginning Work, locate general reference points and take such action as is necessary to prevent their destruction; lay out Work and be responsible for lines, elevations, and measurements, and Work executed under this Contract. Exercise proper precautions to verify figures shown on Drawings before laying out Work. See Section "Field Engineering" for additional requirements.
- vii. Contractor and each subcontractor, before starting work, shall verify governing dimensions at the premises, including floor elevations, floor-to-floor heights, and column locations and shall examine adjoining Work on which Contractor's or subcontractor's Work is in any way dependent. No "Extra" or additional compensation will be allowed on account of differences between actual measurements and dimensions shown. Submit differences discovered during the Work to Architect for interpretation before proceeding with associated Work.
- viii. Employment of local labour shall be given priority wherever possible. However,
- ix. this shall not in anyway affect/ dilute the Contractors obligations listed within the Tender document.

Signature of Contractor.....

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**59. LAMINATION OF DRAWINGS**

All drawings issued to site shall be kept in lamination condition.

**1. Maintenance of installed equipments ,macheneries and fixtures :**

The Contractor, at the time of bidding, will be responsible to ensure the completeness and adequacy of his Bid Price to fulfill the entire responsibilities for Maintaining the installation of all installed equipments , machineries and fixtures minimum for a period of 1 year from the date of commissioning and imparting training to the workers/staff as asked for maintaining the installations as per IS requirement and exercising.

**2. Handing Over:**

At the time of handing over after completion of work, all the equipment, spare including standby equipment etc. must be in good working order as were taken over before commencement of defect liability period.

**3. Penalties for failure to achieve the functional guarantees during Defect liability Period**

In case of failure to deliver the required quality of work, liquidated damages shall be imposed for such failure to meet the performance criteria, as described below. The Employer will be entitled to recover any such damages from the security deposits of the contractor or any other sum due to him. However, the contractor shall be allowed to take up routine / periodical maintenance as per IS guidelines, with prior permission of the Authority.

i. Non redressal of any complaint or instruction given in writing by NRDA within 48 hours: Penalty @ Rs. 6000.00 for each such complaint.

**60. ORDER OF PRECEDENCE**

In case of any discrepancy between the items mentioned in the BoQs/Specifications/Drawing, the Order of precedence should be as follows:

- i. Item details as mentioned in the BoQs, read along with the specification shall prevail. However in case of conflict specification shall hold good.
- ii. Drawings.

**61. PAYMENT**

- I. The Contractor, at the time of bidding, will be responsible to ensure the completeness and adequacy of his Bid Price to fulfill the entire responsibilities as described above.

Signature of Tenderer  
Date :

For  
Chief Executive Officer,  
NRDA, DKS Bhavan Near old Mantralaya  
Raipur 492 001, Chhattisgarh.  
Date :

Signature of Contractor.....

Signature of NRDA.....