BSES Rajdhani Power Ltd.

BSES RAJDHANI POWER LTD (BRPL)

Notice Inviting Tender (NIT)

for

"ESTABLISHMENT OF RATE CONTRACT FOR EXECUTION OF 1.1/ 11 KV SCHEMES IN BRPL"

NIT No.: CMC/BR/25-26/FK/CR/DG/1295

Dated: 22.08.2025

Due Date for Submission of Tender:11.09.2025, 15:30 HRS

Date and Time of opening: 11.09.2025, 15:45 HRS

BSES RAJDHANI POWER LIMITED,
BSES Bhawan, Nehru Place, New Delhi – 110019.
Corporate Identification Number: U74899DL2001PLC111527
Website : www.bsesdelhi.com

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SECTION- I

REQUEST FOR QUOTATION (RFQ)

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REQUEST FOR QUOTATION (RFQ)

1. GENERAL

BSES Rajdhani Power Limited invites sealed tenders on a "Single Stage: Two Envelope" bidding basis (Envelope –I, Techno-Commercial Bid & Envelope-II, Price Bid) from eligible Bidders for "Award of Meter Installation work in BRPL".

1.1. The bidder must qualify the requirements as specified in heading "Qualifying Requirements" of this RFQ.

1.2. The sealed envelopes shall be duly super-scribed as:

"NIT No.: CMC/BR/25-26/FK/CR/DG/1295 Dated: 22.08.2025

for

"ESTABLISHMENT OF RATE CONTRACT FOR EXECUTION OF 1.1/ 11 KV SCHEMES IN BRPL"

1.3. Schedule of the tendering process is given below. Detailed Specification, Scope of Work, Terms & Conditions, etc are mentioned in the Tender documents, which is available on our website.

Cost of Tender Documents (Non- Refundable)	Rs.1180/- (including GST)
Earnest money Deposit	Rs 3.75 Lakh
Duration of the Work	24 Months
Tender documents on sale from	22.08.2025 (Working days)
Date & time of Submission of Bid	11.09.2025 till 15:30 HRS
Date & time of opening of Techno-Commercial Bid	11.09.2025 till 1545 HRS

1.4. The tender document can be obtained from address given below against submission of non-refundable demand draft of **Rs.1180/-** drawn in favour of BSES Rajdhani Power Ltd, payable at Delhi:

Head of Department
Contracts & Material Dept.
BSES Rajdhani Power Limited
Ist Floor, "C" Block, BSES Bhawan
Nehru Place, New Delhi -110019.

1.5. Only DD shall be accepted for tender fees.

1.6. The tender documents will be issued on all working days up to the date mentioned in clause 1.3. The tender documents & detail terms and conditions can also be downloaded from the website

www.bsesdelhi.com. In case tender documents are downloaded from the above website, then the bidder has to enclose a separate demand draft covering the cost of bid documents.

2. POINTS TO BE NOTED

2.1. Works envisaged under this contract are required to be executed in all respects up to the period of completion/ duration of work mentioned above.

2.2. Only those agencies, who fulfil the qualifying criteria as mentioned in clause 3 should submit the tender documents.

2.3. BSES RAJDHANI Power Ltd reserves the right to accept/reject any or all bids without assigning any reason thereof and alter/amend/modify/add/reduce the amount and quantity mentioned in the tender documents at the time of placing Order

2.4. The bid will be summarily rejected if:

(a) **Earnest Money Deposit (EMD)**and **Tender Fee** of requisite amount is not deposited as per tender conditions

(b) Bid received after due date and time.

3. EMD

3.1. The bidder shall furnish, as part of its bid, an EMD of the requisite amount. The EMD is required to protect the Company against the risk of Bidder's conduct which would warrant forfeiture. The EMD shall be denominated in any of the following forms:

(a) BG from nationalized / Scheduled Bank, as per the format annexed in the tender document ,in favour of BSES Rajdhani Power Limited valid for 6(six) months from original due date of bid submission.

(b) Fixed Deposit (lien marked in favor of BSES RAJDHANI POWER LTD) valid for 6(six) months from original due date of bid submission.

3.2. Please note that bank details as given below have been provided only for the purpose of making BG for EMD.

Beneficiary Name	: BSES Rajdhani Power Limited
Bank Name	: State Bank of India
A/c No.	: 40214783615
IFSC Code	: SBIN0009601

3.3. The EMD of the bidders who are not technically qualified shall be returned after the price bid opening.

3.4. Earnest money given by all the bidders who are techno commercially qualified except the lower bidder shall be returned within 8 (Eight) weeks after award of the work.

3.5. The EMD of the successful bidder shall be returned on submission of CPBG as per tender terms.

3.6. The EMD may be forfeited in case of:

(a) The Bidder withdraws its bid during the period of bid validity specified by the Bidder in the

Bid Form or

(b) The successful Bidder does not
(i) accept the Purchase Order/Work Order, or
(ii) furnish the required CPBG as per tender terms

(c) The bidder is found to have submitted false or forged, any of the documents/certificates/information.

4. QUALIFYING REQUIREMENTS (QR)

QUALIFYING REQUIREMENTS (QR)

The prospective bidder must meet all of the following qualifying requirements to be eligible to participate in the bidding.

4.1 Technical QR:

(i) The bidder should have experience in Project execution or maintenance work of Generation/ Transmission/ Distribution Network of voltage level 11 KV or above in any power distribution Utilities / Power Generation Utilities/SEB's / Discoms / other govt. organizations for a cumulative value of not less than Rs. 45 Lacs in the last 3 financial years (FY22-23, FY 23-24 & Fy 24-25) or one single order of not less than Rs. 22.5 lacs or two orders each not less than of Rs. 12 lacs each or three order each not less than Rs 7.5 lacs during last 3 financial years (FY22-23, FY 23-24 & Fy 24-25).

(ii) The bidder should have satisfactory performance certificates from at least 1 reputed organizations for similar work or higher rating work. The work against these issued certificates should be completed within the last five (5) years from the date of bid submission.

(iii) The bidder should have Valid Electrical Contractor License issued by Govt of NCT of Delhi to execute the electrical works in Delhi. Copy of valid Electrical Contractor License issued by Govt. of NCT Delhi needs to be submitted by bidder. In case bidder is not having this License, Bidder shall submit an undertaking that in case they are the successful bidder, same shall be obtained by them before award of contract by BRPL.

(iv) Bidder should have an office in Delhi NCR or shall open an office in Delhi NCR within 15 days from the date of LOI/Award of contract. Bidder to submit undertaking/details of such office on their letterhead. The Head/ In-charge of this office should be competent enough to take all decisions related to this contract.

4.2 Financial QR:

(i) The average annual turnover of the Bidder, in the preceding three (3) financial years (FY 22-23, FY23-24 & FY24-25) should not be less than Rs.3 crores. The bidder shall submit the Annual Turnover Report of the last 3 FYs duly certified by a Chartered Accountant. The Turnover certificate must have UDIN Number. In case the audited balance sheet is not available with the bidder for 24-25, the bidder shall submit the audited balance sheet along with turnover certificate with UDIN number for FY 21-22 or turnover certified by the auditor of the firm for FY 24-25.

(ii) The bidder should have net worth of Rs 80 Lakhs as on the last day of the preceding financial year on the date of bid submission. The bidder shall submit the Certificate of Net Worth duly certified by Chartered Accountant for the last financial year i.e. FY 2024-25. The Net worth certificate must have UDIN Number.

(iii) Bidder shall submit proof of having solvency of an amount equal to Rs 50 lakh from any nationalized/ scheduled commercial bank. It should not be older than 30 days from the date of submission of Techno-Commercial bid.

(iv) Bidder shall submit valid Registration of GST & PAN.

(v) Bidder should fulfil all statutory compliances like PF, ESI registration, etc and submit the registration certificate.

(vi) Bidder should have Valid Electrical License for National Capitol territory of Delhi

(vii) Entities that have been currently debarred/blacklisted by any Private/central/state government institution including electricity boards in India, any of the DISCOM in India, lacks qualifying pre-requisites to participate in this tender will not be considered. Accordingly, an undertaking by the Authorized Person along with other documents to be provided by the bidder on its letter head in this regard, confirming in clear terms, that the contractor has not been debarred/blacklisted as on the date of submission of the bid. Bidders who is currently debarred/ blacklisted/ suspended by BRPL will not be considered in this tender.

(viii) The bidder should give an undertaking by the Authorized Person on their letterhead that all the documents/certificates/information submitted by them against the tender are genuine/true/correct and the copies of documents have been made from the original document/s. Further, in case any of the documents/certificates/information submitted by the bidder is found to be false or forged, BRPL at its sole discretion shall be free to take all actions as permitted under law, including forfeiture of EMD and disqualification from participation in the future tenders of BRPL & Its group companies for indefinite period or period as may be decided by BRPL.

(ix) The bidder should submit an undertaking for "No Litigation" / no legal case is pending with BRPL or its Group Companies. Bidders having any litigation/ legal case pending with BRPL shall not be considered qualified for this tender.

1.1. Other Requirements:

(a) Company reserves the right to carry out technical capability/ infrastructure assessment of the Bidders by factory/office/site inspection or by any other means and company's decision shall be final in this regard.

(b) The bidder shall submit all necessary documentary evidence to establish that the Bidder meets the above qualifying requirements including but not limited to following:

~~i.~~ Last three Financial Years (FY 22-23, FY 23-24 & FY 24-25) audited financial statement.
ii. Bidder to submit UDIN based CA Certificate showing NIL dues towards Statutory Liabilities, including GST, Taxation, PF, ESI, or any other dues Statutory in nature for the period upto 31.03.2025, herein collectively called as "Statutory dues" and there is no liability over the bidder relating to deposition of such statutory dues.
iii. Detail of Banks& Fund & Non fund-based Credit limit
iv. Details of formation/registration of the firm (Proprietary/ Partnership) or Company along with all relevant details)
v. Memorandum & Articles of Association of the Company/ Partnership Deed of the Firm /other registration documents, as applicable
vi. Organization Chart of the Bidders Company/organisation
vii. Organisation chart for execution of the contract comprising of Technically Qualified manager, Safety officer as per CEA guidelines, HR manager, Diploma / Graduate Engineers etc.
viii. Experience details with credentials
ix. Number of Employees & necessary details
x. Details of office/s in Delhi, Details of Registered and Corporate offices and details of other offices/establishments in India.
xi. Work order copies along with performance certificates in support of relevant experience
xii. Turnover certificate issued by CA (along with UDIN no.) for the last three Financial Years.
xiii. Networth certificate as elaborated in financial QR
xiv. List of pending litigation with government/other institution on account of executing any order.
xv. Copy of ESI/PF Registration certificate
xvi. Copy of PAN/GST no.
xvii. Copy of GST Return of last Financial Year.
xviii. Copy of valid Electrical License
xix. Non-Disclosure Agreement (NDA) as per format attached
xx. Bidder's details as per format attached
xxi. Solvency Certificate
xxii. An undertaking to provide all Tools & Plants , PPEs as per tender scope

(c) The bidder should enclose performance certificates in support of relevant experience.

(d) For Existing vendors of BRPL, the evaluation will also include the performance in the existing contracts via-a-vis performance in terms of HR issues, all statutory Compliance parameters and wages disbursement by Vendors. BRPL reserves the right to qualify or disqualify their bid based on the contract performance despite them meeting the above-mentioned qualification requirements.

(e) BRPL may ask for such other documents as it deems fit for substantiating/ justifying the submissions made by the bidder.

5. PRE-BID MEETING

A pre-Bid meeting shall be organised physically at the time and date as specified in the tender documents in the presence of those bidders or their authorized representatives who may choose to be present.

All queries related to this tender must reach to C&M Department of BRPL at least three days before the date of the pre- bid meeting. All the bidder's queries shall be replied to in the pre-bid meeting. In case any change is required in the tender document the same shall be effected in the form of corrigendum to this tender. The bidder or their representatives who intend to bid and who have either purchased tender documents or will pay tender fees for downloaded documents are invited to attend the pre-bid meeting. Corrigendum, if any, to the tender document shall be hosted on the website subsequent to the pre-bid meeting. Bidders are requested to submit their offer strictly in line with this tender document & corrigendum if any.

6. BID SUBMISSION

6.1. The bidders are required to submit the bid in 2(two) parts and in original & duplicate(total 2 copies) at the following address:

Head of Department,
Contracts & Material Department,
BSES Rajdhani Power Limited,
Ist Floor , "C" Block, BSES Bhawan,
Nehru Place,
New Delhi-110019.

6.2. Technical bid documents along with commercial terms and conditions shall also be submitted in Pen Drive. No price bid shall be submitted in Pen Drive. The PEN Drive should be owned by Bidder. The bidder shall ensure that the Pen Drive is free from all viruses/malware. The pen drive once submitted shall not be returned.

6.3. This is a two part bid process. Bidders are to submit the bids in 2(two) parts. Both these parts should be furnished in separate sealed covers super scribing **NIT no. DUE DATE OF**

SUBMISSION, with particulars as PART-A Techno-Commercial Bid and Part-B PRICE BID and these sealed envelopes should again be placed in another sealed envelope which should be super scribed with **—"Tender Notice No.& Due date of opening".** The same shall be submitted before the due date & time specified.

3.3.1. PART A: TECHNO-COMMERCIAL BID, UNPRICED (Envelop-1):

The first sealed envelope shall contain an Unpriced Techno-commercial bid in paper form (hard copies) and envelope super-scribing **PART-A Techno-Commercial Bid**. The details to be submitted in techno-commercial bids are given below:

a) General information about bidder
b) Documentary evidence in support of all the qualifying criteria as per clause 4.0,
c) EMD of requisite amount
d) Non-refundable separate demand draft for Rs. 1180/- In case the forms are downloaded from the website
e) Technical Literature if any.
f) Details of experience of works of the same or similar nature. Copy of work orders and performance certificates.
g) Power of attorney
h) Acceptance to Commercial Terms and Conditions viz Delivery schedule/period, Payment terms, BG etc
i) Any other relevant document to support bidder meeting QR

Techno-Commercial Bid should not contain any cost information whatsoever and shall be submitted within the due date. After techno-commercial evaluation, the list of techno-commercially qualified bidders will be posted immediately on the BSES website.

The bidder should submit complete tender document along with all corrigendum (if any) published against this NIT at our website, signed and stamped with bidder's seal as an acceptance of all the terms & conditions of the Tender.

3.3.2. PART B: PRICE BID (Envelop-2):

The second sealed envelope shall contain Price bids in paper form (hard copies and envelope super-scribing **PART-B Price Bid** on it. The details to be submitted in the Price bid are given below:

(a) **PRICE BID** shall Comprise of Prices **strictly** in the Format enclosed in SECTION VI. Any change in price bid format, content may lead to rejection of the bid.

(b) Price Bid will be opened after techno-commercial evaluation of all the bids and only of the qualified bidders.

3.3.3. FINANCIAL BID EVALUATION THROUGH REVERSE AUCTION:

Reverse Auction (RA) shall be conducted for finalization of contract and the details of the price bid shall not be shared with bidders. The qualified bidders will participate in reverse auction

through SAP-SRM tool. The RA process shall be governed by the terms and conditions enclosed as Annexure-IV in this tender document. Training/details shall be provided to bidders before participation in auction. In case RA is not conducted /concluded for any reasons, a "final no regret" financial bid in a sealed envelope will be called for from all qualified bidders. Notwithstanding anything stated above, the Company reserves the right to assess bidders' capability to perform the contract, should the circumstances warrant such assessment in the overall interest of the Company. In this regard, the decision of the Company shall be final and binding on the bidders.

RA is mandatory. The bids will be evaluated commercially based on the total all inclusive price. BRPL reserves the right to evaluate the bid in totality or Part wise. RA methodology will be informed separately to all the qualified bidders.

7. TIME SCHEDULE

The activities and their timelines are given hereunder which needs to be adhered by the bidders.

S. No.	Activity	Description	Due date
1	Submission of Technical & Commercial Queries, if any	All Queries related to NIT	29.08.2025
2	Pre-Bid Meeting	Discussion queries on pre-bid	02.09.2025, 14:30 Hrs, Ganga Conference room, 2nd Floor, BSES Bhawan, Nehru Place
3	Submission of Techno-Commercial & Price Bid	Unpriced Techno-Commercial & Price Bid in separate sealed envelopes	11.09.2025
4	Opening of Techno- Commercial Bid	Opening of PART-A	11.09.2025
5	Opening of Price Bid	Opening of PART-B of only the techno- commercially qualified bidders (List of bidders will be published at our Website)	To be informed separately
6	Reverse Auction	As per RA Terms	Schedule will be intimated to eligible bidders through email from email id: BRPL.Eauction@relianceada.com

8. AWARD DECISION

8.1. Company intends to award the business on a lowest bid basis, so bidders are encouraged to submit the bid competitively. The decision to place order/LOI solely depends on Company on the cost competitiveness across multiple lots, quality, delivery and bidder‘s capacity, in addition to other factors that Company may deem relevant.

8.2. The Company reserves all the rights to award the contract to one or more bidders who meet the execution requirement or nullify the award decision without assigning any reason thereof.

8.3. In case the performance of any contractor is found unsatisfactory during the execution process, the award will be cancelled and BRPL reserves the right to award the work to other contractor(s) who will be found eligible/fit.

8.4. The abnormally higher or abnormally lower bids shall not be considered with respect to estimated cost. The criteria decided by BRPL on this shall be final and binding on the bidders.

8.5. The bidding firms are advised to quote their Margin / Administrative Service Charges accordingly. BRPL reserves the right to reject the bids quoted with abnormally higher or abnormally lower individual activity rates. The criteria decided by BRPL on this shall be final and binding on the bidders and will not be open for discussion under any circumstances.

9. MARKET INTEGRITY

We have a fair and competitive marketplace. The rules for the bidders are outlined in the Terms & Conditions of the tender documents. Bidders must agree to these rules prior to participating in the tender. In addition to other remedies available, we reserve the right to exclude a bidder from participating in future markets due to the bidder’s violation of any of the rules or obligations contained in the Terms & Conditions. Bidder(s) who violate the marketplace rules or engage in behavior that disrupts the fair execution of the marketplace restricts a bidder from participation in future tenders of BRPL to a length of time as decided by BRPL, depending upon the seriousness of the violation. Examples of violations include, but are not limited to:

- Failure to honour prices submitted to the market place.
- Breach of the terms published in Request for Quotation/NIT
- Misrepresentation of facts, submitting false and fabricating documents

10. CONFIDENTIALITY

All information contained in this tender document is confidential and may not be disclosed, published or advertised in any manner without written authorization from BRPL. This includes all bidding information submitted.

All tender documents remain the property of BRPL and all bidders are required to return these documents to BRPL upon request.

Bidder(s) who do not honour these confidentiality provisions will be excluded from participating in future bidding events.

The bidder shall sign a Non-Disclosure Agreement (NDA) in the format attached in tender document and submit along with its bid.

11. CONTACT INFORMATION

Technical & Commercial clarification, if any, regarding this tender shall be sought in writing and sent by e-mail to the following e-mail IDs:

Address	Name/ Designation	E-mail Address / Phone Number
C&M Dept, 1st Floor, C Block, BSES Rajdhani Power Ltd BSES Bhawan, Nehru Place, New Delhi – 110019.	Ms. Divya Gupta DGM Contracts	Divya.gupta@relianceada.com / 011-49107238
	Mr. Amitava Nandi, Head – (Contracts)	Amitava.Nandi@relianceada.com / 011-4920 9619

SECTION-II

INSTRUCTIONS TO BIDDERS (ITB)

SECTION-II

INSTRUCTIONS TO BIDDERS (ITB)

1. GENERAL

BSES RAJDHANI Power Ltd (BRPL), hereinafter referred to as the "Company" is desirous for awarding work of "**ESTABLISHMENT OF RATE CONTRACT FOR EXECUTION OF 1.1/ 11 KV SCHEMES IN BRPL**" as notified in this tender document.

1.1 All the Bids shall be prepared and submitted in accordance with these instructions.

1.2 Bidder shall bear all costs associated with the preparation and delivery of its Bid, and the Company will in no case shall be responsible or liable for these costs.

1.3 The Bid should be submitted by the Bidder in whose name the bid document has been issued and under no circumstances it shall be transferred /sold to the other party.

1.4 The Company reserves the right to request for any additional information/documents and also reserves the right to reject the proposal of any Bidder, if in the opinion of the Company, the data in support of RFQ requirement is incomplete.

1.5 The Bidder is expected to examine all instructions, forms, terms & conditions and specifications in the Bid Documents. Failure to furnish all information required in the Bid Documents or submission of a Bid not substantially responsive to the Bid Documents in every respect may result in rejection of the Bid. However, the Company's decision in regard to the responsiveness and rejection of bids shall be final and binding without any obligation, financial or otherwise, on the Company.

1.6 The company reserves the right to split the order among various successful bidders in any manner it chooses without assigning any reason whatsoever.

2. SCOPE OF WORK

Detailed specification/scope of work is provided in Section-V of this tender document.

3. DISCLAIMER

3.1. This NIT is not an agreement and further it is neither an offer nor an invitation by BRPL to bidders or any other person for award of contract. The purpose of this NIT is to provide bidders information that may be useful to them in the preparation and submission of their bids.

3.2. This Document includes statements, which reflect various assumptions, which may or may not be correct. Each Bidder should conduct its own estimation and analysis and should check the accuracy, reliability and completeness of the information in this Document and obtain independent advice from appropriate sources in their own interest.

3.3. Neither Company nor its employees will have any liability whatsoever to any Bidder or any other person under the law or contract, the principles of restitution or unjust enrichment or otherwise for

any loss, expense or damage whatsoever which may arise from or be incurred or suffered in connection with anything contained in this Document, any matter deemed to form part of this Document, provision of Services and any other information supplied by or on behalf of Company or its employees, or otherwise arising in any way from the selection process for the Work.

3.4. Though adequate care has been taken while issuing the Tender document, the Bidder should satisfy itself that Documents are complete in all respects. Intimation of any discrepancy shall be given to this office immediately.

3.5. This Document and the information contained herein are Strictly Confidential and are for the use of only the person(s) to whom it is issued. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient's professional advisors).

3.6. It shall be deemed that by submitting a bid, a bidder agrees to release BRPL and its employees, agents and advisors irrevocably unconditionally fully and finally from any and all liability for any claims losses damages costs expenses or liabilities in anyway related to or arising from exercise of any rights and all performance of any obligations under this NIT and or in connection with the bid process to the fullest extent permitted by applicable law and waives any and all rights and all claims it may have in this respect whether actual or contingent whether present or in the future

3.7. BRPL and its employees and advisors also accept no liability of any nature whether resulting from negligence or otherwise arising from reliance of any bidder upon the contents of this NIT. BRPL may in its absolute discretion but without being under any obligation to do so, update amend or supplement the information assessment statement or assumptions contained in this NIT.

3.8. The issue of this tender document does not imply that BRPL is bound to qualify any bidder or to award the contract to any bidder. BRPL reserves the right to reject all or any of the bids without assigning any reasons whatsoever.

4. COST OF BIDDING

The Bidder shall bear all cost associated with the preparation, submission and processing of its Bid and the company will in no case be responsible or liable for the costs.

5. TENDER DOCUMENTS

5.1. The Scope of Work, Bidding Procedures and Contract Terms are described in the Bidding Documents. In addition to the covering letter accompanying Bidding Documents, the Bidding Documents include:

"Check List, Sections, Annexure & Formats as elaborated in CONTENT of this NIT."

5.2. The bidder is expected to examine the tender documents, including all Instructions, Forms, Terms and Specifications. Failure to furnish all information required by the tender documents or submission of a bid not substantially responsive to the tender documents in every respect may result in the rejection of the Bid.

6. AMENDMENT OF TENDER DOCUMENTS

6.1. At any time prior to the deadline for submission of Bids, the Company may for any reason(s),

whether at its own initiative or in response to a clarification requested by a prospective Bidder, alter/amend/modify the tender documents by corrigendum /amendment.

6.2. The corrigendum / amendment shall be part of tender document, pursuant to Clause 5.1, and it will be notified
(a) by way of uploading the corrigendum/amendment on BSES website (in case of public tender),
(b) in writing by e-mail to all the Bidders who have received the Bidding Documents by email. (in case of limited tender)

All such corrigendum & amendments will be binding on the bidders.

6.3. In order to provide prospective Bidders a reasonable time in which to take the Amendment into account in preparing their Bids, the Company may, at its discretion, extend the deadline for the submission of Bids.

7. PREPARATION OF BIDS & LANGUAGE

The Bid prepared by the Bidder, and all correspondence, documents etc. relating to the Bid exchanged by the Bidder and the Company shall be written in English Language. Any printed literature furnished by the Bidder may be written in another Language, provided that this literature is accompanied by English translation, in which case, for purposes of interpretation of the Bid. In case of ambiguity in the English translation, interpretation of the Company as regards to translation will be final.

8. DOCUMENTS COMPRISING THE BID

The Bid prepared and submitted by the Bidder shall comprise the following components:

(a) Techno-Commercial Bid & Price Bid as elaborated in RFQ. (STRICTLY AS PER FORMAT)
(b) All the Bids must be accompanied with the required EMD &Tender Fees against each tender.

9. BID FORM

The Bidder shall complete “Original” Bid Form and submit it along with details mentioned in Techno-Commercial bid (without filling price).

10. BID PRICES

Bidders shall quote for the entire Scope of work with prices for individual items. The bidder is required, at his expense, to obtain all the information he may require to enable him to submit his tender including necessary visits to the site to ascertain the local conditions, procurement of necessary materials, labour, etc., requirements of the local/government/public authorities in such matters.

11. BID CURRENCIES

Prices shall be quoted in Indian Rupees Only.

12. PERIOD OF VALIDITY OF BIDS

12.1. Bids shall remain valid & open for acceptance for a period of 180 days from the date of opening of the Bid.

12.2. Notwithstanding above, the Company may solicit the Bidder's consent to an extension of the Period of Bid Validity and the bidder shall be liable to extend the same at the sole cost and consequences of the bidder and no claim from the company in this regard shall be maintainable.

13. ALTERNATIVE BIDS

Bidders shall submit Bids, which comply with the Tender Documents. Alternative Bids will not be considered. The attention of Bidders is drawn to the provisions regarding the rejection of Bids in the terms and conditions, which are not substantially responsive to the requirements of the Tender Documents.

14. FORMAT AND SIGNING OF BID

14.1. The original Bid Form and accompanying documents (as specified in Clause 9.0), clearly marked "Original Bid", must be received by the Company at the date, time and place specified in Section-I, RFQ.

14.2. The original copy of the Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to sign on behalf of the Bidder. Such authorization shall be indicated by written Power-of-Attorney accompanying the Bid. All pages of the bid shall be signed by the signatory accompanied with seal of the Agency.

14.3. The Bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be signed by the person or persons signing the Bid.

15. SEALING AND MARKING OF BIDS

15.1. Bid submission: One original (hard copies) and one duplicate (total two copies) of all the Bid Documents shall be sealed and submitted to the Company before the closing time for submission of the bid.

15.2. The Bidder has the option of sending the Bids in person. Bids submitted by Email/Telex/Telegram /Fax will be rejected. No request from any Bidder to the Company to collect the proposals from Courier/Airlines/Cargo Agents etc shall be entertained by the Company.

16. DEADLINE FOR SUBMISSION OF BIDS

16.1. The Original bid must be timely received by the company at the address specified in Section –I, RFQ.

16.2. The Company may, at its discretion extend the deadline for the submission of bids by amending the Tender Documents in accordance with Clause 6.0, in which case all rights and obligations of the

Company and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

17. ONE BID PER BIDDER

Each Bidder shall submit only one Bid by itself. A Bidder who submits or participates in more than one Bid will cause all those Bids to be rejected.

18. LATE BIDS

Any Bid received by the Company after the deadline for submission of Bids prescribed by the Company, pursuant to Clause 16.0, will be declared "Late" and rejected and returned unopened to the Bidder.

19. MODIFICATIONS AND WITHDRAWAL OF BIDS

The Bidder is not allowed to modify or withdraw its Bid after the due date of bid submission.

20. EVALUATION OF BID

20.1. The bids will be evaluated techno-commercially on compliance to tender terms and Conditions.

20.2. BRPL reserves the right to ask the bidders to provide any additional information including breakup of the prices as quoted by them against line items.

21. CLARIFICATION OF BIDS

To assist in the examination, evaluation and comparison of Bids, the Company may, at its discretion, ask the Bidder for a clarification of its Bid. All responses to requests for clarification shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted

22. PRELIMINARY EXAMINATION OF BIDS / RESPONSIVENESS

22.1. Company will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order.

22.2. Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.

22.3. Company will determine the substantial responsiveness of each Bid to the Tender Documents including execution capability and acceptable quality of the services offered. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Tender Documents without deviation.

22.4. Bid determined as not substantially responsive will be rejected by the Company and may not subsequently be made responsive by the Bidder by correction of the non- conformity.

23. EVALUATION AND COMPARISON OF BIDS

23.1. The evaluation of Bids shall be done based on the delivered cost competitiveness basis.

23.2. The evaluation of the Bids shall be a stage-wise procedure. The following stages are identified for evaluation purposes: In the first stage, the Bids would be subjected to a responsiveness check later on the Techno-Commercial Proposals and the Conditionality of the Bidders would be evaluated.

Subsequently, the Financial Proposals along with Supplementary Financial Proposals, if any, of Bidders with Techno-commercially Acceptable Bids shall be considered for final evaluation.

23.3. The Company's evaluation of a Bid will take into account, in addition to the Bid price, the following factors, in the manner and to the extent indicated in this Clause:

(a) Contract completion schedule
(b) Conformance to Qualifying Criteria
(c) Deviations from Tender Documents
(d) Conformity and compliance to the conditions/details provided in pre-bid meeting
(e) Change in the quantity from mentioned in the tender

23.4. The cost of all quantifiable deviations and omissions from the specification, terms and conditions specified in Tender Documents shall be evaluated.

23.5. The Company will make its own assessment of the cost of any deviation for the purpose of ensuring fair comparison of Bids.

23.6. Adjustments in price, if any, based on the above procedures, shall be made for the purposes of comparative evaluation only to arrive at an “Evaluated Bid Price”. Bid Prices quoted by Bidders shall remain unaltered.

24. CONTACTING THE COMPANY

24.1. From the time of Bid opening to the time of contract award, if any Bidder wishes to contact the Company on any matter related to the Bid, it should do so in writing.

24.2. Any effort by a Bidder to influence the Company and/or in the Company‘s decisions in respect of Bid evaluation, Bid comparison or Contract Award, will result in the rejection of the Bidder‘s Bid.

25. THE COMPANY ’S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Company reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Company‘s action.

26. AWARD OF CONTRACT

The Company will award the Contract to the successful Bidder whose Bid has been determined to be the lowest-evaluated responsive Bid, provided the Bidder has been determined to be qualified to satisfactorily perform the Contract. Company reserves the right to award order to other bidders in the tender, provided it is required for need of the work. The full or part of the contract may be awarded to other bidder(s) on differential rates.

27. THE COMPANY'S RIGHT TO VARY QUANTITIES

The Company reserves the right to vary the quantity i.e. increase or decrease the Numbers/ quantities without any change in terms and conditions before the award of Contract. Further BRPL may increase or reduce the area/ scale of operations / increase or decrease the Numbers/ quantities after the start of work execution under the contract and the size of contract / contract value shall be adjusted accordingly. In case of decrease in base resources decided mutually then contract value will be adjusted accordingly.

28. LETTER OF INTENT/ NOTIFICATION OF AWARD

The letter of intent/ Notification of Award shall be issued to the successful Bidder whose bids have been considered successful for award of work/order.

The successful Bidder shall be required to furnish acceptance of LOI / notification of award within 7 days of issue of the letter of intent /Notification of Award by Company.

29. CORRUPT OR FRAUDULENT PRACTICES

29.1. The Company requires that the Bidders observe the highest standard of ethics during the entire period of work execution under the Contract. In pursuance of this policy, the Company:

(a) Defines, for the purposes of this provision, the terms set forth below as follows:

"Corrupt practice" means behaviour on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them, or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and "Fraudulent practice" means a misrepresentation of facts in order to influence a award process or the execution of a contract to the detriment of the Company, and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the Company of the benefits of free and open competition.

(b) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

(c) Will declare a firm ineligible either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract.

29.2. Furthermore, It shall be the responsibility of the Bidders to read and understand & aware of the provision stated in the Terms and Conditions of tender before participating in the tender.

30. PROCESS TO BE CONFIDENTIAL

Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence the Company's processing of Bids or award decisions may result in the rejection of the Bidder's Bid.

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SECTION – III

SPECIAL TERMS & CONDITIONS (SCC)

SECTION – III:

SPECIAL TERMS & CONDITIONS (SCC):

These Special Terms and Conditions of Contract (SCC) shall be read in conjunction with the Terms and Conditions of the Contract, General Conditions of Contract (GCC), Scope of Work and other documents forming part of the contract wherever the context so requires. Notwithstanding the subdivision of documents into separate sections and volumes, every part of each such document shall be deemed to be supplementary to and complementary of every other part.

1. DEFINITIONS

1.1. Engineer-in-charge (EIC) / Officer-in-charge (OIC)

The term “Engineer-in-charge (EIC)" / “Officer-in-charge (OIC)” shall mean the Company's nominated representative for the purpose of supervision of the execution of the Contract. The same shall be mentioned in the Contract.

2. SCOPE OF WORK

The scope includes executing 11 KV scheme works as per detailed scope of work as enumerated in Section – V.

3. EFFECTIVE DATE, TIME AND VALIDITY

3.1. The order/agreement shall become effective for all purposes from the date to be specified under the agreement and continue to remain in force for the period of two (2) years and if required it may be further extended for a period of 1 year based on the performance of the contractor. Notwithstanding the continuous/periodic review/assessment of contractor’s performance by BRPL, at its discretion, the annual performance of the Contractor will be evaluated /reviewed year on year basis after completion of every year for continuity of validity of the agreement.

3.2. That Renewal and extension of the agreement shall be the sole prerogative of BRPL. BRPL reserves the right to renew the agreement.

3.3. Illustrative Conditions for Renewal and Extension of Agreement Beyond Agreement Duration:

BRPL may, at its sole discretion, consider renewal and extension of the agreement beyond agreement duration. Such a decision for extension, if envisaged, may be taken 1 month before the expiry of the agreement. However, BRPL may, at its discretion, renew even within One Month of expiry of agreement. BRPL reserves the right not to renew and extend the agreement beyond agreement duration. However, in exceptional cases when the Contract period shall be extended beyond 3 years then same shall be discussed and agreed mutually.

3.4. BRPL shall notify the Contractor of any possible extension or request the Contractor to furnish additional information, as may be required, for granting such extension.

4. ORDER VALUE

Value of the Contract will be contracted out on the basis of finalized rates.

The Contractor shall not be entitled to adjustment in the Service Fees during the term of this Agreement for increase due to

(a) increased labour costs including minimum wages or costs related to vehicles or other equipments provided,
(b) changes in insurance premiums, and/or
(c) changes in legislations or regulations relating to the Service.

5. RATES & ESCALATION

5.1. The Rates/Agreement Consideration are firm and fixed for two years from the date of LOI/Contract. The Rates shall not be subject to escalation or increases on any account/reason(s) whatsoever.

5.2. The rates set out above are also inclusive of reasonable incidental expenses incurred by Contractor on the following:

I. Cost of Labour, tackles and supervision.
II. All taxes and levies, including but not limited to GST, etc as applicable during the currency of the contract.
III. Mobile and Conveyance of the Contractor's employees up to place of work and/ or from one place to another place for carrying out the job.
IV. Uniform with all accessories for the team as per the sample decided.
V. Rates shall be valid for all heights and locations.
VI. All other expenses incidental to the job.
VII. The Company shall pay only once against the service provided irrespective of the fact that the Contractor might have to take more than one attempts for providing the service.
VIII. Compliance with all labour laws including Minimum Wage Act, Bonus Act, The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) ACT, 2013 etc in respect of employees engaged by the Contractor for the discharge of services as per this agreement.

6. CONTRACT CUM PERFORMANCE SECURITY BANK GUARANTEE (CPBG)

6.1. Contractor shall furnish the CPBG in the prescribed format within 15 days from the date of issue of LOI / Work Order for due performance of the provisions of Work Order/Agreement.

6.2. The CPBG shall be of 7.5% (Seven and half percentage) of initial average annual contract value and shall be valid till agreement period plus three (3) months towards claim period or latest RBI guidelines (if any) regarding claim period, whichever is higher. This amount shall remain fixed during the currency of the agreement.

6.3. The CPBG shall be issued from any nationalized / scheduled bank as per company format.

6.4. The Company shall reserve the right to invoke the CPBG unconditionally and without recourse to the Contractor, if there is failure to perform any part of the Agreement for whatsoever reason. This clause is pertaining to performance of contractual obligations and the decision of Company shall be final in this regard.

6.5. In the event of any claim or any other outstanding Contractual obligations remaining unfulfilled, the Contractor shall be required to extend the CPBG till the settlement of all claims and completion of all Contractual obligations at the cost and consequences of contractor.

6.6. In the event, in Company's sole judgement, the Contractor has fulfilled all its obligations under this Agreement, The CPBG shall be released without any interest after the expiry of CPBG and its claim period as mentioned above upon compulsory submission of i) No Demand Certificate ii) Indemnity Bond iii) Work completion certificate issued by BRPL iv) NOC issued by BRPL compliance cell

6.7. If the CPBG is or becomes invalid for any reason (other than its expiry), the Contractor shall immediately notify the Company/BRPL and provide within five (5) days a replacement CPBG in the form set out in the Contract/Agreement.

6.8. Not later than sixty (60) Business Days before the expiry of the CPBG, the Contractor shall, upon request of the Company/BRPL obtain extension of the validity of such CPBG for the period stated in such request by the Company/BRPL and provide a copy of such renewed CPBG.

6.9. It is Contractor's responsibility to incur charges / cost to maintain and for extension of CPBG without claiming reimbursement from the company/BRPL.

7. PAYMENT TERMS

7.1 Payment shall be made to your as under:

i) 80% payment shall be made to contractor within 30 days of submission of your Bill along work completion Certificates at our office. Engineer In-Charge shall issue the work completion certificate by certifying that the work has been completed in full satisfaction of all relevant clauses applicable under the Work Order and all the documents in support of certification to be enclosed.

ii) 20% balance payment shall be release after submission of following documents:

7.2 For HT Works:

a) 10% Payment against submission of Electrical Inspectorate's clearance certificate (Only for HT work).

b) 10% Payment against submission QC clearance certificate.

7.3 For LT works:

20% Payment against submission QC clearance certificate.

7.4 For Street Light / High Mast Installation work:

20% Payment against submission HO/TO certificate.

7.5 The contractor shall submit the invoice along with duly filled invoice which shall be processed and payment shall be made to contractor on certification of Engineer In Charge for compliance to check point given in checklist. Check list shall be provided by the Engineer In Charge.

7.6 The Vendor shall submit ESI, PF challans and workman compensation policy(if applicable) and Third party insurance policy at the time of start of work to the C&M Deptt, which shall be vetted by the CMC HR Deptt. The Engineer in charge shall ensure adherence to submission of ESI, PF challans and workman compensation policy (if applicable) and Third party insurance policy at the time of start of work and also bill certification. The Engineer in charge shall also certify that no labour dispute observed and wages of labour has been settled for the work carried out

8. INSURANCE

The contractor shall take suitable insurance policy for its men and materials (GPA, Mediclaim policy, Workmen Compensation Policy etc.)
as listed below for the resources deployed by him:

8.1. Insurance Policies:

a) Not in use

b) Group Personal Accident Insurance:

Before commencing the execution of the work the Contractor shall take Accidental insurance policy for the staff engaged/deployed by him for the work under agreement, to insure against any loss of life which may occur during the agreement for the work of the Company. The policy shall have coverage of Rs.15 Lakhs (Table C- Death + Permanent Total Disability + Partial permanent Disability due to external accidents). Permanent total disability coverage shall be 125% of the basic sum assured of Rs 15 Lakh.

The Contractor shall be responsible for on the spot same day claim settlement with the victim's legal heirs without waiting for settlement by insurance claim and without any liability on BRPL. The premium amount for both the above policies shall be borne by the Contractor. The Contractor shall furnish copy of policy within 15 days of start of work under the contract.

8.2. Medical Insurance Policy:

Contractor shall take a mediclaim policy including family floater of minimum sum assured value Rs. 2.00 lakhs for the resources who are not covered under ESI. Recovery of premium of GMC insurance shall be as per bidder company policy.

8.3. NOT IN USE

8.4. For all the insurance policies (whether taken by the Company or Contractor), the Contractor shall be responsible for settlement of claims with the underwriters without any liability on the

company and will arrange replacements / rectification expeditiously without a waiting settlement of insurance claim, at contractor's own cost and this shall not entitle the Contractor for any extension of time.

9. PENALTY AND LIQUIDATED DAMAGES

1 A penalty of 2.5% of bill amount shall be levied in each case of non-compliance of safety practices and site cleanliness.

2 Liquidated Damages: In the event of any delay in completion of the work beyond the stipulated time given by in individual scheme due to reasons solely attributable to the Contractor, the Contractor shall pay to the Company liquidated damages.

3 If the Contractor failed perform the services within the time period specified in the individual FO, the Company shall, without prejudice to its other remedies under the contract, deduct liquidated damages a sum equivalent to 2.0% of the FO value for each week or part there of delay until the actual date of completion up to a maximum deduction of 20% of FO value. Once the maximum is reached to Company may consider termination of contract without any liabilities to Company.

4 Incase the contractor has not mobilized / taking up the job as per the direction of Engineer In-charge, the company have all rights to cancel / re-allocate the schemes allotted to the contractor.

5 User group/Engineer In charge should specifically mention the amount of LD levied on the bill of contractor for this job.

10. GUIDELINES REGARDING INSPECTION & MAINTENANCE OF PITS /DUG AREA WHILE DOING WORK AT SITE IN BRPL AREA

The contractor shall ensure strict compliance of the following directions:

a) The sites of all manholes, pits, holes, tanks or any other opening in the ground of any kinds shall be regularly inspected and maintained.
b) Schedule and protocols of inspections and maintenance shall be drawn up and notified to BRPL.
c) These sites shall be cordoned off to render them inaccessible to the public.
d) The existence of these sites shall be clearly & visibly marked by the display of signboards/signages.
e) If they are required to be covered, it shall be ensured that the covers are in place.
f) If required, as per law, prior permission from authorities shall be secured before the commencement of work.

The Execution contractor shall solely be responsible for all the preventive and protective environmental steps as per guidelines. Any violations from the above guidelines has been viewed very seriously by the authorities. Contractor is liable for the penalties / other action by the authorities, the contractor shall indemnify BRPL its employees/directors/associates from all liabilities/penalties/claims including litigation expenses on this account.

11. DERC GUIDELINES & REGULATIONS

The bidder shall make themselves fully aware & familiarise with prevailing DERC guidelines / regulations.

12. WARRANTY/DEFECT LIABILITY PERIOD

1. The Contractor shall be liable to rectify all defects in the materials or works done by the Contractor under this Contract, or from any act or omission of the contractors for a period of Twelve (12) months from date of final work completion certification by the Engineer in- charge.

2. If any defect noticed and system cannot be used by reason of any defect, the defect liability period shall be extended by the period equal to the period during which the system is not in operation.

3. In respect of any warranty work performed by the Contractor, the period during which a claim may be made for such warranty work shall be extended by an additional period of twelve (12) months from the completion of such portion of warranty work.

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SECTION – IV

GENERAL TERMS & CONDITIONS(GCC)

SECTION – IV

GENERAL TERMS & CONDITIONS(GCC)

This GCC shall form an integral part of the Agreement and will be of full force and effect as if they were expressly set out in the body of the Agreement.

Reference to any legislation or law to any provision thereof shall include references to any such law as it may, after the date hereof, from time to time, amended, supplemented or re-enacted, and any reference to a statutory provision, shall include any subordinate legislation made from time to time under that provision.

1. DEFINITION & INTERPRETATION

1.1 Definition

In the Agreement (as defined below) the words and expressions defined below shall have the meanings assigned to them herein except where the context requires otherwise:

1.1.1 "Accounting Year" means the financial year commencing from 1 April of any calendar year and ending on 31 March of the next calendar year.

1.1.2 "Applicable Laws" means all Law / Laws in force and effect, as of the date hereof and which may be promulgated or brought into force and effect hereinafter in India including any revisions, amendments or re-enactments including without limitation regulations, rules and notifications made there under and judgments, decrees, injunctions, writs and orders of any court or regulators or quasi-judicial body or any appropriate authorities, as may be in force and effect during the subsistence of the Contract. It includes Law/Laws of Country/State legislation, statues, ordinance, notification, circular, regulations and other Laws, and bye Laws of any legally constituted public authority.

1.1.3 "Change in Law" means the occurrence of any of the following after the execution of agreement:

(i) The enactment of any new Indian Law;
(ii) The repeal, modification or re-enactment of any existing Indian Law;
(iii) The commencement of any Indian Law which has not entered into effect until the date of performance the Contract;
(iv) Change in the interpretation or application of any Indian Law by a court as compared to such interpretation or application twenty-eight (28) days prior to the last date of submission of Tender;
(v) It also includes changes in the tax rates upward or downward.

1.1.4 "Change in Service" means any addition to, deletion from, suspension of or other modification, to the Services, or to the quality, function or as delineated in this agreement, including any such addition, deletion, suspension or other modification, which requires a change in one or more of the service specification and the completion schedule.

1.1.5 "Communication" means instruction or information or written notice issued on letter head or through electronic mail exchange between Parties and excludes verbal or short messaging services (SMS). The notice shall be served by delivering a copy by electronic mail, or registered post/speed post etc. Unless otherwise stated in the agreement, all communications to be given under the Contract shall be in writing. Communication may be sent to competent authority or authority delegated to such officer/employee. Communication shall be on letter head of Party signed by competent authority/authorized signatory of the Party.

1.1.6 **"Company**/Owner/Purchaser/First Party " the terms used in this agreement shall refer to BSES RAJDHANI Power Limited (BRPL) having its office at BSES Bhawan, Nehru Place, New Delhi - 110019 and shall include its authorized representatives, agents, successors and assignees.

1.1.7 **"Contractor/**Agency/Vendor**"** means the successful bidder to whom this Agreement is awarded. It is entity named in the Execution Cover and includes assignees, administrator, executors, successors, associated company/subsidiary/joint venture/firm/representative of the Contractor. It is also termed as 'Contractor' or 'Agency'.

1.1.8 Contract" /" Agreement/"Work Order" means the agreement between the Company and the Contractor for the performance of the Services, including the Contract / Agreement/ Work Order duly signed and executed between the Parties, the letter of acceptance, the Conditions of Contract, the schedules, Annexures, the Company/BRPL's requirements, including but not limited to the tender, other tender documents and such further documents which are listed in the Contract / Agreement/Work Order and includes any amendment thereto made in accordance with the provisions hereof giving binding effect to the terms and conditions agreed by the Parties. This includes Work Order / Letter of Intent(LOI) issued to the Contractor by the Company/BRPL.

1.1.9 "Agreement Period" shall mean duration of Services to be performed and includes extension thereof after mutual consent of both Parties.

1.1.10 "Agreement Value/Consideration" means the price of the defined Services including taxes payable to the Contractor for the performance of the Services subject to such additions thereto and deductions there from as may be made under the provisions of this Agreement. The Agreement Value is in consideration of providing the Service by the Contractor as per scope of work and as per Service specifications stipulated in the Agreement; the Agreement Value includes all and any fees, charges, local cess, taxes (GST and Income Tax), levies together with all cost and expenses. The Agreement Value may also term as 'Service Fee(s)' or 'Agreement fees'/Consideration elsewhere in the Agreement. Agreement Value is fixed lump sum for the Agreement Period unless mentioned in Agreement elsewhere.

1.1.11 "Force Majeure" shall have the meaning as ascribed in this agreement and annexures thereto.

1.1.12 "Good Industry Practice" means the exercise of the highest degree of skill, diligence, prudence and foresight in compliance with the obligations under the Contract which would be expected from a skilled and experienced Contractor engaged, being internationally accepted and customized in day to day performance in industry including for the supply of Manpower.

1.1.13 "HSE Conditions" shall mean the BRPL's health, safety and environment conditions containing the requirements and conditions to be met with respect to safety, health and environment.

1.1.14 "KPI" shall mean Key Performance Indicator as set out in the Contract/Agreement, its schedules/annexures etc. The performance of the Manpower employed by the Contractor for execution of Services shall be measured through KPI. The payment to Contractor shall be based on Manpower's performance as measured through KPI. It includes metrics in numerical, frequency and measuring process. Total manpower shall be monitored & calculated skill wise but it will be cumulative on monthly basis

1.1.15 "Manpower" means a person/s, labour (including Contractor's staff / personnel) known, introduced, security personnel employed and deployed by the Contractor in Contractor's provision of the Services who has skill, efficiency and mannerism to execute, perform Services under this Contract as per Scope Of Work of the Contract. The Manpower deployed shall have valid licenses, PAN card details / KYC information.

1.1.16 "Contract cum Performance Bank Guarantee (CPBG)" means the bank guarantee to be procured in accordance with terms of agreement for the performance of the Contractor's obligations under the Contract. The CPBG format is furnished in the Annexure, annexed to agreement.

1.1.17 "Service(s)" / "Works" shall mean Company/BRPL's requirements describing in detail including the nature of the Services and activities to be performed by the Contractor and its Manpower, in accordance with specifications, the duration of such requirement, and Services performed, the expected time of commencement and completion, detailed responsibilities and other relevant

particulars. It is 'scope of work' which is to be executed, performed successfully and satisfactorily by the Contractor in accordance with the Contract and ancillary services as may be Communicated by the BRPL from time to time under the Contract Period.

1.1.18 "Site" means the designated place/office or establishment or construction site, office, branch, including right of way and/or places provided by the BRPL where the Services is to be executed and any other place as may be specifically designated in the Contract/Agreement as forming part of the Site or designated as such by the Company/BRPL.

1.1.19 "Sub-Contractor" means a Sub-Contractor whom a part of the Contract is Sub Contracted by the Contractor with the prior written approval of the Company/BRPL, and the permitted legal successors in title to such person, but not any assignee of such person.

1.1.20 "Sub-Contract" shall mean obligations under the Contract have been awarded by the Contractor to Sub-Contractor.

1.1.21 "Tax Invoice" /" Running Bill" (RA Bill/bill) shall have the meaning ascribed to it under GST Laws.

1.2 Interpretation

In the Contract except where the context requires otherwise:

1.2.1 Words indicating one gender include all genders

1.2.2 "Written" or "in writing" means hand-written, written, or electronically made and resulting in a permanent record

1.2.3 Any reference to any provision of an act of Parliament or of a state legislature shall be construed, at the particular time, as including a reference to any modification, extension or re-enactment thereof, to all instruments, orders or regulations then in force

1.2.4 The singular shall include plural and vice versa, and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associations, organizations or other entities

1.2.5 The headings are inserted for convenience and shall not limit, alter or affect the meaning of the Contract.

1.2.6 The terms defined in schedule and the BRPL's Requirements shall have the same meaning ascribed thereto when used elsewhere in the Contract and vice versa;

1.2.7 The words "include" and "including" shall be construed without limitation

1.2.8 The schedules/annexures shall form an integral part of the Conditions of Contract and shall be in full force and effect as though they were expressly set out in the body of the Conditions of Contract.

1.2.9 The word "consent" wherever used, shall mean prior written consent;

1.2.10 In the event any portion or all of the Contract is held to be void or unenforceable, the Parties agree to negotiate in good faith to arrive at an amicable understanding which shall accomplish the intent of the Parties as originally set forth in the Contract;

1.2.11 No failure on the part of any Party to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, and no single or partial exercise of any such right shall preclude any other or further exercise thereof or the exercise of any other right

1.2.12 References to recitals, Articles or schedules in the Contract shall, except where the context otherwise requires, be deemed to be references to recitals, Articles and schedules of or to the Contract; and

1.2.13 In case the day on or by which any thing is to be done is not a Business Day, that thing must be done on or by the immediately occurring next Business Day

2. PRIORITY OF CONTRACT DOCUMENTS

The several documents forming the Agreement are to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies, the same shall be explained and adjusted by the company, who shall, accordingly, issue suitable instructions thereon

to the Contractor. In such event, unless otherwise provided in the agreement or explained by way of instructions by the company, as mentioned above, the priority of the documents forming the Agreement shall be as follows:

i) Contract Agreement/Work Order.
(a)Special Conditions of Contract
(b)General Conditions of Contract
(ii)The Letter of Acceptance/ Intent
(iii)Agreed Minutes of the Tender Negotiation Meetings
(iv) Agreed Minutes of the Tender Technical Meetings
(v) The Priced Bill of Quantities
(vi)The Technical Specifications / Scope of work
(vii)The Tender document, including all Appendices and/or Addenda, Corrigendum the latest taking precedence.

In the event of any conflict between the above-mentioned documents, the more stringent requirement or conditions which shall be favorable to the company shall govern and the decision of company/BRPL shall be final and binding upon the parties.

3. AMENDMENT

Any modification, amendment or other change to the Agreement shall be affected only by a written instrument signed by the authorized representatives of both, the Company and the Contractor.

4. LANGUAGE AND MEASUREMENT

All correspondence and documents relating to this order placed on the Contractor shall be written in English language. Metric System shall be followed for all dimension, units etc.

5. EXAMINATION OF SITE & LOCAL CONDITIONS

The contractor is deemed to have visited all the sites that comes under Company's licensed area under the Contract and therefore, ascertained all site conditions and information pertaining to the services to be provided under this contract. The company shall not accept any claim whatsoever arising out of the difficulties at site/terrain/local conditions, if any.

6. TAXES & DUTIES

(i) Prices shall be inclusive of all taxes and duties including labour cess (except GST). However, Income Tax(TDS) as per applicable rate in accordance with Income Tax Act will be deducted from contractor's bills.
(ii) GST at actual shall be paid extra on submission of GST Registration and self-declaration on Contractor's letter head stating that you have deposited/or will deposit the Tax as per the applicable GST laws. Contractor shall furnish its GST registration number.

(iii) Any statutory variations i.e. increase/decrease in Taxes / Duties introduced by central Govt. / State Govt. shall be reimbursed/recovered to/from Contractor against documentary evidence and proof.

(iv) As Per Notification No. 39/2021 # Central Tax dated 21st December, 2021 w.e.f 01/01/2022 registered person (ie, Recipient/Purchaser) can avail tax credit on those invoices only which have been reflected in GSTR 2A or GSTR2B (it means 100% matching of invoice is required). Also, GST has to be deposited by Supplier/Contractor by filing of GSTR- 1 and GSTR-3B.

(v) In view of above, if the same is not complied with by the supplier/Contractor and the Recipient/Purchaser is not in position to avail / utilize Input Tax Credit due to non-compliance or non-filing of GSTR-1 and GSTR-3B for the month/quarter (as applicable) in which the supply was made, then Recipient/Purchaser has right to hold 100% GST amount from next payment due of the subsequent month till the time default is not cured.

(vi) For releasing of the payment kept on hold on account of non-compliance of GST Act, supplier/Contractor shall submit payment proof i.e GST Portal screenshot reflecting name of Recipient/Purchaser alongwith GSTR-1 and GSTR-3B for month/quarter (as applicable) in which the same has been discharged. Payment shall not be released, till the time necessary proof showing the discharge of GST liabilities by the contractors for the period in default are submitted to the Company.

(vii) Further, the recipient/purchaser shall also be entitled to recover any financial loss suffered by the Company (including tax, interest, penalty and lapse of input credit) due to non-compliance or non-filing of GSTR-1 and GSTR-3B by the supplier/Contractor.

(viii) In case where delivery of goods is being made on FOR site basis, the Supplier/Contractor is responsible to comply with rules applicable for E-way bill. Any violation in provision of E-way Bill will attract penalty and seizure of Transit Material. Any Penalty and Pre-Deposit due to violation of rules/provision shall be paid and borne by Supplier/Contractor. Also, Supplier/Contractor is responsible to get the goods released from the concerned authority. Delay in supply due to seizure of goods shall attract liquidated damages as per Order / Agreement provisions.

7. PAYMENT

7.1. Subject to the Contractor fulfilling its obligations under the Contract, the Company shall pay to the Contractor the Contract Value as per the terms of the Contract. The Company shall, notwithstanding any provision to the contrary included in the Contract, be entitled to deduct from and/or set off against any amount due or become due, whether related to this contract or other contracts awarded to contractor. However, any and all amounts which the Contractor is liable to pay to the Company, the contractor shall make payment as per the agreed schedule to avoid any set off / deductions.

7.2. Subject to the provisions of the Contract, the Contractor shall submit to the Company, monthly on-account Running Bills on or before the 10th of every month in respect of the Services executed by the Contractor in the preceding month. If the Contractor fails to submit any Tax Invoice (Running Bill) by the 10th of any month, then the Company shall have the right to consider such Tax Invoice (Running Bill) only in the immediately succeeding month. The Running Bills shall only be for such Services, as, in the opinion of the Company, the Contractor has executed in accordance with the Contract, based on the certification of Services by the Company in accordance with the Contract. Within 30 days from the receipt of correct Running Bill along with relevant documents, payment shall be released to Contractor's designated bank account through RTGS /online payment as per payment terms under the Contract.

7.3. The Running Bills to be submitted by the Contractor shall be in the format approved by the Company. Each Running Bill submitted by the Contractor under the Contract shall be supported with relevant documents as instructed by the Company from time to time. On receipt of the Running Bill by the Company, the Company shall scrutinize the same to check for any errors and to verify that the amount claimed under the Running Bill is in conformity with the Contract. The Running Bill shall be payable only after certification of Service(s) and approval of the Running Bill for payment by the Company.

7.4. All monitoring , measurement , billing & payment processes shall be on IT enabled platform of BRPL as per Company's guidelines issued from time to time and bidders to ensure adherence.

7.5. Contractor shall upload correct monthly running bills along with all supporting documents in online BTS (Bill Tracking Systems) software or any other IT enabled platform of BRPL as per Company's guidelines issued from time to time for certification / approval purpose and bidders to ensure adherence.

7.6. The Contractor shall ensure that their billing documents support cost / expenses booking at Divisional level / Sub Divisional level as required by the Company.

7.7. Monthly Billing and payment are subject to retention as per retention policy of the company for retentions on any HR, statutory or other non compliance w.r.t deployed manpower , vehicles or any other resources as per scope of work.

8. TAX INVOICE SUBMISSION PROCEDURE AND CERTIFICATION

8.1. Tax Invoice shall be submitted to the Company for certification. Contractor must pay due attention for submission of Tax Invoice in time and along with relevant Documents to Company.

8.2. Tax Invoice shall be certified by Company after verifying relevant original Documents submitted by Contractor. If original Document associated with Tax Invoice is misplaced or lost during transit or for any genuine reason(s) attributable to Contractor, the reason(s) should be informed to Company in writing in stipulated period as instructed by Company. A true copy of certified Document with an indemnity bond or Bank Guarantee, as the case may be, must be submitted in the format provided by the Company.

8.3. Incomplete Tax Invoice will not be considered for processing of payments in terms of the Contract. Company reserves right to recover payable amount or part of Tax Invoice from available financial security or other dues of the contractor with the Company. Contractor shall be paid in terms of the Contract based on certification of Tax Invoice along with associated relevant Document(s) by the Company only.

9. TIME ESSENCE OF CONTRACT

Time is the essence of the contract and the contractor shall be responsible for performance of his works in accordance with the specified schedule. If at any time, the contractor is falling behind the schedule for reasons attributable to him, he shall take necessary action to make good for such delays by increasing his work force or by

working overtime or otherwise to accelerate the progress of the work and to comply with schedule timelines and shall communicate such actions in writing to the company, to the satisfaction of the Company that his action will compensate for the delays. The contractor shall not be allowed any extra compensation for such actions.

Time shall be the essence of the Contractor. Contractor shall complete his work in accordance with the specified time-lines/ Schedules as per the terms of the contract or as may be instructed by the Company from time to time.

10. Not in Use

11. PERIOD OF MOBILISATION

The contractor shall mobilize its resources to carry out the assigned services under this Agreement within 30 days from the issuance of LOI/Order so that services are made available from the date of start of the work mentioned in LOI/Order.

The Contractor shall mobilize its resources to carry out the assigned services under this Agreement immediately/in advance so that services are made available from the date of start

12. OPENING OF SITE OFFICE:

The Contractor shall also open and maintain a site office in the area and depute its authorized representative there.

13. ACCESS TO THE SITE

13.1. The Company shall provide to Contractor the right of access to the Site progressively for the Execution of the Works. The Contractor acknowledges that its access to the Site shall not be exclusive to the Contractor but subject to the restrictions as contained in the Contract as well as the following:

(a) Any public passage or right existing over any part of the Site from time to time;

(b) The rights and obligations of persons or authorities under any Applicable Laws; and

(c) The rights of the Company's Representative, Consultants or any other representative of the Owner or any statutory authorities to have access to the Site for inspection of the Works

13.2. If the Contractor foresees any delay in the Execution of the Works due to failure on the part of the Company to provide right of access to the Site, the Contractor shall immediately give written notice to the Company's Representative substantiating its claim for any delay in the execution of the works due to delay in providing the Site. After receipt of such notice, the Company's Representative shall determine extension of time, if any, to be granted to the Contractor and notify the Contractor accordingly. The Contractor acknowledges and agrees that it shall not be entitled to any monetary claim under any circumstances whatsoever due to any delay in handing over of the Site by the Company.

13.3. The Contractor shall not demolish, remove or alter any structures or other facilities on the Site without the prior written approval of the Company's Representative. The Contractor shall further ensure that all garbage resulting from the Execution of the Works is removed or disposed off, in accordance with Applicable Laws.

14. INSPECTION & QUALITY CONTROL

Inspection shall be performed by BRPL or its appointed authorized inspection agency. The contractor at his sole expenses shall correct defective works.Such rectification needs to be done / completed within the timelines specified by BRPL.

15. DEMOBILISATION/ HANDOVER ON CONTRACT COMPLETION

15.1. The contractor shall ensure that all the premises/equipment/services are in good working condition and are with full configuration while handing over back to the Company/new Contractor at the end of the contract.

15.2. The demobilization/ handover period will be a period of upto 30 days starting from the date of expiry of the contract. The Contractor shall have to complete the demobilization process including closing all pending calls, and handing over all site-related information to the new Contractor/BRPL during this period.

15.3. Within 30 days of the expiry of the contract, the Contractor's representative and BRPL's representatives or the new Contractor may carry out a Joint survey/physical inspection to identify the status of the premises/equipment/services at their locations. If any of the premises/equipment/services are found non-working/ irreparable / unsatisfactory, it is the responsibility of the contractor to make the same good as part of the existing contract.

15.4. No payments shall be admissible for the demobilization period/activities.

15.5. In case the Contractor is not able to close the pending work as identified in Joint survey/physical inspection during the demobilization period, BRPL at its sole discretion can get the work done / Services rendered/ equipment restored/ repaired/substituted by new Contractor/the third party at the risk and cost of the Contractor and the same will be deducted/recovered from the bills of the contractor or the security amount , CPBG , retention amount or otherwise as per terms of the contract and no claim from the Contractor's side , of any nature, including the claim citing the award of work to third party and consequences thereof, shall not be maintainable.

15.6. Payments for the last month shall be cleared only after all the pending works have been closed successfully as indicated above.

15.7. Ceiling on deductions/penalty stipulated in this contract, if any, shall not be applicable on deductions stipulated herein during demobilization/ handover on contract completion.

16. REPORTS AND INFORMATION

The Contractor shall be obliged to submit or furnish to Company, all or any information as desired by company, in the form of a report or otherwise. The report may be required

at regular interval as specified/required by company. The information shall be provided in a format to be specified by the company to the Contractor. However, company, reserves the right to revise this format which would be communicated to the Contractor and it shall be valid and binding obligation on the Contractor to submit the desired information in the revised format.

17. STATUTORY OBLIGATIONS

The Contractor shall ensure the due compliance of all the applicable statutory acts, including but not limited to the following acts, where special attention of the Contractor is required to be drawn towards the compliance of provision (along with the latest amendments/additions)including any statutory approval required from the Central/State Governments, Ministry of Labour.

- The Child Labour (Prohibition and Regulation) Act, 1986.
- The Agreement Labour (Regulation and Abolition) Act, 1970.
- The Employee's Pension Scheme, 1995.
- The Employee's Provident Funds and miscellaneous provisions Act, 1952.
- The Employees State Insurance Act, 1948.
- The Industrial Disputes Act, 1947.
- The Maternity Benefit Act 1961.
- The Minimum Wages Act, 1948.
- The Payment of Bonus Act, 1965.
- The Payment of Gratuity Act, 1972.
- The payment of Wages Act, 1936.
- The Delhi Shops & Establishment Act, 1954.
- The Workmen's Compensation Act. 1923.
- The Company's Liability Act, 1938.
- The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
- The Delhi Preservation of Trees Act 1994

Further the Contractor shall be liable to comply with all the amendment in existing acts / upcoming new comprehensive labour acts/codes related to applicable labour laws.

The Contractor shall, prior to commencement of the jobs under this agreement, furnish to the Company the Registration No and Codes of permanent Provident Fund and ESI of its employees.

Contractor shall bear the entire responsibility, liability and risk relating to coverage of its workforce under different statutory regulations including Workmen's Compensation Act, ESI Act, Factories Act 1948, the Agreement Labour (Regulation and Abolition) Act 1970, as amended from time to time, and any other relevant laws/regulations as the case may be. Contractor shall also be solely responsible for the payment of all benefits such as Provident Fund, Bonus, Retrenchment Compensation, leave etc. applicable as per the various statutory laws/regulations and shall keep the Company indemnified in this regard

against any claim. The Company shall be entitled to deduct from any money due to or become due to Contractor, any money paid or payable by way of compensation as aforesaid or cost or expenses in connection with any claims thereto and Contractor shall abide by the decision of the Company as regards the sum payable by Contractor under the provisions of this clause

The Contractor shall obtain all registration/permissions licenses etc., which are/may be required under any labour or other legislations for providing the services under this Agreement.

Contractor shall take insurance policy under the Workmen Compensation Act to cover workers, not covered under ESI Act 1948, engaged by it and Accident Liability Insurance for its employees for payment of compensation on account of injury, fatal or otherwise due to accident during service. Copies of these insurance policies will be submitted to company for reference and records and these insurance policies shall be kept valid at all times.

In case it is desired by any Labour authorities to produce the records with respect to salary/ PF/ESI/EDIL/Bonus etc, the said record/register will be made available by the Contractor.

The contractor shall follow all law of the land and prevailing orders issued by various Govt Departments like Dept of Power / DERC/ NGT/Dept of Forest/ Dept of Environment / DPCB / CPCB/ Court orders etc.

18. PENALTY FOR NON-COMPLIANCE OF STATUTORY REGULATIONS

If any non-compliance of any Statutory Obligation is observed then an amount equivalent to 1.5 times of the value of the non-compliance will be retained from outstanding (monthly) payment bill, however; if non-compliance is continued, penalty will be levied as follows:

a. Retained amount will be converted into penalty if Non-compliances are not closed within 60 days
b. Termination of agreement in case non-compliances are not cleared after show cause in writing.
c. The imposition of the penalty is without prejudice to the BRPL's right to terminate the Contract. The closure of the work and final settlement of the contract order shall be effected only after issuance of NOC by BRPL.

19. PENALTY FOR MISCONDUCT/FAILURE IN PERFORMANCE OF TASK UNDER AGREEMENT

19.1. The Contractor and its manpower shall adhere all code of conduct/Schedule/SOP/Instructions associated with the task to be performed under the agreement.

19.2. During the period of validity/execution of task under agreement, the behavior of manpower deputed by Contractor shall be entirely professional and shall not commit any misconduct.

19.3. Misconduct shall refer to the following:

a. Interaction with the customer in a non-professional way, including any form of verbal/physical abuse to customer or misuse/damage/tempering of premises and/or meter.

b. Any form of harassment to customer i.e. asking for bribes, reaching customer premises outside the defined working hours, asking the customer for any favours etc.

c. Additional interaction with customer not under purview of task to be performed under agreement.

d. Provide other customer services with or without a charge unless directed by BRPL.

e. Accessing BRPL's IT Infrastructure within data centre or anywhere else, in BRPL premises.

f. The contractor's deputed manpower do not wear the uniform as per the terms and conditions of the contract during the performance of services under the contract.

19.4. BRPL shall conduct audit and quality checks on the activities to be performed by Contractor and/or the personnel deputed by Contractor under Agreement on a periodic basis, to ascertain the overall quality and performance of field activities.

19.5. Any complaints received by BRPL either directly from the customer or observations through audit or any other sources shall be reviewed by BRPL. The decision of the committee on the final action on Contractor shall be binding.

19.6. PENALTY FOR MISCONDUCT

(a) The penalty to be imposed in case of misconduct shall be as follows:
In case of any misconduct as defined above, a penalty of Rs 5000/- per incident shall be levied.

(b) In case of multiple incidences of Misconduct:
1) 4 complaints per annum OR
2) more than 1 complaint in a quarter
An additional penalty of Rs 20,000/- shall be levied and possible termination of the contract.

19.7. The person responsible for such incidence of misconduct must be immediately removed by Contractor from Company's services under the contract and should also never be deployed for providing any other services to the Company. If needed contractor shall file police FIR against such person

19.8. The Contractor shall collect the following documents from the manpower deputed under this agreement, within two weeks of mobilization and shall deposit the same with BRPL as & when demanded, as follows:

(i) Educational Qualification Certificate: Certificate and mark-sheet of all manpower demonstrating the highest educational qualification of all personnel, making them competent for the task assigned.

(ii) Permanent Address Proof: Supporting document for permanent address proof of all personnel.

(iii) Identity Proof: Copy of PAN/Adhaar card should be submitted as identity proof for all personnel.

19.9. Contractor shall deploy the manpower in mutual consultation with BRPL. BRPL reserves the right to reject deployed manpower, in case the same is not found suitable.

19.10. The Contractor shall conduct relevant background checks and prepare Background Reports through an authorized agency of all manpower deployed for the performance of task under agreement in BRPL within one month of deployment.

Such reports shall be shared with BRPL as requested. Contractor shall submit an Affidavit clearly stating that back-ground check for all personnel is complete and back-ground reports have been prepared to this effect within one month of deployment.

20. STATUTORY PERMISSION/ APPROVALS

20.1. The Contractor shall take all steps as may be necessary to comply with the various applicable laws/rules including the provisions of agreement labour (Regulation & Abolition Act) 1970 as amended, minimum wages Act, 1984, Workmen Compensation Act, ESI Act, PF Act, Bonus Act and all other applicable laws and rules framed there under including any other statutory compliance/approval required from the Central/State Govt., Ministry of Labour.

20.2. The Contractor must also submit the following before award of First Work Order under agreement and these shall be renewed time to time:

a) Certificate of registration under Contract labour (R & A) Act 1970.
b) PF Code No. and all employees to have PF A/c No. under PF Act, 1952.
c) All employees to have a temporary or permanent ESI Card as per ESI Act.
d) ESI Registration No.
e) GST registration number
f) PAN No.
g) Electrical License as applicable
f) Labour License under Labour Act (R & A) Act 1970. A copy of Labour License shall be deposited by Contractor with all Engineer-in-charge responsible for execution of the job before start of the work by the contractor, as per guidelines of HR department.)

20.3. The Contractor must follow/adhere/perform the following task:

(a) To take Third party Insurance Policy before start of work.
(b) To follow Minimum Wages Act prevailing in the state.
(c) Salary / Wages to be distributed not later than 7th of each month.
(d) To maintain Wage- cum - Attendance Register.
(e) To maintain First Aid Box at Site.
(f) To Submit Latest P.F. and E.S.I. challans pertaining to the period in which work was undertaken along with a certificate mentioning that P.F. and E.S.I. applicable to all the employees has been deducted and deposited with the Authorities within the time limits specified under the respective Acts.

(g) To frame and adhere the Workmen Compensation Policy in compliance with the law.

(h) To obtain Labour license before start of work.

(i) Registration of Contractors & Contractual Employees under Building & other Construction Worker Welfare Cess Act 1996 & The Building & \ other Construction Workers (Regulation of Employment & Conditions of services) Act 1996, as applicable

(j) Registration under "The Delhi Building and other Construction Worker (Regulation of Employment and Conditions of Services) Rules 2002(B.O.C.W.)", as applicable

Before commencing the work it would be mandatory for the Contractor to furnish the Company the permanent PF code no and ESI of the employees.

20.4. Contractor ensures that Manpower deployed at the site must adhere to terms & conditions as set out in the Contract.

20.5. The Contractor shall give a written declaration / undertaking on or before 15th of the following month that he has complied with the following:
a) Has paid minimum wages to his manpower along with its proof.
b) Deduct and deposited ESI/PF contribution. Copy of the same shall be submitted

20.6. Contractor shall comply with all the amendments to existing acts, upcoming new comprehensive labour acts related to applicable labour law, wage code etc

21. PERMITS, LICENSES & APPROVALS

21.1. It shall be the Contractor's exclusive responsibility to obtain all requisite approvals, permits or licenses required for the performance of the Services. However, upon the request of the Contractor, the Company may, where it is necessary to do so, provide reasonable assistance to the Contractor, at the risk and cost of the Contractor, in applying for and obtaining such permits, licenses or approvals. Any delay in obtaining any such permits, licenses and approvals shall not relieve the Contractor from any of its obligations under the Contract.

21.2. The cost of obtaining the above mentioned permits, approvals and licenses and follow- up of the applications for such permits, approvals and license shall be borne by the Contractor.

21.3. It shall also be the Contractor's exclusive responsibility to obtain those requisite approvals, permits or licenses required for the performance of the Services which needs to be obtained by the Company. However, the cost of obtaining such permits, approvals and licenses shall be borne by the Company. Company shall provide reasonable assistance to the Contractor in applying for and obtaining such permits, licenses or approvals. Any delay in obtaining any such permits, licenses and approvals shall not relieve the Contractor from any of its obligations under the Contract.

22. REPRESENTATION, WARRANTIES AND GUARANTEES

The Contractor hereby represents warrants and guarantees that:

22.1. It is a legally recognized entity under the laws of India;

22.2. The Agreement contains valid and binding obligations and is enforceable in accordance with the terms hereof;

22.3. It has studied the technical feasibility, Site conditions and other prevailing conditions and all other operational details and based on these studies carried out, has agreed to provide to the Company the services as contemplated in this Agreement;

22.4. It has appraised itself of all applicable rules and regulations, and shall at all times comply with such rules and regulations;

22.5. It shall procure vehicles and hire manpower suitable for the purposes of rendering services as contemplated in this agreement;

22.6. The Services would be conducted in a safe and efficient manner at the Site and at all times in compliance with Good Industry Practices and requirements of the Company, and in any event, in accordance to this Work Order/agreement;

22.7. It shall procure all consents, licenses, permits, approvals and certificates and authorizations as may be required from any governmental authority for the performance of services at the Site;

22.8. It shall duly pay the duties, taxes and levies as are set out in this agreement or otherwise, which are to be paid by the Contractor;

22.9. There is no action, suit or proceeding, at law or in equity, or to the best of knowledge of Contractor, any official investigation before or by any governmental authority, arbitration tribunal or other body pending or, to the best of its knowledge, threatened against or affecting it or any of its property, rights or assets, which could reasonably be expected to have material adverse effect on its ability to perform its obligations under this Agreement or on the validity or enforceability of this agreement;

23. EVENTS OF DEFAULTS

Company may, without prejudice to any of its other rights or remedies under the Contract or in law, terminate the whole or any part of this Contract by giving written notice to the Contractor, if in the opinion of Company, contractor has neglected to proceed with the Contracts with due diligence or commits a breach of any of the provisions of this Contract including but not limited to any of the following cases:

23.1. Failing to complete execution of Contract as per the terms and conditions specified in the Contract.

23.2. Failing to complete Contracts in accordance with the approved schedule of Contract.

23.3. Failing to comply with any reasonable instructions or orders issued by Company in connection with the Contract.

23.4. Failing to comply with any of the terms or conditions of this Contract.

23.5. In the event Company terminates this Contract, in whole or in part, on the occurrence of any event of default, Company reserves the right to engage any other vendor or agency to complete the Contract or any part thereof, and in addition to any other right Company may have under the Contract or in law including without limitation, including the right to penalize for delay under clause “Liquidated Damage” of this Contract , the contractor shall be liable to Company for any additional costs that may be suffered/borne by Company for the execution of the Contract.

23.6. Failure on the part of the Contractor to maintain its confidentiality obligations and or compromising its integrity, which are required to be of highest standards, in so far as the present scope of work is concerned.

24. RISK & COST

If the Contractor fails to execute the work as per specification/Agreement/as per the direction of Engineer-in-change within the scheduled period and/or even after the extended period, the company shall be having the right to cancel/terminate the agreement and the company reserves the right to get the work executed from any other source at the Risk & Cost of the Contractor. The Extra Expenditure so incurred shall be debited to/recovered from the Contractor.

25. LIMITATION OF LIABILITY

25.1. The Contractor's liability (except Third Party Liability; covered under the agreement and addendums thereto) for all damages, losses, acts or omissions, howsoever occasioned, shall not, at any time exceed an amount equivalent to Contract Value.

25.2. Notwithstanding anything stated in the agreement, the limitation of Liability shall not be available /applicable in case of wilful default/breach/negligent act/misconduct on the part of the Contractor and/or its employees.

26. TERMINATION

26.1. TERMINATION BY COMPANY FOR NON PERFORMANCE

During the course of the execution, if at any time the Company observe and forms an opinion that the work under the order is not being performed satisfactory and the performance of the Contractor not found satisfactory, the Company reserves its right to cancel/ terminate this Agreement giving minimum 30 days’ notice without assigning any reason and the Company will recover all damages including losses occurred due to loss of time from the Contractor. After termination of the agreement, the Contractor shall immediately stop all activities related to the work terminated. This is without prejudice to other rights under the terms of contract. The Contractor shall hand over the Company all drawing/documents prepared for this contract up to the date of cancellation of order.

26.2. PREMATURE TERMINATION

The order can be terminated by the Company before the expiry of its term under the following conditions:

(i) The Contractor repudiates this order or otherwise evidences intention not to be bound by this order;
(ii) The Contractor assigns, mortgages, or charges or purports to assign, mortgage, or charge any of its obligations or rights in contravention to the provisions of this order; or, transfers or negates any of its obligations in contravention to the provisions of this order.
(iii) The Contractor breaches the Secrecy/Non-disclosure Clause/Confidentiality obligations.
(iv) If at any stage during the tenure of the work order, Contractor is found to be involved or indulging or even attempting illegal, unlawful action or activities or some fraudulent or even trying to take or ask bribe from any customer or to give bribe official/staff or misuse or abuse any meter or property of the Company.
(v) The Company shall be entitled to deduct from any money due or to becomes due to the Contractor, money paid or payable by way of compensation as aforesaid or cost or expenses in connection with any claims thereto. The Contractor shall abide by the decision of the Company as to the amount payable by the Contractor under the provision of this clause.

26.3. TERMINATION BY COMPANY FOR CONVENIENCE

The Company shall, in addition to any other right enabling it to terminate the Contract, have the right to terminate the Contract at any time without assigning any reason, by giving a written notice of minimum 30 days to the Contractor. The Contract shall stand terminated on the date as per the notice but such termination shall be without prejudice to the rights of the Parties accrued on and before the date of termination.

27. GOVERNING LAW AND ARBITRATION

27.1. Governing Law: This Work Order/Agreement shall be governed by the laws of India and each party submits to the exclusive jurisdiction of the courts in New Delhi.

27.2. Dispute Resolution Mechanism. All disputes and differences arising out of or in connection with this Agreement shall be resolved amicably by mutual discussion within 30 days. If the dispute cannot be resolved by mutual discussions and agreement, the parties will take such dispute to an arbitral panel comprising Sole Arbitrator jointly appointed by the parties to agreement.

27.3. In the event parties fail to appoint the sole arbitrator within 30 days from the date of request made by party, the Sole Arbitrator shall be appointed as per the provisions of The Arbitration and Conciliation Act 1996 as amended upto date. The arbitration shall be conducted in New Delhi in accordance with the provisions of the Arbitration and Conciliation Act 1996. The award of the arbitral panel shall be final and binding on all parties. The arbitration proceedings shall be conducted in English. The venue and seat of Arbitration shall be in Delhi Only. The cost of arbitration shall be shared equally between the parties unless otherwise directed by the Arbitrator.

28. FORCE MAJEURE

28.1. General

An "Event of Force Majeure" shall mean any event or circumstance not within the reasonable control, of the Party affected, but only if and to the extent that:

(i) Such event or circumstance, despite the exercise of reasonable diligence, could not have been prevented, avoided or reasonably foreseen by such Party;

(ii) Such event or circumstance materially and adversely affects the ability of the affected Party to perform its obligations under this agreement, and the affected Party has taken all reasonable precautions, due care and reasonable alternative measures in order to prevent or avoid the effect of such event on the affected party's ability to perform its obligations under this Agreement and to mitigate the consequences thereof. For the avoidance of doubt, if such event or circumstance would not have materially and adversely affected the performance of the affected party had such affected party followed good industry practice, such event or circumstance shall not constitute force majeure.

(iii) Such event is not the direct or indirect result of the failure of such Party to perform any of its obligations under this Agreement; and

(iv) Such Party has given the other Party prompt notice describing such events, the effect thereof and the actions being taken in order to comply the relevant clause

28.2. Specific Events of Force Majeure

Subject to the provisions of the agreement, Events of Force Majeure shall include only the following to the extent that they or their consequences satisfy the above requirements:

(i) The following events and circumstances:
   a. Effect of any natural element or other acts of God, including but not limited to storm, flood, earthquake, lightning, cyclone, landslides or other natural disasters, and\
   b. Explosions or fires or flood
(ii) Public disorder, insurrection, rebellion, sabotage, riots or violent demonstrations of a local character;
(iii) Declaration of the Site as war zone.
(iv) Any order, regulation, directive, requirement from any Governmental, legislative, executive or judicial authority.

28.3. Notice of Events of Force Majeure

If a force majeure event prevents a party from performing any obligations under the Agreement in part or in full, that party shall:

(i) Immediately notify the other party in writing of the force majeure events within 2 working days of the occurrence of the force majeure event
(ii) Be entitled to suspend performance of the obligation under the Agreement which is affected by force majeure event for the duration of the force majeure event
(iii) Use all reasonable efforts to resume full performance of the obligation as soon as practicable
(iv) Keep the other party informed of all such efforts to resume full performance of the obligation on a regular basis
(v) Provide prompt notice of the resumption of full performance or obligation to the other party.

28.4. Mitigation of Events of Force Majeure

The Contractor shall:

(i) Make all reasonable efforts to prevent and reduce to a minimum and mitigate the effect of any delay occasioned by an Event of Force Majeure, including applying other ways in which to perform the agreement;
(ii) Use its best efforts to ensure resumption of normal performance after the termination of any Event of Force Majeure and shall perform its obligations to the maximum extent practicable as agreed between the Parties; and
(iii) Keep the Company informed at regular intervals of the circumstances concerning the event of Force Majeure, with best estimates as to its likely continuation and what measures or contingency planning it is taking to mitigate and or terminate the Event of Force Majeure.

28.5. Burden of Proof

In the event that the Parties are unable in good faith to agree that a Force Majeure event has occurred to an affected party, the parties shall resolve their dispute in accordance with the provisions of this agreement. The burden of proof as to whether or not a force majeure event has occurred shall be upon the party claiming that the force majeure event has occurred and that it is the affected party.

28.6. Termination for Certain Events Of Force Majeure

If any obligation of any Party under the Agreement is or is reasonably expected to be delayed or prevented by a Force Majeure event for a continuous period of more than 1 (one) month during the Term of the Agreement, the Agreement shall be terminated at the discretion of the Company and neither Party shall be liable to the other for any consequences arising on account of such termination.

The Company reserves the right to demand the Contractor's services on holidays as well as beyond the normal working hours.

The Contractor will ensure that none of their person is engaged in any unlawful activities subversive of the Company's interest failing which suitable action may be taken against the Contractor as per the terms and condition of this order.

The Contractor shall be liable for payment of all taxes and duties as applicable, to the State/ Central Govt. or any local authority.

The Contractor's employees shall not be treated as Company's employees / persons for any purpose whatsoever & facilities/ benefits applicable to the Company's employees shall not be applicable to Contractor's employees. If due to any reasons whatsoever the Company is made liable to meet any obligation under any of the laws & enactment etc, for any reason whatsoever the same shall be recovered from the Contractor either from the present and future amount payable to him or as per law.

29. NOTICE & COMMUNICATION

Any notice or other formal communication to be given under this agreement shall be in writing and signed by or on behalf of the party giving it and shall be sent by registered post, A.D. to the addresses of Contractor or BRPL as mentioned herein above or to any other addresses as agreed by the parties, in writing from time to time.

Any notice or other formal communication can also be sent through official e-mail ID of authorized person of Contractor or BRPL.

30. SAFETY CODE

30.1. The Contractor shall ensure adequate safety precautions at site, as required under the law of the land to facilitate safe working, during the execution of work under agreement/work order and shall be entirely responsible for the complete safety of their workmen as well as other workers at site and premises during performance of work under agreement.

30.2. The Contractor shall observe the safety requirements as laid down in the agreement and in case of sub-contract/assignment (only after written approval of company), it shall be the responsibility of Contractor that all safety requirements are followed by the employees and staff of the sub-contractor.

30.3. The Contractor employing two hundred employees or more, including employees deputed under agreement, shall have a safety officer in order to ensure the implementation of safety requirements of the agreement and if the Contractor having lesser number of employees, including agreement workers, shall nominate one of its employees to act as safety coordinator who shall liaise with the safety officer on matters relating to safety and his name shall be displayed on the notice board at a prominent place at the work site.

30.4. The Contractor shall be responsible for non-compliance of the safety measures, implications, injuries, fatalities and compensation arising out of such situations or incidents.

30.5. In case of any accident, the Contractor shall immediately submit a statement of the same with BRPL and the safety officer, containing the details of the accident, any injury or causalities, extent of properly damage and remedial action taken to prevent recurrence and in addition, the Contractor shall submit a monthly statement of the accidents to BRPL at the end of each month.

30.6. The contractor / safety officer shall be responsible for providing training to all staff & workers , safety compliances , testing and fitness of all T&P , PPE, annual safety audit reports etc in line with CEA norms

31. WORKMEN COMPENSATION

31.1. The Contactor shall take insurance policy at his own cost under the Workmen Compensation Act to cover such workers who are not covered under ESI by the Contractor however engaged to undertake the jobs covered under this order and a copy of this insurance policy will be given to Company for reference and records. This insurance policy shall be kept valid at all times. In case there are no workers involve other than those who are covered under ESI by the Contractor, the Contractor shall certify for the same.

31.2. The Contractor shall keep the Company indemnified at all times, against all claims of compensation under the provisions of Workmen Compensation Act 1923 as amended from time to time or any compensation payable under any other law for the time being involving workmen engaged by the Contractor in carrying out the job involved and against costs and expenses, if any, incurred by the Company in connection therewith and without prejudice to make any recovery.

31.3. The Company shall be entitled to deduct from any money due to or to become due to the Contractor, moneys paid or payable by way of compensation as aforesaid or cost or expenses in connection with any claims thereto and the Contractor shall abide by the decision of the Company as to the amount payable by the Contractor under the provisions of this clause.

32. THIRD PARTY INSURANCE

The Contractor shall, before the commencement of work, take a Third Party Insurance of an adequate value, at his own cost and expenses, securing all the risks/losses/damages which may be caused to any third party and/or BRPL and/or its employees/associates, because of the omission/performance of tasks by the Contractor under this agreement. The full and final settlement of claims raised by third parties shall be the sole responsibility of the Contractor without any liability to BRPL.

It is further agreed by the Contractor that in case of defect/damage to the system because of default on the part of the Contractor, the Contractor shall, at its own cost, be liable to replace/rectify the same at the earliest or make good the loss suffered by BRPL

33. HUMAN RESOURCE ISSUES

(A) The Contractor would execute the works under agreement through its own resources.

(B) The Contractor shall bear all expenses/cost to be incurred towards salary, allowances, perks, travelling allowances, advances, insurance, safety measures, annual increment, security, transportation, conveyance reimbursement, telephone expenses, leave pay and all other misc. expenses etc. of their employees/ workmen during the validity/tenure of the Agreement or any renewed tenure thereto. Also, the Contractor shall be solely responsible for making payment for Hospitalization, Compensation thereof in case of any accident & injury.

(C) The Contractor to deploy its manpower immediately for carrying out the work as specified in the tender document.

(D) The Contractor shall ensure that there are no disputes regarding service, payment etc. of the persons engaged by it, anytime during the tenure/validity of the contract. At no point of time during the tenure/validity of contract, the Contractor's employees shall insist upon the Company for employment, wages, and allowances or any other related matter, payment etc.

(E) The Contractor shall not deploy the manpower below the age of 18 years or above the age of 58.

(F) The Contractor shall not deploy the female manpower between 7 PM to 6 AM.

(G) The Contractor shall be directly responsible for any / all disputes arising between Contractor and its persons and keep the Company indemnified against all losses, damages and claims arising thereof. The Contractor shall resolve all disputes of its

manpower. All the legal dues of the manpower of Contractor is to be paid on or before due date as per applicable laws or within 8 days from date of the termination of manpower.

(H) All safety wears required for the Contractor's manpower during the execution of work must be provided by the Contractor at its own cost and the Contractor shall ensure that its employees regularly use such safety gears.

(I) The Contractor shall be responsible for discipline of its manpower and shall ensure that the personnel deputed should adhere to the disciplinary procedure set by the Company. The Contractor shall ensure that none of its associate/personnel is engaged in any unlawful activities or any other activity subversive of the Company's interest, failing which the same shall be termed as breach of the terms of agreement and annexures thereto and suitable action may be taken against the Contractor as per the terms & conditions of the Agreement. The Contractor will ensure that none of the manpower engaged by it will demonstrate before the offices of the Company in any manner whatsoever. In case any of the manpower engaged by Contractor is found indulging in such activities, the same shall be termed as breach of the terms of agreement and annexure thereto and the Contractor will take suitable action against such of their employees and submit the ATR with company.

(J) The Contractor shall ensure compliance with minimum wage requirements of the correct category and shall ensure the following:

(a) Timely payment of minimum wages to deployed manpower as per the rate notified from time to time by the Government of National Capital Territory of Delhi.
(b) Compliance with all other relevant PF, ESI, Insurance and other laws as applicable per statute.
(c) To retain Challans/Receipt issued by Statutory Authorities like Regional Provident Fund Commissioner (RPFC)/including its own Pension Provident Fund Trust for previous month & proof of payment towards compliance of other statutory provisions like E.S.I., GST etc.
(d) Contractor will also produce challan/receipt with respect to payment of GST as a proof for such statutory payment.

(K) Contractor shall comply with provisions of the Payment of Wages Act 1936, Minimum wages Act-1948, Employee's Provident Fund & Miscellaneous Provision Act 1952, ESI Act 1948, Company's Liability Act 1936, Industrial Dispute Act 1947, Maternity Benefit Act 1961, Contract Labour (Regulations & abolition) Act 1970, Delhi Shops & Establishment Act or any modification thereof, THE SEXUAL HARASSMENT OF WOMEN AT WORKPLACE (PREVENTION, PROHIBITION AND REDRESSAL) ACT, 2013 or any other Act relating to rules made hereunder from time to time. For the said purpose the Contractor shall get itself covered under the Employee's Provident Fund & Miscellaneous provision Fund 1952 & ESI directly with the appropriate Regional Provident Fund Commissioner, if not done so far and shall intimate to the Company the Code No. allotted by the RPFC & ESI Authorities within one month from the date of commencement of the work under agreement.

(L) Contractor shall organize periodic awareness session on POSH, 2013 and strict compliance to POSH, 2013.

(M) Contractor shall have a detailed HR policy for retirement, training, safety, job suitability, health etc. for it's employees. Further the Contractor shall have proper grievance redressal process for addressing HR issues raised by it's employees.

(N) **ID CARD:** The Contractor will not issue any ID cards to the manpower deputed under agreement, on its own. All ID Cards for the workforce will be issued by BRPL Security ID Card Cell only. The Contractor should maintain the records of Identity Cards of their employees and whenever any employee quits/is removed then his/her Identity card should be collected & submitted to BRPL Security ID Card Cell. Penalty will be imposed on the Contractor in case of violation of the above rule. Contractor shall submit the details/ list of the employees that they are going to be deputed with BRPL Security before the commencement of the work under agreement.

(O) The Contractor shall conduct relevant background checks and prepare Background Reports through an authorized agency of all personnel deployed for the performance of task under agreement in BRPL within one month of deployment.
Such reports shall be shared with BRPL as requested. Contractor shall submit an Affidavit clearly stating that back-ground check for all personnel is complete and back-ground reports have been prepared to this effect within one month of deployment.

(P) Failure by the Contractor's personnel to wear PIC shall attract a penalty of Rs.1,000/- per incident per day.

(Q) In case, any of the manpower has been found not serving his part of duty on any day as per the instructions, Contractor will be fined at the rate of Rs 500/- per person per day.

(R) A separate penalty as per score card shall be levied.

(S) There will not be duplicity of penalty for the same default.

34. DEPLOYMENT OF RESOURCES

34.1. Number of resources to be deployed by the Contractor at all-time shall be specified by the bidder as per the format in Section-V, scope of work.

34.2. The contractor shall deploy adequate resources for the smooth execution of work assigned to them. The contractor shall provide complete details including name, address, and Aadhar Card number of resource deployed.

34.3. The contractor shall deploy qualified & experienced resources comprising engineers, supervisors, diploma holders, skilled, semi-skilled & unskilled staff in accordance with the requirements of electricity rules, safety laws and other applicable regulatory laws. The contractor shall also ensure to meet the requirements of performance standards as mentioned in this document. If at any stage, the Company/Engineer In-Charge finds the resources not suitable or not up to the mark, the Contractor shall deploy the alternate resources immediately.

34.4. Distribution of electricity is an essential service as well as a public utility service. It is imperative to secure the electric network of our license area so that uninterrupted distribution of power supply to essential services like Delhi Metro, Police, hospitals, etc. is maintained. Proper security measures are essential due to the extremely sensitive and critical nature of these services. Therefore, Contractors shall be responsible for maintaining Personal Identification Data of all staff deployed by him at our premises in electronic or any other form as prescribed by the company. In addition to this, the Contractor shall also submit a record of his deployment in various locations to BRPL on a daily basis if required by the Divisional In-charge.

34.5. The resource deployed by the contractor shall exercise highest level of integrity at work place and shall not involve in any type of malpractice. In case any resource of the contractor is found involved in any malpractice, the contractor shall indemnify the company for the loss incurred by the company on account of such malpractice/misconduct. Since this scope of work and the assistance contemplated under the present contract or in the nature of statutory assistance towards preventing the theft of electricity under the provisions of the electricity act 2003 the integrity levels of the Contractor and /or the agency which is awarded the contract is expected to be of the highest standards.

34.6. In case the contractor or the resource deployed by him unable to execute the work assigned to it as per satisfaction of the company or the workmen of the Contractor refuses to work, going on strike or for any other reason likely to lead to loss of productivity, the company shall have right of engaging any other agency or resorting to any other suitable means without giving any reason and to recover the cost incurred out of the amount payable or become due to the contractor.

35. REPLACEMENT OF RESOURCE(S)

35.1. Should the Company consider at its sole judgment that the persons deployed by the Contractor are not suitable for the job for whatsoever reason, the Company will have the option either (i) to seek prompt replacement deputing the other person at the cost of Contractor or (ii) to terminate this work order/agreement in part or as a whole.

35.2. If the Company finds any employee of the Contractor guilty of any misconduct, incompetence or negligence, the Contractor shall, if so intimated by the Company, withdraw such employee from the work of company and replace him with a qualified and competent manpower. Contractor shall keep the Company informed of all manpower replacements and all such data shall be submitted with the person nominated by Company along with personal & qualification details of such persons deputed as replacement.

35.3. If any employee of the Contractor found indulged in unfair practices or causing direct or indirect damage to Company's Image/Property/Revenue, immediate action shall be taken by the Contractor and the Contractor shall suitably compensate the company for all loss incurred by the Company. Contractor shall have retrenchment / removal policy in place to handle such matters.

36. CONTRACTOR'S OBLIGATIONS

A) General Obligations

36.1 The performance of Services as completed by the Contractor shall be wholly in accordance with the Contract and fit for the purposes for which they are intended to and as defined in the Contract. The Services shall include any Service which is necessary to satisfy the Company's requirements and as implied by the Contract.

36.2 The Contractor shall execute the Services within the time frame for completion as specified in the order/agreement and Scope of Work. Without prejudice to the provisions of the Contract, before commencing the Services, the Contractor shall satisfy itself regarding the BRPL's requirements. The Contractor shall give notice to BRPL, within forty-eight (48) hours of the receipt of BRPL's requirements, of any error, fault or other defect in the BRPL's requirements or such items of reference.

36.3 The Contractor takes full responsibility for the adequacy and stability of Services to be performed at the Site.

36.4 The Contractor shall at all times endeavour to adopt best practices as is prevalent in like industry and shall always be required to achieve the desired quality and confirm to the schedule of Service(s) at no additional cost to the company/BRPL.

36.5 The Contractor is deemed to have satisfied itself as to the correctness and sufficiency of the BRPL's requirements and other terms of the Contract relating to its risks, liabilities and obligations set out in or implied by the Contract and all matters and things necessary for the proper performance of the Services.

36.6 The Contractor acknowledges the responsibility of the following during the performance of the Services:

(a) The proper transportation of Manpower and materials upto the Site and back.
(b) Availability of skilled Manpower in time.
(c) Compliance with the HSE Conditions and adherence to Contractual terms;
(d) Protection of the environment and adjacent structures and taking steps for remedying any damage caused to the environment or adjacent structures during the performance of the Services by the Manpower ;

36.7 The Contractor shall, whenever required by the BRPL, submit details of the arrangement and methods which the Contractor proposes to adopt for the performance of the Services. No alteration to these arrangements or methods shall be made without the approval of BRPL.

36.8 Train its Manpower in the manner as reflected in their training manual, requirements of BRPL and as per the best industry practice before the deployment at the Site. Contractor shall maintain training records. Contractor ensures to replace Manpower of same specification in order to reliever / absenteeism of Manpower. In the event of replacement of Manpower, comply with all the pre and post requisite details of deployment, including but not limited to, furnishing of all the required registrations, licenses and medical examinations at the cost of Contractor without reimbursement from Company/BRPL.

36.9 Contractor agrees to provide all preliminary information or data as may be required by the Company/BRPL within fifteen days of issuance of the signed LOI/Work order or as per mutually agreed timelines.

36.10 In case the Contractor comes across with any ambiguity and/ or discrepancy in the BRPL's requirements, it shall immediately Communicate such ambiguity and/ or discrepancy to BRPL, for seeking appropriate instructions to resolve such ambiguities and discrepancies.

36.11 Contractor to maintain sufficient cash flow as working capital to meet daily expenses for the Manpower.

36.12 Contractor to coordinate and maintain close liaison with local police and administrators. Contractor to visit Site periodically and as per specific request of Company/BRPL.

36.13 Notwithstanding anything contrary in the Contract, Contractor must make judicious and economical use of resources of the company/BRPL at the Site, including, but not limited to resources such as space, water and electricity. In the opinion BRPL discover the misuse of resources by the Manpower, after serving notice to the Contractor if Contractor fails to adhere to this Article, BRPL reserves right to recover a suitable amount as per BRPL discretion. BRPL decision in this regard shall be final & binding.

36.14 The Contractor shall not use the name of the company/BRPL in any manner for credit arrangement or otherwise and it is agreed that the company/BRPL shall not in any way be responsible for any debts, liabilities or obligations of the Contractor or its Manpower.

36.15 In case, if the company/BRPL is of the opinion, after due consultation with the Contractor, that extra Manpower or material / equipment is/are required for reasons of improving the quality and nature of Services at the Site, the Contractor shall arrange for the same timely at the same price specified in the Contract.

36.16 Contractor to ensure that the Manpower deployed should have bank account which their payment must be directly credited to their bank account by the Contractor. The Contractor shall submit the copy of its instructions to the bank to transfer the salary / wages to the account of its Manpower deputed under the contract to the company/BRPL on or before 7th day of every month for the previous month's salary transfer of individual Manpower to their bank.

36.17 Contractor to maintain list of Manpower in shifts and attendance muster at the Site entrance for Manpower deployed under the Contract.

36.18 The Contractor shall provide such uniforms as approved by the company/BRPL.

36.19 Immediately on commencement of the Contract, Contractor shall provide complete bio data of each Manpower employed at Site and shall ensure that the information provided in respect of each Manpower is verified and correct.

36.20 Staff working hours will be governed by the Factories Act and Applicable Law as per State where Site is located and Manpower have been deployed.

36.21 Contractor must ensure that child labour is not to be deployed at the Site.

36.22 A detailed Site specific deployment chart shall be submitted by the Contractor to Company within 5 working days before commencement of Services.

36.23 Contractor must ensure to conduct at least bi-weekly surprise checking at Site where their Manpower is deployed and performing Services to ascertain performance as per Contract. Contractor shall provide adequate quick response team and surveillance team for this purpose

36.24 Contractor shall develop its own network and arrangements and shall be solely responsible to recruit its own personnel for providing Services.

36.25 If required and on specific instructions by the company/BRPL, Contractor shall periodically rotate

the Manpower after every 12 months or period as requested by the company/BRPL. BRPL to Communicate the same to the Contractor atleast 20 working days before rotation of Manpower is intended.

36.26 Manpower so deployed at the Site shall carry out only those Services that are stipulated under the terms of the Contract and shall not do any other job for reward or otherwise, except than those stipulated.

36.27 In case of accident of whatsoever nature at the Site where the Manpower is injured or dies, it would be the sole responsibility of the Contractor without any risk and cost of the BRPL.

36.28 Contractor to submit documents related to Manpower along with Contractor's organisation chart, authorised signatories & etc., before commencement of Services under the Contract.

36.29 In case death, injury to any Manpower of the Contractor, Contractor is sole responsible under Workmen Compensation Act and any other Applicable Law. Contractor must not violate any statutory provisions / Applicable Law and shall keep BRPL indemnified, in full, from any claim associated with injury/death to its employee deployed under the agreement. Contractor to compliant with all Applicable Laws. Any breach in statue / Applicable Law , BRPL reserves right to recover reasonable compensation at the discretionary of BRPL.

36.30 Contractor to provide master plan for deployment of Manpower and related resourced to the Company/BRPL before commencement of the Services. Along with this Contractor shall provide documentations in details covering Manpower details as requested by BRPL.

B) Compliance with Applicable Laws by Contractor

36.31 The Contractor shall fully familiarize itself and conform in all aspects with all Applicable Laws. The Contractor shall be bound to give all notices, file all returns, etc., required by Applicable Laws, as aforesaid and to pay all fees and charges in respect thereof. Contractor must have experienced manpower with knowledge to handle all statutory compliance related matters

36.32 The Contractor shall not be absolved from any of its obligations under Applicable Laws or the Contract or claim any additional amount from the Company/BRPL or seek any extension of time due to its ignorance of any Applicable Law.

36.33 The Contractor shall indemnify the company/BRPL against all costs, expenses, penalties and liabilities incurred/ suffered by any of the Company due to non-compliance of any Applicable Law by the Contractor in relation to the performance of the Services.

36.34 Contractor is required to obtain requisite license issued by the licensing officer/competent authority in the Government office before commencement of Services.

36.35 Contractor shall ensure that it remains in compliance with Applicable Laws at all times and maintained registers and records with all particulars as may be specified in the Applicable Laws.

36.36 Payment of gratuity (if any) to Manpower will be sole responsibility of the Contractor.

36.37 Contractor to submit details of payments made to PF and ESIC authorities with a list of Manpower deployed at the Site with copy of deposit challans. List of Manpower with PF and ESIC numbers to maintained up to date by Contractor and if required to be shared with BRPL.

C) Contractor's Other Obligations

36.38 The Contractor shall also provide the necessary proof of remittances of EPF, Pension amount and ESIC for the previous month, along with their invoices for the current month to Company. Without such proof, the invoices will not be processed for payment.

36.39 The employees deployed by the Contractor shall be employees of the Contractor.

36.40 At no point in time shall any employee of the Contractor claim to be the employee of the Company.

36.41 The Contractor is committed to recruit and provide qualified, experienced, well-trained, physically & mentally fit personnel in accordance with the Company's standard, duly verified by the local police Station as regards their antecedents and backgrounds.

36.42 The Contractor shall ensure that, the Contractor's manpower deployed at the Company shall be in good health, shall have proper eyesight and shall not have any medical problems which may endanger his life and the life of the other Company employees appointed at the said location. The Contractor shall ensure that, the Contractor's personnel deployed at the Company shall be entirely responsible for the stock of the commodities stored at the said location. To ensure such safety, the Contractor shall, before deploying any employee in the premises, shall have him medically examined by a registered medical practitioner at its own cost and expenses and produce a medical certificate certifying that the said employee is medically fit. It is further agreed that without such medical certificate, Company shall not permit any such Contractor's personnel to work in its premises. It is further agreed that Company may, from time to time, call upon the Contractor to have all or any of its Contractor's personnel examined.

36.43 The Contractor shall uphold the strictest disciplinary standards for all their personnel and any transgressions are dealt with immediately, and to the fullest extent that the law allows.

36.44 The Contractor shall provide uniforms to the its manpower and shall provide an authority letter to the its manpower and they shall carry the same when they are on duty at the Company.

36.45 Whenever any Contractor's personnel go on leave, the Contractor will arrange for a suitable replacement immediately.

36.46 The Contractor shall deploy electronic attendance marking system for their Resources and maintain records for the same. The same has to be produced if demanded by the Company.

36.47 The Contractor shall fully guide, supervise and monitor the Contractor's manpower deployed in Company locations by its Supervisors.

36.48 Supervisors will inspect every location at least once every 15 days during day/night to check the level of control exercised by Contractor's personnel. The Supervisors will take digital photographs of Contractor's personnel in the location during their inspection. The photographs will contain date and time stamp to identify the date the photographs are taken and send the photographs to Company along with their inspection report on weekly basis.

36.49 The Contractor undertakes to provide required resources to maintain desired service level. In case of any failure in services due to paucity of resources, BRPL shall be within its rights to make necessary deductions in addition to such rights as available under contract.

36.50 TIMELY DISBURSEMENT OF WAGES

The Contractor shall ensure that monthly wages/salary disbursed to its manpower timely but not later than 7th of each month. Though the company endeavours to process Contractor's bills on time as per the payment timelines mentioned in agreement (payment terms), under no circumstances delay in disbursement of wages shall be acceptable, it is the Contractor's responsibility to ensure the same, accordingly the bidders are expected to quote their rates to fulfil their obligations towards the timely disbursal of wages and all other benefits including PF/ESI/Bonus/leave pay/allowances etc.

It may please be noted that BRPL reserves the right to terminate the agreement in case of second or subsequent repeated instances of delay in disbursal of the wages.

37. THE COMPANY/BRPL'S OBLIGATIONS/RESPONSIBILITIES

37.1 BRPL may check the competencies of the manpower for the work for which they are deputed to ensure that requisite skill and competency levels are being met with by the Contractor .

37.2 BRPL shall not exercise direct control (including matters of payments, discipline and removal/termination) and supervision over the Contract Manpower and that shall be done by the Contractor. However, BRPL shall have a right to assess the abilities and skills of the Manpower deployed by the Contractor to ensure the quality of Service provided under the Contract, without actually managing or directing such Contract Manpower.

37.3 The contractor shall ensure to maintain the registers like muster roll, wage register, etc., and shall share the copy of the same with BRPL as and when demanded,

37.4 The Company/BRPL reserves the right to engage other party(ies) to perform similar or identical Services to be performed by Contractor under this Contract / Agreement for which Contractor shall not have any objections.

37.5 BRPL reserves right to review the resources requirement for the performance of assigned task, on periodically or preferably on monthly basis for their respective performance. The Contractor, without any objection, shall deploy resources on time accordingly. The Contractor to deploy resources within 2 days (including Central and State holidays) to Site / establishment as notified by BRPL in writing. Failure to do so shall result into delay in deploying resources for the completion of the assigned task, the reasonable compensation shall be applicable in terms of the Contract.

37.6 BRPL shall at all times have access to any Site where the Manpower is engaged and performing any of the Services and BRPL shall have the right to inspect performance at Site. Any deviation or gap or discrepancies arises while executing Services shall be communicated to Contractor within 3 working days. The Contractor within next two working days shall provide reasonable feedback with evidence if any to BRPL. If Contractor does not respond to the Communication in time under this sub Article, it tantamount to breach of the Contract and shall attract reasonable compensation in terms of the Contract.

38. INDEMNITY

The Contractor shall indemnity, defend, save and hold harmless all directors, company

and its employees against any and all suits, proceedings, actions, demands and third party claims for any loss, damage, cost and expense suffered by company on account of the negligence, act or omission inaction by the Contractor or its employees under this Agreement. Agencies shall also wholly indemnity and compensate company against any theft, misappropriation, fraudulent act or omission, any collusion with customer/s, intentional recording of incorrect reading/DATA, or any other offence under the applicable laws or breach of obligation under the present agreement, and would also render itself liable to appropriate legal action being initiated against it by company.

The Contractor shall also be responsible and liable to company for any loss or damage caused to company for any negligence or inaction, damage to the property of company caused by the Contractor or its employees.

39. SECRECY & CONFIDENTIALITY

39.1 The technical information, data and other related documents forming part of order and the information obtained during the course of investigation under this order shall be the Company's exclusive property and shall not be used for any other purpose except for the execution of the order. The technical information drawing, records and other document shall not be copied, transferred, or divulged and/or disclosed to third party in full/part, not misused in any form whatsoever except to the extent for the execution of this order.

39.2 These technical information, drawing and other related documents shall be returned to the Company with all approved copies and duplicates including data/drawing/plans as are prepared by the Contractor during the executions of this order, if any, immediately after they have been used for agreed purpose.

39.3 In the event of any breach of this provision, the Contractor shall indemnify the Company against any loss, cost or damage or claim by any party in respect of such breach.

39.4 The Contractor shall not use the name/logo/emblem of the Company in any manner either for credit arrangement or otherwise and it is agreed that the Company shall not in any way be responsible for the debts, liabilities or obligations of the Contractor and/or his employees.

39.5 The Contractor hereby covenant that the Contractor shall be responsible for theft, if any committed, by his staff and the Contractor shall indemnify Company from and against all claims, demands, actions, suits and proceedings, whatsoever that may be brought or made against the Company by or on behalf of any person, body, authority whatsoever and whomsoever and all duties, penalties, levies, taxes, losses, damages, costs, charges and expenses and all other liabilities of whatsoever nature which the Company may be liable to pay, incur or sustain by virtue of or as a result of the performance or non- performance or observance or non- observance by the Contractor of any of the terms and conditions of this agreement. The Company shall have full power and rights at its discretion to pay or defend or compromise any suits, claims or demands brought or made, whether pending or threatened touching upon this agreement as it may consider necessary or desirable and shall be entitled to recover from the Contractor all sums of money including all legal costs, charges and expenses incurred by virtue of any such compromises which shall not be called into question by the Contractor but shall be final and binding on the Contractor.

39.6 Contractor shall submit signed NDA as per the format 4.3 attached.

40. NON-EXCLUSIVITY

The award of the work order/agreement to the Contractor shall not preclude the Company from awarding the same order for similar work at the same rates, or on any terms and conditions to other party or parties. The Company at its discretion may place the order on any other party.

41. SEVERABILITY

If any provision of this Agreement is or becomes invalid or unenforceable by the courts of any jurisdiction to which it is subject, such invalidity or unenforceability shall not prejudice the remaining provisions of this Agreement, which shall continue in full force and effect.

42. ASSIGNMENT & SUBLETTING

The Contractor shall not, without company's prior consent in writing assign or sublet or transfer any portion of services awarded to the Contractor as envisaged herein and falling under this contract. Moreover, any such consent shall not relieve the Contractor from any obligation, responsibility, or duty under this Contract.

43. ASSIGNMENT BY THE COMPANY

The rights and obligations of BRPL under the Contract shall be assignable to Affiliates, associate company, joint venture or any other company including change in Management Control and BRPL's lenders without consent of the Contractor. Upon written notice of seven Business Days (07 days) by BRPL, the Contract shall be deemed to have been assigned to the third party under this Article. This Article fulfils its meaning notwithstanding the notice is not accepted by the Contractor and BRPL shall not be obliged to the Contractor after seven days (07) of issue of any further notice.

44. NOT USED

45. NO JOINT VENTURE

The Contractor shall not constitute a joint venture, consortium or other unincorporated grouping of two or more Persons, following the execution of the Contract.

46. WAIVER OF RIGHTS

No delay or forbearance by company in exercising any right or power under this Agreement shall be construed as a waiver of such right or power, nor shall any single or partial exercise of such right or power preclude any further exercise of such right of power.

47. THE COMPANY'S RIGHT TO VARY QUANTITIES

The Company reserves the right to vary the quantity i.e. increase or decrease the Numbers/ quantities without any change in terms and conditions during the execution of

the Order. BRPL may increase or reduce the area/ scale of operations after starting of execution of the contract and the size of contract may be adjusted accordingly.

48. CONTRACTOR'S EQUIPMENT

48.1. All Contractor's Equipment and Temporary Works provided by the Contractor or any permitted Subcontractor, shall, when brought on to the Site, be deemed to be exclusively intended for execution of the Works and not be removed without the consent, in writing, of the Company's Representative.

48.2. Upon completion of the Works, the Contractor/permitted Subcontractor shall remove from the Site, all its Equipment and Temporary Works and its unused materials.

48.3. The Company shall not at any time be liable for the loss or damage to any of the constructional plant, Temporary Works or materials.

48.4. The Contractor shall, upon written request by the Company's Representative, produce to the Company's Representative, all documents evidencing title to or the contractual arrangement giving the right to the Contractor to use the Contractor's Equipment. In the event of failure to comply with such request within seven (7) days, then without prejudice to any other rights, the Company shall be entitled to withhold the payments due to the Contractor under the Contract.

49. AVAILABILITY OF TOOL &PLANT (T&P)

The contractor shall provide T&P to their staff as mentioned in Scope of work. The contractor shall provide all tools in the beginning of contract and shall ensure the proper availability of tools and tackles as per that list throughout the contractual period. These tools shall be of make as specified in the Scope of work. It shall be responsibility of contractors to replenish and maintain the existing T&P on regular basis.

I. All the T&P shall be tagged / marked as "BRPL-AMC-Div Name-Serial No." , For eg. LNR Divn T&P shall be tagged / marked as "BRPL-AMC-LNR-001" The tagging/ marking shall be done wherever possible

II. A certificate from Engineer-In Charge to this effect under point no. I above and that T&P have been provided to all working staff.

50. FREE ISSUE MATERIAL

50.1. The Company, may provide free issue materials to Contractor in those cases only where it is specifically mentioned in the Contract. Transportation of free issue materials from site / store or place of availability at site to the work area shall be in scope of the contractor.

50.2. Contractor shall submit Reconciliation Statement of these free issue materials along with monthly bill. Reconciliation Statement will show issued quantity of free issue materials/ quantity consumed in work and quantity balance in contractor's stock.

50.3. The Contractor shall have to furnish an Indemnity Bond for materials which are free issued by the Purchaser. Further the contractor shall be responsible for the safe custody of materials till the materials are utilized, fabricated, erected and accounted for in all respects.

51. VENDOR CODE OF CONDUCT

Contractor confirms to have gone through the Policy of BRPL on legal and ethical code required to be followed by Vendors encapsulated in the "Vendor Code of Conduct" displayed on the official website of BRPL (www.bsesdelhi.com) also, which shall be treated as a part of the agreement.

Contractor undertakes that he shall adhere to the Vendor code of Conduct and also agrees that any violation of the Vendor Code of Conduct shall be treated as breach of the agreement.

In event of any such breach, irrespective of whether it causes any loss/damage, company (BRPL) shall have the right to recover loss/damage including liquidated damages from Contractor.

The Contractor herby indemnifies and agrees to keep indemnified the company (BRPL) against any claim/litigation/liability/penalty including litigation cost arising out of any violation of Vendor Code of Conduct by the Contractor or its officers, agents & representatives etc.

52. DISCLOSURE OF RELATIONSHIP

The Contractor acknowledges & undertakes that the Contractor or any partner of the Contractor or director of the Contractor is not related to any of the officers of the Company or the Company's Representative, or alternatively, is a close relative of an officer of the Company or the Company's Representative and has no financial interest/stake in the Company's business. The Parties agree that breach of the above provisions shall entitle the Company to terminate the Contract under Clause 23, without payment of any compensation to the Contractor. The Contractor agrees and acknowledges and shall ensure that its employees, directors and partners do not develop any such interest during the Contract Period.

53. MSME

53.1. If the Contractor is covered under the definition of supplier/Contractor under the purview of Micro, Small & Medium Enterprises Development Act, 2006, it shall declare so at the time of its registration as vendor with the Company failing which it will be presumed that it is a non-MSME unit.

53.2. Contractor shall provide to Company the proof of classification of its enterprise and filing memorandum with the authorities concerned under the Micro, Small & Medium Enterprises Development Act, 2006 (herein referred to as "the MSMED Act") within one week of receipt of the Contract

53.3. The Contractor further declares and undertakes to intimate Company of any change in its status or constitution under this section from time to time under this Contract. The Contractor must provide MSME registration number along with PAN card and GST registration number on Tax Invoice failing which the Contractor shall not claim any benefit under the MSMED Act.

53.4. The Contractor to furnish the undertaking to the Company in this regard.

54. COVID GUIDELINES

Looking to the prevailing Covid19 situation, Contractor will ensure that the work carried out in the field by their staff shall be as per the guidelines issued by MHA / BRPL/ Engineer-in-charge from time to time. Further Contractor shall be required to provide to their staff masks/ sanitizers/ all PPEs required for working in Covid19 situation. The Contractor shall further ensure to work as per the guidelines issued by BRPL and the instruction of the Engineer in charge.

55. CLEANLINESS & PRECAUTIONS TO BE TAKEN WHILE DOING WORK AT SITE TO PREVENT DUST POLLUTION

All debris shall be removed and disposed off at assigned areas on daily basis. Surplus excavated earth shall be disposed of in an approved manner. In short, the contractor shall be fully responsible for keeping the work site clean at all times. In case of non-compliance, company shall get the same done at Contractor's risk and costs.

While carrying out any civil work including road/ pit digging, plinth/ fence making, road restoration etc contractor shall adhere to below mentioned guidelines.

(a) No construction material/ debris shall be stored on metalled road.
(b) Wind breakers of appropriate height on all sides of ear marked area using CGI sheets shall be raised to ensure that no construction material dust fly outside ear marked area.
(c) The construction material i.e. coarse sand, stone aggregates, excavated earth, cement and any other material to and from the site shall be transported under wet and covered condition to ensure their non-slippage en-route to avoid air contamination.
(d) The contractor shall provide mask and helmet to every worker working on the construction site and involved in loading/unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.
(e) Over loading of vehicles shall be strictly prohibited
(f) The construction material at site shall be stored under wet and covered condition.
(g) The dumping sites for temporarily storing the excavated earth shall be properly levelled, watered and rehabilitated by plantation to avoid flying of dust.
(h) The worker at the site shall be sensitized to adopt / observe the dust controlled measures in true spirit.
(i) If any C&D waste is generated at site the same will be transported to the C&D waste site only and the record for the same will be maintained by the agency.
(j) Wet jet in grinding and stone cutting is being permitted at site.
(k) The necessary record for dust control is being maintained by the department on day to day basis and being monitored regularly.
(l) Contractor shall ensure that no tree shall be harmed and no tree roots shall be destroyed/cut while performing the task under agreement.
(m) The contractor shall comply the provisions of The Delhi Preservation of Trees Act 1994.

The Execution contractor shall be responsible for all the preventive and protective

environmental steps as per guidelines. Any violations from the above guidelines have been viewed very seriously by the authorities. Contractor shall be liable for the penalties / other action by the authorities, the contractor shall indemnify BRPL from all liabilities on this account.

56. ENVIRONMENTAL, HEALTH &SAFETY

The Contractor will ensure that the Environment, Health & Safety (EHS) requirements are clearly understood and faithfully implemented at all levels at site as per instruction of Company/BRPL. Contractors must comply with the requirements, as follows:
(i) Comply with all of the elements of the EHS Plan and any regulations applicable to the work
(ii) Comply with the procedures provided in the interests of Environment, Health and Safety
(iii) Ensure that all of their employees designated to work are properly trained and competent
(iii) Ensure that all plant and equipment they bring on to site has been inspected and serviced in accordance with legal requirement and manufacturer's or supplier/Contractor s' instructions
(iv) Make arrangements to ensure that all employees designated to work on or visit the site present themselves for site induction prior to commencement of work
(v) Provide details of any hazardous substances to be brought onsite
(vi) Ensure that a responsible person accompanies any of their visitors to site

All personnel deputed by Contractor under agreement shall be accountable for the following:

(a) Use the correct tools and equipment for the job and use safety equipment and protective clothing supplied, e.g. helmets, goggles, ear protection, etc. as instructed
(b) Keep tools in good condition
(c) Report to the Supervisor any unsafe or unhealthy condition or any defects in plant or equipment
(d) Develop a concern for safety for themselves and for others
(e) Prohibit horseplay
(f) Not to operate any item of plant unless they have been specifically trained and are authorized to do so.

57. ACCEPTANCE

Acceptance of the CONTRACT implies and includes acceptance of all terms and conditions enumerated in the CONTRACT, in the technical specification and drawings made available to the Contractor consisting of general conditions and complete scope of work.

Contractor's and Company's contractual obligations are strictly limited to the terms set out in the CONTRACT.

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SECTION – V

SCOPE OF WORK

The scope of work to be carried out by the contractor shall be execution of 1.1/11 KV works pertaining to various schemes of BRPL. The work shall be carried out as per detailed annexure prepared by Engineer in Charge as per actual site condition and requirement for each scheme.

The contractor has to obtain Electrical Inspectorate's clearance of the installation for schemes. (Applicable for HT works only)

All the labour, cranes, power, tool and tackles and technical supervision etc. are including in your scope of work. Adequate number of engineers, supervisors and labours shall be posted at site and the list of the same along with certificate of Qualification of technical staff should be submitted by the Contractor to the Company for checking the adequacy immediately (with in seven days) after award of contract.

However, Engineer In-Charge shall arrange any permission like Road cutting clearance etc. from the Delhi Civic authorities like MCD, DDA, PWD, DJB and Traffic Police. However, the contractor shall make follow up with local authorities and other connected persons that may be required to carry out the job under this order.

All loading/ unloading of materials at work-site shall be your responsibility. Involvement of Crane/Hydra/Tractor/Trailer for this type of work shall be in your scope. Adequate weather protection shall be provided by the contractor to keep the materials safe from sun & rain by providing covered storage space as well as using tarpaulins.

While carrying out trenchless / open digging works the existing underground cables are liable to get damaged leading to High Risk Safety Hazard to the working people.

To arrest above problem to the best degree possible, there are technology support available, like Cable Route Tracer which is an important tool to detect the live / dead cables underground to the depth upto 3 meters, comfortably. The vendor must employ Cable Route Tracer before start of excavation / trenchless job and submit reports to the Engineer-in-charge for clearance to start the job. The above will minimize the risk of cable damage and improve safety of the working people.

It may please be noted that in case contractor have no "Cable Route Tracers" with him, as a basic necessity tool. Heavy penalty will be imposed on the vendors, if the vendor damages the cables. The preferable make for the Cable route tracer shall be 3M or equivalent make.

SECTION-VI

PRICE BID

Price Bid

S.No	Service Code	New Description	UNIT	Qty	Rate	Amount
1	3002861	Erection of 36' PCC poles (11 Mtr) ,i/c refilling,ramming of the foundation and including removal of malba & transportation of pole from stacking site within 1 Km.distance excluding Digging,Concreting,& Brick Padding.	EA	2708		
2	3002862	Erection of 110 Lbs, 42' rails including digging , refilling,ramming of the foundation and including removal of malba ,grouting with cement concrete mortar to 16 cft. of 1:3:6 ratios (1 cement, 3 Badarpur, 6 Stone blast-Cement,Sand and Mortar to be supplied by the contractor).including transportation of pole from stacking site within 1kms.Painting of Rail with one coat of primer & two coat of Al (Paint to be supplied by the conractor).Including brick padding.	EA	1		
3	3002863	Erection of 8.1M PCC pole,i/c refilling, ramming of pole foundation and including removal of malba & transportation of pole from the stacking site within 1Km.distance excluding Digging,Concreting,& Brick Padding.	EA	1		
4	3002864	Erection of 9.0 M PCC pole/steel tubelar i/c refilling, ramming of pole foundation and including removal of malba & transportation of pole from the stacking site within 1Km.distance excluding Digging,Concreting,& Brick Padding.	EA	5582		
5	3006419	Erection of GI pipes(size 50 to 100mm dia) of 6Mtr or 6.6Mtr. length. The work shall include excavation/backfilling of soil and including removal of malba and fixing of pipe by grouting(Brick padding and concreating shall be paid seperatley)	EA	35		
6	3006421	Erection of angle/channel of 3.6 meter length. The work shall include excavation/backfilling of soil and including removal of malba and fixing by grouting angle/channel and also 2 coats of Al.paints i/c supply of outdoor type ISI mark paint.(concreating shall be paid seperatley)	EA	1905		
7	3007261	Excavation for erection of any kind of pole or strut or stay in Ordinary Soil.	CUM	232		
8	3007262	Excavation for erection of any kind of pole or strut or stay in Brick-Work.	CUM	85		
9	3007263	Excavation for erection of any kind of pole or strut or stay in Footpath of tiles/Rajasthani or Kota or Agra-Stone/Tiles.	CUM	1		
10	3007264	Excavation for erection of any kind of pole or strut or stay in Ordinary Bitumenous Road.	CUM	286		
11	3007265	Excavation for erection of any kind of pole or strut or stay in Dense Carpeted or C.C.or Asphaltic portion.	CUM	3687		
12	3007266	Excavation for erection of any kind of pole or strut or stay in Rocky-Area portion.	CUM	22691		

13	3006420	Installation of any hardware fitting on GI pipe for supporting service line/LT main (excluding fabrication works but including jumpering etc.).Rate is for per GI Pipe.	EA	47		
14	3002865	Installation of any hardware fitting i.e. Pin insulators, Earth bracket, Cross arms, Disc. Insulators, Clamps etc.but excluding fabrication work on HV line.Rate is for per Pole on Single pole/rail structure/Double pole / rail Structure/on X-bracing structure/on 3 pole structureon /4 pole/rail structure on X-bracing of 3/4 pole/rail structure.	EA	9079		
15	3002871	Installation of any hardware fitting i.e. D` clamp,Two line cross arm, Shackle strips etc, for LV line (excluding fabrication works but including jumpering etc.).Rate is for per Pole on Single phase line./on Two phase line/on Three phase line with street lighting.Note:Shackle Insulators are included with H/W-Fitting.	EA	10158		
16	3002874	Installation of any hardware fitting i.e. D` clamp, Two line cross arm, Shackle strips etc, for LV line (excluding fabrication works but including jumpering etc.).Rate is for per Pole on Erection of extension bracket for single phase lines with street lighting.Note:Shackle insulators are included with H/W-Fitting.	EA	256		
17	3002875	Installation of any hardware fitting i.e. D` clamp,Two line cross arm, Shackle strips etc, for LV line (excluding fabrication works but including jumpering etc.).Rate is for per Pole on Erection of extension bracket three phase line with street lighting.Note:Shackle Insulators are included with H/W-Fitting.	EA	447		
18	3002878	Sagging & stringing of ACSR Conductor including jumpering & making of connection hooks etc. per conductor /per mtr.route length. Wolf	M	1		
19	3007267	Re-sagging of ACSR Conductor including jumpering & making of connection hooks etc. per conductor /per mtr.route length. Wolf	M	200		
20	3002879	Sagging & stringing of ACSR Conductor including jumpering & making of connection hooks etc. per conductor /per mtr.route length. Dog/Raccoon/Rabbit	M	73408		
21	3007268	Re-sagging of ACSR Conductor including jumpering & making of connection hooks etc. per conductor /per mtr.route length. Dog/Raccoon/Rabbit	M	18502		
22	3002882	Sagging & stringing of ACSR Conductor including jumpering & making of connection hooks etc. per conductor /per mtr.route length. Squirrel	M	1246		
23	3007269	Re-sagging of ACSR Conductor including jumpering & making of connection hooks etc. per conductor /per mtr.route length. Squirrel	M	70		
24	3002883	Sagging & stringing of G.I. Earth wire including jumpering & making of connection hooks etc. per conductor /per mtr.route length. GI wire	M	207222		

		4/6/8 swg.				
25	3007300	Re-sagging of G.I. Earth wire including jumpering & making of connection hooks etc. per conductor /per mtr.route length. GI wire 4/6/8 swg.	M	1716		
26	3002885	Fixing of pucca stays in plinth of 8 cft. Concrete mortar of ratios 1:3:6 (1 cement,3 Badarpur 6 stone ballast), fixing of Base plate, Tension screws etc. with out fabrication work. Note: Badarpur,cement & Stone ballast to be provided by the conractor.- Excl.stay material & Excavation For HV pole.	EA	277		
27	3002886	Fixing of pucca stays in plinth of 8 cft. Concrete mortar of ratios 1:3:6 (1 cement,3 Badarpur 6 stone ballast), fixing of Base plate, Tension screws etc. with out fabrication work. Note: Badarpur,cement & Stone ballast to be provided by the conractor.- Excl.stay material & Excavation For LV pole.	EA	1040		
28	3002887	Fixing of flying stay including Erection of pole / rail in the plinth of 8 cft. Concrete mortar of ratio 1:3:6 (1 cement 3 badarpur, 6 stone ballast) with Base plate, Tension screw etc. excluding fabrication works. (Note: Badarpur,cement & Stone ballast to be provided by the contractor) Excl. stay material & Excavation but i/c transp.of pole/rail within 1Km.of stacking site/site to site. For HV pole	EA	17		
29	3002888	Fixing of flying stay including Erection of pole / rail in the plinth of 8 cft. Concrete mortar of ratio 1:3:6 (1 cement 3 badarpur, 6 stone ballast) with base plate, tension screw etc. excluding fabrication works. (Note: Badarpur,cement & Stone ballast to be provided by the contractor-Excl. stay material & Excavation but i/c.transp.of pole/rail within 1 km.of stacking site/site to site. For LV pole with egg insulator.	EA	38		
30	3002889	Fixing of strut stay with clamps i/c.transp.of Pole from stacking site within one Km.excluding Digging,Concreting,& Brick Padding.For HV pole.	EA	84		
31	3002890	Fixing of strut stay with clamps i/c.transp.of Pole from stacking site within one Km.excluding Digging,Concreting,& Brick Padding. For LV pole.	EA	169		
32	3002891	Making & fixing of guard lacs of G.I.Wire no.4/6/8 SWG. For HV pole.	EA	21446		
33	3002892	Making & fixing of guard lacs of G.I.Wire no.4/6/8 SWG. For LV pole.	EA	28		
34	3003638	Supply and fixing of Bamboo/PVC spacer for LT line	EA	14		

35	3002900	Passing GI stay wire 7/8 or 7/9 or 7/10 SWG, through suitable size of G.I.Pipe fixing the pipe & stay wire on the pole with clamps & terminating the earth wire at cross arm & connecting the same with all the metal portions with proper binding wire (excluding fab, GI pipe and Stay wire supply).	EA	5008		
36	3002901	Providing and Fixing of anti-climbing devices with six round of barbed wire.	EA	2731		
37	3002902	Providing and Fixing of Danger plate with clamps.	EA	7064		
38	3002904	Fabrication work using MS steel (for any type & as per drawing, specification provided by BSES) including all consumables i.e. welding rods, supplying and providing 2 coats of red oxide primer and one coat of aluminum paint, nuts, bolts and washers. All type frames,structure,clamps etc.Steel shall be provided by Contactor.	KG	318021		
39	3005580	Fabrication work using MS steel (for any type as per drawing, specification provided by BSES) including all consumables i.e. welding rods, supplying and providing 2 coats of red oxide primer and one coat of aluminum paint, nuts, bolts and washers. All type frames,structure,clamps etc.Steel shall be provided by BSES	KG	600866		
40	3003215	Mounting of following accessories on the existing structure of P/M S/Stn. By means of suitable nut, bolts & clamps etc.mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an 11 KV G.O. Switch.(Three Phase)	EA	145		
41	3009059	Mounting of following accessories on the existing structure of P/M S/Stn. By means of suitable nut, bolts & clamps etc.mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an 11 KV G.O. Switch (single phase)	EA	3		
42	3003216	Mounting of following accessories on the existing structure of P/M S/Stn. By means of suitable nut, bolts & clamps etc. mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an 11KV DD Fuse units (A set of three nos)	EA	355		
43	3009070	Mounting of following accessories on the existing structure of P/M S/Stn. By means of suitable nut, bolts & clamps etc. mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an 11KV DD Fuse units (single phase)	EA	695		
44	3003217	Mounting of following accessories on the existing structure of P/M S/Stn. By means of suitable nut, bolts & clamps etc.mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an Lightening arrestors	EA	1051		

45	3002941	Turning the face of HV/LV pole for erecting 2/4 pole structure/LV Line etc. pole of 9/11 mtr size.	EA	22		
46	3002943	Making & fixing of connection hooks on LT & HT O/H. line including binding as required. U-shape conventional type/Reverse U-Type including crimping of two sockets at the end..	EA	321		
47	3002945	Sliding or Shifting or Straightening of tilted PCC Poles upto 36' i/c.digging the pit.	EA	1198		
48	3002946	Making & Fixing jumpers on shackle points. (on LT) including crimping of cable sockets at its ends and connection with connection hook. From 50 sq. mm to 150 sq. mm cable S/Core	EA	1006		
49	3002947	Making & Fixing jumpers on shackle points. (on LT) including crimping of cable sockets at its ends and connection with connection hook. Above 150 sq. mm.	EA	490		
50	3007301	Making of shackle points on HT 11 KV O/H line of all sizs of conductors complete in all respect.Rates are for Three Phases	EA	162		
51	3007302	Making of Dead end points on HT 11 KV O/H line of all sizs of conductors complete in all respect.Rates are for Three Phases	EA	188		
52	3007303	Making of shackle points on LT O/H line of all sizs of conductors complete in all respect.Rates are per Phase	EA	6214		
53	3007304	Making of Dead end points on LT O/H line of all sizs of conductors complete in all respect.Rates are per Phase	EA	7558		
54	3002948	Trimming of any no. of branches of any size of any type of tree as to keep them away at least 2.00 mtr at the time of trimming in such a way that they do not fall on the GI/ACC shed, live transformer, electric/telephone wire by any means Use, axe, saw, ropes etc. as per site conditions. The trimmed material to be disposed to the municipal bin by any means. Nothing shall be allowed to burnt or flamed.	EA	20457		
55	3006364	Drawing of single core PVC/XLPE cable on poles supported with catenary wire including fixing of cleat/clamps etc. as required for supporting of cable/wire. Upto 10 sq mm Rates per mtr of s/c	M	1995		
56	3007305	Drawing of single core PVC/XLPE cable on poles supported with catenary wire including fixing of cleat/clamps etc. as required for supporting of cable/wire. Above 10 to 25 sq mm Rates per mtr of s/c	M	6264		
57	3002949	Drawing of single core PVC/XLPE cable on poles supported with catenary wire including fixing of cleat/clamps etc. as required for supporting of cable/wire. Above 25 Sq. mm to 50 sq mm.Rates per mtr of s/c	M	64		
58	3002950	Drawing of single core PVC/XLPE cable on poles supported with catenary wire including fixing of cleat/clamps etc. as required for supporting of cable/wire. above 50 sq. mm up to 150 sq. mm. Rates per mtr of s/c	M	2157		

59	3003637	Drawing of single core PVC/XLPE cable on poles supported with catenary wire including fixing of cleat/clamps etc. as required for supporting of cable/wire. Above 150 sq. mm.Rates per mtr of s/c	M	11		
60	3006365	Drawing of Multicore PVC/XLPE cable on poles supported with catenary wire including fixing of cleat/clamps etc. as required for supporting of cable/wire. Upto 10 sq mm	M	639629		
61	3006366	Drawing of Multicore PVC/XLPE cable on poles supported with catenary wire including fixing of cleat/clamps etc. as required for supporting of cable/wire.above 10 sq.mm. to 25 sq mm	M	333182		
62	3004908	Drawing of Multicore PVC/XLPE cable on poles supported with catenary wire including fixing of cleat/clamps etc. as required for supporting of cable/wire. above 25 sq. mm to 50 sq mmm	M	47746		
63	3004909	Drawing of Multicore PVC/XLPE cable on poles supported with catenary wire including fixing of cleat/clamps etc. as required for supporting of cable/wire. Above 50 sq. mm up to 150 sq. mm	M	15701		
64	3004910	Drawing of Multicore PVC/XLPE cable on poles supported with catenary wire including fixing of cleat/clamps etc. as required for supporting of cable/wire. Above 150 sq. mm	M	285		
65	3002893	Earthing by boring 3" dia in ordinary soil with earth pipe GI stay wire 7/8-10 SWG upto ground level. The eye will be made for fixing wire in earth pipe/rod with nut & bolt arrangement as per BSES design. Resistance should be less than 1 ohm.All the material shall be provided by BSES . Upto 6m depth.	EA	1		
66	3002894	Earthing by boring 3" dia in ordinary soil with earth pipe GI stay wire 7/8-10 SWG upto ground level. The eye will be made for fixing wire in earth pipe/rod with nut & bolt arrangement as per BSES design. Resistance should be less than 1 ohm.All the material shall be provided by BSES. More than 6 mtrs. depth But upto 8 mtrs. Depth.	EA	18		
67	3002895	Earthing by boring 3" dia in ordinary soil with earth pipe GI stay wire 7/8-10 SWG upto ground level. The eye will be made for fixing wire in earth pipe/rod with nut & bolt arrangement as per BSES design. Resistance should be less than 1 ohm.All the material shall be provided by BSES. For every additional mtr. More than 8 mtrs. Depth	M	1		
68	3004906	Earthing with 40mmX3mt long GI pipe of B class with Masonary earth pit enclosure on top covered having locking watering arrangement with funnel I/C provision of salt charcoal as per IS 3043. (Resistance should be less than 1 ohm) Salt,charcoal, masonary material and top enclosure cover shall be provided by contractor and all earthing material shall be provided by BSES.	EA	3		

69	3009071	Earthing with 40mmX3mt long GI pipe of B class with Masonary earth pit enclosure on top covered having locking watering arrangement with funnel I/C provision of salt charcoal as per IS 3043. (Resistance should be less than 1 ohm) Salt,charcoal, masonary material and top enclosure cover and all the earthing material shall be provided by contractor	EA	92		
70	3004907	Earthing with 40mmX2.5mt.,GI pipe of B class with Masonary earth pit enclosure on top covered having locking watering arrangement with funnel I/C provision of salt charcoal as per IS 3043. (Resistance should be less than 1 ohm) Salt,charcoal, masonary material and top enclosure cover shall be provided by contractor and all earthing material shall be provided by BSES.	EA	59		
71	3009072	Earthing with 40mmX2.5mt.,GI pipe of B class with Masonary earth pit enclosure on top covered having locking watering arrangement with funnel I/C provision of salt charcoal as per IS 3043. (Resistance should be less than 1 ohm) Salt,charcoal, masonary material and top enclosure cover and all the earthing material shall be provided by contractor.	EA	367		
72	3009073	Earthing with 100 mmX6 mt.,GI pipe of B class with Masonary earth pit enclosure on top covered having locking watering arrangement with funnel I/C provision of salt charcoal as per IS 3043. (Resistance should be less than 1 ohm) Salt,charcoal, masonary material and top enclosure coverv shall be provided by contractor and all earthing material shall be provided by BSES.	EA	1		
73	3009074	Earthing with 100 mmX6 mt.,GI pipe of B class with Masonary earth pit enclosure on top covered having locking watering arrangement with funnel I/C provision of salt charcoal as per IS 3043. (Resistance should be less than 1 ohm) Salt,charcoal, masonary material and top enclosure coverv and all the earthing material shall be provided by contractor.	EA	18		
74	3007287	Providing Plate Earthing including supply of 600mm x 600mm x6mm GI Plate, masonary encloser with hinged CI cover having locking and watering arrangement with funnel I/c provision of Salt, Charcoal as per IS - 3043. - In soft soil	EA	5		
75	3007288	Providing Plate Earthing including supply of 600mm x 600mm x 6mm GI Plate, masonary encloser with hinged CI cover having locking and watering arrangement with funnel I/c provision of Salt, Charcoal as per IS - 3043. - In rocky area	EA	1		

76	3002897	Providing artificial earthing with common salt and charcoal and earthing rod, stay wire of size 7/8-10 SWG wire upto ground level. Separate GI pipe 1" with plugging arrangement is to be provided for watering the earthing as per ISI/BSES design.The eye will be made for fixing wire in earth pipe/rod with nut&bolt arrangement.Salt,charcoal, masonary material and top enclosure cover and all earthing material shall be provided by contractor. For rocky soil.	EA	453		
77	3002898	Providing artificial earthing with common salt and charcoal and earthing rod, stay wire of size 7/8-10 SWG wire upto ground level. Separate GI pipe 1" with plugging arrangement is to be provided for watering the earthing as per ISI/BSES design.The eye will be made for fixing wire in earth pipe/rod with nut&bolt arrangement.Salt,charcoal, masonary material and top enclosure cover and all earthing material shall be provided by contractor . For semi rocky Soil.	EA	154		
78	3002899	Providing artificial earthing with common salt and charcoal and earthing rod, stay wire of size 7/8-10 SWG wire upto ground level. Separate GI pipe 1" with plugging arrangement is to be provided for watering the earthing as per ISI/BSES design.The eye will be made for fixing wire in earth pipe/rod with nut&bolt arrangement.Salt,charcoal, masonary material and top enclosure cover and all earthing material shall be provided by contractor . For normal Soil.	EA	43		
79	3007063	Earthing of Poles / Structrure / Hardwares (supply of nuts, bolts, washers in the scope of contractor): - By 4/6/8 swg GI Wire	M	1506		
80	3007031	Installation of Earth Electrode without chamber by 40mm dia 3m long electrode, fabrication and fixing of clamps and test links, including supply of salt and charcoal. as per IS-3043	EA	1		
81	3009075	Laying of G.I strip from the main earth electrode upto the transformer body, neutral point, RMU, LT/HT Panel etc. including passing through suitable GI pipe clamping etc. wherever required and the proper end connections (supply of nuts, bolts, washers in the contractor scope) G.I strip of 75x12 sq.mm.	M	216		
82	3009076	Laying of G.I strip from the main earth electrode upto the transformer body, neutral point, RMU, LT/HT Panel etc. including passing through suitable GI pipe clamping etc. wherever required and the proper end connections (supply of nuts, bolts, washers in the contractor scope) G.I strip of 75x10 sq.mm.	M	1		
83	3007064	Laying of G.I strip from the main earth electrode upto the transformer body, neutral point, RMU, LT/HT Panel etc. including passing through suitable GI pipe clamping etc.	M	52909		

		wherever required and the proper end connections (supply of nuts, bolts, washers in the contractor scope) G.I strip of 50x6 sq.mm.				
84	3006416	Laying of G.I strip from the main earth electrode upto the transformer body, neutral point, RMU, LT/HT Panel etc. including passing through suitable GI pipe clamping etc. wherever required and the proper end connections (supply of nuts, bolts, washers in the contractor scope) G.I strip of 25x6 sq.mm.	M	4392		
85	3009077	Laying of G.I strip from the main earth electrode upto the transformer body, neutral point, RMU, LT/HT Panel etc. including passing through suitable GI pipe clamping etc. wherever required and the proper end connections (supply of nuts, bolts, washers in the contractor scope) G.I strip of 25x3 sq.mm.	M	47		
86	3007048	Fabrication, drilling for perforation and welding of 2-nos of G.I Strips of size 25mm x 6mm x 75mm with 40mm dia 3 mtr GI pipe as earth electrode to take out the connection of double earth	EA	26		
87	3009078	Supply and laying of 75 x12 mm G I strip to connect all earth electrode in parallel with double connection to the tansformer / any switch gear as per site requirement	M	1		
88	3009079	Supply and laying of 75 x10 mm G I strip to connect all earth electrode in parallel with double connection to the tansformer / any switch gear as per site requirement	M	1		
89	3003201	Supply and laying of 50 x 6 mm G I strip to connect all earth electrode in parallel with double connection to the tansformer / any switch gear as per site requirement	M	36310		
90	3003676	Supply and laying of 25 x 6 mm G I strip to connect all earth electrode in parallel with double connection to the tansformer / any switch gearas per site requirement	M	2092		
91	3009080	Supply and laying of 25 x 3 mm G I strip to connect all earth electrode in parallel with double connection to the tansformer / any switch gearas per site requirement	M	1		
92	3003200	Laying of 7/8-10 SWG GI stay wire Along the cable trench By Providing & fixing of proper wooden cleats and wall bolts and taking the loop connection for various switchgear and equipments by means of proper sockets & binding wire as BSES design & site requirements	M	2224		
93	3003228	Running of the G.I earth wire of 7/8-10,SWG from the main earth electrode upto the transformer body, neutral point, G.O.'s handle lightening arrestor etc. including passing through suitable GI pipe clamping etc. wherever required and marking the proper end connection by crimping as per BSES design and practice.	M	25921		

94	3003731	Making earthing grid of old earth by Jointing & Socketing and Connecting the same to all metal parts by stay wire at any type of sub stn.Rates are for each S/Stn Job.	EA	16		
95	3003725	Providing & Fixing of G.I. earth clamp on cable including socketing & connecting the same.	EA	9910		
96	3004885	Providing & Fabrications of wooden cleats each with two holes for running of GI stay wire or cable as required set of two nos.	EA	512		
97	3007312	Dismantling of poles of following sizes after digging the pit and taking out the pole and stacking the pole at a proper place in safe positions and refilling the pit with loose earth and ramming including removal of Malba. PCC/RCC 30'/28'/27' Long.	EA	1114		
98	3002916	Dismantling of poles of following sizes after digging the pit and taking out the pole and stacking the pole at a proper place in safe positions and refilling the pit with loose earth and ramming including removal of Malba. PCC/RCC 36'Long.	EA	680		
99	3002919	Dismantling of poles of following sizes after digging the pit and taking out the pole and stacking the pole at a proper place in safe positions and refilling the pit with loose earth and ramming including removal of Malba. 9 Mtr Steel Tub pole	EA	179		
100	3007900	Dismantling of poles of following sizes after digging the pit and taking out the pole and stacking the pole at a proper place in safe positions and refilling the pit with loose earth and ramming including removal of Malba.Street light St. Tub. Poles of any type	EA	2		
101	3002920	Dismantling of poles of following sizes after digging the pit and taking out the pole and stacking the pole at a proper place in safe positions and refilling the pit with loose earth and ramming including removal of Malba.. MS rails/Struts.	EA	36		
102	3002922	Dismantling of conductor of the following sizes from the O/H. line recoiling of the conductor and stacking the same at tent site. All sizes of Earth Wire or Conductor below the size of Dog conductor.	M	166479		
103	3002923	Dismantling of conductor of the following sizes from the O/H. line recoiling of the conductor and stacking the same at tent site. Wolf conductor & above Dog .	M	7387		
104	3002924	Removal of all hardware fitting & insulators etc. from all sizes of poles & stacking the material at tent site.(Rates are for each Pole). LT pole.	EA	3648		
105	3002925	Removal of all hardware fitting & insulators etc. from all sizes of poles & stacking the material at tent site.(Rates are for each Pole). HT Pole.	EA	2827		
106	3002926	Removal of following sizes of st. ltg. Fitting with hardware etc. including the safe transportation to the tent site and stacking the material	EA	201		

		properly. Fluorescent type fittings.				
107	3002927	Removal of following sizes of st. ltg. Fitting with hardware etc. including the safe transportation to the tent site and stacking the material properly. Swan neck type fittings.	EA	64		
108	3002928	Removal of following sizes of st. ltg. Fitting with hardware etc. including the safe transportation to the tent site and stacking the material properly. HPMV/HPSV fittings (Tower wagon shall be provided by BSES, free of cost).	EA	882		
109	3002929	Dismantling of PVC/WP catenary cables from O/H line including earth wire and stacking at tent site. Single/two core cables of size up to 25 sq. mm.	M	767545		
110	3002930	Dismantling of PVC/WP catenary cables from O/H. line including earth wire and stacking at tent site.Single/two core cable of size above 25 sq. mm to 95 sq. mm	M	1941		
111	3002931	Dismantling of PVC/WP catenary cables from O/H. line including earth wire and stacking at tent site. Single/two core cables above 95 sq. mm.	M	325		
112	3002932	Dismantling of PVC/WP catenary cables from O/H. line including earth wire and stacking at tent site. 4 core cable of size upto 25 sq. mm.	M	8904		
113	3002933	Dismantling of PVC/WP catenary cables from O/H. line including earth wire and stacking at tent site. 4 core cable of size above 25 sq. mm and upto 95 sq. mm.	M	11292		
114	3002934	Dismantling of PVC/WP catenary cables from O/H. line including earth wire and stacking at tent site.4 core cable of size above 95 sq. mm and upto 150 sq. mm	M	2154		
115	3002935	Dismantling of PVC/WP catenary cables from O/H. line including earth wire and stacking at tent site.4 core cables of size above 150 sq. mm.	M	324		
116	3002936	Dismantling of service pillar including removal of connections of existing cables and its transportation to the tent site.	EA	7		
117	3002937	Dismantling of feeder pillar including removal of connections of existing cables and its transportation to the tent site.	EA	40		
118	3004874	Dismantling ,re-fixing and connection with O/H. line of following type of service cable from old O/H. line after digging of trenches in all types of soil, in case of U/G service cables including cutting of roads/pucca foot path/ ramps of houses and relaying. U/G. services cables of all sizes:	M	88		
119	3003203	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). 11 KV	EA	33		

		single panel				
120	3003204	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). 11 KV RMU	EA	596		
121	3003205	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). 11 KV 4 panel board	EA	20		
122	3003206	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). 11 KV 7 panel board	EA	1		
123	3003207	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). LT board suitable for 315/400 KVA.	EA	11		
124	3003208	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). LT board suitable for 630 KVA.	EA	10		
125	3003209	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). LT board suitable for 990 KVA.	EA	9		
126	3003210	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). 315/400 KVA Transformer.	EA	111		
127	3003211	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). 500/630 KVA Transformer.	EA	169		
128	3003212	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). 990 KVA Transformer.	EA	158		

129	3003229	Dismantling from existing P/M S/Stn. The work includes their removal & stacking at tent site and loading unloading For 315/400/500/630 KVA Transformers	EA	7		
130	3003230	Dismantling from existing P/M S/Stn. The work includes their removal & stacking at tent site and loading unloading For 63 or 100 KVA Transformers	EA	60		
131	3006085	Dismantling from existing P/M S/Stn. The work includes their removal & stacking at tent site and loading unloading For 16/25 KVA Transformers or outdoor type CT-PT metering cubicle	EA	397		
132	3003231	Dismantling from existing P/M S/Stn. The work includes their removal & stacking at tent site and loading unloading For 11 KV G.O. Switch 400/200 Amps	EA	59		
133	3003232	Dismantling from existing P/M S/Stn. The work includes their removal & stacking at tent site and loading unloading For 11 KV D.D. Fuse unit	SET	374		
134	3003236	Dismantling from existing P/M S/Stn. The work includes their removal & stacking at tent site and loading unloading For Lightening Arrestors	SET	83		
135	3003233	Dismantling from existing P/M S/Stn or I/D s/stn. The work includes their removal & stacking at tent site and loading unloading For LT ACB of all ratings.	EA	1756		
136	3003237	Dismantling from existing P/M S/Stn. The work includes their removal & stacking at tent site and loading unloading For 11 KV bus bars and insulators	SET	88		
137	3003238	Dismantling from existing P/M S/Stn. The work includes their removal & stacking at tent site and loading unloading For Taking down of HT feeder with cable end box and supporting pipes	EA	74		
138	3003239	Dismantling from existing P/M S/Stn. The work includes their removal & stacking at tent site and loading unloading For Taking down of LT feeder with cable end box and GI pipes	EA	91		
139	3003240	Dismantling from existing P/M S/Stn. The work includes their removal & stacking at tent site and loading unloading For Removal of all the angle Irons channel - frames/ clamps etc. on 2 pole structure	EA	115		
140	3003241	Dismantling from existing P/M S/Stn.The work includes their removal & stacking at tent site and loading unloading For Removal of all the angle Iron channel/MS flat frames/platform clamps etc on 4 pole structure.	EA	14		
141	3004886	Dismantling of HT cable between transformer and HT panel.	M	3386		
142	3004887	Dismantling of LT leads between transformer and LT panel or LT Main to feeders switch (For all the leads and for all rating of Trs.)	M	19043		
143	3003276	Dismantling of metering cubical including their safe removal and stacking at tent site within one Km	EA	16		

144	3003277	Dismantling of ICTP switches of all ratings. including their safe removal and stacking at tent site within one Km.	EA	26		
145	3007289	Dismantling of the following from kiosk/indoor type Sub. stn. including their safe removal and stacking at tent site. (the work includes the removal of all the electrical / earth connections).:- LT APFC Panel , 200 / 300 KVAR	EA	7		
146	3007038	Disconnection or Connection of 11KV XLPE Cable of following sizes: 3cX 150 sq.mm.	EA	1517		
147	3007039	Disconnection or Connection of 11KV XLPE Cable of following sizes: 3cX 300 sq.mm./400 sq.mm	EA	4919		
148	3007040	Disconnection or connection of LT cable of following sizes : LT 2 core cable of any size.	EA	97482		
149	3007041	Disconnection or connection of LT cable of following sizes : LT Cable upto 4x50 sq. mm	EA	9016		
150	3007042	Disconnection or connection of LT cable of following sizes : LT Cable from 3.5cx 95 sq. mm to 3.5c185sq.mm.	EA	1900		
151	3007043	Disconnection or connection of LT cable of following sizes :LT Cable 3.5cx 300 sq. mm	EA	4047		
152	3007044	Disconnection or connection of LT cable of following sizes : - LT Cable 1c x 630 sq.mm.	EA	7571		
153	3007320	Dismantling / Reclaiming and de-termination of HV cables from dugged trench and re-rolling the cable on the drum or in the shape of coil and transportation to store/ tent site for 11 kV, 3CX300 sqmm/400 sq.mm XLPE cable (digging will be extra and applicable same as in case of cable laying)	M	2881		
154	3007321	Dismantling / Reclaiming and de-termination of HV cables from dugged trench and re-rolling the cable on the drum or in the shape of coil and transportation to store/ tent site for 11 kV, 3CX150 sqmm XLPE cable (digging will be extra and applicable same as in case of cable laying)	M	292		
155	3007322	Dismentaling / Reclaiming and de-termination of PVC insulated, armoured control and auxilary power cables from dugged trench and re-rolling the cable on the drum or in the shape of coil and transportation to store/ tent site for 3.5 Cx 300 sqmm / 400 sq mm Al (digging will be extra and applicable same as in case of cable laying)	M	2662		
156	3007323	Dismantling / Reclaiming and de-termination of PVC insulated, armoured control and auxilary power cables from dugged trench and re-rolling the cable on the drum or in the shape of coil and transportation to store/ tent site for 3.5 Cx 150 sqmm, Al (digging will be extra and applicable same as in case of cable laying)	M	91		
157	3007324	Dismantling / Reclaiming and de-termination of PVC insulated, armoured control and auxilary power cables from dugged trench and re-rolling the cable on the drum or in the shape of coil and transportation to store/ tent site for below	M	1		

		3.5Cx150 up to 3.5Cx95 (digging will be extra and applicable same as in case of cable laying)				
158	3007325	Dismantling / Reclaiming and de-termination of PVC insulated, armoured control and auxilary power cables from dugged trench and re-rolling the cable on the drum or in the shape of coil and transportation to store/ tent site for below 3.5 Cx 95 sq.mm,AL. (digging will be extra and applicable same as in case of cable laying)	M	1		
159	3003708	Dismantling and demolishing concrete work for all types of structure at all levels including stacking of structure at all levels including stacking of serviceable material, cutting reinforcement, labour, equipment, safety precautions, all complete as per specification, drawing and instruction of engineer. - Plain cement concrete of all grades	CUM	1467		
160	3003709	Dismantling and demolishing concrete work for all types of structure at all levels including stacking of structure at all levels including stacking of serviceable material, cutting reinforcement, labour, equipment, safety precautions, all complete as per specification, drawing and instruction of engineer. - Reinforced Cement concrete of all grades	CUM	1259		
161	3007901	Dismantling of the following LT AB cables, with help of proper tool i.e. pullies, cable drum jacks, pulling & crimping tool etc. - 3 cores of 95 sqmm, 1 core of 50 sqmm Al conductor with XLPE insulation and messanger wire (with or without one 16 sq.mm. additional core for lighting)	M	21269		
162	3007902	Dismantling of the following LT AB cables, with help of proper tool i.e. pullies, cable drum jacks, pulling & crimping tool etc. - 3 cores of 50 sqmm, 1 core of 25 sqmm Al conductor with XLPE insulation and messanger wire (with or without one 16 sq.mm. additional core for lighting)	M	731		
163	3007903	Dismantling of the following LT AB cables, with help of proper tool i.e. pullies, cable drum jacks, pulling & crimping tool etc. - 3 cores of 150/120sqmm, 1 core of 70 sqmm Al conductor with XLPE insulation and messanger wire (with or without one 16 sq.mm. additional core for lighting)	M	56167		
164	3007904	Dismantling of Piercing connectors on LT AB cables at pole top height to make proper tap-off connections - Main cables size : 16-95 sqmm, Tap cables size : 4-35 sqmm	EA	3823		
165	3007905	Dismantling of Piercing connectors on LT AB cables at pole top height to make proper tap-off connections - Main cables size : 50-150 sqmm, Tap cables size : 6-35 sqmm	EA	3999		

166	3007906	Dismantling of Piercing connectors on LT AB cables at pole top height to make proper tap-off connections - Main cables size : 25-95 sqmm, Tap cables size : 25-95 sqmm	EA	1		
167	3007907	Dismantling of Piercing connectors on LT AB cables at pole top height to make proper tap-off connections - Main cables size : 50-150 sqmm, Tap cables size : 50-150 sqmm	EA	1826		
168	3007908	Dismantling of Piercing connectors on LT AB cables at pole top height to make proper tap-off connections - Main cables size : 16-95 sqmm, Tap cables size : 1.5-10 sqmm	EA	239		
169	3007909	Dismantling of - Single Phase DB complete as required.	EA	824		
170	3007910	Dismantling of - Three Phase DB cmplete as required.	EA	152		
171	3007911	Dismantling of Eye Hook/Dead end clamp or any type of hook or clamp used for AB Cable erection.	EA	3821		
172	3009081	Dismantling of Cable of following size with 3 core Al. Conductor (XLPE Insulated) and 1 Core bare Al. messanger Cum neutral - HT AB Cable 3Cx150+1Cx150 sqmm	M	11562		
173	3009082	Dismantling of Cable of following size with 1 core Al. Conductor (XLPE Insulated) and 1 Core bare Al. messanger Cum neutral - HT AB Cable 1c x95+1cx34 sq. mm	M	14998		
174	3002677	Labour charges for digging of the trench as per B.S.E.S.practice of the required size for service cables including the backfilling with the excavated earth and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated.Digging of Cable trench in ordinary soil for 1.1 KV LT 4 x 95/50/25 & 2X25/10 sq mm .	CUM	3563		
175	3007258	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of Cable trench in ordinary soil for 1.1 KV LT 3.5X300 /400 sq mm Single Circuit/Double Circuit/Triple Circuit of size 400X875 mm as per Drg.# 8 Type A-1.	M	4762		
176	3007259	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of Cable trench in ordinary soil for 1.1 KV LT 3.5X150 sq mm Single Circuit/Double Circuit/Triple Circuit of size 400X875 mm as per Drg.# 9 Type A-1.	M	619		

177	3007330	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of Cable trench in ordinary soil for 11KV H.T. 3X150/300/400 sq.mm Single Circuit of size 400X1055 mm as per Drg.# 6,TYPE A-2.	M	1994		
178	3007331	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of Cable trench in ordinary soil for 11KV H.T. 3X150/300/400 sq.mm Double Circuit of size 650X1055 mm as per Drg.# 7,TYPE B-1.	M	1340		
179	3005508	Labour charges for digging of the trench as per B.S.E.S.practice of the required size for service cables including the backfilling with the excavated earth and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated.Digging of cable trench in brick work for 1.1 KV LT 4X95/50/25 & 2X25/10 sq.mm .	CUM	12		
180	3007332	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less..Digging of cable trench in brick work for 1.1 KV LT 3.5X300 sq.mm Single Circuit/Double/Triple Circuit of size 400X875 mm as per Drg.# 8 Type-A-1	M	259		
181	3007333	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less..Digging of cable trench in brick work for 1.1 KV LT 3.5X150 sq.mm Single Circuit/Double/Triple Circuit of size 400X875 mm as per Drg.# 9 Type-A-1.	M	1		
182	3007334	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in brick work for 11 KV H.T 3X150/300/400 sq.mm Single Circuit of size 400X1055 as per Drg.#6,TYPE A-2.	M	385		

183	3007335	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in brick work for 11 KV H.T 3X150/300/400 sq.mm Double Circuit of size 650X1055 mm as per Drg.#7,TYPE B-1.	M	254		
184	3005509	Labour charges for digging of the trench as per B.S.E.S.practice of the required size for service cables including the backfilling with the excavated earth and disposing the surplus excavated material all complete . Payment shall be released as per actual depth excavated.Digging of cable trench in foot- path of tile /Rajasthani stone/Kota stone/Agra stone/Tiles for 1.1KV LT 4X95/50/25 & 2X25/10 sq.mm .	CUM	1		
185	3007336	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in foot- path of tile /rajasthani stone/Kota stone/Agra stone/Tiles for 1.1KV LT 3.5X300 sq.mm Single/Double/Triple of size 400X875 mm as per Drg.# 8 Type A-1.	M	246		
186	3007337	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in foot- path of tile /rajasthani stone/Kota stone/Agra stone/Tiles for 1.1KV LT 3.5X150 sq.mm Single/Double/Triple of size 400X875 mm as per Drg.# 9 Type A-1.	M	56		
187	3007338	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in foot- path of tile /rajasthani stone/Kota stone/Agra stone/Tiles for 11KV H.T. 3X150/300/400 sq.mm Single Circuit of size 400X1055 mm as per Drg.#6, Type# A-2.	M	1305		

188	3007339	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in foot- path of tile /rajasthani stone/Kota stone/Agra stone/Tiles for 11KV H.T. 3X150/300/400 sq.mm. Double Circuit of size 650X1055 mm as per Drg.#7, Type# B-1	M	75		
189	3005510	Labour charges for digging of the trench as per B.S.E.S.practiceof the required size for service cables including the backfilling with the excavated earth and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated..Digging of cable trench in Ordinary Bituminious Road for 1.1KV LT 4X95/50/25 & 2X25/10 sq.mm .	CUM	74		
190	3007350	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Ordinary Bituminious Road for 1.1KV LT 3.5X300 sq.mm Single/Double/Triple Circuit of size 400X875 mm as per Drg.# 8 Type A-1.	M	6278		
191	3007351	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Ordinary Bituminious Road for 1.1KV LT 3.5X150 sq.mm Single/Double/Triple Circuit of size 400X875 mm as per Drg.# 9 Type A-1.	M	1200		
192	3007352	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Ordinary Bituminious Road for 11 KV H.T. 3X150/300/400 sq.mm/1CX800 sq.mm Single Circuit of size 400X1055 mm as per Drg.#6,Type A-2	M	3657		
193	3007353	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable	M	1279		

		trench in Ordinary Bituminious Road for 11 KV H.T. 3X150/300/400 sq.mm /1CX800 sqmm Double Circuit of size 650X1055 mm as per Drg.#7,Type B-1				
194	3005511	Labour charges for digging of the trench as per B.S.E.S.practice of the required size for service cables including the backfilling with the excavated earth and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated.Digging of cable trench in Dense carpeted bituminous roads/CC Road/Asphaltic Road for 1.1KV LT 4X95/50/25 & 2X25/10 sq.mm Single Circuit/Double circuit.	CUM	238		
195	3007354	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less. Digging of cable trench in Dense carpeted bituminous roads/CC Road/Asphaltic Road for 1.1KV LT 3.5X300 sq.mm Single /Double / Triple circuit of size 400X875 mm as per Drg.# 8,Type A-1.	M	11607		
196	3007355	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less. Digging of cable trench in Dense carpeted bituminous roads/CC Road/Asphaltic Road for 1.1KV LT 3.5X150 sq.mm Single /Double / Triple circuit of size 400X875 mm as per Drg.# 9,Type A-1.	M	1985		
197	3007356	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Dense carpeted bituminous roads/CC Road/Asphaltic Road for 11KV H.T. 3X150/300/400 sq.mm Single Circuit of size 400X1055 mm as per Drg.# 6 and Type A-2.	M	13189		
198	3007357	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Dense carpeted bituminous roads/CC Road/Asphaltic Road for 11KV H.T.	M	3600		

		3X150/300/400 sq.mm /1X800sq.mm Double Circuit of size 650X1055 mm as per Drg.# 7 and Type B-1				
199	3002679	Labour charges for digging of the trench as per B.S.E.S.practice of the required size for service cables including the backfilling with the excavated earth and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated..Digging of cable trench in Rocky area for 1.1KV LT 4X95/50/25 & 2X25/10 sq.mm .	CUM	667		
200	3007358	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Rocky area for 1.1KV LT 3.5X300 sq.mm Single Circuit/Double Circuit/Triple Circuit of size 400X875 mm as per Drg.# 8 Type A-1.	M	13632		
201	3007359	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Rocky area for 1.1KV LT 3.5X150 sq.mm Single Circuit/Double Circuit/Triple Circuit of size 400X875 mm as per Drg.# 9 Type A-1.	M	1266		
202	3007360	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Rocky area for 11KV HT 3X150/300/400 sq.mm /1X 800 sqmm Single Circuit of size 400X1055 mm as per Drg.#6 TYPE# A-2.	M	21890		
203	3007361	Labour charges for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Rocky area for 11KV HT	M	4760		

		3X150/300/400 sq.mm Double Circuit of size 650X1055 mm as per Drg.#7 TYPE# B-1				
204	3004911	Labour charges for laying of pipe in already excavated trench including all jointing materials and dressing and ramming of the bottom before laying of pipes. PVC 100 to 300mm dia	M	2206		
205	3004912	Labour charges for laying of pipe in already excavated trench including all jointing materials and dressing and ramming of the bottom before laying of pipes. Hume pipe 150mm dia	M	400		
206	3004913	Labour charges for laying of pipe in already excavated trench including all jointing materials and dressing and ramming of the bottom before laying of pipes. Hume pipe 200mm dia	M	39		
207	3004914	Labour charges for laying of pipe in already excavated trench including all jointing materials and dressing and ramming of the bottom before laying of pipes. Hume pipe 250mm dia	M	26		
208	3004915	Labour charges for laying of pipe in already excavated trench including all jointing materials and dressing and ramming of the bottom before laying of pipes. B Class GI Pipe 50mm dia.	M	1		
209	3004916	Labour charges for laying of pipe in already excavated trench including all jointing materials and dressing and ramming of the bottom before laying of pipes. B Class GI Pipe 100mm dia.	M	415		
210	3004917	Labour charges for laying of pipe in already excavated trench including all jointing materials and dressing and ramming of the bottom before laying of pipes. B Class GI Pipe 150mm dia.	M	1927		
211	3004918	Labour charges for laying of pipe in already excavated trench including all jointing materials and dressing and ramming of the bottom before laying of pipes. B Class GI Pipe 200mm dia.	M	1		
212	3007370	Digging of Test pit of the required size at site for identification of the cable alongwith refilling with loose earth and ramming the surface including removal of Malba :The volume of this shall be deducted from Item Labour charges for digging of this schedule(Only for those test pit which are lying on the cable digging route) .For Ordinary Soil	CUM	74		
213	3007371	Digging of Test pit of the required size at site for identification of the cable alongwith refilling with loose earth and ramming the surface including removal of Malba.The volume of this shall be deducted from Item Labour charges for digging of this schedule(Only for those test pit which are lying on the cable digging route).For	CUM	59		

		Brick Work Portion.				
214	3007372	Digging of Test pit of the required size at site for identification of the cable alongwith refilling with loose earth and ramming the surface including removal of Malba. The volume of this shall be deducted from Item Labour charges for digging of this schedule(Only for those test pit which are lying on the cable digging route).For Ordinary Bitumens Portion.	CUM	113		
215	3007373	Digging of Test pit of the required size at site for identification of the cable alongwith refilling with loose earth and ramming the surface including removal of Malba. The volume of this shall be deducted from Item Labour charges for digging of this schedule(Only for those test pit which are lying on the cable digging route).For Dense Carpet/CC Portion/Asphaltic Road Portion.	CUM	10163		
216	3007374	Digging of Test pit of the required size at site for identification of the cable alongwith refilling with loose earth and ramming the surface including removal of Malba.The volume of this shall be deducted from Item Labour charges for digging of this schedule(Only for those test pit which are lying on the cable digging route).For Rocky Portion.	CUM	1450		
217	3007375	Digging of Test pit of the required size at site for identification of the cable alongwith refilling with loose earth and ramming the surface including removal of Malba.The volume of this shall be deducted from Item Labour charges for digging of this schedule(Only for those test pit which are lying on the cable digging route). For Unmetalled pucca/Foothpath of tiles/Agra stone/Kota stone/Rajasthani stone Portion.	CUM	10		
218	3003157	Digging of joints pits as required, docketing with bricks and sand of the joint & refilling with loose earth and ramming the surface including removal malba. Brick and sand shall be supplied by the contractor	EA	2108		
219	3007376	Laying of under- ground HT cable (XLPE or CCD / Cable in Co-extruded Duct with or without embedded OFC) in trench ,docketing with bricks & sand as per BSES specifications, refilling the trench and ramming the surface & removal of malba if any, including supply of IInd class bricks and sand (Sand cushion min 75mm below and 75mm above the cable.Also a warning tape above 224 mm of the docket be laid.) and including watch and ward till charging of cable. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. Cable size 3X150 / 300 /400 sq.mm &	M	46802		

		1X800 sq mm 11KV.Single Circuit,as per Drg.#6, Type A-2.				
220	3007377	Laying of under- ground HT cable (XLPE or CCD / Cable in Co-extruded Duct with or without embedded OFC) in trench ,docketing with bricks & sand as per BSES specifications, refilling the trench and ramming the surface & removal of malba if any, including supply of IInd class bricks and sand (Sand cushion min 75mm below and 75mm above the cable.Also a warning tape above 224mm of the docket be laid.) and including watch and ward till charging of cable. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. Cable size 3X150 / 300 / 400 sq.mm. & 1X 800 sq mm 11KV.Double Circuit,as per Drg.#7, Type B-1.	M	12113		
221	3007378	Laying of under- ground LT cable in trench ,docketing with bricks & sand as per BSES specifications, refilling the trench and ramming the surface & removal of malba if any, including supply of IInd class bricks and sand (Sand cushion min 65mm below and 75mm above the cable. Also a warning tape above 224mm of the docket be laid) and including watch and ward till charging of cable of size 3.5X300 sq.mm.Single Circuit,as per Drg.# 8,Type A-1.	M	33595		
222	3007912	Laying of under- ground LT cable in trench ,docketing with bricks & sand as per BSES specifications, refilling the trench and ramming the surface & removal of malba if any, including supply of IInd class bricks and sand (Sand cushion min 65mm below and 75mm above the cable. Also a warning tape above 224mm of the docket be laid) and including watch and ward till charging of cable of size 3.5X300 sq.mm.Double Circuit,as per Drg.# 8,Type A-1.	M	7102		
223	3007913	Laying of under- ground LT cable in trench ,docketing with bricks & sand as per BSES specifications, refilling the trench and ramming the surface & removal of malba if any, including supply of IInd class bricks and sand (Sand cushion min 65mm below and 75mm above the cable. Also a warning tape above 224mm of the docket be laid) and including watch and ward till charging of cable of size 3.5X300 sq.mm.Triple Circuit,as per Drg.# 8,Type A-1.	M	720		

224	3007379	Laying of under- ground LT cable in trench ,docketing with bricks & sand as per BSES specifications, refilling the trench and ramming the surface & removal of malba if any, including supply of IInd class bricks and sand (Sand cushion min 75mm below and 80mm above the cable. Also a warning tape above 300mm of the docket be laid) and including watch and ward till charging of cable of size 3.5X150 sq.mm.Single Circuit,as per Drg.# 9,Type A-1.	M	3504		
225	3007914	Laying of under- ground LT cable in trench ,docketing with bricks & sand as per BSES specifications, refilling the trench and ramming the surface & removal of malba if any, including supply of IInd class bricks and sand (Sand cushion min 75mm below and 80mm above the cable. Also a warning tape above 300mm of the docket be laid) and including watch and ward till charging of cable of size 3.5X150 sq.mm.Double Circuit,as per Drg.# 9,Type A-1.	M	309		
226	3007916	Laying of under- ground LT cable in trench ,docketing with bricks & sand as per BSES specifications, refilling the trench and ramming the surface & removal of malba if any, including supply of IInd class bricks and sand (Sand cushion min 75mm below and 80mm above the cable. Also a warning tape above 300mm of the docket be laid) and including watch and ward till charging of cable of size 3.5X150 sq.mm.Triple Circuit,as per Drg.# 9,Type A-1.	M	185		
227	3007380	Laying of under- ground LT Service cables in trench ,docketing with bricks & sand as per BSES specifications, refilling the trench and ramming the surface & removal of malba if any, including supply of IInd class bricks and sand (Sand cushion min 50mm below the cable and 50mm above the cable.)and including watch and ward till charging of cable up to 4X95/50/25 sq.mm & 2X25/10 sq.mm.	M	10668		
228	3003167	Supplying & fixing of lead tags, embossing feeder's name and cable size. 6"x3"x1/8"	EA	499		
229	3003168	Fixing of route / joint marker on cable routes by grouting with stone blast and coarse sand including supply of cement, stone ballast and sand.	EA	8		
230	3003169	Laying of HT/LT cable (XLPE or CCD / Cable in Co-extruded Duct with or without embedded OFC) of following size in S/ Stn. Trench.above 150 sq.mm.	M	67163		
231	3003170	Laying of HT/LT cable of following size in S/ Stn. Trench. Above 70 sq mm upto 150 sqmm	M	11429		
232	3003171	Laying of HT/LT cable of following size in S/ Stn. Trench. Up to 70 sqmm.	M	339		
233	3003172	Laying of HT/LT cables through GI Pipe / HDPE Pipe / RCC hume pipe. Up to 50 sqmm	M	934		
234	3003173	Laying of HT/LT cables through GI Pipe / HDPE Pipe / RCC hume pipe. above 50 sqmm upto	M	12145		

		150 sqmm.				
235	3003174	Laying of HT/LT cables (XLPE or CCD / Cable in Co-extruded Duct with or without embedded OFC) through GI Pipe / HDPE Pipe / RCC hume pipe. above 150 sqmm	M	427671		
236	3003175	Laying of HT 11kV cable of different sizes on the existing over hanging cables trays.	M	248		
237	3007806	Mounting of HT cables on pole,after passing through suitable size of GI pipe / HDPE pipe proper Clamping and proving and fixing wooden bush alongwith clamping of end box. of size 3 x 150 sqmm and above /pole.(The length of cable to be mounted on pole should be excluded from the laying lengh)	M	16121		
238	3007807	Mounting of LT cables on pole,after passing through suitable size of GI pipe / HDPE pipe proper Clamping and proving and fixing wooden bush alongwith clamping of end box. Above Of size 150 sqmm /pole.(The length of cable to be mounted on pole should be excluded from the laying length.)	M	17320		
239	3007808	Mounting of cables on pole,after passing through suitable size of GI pipe / HDPE pipe proper Clamping and proving and fixing wooden bush alongwith clamping of end box. 4 x 95 sqmm to 4 x 150 sqmm/pole	M	483		
240	3007809	Mounting of cables on pole,after passing through suitable size of GI pipe / HDPE pipe proper Clamping and proving and fixing wooden bush alongwith clamping of end box. 2 x 10 / 2 x 25 / 4 x 10 / 4 x 25 /4 x 50 sqmm/pole	M	2778		
241	3003180	Providing and fixing PVC Bushes for various sizes of cable (with materail).	EA	1		
242	3003185	Fixing of GI Pipe on the edges of culvert/ Nalla/ Bridge for crossing of HT/LT cables of various sizes with proper clamps etc. including fabrication work and supply of Cement (GI Pipe / Steel to be provided by BSES).	M	1049		
243	3005516	Supply and Laying of GI pipe 6" dia 2nd class ISI mark for crossing the various nallah on route including supply and fabrication of support of M.S. channe/Angle with petty masonary work for grouting of support. Badarpur stone ballast, cement and bricks shall be supplied by the contractor.	M	390		
244	3005518	Supply and Laying of GI pipe 6" dia 2nd class ISI mark for crossing the various nallah.	M	644		
245	3004932	Cleaning and clearing of malba after completion of work at site or removal of malba to carry out the work at site (This item is not applicable for removal of malba in digging and cable laying and Pole erection work)	CUM	21463		
246	3005515	High Voltage test of 11KV 3x300/ 400 sq.mm/1X800 sq mm cable - Testing Equipment to be provided by the contractor.	EA	4010		

247	3005528	Optional price for Continuous Steel Barricading of 1.2 M High including cost of all materials.40% quantity for selected location per meter Trench	M	120633		
248	4060000	Charges for carrying out Route survey and identification of underground utilities of various civic agencies before/ during execution of scheme involving cable laying work. Route length will be considered for payment. Route length will be specifically verified by DGM.	M	514893		
249	3003190	Installation , testing and commissiong of following sizes including unpacking leveling grouting, coupling taping oil fillings & earth connection etc. as required Ist class bricks,cement and sand to be supplied by the contractor. 11 KV metering cubical.	EA	137		
250	3003191	Installation , testing and commissiong of LT Board of following sizes including leveling grouting, coupling tapping & earth connection etc. as required Ist class bricks,cement and sand to be supplied by the contractor., Suitable for 400 KVA Transformer.	EA	11		
251	3003192	Installation , testing and commissiong of LT Board of following sizes including leveling grouting, coupling tapping & earth connection etc. as required Ist class bricks,cement and sand to be supplied by the contractor., Suitable for 630 KVA Transformer.	EA	3		
252	3003193	Installation , testing and commissiong of LT Board of following sizes including leveling grouting, coupling tapping & earth connection etc. as required Ist class bricks,cement and sand to be supplied by the contractor., Suitable for 990 KVA Transformer.	EA	17		
253	3006084	Installation , testing and commissiong of 11/0.433 KV distribution transformer of following sizes on existing structure including unpacking leveling, nut bolting, welding on double channel, taping, oil topping, jumpering of HT side and connecting the leads on LT side: 16 or 25 KVA Tr or outdoor type 11kV CT-PT metering cubicle. On 2-pole/single pole structure. Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site.	EA	779		

254	3003265	Installation , testing and commissiong of 11/0.433 KV distribution transformer of following sizes on existing structure including unpacking leveling, nut bolting, welding on double channel, taping, oil topping, jumpering of HT side and connecting the leads on LT side: 63 or 100 KVA Tr. On 2-pole structure. Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site.	EA	70		
255	3003194	Installation , testing and commissiong of 11/0.433 KV distribution Transformer of following sizes on existing plinth including grouting of frames required on HT & LT side for cables as per BSES Design & practice. 315/400 KVA Transformer. Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site.	EA	200		
256	3003267	Installation , testing and commissiong of 11/0.433 KV distribution transformer of following sizes on existing structure including unpacking leveling, nut bolting, welding on double channel, taping, oil topping, jumpering of HT side and connecting the leads on LT side: 400 KVA on 2-pole structure any type. Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and	EA	29		

		transportation of testing equipment at site.				
257	3003268	Installation , testing and commissiong of 11/0.433 KV distribution transformer of following sizes on existing structure including jumpering of HT side and connecting the leads on LT side: 630 KVA on 4-pole structure any type. Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site.	EA	8		
258	3003195	Installation , testing and commissiong of 11/0.433 KV distribution Transformer of following sizes on existing plinth including grouting of frames required on HT & LT side for cables as per BSES Design & practice. 630 KVA Transformer any type. Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site.	EA	247		

259	3003196	Installation , testing and commissiong of 11/0.433 KV distribution Transformer of following sizes on existing plinth including grouting of frames required on HT & LT side for cables as per BSES Design & practice. 1000 KVA Transformer any type. Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site.	EA	274		
260	3010001	Dragging of Old/New Distribution Transformres or PSS of 250 to 990 KVA ratng of oil/dry type as per standard practice from more than 10 mtr to 30 mtrs.	EA	136		
261	3010002	Dragging of Old/New Distribution Transformres or PSS of 250 to 990 KVA ratng of oil/dry type as per standard practice from more than 10 mtr to 30 mtrs.	EA	27		
262	3010003	Dragging of Old/New Distribution Transformres of 400 to 990 KVA ratng of oil/dry type as per standard practice for more than 60 mtrs (rates are per mtr)	M	195		
263	3007381	Laying and connecting of HT jumper or HT cable from HT Switchgear or DD Fuse to TR with EPR+Silicone taping / HT boot and LT single core cable of size 300 sq. mm. from TR to LT Main including fixing the same by means of proper wooden cleats etc. as required (The work includes crimping of sockets earthing & taping etc. as req). For 100 KVA P/M Transformer S/Stn.	EA	48		
264	3007382	Laying and connecting of HT jumper or HT cable from HT Switchgear or DD Fuse to TR with EPR+Silicone taping / HT boot and LT single core cable of size 630 sq. mm. from TR to LT Main including fixing the same by means of proper wooden cleats etc. as required (The work includes crimping of sockets earthing & taping etc. as req). For 315/400 KVA P/M Transformer S/Stn.	EA	41		
265	3003197	Laying and connecting of 11KV cable of size 3x150 sq. mm. from HT switch gear to the transformer with EPR+Silicone taping / HT Boot and LT single core cable of size 630 sq. mm. from TR to LT board including fixing the same by means of proper wooden cleats etc. as required (The work includes crimping of sockets earthing & taping etc. as req). For 315/400 KVA Transformer	EA	203		

266	3003198	Laying and connecting of 11KV cable of size 3x150 sq. mm. from HT switch gear to the transformer with EPR+Silicone taping / HT Boot and LT single core cable of size 630 sq. mm. from TR to LT board including fixing the same by means of proper wooden cleats etc. as required (The work includes crimping of sockets earthing & taping etc. as req). For 630 KVA Transformer	EA	248		
267	3003199	Laying and connecting of 11KV cable of size 3x150 sq. mm. from HT switch gear to the transformer with EPR+Silicone taping / HT Boot and LT single core cable of size 630 sq. mm. from TR to LT board including fixing the same by means of proper wooden cleats etc. as required (The work includes crimping of sockets earthing & taping etc. as req). For 990 KVA Transformer	EA	279		
268	3005318	Laying additional or new single core cable or replacing existing cables with proper clamping. - 150 sqmm	M	657		
269	3005319	Laying additional or new single core cable or replacing existing cables with proper clamping. - 300 sqmm	M	31005		
270	3005320	Laying additional or new single core cable or replacing existing cables with proper clamping. - 630 sqmm /1000 sqmm	M	51262		
271	3003202	Fixing of fire extinguishers/ bucket by means of proper hooks clamps etc. as required including grouting and painting of hooks/clamps.	EA	94		
272	3007383	Mounting of following accessories on the existing structure of P/M S/Stn.by means of suitable nut,bolts &clamps etc.complete as reqd.for 100/315/400/630 KVA TRFR. 11K.V.BUS-BARS & INSULATORS.	EA	842		
273	3004919	Mounting of following accessories on the existing structure of P/M S/Stn. By means of suitable nut, bolts & clamps etc.electrically interconnecting with each other after Crimping the sockets an Interconnection of equipment / jumpering to the equipment by Al. conductor / cable leads.	M	986		
274	3003705	Mounting , testing and commissiong of following accessories on the existing structure of P/M S/Stn or I/D s/stns . By means of suitable nut, bolts & clamps etc. including mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an LT ACB 400/800 Amps.	EA	3750		
275	3003219	Mounting , testing and commissiong of following accessories on the existing structure of P/M S/Stn or I/D s/stns. By means of suitable nut, bolts & clamps etc. including mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an LT ACB 1250 Amps.	EA	662		

276	3003220	Mounting , testing and commissiong of following accessories on the existing structure of P/M S/Stn or I/D s/stns. By means of suitable nut, bolts & clamps etc. including mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an LT ACB 2000 Amps.	EA	362		
277	3003221	Mounting of following accessories on the existing structure of P/M S/Stn. By means of suitable nut, bolts & clamps etc. including mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an LT ICTP Switch fuse unit 400 Amps.	EA	26		
278	3003222	Mounting of following accessories on the existing structure of P/M S/Stn. By means of suitable nut, bolts & clamps etc. including mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an LT ICTP Switch fuse unit 200 Amps.	EA	49		
279	3003223	Mounting of following accessories on the existing structure of P/M S/Stn. By means of suitable nut, bolts & clamps etc. including mounting on necessary frames electrically interconnecting with each other after Crimping the sockets an LT ICTP Switch fuse unit 100 Amps.	EA	8		
280	3010012	Installation of timer switch on pole including clamping with pole	EA	22		
281	3007046	Installation of Lighting Panel / timer switch on wall / pole including grouting over wall / clamping with pole (supply of material for grouting / clamping by contractor)	EA	41		
282	3003707	Providing, supplying and laying minimum 150 mm thick gravel fillling after cleaning and leveling of site. Size of gravel should be between 20mm including dressing, compacting etc. All stone used shall be granite stone free from dirt or organic material.	CUM	6553		
283	3003224	Mounting of following accessories on the existing structure of P/M S/Stn/HT Line/HT Panels/where ever rquired . By means of suitable nut, bolts & clamps etc. including mounting on necessary frames electrically interconnecting with each other after Crimping the sockets. Erection of 11kV O/D or I/D Cable end box	EA	2608		
284	3004882	Mounting of following accessories on the existing structure of P/M S/Stn.or any s/stn.by means of suitable nut, bolts & clamps etc.i/c.connections after Crimping the sockets.Laying of LT U/G PVC/XLPE cables of various sizes upto ICTP switches on 2/4 pole strcutures/where ever required.	M	3626		
285	3003257	Drilling of cables holes in S/Stn. walls as required.	EA	481		

286	3003256	Plugging of cable holes in S/Stn. Walls or any other opening (all material will be supplied by the contractor to complete the job) 30CM x 30 CM	EA	121		
287	3003255	Plugging of cable holes in S/Stn. Walls or any other opening (all material will be supplied by the contractor to complete the job) 60CM x 30CM	EA	344		
288	3004890	Inter connection of metering cubicles,for metering S/Stn. with the help of GI conduit pipe of required size at the S/Stn. including welding of pipe threading holding and fixing of pipe sockets etc. (Only GI conduit pipe of required size will be provided by BSES).	M	1		
289	3003271	Enlargement of holes in the bottom plate of the H.T. switch gear for cable entry (Reqd.for jointing purposes).	EA	452		
290	3004891	Providing and Fabrications of wooden cleats for supporting LT S/C cable from transformer to LT board with suitable size of holes as required. (Material will be supplied by the contractor). Cleats with 4 holes	EA	732		
291	3004892	Providing and Fabrications of wooden cleats for supporting LT S/C cable from transformer to LT board with suitable size of holes as required. (Material will be supplied by the contractor). Cleats with 7-11 holes	EA	1342		
292	3004893	Providing and Fabrications of wooden cleats for supporting HT cable from Transformer to H.T.Switchgear with suitable size of holes as required. (Material will be supplied by the contractor). Cleats with single hole for HT cable	EA	6898		
293	3003275	Making of masonry plinth for placing the transformer or RMU with 90cm height above the ground level and 30cm below ground complete with bricks, cement, badarpur in the ratio of 1:6 and duly plastered on all sides Plinth to be provided with 75mm PCC layer on top. It also includes extra civil work for step-making (required for smooth operation/maintenance of RMU)	CUM	2561		
294	3003657	Minor repairing of existing Plinth of any size for placing the transformer. Material will be supplied by the Contractor.	EA	64		
295	3005327	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in cement mortar 1:6 (1 cement : 6 coarse sand)	CUM	7147		
296	3005328	15mm cement plaster on rough side of single or half brick wall of mix 1:4 (1 cement : 4 fine sand)	SQM	17765		
297	3003711	Repairing and strengthing of existing fencing structure.	SQM	3991		

298	3005325	Supply and fixing of MS mesh fencing 2.5 mtr height with gate frame of 3 mtr x 2.5 mtr with complete material including setting, welding, fabrication, red-oxide primaring, painting eg angle, channel, chain link, MS mesh and civil material etc complete as per specification & drawing of BSES. Angle iron size 40x40x6 mm & MS strip 20 x 5 mm, IRC Welded mesh 75x25 mm (7.75 Kg/sqm) to be used with support provided at 1.25m distance with 75x40 mm single MS Channel and at corners with 75x40 mm box MS Channel suitably grouting in ground	SQM	8678		
299	3007220	Supply and making connections at where ever required (feeder pillars/service pillars/ LT panel etc.) with following size of socket including crimping of socket and complete armouring . AL 6 sqmm sockets	EA	1		
300	3007221	Supply and making connections at where ever required (feeder pillars/service pillars/ DB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping. AL 10 sqmm sockets	EA	308		
301	3007222	Supply and making connections at where ever required (feeder pillars/service pillars/ DB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping AL 25 sqmm sockets	EA	5461		
302	3007223	Supply and making connections at where ever required (feeder pillars/service pillars/ DB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping AL 50 sqmm sockets	EA	2653		
303	3007224	Supply and making connections at where ever required (feeder pillars/service pillars/ DB / MCCB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping AL 95 sqmm sockets	EA	2086		
304	3003691	Supply and making connections at where ever required (feeder pillars/service pillars/ MCCB / LT ACB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping AL 150 sqmm sockets	EA	6873		
305	3003692	Supply and making connections at where ever required (feeder pillars/service pillars/ LT ACB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping AL 300sqmm sockets	EA	5462		
306	3003693	Supply and making connections at where ever required (feeder pillars/service pillars/ LT ACB, LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping: AL 630 sqmm sockets or AL 1000 sqmm sockets	EA	2849		

307	3007225	Making connections at where ever required (feeder pillars/service pillars/ LT panel etc.) with following size of socket including crimping of socket and complete armouring: AL 6 sqmm sockets (Sockets will be supplied by BSES)	EA	1		
308	3007226	Making connections at where ever required (feeder pillars/service pillars/ DB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping: AL 10 sqmm sockets.(Sockets will be supplied by BSES)	EA	118		
309	3007227	Making connections at where ever required (feeder pillars/service pillars/ DB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping: AL 25 sqmm sockets .(Sockets will be supplied by BSES)	EA	11647		
310	3007228	Making connections at where ever required (feeder pillars/service pillars/ DB / MCCB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping: AL 50 sqmm sockets .(Sockets will be supplied by BSES)	EA	2627		
311	3007229	Making connections at where ever required (feeder pillars/service pillars/ DB / MCCB / LT ACB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping: AL 95 sqmm sockets .(Sockets will be supplied by BSES)	EA	7649		
312	3003694	Making connections at where ever required (feeder pillars/service pillars/ MCCB / LT ACB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping: AL 150 sqmm sockets (Sockets will be supplied by BSES).	EA	18647		
313	3003695	Making connections at where ever required (feeder pillars/service pillars/ MCCB / LT ACB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping: AL 300 sqmm sockets (Sockets will be supplied by BSES)	EA	18696		
314	3003696	Making connections at where ever required (feeder pillars/service pillars/ LT ACB / LT panel etc.) with following size of socket including crimping of socket and complete armouring / taping: AL 630 sqmm sockets or AL 1000 sqmm sockets (Sockets will be supplied by BSES)	EA	8079		
315	3007384	Supply and fixing of double compression cable glands suitable for following L.T. Cables size : 2x10 / 2x25 sq.mm.	EA	64		
316	3007385	Supply and fixing of double compression cable glands suitable for following L.T. Cables size : 4x25 sq.mm.	EA	1		
317	3007386	Supply and fixing of double compression cable glands suitable for following L.T. Cables size : 4x50 sq.mm.	EA	725		
318	3007387	Supply and fixing of double compression cable glands suitable for following L.T. Cables size :	EA	21		

		3.5x 95 sqmm				
319	3005315	Supply and fixing of double compression cable glands suitable for following L.T. Cables size : 3.5x 150 sqmm	EA	1327		
320	3005316	Supply and fixing of double compression cable glands suitable for following L.T. Cables size : 3.5x 300 sqmm	EA	1275		
321	3005317	Supply and fixing of double compression cable glands suitable for following L.T. Cables size : 630 sqmm	EA	887		
322	3007388	Fixing of double compression cable glands suitable for following L.T. Cables size : 2x10 / 2x25 sq.mm.Gland provided by B.S.E.S.	EA	1		
323	3007389	Fixing of double compression cable glands suitable for following L.T. Cables size : 4x25 sq.mm.Gland provided by B.S.E.S.	EA	1		
324	3007390	Fixing of double compression cable glands suitable for following L.T. Cables size : 4x50 sq.mm.Gland provided by B.S.E.S.	EA	2		
325	3007391	Fixing of double compression cable glands suitable for following L.T. Cables size : 3.5x95sq.mm.Gland provided by B.S.E.S.	EA	1		
326	3007392	Fixing of double compression cable glands suitable for following L.T. Cables size : 3.5x150sq.mm.Gland provided by B.S.E.S.	EA	1		
327	3007393	Fixing of double compression cable glands suitable for following L.T. Cables size : 3.5x300sq.mm.Gland provided by B.S.E.S.	EA	1		
328	3005321	Providing Aluminium Bus Bars as per site condition. - 400 Amp.	M	1		
329	3005322	Providing Aluminium Bus Bars as per site condition. - 800 Amp.	M	6		
330	3005323	Providing Aluminium Bus Bars for as per site condition. - 1250 Amp.	M	15		
331	3005324	Providing Aluminium Bus Bars for as per site condition. - 2000 Amp.	M	10		
332	3004901	Supply & Installation of fire buckets filled with sand, including fabrication of frame/stand of suitable size, canopey, grouting on surfce or wall, painting of frame including necessary hardware and consumables. 1 bucket stand	SET	8		
333	3004902	Supply & Installation of fire buckets filled with sand, including fabrication of frame/stand of suitable size, canopey, grouting on surfce or wall, painting of frame including necessary hardware and consumables. 2 bucket stand	SET	120		
334	3004903	Supply & Installation of fire buckets filled with sand, including fabrication of frame/stand of suitable size, canopey, grouting on surfce or wall, painting of frame including necessary hardware and consumables. 3 bucket stand	SET	3		
335	3004904	Supply & Installation of fire buckets filled with sand, including fabrication of frame/stand of suitable size, canopey, grouting on surfce or wall, painting of frame including necessary	SET	14		

		hardware and consumables. 4 bucket stand				
336	3007045	Removal & refixing of gland plate after drilling of required nos. of holes for fixing cable gland as per site conditions and instructions of site engineer (for 10- 12 holes in one gland plate)	EA	847		
337	3006641	RMU installation 1-Function.	EA	36		
338	3006640	Installation of 3 Way RMU (motorized with FRTU or non-motorized)	EA	843		
339	3006690	Installation of 4 Way RMU (motorized with FRTU or non-motorized)	EA	421		
340	3006643	Testing and commissioning comprising of Hi-pot or HV test, Insulation Resistance test, Contact Resistance test, CT/PT testing (Ratio, Polarity, etc), and testing of relay / FPI / VPI / etc through primary injection and their setting as per BSES standards for 1-Way RMU	EA	35		
341	3006642	Testing and commissioning comprising of Hi-pot or HV test, Insulation Resistance test, Contact Resistance test, CT/PT testing (Ratio, Polarity, etc), and testing of relay / FPI / VPI / etc through primary injection and their setting as per BSES standards for 3-Way RMU (motorized with FRTU or non-motorized)	EA	852		
342	3006691	Testing and commissioning comprising of Hi-pot or HV test, Insulation Resistance test, Contact Resistance test, CT/PT testing (Ratio, Polarity, etc), and testing of relay / FPI / VPI / etc through primary injection and their setting as per BSES standards for 4-Way RMU (motorized with FRTU or non-motorized)	EA	422		
343	3003706	Making Cable End termination. Note: End Termination kit will be provided by BSES as free supply.	EA	7519		
344	3003674	Making Straight through joint. Note: St.Th.joint kit will be provided by BSES as free supply.	EA	2908		
345	3006700	Supply & Erection of MS Frame for 1-Way RMUs.	EA	29		
346	3006701	Supply & Erection of MS Frame for 3-Way RMUs (motorized with FRTU or non-motorized).	EA	454		
347	3006703	Supply & Erection of MS Frame for 4-Way RMUs (motorized with FRTU or non-motorized).	EA	194		
348	3004921	Providing ,Fabrication and fixing of Al. flat strip of required size suitable for any size of cable to connect in service / feeder pillars including cost of Al. strips , nut and bolts of required sizes.	M	16		
349	3003308	Painting of nomenclature of size(s) as reqd. on FP/Service Pillar / LT Panel / HT Panel and LT ACBs etc. including supply of paint.rates are per alphabat	EA	531287		
350	3003310	Plinthing and erection of Service Pillars / Feeder Pillars as per BSES design including	EA	144		

		supply of bricks, cement, badarpur, jamuna sand etc. Feeder Pillar				
351	3003311	Plinthing and erection of service pillars / Feeder Pillars as per BSES design including supply of bricks, cement, badarpur, jamuna sand etc. Service Pillar	EA	10		
352	3003315	Construction & Raising the plinth / base of any equipment / substation above the ground/road level with proper bricks, cement, badarpur, jamuna sand, soil; ramming and leveling of ground; dismantling of old foundation; digging of the trench as required, removal of malba of the damaged old foundation or any other left over (Unit: CuM)	CUM	1137		
353	3003316	Construction & Raising the plinth of service pillers approx 2' above the ground/Road level & erection of service pillers. thereon with proper bricks ,cement, badarpur ,jamuna sand, digging of the trench as required, removal of malba of the damaged old foundation.	EA	5		
354	3003317	Erection of following accessories of F/pillar, Service pillar including disconnection and connection with crimped sockets etc as required. Bus bar main Al. for phase/neutral per bus bar.	EA	19		
355	3003318	Erection of following accessories of F/pillar, Service pillar including disconnection and connection with crimped sockets etc as required. "L" type of outgoing feeder.including cost of material.	EA	2		
356	3003319	Erection of following accessories of F/pillar, Service pillar with material as required. Taping of busbar with insulation tape including cost of tape per bus bar.	EA	1990		
357	3003320	Erection of following accessories of F/pillar, Service pillar with material including disconnection and connection with crimped sockets etc as required. Fuse Base contact 400 A rating including cost of Fuse base contact	EA	5		
358	3003321	Erection of following accessories of F/pillar, Service pillar with material including disconnection and connection with crimped sockets etc as required. Kit-kat 60 A fuse on service/feeder pillar including cost of kit kat	EA	1		
359	3003322	Erection of following accessories on F/pillar, Service pillar with material as required. Supplying and welding new Hinge 100 mm on Service or Feeder pillar.	EA	701		
360	3003323	Erection of following accessories on F/P, S/P & /S/Stn Door with material including disconnection and connection with crimped sockets etc as required. Providing and welding of "Kunda" including welding of lock if required on service/feeder pillar door.(Kunda to be fabricated of M.S. flat 40 mm x 3 mm).	EA	1197		

361	3003541	Erection of steel tubular poles i/c refilling,ramming & transportation of the poles from stacking site within one Km. Distance,) excluding Digging,Concreting,muffing and Brick Padding. 6.6M SOH	EA	1		
362	3003455	Erection of steel tubular pole i/c refilling,refilling & transportation of the poles from stacking site within one Km. Distance,) excluding Digging,Concreting,muffing and Brick Padding 9.1M SOH	EA	26		
363	3003457	Erection of steel tubular poles i/c refilling & transportation of the poles from stacking site within one Km. Distance,) excluding Digging,Concreting,muffing and Brick Padding 10.5M SOH/DOH	EA	9		
364	3003459	Erection of steel tubular poles i/c refilling, muffing & transportation of the poles from stacking site within one Km. Distance,) excluding Digging,Concreting,muffing and Brick Padding 11.86M SOH/DOH	EA	1		
365	3003481	Internal wiring of pole with 4 or 2.5mm 2 PVC Wire .9.1M SOH	EA	306		
366	3004924	Internal wiring of pole with 4 or 2.5mm2 PVC Wire. 6.6M SOH	EA	1		
367	3003486	Internal wiring of pole with 4 or 2.5mm2 PVC Wire. 10.5M SOH/DOH	EA	9		
368	3003484	Internal wiring of pole with 4 or 2.5mm2 PVC Wire. 11.86M SOH/DOH	EA	1		
369	3003487	Installation of fuse box	EA	13		
370	3003491	Installation of St.lighting fitttings i/c connections i) HPSV 250w/400w	EA	9		
371	3003546	Installation of St.lighting fitttings i/c connections i) HPSV 150w	EA	186		
372	3003545	Installation of St.lighting fitttings i/c connections ii) HPSV 70 W	EA	1330		
373	3003489	Installation of St.lighting fitttings i/c connections iii) F.T. TUBE 1X40 W	EA	2		
374	3007395	Installation of St.lighting fitttings i/c connections iii) F.T. TUBE 2X40 W	EA	1		
375	3007396	Tuck welding of HPSV/HPMV fitting on street lighting poles	EA	3		
376	3007397	Tuck welding of MS Fuse boxes on street lighting poles	EA	198		
377	3004925	Muffing and plinthing of pole as per design of cement mortor 1:3:6(All material to be provided by contractor)	EA	3050		
378	3002767	Zebra painting on any type of pole including supply of paints upto 1.03 M height from GL	EA	15012		
379	3003550	Painting of St. Ltg. Steel Tubular poles with 1 coat of red oxide primer and 2 coats of aluminum paint including numbering as per	EA	1		

		BSES design (I/c supply of paint) 6.6 M SOH				
380	3003494	Painting of St. Ltg. Steel Tubular poles with 1 coat of red oxide primer and 2 coats of aluminum paint including numbering as per BSES design (I/c supply of paint) 9.1M SOH/9.0 M Steel Tubular Pole	EA	21		
381	3003495	Painting of St. Ltg. Steel Tubular poles with 1 coat of red oxide primer and 2 coats of aluminum paint including numbering as per BSES design (I/c supply of paint) 10.5 M SOH	EA	1		
382	3003496	Painting of St. Ltg. Steel Tubular poles with 1 coat of red oxide primer and 2 coats of aluminum paint including numbering as per BSES design (I/c supply of paint) 10.5 M DOH	EA	1		
383	3003547	Painting of St. Ltg. Steel Tubular poles with 1 coat of red oxide primer and 2 coats of aluminum paint including numbering as per BSES design (I/c supply of paint) 11.86 M SOH	EA	1		
384	3003548	Painting of St. Ltg. Steel Tubular poles with 1 coat of red oxide primer and 2 coats of aluminum paint including numbering as per BSES design (I/c supply of paint) 11.86 M DOH	EA	1		
385	3007922	Concreting with 1:4:8 mix complete in all respect.	CUM	944		
386	3007921	Concreting with 1:2:4 mix complete in all respect.	CUM	2544		
387	3005512	Concreting with 1:3:6 mix complete in all respect.	CUM	7271		
388	3007362	Brick padding including material per pole	EA	6098		
389	3002951	Loading/unloading and transportation of 110 lbs 42' MS rail from store to site or from site to site. Beyond one km. to 5 km.	EA	1		
390	3002952	Loading/unloading and transportation of 110 lbs 42' MS rail from store to site or from site to site. Beyond 5 kms.	EA	5		
391	3002953	Loading/Unloading/Transportation of 36' PCC Poles from store to site or site to site. Beyond one km. to 5 Kms.	EA	284		
392	3002954	Loading/Unloading/Transportation of 36' PCC Poles from one site to another site Beyond 5 Km distance.	EA	2586		
393	3002955	Loading/Unloading/Transportation of 27', 28' and 30' PCC Poles from store to site or site to site.Beyond one km.to 5 Kms	EA	268		
394	3002956	Loading/Unloading/Transportation of 27', 28' and 30' PCC Poles from one site to another Beyond 5 Kms	EA	5587		
395	3007306	Loading/Unloading/Transportation of Steel Tubeler 9 mtr long Poles from store to site or site to site.Beyond one km.to 5 Kms	EA	9		
396	3007307	Loading/Unloading/Transportation of Steel Tubeler 9 mtr long Poles from one site to another Beyond 5 Kms	EA	69		

397	3007308	Loading/Unloading/Transportation of steel tubular poles . from one site to another site up Beyond one Km.to 5 Kms 6.6M SOH	EA	1		
398	3007309	Loading/Unloading/Transportation of steel tubular polesfrom one site to another site Beyond one Km.to 5 Kms 9.1M SOH	EA	1		
399	3007410	Loading/Unloading/Transportation of steel tubular poles from one site to another site Beyond one Km.to 5 Kms10.5M SOH/DOH.	EA	1		
400	3007411	Loading/Unloading/Transportation of steel tubular poles from one site to another site Beyond one Km.to 5 Kms 11.86M SOH/DOH	EA	1		
401	3007412	Loading/Unloading/Transportation of steel tubular poles . from one site to another site Beyond a distance of 5 Kms 6.6M SOH	EA	1		
402	3007413	Loading/Unloading/Transportation of steel tubular polesfrom one site to another site Beyond a distance of 5 Kms 9.1M SOH	EA	1		
403	3007414	Loading/Unloading/Transportation of steel tubular poles from one site to another site Beyond a distance of 5 Kms10.5M SOH/DOH	EA	1		
404	3007415	Loading/Unloading/Transportation of steel tubular poles from one site to another site Beyond a distance of 5 Kms 11.86M SOH/DOH	EA	1		
405	3004899	Transportation of Electrical equipments or any any kind of materials from store to site or from site to site including laoding and unloading at both ends by manually -> By Full body truck load (9T capacity). Note:- Above item will be selected ensuring optimum utilization of the approved rates.	TRP	847		
406	3004900	Transportation of Electrical equipments or any any kind of materials from store to site or from site to site including laoding and unloading at both ends by manually -> By Half body Truck. Note:- Above tem will be selected ensuring optimum utilization of the approved rates.	TRP	21290		
407	3007416	Transportation of Electrical equipments or any any kind of materials from store to site or from site to site including laoding and unloading at both ends by using T & P such as Tripod/cranes -> By Full body truck load (9T capacity). Note:- Above item will be selected ensuring optimum utilization of the approved rates.	TRP	8366		
408	3007417	Transportation of Electrical equipments or any any kind of materials from store to site or from site to site including laoding and unloading at both ends by using T & P such as Tripod/cranes -> By Half body Truck. Note:- Above tem will be selected ensuring optimum utilization of the approved rates.	TRP	5989		
409	3003288	Transportation of following sizes of cables pieces from stores to site or from site to site (Transportation cost should not exceed the cost of the transportation of the Trip). Above 150 sq. mm.	M	1		

410	3003289	Transportation of following sizes of cables pieces from stores to site or from site to site (Transportation cost should not exceed the cost of the transportation of the Trip). Above 95 sq. mm. up to 150 sq. mm.	M	63		
411	3003290	Transportation of following sizes of cables pieces from stores to site or from site to site (Transportation cost should not exceed the cost of the transportation of the Trip). Up to 95 sq. mm	M	1		
412	3004920	Transportation of material by trailor including loading and un-loading	TRP	880		
413	3003752	Transportation of material by hand-cart i/c.loading & unloading at both ends safely	TRP	60269		
414	3005542	Transportation of empty cable drum from site to designated store anywhere in Delhi.For Steel Drum	EA	369		
415	3005543	Transportation of empty cable drum from site to designated store anywhere in Delhi. For minimum 11 nos Wooden Drum (In case under execution No. of empty drum are less than 11 nos. the same can be transported against one transportation charges)	TRP	984		
416	3006646	Transportation of RMU's and other materials from Main Store to Distt.Store or from Distt.Store to site, i/c.loading & unloading at both ends safely (a) One transport will be paid per site for New RMU along with other materials. (b) In case of transhipment of RMU from main store to district store and then from district store to site, two transport will be allowed.	TRP	2851		
417	3004933	Supply of Hume Pipes. 250mm dia	M	26		
418	3004934	Supply of Hume Pipes. 200mm dia	M	30		
419	3004935	Supply of Hume Pipes. 150mm dia	M	1188		
420	3004936	Supply of Semi Hume Pipes. 250mm dia.	M	1		
421	3004937	Supply of Semi Hume Pipes. 200mm dia.	M	1		
422	3004938	Supply of Semi Hume Pipes. 150mm dia.	M	304		
423	3005517	Supply of Route/Joint marker	EA	1		
424	3005581	Supply of HDPE pipes as per IS 4984,PN 4 class PE 63 - 110mm dia	M	6104		
425	3005532	Supply of HDPE pipes as per IS 4984,PN 4 class PE 63 - 140mm dia.	M	3698		

426	3005533	Supply of HDPE pipes as per IS 4984,PN 4 class PE 63 - 160mm dia.	M	27901		
427	3005534	Supply of HDPE pipes as per IS 4984,PN 4 class PE 63 - 200mm dia	M	1378		
428	3004923	Supply of Bolts/ nuts, etc. including erection	KG	82830		
429	3003326	Supply of MS Steel (Angle, Channel, Flat)	KG	16112		
430	3005494	Crossing of roads by trench-less technology by laying of HDPE pipe excluding supply of pipe. Laying by HDD Machine Moling.Drilling and laying. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. 110/140mm dia.	M	44297		
431	3005495	Crossing of roads by trench-less technology by laying of HDPE pipe excluding supply of pipe. Laying by HDD Machine Moling. Drilling and laying. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. 160mm dia.	M	172494		
432	3005496	Crossing of roads by trench-less technology by laying of HDPE pipe excluding supply of pipe. Laying by HDD Machine Moling. Drilling and laying. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. 200mm dia.	M	20509		
433	3007917	Crossing of roads by trench-less technology by laying of one HT or LT cable (XLPE or CCD / Cable in Co-extruded Duct with or without embedded OFC) with HDPE pipe excluding supply of pipe. Laying by Tractor Moling.Drilling and laying. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. 110/140mm dia.	M	554		
434	3007918	Crossing of roads by trench-less technology by laying of one HT or LT cable (XLPE or CCD / Cable in Co-extruded Duct with or without embedded OFC) with HDPE pipe excluding supply of pipe. Laying by Tractor Moling. Drilling and laying. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. 160mm dia.	M	1344		
435	3007919	Crossing of roads by trench-less technology by laying of one HT or LT cable (XLPE or CCD / Cable in Co-extruded Duct with or without embedded OFC) with HDPE pipe excluding supply of pipe .Laying by Tractor Moling. Drilling and laying. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be	M	301		

		updated in GIS. 200mm dia.				
436	3007049	Installation of slotted angle	M	16		
437	3007060	Installation of DT/TP MCB upto 45A in the DB	EA	1		
438	3007061	Installation of DT/TP Isolator upto 45A on wall/ Slotted angle from Meters outgoing	EA	1		
439	3006367	Stringing and sagging of the following LT AB cables, with help of proper tool i.e. pullies, cable drum jacks, pulling & crimping tool etc. - 3 cores of 95 sqmm, 1 core of 50 sqmm Al conductor with XLPE insulation and messanger wire (with or without one 16 sq.mm. additional core for lighting)	M	5998		
440	3006368	Stringing and sagging of the following LT AB cables, with help of proper tool i.e. pullies, cable drum jacks, pulling & crimping tool etc. - 3 cores of 50 sqmm, 1 core of 25 sqmm Al conductor with XLPE insulation and messanger wire (with or without one 16 sq.mm. additional core for lighting)	M	2781		
441	3006369	Stringing and sagging of the following LT AB cables, with help of proper tool i.e. pullies, cable drum jacks, pulling & crimping tool etc. - 3 cores of 150/120sqmm, 1 core of 70 sqmm Al conductor with XLPE insulation and messanger wire (with or without one 16 sq.mm. additional core for lighting)	M	515736		
442	3006390	Installation of Piercing connectors on LT AB cables at pole top height to make proper tap-off connections - Main cables size : 16-95 sqmm, Tap cables size : 4-35 sqmm	EA	5584		
443	3006391	Installation of Piercing connectors on LT AB cables at pole top height to make proper tap-off connections - Main cables size : 50-150 sqmm, Tap cables size : 6-35 sqmm	EA	1805		
444	3006392	Installation of Piercing connectors on LT AB cables at pole top height to make proper tap-off connections - Main cables size : 25-95 sqmm, Tap cables size : 25-95 sqmm	EA	37		
445	3006393	Installation of Piercing connectors on LT AB cables at pole top height to make proper tap-off connections - Main cables size : 50-150 sqmm, Tap cables size : 50-150 sqmm	EA	19038		
446	3006394	Installation of Piercing connectors on LT AB cables at pole top height to make proper tap-off connections - Main cables size : 16-95 sqmm, Tap cables size : 1.5-10 sqmm	EA	131		
447	3006395	Straight through jointing of U/G cable to AB Cables. The job involves preparing U/G cables for termination, fitting heat shrinkable breakouts, non tension connectors, heat shrinkable sleeves to make proper joint with AB	EA	3		

		Cable. Joint to be made at pole near to pole top. - U/G cables : 35-150 sqmm, ABC cables : 25-120 sqmm				
448	3006396	Straight through jointing of U/G cable to AB Cables. The job involves preparing U/G cables for termination, fitting heat shrinkable breakouts, non tension connectors, heat shrinkable sleeves to make proper joint with AB Cable. Joint to be made at pole near to pole top. - U/G cables : 150-300 sqmm, ABC cables : 150-185 sqmm	EA	2		
449	3006397	Mid span jointing of individual cores LT ABC cables using waterproof pre-insulated hexagonal compression connectors - ABC cables : 70 to 150 sqmm	EA	30		
450	3006398	Mid span jointing of individual cores LT ABC cables using waterproof pre-insulated hexagonal compression connectors - ABC cables : 16 to 50 sqmm	EA	1		
451	3006399	Mid span jointing of following sizs bare messangers using full-tension DIN-compression connectors - Bare Messanger : 35 to 120 sqmm	EA	303		
452	3006400	Fixing of eye hook or GI clamps or dead end clamps or suspension clamps with turn buckle for following sizes of messenger wire - Messenger size : 35-120 sqmm	EA	73003		
453	3006401	Fixing of heat shrinkable end cap on individual coares of 16 to 150 sqmm AB cables.	M	1		
454	3006404	Installation of following after fixing on wall/slotted angle frame etc as required including connection through reinforced flexible conduit. The job shall be as per approval of Engineer In Charge and include supply of consumable like PVC bobbin, black lap, socket etc shall be supplied by the contractor and Angle iron split, nuts & bolts shall be supplied by BSES on free issue basis. - Single Phase DB	EA	3191		
455	3006403	Installation of following after fixing on wall/slotted angle frame etc as required including connection through reinforced flexible conduit. The job shall be as per approval of Engineer In Charge and include supply of consumable like PVC bobbin, black lap, socket etc shall be supplied by the contractor and Angle iron split, nuts & bolts shall be supplied by BSES on free issue basis. - Three Phase DB	EA	364		
456	3007032	End termination of cable, in pole/wall/structure mounted distribution boxes/meter boxes, including fixing of cable glands, crimping of lugs as required as per site requirement and instructions of site engineer for following sizes of cables. : Upto 2Core x 25 Sqmm	EA	65033		

457	3007033	End termination of cable, in pole/wall/structure mounted distribution boxes/meter boxes, including fixing of cable glands, crimping of lugs as required as per site requirement and instructions of site engineer for following sizes of cables. : From 2/4Core x 25 Sqmm to 3.5 Core x 70	EA	6724		
458	3007034	Making Connections/Joints between connductors, wires etc. for proper earthing connection with use of clamps/connectors/lugs/wires. Clamps, connectors, lugs shall be free issue items.Connection between 6/8 swg wire and bare conductor of 35-70 Sq.mm. Or equivelent	EA	6777		
459	3007035	Making Connections/Joints between connductors, wires etc. for proper earthing connection with use of clamps/connectors/lugs/wires. Clamps, connectors, lugs shall be free issue items.Connection between bare conductor of 35 to 70 Sq.mm. and another bare conductor of 35 to 70 Sq.mm.	EA	13361		
460	3007036	Making Connections/Joints between connductors, wires etc. for proper earthing connection with use of clamps/connectors/lugs/wires. Clamps, connectors, lugs shall be free issue items.Connection between Earth conductor 10 to 35sq.mm. and panels/ equipments	EA	192		
461	3007418	Fixing of following sizes of cable on wall/structure/poles by providing proper support with cleats, clamps, ties. Cleats, clamps, ties shall be free issue items. - Upto 3.5Core x 50 Sqmm	M	211		
462	3007065	Fixing of following sizes of cable on wall/structure/poles by providing proper support with cleats, clamps, ties. Cleats, clamps, ties shall be free issue items. - above 3.5Core x 50 to 3.5Core x 150 Sqmm	M	2		
463	3007419	Fixing of following sizes of cable on wall/structure/poles by providing proper support with cleats, clamps, ties. Cleats, clamps, ties shall be free issue items. - above 3.5Core x 150 to 3.5Core x 300 Sqmm	M	490		
464	3007420	Fixing of following sizes of G.I.pipes for cable entry. The work shall include excavation/back filling of soil, breaking/repairing of wall/plinth, grouting, fixing of clamps etc. - Upto 50 mm dia.	M	12057		
465	3007421	Fixing of following sizes of G.I.pipes for cable entry. The work shall include excavation/back filling of soil, breaking/repairing of wall/plinth, grouting, fixing of clamps etc. - 50 to 100 mm dia.	M	9403		
466	3007066	Laying of cables of following sizes of cable through G.I. Conduits of various sizes - Upto 25 mm outer dia.	M	35		

467	3007067	Laying of cables of following sizes of cable through G.I. Conduits of various sizes - above 25 to 50 mm outer dia.	M	23		
468	3006405	Laying of Cable of following size with 3 core Al. Conductor (XLPE Insulated) and 1 Core bare Al. messanger Cum neutral - HT AB Cable 3Cx150+1Cx150 sqmm	M	6255		
469	3006406	Laying of Cable of following size with 1 core Al. Conductor (XLPE Insulated) and 1 Core bare Al. messanger Cum neutral - HT AB Cable 1c x95+1cx34 sq. mm	M	21346		
470	3006407	Termination of - HT AB Cable 1Cx95 sqmm	EA	925		
471	3006408	Termination of - HT AB Cable 1Cx150 sqmm	EA	308		
472	3006409	Termination of - 25 sq. mm. earthing cable	EA	9697		
473	3006410	Fixing of suspension Clamps for 11KV ABC for below mentioned sizes - HT AB Cable 3Cx95+1Cx95sqmm	EA	43		
474	3006411	Fixing of suspension Clamps for 11KV ABC for below mentioned sizes - HT AB Cable 3Cx150+1Cx150sqmm	EA	516		
475	3006413	Fixing of dead end clamps for 11KV ACB for below mentioned sizes - HT AB Cable 3Cx95+1Cx95sqmm	EA	277		
476	3006412	Fixing of dead end clamps for 11KV ACB for below mentioned sizes - HT AB Cable 3Cx150+1Cx150sqmm	EA	67		
477	3006414	PG clamp for 120/150 sqmm messenger wire	EA	844		
478	3006415	HT Al. Bus Bar 50x10x500 mm mounted an 11KV Solid core insulator for holding T off connectors	EA	3		
479	3006417	11 kv Heat Shrinkable sleeving for jumpering	M	5		
480	3006418	11 kv Heat Shrinkable sleeving on Bus bar	M	1		
481	3007037	Clamps & connector for jumpering of transformer/LAS/GO swithches/D.O sets/P.G/Tee clamps etc. including Nuts & Bolts.	EA	6136		
482	3009083	Charging of complete system including transformer, HT ABC etc.charges are per transformer	EA	883		
483	4060510	Installation of 50KVA, 6.35/0.24KV, 1 Phase Distribution Transformer on 9.2m Polygonal Steel Pole.	EA	3		

484	4060511	Preparation of foundation by Excavation of size. 2 mtr x 2 mtr of depth 60 cm or till firm soil from the existing ground level; Levelling of excavated surface; Providing & laying CC 1:4:8 of thickness 10cm (1 cement : 4 coarse sand :8 Stone aggregate of 40 mm nominal size); Levelling of CC surface; Erection and placing of precast plinth on levelled CC surface. (Transportation and loading / unloading is excluded and relevant service code may be used as required); Refilling of the available earth in layers not more than 30cm i/c compaction & watering all round the Transformer.	EA	397		
485	4060512	Erection of 9.2m Polygonal Steel Pole with Crane. Cost of hiring crane is excluded.	EA	13		
486	3012261	Installation , testing and commissioning of 11/0.433 KV distribution Transformer of following sizes on existing Structure including jumpering of HT side and connecting the leads on LT side : 250KVA on 2-pole structure any type. Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site.	EA	42		
487	3012262	Laying and connecting of HT jumper or HT cable from HT Switchgear or DD Fuse to TR with EPR+Silicone taping / HT boot and LT single core cable of size 630 sq. mm. from TR to LT Main including fixing the same by means of proper wooden cleats etc. as required (The work includes crimping of sockets earthing & taping etc. as req). For 250 KVA P/M Transformer.	EA	36		
488	4060594	Installation , testing and commissiong of 11/0.433 KV distribution Transformer of following sizes on existing plinth including grouting of frames required on HT & LT side for cables as per BSES Design & practice. 2000 KVA Transformer any type	EA	1		
489	4060596	Laying and connecting of 11KV cable of size 3x150 sq. mm. from HT switch gear to the transformer and LT single core cable of size 630 sq. mm. from TR to LT board including fixing the same by means of proper wooden cleats etc. as required (The work includes crimping of	EA	1		

		sockets earthing & taping etc. as req). For 2000 KVA Transformer				
490	4060595	Installation , testing and commissiong of 11/0.433 KV distribution Transformer of following sizes on existing plinth including grouting of frames required on HT & LT side for cables as per BSES Design & practice. 1500 or 1600 KVA Transformer any type Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site.	EA	99		
491	4060597	Laying and connecting of 11KV cable of size 3x150 sq. mm. from HT switch gear to the transformer and LT single core cable (eg: 630, 1000 sqmm size) from TR to LT board including fixing the same by means of proper wooden cleats etc. as required (The work includes crimping of sockets earthing & taping / boot etc. as req). For 1500 or 1600 KVA Transformer	EA	103		
492	4060598	Laying & connecting of 2.5MM2, 10C, 1.1KV Control cable from TRF to relay of RMU , to provide protection for any 11/0.433 TRF.	EA	69		
493	4060090	Replacement of each strip in S/Ph or 3/Ph DB	EA	1		
494	4000211	SUPPLY, PRECAST RCC TRENCH COVER OF VARIOUS SIZE VARYING 1500 MM. IN "LENGTH, 450 MM. IN WIDTH & 50 MM. IN THICKNESS, WITH 3 MM THICK 50MM "WIDE,MS STRIP ALL AROUND WELDED TO THE STEEL REINFORCEMENT BAR OF 6MM" DIA, 100 MM CENTRE TO CENTRE & TWO NO. HOOKS OF 12 MM DIA BAR FOR " LIFTING GAVING FINISHING TOP SURFACE & GRADE OF CEMENT CONCRETE M-20 (ITEM TO BE EXECUTED DURING/AFTER ENERGISATION).	SQM	353		
495	3012347	Prov/Fix Exhaust Fan 12"	EA	30		
496	3012348	LT Straight though Jointing	EA	241		
497	3012349	LT Termination	EA	6116		
498	3012362	Sagging & stringing of XLPE Insulated DOG Conductor per conductor /per mtr.route	M	39879		

		length.				
499	3012363	Installation of tension Clamp on Disc Insulator for insulated condcutor	EA	243		
500	3012364	Installation of tie on Pin Insulator for insulated conductor	EA	496		
501	3012365	Installation of Piercing connectors on XLPE Insulated DOG Conductor.(Covered Conductor to Covered Conductor / Covered Conductor to Bare Conductor)	EA	222		
502	3012366	Mid span jointing of individual cores on XLPE Insulated DOG Conductor	EA	24		
503	3012611	Installation, Testing & Commissioning of Chemical earthing (per pit) complete in all respect in soft soil. Kit (to be provided by BRPL) contains 17.2mm diameter 3metre long Copper bonded rod, 25kg chemical and one polyplastic pit cover. All kind of transportation of free issue items from BRPL store to site shall be in contractor's scope. Mesh Earth resistance shall be in the range of less than 2Ohm (with soil resistivity 15ohm meter) to be checked and verified by the contractor to BRPL Engineers after work completion	EA	2249		
504	3012612	Installation, Testing & Commissioning of Chemical earthing (per pit) complete in all respect in rocky soil. Kit (to be provided by BRPL) contains 17.2mm diameter 3metre long Copper bonded rod, 25kg chemical and one polyplastic pit cover. All kind of transportation of free issue items from BRPL store to site shall be in contractor's scope. Mesh Earth resistance shall be in the range of less than 2Ohm (with soil resistivity 15ohm meter) to be checked and verified by the contractor to BRPL Engineers after work completion	EA	16582		
505	3012613	Laying of 50x6mm GI strip at 500mm depth (minimum) from finished ground level for fomation of mesh by exothermic joint. Rod to rod, mesh formation through GI strip with exothermic joint . Mould & Gun powder required to prepare exothermic joints and GI strips (50mmx6mm) to connect the pits are to be issued from BRPL store, Providing of bolts & nuts shall be in contractor's scope. All kind of transportation of free issue items from BRPL store to site shall be in contractor's scope. Mesh Earth resistance shall be in the range of less than 2Ohm (with soil resistivity 15ohm meter) to be checked and verified by the contractor to BRPL Engineers after work completion	M	37224		

506	3012614	Laying of 50x6mm GI strip to connect equipments to mesh. Mesh end -- jointing through exothermic joint. Equipment end -- jointing by bolting arrangement. Mould & Gun powder required to prepare exothermic joints and GI strips (50mmx6mm) to connect equipment & mesh are to be issued from BRPL store, Providing of bolts & nuts shall be in contractor's scope. All kind transportation of free issue items from BRPL store to site shall be in contractor's scope. Mesh Earth resistance shall be in the range of less than 2Ohm (with soil resistivity 15ohm meter) to be checked and verified by the contractor to BRPL Engineers after work completion	M	52094		
507	New	Mounting, testing and commissioning of accessories on the existing structure of P/M S/Stn or I/D s/stns. by means of suitable nut, bolts & clamps etc. including mounting on necessary frames electrically interconnecting with each other after Crimping the sockets for a LT ACB 3200 Amps. (Unit: No.)	No.	99		
508	New	Loading, Unloading, lifting, lowering, moving horizontally and placement of a heavy equipment / object using crane (upto 10Ton), including supply of slings, wire ropes , hooks, U-bolts etc required for safe material handling. (It may be used in cases where transportation with truck is not involved, for example DT/RMU plinth height raising.) (Unit: per heavy equipment)	No. (per heavy equipment)	3012		
509	New	Laying one HT or LT cable (XLPE or CCD / Cable in Co-extruded Duct with or without embedded OFC) without HDPE pipe by trench-less technology. Laying by HDD Machine Moling. Drilling. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. (eg: 3X150, 3X300, 3X400,1X800, 4CX50, 4Cx150, 4CX300 ,4CX400 sq mm) (Unit: M)	M	237299		
510	New	Laying one HT or LT cable (XLPE or CCD / Cable in Co-extruded Duct with or without embedded OFC) without HDPE pipe by trench-less technology. Laying by Tractor, Moling, Drilling. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. (eg: 3X150, 3X300, 3X400, 4CX50, 4Cx150, 4CX300 ,4CX400 sq mm) (Unit: M)	M	2198		
511	New	Use pneumatic or electo-mechanical jack hammer to drill / dig / break / chip tough surface such as concrete, rock, etc. (Unit: CuM) for Digging of Test pit of the required size at site for identification of the cable alongwith refilling with loose earth and ramming the surface including removal of Malba.The volume of this shall be deducted from Item Labour charges for digging of this schedule(Only for	CuM	1450		

		those test pit which are lying on the cable digging route).For CC Road /Hard Surface				
512	New	Labour charges including use of pneumatic or electo-mechanical jack hammer to drill / dig / break / chip tough surface such as concrete, rock, etc. for digging of the trench of the required size including the backfilling with the excavated earth ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less. Digging of cable trench in Dense carpeted bituminous roads/CC Road/Asphaltic Road for 1.1KV LT 4X150/300/400 sq.mm Single /Double / Triple circuit of size 400X875 mm as per Drg.# 8,Type A-1.	M	24672		
513	New	Labour charges including use of pneumatic or electo-mechanical jack hammer to drill / dig / break / chip tough surface such as concrete, rock, etc. for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Dense carpeted bituminous roads/CC Road/Asphaltic Road for 11KV H.T. 3X150/300/400 sq.mm /1X800 sq mm Single Circuit of size 400X1055 mm as per Drg.# 6 and Type A-2.	M	38496		
514	New	Labour charges including use of pneumatic or electo-mechanical jack hammer to drill / dig / break / chip tough surface such as concrete, rock, etc. for digging of the trench of the required size including the backfilling with the excavated earth and ramming the same and disposing the surplus excavated material all complete. Payment shall be released as per actual depth excavated or as mentioned in drawing whichever is less.Digging of cable trench in Dense carpeted bituminous roads/CC Road/Asphaltic Road for 11KV H.T. 3X150/300/400 sq.mm Double Circuit of size 650X1055 mm as per Drg.# 7 and Type B-1	M	3626		

515	New	Installation, testing and commissioning of 250kVA 11/0.4 Package Substation including all internal components such as RMU, transformer, ACB, MCCB, APFC, etc; grouting of PSS; setting of all relays, FPI, etc as per standard design; Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site. Protection testing of RMU includes Hi-pot or HV test, Insulation Resistance test, Contact Resistance test, CT/PT testing (Ratio, Polarity, etc), and testing of relay / FPI / VPI / etc through primary injection and their setting as per BSES standards (Unit: No.)	No.	10		
516	New	Installation, testing and commissioning of 400kVA 11/0.4 Package Substation including all internal components such as RMU, transformer, ACB, MCCB, APFC, etc; grouting of PSS; setting of all relays, FPI, etc as per standard design; Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site. Protection testing of RMU includes Hi-pot or HV test, Insulation Resistance test, Contact Resistance test, CT/PT testing (Ratio, Polarity, etc), and testing of relay / FPI / VPI / etc through primary injection and their setting as per BSES standards (Unit: No.)	No.	2		

517	New	Installation, testing and commissioning of 630kVA 11/0.4 Package Substation including all internal ccomponents such as RMU, transformer, ACB, MCCB, APFC, etc; grouting of PSS; setting of all relays, FPI, etc as per BSES standard design; Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site. (Unit: No.) Protection testing of RMU includes Hi-pot or HV test, Insulation Resistance test, Contact Resistance test, CT/PT testing (Ratio, Polarity, etc), and testing of relay / FPI / VPI / etc through primary injection and their setting as per BSES standards (Unit: No.)	No.	2		
518	New	Installation, testing and commissioning of 1000kVA 11/0.4 Package Substation including all internal ccomponents such as RMU, transformer, ACB, MCCB, APFC, etc; grouting of PSS; setting of all relays, FPI, etc as per BSES standard design; Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site. (Unit: No.) Protection testing of RMU includes Hi-pot or HV test, Insulation Resistance test, Contact Resistance test, CT/PT testing (Ratio, Polarity, etc), and testing of relay / FPI / VPI / etc through primary injection and their setting as per BSES standards (Unit: No.)	No.	10		

519	New	Installation, testing and commissioning of 2x1000kVA 11/0.4 Package Substation (G+1) including all internal ccomponents such as RMU, transformers, ACB, MCCB, etc; grouting of PSS; setting of all relays, FPI, etc as per BSES standard design; Protection testing of distribution transformer includes insulation resistance (IR) test, turns ratio test, winding resistance measurement, magnetic current test, BDV measurement (for oil type); functional tests such as tripping of HT breaker on WTI, OTI, Oil level (MOG), Gas pressure or Buchholz relay exceeding predefined values and on opening of transformer door whichever is applicable; laying and connection of control and auxiliary power cables in between transformer and 11KV switchgear / RMU; providing and transportation of testing equipment at site. (Unit: No.) Protection testing of RMU includes Hi-pot or HV test, Insulation Resistance test, Contact Resistance test, CT/PT testing (Ratio, Polarity, etc), and testing of relay / FPI / VPI / etc through primary injection and their setting as per BSES standards (Unit: No.)	No.	6		
520	New	Fixing of MS mesh fencing 2.5 mtr height with gate frame of 3 mtr x 2.5 mtr with complete material including setting, welding, fabrication, red-oxide primaring, painting; eg angle, channel, civil material etc complete as per specification & drawing of BSES. Fencing panel and MS Channel to used from BSES store. Single MS Channel at intervals of max 1.2m and box MS Channel at corners to be grouted in ground to support fencing. Rest material such as Kunda, Hinge, etc shall be supplied by contractor. (Unit: SqM)	SqM	20249		
521	New	Dismantling and demolishing brick work / plinth for all types of structure including stacking of serviceable material or salvageable scrap, including labour, equipment, safety precautions, all complete as per specification, drawing and instruction of engineer. (Unit: CuM)	CuM	115		
522	New	Crossing of roads with two HDPE pipe along the same route by trench-less technology excluding supply of pipe. Laying by HDD Machine Moling.Drilling and laying. 110/140mm dia. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. (Unit: M Route length)	M Route Length	1150		
523	New	Crossing of roads with two HDPE pipe along the same route by trench-less technology excluding supply of pipe. Laying by HDD Machine Moling.Drilling and laying. 160mm dia. It also include Preparation of map marking route &	M Route Length	1150		

		depth of cable (section wise) and coordinates of joints which can be updated in GIS. (Unit: M Route length)				
524	New	Crossing of roads with two HDPE pipe along the same route by trench-less technology excluding supply of pipe. Laying by HDD Machine Moling.Drilling and laying. 200mm dia. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. (Unit: M Route length)	M Route Length	1150		
525	New	Crossing of roads with two HDPE pipe along the same route by trench-less technology excluding supply of pipe. Laying by Tractor Moling.Drilling and laying. 110/140mm dia. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. (Unit: M Route length)	M Route Length	1150		
526	New	Crossing of roads with two HDPE pipe along the same route by trench-less technology excluding supply of pipe. Laying by Tractor Moling. Drilling and laying.160mm dia. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. (Unit: M Route length)	M Route Length	1150		
527	New	Crossing of roads with two HDPE pipe along the same route by trench-less technology excluding supply of pipe. Laying by Tractor Moling. Drilling and laying. 200mm dia. It also include Preparation of map marking route & depth of cable (section wise) and coordinates of joints which can be updated in GIS. (Unit: M Route length)	M Route Length	1150		
528	New	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). 1500 or 1600 KVA Transformer.	No.	1		
529	New	Dismantling of the following from kiosk/ indoor type. S/stn. Including their safe removal and stacking at tent site including loading and unloading . (the work also includes the removal of all the electric/earth connections). 2000 KVA Transformer.	No.	1		
530	New	Stringing and sagging of the following LT XLPE Armoured cables supported on messenger wire with fabricated clamps, with help of proper tool i.e. pullies, cable drum jacks, pulling & crimping tool etc.; Fabricated clamp to support LT cable with messenger wire in contractor's supply; - 4C150 or 4C300 sq mm	M	2500		

531	New	Installation of safety padlocks including welding-1 of S/S Door & Lock with base plate, welding-2 of S/S Door & Chain with base plate, transportation among substations, sites and store; sanding / smoothing the edges and weld with sand paper, apply red-oxide primer and spray silver paint	No.	100		
532	New	Installation of bird cap / transparent polycarbonate box per HVDS transformer	No.	100		
533	New	Installation bird spike guard on overhead insulators or insulation sleeve on bare overhead conductor (Unit: per pole)	Per Pole	100		
534	New	Dismantling of MS mesh / FRP fencing including their safe removal and stacking at tent site nearby	SqM	230		
535	New	Installation of FRP fencing including grouting of vertical post sections in pedestal and fixing it with fencing panels with nut bolting arrrangement	SqM	50		
536	New	Making Straight through joint with installing extra cover and poring resin hardener for additional protection in water logged areas. Note: St.Th.joint kit will be provided by BSES as free supply.	No.	1		
537	New	Erection of FRP pole (6 Mtr) ,i/c refilling,ramming of the foundation and including removal of malba & transportation of pole from stacking site within 1 Km.distance excluding Digging,Concreting,& Brick Padding.	No.	1		
538	New	Making Straight through joint having only 1 core instead of 3 core with Long ferrule	No.	1		
539	New	Installation, testing and commissioning of 11kV, Single Phase Breaker with control panel on pole along with supporting fittings	No.	1		
540	New	Installation of fire protecion device on top of transformer through suitable mounting arrangement (steel structure) including its fabrication	No.	1		
541	New	Installation of normal / smart MCCB of any rating with box with suitable clamping on supporting arrangement	No.	70		
542	New	Installation of guard channel or painted broken pole to avoid pole damage i/c refilling, ramming of the foundation and including removal of malba & transportation of pole from stacking site within 1 Km.distance excluding Digging,Concreting,& Brick Padding.	No.	230		
543	New	GPR survey and cable route tracing with tracer to be arranged by contractor to ensure that existing utilities are not damaged. Pre and Post Scheme Execution GPR Report to be submitted	M	115000		
544	New	Installation of reflective tape / sticker on pole	per pole	100		
545	New	Installation of Mobile DT with Trolley with HT and LT Connection and Removal of Mobile DT with Trolley with HT and LT Disconnection with complete safety clearance and cautionary tape	EA	115		

		including Complete Transportation for movement of Mobile DT Trolley .(Mobile DT with Trolley will be provided by BSES)				
546	New	Suppy of Digital board for New sub Station regarding safety awareness and branding specially road side sub station as per BSES Specifications	EA	1		
547	New	Installation of space constraint board regarding safety precautions in Hindi / English as per BSES Specifications	EA	1		
548	New	Zebra painting on toe-walls, DTR plinths, and feeder plinths	Sqmtr	1150		
549	New	Supply of Functional Location Board as per BSES Specifications	EA	1		
		Total				
		GST @ 18%				
		Total i/c GST				

ANNEXURE –I : BID FORM

To,

Head of Department
Contracts & Material Deptt.
BSES RAJDHANI Power Ltd
Ist Floor, C Block
BSES Bhawan, Nehru Place
New Delhi 110019.

Dear Sir,

1 We understand that BRPL is desirous of awarding the contract for…….. (Name of the Work) work in its licensed distribution network area in Delhi.

2 Having examined the Tender Documents for the above named works, we the undersigned, offer to deliver the goods/services in full conformity with the Terms and Conditions, technical specifications & Scope of Work as may be determined in accordance with the terms and conditions of the contract. The quoted amounts for this work are in accordance with the Price Schedules attached herewith and are made part of this bid.

3 If our Bid is accepted, we undertake to deliver the entire goods/services as per delivery/ completion schedule mentioned in Section III from the date of award of order/letter of intent.

4 If our Bid is accepted, we will furnish a Contract Cum Performance Bank Guarantee (CPBG) for due performance of the Contract in accordance with the Terms and Conditions of the NIT.

5 We agree to abide by this Bid for a period of 180 days from the due date of bid submission and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

6 We declare that we are aware of the provision of all Laws associated with the supply of equipments/materials or Services and the prices have been quoted accordingly.

7 Unless and until Letter of Intent is issued, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.

8 We understand that BRPL is not bound to accept the lowest, or any bid BRPL may receive.

9 There is provision for Resolution of Disputes under this Contract, in accordance with the Laws and Jurisdiction of Contract.

10 We do hereby agree and shall abide the terms of tender documents/agreement, in full

Dated this..... day of..... 2022

Signature..... In the capacity of ……

.....duly authorized to sign for and on behalf of

(IN BLOCK CAPITALS).....

*****

ANNEXURE – II
BIDDER'S DETAILS

S.No.	Item	Description
1	**Company Name**	
2	BRPL Vendor Code (If Registered)	
3	Area of Specialization	
4	Company Founded Year	
5	Type of Company	
6	Constitution(Company Registration number)	
7	Name of Director / Mobile Number	
8	Name of other main person / Mobile Number	
9	Vendor Address	
10	Vendor Contact no	
11	Vendor Email ID	
12	No. of Manpower on payroll (Executive/Skilled/Semi-Skilled/Un-skilled)	
13	No. of Contractual Manpower (Executive/Skilled/Semi-Skilled/Un-skilled)	
14	Other Office / Factory Address	
15	ISO certification	
16	PAN	
17	PF/ESI	
18	Shop Establishment Certificate (If Applicable)	
19	Electrical License Detail (If Applicable)	
20	GST	
21	GST Registration Date	
22	SSI	
23	MSME Registration Number (If Applicable)	
24	Turn Over FY 2021-22 (Rs. Cr.)	

25	Turn Over FY 2022-23 (Rs. Cr.)	
26	Turn Over FY 2023-24 (Rs. Cr.)	
27	Turn Over FY 2024-25 (Rs. Cr.)	
28	Profit after Tax FY 2021-22 (Rs. Cr.)	
29	Profit after Tax FY 2022-23 (Rs. Cr.)	
30	Profit after Tax FY 2023-24 (Rs. Cr.)	
31	Profit after Tax FY 2024-25 (Rs. Cr.)	
32	Networth (Rs Cr.)	
33	Bank Guarantee Limit (in Cr.)	
34	Over Draft/Cash Credit Limit (in Cr.)	
35	Present Order Booking (Rs Cr.)	
36	Order executed with Reliance ADA (Rs Cr.)	
37	Name & Detail of relative working in BRPL	
38	Main Customer	
39	Details of orders executed / Under Execution	Please submit the details in Attachment - A

BSES Rajdhani Power Ltd.

ATTACHMENT – A

Reference List of Order Executed / under Execution by the Vendor (M/s ……)

A) Major Orders Executed

SN	Name of Project	Client name & address	Client contact Detail (Person name, e-mail ID, Mobile & landline number)	Vendor's Scope of Work	Date Of Award	Value of Work (Rs in Lakhs)	Completion date as par Order	Actual Completion Date	LD / Penalty imposed, if any (Rs in Lakhs)	Litigation / Arbitration (Y/N) (If Yes, furnish details)	Remarks
1.											
2.											
3.											
4.											
5.											

B) Orders Under Execution

SN	Name of Project	Client name & address	Client contact Detail (Person name, e-mail ID, Mobile & landline number)	Vendor's Scope of Work	Date Of Award	Value of Work (Rs in Lakhs)	Completion date as par Order	Actual Completion Date	LD / Penalty imposed, if any (Rs in Lakhs)	Litigation / Arbitration (Y/N) (If Yes, furnish details)	Remarks
1.											
2.											
3.											
4.											
5.											

ANNEXURE – III

ENVIRONMENTAL, OCCUPATIONAL HEALTH & SAFETY CONDITIONS OF CONTRACT

1.0 General Requirements

1.1 The contractor shall ensure that safety of all the workers, materials, Installation and equipment's belonging to him or to others and working at the site is ensured through effective and practicable safety management systems.

1.2 The contractor shall be responsible for compliance to provisions of all safety requirements under various notices, acts, rules and relevant applicable legislations.

1.3 The contractors shall comply with all health & safety requirements as deemed necessary by BRPL from time to time.

1.4 Works shall be carried out by the contractor after taking necessary "Permit to work". Also the work shall not be carried out without use of Protective equipment's like shoes, safety belts, helmets etc. adhering to safety compliance.

1.5 All the equipment's being used shall be timely calibrated and a copy of the same shall be submitted to Safety Department within 4 weeks of the acceptance of contact and thereafter on every renewal.

2.0 EHS Policy

The contractor as per requirement of CEA Measures Relating to Safety and Electric Supply Regulations, 2010 shall follow the Environment, Health & Safety policy of BRPL.The contractor shall implement quality, health & safety management systems in accordance to BRPL EHS policy and ensure that intentions of such policy are met.

3.0 Health & Safety Plan

3.1 Within 4 weeks of the notification of acceptance of the tender, the contractor shall submit detailed and comprehensive Contract specific health & safety plan incorporating HIRA (Hazard Identification & Risk Analysis) to BRPL. This plan shall necessarily include detailed policies, procedures, method statement for each activity to be performed and regulations which, when implemented, will ensure compliance of the contract provisions stated herewith.

3.2 The contractor shall submit health & safety plan for such activities required to be carried out under the awarded contract as deemed necessary by BRPL.

3.3 Health & safety plans, procedures, method statements, etc. developed & submitted by contractors shall be reviewed and approved by designated authorities of BRPL (Head Safety). First cut of the plan shall be submitted to Safety Department within 2 weeks of agreement of contract. After suggested rectification, the final plan shall be submitted to Head Safety not later than 4 weeks of the agreement of contract. A copy of the same shall be given to the engineer in charge also. The document shall carry the signatures of the authorized signatory (the person who has signed the

agreement document of contract).

3.4 The health & safety plans, procedures, method statements, etc. shall not be changed without prior review and approval by designated authorities of BRPL.

4.0 OHS Organization & Responsibility

4.1 The contractor supervisor will play the role of safety supervisor. The safety supervisor shall hold a diploma degree from a recognized institute or university as per CEA Regulations, 2010. Also simultaneously contractor has to ensure their competency in safety or EHS with 40 hours training from reputed agency (like RLI/Allied Boston/ National Safety Council) or trainer, which should be verified earlier by BRPL safety department accordingly. The copy of training certificate shall be submitted to Safety Department within 4 weeks of agreement of contract. Time extension may be given in extraordinary situation subjected to submission of any convincing document carrying valid proof of near future plan of the training.

4.2 The training certificate should not be more than one-year-old.

4.3 Apart from above, as an owner of the company the contractor & their other key persons are also responsible for safety compliance and related issues.

5.0 First Day at Work –Induction Training and Issuance of ID-Card

5.1 The contractor shall ensure that all his workers have under gone the safety induction and have been issued with a valid ID card prior to start work at BRPL site. The proof of the same shall be submitted to Safety Department within 4 weeks of agreement of contract.

5.2 All contractor workers shall undergo above as per the BRPL site specific procedure issued from time to time.

5.3 The contractor shall ensure that no worker is in any O&M activities until the valid ID card is issued and the same is available by each worker at site including that of sub-contractor(s).

5.4 In case any worker lost the ID card issued to him, the contractor shall ensure that such incidences are promptly reported to BRPL and duplicate or new ID card is issued immediately after completing formalities as deemed necessary by BRPL.

6.0 Provision of Safe Working Conditions

6.1 Proper barricading shall be created during height work, cable laying work, working on pole, etc. Dimensions of barricading while cable laying work- Height- 2 mtr, Length- 1.5 mtr. There shall not be any gap in between two barricades. LED Bacon light shall be placed at 1st and every 4th barricade. However, while working on pole during supply maintenance work there should be a barricading cone and caution tape . In narrow lanes, where proper barricading as per rules is not possible, use barricading as per the approval of respective safety circle head in writing and copy forwarded to safety and uploading in QMS.

6.2 **PPE' Requirement**

6.2.1 The contractor shall ensure all the required PPEs given in clause 6.2 and shall allow their workers to start work at site only after proper verification of adequacy of safety gears/PPE required for the

specific job at site by the Safety personnel/Site Engineer of BRPL.

Contractor has to ensure the quantity and quality of PPEs during procurement and continuous usage of following PPE's by his staff.

S.NO.	NAME OF THE PPEs	LINEMAN / FITTER/SKILLED	HELPER/UNSKILLED	SUPERVISOR
1	SAFETY HELMET	✓	✓	✓
2	FULL BODY HARNESS (POSITIONING BELT)	✓	X	X
3	ELECTRICAL HAND GLOVES	✓	✓	X
4	SAFETY SHOES	✓	✓	✓
5	SAFETY GOGGLES	✓	✓	✓
6	REFLECTIVE JACKET	✓	✓	✓

6.2.2 Contractor has to ensure for proper procurement and distribution of required PPE's among their workers with receiving in attached format (Appendix-3) which will be verified by the safety department during inspection. The entire issuance format duly signed by individual worker and to be verified/ certified by Department Head and the same need to be submitted to Safety Department along with mentioned certificates within 4 weeks of agreement of contract. The sample of the PPE's being procured by the contractor shall be submitted and approved from the Safety Department beforehand.

6.2.3 The contractor has to provide 3 arc protection face shields in each zone (2 for complaint team and 1 for maintenance team) as per specifications mentioned in clause 6.2.5.6.

6.2.4 If any of the contractor staff found without PPEs, the said PPE's will be issued to them from BRPL store with immediate effect. And the 20% extra amount with procurement cost will be recovered from their next monthly bill cycle.

Note: PPEs shall strictly be as per the brand mentioned in clause 6.2.5

6.2.5 **Technical Specification of the PPEs**

6.2.5.1. Safety Shoes – With Composite / Fiber toes (CE approved / IS 15298) – Mandatory for all personnel working at BRPL O&M. The safety shoes shall meet the following features:

1. Electric Shock Resistant Sole
2. Impact Resistant
3. Scrap/Heat Resistant
4. Slip Resistant
5. Oil and Acid Resistant
6. Rubber PU Sole
7. Anti-puncture

Lead MAKE: BATA/HONEYWELL/KARAM

6.2.5.2 Safety Helmets: (IS 2925 - 1984 or DGMS) with chin strap – Mandatory for all personnel working at BRPL O&M. The specification of safety helmet shall be as given below:

V-GARD HDPE Yellow With 4 Point Fas Trac Ratchet Suspension

Shell Material	UV stabilized HDPE, Non vented
Suspension	• With 4 Point Fas Trac Ratchet Suspension sewn headband • Textile straps made from polyester Suspension • point fixing: good positioning, ...stability, better air circulation due to ...limited contact areas with the head • Easy clean sweatband
Size	52-62 cm
Accessory slot	Standard 30 mm with removable HDPE dead plugs suitable to leak proof fitting
Approvals	ANSI/ IEC Z89.1 Class E (electrical)
Additional	Low temperature -10°C (acc. to GB2811), High temperature +50°C
Colours	Yellow
weight	360 g

Lead MAKE: 3M / KARAM / UFS

6.2.5.3 Full Body positioning Harness: (CE approved / IS 3521 / EN 361 / EN 355) – Shall be used while work is in progress at height more than 1.8 meter or where from a person may fall and get injured. The specification of the Full body harness shall be as given below:

Anchorage	Adjustable two chest attachment D-rings and A dorsal attachment D-ring
Adaptability	Adjustable shoulder and thigh straps
Convenience	Shoulder and thigh straps differentiated by a dual color scheme.
Ergonomics	Idealy. Positioned sit strap for extended comfort.
Size	Standard
weight	1200GMS
ENERGY ABSORBING FORKED LANYARDS :	
Spec.	44mm wide polyamide webbing.
Length	1.5 Meter

There should not be any metallic part in the full body harness.

Lead MAKE: KARAM /LIFEGEAR/UFS/HONEYWELL

6.2.5.4 Flex Chem Full View Safety Goggles – Shall be used to protect workers eyes from foreign materials and flying particles. Mandatory for all personnel working at BRPL O&M. Safety goggles shall meet the following feature:

1. Acetate lens for special applications requiring superior chemical resistance.
2. Industrial version of tough and popular first responder goggles.
3. SoftFlex low profile frosted frame for increased comfort.
4. Comfortable headband with length adjustment.
5. Indirect venting for comfortable, long lasting wear can be worn with safety helmets and over prescription spectacles.
6. Sightgard + premium anti-fog coating (EN 166 "N") with good anti- scratch properties.

Technical Specification:

Weight	95g.
Lens thickness	1.0mm
Overall width	173mm
Overall length	90mm
Bridge	47.6mm
Lens base	5.5 curve
Lens size	86.1mm verticle, 174mm diagonal
Headband	Adjustable length at max.440mm(long enough to fit together with helmets)
Material & colors	
Lens	Acetate clear, coating, Sightgard + anti-fog according to EN 166 "N" & anti scratch.
Body	PVC smoke
Headband holder	Nylon
Headband	Adjustable grey elastic fixed on frame side parts
Marking / Approvals	
Standard number	EN 166
Frame marking	MSA EN 166 34-FT CE
Lens marking	2C-1.2 MSA 1 FT N CE
Filter class	2C (Ultra violet radiation with enhanced color recognition)
Scale number	1.2: luminous trasmittance-89%
Optical class	1 (best class, for permanent wear)
Mechanical resistance	F (low energy impact 45m/s) T (at extreme temperature -5 to $+55^0$ C)
Resistance to	N(distorted vision due to lens fogging)
UV filter	99.9%
Ordering information	10145578-FlexiChem Sightgard + clear , 6x

Lead MAKE: MSA / UVEX/ UFS/3M/KARAM

6.2.5.5 Electrical Insulating Hand Gloves – Shall be used to prevent electric shock based upon the hazards/risks involved in a particular activity. Safety goggles shall meet the following features:

- Breakthrough manufacturing process for exception dry grip.
- Soft and flexible for enhanced tactility, high dexterity and wearer comfort.
- Ergonomic design featuring tapered fingers to reduce hand fatigue.

- Relaxed wrist for easy on/off.

	For LT work	For HT work
Length	360mm	360mm
Class	2	0
Thickness	3.6mm	1mm
Proof test voltage	20000	5000
Maximum use voltage	11000	1000
Tensile strength	>16mpa[Mega Pascal]	
Puncture resistance	>18N/mm [Newton per mili meter]	
Elongation at break	>600% [Stretching length]	
Tension set	<15%	

- It should be resistant to oil, acid, ultra violet rays and very low temperature.
- Each pair of glove should be marked with class, category, month & year of manufacturing, CE logo, batch no. and certified laboratory no.
- EN certified to electrical and thermal hazards,
- EN certified to thermal & electrical hazards to confirm EN 60-903,
- EN certified to mechanical hazard to EN-388

Lead MAKE: Honeywell / ANSELL/CATU

6.2.5.6 Arc Protection Face Shield

a) ATPV value is 10 cal/cm2
b) It shall have a slotted hard hat and chin guard
c) Visible light transmission (VLT) shall be 70%
d) It should have anti fog lens
e) It should have a provision for replacement of lens and brackets.
f) It should cover the complete face and the complete neck region.
g) It must not hinder the work. Must be comfortable for the height jobs as well as in the ground.
h) Carry bag for the kit.

Lead MAKE: Oberon/Honeywell

6.2.5.7 Certificates required for all PPEs:

1. Manufacturer Certificate
2. Test Certificate
3. Authorization of Dealership/Distribution ship

The copy of all the certificates shall be submitted to safety department within 4 weeks of agreement of contract.

7.0 Integrated Management System & Audits

7.1 The Contractor shall work in the framework of Integrated Management System (IMS) and shall

maintain documentation as prescribed in the IMS Manual of BRPL. IMS Manual can be obtained directly from site engineer/Division Head/Respective Head.

7.2 All contractors during their currency of contract shall strive to continuously improve and demonstrate strict compliance to ISO 9001, 14001 & 45001 standards of BRPL.

7.3 To verify compliance and to continually improve the management system, all contractors shall be subjected to both internal & external audits.

8.0 Medical Examination

8.1 The contractor shall arrange a medical examination of all his employees including his sub-contractor employees like lineman, ALM, supervisor, Fitter, welders, gas cutters, drivers and all the workers supposed to work at height (and any other trade specified deemed necessary by BRPL at the time of deployment then annually) before employing, after illness or injury, if it appears that the illness or injury might have affected his fitness and, thereafter, once in every year as per the provisions of applicable laws or as prescribed by BRPL with proper record.

8.2 Records of medical examination as described above shall be maintained at the contractor premises and a copy of the same shall be submitted to Safety Department within 4 weeks of agreement of contract.

8.3 No person about whom the Contractor knows or has reason to believe that he is a deaf or he has a defective vision or he has a tendency to giddiness shall be required or allowed to work in any O&M operation or other construction work which is likely to involve a risk of any accident either to the worker himself or to any other person.

9.0 Working at Height

9.1 The Contractor shall ensure that all works carried out at a height of 2 Meter or more shall only be started after obtaining a permit to work at height, which shall be issued as per the procedure of BRPL by authorized personnel.

9.2 The contractor shall ensure that all control measures mentioned and agreed through above work permit or as deemed necessary by BRPL are enforced and complied all the time during activities carried out at height.

9.3 Full body harness and ladder along with the required PPEs shall be used during height work.

9.4 Barricading cone and tape shall be used along with creation of proper safety zone.

10.0 Reporting of Near Miss/ Incidents / Dangerous Occurrences

10.1 In case of any incident/ accident occurs during the O&M activities undertaken by the Contractor thereby causing a dangerous occurrence or near miss or any minor or major or fatal injury to his employees due to any reason, whatsoever, it shall be sole responsibility of the Contractor to promptly inform the same to Department Head in prescribed form and also to all authorities envisaged under the applicable laws.

11.0 Suspension of Work

11.1 BRPL shall have the right at its sole discretion to suspend the work till compliance of safety norms, if in its opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and / or property, and / or equipments.

11.2 In such cases, the contractor shall be informed in writing about the nature of hazards and possible injury /accident and he shall comply to remove all shortcomings promptly. Decision of BRPL shall be conclusive and binding on the Contractor in such aspects.

11.3 The contractor shall not be entitled to damages / compensation for suspending of work due to safety reasons and the period of such stoppage of work will not be taken as an extension of time for completion of the facilities as per the work order and will not be the ground for wavier of levy of liquidated damages.

11.4 The contractor shall follow and comply with all safety Rules of BRPL, relevant provisions of applicable laws pertaining to the safety of workmen, employees plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservation. In case of any nonconformity between statutory requirement and safety rules of the BRPL referred above, the latter shall be binding on the contractor unless the statutory provisions are more stringent.

12.0 OHS Appreciation Policy

12.1 If the contractor observes all the safety rules and codes, statutory laws and rules during the period of the contract awarded by the BRPL and no accident occurs then BRPL may consider the performance of the contractor and safety score card will be prepared. The best contractor will be appreciated by suitable “SAFETY AWARD” as per scheme as may be announced separately from time to time.

13.0 Safety Motivational Scheme for Contractor Employee

13.1 All contractors must reward their employee monthly for best worker in term of complying safety norms. They should honour with a gift of Rs. 500/- (five Hundred) with commendation certificate to motivate others towards safety compliance. The record with photograph should be kept with them & also to be submitted to BRPL safety department. Contractor may ask to BRPL safety people for their presence during awarding time.

13.2 All contractors have to observe safety day/ week on 4th March to 10th march every year with proper planning and record to create safety awareness inside their organization. A detailed report of observing the same to be forwarded to safety department every year.

14.0 NOT IN USE

15.0 Guidelines for Safety Appreciation Policy Implementation

15.1 Recommending Authority shall write comments of his Appreciation in case he observes that there is no any safety violations.

15.2 Recommending Authority shall send his Safety Appreciation to Safety Head who in turn shall either approve or reject it and shall send it to Site Safety Officer for keeping in records.

15.3 Management will appreciate the Safe Contractors for their best performance towards safety norms

based upon number of safety appreciation notes.

15.4 Every year best Safe Contractor shall be suitably awarded. The contractor shall be selected based upon the maximum numbers of approved safety appreciation notes.

15.5 Any contractor who has received any penalty for a particular year shall not be entitled for Safe Contractor's Award irrespective of number of safety appreciation notes he has received.

15.6 Site Safety Officer will maintain the contractor wise record of penalty & safety appreciation notes and declare the results latest by 28th February of every year for the performance of previous year.

15.7 BRPL Management shall present a Trophy with commendation certificate of safety excellence every year on the occasion of 4th to 10th March (National Safety Day) to the contractor, who qualified the safety standard criteria.

Appendix – 1

Penalty Policy on Safety Violation

Class	Type of Offense	Penalty Detail	Execution Channel
A	Not Wearing Safety Helmets Safety shoes/ Safety Goggles / Electrical insulating hand gloves/ reflective jacket/Not using electrically safe tools and equipments. (Poor quality or damaged item means noncompliance)	# First Offence - Warning Note & Rs.2000/- # Second Offence - Warning Note & Fine of Rs.5000/- # Third Offence- Note of recommendation of the concerned workmen/ supervisors for removal from deployment with BRPL& Fine of Rs.15000/-	Recommendation by OHS-Representative/Department Head Approval by Safety Head Deduction by Finance & Account
B	Not wearing Full Body Harness/fall arresters while working at a height more than 1.8 meter or where from a person may fall. Not using Safety Net to arrest falling objects and personnel. Not using Arc Protection Face Shield Not using barricading cone and tape. (Poor quality or damaged item means noncompliance)	# First Offence -Warning Note & Fine of Rs.5000/- # Second Offence - Warning Note for dismissal and a Fine of Rs.10000/- # Third Offense - -Action for the concerned Workmen/ supervisor for removal from deployment with BRPL and a fine of Rs.25000/-	Recommendation by OHS-Representative/Department Head Approval by Safety Head Deduction by Finance & Account
C	Any other unsafe work practices or condition which is considered having potential for fatality or injury to personnel.	# First Offence - Warning Note & Fine of Rs.10000/- # Second Offence - Action for the concerned workmen/ supervisors for removal from deployment with BRPL and fine of Rs.20000/-.	Recommendation by OHS-Representative/Department Head Approval by Safety Head Deduction by Finance & Account

Notes:

Refer clause No. 14 for penalty policy implementation guidelines
If there are 03 violations by an individual employee, his removal from deployment with BRPL # If there are 10 violations in one quarter, will be recommended for termination of contract order.

BSES Rajdhani Power Ltd.

Appendix – 2

Penalty Policy on non- submission of EHS related requirements

Following EHS related requirements to be submitted within 4 weeks of agreement of contract		
Requirement	**Penalty Detail**	**Execution Channel**
1. Contract specific health & safety plan and HIRA (Hazard Identification & Risk Analysis) 2. Safety supervisor training records on EHS (40 hrs training) 3. Submission of sample of PPE's in EHS department for approval (if procured by the contractor) 4. Bills/challan of PPE's along with test certificates (if procured by the contractor) 5. PPE's receipt by worker (as per Annexure #1) 6. Medical examination record of workers 7. ID card of workers 8. Calibration Certificates of equipments	Delay of 15 days- Warning Note & Consolidated Fine of Rs.5000/- on non-submission of proof of any of these mentioned 8 types of documents On every subsequent delay of 15 days- Warning Note & Consolidated Fine of Rs. 10,000/- on non-submission of proof of any of these mentioned 8 types of documents	Recommendation by OHS-Representative Approval by Safety Head Deduction by Finance & Account

Appendix – 3

Format for PPE's Receipt by workers

Name of Site ----------

Division----------

Name of Contractor ----------

S. NO.	NAME	DESI.	Safety Helmet	Electrical Insulating Hand gloves	Full Body Harness	Safety Shoes	Safety Goggle	Reflective Jacket	SIGNATURE

Signature of Contractor / Date…….

ANNEXURE – IV

ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed and stamped by the bidder prior to participation in the auction event)

BRPL intends to use the reverse auction through SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are found as techno commercially qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

The following terms and conditions are deemed as accepted by the bidder on participation in the bid event:

1. BRPL shall provide the user id and password to the authorized representative of the bidder. (Authorization letter in lieu of the same be submitted along with the signed and stamped acceptance form)

2. BRPL will make every effort to make the bid process transparent. However, the award decision by BRPL would be final and binding on the supplier/Contractor.

3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of BRPL, bid process, bid technology, bid documentation and bid details.

4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.

5. In case of bidding through internet medium, bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, internet response issues, software or hardware hangs; power failure or any other reason shall not be the responsibility of BRPL.

6. In case of intranet medium, BRPL shall provide the infrastructure to bidders, further, BRPL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case of an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.

7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be out rightly rejected by BRPL.

8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.

9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at BRPL site.

10. The prices submitted by a bidder during the auction event shall be binding on the bidder. No further communication will be there.

11. No requests for time extension of the auction event shall be considered by BRPL.

12. The original price bids of the bidders shall be reduced on pro-data basis against each line item based on the final all-inclusive prices offered during conclusion of the auction event for arriving at contract amount.

For……

Signature:

Name:

Designation:

ANNEXURE – V

PERFORMANCE EVALUATION & SCORE CARD

The performance of the contractor through score card shall be reviewed by the company on Scheme basis.

Under Group	Weightages
Execution	60%
Quality	15%
Safety	15%
VSC	10%
Total	100%

						Marking Scheme				
Group	**Criteria**	**Description**	**Weightage**	**Observation Period**	**Frequency**	**5**	**4**	**3**	**2**	**1**
Execution	Mobilization team	Number of days taken to mobilize after work order; faster = better score	5%	At Start	One time	Within 1 day	2 days	3-5 days	6-7 days	after 7 days
Execution	Timely Completion	Was the work completed as per scheduled completion date?	10%	At End	One time	On time	Delay < 1 week	Delay 1–2 weeks	Delay 2–4 weeks	Delay more than 4 weeks
Execution	Resource Management	Was adequate manpower and machinery available throughout the project?	6%	Throughout	One time	Adequate resources throughout	Minor shortfalls	Intermittent issues	Prolonged shortages	Major resource gaps
Execution	Tools & Plants Availability	Was proper tools and equipment available and used at site?	5%	Throughout	One time	All T&P available	Minor shortfall	Some delays	Frequent unavailability	Major gaps
Execution	Coordination with EiC / Field Engineer	Was the vendor responding to the stipulated timeline?	5%	Throughout	One time	Always ahead of schedule	Always on time	Mostly on time with minor delays	Frequently late	Consistently late

Execution	Weekly Progress Review	Was weekly progress discussed with the concerned engineer?	5%	Throughout	Weekly	Weekly meetings held				Irregular interaction
Execution	Action Taken Report (ATR)	Regular compliance to points raised in weekly review meeting within stipulated timeline	5%	Throughout	Weekly	Fully Addresses		Partially Addressed		No response
Execution	Timely Pickup of Material from Store	Were materials picked up on time from store without affecting execution?	5%	Throughout	One time	Picked as per schedule		Regular delays		No response
Execution	Scrap Return Timeliness	Was scrap returned with all required documentation?	4%	Throughout	One time	Complete documentation		incomplete documentation		No documentation
Execution	Wage-cum-Attendance Register	Was the Wage-cum-Attendance Register present at site?	3%	Throughout	One time	Yes				No
Execution	Labour License under Contract Labour Act (R & A) Act 1970	Labour License under Contract Labour Act (R & A) Act 1970 and displayed at site	2%	Throughout	One time	Yes				No
Execution	Site Cleanliness after Execution	Was the site properly cleaned after execution?	5%	Throughout	One time	Yes				No
Quality	Calibration Certificate of T&P	Were valid Calibration Certificate submitted for all T&P and visibly displayed on site?	3%	At Start	One time	Yes				No
Quality	Audit Cooperation	Was the vendor cooperative during ISO external audit ?	3%	Throughout	One time	Yes				No
Quality	Civil and Electrical Finishing	•Proper curing, levelling, and concreting of equipment foundations with good workmanship? •All panels, switchboards, and enclosures are securely closed? •Wiring is well supported, with no signs of damage or	3%	At end	One time	All three as per requirement		Only two as per requirement		Only one or none as per requirement

		corrosion?								
Quality	Proper fastening with washers	Was a washer used with all nuts and bolts to ensure secure and even fastening during installation?	3%	At end	One time	Yes				No
Quality	Installation safety	•Was stringing and sagging done as per specification? •Egg insulator used in every stay? •Piercing joints taped at the ends? •Messenger wire connected via jumper and fittings?	3%	At end	One time	All 4 avaialble	3 available	2 available	1 availabe	None available
Safety	Signage and Labelling	Labels, signage, and warning notices are correctly installed and legible including emergency contact number on the barricading	1%	Throughout	One time	Yes				No
Safety	Safety Training	Safety training has been provided to operational staff weekly and submit documentation	2%	At Start	One time	Yes				No
Safety	Lighting	Adequate lighting around electrical areas Emergency lighting available and operational?	2%	Throughout	One time	Lighting including emergency lighting present		Emergency Lighting absent		No lighting atonement
Safety	Barricading	Was barricading adequate and safe throughout the work?	2%	Throughout	One time	Yes				No
Safety	PPE	Were safety PPEs like helmets and shoes properly used? Fully functional PPE (gloves, insulated tools and helmets, etc) available	3%	Throughout	One time	Yes				No

Safety	Safety/Quality Officer Deployment	Were both safety and quality officers deployed and submitting reports on weekly basis?	3%	Throughout	One time	Yes				No
Safety	First Aid Kit	Is first aid kit available at easily accessible place on site?	2%	Throughout	One time	Yes				No
VSC	Document Discrepancy	Were all the supporting documents uploaded along with invoices on BTS?	4%	Throughout	Monthly	Yes				No
VSC	Timely Submission	Were all the invoices submitted within adequate time from completion of payment milestones in BTS?	4%	Throughout	Monthly	Within stipulated time	1 day delay	2 day delay	3 day delay	delay more than 4 days
VSC	Statutory Workforce Compliance	•Did all the workers have valid PF, ESI, Group Insurance and other labour law related documents? •Were the documents submitted verifiable?	2%	Throughout	Monthly	Yes				No
		Total	100%							

Penalty

Penalty as specified below shall be levied on the Scheme bills on the basis of scores from performance score card.

Reference Range of marks scored in Score Card	Penalty on Scheme billing
More than 80%	Nil
>75% to <=80%	2.5%
>70% to <= 75%	5%
>65% to <= 70%	7.5%
>60% to <= 65%	10%
<=60%	10% + No award for next 3 months

Penalty on Scheme billing on the basis of Score card shall not be more than 10% of the Scheme bill value.

Note – The complete vendor performance shall be reviewed by BRPL at the at the end of every quarter.

FORMAT – 4.1

EMD BANK GUARANTEE

(To be issued in a Non Judicial Stamp Paper of Rs.100/-purchased in the name of the bank)
Whereas [name of the Bidder] (herein after called the "Bidder") has submitted its bid dated[date of submission of bid] for the supply/services of [name and/or description of the goods/services] (here after called the "Bid"). KNOW ALL PEOPLE by these presents that WE [name of bank] at [Branch Name and address],having our registered office at[address of the registered office of the bank](herein after called the "Bank"),are bound unto BSES RAJDHANI Power Ltd., with its Corporate Office at BSES Bhawan, Nehru Place, New Delhi - 110019 ,(herein after called —the "Purchaser")in the sum of …… (Rupees …… only) for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this_____ day of_____ 2022. The Conditions of this obligation are:

1. If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form;

or

2. If the Bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity:

(a) Fails or refuses to execute the contract form, if required: or

(b) Fails or refuses to furnish the performance security, In accordance with the instructions to Bidders/Terms and Conditions.

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that is its demand the purchaser will note that amount claimed by it is due to it, owing to the occurrence of one or both of the two condition(s), specifying the occurred condition or condition(s). This guarantee will remain in force up to and including 180 days after the due date of submission bid, and any demand in respect thereof should reach the Bank not later than the above date.

(Stamp & signature of the bank)

Signature of the witness(s)

BSES Rajdhani Power Ltd.

FORMAT – 4.2

PROFORMA OF CONTRACT CUM PERFORMANCE BANK GUARANTEE

(TO BE ISSUED ON RS 100/- STAMP PAPER)

This Guarantee made at _____ this [___] day of [_____] 2022

1. WHEREAS **M/s BSES Rajdhani Power Limited**, a Company incorporated under the provisions of Companies Act, 1956 having its Registered Office at **BSES Bhawan, Nehru Place, New Delhi - 110019**, India hereinafter referred to as the "Company", (which expression shall unless repugnant to the context or meaning thereof include its successors, administrators, executors and assigns).

2. AND WHEREAS the Company has entered into a contract for _____ (Please specify the nature of contract here) vide Contract No. _____dated _____ (hereinafter referred to as the "Contract") with M/s._____, (hereinafter referred to as "Contractor", which expression shall unless repugnant to the context or meaning thereof be deemed to mean and include each of their respective successors and assigns) for providing services on the terms and conditions as more particularly detailed therein.

3. AND WHEREAS as per clause ____of General Conditions of Contract, the Contractor is obliged to provide to the Company an unconditional bank guarantee for an amount equivalent to seven and half percent (7.5%) of the total Contract Value for the timely completion and faithful and successful execution of the Contract from [_____] pl. specify the name of Bank) having its head/registered office at [_____] through its branch in _____(pl. specify the name of Branch through which B.G is issued) hereinafter referred to as "the Bank", (which expression shall unless it be repugnant to the context or meaning thereof be deemed to include its successors and permitted assigns).

4. NOW THEREFORE, in consideration inter alia of the Company granting the Contractor the Contract, the Bank hereby unconditionally and irrevocably guarantees and undertakes, on a written demand, to immediately pay to the Company any amount so demanded (by way of one or more claims) not exceeding in the aggregate [Rs.]……(in words) without any demur, reservation, contest or protest and/or without reference to the Contractor and without the Company needing to provide or show to the Bank ,grounds or reasons or give any justification for such demand for the sum/s demanded.

5. The decision of the Company to invoke this Guarantee and as to whether the Contractor has not performed its obligations under the Contract shall be binding on the Bank. The Bank acknowledges that any such demand by the Company of the amounts payable by the Bank to the Company shall be final, binding and conclusive evidence in respect of the amounts payable by the Supplier to the Owner. Any such demand made by the Owner on the Bank shall be conclusive and binding, notwithstanding any difference between the Owner and the Contractor or any dispute raised, invoked, threatened or pending before any court, tribunal, arbitrator or any other authority.

6. The Bank also agrees that the Company at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor without proceeding against the Contractor notwithstanding any other security or other guarantee that the Company may have in relation to the Contractor's

liabilities.

7. The Bank hereby waives the necessity for the Company first demanding the aforesaid amounts or any part thereof from the Contractor before making payment to the Company and further also waives any right the Bank may have of first requiring the Company to use its legal remedies against the Contractor, before presenting any written demand to the Bank for payment under this Guarantee.

8. The Bank's obligations under this Guarantee shall not be reduced by reason of any partial performance of the Contract. The Bank's obligations shall not be reduced by any failure by the Company to timely pay or perform any of its obligations under the Contract.

9. The Bank further unconditionally and unequivocally agrees with the Company that the Company shall be at liberty, without the Bank's consent and without affecting in any manner its rights and the Bank's obligation under this Guarantee, from time to time, to:
   (i) Vary and/or modify any of the terms and conditions of the Contract;

   (ii) Forebear or enforce any of the rights exercisable by the Company against the Contractor under the terms and conditions of the Contract; or

   (iii) Extend and/or postpone the time for performance of the obligations of the Contractor under the Contract;

   and the Bank shall not be relieved from its liability by reason of any such act or omission on the part of the Company or any indulgence shown by the Company to the Contractor or any other reason whatsoever which under the law relating to sureties would, but for this provision, have the effect of relieving the Bank of its obligations under this Guarantee.

10. This Guarantee shall be a continuing bank guarantee and shall not be discharged by any change in the constitution or composition of the Contractor, and this Guarantee shall not be affected or discharged by the liquidation, winding-up, bankruptcy, reorganization, dissolution or insolvency of the Contractor or any of them or any other circumstances whatsoever.

11. This Guarantee shall be in addition to and not in substitution or in derogation of any other security held by the Company to secure the performance of the obligations of the Contractor under the Contract.

12. NOTWITHSTANDING anything herein above contained, the liability of the BANK under this Guarantee shall be restricted to _____ (insert an amount equal to seven and half percent (7.5%) of the Annual Contract Value) and this Guarantee shall be valid and enforceable and expire on _____ (pl. specify date) or unless a suit or action to enforce a claim under this Guarantee is filed against the Bank on or before the date of expiry.

13. On termination of this Guarantee, all rights under the said Guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities hereunder.

14. The Bank undertakes not to revoke this Guarantee during its validity except with the prior written consent of the Company and agrees that any change in the constitution of the Bank or the Contractor shall not discharge our liability hereunder.

15. Company may assign this Guarantee to any Person or body whether natural, incorporated or otherwise under intimation to the Bank. The Bank shall be discharged of its obligations hereunder by performance in accordance with the terms hereof to such assignee without verifying the validity / legality / enforceability of the assignment.

16. This Guarantee shall be governed by the laws of India. Any suit, action, or other proceeding arising out of, connected with, or related to this Guarantee or the subject matter hereof shall be subject to the exclusive jurisdiction of the courts of Delhi, India.
Dated this …… day of …….. …2022 at …….

(Signature)
.....

(Name)
.....

(Designation with Bank Stamp)

Attorney as per

Power of Attorney No.....

Date.....

Beneficiary's bank detail with IFSC Code:

Beneficiary Name	: BSES Rajdhani Power Limited
Bank Name	: State Bank of India
A/c No.	: 40214783615
IFSC Code	: SBIN0009601

Vendor has to fill this form & submit along with the PERFORMANCE BANK GUARANTEE

1. Bank Email ID----------Bank Phone No----------

2. Where to Dispatched the BG -Local Address of bank ----------

3. Where to Dispatched the BG Head Office Address ----------

BSES Rajdhani Power Ltd.

FORMAT – 4.3

NON-DISCLOSURE AGREEMENT

THIS NON-DISCLOSURE AGREEMENT ("Agreement") is made and entered into at Delhi on the _____ day of _____, 2022

By And Between

M/s BSES Rajdhani Power Limited, a company registered under the Companies Act, 1956 and having its registered office at **BSES Bhawan, Nehru Place, New Delhi - 110019** (hereinafter referred to as the "Disclosing Party" which expression shall unless repugnant to the meaning and context mean and include its successors and permitted assigns) of the FIRST PART

And

_____, a company incorporated under the Companies Act, 1956 and having its registered office at _____, (hereinafter referred to as the "Receiving Party" which expression shall unless repugnant to the meaning and context mean and include its successors and permitted assigns) of the OTHER PART

Disclosing Party and Receiving Party are hereinafter individually referred to as the "Party" and collectively as the "Parties".

WHEREAS the Disclosing Party is in discussions with the Receiving Party for Security Management Services ("Project") and the Disclosing Party may in conjunction with the aforesaid disclose to the Receiving Party information relating to their businesses which is confidential and sensitive in nature and the Receiving Party is willing to undertake to restrict the use and further disclosure of the information in accordance with the terms and conditions set out herein:

1. The "Receiving Party" acknowledges and confirms the confidential and sensitive nature of all information, documents and material relating to Persons and entities which may be accused of or related to the theft of electricity which is a penal offense under the provisions of the electricity act 2003As well as the various data and tools which may be available by way of documents as well as other modes of proof("Project") (i) that may be disclosed or made available to the Receiving Party by the Disclosing Party or its employees/ representatives/ advisors/ consultants; (ii)Receiving Party may gain or gather from any source; (iii) Receiving Party may process or arrive at during the course of the Project; (iv) Receiving Party may have come across during its discussions with any person in the course of the Project; and (v) all negotiations and discussions between the Parties relating to the Project (all the information referred to above is hereinafter referred to as the "Confidential Information").

2. Confidential Information is understood to include but is not limited to information made available in written, machine recognizable, graphic or sample form including, without

limitation, drawings, photographs, models, design or performance specifications, its analysis, compilations, studies, notes and all other information and data disclosed orally or visually which has been developed / is exclusive to the Disclosing Party and includes information provided in various meetings.

Provided, however, that Confidential Information shall not include information which (a) is, or becomes, publicly known, otherwise than through a wrongful act of the Receiving Party or its representatives; (b) is in the possession of the Receiving Party prior to receipt from the Disclosing Party or its representatives without an obligation of confidentiality; (c) is independently developed by the Receiving Party, provided that it was not derived from the Confidential Information; (d) is furnished to others by the Disclosing Party without restrictions, similar to those herein on the rights of such others to use or disclose; or (e) is approved in writing by the Disclosing Party for disclosure.

3. The Receiving Party shall not disclose the Confidential Information to any other person save and except with the express consent in writing given by the Disclosing Party. The Receiving Party, however, may disclose such part of the Confidential Information where (i) such disclosure is in response to a valid order of a court or any other governmental body having jurisdiction over this Agreement or (ii) such disclosure is otherwise required by law, provided that Receiving Party has given prior written notice to the Disclosing Party forthwith it came to learn about such disclosure requirement or the demand for such for disclosure and made all reasonable efforts to protect the Confidential Information in connection with such disclosure.

4. The Receiving Party shall with reference to the Confidential Information take all actions as may be necessary to (i) maintain the confidentiality thereof; (ii) limit its use of such Confidential Information solely for the purpose of the Project; (iii) avoid disclosure even to any of its employees that are not associated with the Project; (iv)avoid any dissemination or publication by any of its employees/ representatives associated with the Project; (v) avoid writing about sensitive information which is disclosed verbally and is sensitive to the operations; and (vi) safeguard the Confidential Information from being accessed by any unauthorized person. Such actions shall include but not be limited to obtaining appropriate non-disclosure undertakings from its employees directly or indirectly engaged in the Project.

5. The Receiving Party hereby agrees to indemnify and hold harmless the Disclosing Party and its directors and employees from and against any damage, loss, cost or liability (including all expenses and costs of enforcing rights under the Agreement) arising out of or resulting from (i) any use or disclosure by the Receiving Party of Confidential Information in violation of the Agreement; (ii) any leakage of the Confidential Information at the end of the Receiving Party or its employees/ representatives; and (iii) breach or violation of any of the other covenants herein.

6. The Receiving Party will, promptly upon the request of the Disclosing Party, deliver to the Disclosing Party, the documents comprising the Confidential Information or any part

thereof and will destroy any copies, notes, or extracts thereof, without retaining any copy thereof, except that any portion of the Confidential Information that consists of analysis and any written Confidential Information not so requested and returned, shall be retained and kept subject to the terms of this Agreement, or upon the Disclosing Party's request destroyed (such destruction to be confirmed in writing).

7. The term of this Agreement is 3 years from the date of execution of this Agreement. However, the obligation to maintain confidentiality of the Disclosing Party's information shall survive the termination of this Agreement. Any violation of this agreement may lead to termination of all the relations with the Receiving party and black listing/ debarring of the Agency for future engagements.

8. This Agreement shall be governed by the laws of India. Any dispute, difference or claim related to or arising under, out of or in connection with this Agreement shall be resolved subject to the jurisdiction of Delhi Courts.

For the Disclosing Party

_____
Authorized Signatory
Name:
Designation:

For the Receiving party

_____
Authorized Signatory
Name:
Designation:

BSES Rajdhani Power Ltd.

FORMAT – 4.4

NO DEVIATION DECLARATION

NO DEVIATION –A(Technical)
NIT NO & DATE:

DUE DATE OF TENDER:

We hereby accept all terms and conditions of the technical scope of work as mandated in the tender documents subject to the following deviations as mentioned against the applicable technical qualifying requirement:

S.NO.	SL.NO OF TECHNICAL SPECIFICATION/SCOPE OF WORK	DEVIATIONS, IF ANY

SIGNATURE & SEAL OF BIDDER

NAME OF BIDDER

Note-The above template is indicative only, May vary depending on the nature of procurement/value.

NO DEVIATION –B (Commercial)

NIT NO & DATE:

DUE DATE OF TENDER:

We hereby accept all terms and conditions of the commercial requirement as mandated in tender document subject to the following deviations as mentioned against the applicable commercial qualifying requirement:

S.NO.	S. NO OF COMMERCIAL REQUIREMENTS	DEVIATIONS, IF ANY

SIGNATURE & SEAL OF BIDDER

NAME OF BIDDER

Note:-It is important to explicitly include all such terms and conditions which are considered absolutely necessary to be accepted by bidder without any deviation. Tender document shall have a stipulation that deviation to such criteria shall make the bid liable for rejection.

BSES Rajdhani Power Ltd.

FORMAT – 4.5

GST COMPLIANCE DECLARATION

To be printed on Letter Head of the Company

To,
Vendor Support Cell (VSC)
BSES Rajdhani Power Limited
BSES Bhawan
Nehru Place
New Delhi-110019

Date: ……/……/……..

Subject- Declaration of Payment of GST and its compliance as per GST Act.

Division:-_____.
Invoice No. & Date:-_____, dated_____.
Sir,
We hereby undertake to deposit due GST with appropriate authority as per GST Act as and when becomes due against the awarded Purchase Order (PO) / Rate Contract (RC) ref. no._____dated_____By BSES Rajdhani Power Limited (BRPL).

I would also like to bring your notice that I/We have paid/deposited the due tax with interest (if applicable) against the Invoice No……dt……..……at the time of filing GSTR1 and GSTR3B in which period the supply was made and all the invoices issued in favor of M/s BSES Rajdhani Power Limited (BRPL), under GSTN 07AAGCS3187H2Z3 and the same is being reflected in BRPL's GSTR 2A/B.

I/We undertake to indemnify that, in the event of any default in compliance with the provisions of the GST Act, BRPL shall have the right to withhold the GST amount claimed by me/us until such default is rectified. BRPL shall also be entitled to recover any due tax, applicable interest, and penalties from any amounts payable or becoming payable to me/us in respect of services/supply contracts.

We further undertake to provide all necessary supporting documents towards our GST deposition and its compliance based on above declaration/claim to your company as and when required.

Thanking you

For and on behalf of …… (Name of Supplier / Contractor)

Authorized signatory

Aadhar No.:-

GST No.:-

Company Seal

BSES Rajdhani Power Ltd.

FORMAT – 4.6

CHECKLIST FOR VENDORS (SERVICES)

BRPL

CHECK LIST FOR VENDORS (SERVICES)

VENDOR CODE: _____

AGENCY NAME: _____

CONCERNED PERSON: _____

AGENCY ADDRESS _____

PHONE/ MOBILE NO. _____

Email ID: _____

VSC Entry No	
VSC Entry Date	

S. No.	DESCRIPTION	Period	PAGE NO.	TO BE FILLED UP BY VENDOR.
1	Original Tax Invoice	As per service period		
2	E-Invoice (if applicable)/ Declaration for non-applicability	As per service period		
3	Certified Measurement sheet / Bill	As per service period		
4	Attendance sheet (if applicable)	As per service period		
5	Invoice Movement Sheet (If applicable)	As per service period		
6	Work Order no. with COPY (Frame order no. with COPY)	As per service period		
7	Scheme No.	As per service period		
8	Actual date of start of work for current invoice	As per service period		
9	Actual date of Completion of work for current invoice	As per service period		
10	Declaration - Labour Less than 20 Labour (Duly Certified by DGM-EIC)	As per service period		
11	Declaration - Minimum Wages Letter(Duly Certified by DGM – EIC)	As per service period		
12	Declaration – PF & ESI Deposit	As per service period		

13	Declaration – GST Deposit	As per service period		
14	Quality Certificate (If Applicable)	As per service period		
15	Safety Certificate (If Applicable)/ Self Certificate	As per service period		
16	EBS (If Applicable)	As per service period		
17	Material Reconciliation (Annexure)(If Applicable)	As per service period		
18	Scrap Document (If Applicable)	As per service period		
19	Completion Report (if applicable)	As per service period		
20	Supporting Documents (Annexure to be attached with all supporting documents with reference to bill)	As per service period		
21	Wages Register (Wages Should Be Paid As Per The Latest Notified Minimum Wages Rates of Delhi)	As per service period		
22	WORKMEN REGISTER WITH DEPLOYED MANPOWER FORM (XIII)	As per service period		
23	ECS / Bank Statement (with highlighted salary debit transaction)	As per service period		
24	PF Challan	As per service period		
25	ESIC Challan	As per service period		
26	PF ECR	As per service period		
27	ESIC Contribution Sheet	As per service period		
28	PF Registration	Yearly/One Time as applicable		
29	ESIC Registration	Yearly/One Time as applicable		
30	PAN CARD	Yearly/One Time as applicable		
31	GST REGISTRATION / Declaration – GST Applicability (If GST not applicable declaration	Yearly/One Time as applicable		

	required)			
32	Shops and Establishment Registration Certificate	Yearly/One Time as applicable		
33	Labour License, If Manpower Is More Than Equal To 20 Nos, to be obtained from respective DLC office (South / South-East/ South-West / West & New Delhi)	Yearly/One Time as applicable		
34	Electrical License (if applicable)	Yearly/One Time as applicable		
35	Workmen Compensation Policy (If Manpower Is Not Covered Under ESIC)	Yearly/One Time as applicable		
36	Third Party Insurance (Public Liability Policy)	Yearly/One Time as applicable		
37	Group Personal Accidental Policy (each manpower should be insured with the amount as mentioned in work order)	Yearly/One Time as applicable		
38	MEDICLAIM POLICY OF EMPLOYEES(if applicable)	Yearly/One Time as applicable		
39	Group Term Life Insurance Policy if part of work order (each manpower should be insured with the amount as mentioned in work order)	Yearly/One Time as applicable		
40	BOCW Registration (if applicable)	Yearly/One Time as applicable		
41	PSARA Registration (for security work)	Yearly/One Time as applicable		
42	MSME Registration(If Yes attach certificate)	Yearly/One Time as applicable		
43	FSSAI License(for canteen	Yearly/One Time as applicable		

	only)			
44	Bank Guarantee (if applicable)	Yearly/One Time as applicable		

Name of Division: _____

Description of Services: _____

NOTE:-

- The Document's Should be arranged in order as per Check List
- All documents checked by VSC and if no discrepancy is found then VSC Entry Number provided.
  HR Compliance monthly documents (Wages Sheet, PF Challan & ECR, ESI challan& Contribution Sheet, ECS & Bank Statement (with highlighted wages debit transactions) and annual documents (all applicable insurance policies, registrations and licenses) – If applicable to be sent by email (brpl.hrcompliance@reliancegroupindia.com) to HR CMC cell)

VSC REMARKS (If Applicable):

BSES Rajdhani Power Ltd.

FORMAT – 4.7

E_INVOICE DECLARATION

To be printed on Letter Head of the Company

To, **Dated: _____**

Vendor Support Cell (VSC)
BSES Rajdhani Power Limited
BSES Bhawan, Nehru Place
New Delhi-110019

Reference: - Purchase Order No. _____, Invoice No. _____, Dated _____.

Subject: - Declaration for Non-Applicability of E-Invoicing.

I/We_____ (**Vendor Name**), having GSTIN_____, hereby declare that as per Notification No. 10/2023 dated 10th May, 2023 **and its subsequent amendments, if any**, the provisions relating to **e-invoicing under Rule 48(4) of the CGST Rules, 2017** are **not applicable** to us.

We confirm that the above declaration is true and correct to the best of our knowledge and records. In case our company is eligible to generate e-Invoicing under GST Act, we shall comply with the applicable provisions and inform you accordingly.

In the event of any penalty or legal issue arising due to non-adherence to the applicability of e-invoicing rule, we hereby indemnify and agree to fully compensate the buyer for any such penalties or legal consequences.

Warm Regards,

(Signature with Seal)

Name & Designation:

Date:

Place:

FORMAT – 4.5
BIDDER'S COMMUNICATION DETAILS

Bidder should furnish the below details for future communication: -

GENERAL INFORMATION	
NAME OF Company	
POSTAL ADDRESS	

FOR TECHNICAL QUERY:		
CONTACT PERSON & DESIGNATION	NAME	DESIGNATION
E-MAIL	MOBILE NO	TELEPHONE NO

FOR COMMERCIAL QUERY:		
CONTACT PERSON & DESIGNATION	NAME	DESIGNATION
E-MAIL	MOBILE NO	TELEPHONE NO

Note: No communication shall be entertained from any other email id, except as mentioned above. Bidder needs to inform the company if any changes in the email id on their letter head duly signed by the authorized signatory.

*****

Standard Operating Procedure
For
11 KV Cable Laying

Index:

1.1 Scope

This SOP (standard operating procedure) is applicable for laying of 11kV underground cable.

1.2 References standard

Following standard are considered while preparing procedures.

IS 1255 : Code of practice for installation and maintenance of power cable up to and including 33kV rating.

1.3 Cables Details

Following cables are being used in our network:-

- 3C X 150 SQMM, AL, XLPE, 11KV
- 3C X 300 SQMM, AL, XLPE, 11KV

1.4 Clearance

Following clearances are to be ensured during cable laying

- Safety Clearance.
- Quality Clearance – in process and final inspection /testing.
- Land / Property Owner clearance. (MCD/PWD/DDA/Private owner).
- Traffic police / Concern authority.

1.5 Man Power Requirement

- Engineer
- Supervisor
- Contract Labour Supervisor
- Contract Labour

(Man power may vary as per site condition and job requirement, availability and urgency of job)

1.6 Tools, PPE and consumable

1.6.1. Tools and Tackles

Following tools availability must be ensured by respective execution engineer, quality control engineers and site in charge before starting laying work.

- Roller for cable laying.
- Manila ropes.
- Crow bar as per site requirement.
- Wooden slipper as per site requirement.
- Spades (Phowrahs)
- Pick Axes chisel (wide) & point end.
- Shovels (Square Nose).
- Mortar pans.
- Wood cutting Axe.
- G I Wire
- Cable Grip for pulling purpose
- Diesel /petrol operated dewatering pump
- Measurement Tape.
- Lighting accessories
- 5 /10 Kv Insulation resistance tester
- Cable avoidance Tool (Cable Locator)
- Barricading tape.
- Barricading cone.
- “Man at work” sign board

(Use insulated tools only)

1.6.2. PPEs

Following minimum safety gears / personal protection equipments are to be ensured by site in charge / execution engineer before starting cable laying work.

- Safety shoes / Gum boot.
- Safety Helmets
- Fluorescent Jacket
- Safety gloves

1.6.3. Materials Consumable

- 11 KV Cable
- River Sand
- 11 KV RCC Tiles,
- Warning/Caution Tape
- Cement
- Red Bricks
- 11 KV slab
- HDPE/RCC pipes as per cable size

(Consumable item’s consumption will be depend on site conditions & hence will vary.)

1.6.4. External services

- Road breaking compressor
- Core cutting / concert cutting machine
- Horizontal Drilling services

1.7 CABLE LAYING PROCESS

1.7.1. Selection of the Cable Route

1.7.1.1 The cable route selection shall be done by the concerned supervising engineer by first conducting route survey and selecting a route along with contractor keeping followings in mind-

- The side of road, which presents the least obstacles and the fewest roadways crossings.
- Railway, road crossings, MCD and other government agencies may also influence in selection of cable route.
- Plans for future building projects should be considered.
- The route shall be as far as possible away from parallel running gas, water pipes and
- telephone/telecommunication cables.

1.7.1.2 Route survey with Cable avoidance Tool (**Cable locator)** to be checked for other electrical cable, utility services and depth of installations

1.7.1.3 A start is then made by sinking **test pit** in advance along with proposed line of the trench, thus checking exactly what obstructions will be encountered. Test pit should be at every 100 m according to Trench length.

1.7.2. Planning and Preparation

1.7.2.1 Permission for Excavation is obtained from concerned Road owning Agency.

1.7.2.2 Ensure that the contractor has necessary manpower to carry out the cable laying work and all the persons to work at site should have valid identity card

1.7.2.3 Checking the availability of material to be transported & type of tools and tackles required for loading, transporting & unloading the material/equipments

1.7.3. Trench/Pit Excavation

1.7.3.1 Before Pit Excavation start, Proper barricade the excavation route for safety.

1.7.3.2 Start digging of a trench directly in the ground on the given route. Care must be taken to avoid damage to the other cable, pipes and other utilities services.

1.7.3.3 As the work proceeds and pipes or other services are unearthed, they must be supported temporarily with ropes or chains. If there is any danger of soil failing in, timbering or shuttering may have to be resorted to as the excavation proceeds. There must be no unevenness no rocks or stones to damage the cable.

1.7.4. Depth of Cable Laying

Following depths over the top of the cable are normally recommended for cables buried in ground.

Particulars	Depth of Cable Laying (M)
3.3kV to 11kV	0.9 M

1.7.4.1 Wherever it is **not possible to dig to the recommended depth** due to technical reasons which is beyond the control of Vendor or BSES, the same **shall be informed to Divisional Head** for Deviation Report (Annexure 2)

1.7.4.2 Following steps must be implemented when cable laying is done at low dept

- Think for alternate cable route where required depth can be achieved
- In case it is not possible to change the cable route, provide additional protection for cable as below
  - Provide double layer 11 KV Tile on top and also provide RCC Tiles at the sides.
  - Use HDPE/RCC pipe along the cable at low depth

1.7.5. Width of Cable Trench

The width of Cable Trenches shall depend upon number of circuits

Cable Size	Width of Trench (mm)
3Cx150 / 300 mm2 - Single Circuit	400

3Cx150 / 300 mm2 -Double Circuit	600

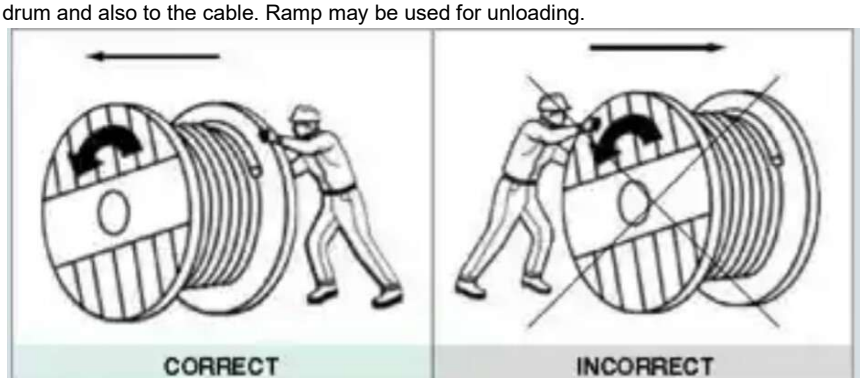
- The trench should be wide enough so that persons can stand in it and guide the cable when cable laying process is in progress.

- Whenever the excavation is across streets, Opposite Gate, signal, On nallah or where ever it is necessary, laying of **HDPE/RCC pipes is necessary**. The size of the pipes should be sufficiently large to allow cables to be pulled through freely and to lay additional cables in future. Besides, for future use, additional pipes also may be laid across road or under railway tracks. The mouth of these additional pipes shall be effectively blocked to prevent pipes from being chocked. The internal diameter of the pipe / duct should be such that the cables occupy only 40% of the area of the pipe / duct to avoid de-rating.

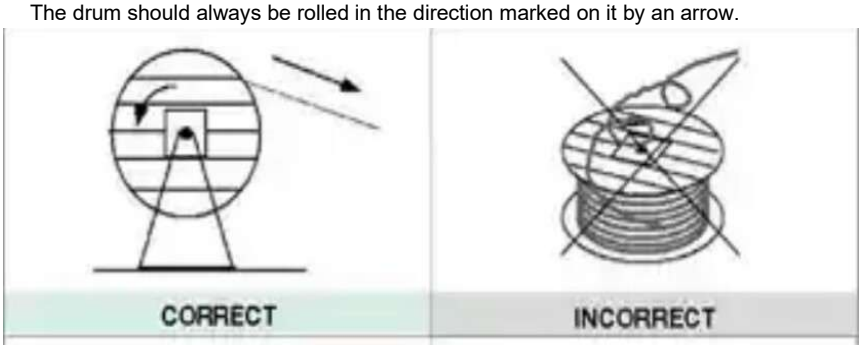
1.7.6. Handling of Cable Drum and Pulling of Cable

1.7.6.1 The cable drums shall be transported upright, so that the weight is distributed on both the flanges. Under no circumstances the cable drum may be laid on its side.

1.7.6.2 The cable drums should never be dropped from Lorry or a trailer, so as to prevent damage to the cable drum and also to the cable. Ramp may be used for unloading.



1.7.6.3 The drum should always be rolled in the direction marked on it by an arrow.



1.7.6.4 The cable should be taken from the top of the drum with a supporting ramp if necessary, the drum being braked to avoid over running.

(Jack for Free Reeling)

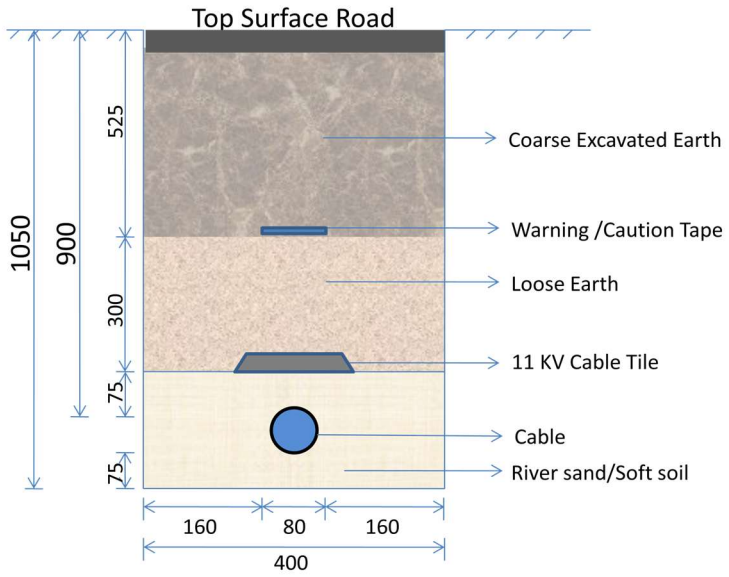
(Rollers for cable pulling)

1.7.6.5 The rollers, corner rollers and properly aligned and smooth running cable rollers should be placed every 3 to 4 m in the cable trench.

1.7.6.6 Cable is then pulled by connecting cable sock or cable grip at one end and pulled in its direction. All workmen should exert force simultaneously while pulling the cable so that the pulling pressure is equally distributed on length of cable.

1.7.6.7 The bending radius should be as large as possible. (15D , where D is the overall diameter of cable to be laid)

1.7.7. Cable Laying



(All dimensions are in **mm**)

1.7.7.1. **Soft bedding** of River sand or soft soil is provided before laying the cable. The thickness of this layer should be around 75 mm

1.7.7.2. Cable then pulled in the trench **with Rollers** (put every 3 to 4 meters) across the cable and care should be taken to avoid damages to the outer sheath

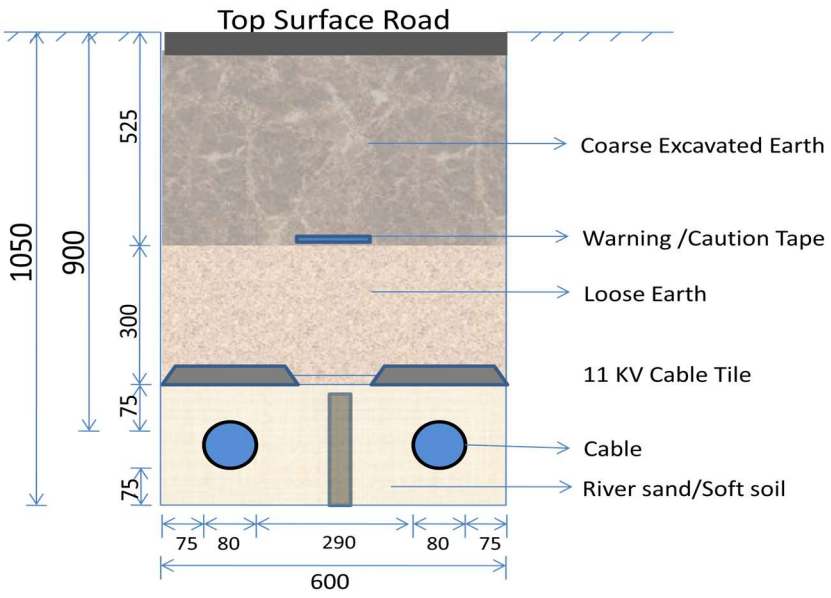
1.7.7.3. After laying of the cable, layer of soft earth or sand is provided over the cable. The thickness of River/soft sand layer should be around 75 mm.

1.7.7.4. Top cover of **11 KV RCC tiles** is provided over the soft soil. This helps in the identification of the cable route and also protects the cable against the mechanical damage.

1.7.7.5. The remaining trench is filled up with balance road material (soft soil or earth). Care has to be taken that big stones should not be used for refilling purpose

1.7.7.6. Put Warning/Caution tape across the cable so that other excavating agency can identify the electric cable below and contact BSES for coordination.

1.7.7.7. Where more than one cable is to be laid, width of trench shall be increased such that inter axial spacing between the cables should be as per following diagram.



(All dimensions are in **mm**)

1.7.7.8. Whenever the cable is laid across streets, Opposite Gate, signal, On nallah or where ever it is necessary, lay cable through **HDPE/RCC Pipes**.

1.7.7.9. Cable should be laid at least 1 mtr. away from the foundation of the buildings and at least 0.5 mts. away from the communication cables and 1 mtr. from pipe line. If the cable is to cross the pipeline, spacing should be at least 0.5 mtr.

1.7.7.10. BSES intents to show all the cable routes, location of joints and other underground obstructions on a GPS map. Contractor has to take all GPS coordinates and submit within 15 days after completion of work. The final bill shall not be processed by BSES unless this activity has been completed to the entire satisfaction of BSES

1.8 Testing to be carried out after completion of cable laying

1.8.1. Testing of cable before jointing –

- Cable shall be tested for Insulation Resistance prior to laying by 5/10 KV Megger.

1.8.2. Testing on complete Cable Installation –

a. Insulation resistance of each core shall be measured against all the other cores and the metal screen connected to earth.

b. The resistance of the conductor shall be measured.

c. DC High voltage. For old cables test voltage shall be 1.5 times rated AC Phase voltage or less depending on age of cable.

d. DC High Voltage Test for new cable shall be

Rated Voltage	Test Voltage	Duration
	Any Conductor and Metallic Sheath/Screen/Armour	
11 KV	18 KV	5 Min

1.8.3. The cable cores must be discharged on completion of DC high voltage test and cable should be kept earthed until it is put into service.

1.9 Annexure 1 : Check Sheet for Cable Laying

Sr No	Checklist	Yes	No
1	Road cutting permission received		
2	Route survey by cable route tracer to identify low depth cables of other utility		
3	Test Pit for type of soil (rocky/soft)		
4	Proper loading, unloading of cable drum done by using Crane		
5	Physical inspection of Cable for damages		
6	Arrangement of Menpower with PPE		
7	Proper barricading arrangement done before excavation		
8	Drum properly supported for free reeling		
9	Cable rollers are used for pulling		
10	Sharp Stones removed from pit		
11	Proper Depth of pit maintained (0.9 mtr)		
12	Proper River sand bed at bottom and top of the cable (75 mm)		
13	Tiles/bricks placed over the entire the cable length		
14	Warning tape placed over the entire cable length		
15	Proper refilling done		
16	Testing of cable after completed laying work		
17	IR Value of Phase to Earth		
18	IR Value of Phase to Phase		
19	Empty cable drum returned to store		
20	HDPE pipe Installed at crossing, low depths		
21	Site cleaned after laying		
22	Coffin at low depth cables and joints used		

1.10 Annexure 2 : Deviations

Deviations

Deviations from this Specification shall be stated in writing by the contractor. Written approval shall be obtained from BSES by the contractor. In absence of such a statement, it will be assumed by BSES that the Contractor complies fully with this specification during execution of the job.

DEVIATION REPORT FORMAT

Sr No	Clause no of Specification	Details about Deviation	Reason for Deviation	Approved by (Signature / Name)

1.0 Scope, References & Standard sizes of 11kV cable used

1.0.0Scope

This section covers the 11kV cable network of BSES including the description of HT Cable Jointing

1.0.1References

IS 1255: Code of practice for installation and maintenance of power cable upto and including 33kV rating.

1.0.2Standard sizes used

BSES has standardized on two sizes of PILC and XLPE cables for 11kV network viz. 3/c x150 sq.mm ,240 sq.mm and 300 sq.mm

1.1 Safety Points/Precautions

1.1.0Tools and Tackles

1.1.0.1 Jointing kit

1.1.0.2 Gas cylinder

1.1.0.3 Gas torch

1.1.0.4 Hydraulic cable puncturing tool

1.1.0.5 Cable cutter / Hacksaw Blade

1.1.0.6 Megger

1.1.0.7 Cable identifier

1.1.0.8 Discharge rod.

1.1.0.9 Jointer's tool kit with required tools and tackles.

1.1.0.10 Ladder if required.

1.1.0.11 Dewatering Pump in good condition

1.1.0.12 Required Excavation Tools like (Mortar Pans / Shovels / Axes / Pick axes / Spades).

1.1.0.13 Barricading Tape.

1.1.0.14 Barricading Cone.

1.1.0.15 " Man At Work" Caution board with Stand / Sign Board

1.1.1PPEs

1.1.1.1 Safety shoes / Gum boot.

1.1.1.2 Safety helmets

1.1.1.3 Cotton Gloves

1.2 Before Excavation

1.2.0Road Cutting Permission from concerned road owning agency

1.2.1Arrange proper material and men power

1.2.2 Barricade the working area by barricading tape. Where appropriate sign board indicating the hazard shall be displayed near the barricade.

1.2.3Keep Gas cylinders at safe distance

1.2.4 At each location where isolation has been carried out provide LOTO(Lock Out Tag Out) & Put the "Not to be Charged" Board and mention the details of reason of isolation, date and time, engineer name and contact details.

1.2.5 If another feeder cable joint in same pit than do not carry out jointing work in same pit or make another jointing pit. If another pit is not possible than isolate and back feed the area

1.2.6 PTW to be transferred to concerned Engineer by HT Break down team for attending the fault. All the process to be informed to system operation team.

1.3 Jointing of cables

1.3.0 Requirements of cable joints

1.3.0.1 Conductivity of the jointed conductors should be equal to the conductor of the cable.
1.3.0.2 Joints or conductor lugs should have a mechanical strength fairly comparable to that of the conductor
1.3.0.3 The cable insulation level must be maintained at the joints
1.3.0.4 The joint should provide proper mechanical protection to the insulated cores
1.3.0.5 Maintain the crimping sequence over the ferrule for uneven expansion of ferrule during the crimping
1.3.0.6 The joint should ensure the continuity of metallic sheath or armour
1.3.0.7 For joints of screened cables, following additional features must be considered-

a. Electric stress relief at termination of screen
b. Ionization and corona discharge

Besides the above requirement, cable joints should be simple and compact. It should require minimum time for jointing. It should be mechanically strong to withstand dynamic stresses due to short circuit current and impacts. The joints should further be resistant to corrosion and other chemical effects.

1.3.1Preparation before jointing

a. A proper joint position should be selected for jointing.
b. The joint pit should be of sufficient dimensions as to allow jointers to work. Sides of the pit should be well covered with tarpauline sheets to prevent loose earth from falling. When jointing cables in water logged ground or under monsoon conditions, sump hole should be excavated at one end of the joint pit in such a position so that the accumulating water can be pumped out or bailed out without causing interference to the jointing operation and tarpaulin tent to be made to avoid rain water. The jointing as far as possible is to be carried out inside a tent.

c. Before proceeding for jointing, on the existing cable, it is very essential to identify the cable to be jointed. For jointing of high tension cables, the cable should be made dead and earthed before commencement of the jointing. This should be confirmed by spiking method(Use Hydraulic Puncturing tool)

d. Cleanliness is the most important factor in all jointing work. All tools should be clean and dry at the time of the jointing process. Cleanliness while handling the insulation is very important. Any contamination of the insulation by dust or moisture is detrimental to the joint.

e. The cables to be jointed should then be meggered to check the condition of the insulation and a further check of further continuity of cables and tracing out cables to be jointed is necessary. Number on cores represents the phases. But these should never be taken for granted. Crossing of the core should be avoided in a joint.

1.3.2Jointing Method

Refer Instruction Manual given by manufacturer

1.3.3Care to be taken while Jointing

a) To maintain min 10 mtrs Cables in between two joints
b) Double earthing should be maintain in joints
c) Binding wire is used while removing the semi con layer and copper tape for avoid the uneven cuts and voids
d) Maintain the crimping sequence over the ferrule for uneven expansion of ferrule during the crimping
e) Avoid any scratches and cut marks in XLPE insulation while removing the semi con layer
f) Proper filing the XLPE insulation by emery paper for removing impurities of semi conductor and voids.
g) Apply the silicone gel over the XLPE insulation.
h) Maintain cooling period 30 min for post shrinked (Stress control tube, Insulation tube, Dual wall tube and core water sealing tube)

1.3.4Through Phasing

a) If joint failed:
Match the R/Y/B phase sequence at both ends of the joint by using Meggar/Multi meter for maintaining the phase sequence in new joints.

1.3.5**Safeguarding of Joint** :

a) Safeguard the joint by covering it with the help of Red bricks, sand and 11 kV tiles by making coffin for safe guarding the joints from mechanical damage and water logging.

Conductor joints should satisfy the following basic requirements.

a) Ensure conductivity of the conductor by proper crimping.
b) Leave a reasonably smooth finish and profile on the conductor joint as to avoid under stress concentration.

1.4 After Jointing Process

a. Cancel permit to work by informing HT Break down team and SCADA Control Room
b. Refill the excavated area.

c. Test the repaired cable (Pressure Testing)

d. Report to Breakdown Team/ Division Head/ SDO regarding work carried out and to charge the cable.

e. Inform GIS department for updating Coordinates of Joint Location

f. Inform the concerned authority for road reinstatement for processing and settlement of RR Charges

g. Return unused, recovered and scrap materials to store.

h. Entry of Material used, location, distance, nature of fault etc must be entered in Fault Notification in the SAP

i. Closure of Notification and Order.

1.5 Causes of faults of the cable

In the run of the cable

a. Damaged by external agency

b. Manufacturer's defect

c. Transients – Current or voltage fluctuations

d. Miscellaneous

e. Overloading of cables

Cable Size	Max. Loading (Amp/phase)
150 sqmm	200
240 sqmm	280
300 sqmm	305

In joints and terminations

1. Bad quality of material used in jointing
2. Bad workmanship

a) Bad ferruling, lug formatting, loose connections at terminations
b) Improper application of insulating tapes and insulating material
c) Bad handling of jointing materials
d) Use of defective jointing tools
e) Defective technique
f) Improper continuity of earth in earthed system
g) Improper leveling of joint

3. Improper design

Use of improper size of jointing kits

4. Miscellaneous

a) Improper positioning of joints
- Situating joint on a cable bend
- Situating joint in traffic ways-failure due to vibrations
b) Movement of soil
c) Improper handling of joints by external agencies
d) Ingress of moisture
e) Improper safeguarding

Note:It may be noted that fault may be due to one or composite effect of more than one causes mentioned above.

1.6 Scope

1.1. This document details the procedure for installation of 11KV 3C XLPE Termination.

1.2. This procedure shall be carried out by skilled HT jointer and shall be supervised by site engineer.

1.3. The result of site observations , IR measurement and all relevant remarks shall be recorded

1.7 Safety Points/Precautions

1.2.1 Tools and Tackles

1.2.1.1 Termination kit (Outdoor/Indoor)

1.2.1.2 Reusable boots

1.2.1.3 Gas cylinder

1.2.1.4 Gas torch

1.2.1.5 Megger

1.2.1.6 Hydraulic crimping tool

1.2.1.7 Torque wrench (Range – 0 to 100 N.m)

1.2.1.8 Testing rod/ Testing plug.

1.2.1.9 Cable identifier

1.2.1.10 Discharge rod

1.2.1.11 Live line detector.

1.2.1.12 Barricading tape.

1.2.1.13 Jointer's tool kit with required tools and tackles.

1.2.1.14 Required Excavation Tools like (Mortar Pans/ Shovels/ Axes/ Pick axes/ Spades)

1.2.2PPEs

1.1.1.4 Safety shoes / Gum boot.

1.1.1.5 Safety helmets

1.1.1.6 Hand Gloves

1.8 Responsibility:

a. Sub Division Officer

b. Divisional Head

c. Execution Head

1.9 Support:

Support by following function shall be extended for site inspection and data compilation.

1.4.1 Safety & Quality Team

1.4.2 PM Cell

1.10 Precautions

1.2.7 Arrange proper material and men power for the job.

1.2.8 Barricade the working area by barricading tape. Where appropriate sign board indicating the hazard shall be displayed near the barricade.

1.2.9 Keep Gas cylinders at safe distance

1.2.10 At each location where isolation has been carried out provide LOTO(Lock Out Tag Out) & Put the "Not to be Charged" Board and mention the details of reason of isolation, date and time, engineer name and contact details.

1.11 Pre installation checks:

1.8.3. In event of ID box failure, please verify the size of termination box.

1.8.4. If existing cable is short in length for termination then use ST.Thr XLPE joint at suitable location.

1.8.5. Confirm the section for proper isolation, lockout & tag out.

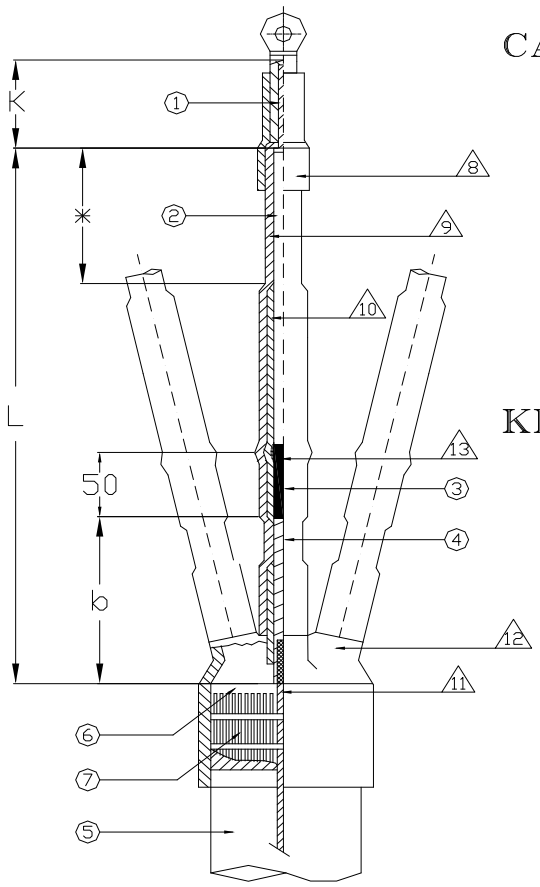
1.8.6. open the HT cable box & check for positive isolation with the help of HT live line detector and discharge rod.

1.8.7. PTW to be transferred to concerned Engineer by HT Break down team for attending the fault. All the process to be informed to system operation team.

1.8.8. Identify phasing : At work place identify each phase with respective core

1.8.9. Start Termination process

1.12 11KV 3C XLPE Indoor termination process :



CABLE COMPONENTS

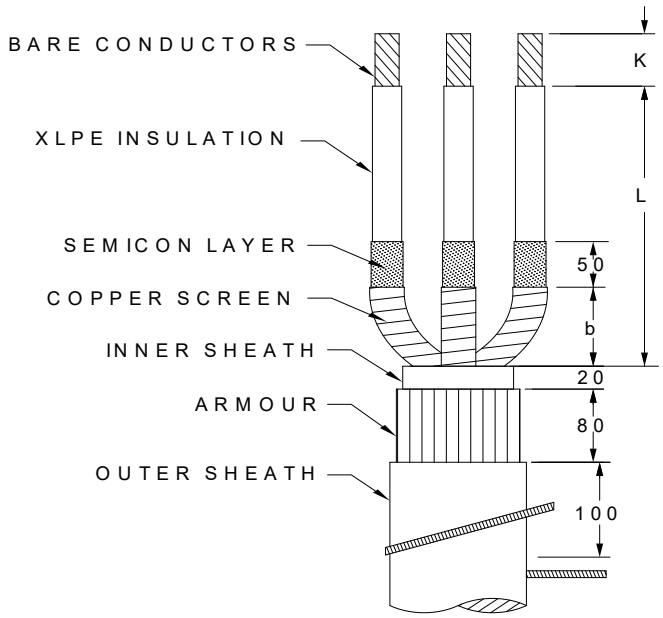
1. CONDUCTOR
2. INSULATION
3. SEMI–CONDUCTING SCREEN
4. COPPER SHILD TAPE
5. OUTER SHEATH
6. INER SHEATH
7. ARMOUR

KIT COMPONENTS

8. LUG SEALING TUBE
9. NON TRACKING WEATHER RESISTANT TUBING
10. STRESS CONTROL TUBING
11. COPPER BRAID FOR TAPE SHIELD
12. BREAKOUT
13. STRESS CONTROL MASTIC
14. PVC TAPE COVERING OVER ARMOUR CLAMPS
15. ARMOUR CLAMPS
16. BRAID FOR ARMOUR EARTHING
17. LUG

Step 1: Cable preparation: Strip of the cable outer sheath, Armour and inner sheath, copper screen & semicon layer as per the dimensions shown in figure. Abrade the insulation to a smooth finish with AL. oxide cloth. Clean and degrease the insulation and end of the outer sheath for about 100 mm. Using solvent provide in the kit.

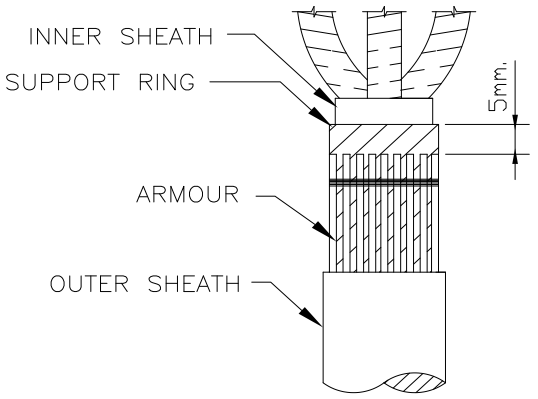
Note: Do not nick the insulation.



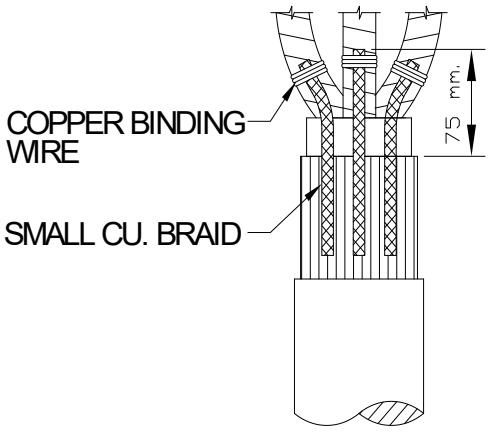
Condition	*L Indoor Straight Connection [mm]	*L Indoor crossed Connection [mm]	b [mm]	K
Part I : Standard Termination	400	450	100	According to Depth of cable lug barrel hole + 5 mm
Part II : RMU Termination				
Isolator Panel	600	650	250	
Circuit Breaker Panel	600	650	400	

Step 2: Spread the armour wire and insert the Support ring to rest on the inner sheath and project beyond the ends of the armour wires by 5 mm. Bind the ends of the armour wires using the Jubilee Clamp. The armour wires should make firm contact

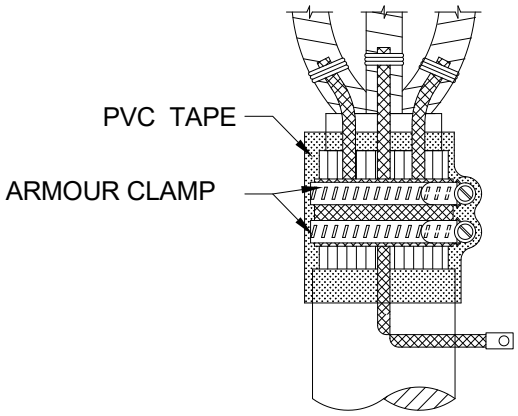
with the support ring. Filling the cut edges of armor and apply PVC tape at the edge to avoid the damage of inner sheath and Break out.



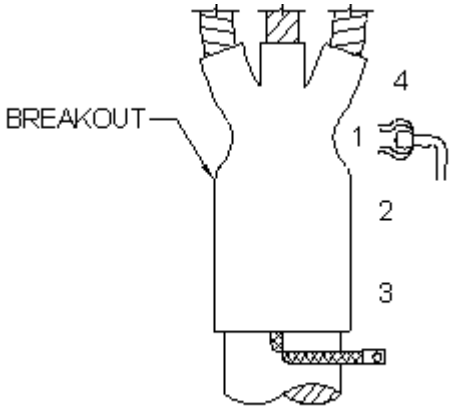
Step 3: Earthing arrangement for copper screen: - Spread out the cores, place the tinned copper braid (smaller one) over each core at 75 mm. above the armour cut, use binding wire to hold it, and solder tack it to the copper tape screen.



Step 4: Earthing arrangement for armour: - Extend the three small copper braid strips, which are already fixed on the copper screen of the cores down towards wire armour for main earthing arrangement. Wrap one layer of copper braid around the armour. Also insert small copper braids under this assembly. Tighten the clamps till the armour wires make firm contact with the support ring. The remaining copper braid strip shall be taken out for connection to the earth point. Apply adequate layer of PVC adhesive tape to cover the armour clamp and all sharp edges if any.

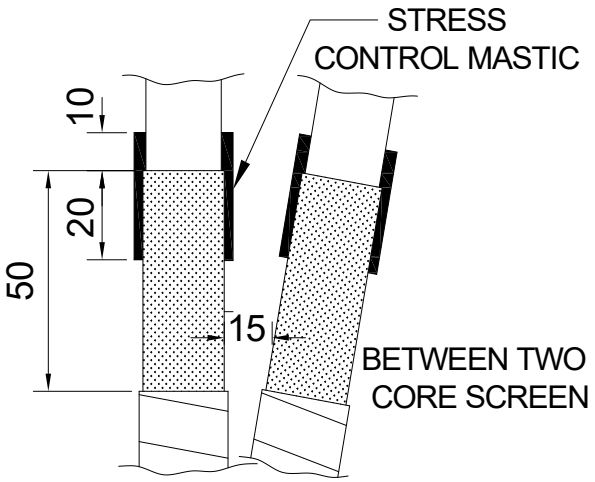


Step 5: Slide the heat shrinkable breakout over the cores and pull it well down into the crutch of the cable. Ensuring that it overlaps the outer sheath and hold down the breakout with the help of plier to avoid upward slippage commences shrinking the breakout at the center. Work first towards the lower end and then shrink the turrets onto the cores as shown in the sequence 1, 2, 3 & 4 as shown in fig.

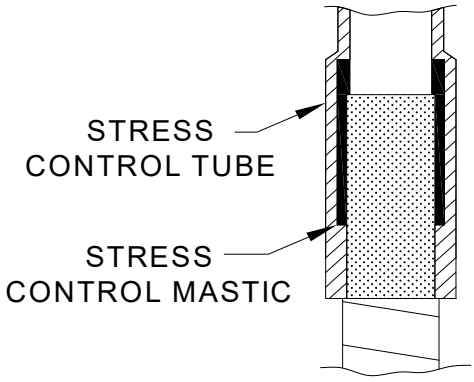


Step 6: Stretch stress control mastic around the each core. Start from 10 mm on insulation and continue on the semi-con upto 20 mm. Stretch the strip to half of its original width to achieve a fine, thin edge onto the insulation.

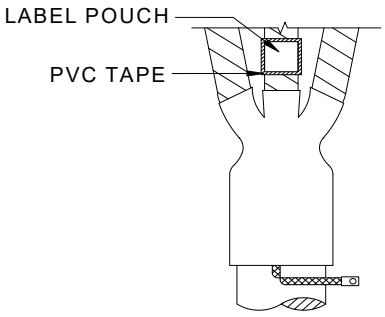
Apply a thin film of silicone grease on the XLPE insulation.



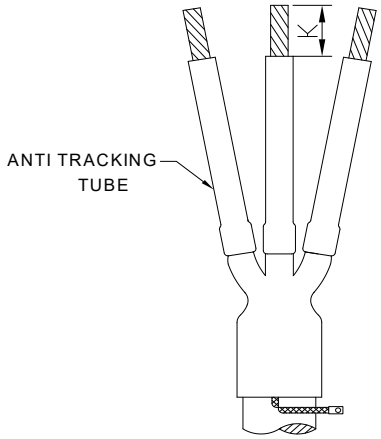
Step 7: Insert the heat shrinkable stress control tubes (black) over each core and position lower end of tubes in line with the copper tape shield cut back. Start shrinking the tube from the lower end and proceed upwards. Ensure that the tube is shrunk uniformly and is free from voids and wrinkles.



Step 8: Write down necessary information the label provided in the kit. Put the label in the pouch provided. Seal the pouch by using the double sided tape and wrap the pouch on the Cu. Screen of the XLPE cable core with help of PVC tape as shown in fig.

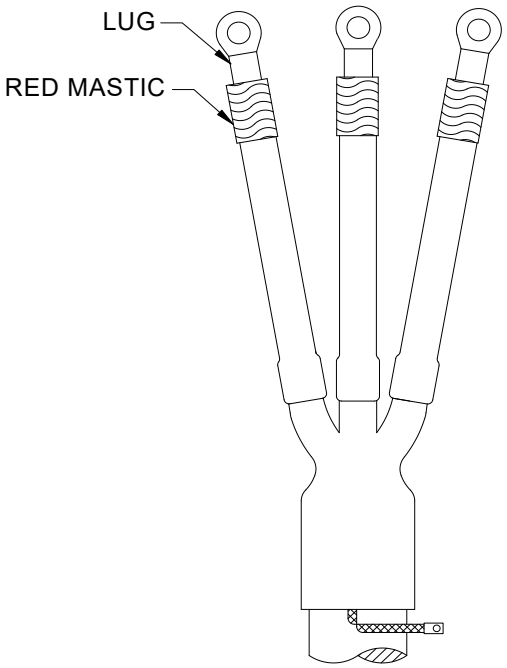


Step 9: Remove the release paper from the Anti tracking tubes (Red) & Insert the heat shrinkable Anti tracking tubes (Red) over each core from the end of the cores, and place them at the prescribed position ensuring that these tubes cover the fingers of breakout then shrink Anti tracking tubes from bottom to top. Remove the insulation from the core end according to **K = depth of cable lug barrel + 5 mm**



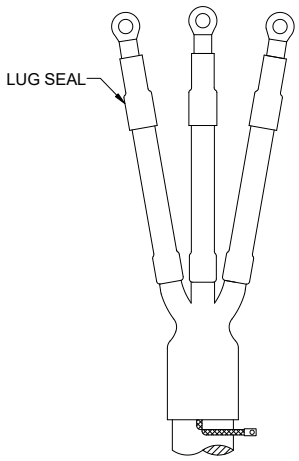
Step 10: Put the terminal lug and compress with applicable dies. Remove the release paper and wrap the red mastic tape around the barrel of the cable lug with a small overlap and slight tension.

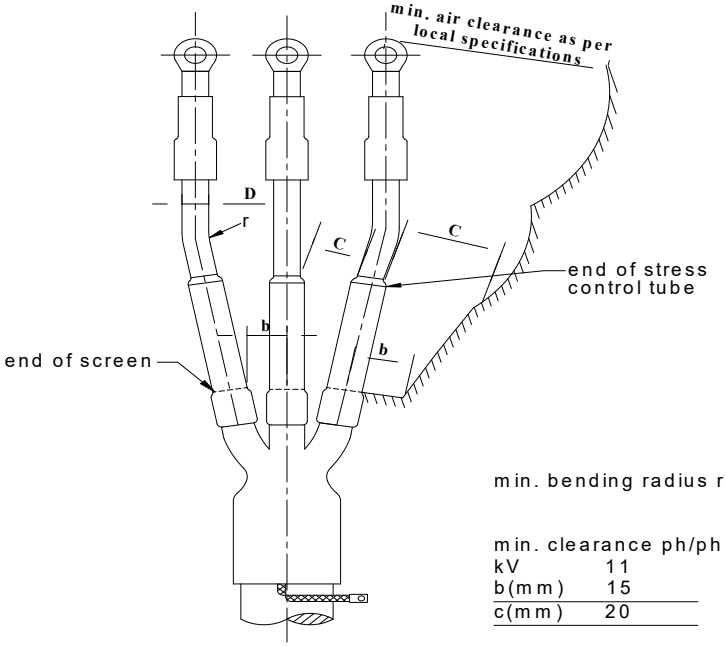
Note: Use the remaining sealant tape (Red) to fill any remaining gap between the core insulation and the cable lug.



Step 11: Remove the release paper from the lug sleeve and position the sleeve to overlap lug barrel and core equally. Start shrinking from the top and proceed downwards.

Note: When crossing the termination cores, ensure that the minimum core to core clearances (b) & (c) are maintained, as shown.





min. bending radius r = 10xD before bending heat cores up to approx 70° C

min. clearance ph/ph and ph/ground

kV	11
b(mm)	15
c(mm)	20

Step 12 : Give cable support with the help of cable cleat/clamps below breakout of termination.

Step 13: Tighten lugs with M16 bolts. Use torque wrench to tighten the bolts. Apply torque on M16 bolts as per RMU instruction manual.

Step 14: Apply cold shrink shrouds(boots) over lug connections. Maintain distance of at least 5mm between adjacent shrouds.

Step 15: In case shrouds are touching each other avoid using them and use filler tape, EPR tape and silicone tape over lug connection. (Refer Annexure-1)

Step 16: XLPE termination is over.

Step 17: Record Insulation Resistance value for future reference before connecting lugs.

1.13 After Termination work checks

1.8.1. After completion of work remove all packing, waste material and dump in appropriate place.
1.8.2. Clean the whole area.
1.8.3. Remove barricades, temporary stakes etc
1.8.4. Ensure the backfield areas are level with ground surface.
1.8.5. Remove the barricading and sign board.
1.8.6. Shift all the manpower and tools and tackles from the Site
1.8.7. Cancel work permit after getting clearance from the competent person to whom “Permit to Work” has been issued.
1.8.8. Normalize isolated section and restore the supply.
1.8.9. Inform to SDO, Divisional Head and SCADA Control room.
1.8.10. Data entry and material reconciliation of work done in system.

1.14 CABLE TERMINATION CONNECTION PROCEDURES

1.9.1. Properly crimped lugs are to be connected using bi-metallic washer (if applicable),plain washer, spring washer and proper lugs. Copper based conductivity paste shall be applied at all metal to metal contact surfaces.
1.9.2. Apply 2 layers of EPR tape covering all live portions in termination area with 50% overlap. This tape shall be stretched to minimum 200% while applying. No live part should be left exposed.
1.9.3. In highly moisture prone areas, such as sea shore, dumping area & area nearby creeks, 2 additional layers of self fusing silicone tape shall be applied over the entire bushing and the area already covered by EPR tape.
1.9.4. Please ensure use of PVC tape is forbidden.

Application of EPR tape (3M-Scotch-130C) *Application of Silicon tape*

Problems in present practice of Trenchless method cable laying

1. No pre survey is conduct due to which standard depth of cable is not maintained.
2. Completion report of cable laying with depth and route co ordinates is not part of submission with depth and route co ordinates

3. Cable laying is done at much high depth while crossing the critical utilities like IGL, Petroleum pipe line and EHV cables.
4. Difficulty in revive the running fault of cable due to deeper depth of the cable & require higher cable length due to parabolic path.
5. Difficult to pin point the exact fault location due to fault sound travel along the HDPE or trenchless hole.

Solution for overcome the present problems

1. Pre survey to be conducted and survey map to be marked following points

   a, Proposed minimum depth of cable (1m) along with allowed deviation band (1m to 1.5m)
   b, Marking of Crossing and nearby critical utilities along the cable route like IGL, Petroleum pipe line and EHV cable.
   C, Proposed No of test pits and cable joint pits.
   D, Proposed cable route.
2. Mandatory approval to be fixed for deviation from pre survey report
3. Coffin to be provided for cable jointing to save the damage from other utilities digging and also increase the life of joints.
4. Route marker to be arranged along the cable route with details (Contact number, depth of cable, Voltage level of cable and No of runs as per standard practice) to avoid damages.
5. Completion report to be submitted with details Map (Proposed Vs actual depth of cable, Cable route co ordinates and No of Joints used with coffin)
6. Don't lay more than one cable in same pilot drilling because cable will de rate up to 70% in case of touch together/Layed in toching portion..
7. Trenchless UG system to be marked in GIS by different in identification. Possibility to be explored.
8. Cable pulling eye to be used because upto two meter cables gets damaged while fixing cable pulling mesh by nails.

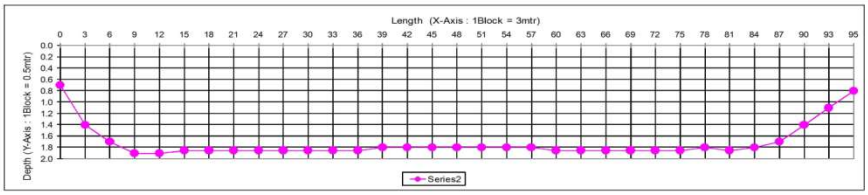
SOP for Installation of sign board and Route map during cable trenchless work

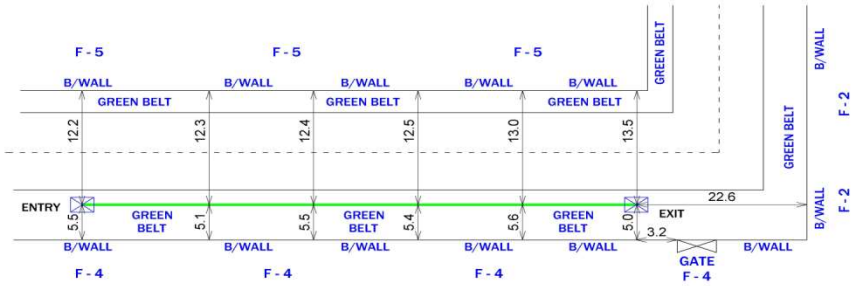
Problem Statement:

- In FY 22-23, approx. 3303 nos. of 11 kV cable got fault and out of 431 nos. got damaged by external agencies i.e. approximately 13 % of the cable fault got damaged due to external damage every year.
- Actual depth of the cable is not known when cable gets faulty result in more time in restoration.
- No data of depth available with BSES for sharing it with other utilities.

So for reducing underground cable fault by maintaining proper trenchless data i.e. Offset, Depth, length, Route marking during execution work.

ROD NO.	DISTANCE	DEPTH	ANGLE
1	0	0.70	-28
2	3	1.40	-20
3	6	1.70	-10
4	9	1.90	-6
5	12	1.90	0
6	15	1.85	2
7	18	1.85	0
8	21	1.85	0
9	24	1.85	0
10	27	1.85	0
11	30	1.85	0
12	33	1.85	0
13	36	1.85	0
14	39	1.80	2
15	42	1.80	0
16	45	1.80	0
17	48	1.80	0
18	51	1.80	0
19	54	1.80	0
20	57	1.80	0
21	60	1.85	-2
22	63	1.85	0
23	66	1.85	0
24	69	1.85	0
25	72	1.85	0
26	75	1.85	0
27	78	1.80	2
28	81	1.85	-2
29	84	1.80	2
30	87	1.70	3
31	90	1.40	10
32	93	1.10	10
33	95	0.80	10





LEGENGD :-

By HDD
By OPEN TRENCH
By MOLING
MAIN HOLE
COUPLER / PIT
DWC PIPE
G.I PIPE
ELECTRIC POLE
ENTRY / EXIT PIT

LOCATION : RADHEY MOHAN DRIVE, CHATRAPUR, NEW DELHI

JOB NO - 01

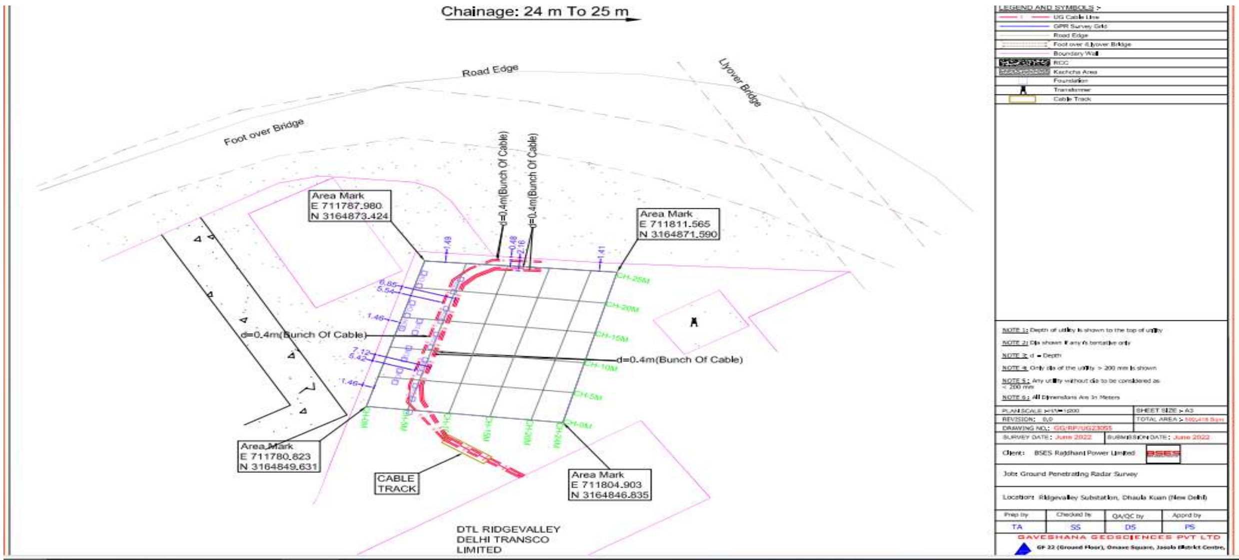
HDD LENGHT - 95MTR

BSES PIPE - 1NO X 160MM

	CONTRACTOR	PROJECT ENGINEER	AT ENGINEER	CLIENT :-	B S E S
SIGN.				COMPANY NAME :-	BRAIN ELECTRICAL
NAME					
CHECKED & APPROVED			SCALE :-	DESIGN BY :- MANOJ KUSHWAH +919810826413	

Standard methodology /BOQ: Installation of Sign Board & Route map during cable trenchless work.

PART-A	**Material Part**				
S.No.	Material Description	UOM	Rate	Quantity	Amount
1	CONDUIT PIPE 60MM (8 Feet)	Nos			
2	SIGN BOARD OF IRON SHEET WITH PAINT (16Gauge)	Nos			
	Material Cost				
	GST @18%				
	Total Material Cost (Part A)				
	PART- B				
	Total Labour (Part 'B')				
	Total Estimate Cost of Part (A +B)				
	Total Estimate Cost Rs.				
Part-B	**Labour**				
S. No.	Description	Units	Rate	Quantity	Amount
1	Route survey	M			
2	Installation of 60mm Pipe with fabrication of Iron Sign Board	Nos			
3	Concreting with 1:2:4 mix complete in All respect for 1 Sign Board	Nos			
4	Painting of nomenclature of size(s) as reqd. on FP/Service Pillar / LT Panel / HT Panel and LT aCBs etc. including supply of paint.rates are per alphabat	EA			
5	Making of Cable Route Map (Price as per the length of Cable Laying)	M			
	Total				
	GST :(18%)				
	GRAND TOTAL				


Chainage: 24 m To 25 m
Road Edge
Foot over Bridge
Flyover Bridge
Area Mark
E 711787.980
N 3164873.424
Area Mark
E 711811.565
N 3164871.590
Area Mark
E 711780.823
N 3164849.631
Area Mark
E 711804.903
N 3164846.835
d=0.4m(Bunch Of Cable)
d=0.4m(Bunch Of Cable)
d=0.4m(Bunch Of Cable)
d=0.4m(Bunch Of Cable)
CABLE
TRACK
DTL RIDGEVALLEY
DELHI TRANSCO
LIMITED
LEGEND AND SYMBOLS :-
UG Cable Line
GPR Survey Grid
Road Edge
Foot over /Flyover Bridge
Boundary Wall
RCC
Kachcha Area
Foundation
Transformer
Cable Track
NOTE 1: Depth of utility is shown to the top of utility
NOTE 2: Dia shown if any is tentative only
NOTE 3: d = Depth
NOTE 4: Only dia of the utility > 200 mm is shown
NOTE 5: Any utility without dia to be considered as < 200 mm
NOTE 6: All Dimensions Are In Meters
PLAN SCALE :-H/V=1:200
SHEET SIZE :- A3
REVISION: 0.0
DRAWING NO.: GG/RP/UG23055
SURVEY DATE: June 2022
SUBMISSION DATE: June 2022
Client: BSES Rajdhani Power Limited
Job: Ground Penetrating Radar Survey
Location: Ridgevalley Substation, Dhaula Kuan (New Delhi)
Prep by
Checked by
QA/QC by
Appro by
TA
SS
DS
PS
GAVESHANA GEOSCIENCES PVT LTD
GF 22 (Ground Floor), Omaxe Square, Jasola District Centre,

BSES

TECHNICAL SPECIFICATION

FOR

LAYING OF 66 kV / 33 kV / 11 kV / 1.1 KV GRADE PVC / XLPE CABLES

Specification no: GN101-03-SP-06-03

BSES RAJDHANI POWER LTD			
Prepared by	Pronab Bairagi		Rev : 03
Reviewed by	Amit Tomar	31.10.17	Date : 31.10.2017
Approved by	Vijay Panpalia		Pages : 44
Registered Office: BSES Bhavan, Nehru Place, Delhi - 110019			

Index

General Specification

1.0 Codes & standards

Materials, equipment and methods used in the Laying of 11/33/66KV Cable shall conform to the latest edition of following –

S. No.	Reference No.	Name of Standard
1		Indian Electricity Rules, 1956
2		Indian Electricity Act, 1910
3		Indian Electricity Supply Act, 1948
4		Electricity Laws Act, 1991
5		National Electrical Code (Indian standards Institution)
6	IS 1255	Code of practice for installation and maintenance of Power Cable upto and Including 33KV rating.
7	IS 1554	PVC Insulated Electrical Cables upto 11KV
8	IS 2274	Code of Practice for electrical wiring installation – system voltage exceeding 650V
9	IS 7098 Part II	Crosslinked Polyethylene Insulated PVC sheathed cables for working voltages from 3.3KV upto and including 33KV
10	IS 7098 Part III	Crosslinked Polyethylene Insulated PVC sheathed cables for working voltages from 66KV upto and including 220KV
11	IS 5820	Specification of precast concrete Cable cover.

2.0 Design guidelines and Parameter for cable laying-

S. No.	Parameter	Details
2.1	Selection of Cable Route	The cable route selection shall be done by the concerned supervising engineer by first conducting route survey and selecting a route along with contractor keeping followings in mind: -The side of road which presents the least obstacles and the fewest roadways crossings. -The future consumers and existing cables in the route may influence the cable route. -Railway, road crossings, MCD and other government agencies may also influence in selection of cable route. -Plans for future building projects should be considered. -The route shall be as far as possible away from parallel running gas, water pipes and telephone/telecommunication cables.
2.2	Site Preparation	a) Barricading: • The identified cable route shall be barricaded continually before excavation. • Barricading shall be as drawing laid • Open Trench method shall be adopted as far as possible for trench preparation. b) Excavated Earth:

		• The excavated earth shall be so stored at site, that it shall not cause trouble to running traffic • All excavated earth shall be stored within the barricaded area. • c) Full height fence, barriers, barricades etc. shall be erected around the site in order to prevent the working area from the risk of accidents due to speedy vehicular movement. Same the way barricades protect the road users from the danger due to construction equipment and temporary structures. d) The structure dimensions of the barricades , material and composition, its colour scheme, BSES logo and details shall be in accordance with specification and drawing laid down in the tender documents. e) All the barricades shall be erected as per the design requirements of employer, numbered painted and maintained in good condition and also barricade in charge maintain a barricade register at site. f) All barricades shall be conspicuously seen in the dark/night time by the road users so that no vehicle hits the barricades. Conspicuity shall be ensured by affixing retro reflective strips of required size and shape at appropriate angle at bottom and middle portion of the barricades at a minimum gap of 1000 mm. In addition minimum one red light /red blinker and red beacon light should be placed at the top of each barricade. g) PPP to be provided by vendor to all workers and engineers. **h) Also refer Annexure- 7: Barricading and Safety**
2.3	Clearance	The desired minimum clearances are as follows – - Power cable to power cable – A minimum clearance equal to diameter shall be maintained. Trench drawings shall be referred to for guidance. - Power Cable to control cables – 0.2 M - Power cable to communication cable – 0.3M - Power cable to gas/water main – 0.3 M
2.4	Depth of Cable Laying	The desired minimum depth of laying from ground surface to the top of cable shall be: 650 / 1100V grade XLPE Cables – 75 cm 6.35 / 11KV grade XLPE Cables – 90 cm Low voltage and Control cable - 75 cm 19 / 33KV grade XLPE Cables - 1.2 M 38 / 66KV grade XLPE Cables - 1.5 M Cables at Road crossing - 1.0 M (min.) Cables at railways level crossings (measured from bottom of sleepers to the top of Pipe) - 1.0 M (min.) Whenever there is any obstacle at the laying depth, the cable should be lowered/ raised to cross the obstacle. However variation in the depth is to be approved by BSES. The Contractor shall provide the same in deviation report.
2.5	Width of Cable	The width and depth of Cable Trenches shall depend upon number of

	trenches	circuits and Voltage Grade. Annexure # 3 and drawings of this specification shall be followed.
2.6	Bending Radius of Cables	While pulling of the Cable from the drum or during laying following minimum bending radius shall be maintained so that the cable, in particular the insulation does not get damaged – A) Single Core Cables (PVC & XLPE) Upto 1.1KV grade – 15 X D Above 11KV grade - 20 X D B) Multi Core Cables (PVC & XLPE) Upto 1.1KV grade - 12 X D Above 1.1KV grade – 15 X D Where 'D' is overall diameter of the cable.
2.7	Maximum permissible Tensile Strength for Cables	For cables pulled with Stocking PVC and XLPE SWA Armoured cables P = 30 X D PVC and XLPE AWA Armoured cables P = 20 X D Where P= pulling force in Kgrm, D= Diameter of Cable in mm For Cables pulled by Cable eyes Aluminium conductor – 30 N/mm2 = 3 Kg/sq. mm Copper conductors - 50N/mm2 = 5 Kg/sq. mm Permissible force is calculated by multiplying the above values by cross sectional area (CSA) of conductor of each core and then number of cores.
2.8	Methods of Laying	a) Cables shall be laid in direct in ground, in trenches excavated therein and shall be protected with covers as given in the drawing. Cables shall also be drawn into pipes of ducts or laid in the formed trenches or troughs or on racks or supported in trays or cleats as required by the site exigencies. Where the cables are laid in the formed trenches, the installation shall include removal and replacement of the trench covers and the provision of temporary protective covers on the trenches where they cross the access ways. b) HDPE (PN6,PE80) or RCC ducts shall be used where cable cross roads and railways tracks. Spare ducts for future extensions should be provided. Spare duct should be sealed off. Buried ducts or ducting blocks shall project into footpath or upto the edge of road, where there is no footpath, to permit smooth entry of cable without undue bending. The diameter of the cable conduit or pipe or duct should be at least 1.5 times the outer diameter of the cable. Angular alignment of the duct across road crossings shall be predetermined to maintain safe bending radius when direction of cable trench changes before or after the road. c) The contractor shall lay cable by Horizontal direct drilling (HDD) in main roads and highway with heavy traffic, passage to public property where excavation is not possible. Contractor shall take approval for laying of cable by means of HDD wherever required from the supervising engineer. The cable laid by HDD shall be

		minimized so that it doesn't exceed by 12% of total route length. This is to avoid De-rating of Cables. d) Unless approved by BSES, the contractor shall lay the cables, direct in ground, in single layer. The cables shall be laid with the pre-determined and approved cable route. e) Spacing shall be maintained uniformly between the cables all along the length including the bends, as approved by BSES. To maintain the spacing, suitable non-metallic formers shall be placed uniformly with spacing not exceeding 5 meters. Every bend shall have at least one spacer. f) 75 mm of the sand bed shall be placed at the bottom of cable trench. g) After the cables have been laid the trench shall be filled with the sand and shall be well rammed to a level not less than 75 mm above the top of the cables all throughout the route. h) To protect the cables against external mechanical damage, which may be caused by other agencies, the cable shall be protected by suitable cover. (for drawing of RCC cable cover refer annexure VI). i) The type of the covers shall be as under - 1.1KV Cables – Single layer of brick thickness not less than 75 mm (3 inch) - 11KV Cables – sand stone of thickness not less than 75mm (3 inch). - 33KV Cables shall be protected by reinforced concrete cover of width 300 mm as per attached drawing with thickness not less than 50mm. - 66KV Cables shall be protected by reinforced concrete cover as per attached drawing with thickness not less than 50mm. The RCC cable cover shall be embossed as "BSES EHV CABLE". j) Back fill to be filled up to 75mm and the warning tape shall be installed continuously. The tape shall be yellow in colour with Black / Red lettering of minimum 20mm height. The approved warning message shall be written in English and Hindi/ local language. The minimum thickness and width of the tape should be 300 microns and 150 mm respectively. k) The trench shall be filled-up by loose soft soil (300mm) and Excavated soil as indicated in drawings.
2.9	Cable over	On Bridges the cables are generally supported on wooden cleats and

	Bridges	clamped on steel supports at regular intervals. The cables laid on bridges shall be provided with Sun shield. Approval from appropriate authorities (PWD/railways) as applicable shall be taken by contractor.
2.10	Laying of Single Core Cables	a) The single core cables shall be laid in trefoil formation. Single core cables can be laid individually in HDPE pipe in case of HDD only. (Details of HDPE Pipe as per Annexure-9) b) For single core cables laid in trefoil formation, plastic cable ties shall be used at interval of 1.0 (one) meter throughout the cable length to maintain the trefoil arrangement. c) To balance the inductance, the phase sequence in trefoil format shall be maintained by vendor (for double circuit) d) To prevent magnetic losses (eddy current and hysteresis losses), the base plate of the panels or the terminal box of the equipments, shall have aluminium plate. In case the entry into the building is through GI pipe, a "slit" in the GI pipe shall be necessary. Alternatively GI pipes may altogether be avoided and non-metallic pipes such as PVC or HDPE pipe shall be used. Concrete pipes having steel reinforcement (RCC pipe) are not to be used.
2.11	Earthing of Single Core Cables	a) Single point bonded earthing shall be employed to prevent flow of induced circulating current in the armour and screen and consequential de-rating of cables for feeder less than 2.0 KM. b) For feeder length more than 2 KM, mid point earthing shall be provided.
2.12	Violation of barricading guideline and safety norms	On violation of barricading guideline and safety norms, a fine of Rs.5000 /day shall be imposed. BRPL inspector/engineer in-charge shall be empowered to impose the above penalty.

3.0 General guidelines for Laying Cables

S. No.	Parameter	Details
3.1	General	a) Laying of the cables and handling of the same shall be undertaken, at all times, by adequate staff suitably trained and supplied with all the necessary plant, equipment and tools. b) The contractor shall be responsible for all the route survey, establishment of the position of the joints as per the site exigencies and the drum lengths of cables to be laid. While carrying out the route survey the contractor shall take into account the obstacles on the route whether above or below ground. The cable shall be planned to be laid in an orderly formation, free from unnecessary bends and crossings c) The contractor shall submit a drawing for the complete scheme

		showing the entire route, road crossings, location of joints and also the arrangement of cables to be laid. In case due to site exigencies, cables have to cross over within the trench, the same shall be shown in the drawing. For each and every job, these drawings shall be approved by BSES, prior to commencement of work. d) BSES shall arrange for all the material and manpower required for jointing and end termination. The Contractor shall provide pit, carry out excavation for creation of working space required for jointing by the jointer. All civil works, structural work, clamping and earthing shall be carried out by the contractor, so that the cables and accessories perform satisfactorily during the entire life time. e) The entry and exit of the cables into the building shall be through RCC or GI pipe except for single core cables, which shall be properly sealed and shall be duly supported as per the method and technique approved by BSES, so that the outer sheath of the cable does not get damaged at the entry and exit points. The sealing should be of adequate length so that it minimizes the risk of spreading of fire or ingress of water.
3.2	Handling and Storage of Cable drums (All empty drums are returnable)	a) The cable drums shall be transported upright, so that the weight is distributed on both the flanges. Under no circumstances the cable drum may be laid on its side. During transportation the drums must be properly secured. The cable drums should never be dropped from Lorry or a trailer, so as to prevent damage to the cable drum and also to the cable. Ramp may be used for unloading. The drums may be rolled over short distance, provided the correct direction of rolling as provided on the drum is observed. Alternatively, a mobile crane should be used for lifting and lowering the drum. A chain-pulley arrangement may also be used to lift the drums and deposit the same on ground if required. b) In case the drums are to be stored prior to cable laying, they should be arranged in such a way to leave some space between them for air circulation. It is desirable that the drums stand on battens placed directly under the flanges. Overhead covering is not essential except in heavy rainfall areas or during monsoon. Cable should however be protected from direct rays of sun by leaving the battens on or by providing some form of sunshade. In no case the drums shall be stored in a flat position with flanges horizontal. c) For transportation of the cable drums from storage site to work site, the drum should be mounted on a trailer or an open lorry and unloaded by mobile cranes. d) After cable laying, empty cable drums shall be taken return back by vendor from site at their own risk and cost. Cost of empty drums shall be deducted from vendor account during final settlement.
3.3	Cable Laying	a) The ground over which the drum is positioned at site should be

		properly consolidated and jacks placed on both sizes of the drum to make the pay-off arrangement stable. Suitable arrangement be made to stop the drum rotation, during cable laying preferably by square wooden poles kept temporarily pivoted over cable roller under the flanges which when required can be applied on the flange as a brake by personnel manning the drum. b) The cable should always be paved off from the top of the drum. The drum must be positioned in such a way that the arrow on the drum points opposite to the direction of rotation marked on the drum. c) It must be ensured that the cable is not dragged over sharp object or on the road surface, so as to avoid damage to the outer sheath of the cable. d) The pulling method to be used shall be approved by BSES. Cable supplier's recommended maximum pulling tension shall not be exceeded. e) Rollers shall be placed at intervals and the cable shall be pulled over the rollers. The rollers shall be kept lubricated so that they rotate freely, minimize friction to the cable in motion. Rollers shall be positioned at the bends to minimize side wall friction. The contractor shall ensure that PVC/HDPE sheath of cable is free from damage due to abrasion. f) The cable should not be pulled out from the drum by lifting of the coil while the drum is lying flat on the flange. This leads to twisting of the armour and cores resulting in permanent damage to the cable. g) To avoid ingress of moisture, it must be observed that the end capping of the cables is not damaged. Cut pieces of the cables must be capped immediately, before laying of the same is taken-up.
3.4	Excavation of the Trenches	a) The excavation of the trenches shall be commenced, with proper co-ordination with BSES, so that all the necessary clearances for the route are already obtained from the competent authorities, well in time. b) Before opening of the section of the trench, the contractor shall satisfy himself that the line of the trench is clear of underground obstructions, by taking out trial pits on the line of the trench. c) The exact location of each trench shall be approved on site by BSES. The trenches shall be kept as straight as possible and each trench shall be excavated to approved formation and dimensions. If necessary, the trenches shall be adequate shored by wooden planks and bracing to avoid trench cave-ins which would cause injury to the persons and also damage the cables laid. d) The bottom of each trench shall be firm and of smooth contour. The contractor shall take reasonable precautions to prevent damage to the highway or ground surface from a slip or breaking away of the sides of the trench. e) The trench excavation and filling in shall be so executed that all

		walls, roads, sewers, drains, pipes, cables, structures, places and things shall be reasonably secured against risk of subsidence or injury and shall be carried out to the satisfaction of the authorities concerned. Should, however, a damage to an existing or other services be made, the Contractor will arrange and pay for any necessary repair, to make good the damages. f) Where trenches pass from a footway to a roadway or at other positions where a change of level is necessary, the bottom of the trench shall rise or fall gradually. The rate of rise or fall shall be approved by BSES. g) Contractor shall ensure that during excavation and until restoration has been completed, for reasonable access of persons and vehicles to property or places adjacent to the route. h) When the excavation of the trenches has been accurately executed, the contractor shall inform BSES for approval. Laying of cables or building of structure shall not be started until the contractor has been advised by BSES to proceed with the work.
3.5	Excavated material	a) The materials excavated from each trench shall be placed so as to prevent nuisance or damage to adjacent ditches, drains fences, gateways and other property or things. Excavated material shall be stacked so as to avoid undue interference with traffic. b) Where, owing to traffic or for reasons of safety or other considerations, this is not permissible, the excavated material shall be removed from the site and returned for refilling the trench on completion of laying; surplus material shall be disposed off by the contractor at his own cost.
3.6	Pipes and Ducts	a) Care shall be taken to make the bend of the pipes or duct lines as easy as practicable and in no case of radius less than 3 meters. Where approved, split pipes may be used on bends, the pipes being fitted round the cable after laying. b) All road crossings shall be ducted. This applies to present and future roads as indicated on the route plans. The pipes and the ducts shall be laid in an approved manner and shall be surrounded by 150 mm of PCC (1:2:4) c) Ducts under the road shall be provided by the contractor, by non-disruptive method, if road cutting is not permitted by the concerned authorities Cable laying shall be done by Horizontal Direct drilling method (HDD). d) The cables shall be suitably protected at entry and exit from the pipes, so that the outer sheath does not come in contact with the edges of the pipes / ducts. The pipes and ducts shall have slope so that the seepage water can drain through the small opening provided on the lower side of the pipe sealing. e) The pipes and ducts shall be secured to the base at both ends and at regular interval, throughout the length, so that at no point the ducts or pipes get suspended over the threaded cable, and damage the same, thus defeating the very purpose of providing the pipe / duct.

		f) At all road crossings at least one spare duct / pipe shall be provided for future use. The pipe shall be thoroughly cleaned of obstructions. A draw wire or rope shall be left in each pipe to facilitate the drawing in of the cables. The duct end shall be sealed temporarily to prevent the entry of foreign matter. End caps and permanent markers shall be placed flush with footpath / roadways at both the ends. The pipes and ducts shall be cleaned again immediately before the cables are drawn in. g) The internal diameter of the pipe / duct should be such that the cables occupy only 40% of the area of the pipe / duct to avoid de-rating.
3.7	Joint Bays	The contractor shall provide all help so as to enable jointers to carry out their work efficiently and expeditiously. The method of securing and supporting cable joints and cables also the bonding and earthing thereof, shall be detailed on the drawing. The details shall be approved by BSES prior to commencement or work. The joint position should be staggered.
3.8	Back filling of trenches	a) Filling in of trenches shall not be commenced until BSES has inspected and approved the cables and accessories at site. The inspection should be got done on daily basis so that the trenches do not remain open unnecessarily, to avoid inconvenience to public. b) The trench shall be backfilled after putting all protections for cables. c) Soft soil shall be backfilled for 300 mm above the cable protection cover. d) Caution Tape shall be laid all along the cable route above the soft soil filling. e) Complete backfilling shall be done above the caution tape.
3.9	temporary Reinstatement	a) Where cables routes are in public highways, footpaths, gardens etc., the method of reinstatement will be subject to approval by MCD. All costs incurred will be at the contractor's expenses. b) The contractor shall be responsible for proper permanent reinstatement of the upper levels, which shall be carried out to the satisfaction of BSES and the MCD authorities concerned. c) Before finally leaving site, permanent reinstatement shall be executed by the contractor to the approval of MCD and the property owners and all costs incurred shall be to the contractor's account.
3.10	Permanent Reinstatement of Public Road,	a) In public roads and footways the surfaces and foundations shall be temporarily reinstated by the contractor. After settlement, temporary reinstatement material shall be removed as necessary and the permanent reinstatement shall be carried out to the approval of the appropriate highway authority / MCD. Stone and pre-cast concrete paving kerbs and channels shall also be finally reinstated by the contractor. b) Temporary reinstatement shall be maintained by the contractor until commencement of final reinstatement to ensure that the surface is always safe for the passage of pedestrians and vehicular traffic.

3.11	Identification	All cables shall be identified below the gland at each end, at joint position and at approved positions by means of bands engraved or punched with cable no. feeder name, size of cable, number of cores, phase colour etc. The bands shall be secured fastened in a permanent manner, and shall be made of material able to resist corrosion, dampness and mechanical damage.
3.12	Cable Route Markers	All cables routes shall have markers at suitable location with a gap not exceeding 30 meters. The route markers shall be approved design. Additional markers shall be provided at joint locations with approved markings.
3.13	Cable supports / Clamps	a) The contractor shall supply and install all the supports, racks, trays, cleats, saddles, clips and other parts required to carry and secure the cables, without risk so that there is no undue mechanical load or stress due to weight of the cable at each end. Cleats, saddles and clips shall be of the design as approved by BSES. No cable shall be laid on the trench floor. They shall be run in a neat and orderly manner and the crossing of cables within the trench shall be avoided as far as possible. Where cable runs unavoidably cross, a suitable supporting arrangement shall be provided to maintain an adequate gap between the cables b) Every cable shall be supported at a point not more than 500 mm from its termination.
3.14	Installation of Cables in tunnels / basement / below the panels etc	a) The design of cable support for cables installed in air in cable tunnels, basements etc. shall consist of vertical steel members spaced at approved interval and secured to the walls, floors and ceilings as necessary by means of bolts either cemented in position or expanded into cored holes. Each vertical support shall have bolted to it a number of steel brackets spaced at the intervals and designed to support and retain trays constructed of galvanized sheet steel of adequate section to carry the weight of the cables, plus space for an additional quantity of future cables at least 25% by weight and dimensions in excess of the cables installed under the contract and an additional load of 100 kg at the extremity without distortion. The trays shall be designed with raised edges to retain the cables and shall incorporate an interlocking feature so as to prevent movement between supports. b) The design and construction of all cable cleating and supporting arrangements shall suit the cable system design. The spacing of cable supports shall be approved by BSES. c) Cable run on trays shall be neatly dressed and where not provided with cleats shall be secured by heavy gauge, type approved metal reinforced, clips or saddles. Not more than six cables shall be embraced by one clip. d) Mild steel of appropriate sections, duly painted in an approved manner, shall be used for fabrication of cable supports. The steel shall be free from blisters, scales, laminations or other defects. Before final painting, the steel sections shall be provided with double coat of red primer.

3.15	Cable Protection at overhead Towers or Poles	Where the cables terminate on overhead line poles or towers located outside substation compounds the contractor shall provide suitable cable supporting galvanized steel work attached to the pole or tower and comprising backboard, runners, sheet, steel cover of not less than 3.0mm thickness, stays, cable cleats, anti climbing guard and all incidental items to provide secure protection for the cables. Isolators and Lightning arrestor if required to be installed shall be provided as free issue item to the contractor, however the erection and steel structure required shall be in scope of the contractor.
3.16	Sun Shades	All cables shall be protected from direct solar radiation by ventilated sun shields as approved by BSES.
3.17	Route Plan	a) BSES intents to show all the cable routes, location of joints and other underground obstructions on a GPS map. b) During the progress of the contract works the contractor shall record on a set of route plans and cross section drawings of an approved form, these details so that the same can be transferred on the GPS maps. Such particulars will allow an accurate reference to be made in the case of any fault or projected modification. These records shall show, amongst other data, both indoors and outdoors the exact position of every joint, cable end termination and also the particulars of the depth of the trench, the arrangement of the cables, with cable numbers and the position of all obstructions revealed during the course of excavations. These completed records shall be submitted to BSES within 15 days of completion of any particular route/feeder. The final bill shall not be processed by BSES unless this activity has been completed to the entire satisfaction of BSES
3.18	Site Facilities to be maintained by the Contractor	a) The contractor shall arrange for all the tools and tackles required for cable laying as per this specification. BSES shall arrange for all the material and manpower required for jointing and end termination. b) Illumination and Power supply shall be arranged by the contractor so that the work can be carried out round the clock. c) The contractor shall maintain functional dewatering pumping facility with suitable power supply so as to protect the cables and the joints from ingress of water due to rain or otherwise d) The contractor shall make arrangement to provide suitable scaffolding arrangement to carry out the termination work e) The contractor shall carry out proper barricading of the dug cable route and the joint bays and shall take all necessary precautions to avoid any public hazard f) Also refer Annexure-7: Barricading and Safety.
3.19	Type of Roads and guidelines for road restoration	The typical section of type of Roads (based on width) under PWD and MCD are :- - 20 Feet Wide road - 30 Feet wide road - 40 to 60 Feet Road - Other (which include Kota stone, Agra stone, Cement concrete, interlocking paving tiles, brick road, chequered tiles

		and asphalted road) The drawing are shown in annexure IV The guidelines for road restoration for various type of roads and surfaces are indicated in annexure V as :- - Bituminous road Type I (category I & II) - Bituminous road Type II (category III) - Cement concrete road - Kota/Rajasthan stone Road - Brick Road - Interlocking paving tiles. - Agra stone road - Chequered tiles road - Asphalted road

4.0 Testing

S. No.	Parameter	Details
4.1	Tests to be carried out during and after completion of Cable Laying	Testing of cable before jointing – - Cable shall be tested for Insulation Resistance prior to laying by opening the end and resealing end properly. Testing on complete Cable Installation – a) Insulation resistance of each core shall be measured against all the other cores and the metal screen connected to earth. b) The resistance of the conductor shall be measured. c) DC High voltage. For old cables test voltage shall be 1.5 times rated voltage or less depending on age of cable.(refer annexure # 2 for values) d) Charging of Cable at No-Load at Nominal working voltage for 24 Hours. e) After laying and before termination of cable a sheath test shall be conducted for 66KV Single core Cable as under :- At both ends the cable shall be raised from ground. From the end graphite coat applied over the outer PVC jacket shall be removed with a piece of glass for a length of 300mm. A spiked steel rod with an eye for attaching a wire shall be driven into the ground and connected to a nearby water or hydrant pipe. Insulation resistance of PVC jacket shall be measured between the aluminium wire armour and the spike with a 500/1000V insulation tester. Measured resistance shall not be less than 2.5M OHM per KM. Thereafter 10KV DC shall be applied for one minute in the same way. After the test the armour shall be kept earthed to the steel spike for 15 minutes for discharging residual charge.
4.2	**Statutory**	a) Road cutting permission

	clearance	Road cutting permission shall be taken from competent authority by vendor. How ever official fees shall be paid by BRPL. b) Electrical inspector clearance Electrical Inspector clearance shall be in vendor scope. How ever official fees shall be paid by BRPL.

5.0 Progress Reporting:

S. No.	Parameter	Details
5.1	Detailed Progress report	Progress report to be submitted by Contractor to BSES once in a Week containing i) Excavation status ii) Cable laying status iii) Status of preparedness for Jointing iv) Reason for any delay in total programme v) Details of damage to cable during laying. vi) Progress on final completion / Constraints / Forward path

6.0 Drawing, Data & Manuals:

S. No.	Parameter	Details
6.1	To be submitted After Completion of the Job	As the works is completed the following reports in quadruplicate shall be submitted to BSES for record purpose and shall be incorporated in the 'As constructed Records'. a) Feeder details (sending end, receiving end, SAP number of project etc) - Type of cables, cross section area, rated voltage. Details of construction, cable number & drum number. - Year and month of laying. - Actual total route length, cable length, length between joint to joints or end. - Location of cables and joints in relation to certain fixed reference points, for example buildings, hydrant, boundary stones etc. - Jointing reports detailing the date, weather conditions, jointers and supervising Engineers names, details of type of cable and type of joint or termination, location and joint bay number, ambient temperature. - Results of original electrical measurements and testing on cable installation. - Full written reports will be required of any damage occurring to cable or equipment together with remedial action proposed which will be subject to the approval of BSES.
6.2	Drawing and document sizes	Standard size paper A0, A1, A2, A3, A4

7.0.0 Deviations

Deviations from this Specification shall be stated in writing by the contractor. Written approval shall be obtained from BSES by the contractor. In absence of such a statement, it will be assumed by BSES that the Contractor complies fully with this specification during execution of the job.

Deviation mentioned in any other submitted tender docs like in GTP, QAP, Old PO, old WO, BRPL Standard, vendor standards etc. shall not be considered as a deviation at any stage of contract.

The format for approval of deviation attached in annexure # 1

Annexure # 1 – DEVIATION REPORT FORMAT

S. NO.	Clause No. of Specification	Details about deviation	Reason for deviation	Approved by (Sign & Name)

Annexure # 2 – DC HIGH VOLTAGE TEST

Rated Voltage of cable in KV	Test Voltage Between		Duration in Min.
	Any conductor and metallic sheath / Screen / armour	Conductor to conductor (for unscreened Cables)	
0.65 / 1.1	**3**	**3**	**15 Min**
6.35 / 11	**18**	**30**	
19 / 33	**60**	**----**	
38 / 66	**90**	**----**	

Reference value for DC High voltage Test.

Annexure # 3 – CABLE TRENCH DETAILS

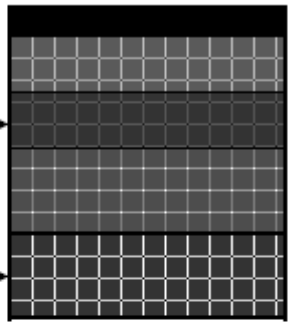
S. No.	Cable Size	Trench		Cable Trench drawing reference
		Width (mm)	**Depth (mm)**	
1	**1.1 kV LT Cables**			
a	3.5Cx150 mm^2 - Single Circuit	**400**	**875**	A – 1 (Drg. # 9)
b	3.5Cx150 mm^2 - Double Circuit	**400**	**875**	A – 1 (Drg. # 9)
c	3.5Cx150 mm^2 - Triple Circuit	**400**	**875**	A – 1 (Drg. # 9)
d	3.5Cx300 mm^2 - Single Circuit	**400**	**875**	A – 1 (Drg. # 8)
e	3.5Cx300 mm^2 - Double Circuit	**400**	**875**	A – 1 (Drg. # 8)
f	3.5Cx300 mm^2 - Triple Circuit	**400**	**875**	A – 1 (Drg. # 8)
2	**11 KV Cables**			
a	3Cx150 / 300 mm^2 - Single Circuit	400	**1055**	A – 2 (Drg. # 6)
b	3Cx150 / 300 mm^2 -Double Circuit	650	**1055**	B – 1 (Drg. # 7)
3	**33 kV Cables**			
a	3Cx400 mm^2 - Single Circuit	**400**	**1235**	A – 3 (Drg. # 3)
b	3Cx400 mm^2 - Double Circuit	**650**	**1235**	B – 2 (Drg. # 4)
c	3Cx400 mm^2 - Quadruple Circuit	**650**	**1235**	B – 2 (Drg. # 5A)
d	3Cx400 mm^2 - Quadruple Circuit	**650**	**1545**	B – 3 (Drg. # 5B)
e	3Cx400 mm^2 - Quadruple Circuit	**1200**	**1235**	C – 1 (Drg. # 5C)
4	**66 kV Cables**			
a	1Cx630/1000 mm^2 - Single Circuit	**650**	**1445**	B – 4 (Drg. # 1)
b	1Cx630/1000 mm^2 - Double circuit	**1200**	**1445**	C – 2 (Drg. # 2)
c	3Cx300 mm^2 - Double circuit	**1200**	**1445**	C – 2 (Drg. # 2A)

Annexure # 4 – Standard Road Profile

STANDARD ROAD PROFILE
20' - 00 " FEET WIDE ROAD (Road type 1)

Sketch 1 of 4

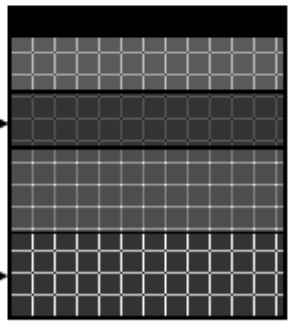
1 **20 mm thick** Pre-Mix Carpet
2 **75 mm thick** WBM 53mm to 22.5 mm stone aggregate
3 **75 mm thick** WBM 63mm to 45 mm stone aggregate
4 **100 mm thick** WBM 90mm to 65 mm stone aggregate
5 Compacted Earth



Sketch 2 of 4

30' - 00 " FEET WIDE ROAD (ROAD TYPE II)

1 **20 mm thick** Pre-Mix Carpet
2 **75 mm thick** WBM 53mm to 22.5 mm stone aggregate
3 **75 mm thick** WBM 63mm to 45 mm stone aggregate
4 **100 mm thick** WBM 90mm to 65 mm stone aggregate
5 Compacted Earth

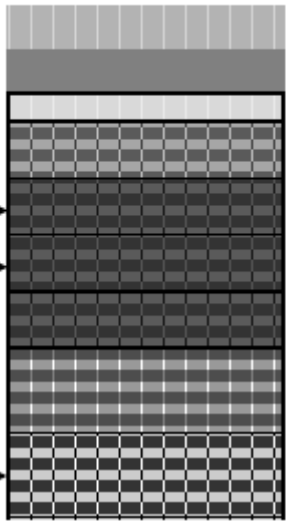


Section X-X '

Sketch 3 of 4

40'-00 " TO 60'-00" FEET WIDE ROAD

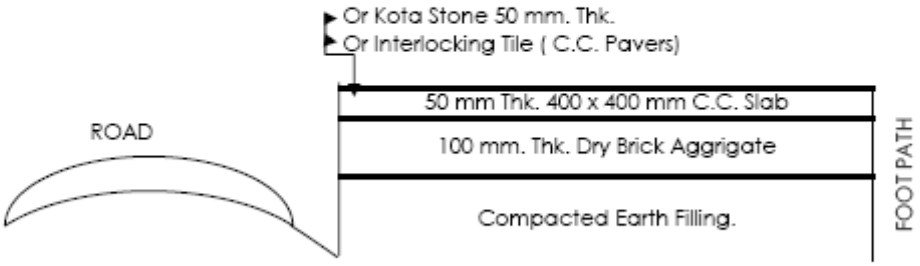
1 **50 mm thk.**(Dense Asphaltic coat) (DAC)
2 **50 mm thk.**(Dense Bituminous)
3 **20 mm thick** Pre-Mix Carpet
4 **75 mm thick** WBM 53mm to 22.5 mm stone aggregate
5 **75 mm thick** WBM 63mm to 45 mm stone aggregate
6 **75 mm thick** WBM 63mm to 45 mm stone aggregate
7 **75 mm thick** WBM 63mm to 45 mm stone aggregate
8 **100 mm thick** WBM 90mm to 65 mm stone aggregate
9 Compacted Earth



Section A-A '

Sketch 4 of 4

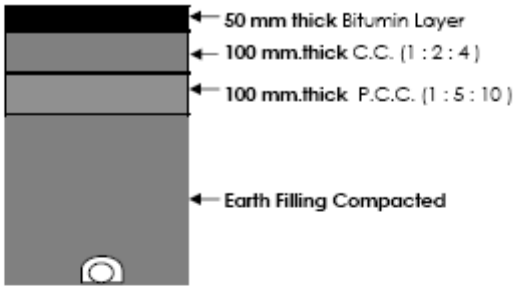
General drawing for cases other than roads.



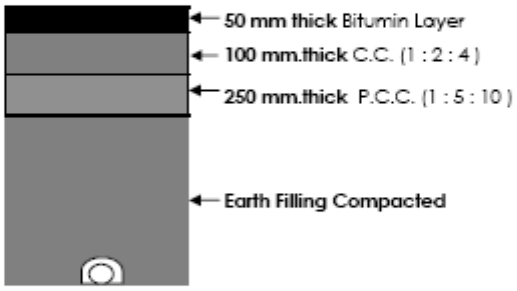
Details of Foot Path Along roads under PWD & MCD.

Annexure # 5 – Road Restoration Sectional Drawing

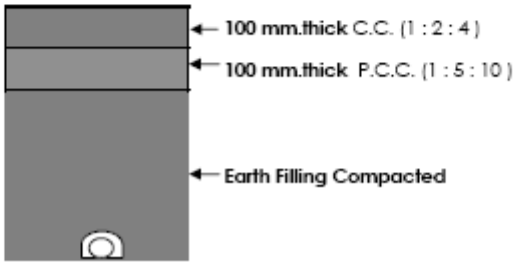
ROAD RESTORATION SECTIONAL DRAWINGS



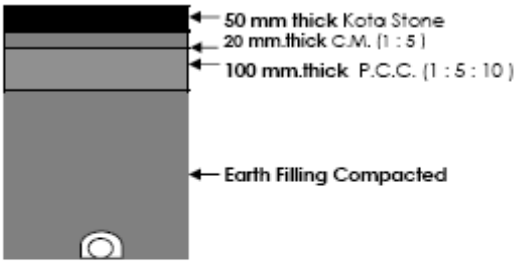
Bituminious Road Type - I (Category 1 & 2) Road width 20 to 30 feet and 30 to 40 feet.



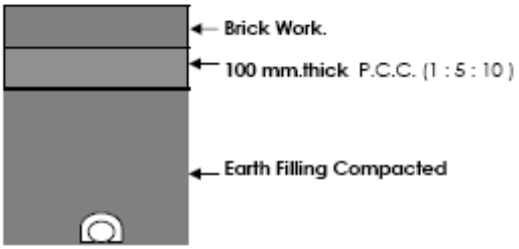
Bituminious Road Type - II (Category 3)



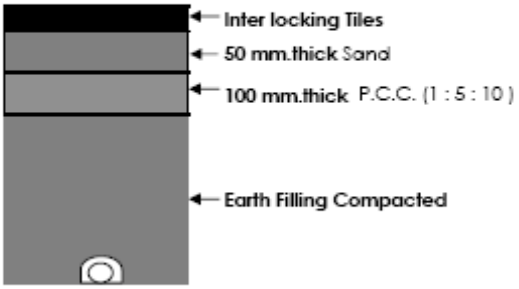
Cement Concrete Road



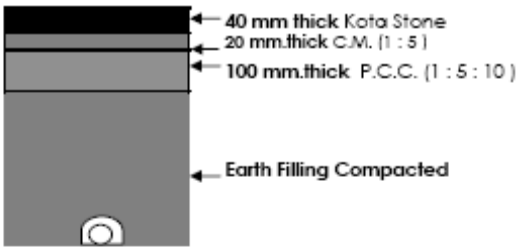
Kota / Rajasthan stone Road



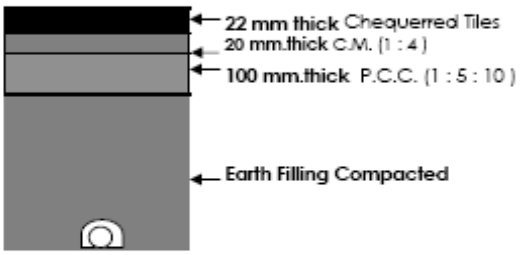
Brick Road



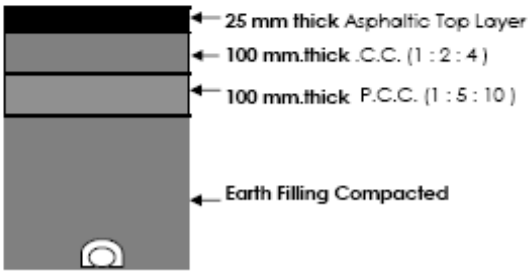
Interlocking Paving Tiles



Agra stone Road .



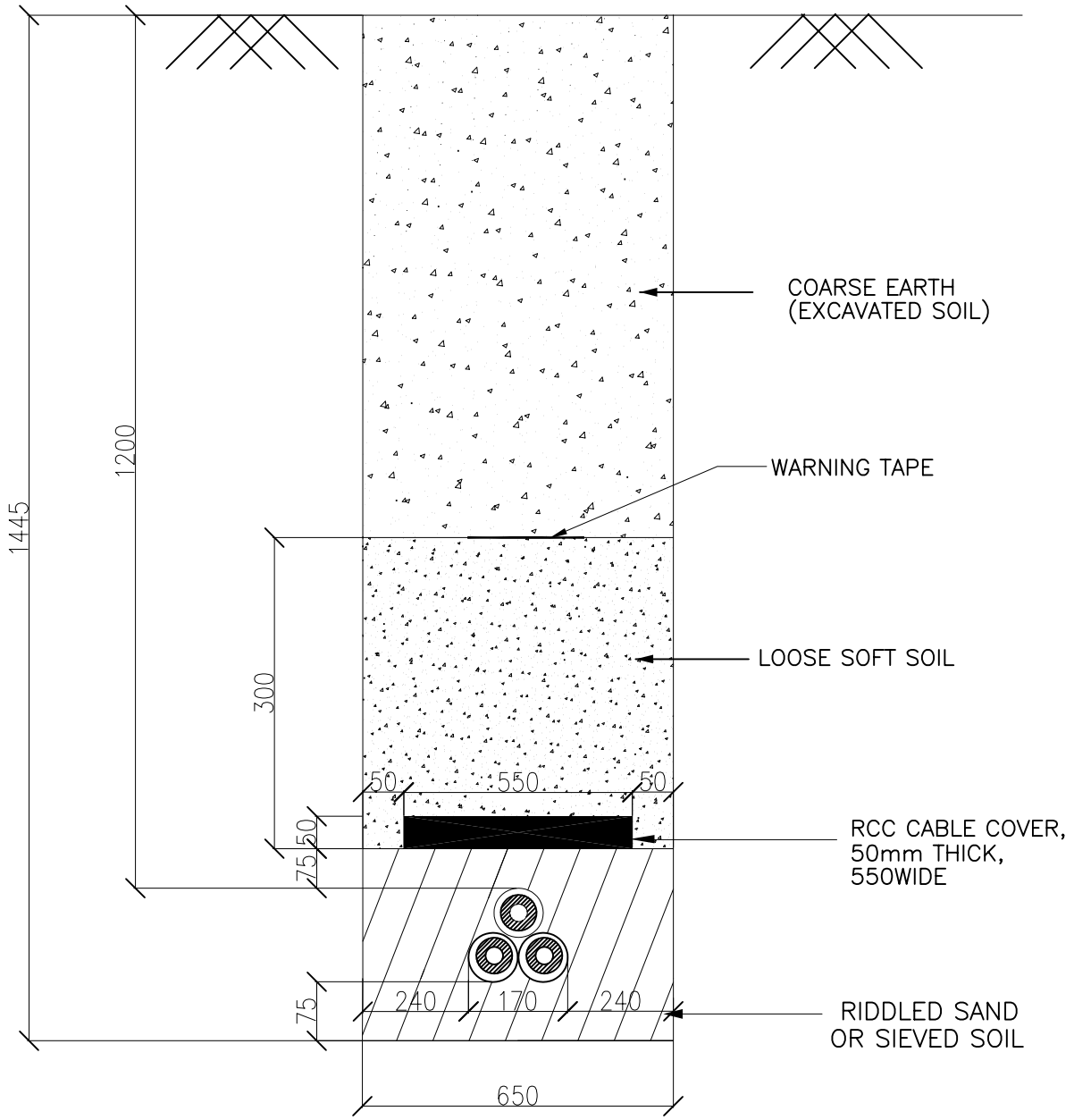
Chequerred Tiles .



Asphaltic Road .

Annexure # 6 – DRAWINGS (CABLE TRENCH AND RCC CABLE COVER)

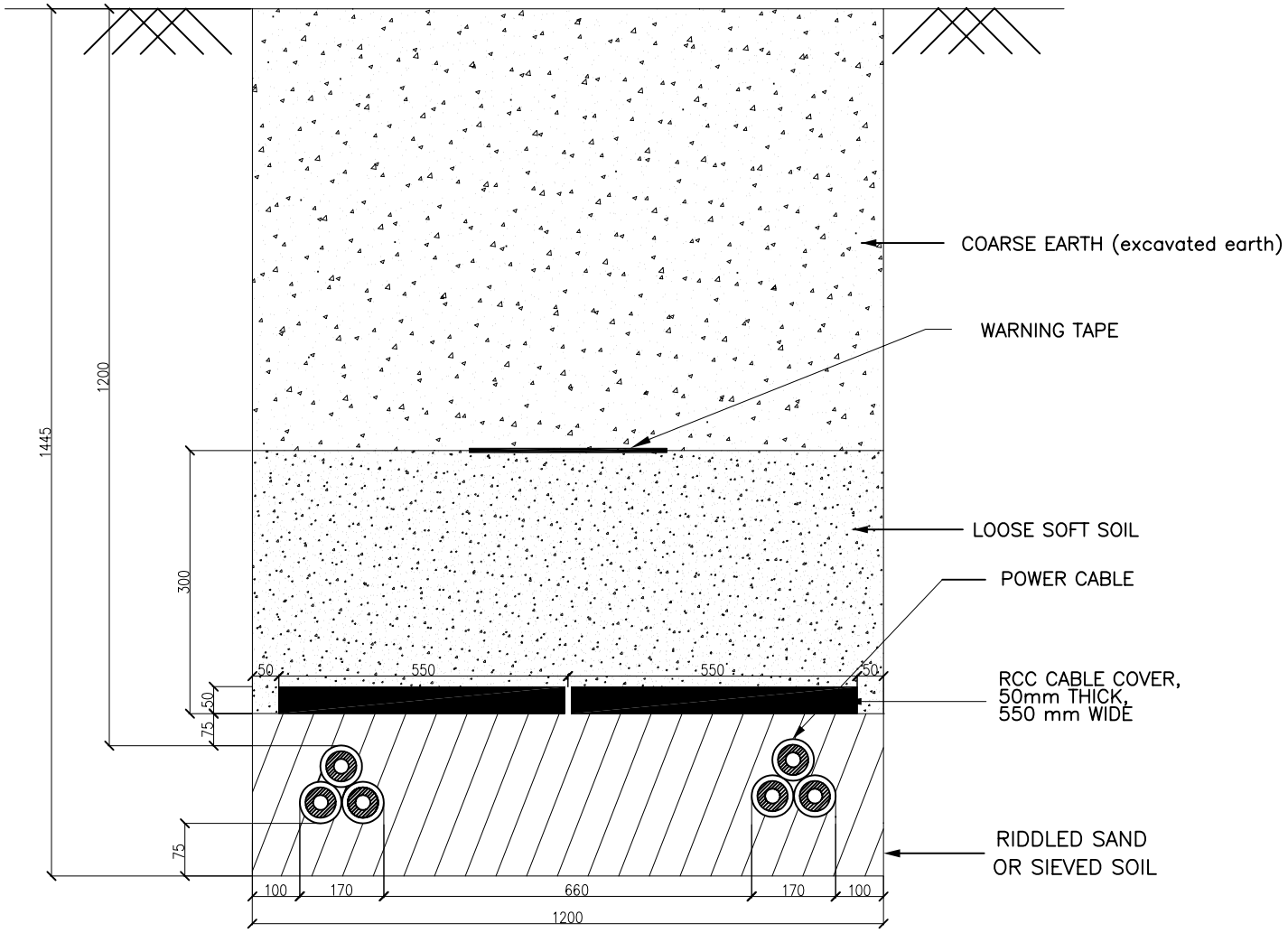
DRAWING # 1



TYPICAL DETAILS FOR 66KV BURRIED CABLE FOR SINGLE CIRCUIT
TYPE – B 4

DRAWN	DS	TITLE:– TRENCH DRAWING FOR 1C X 630 Sq. mm 66KV SINGLE CIRCUIT XLPE CABLE	BSES
CHECKED	SGD		
APPD.	D.GUHA		
DATE			REV. 00
SCALE			

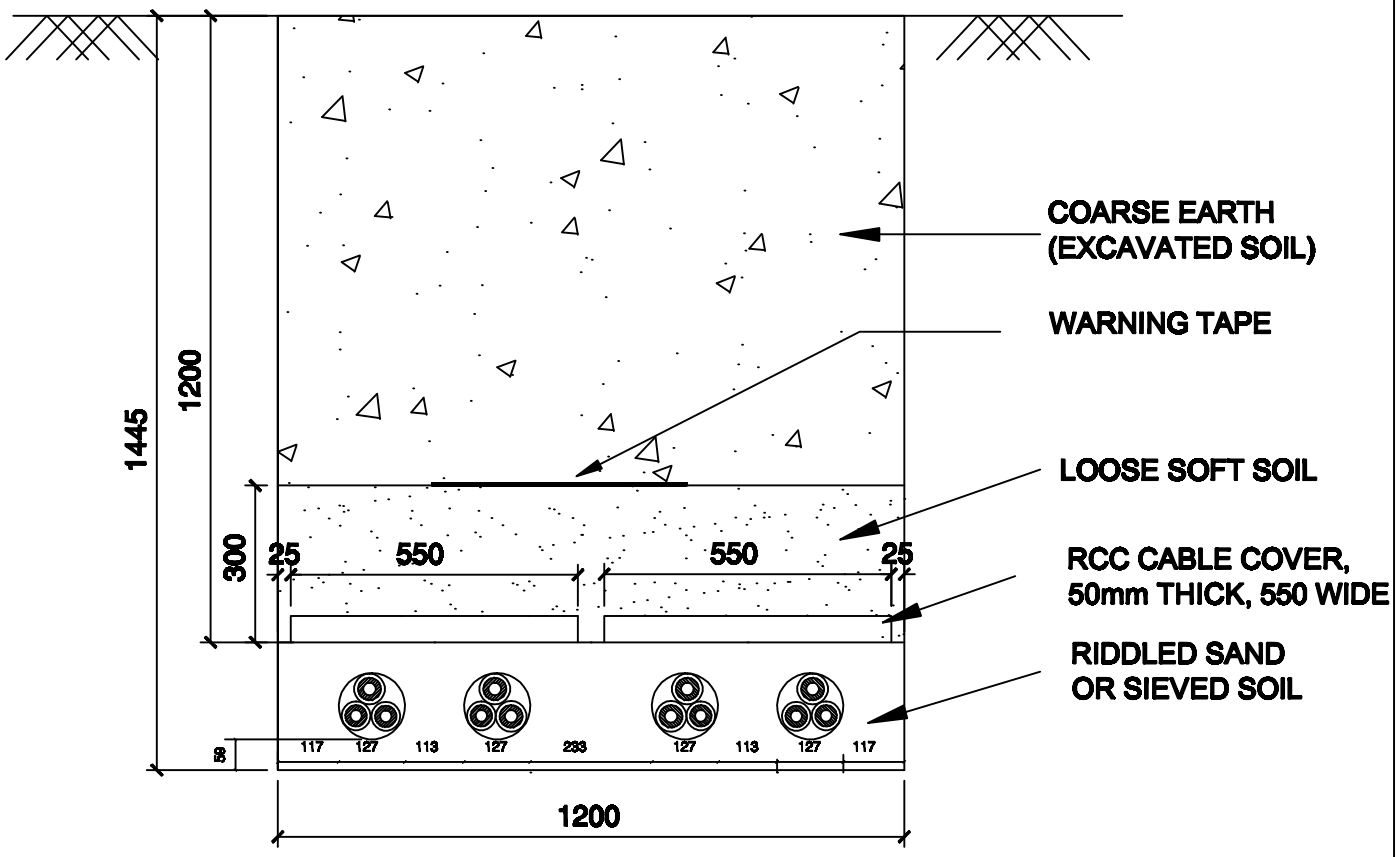
DRAWING # 2



TYPICAL DETAILS FOR 66KV BURRIED CABLE FOR TWO CIRCUIT
TYPE – C 2

DRAWN	DS	TITLE:– TRENCH DRAWING FOR 1C X 630 Sq. mm 66KV DOUBLE CIRCUIT XLPE CABLE	BSES
CHECKED	SGD		
APPD.	D.GUHA		
DATE			REV. 00
SCALE			

DRAWING # 2 A

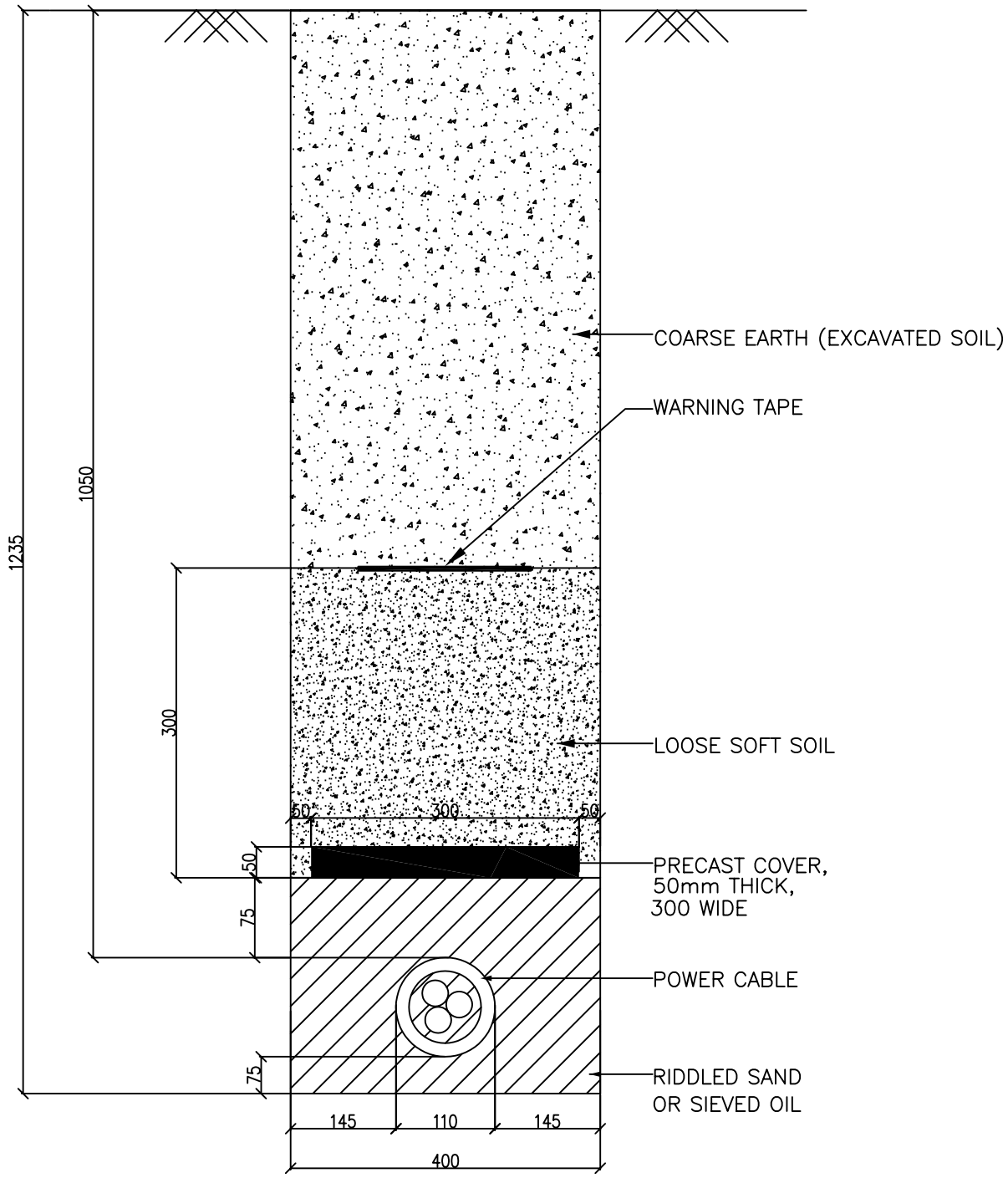


TYPICAL TRENCH SECTION DETAILS FOR 66KV SINGLE CORE 300 Sq. mm. BURRIED CABLE FOR DOUBLE CIRCUIT

TYPE - C 2

DRAWN	SAURABH	TITLE:–	BSES Rajdhani Power Limited
CHECKED	A.S	TYPICAL TRENCH SECTION DETAILS FOR 66KV SINGLE CORE 300 mm BURRIED CABLE FOR DOUBLE CIRCUIT	
APPD.	K.S		
DATE	09.01.15		REV. 00
SCALE			

DRAWING # 3

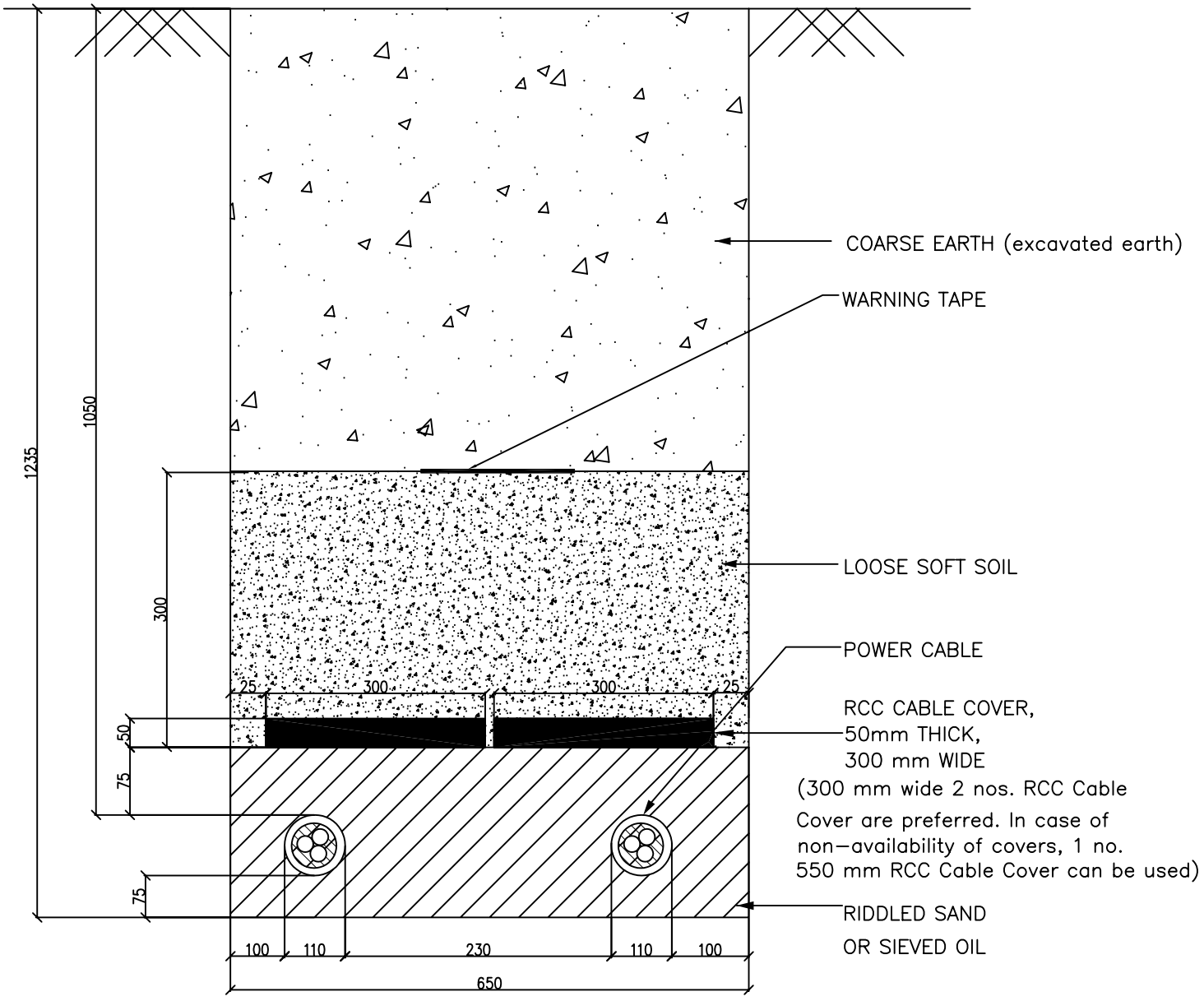


TYPICAL DETAILS FOR 33KV BURRIED CABLE FOR SINGLE CIRCUIT

TYPE – A 3

DRAWN	DS	TITLE:–	BSES
CHECKED	SGD	TRENCH DRAWING FOR	
APPD.	D.GUHA	33KV 3CX 400 mm sq.	
DATE		SINGLE CIRCUIT	REV. 00
SCALE		XLPE CABLE	

DRAWING # 4

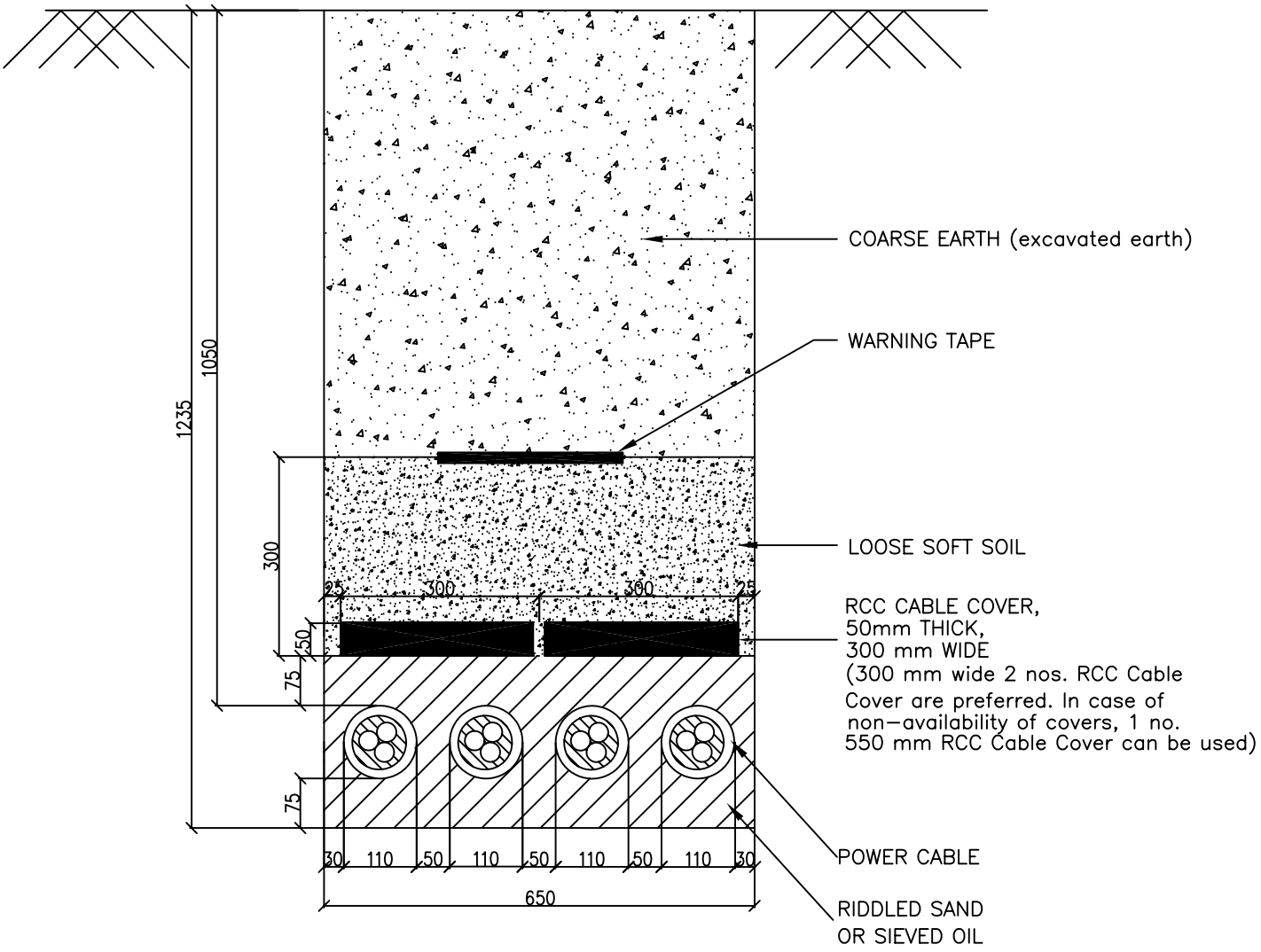


TYPICAL DETAILS FOR 33KV BURRIED CABLE FOR TWO CIRCUIT

TYPE – B–2

DRAWN	DS	TITLE:– TRENCH DRAWING FOR 3C X 400MM2, 33KV DOUBLE CIRCUIT XLPE CABLE	BSES
CHECKED	SGD		
APPD.	D.GUHA		
DATE			REV. 00
SCALE			

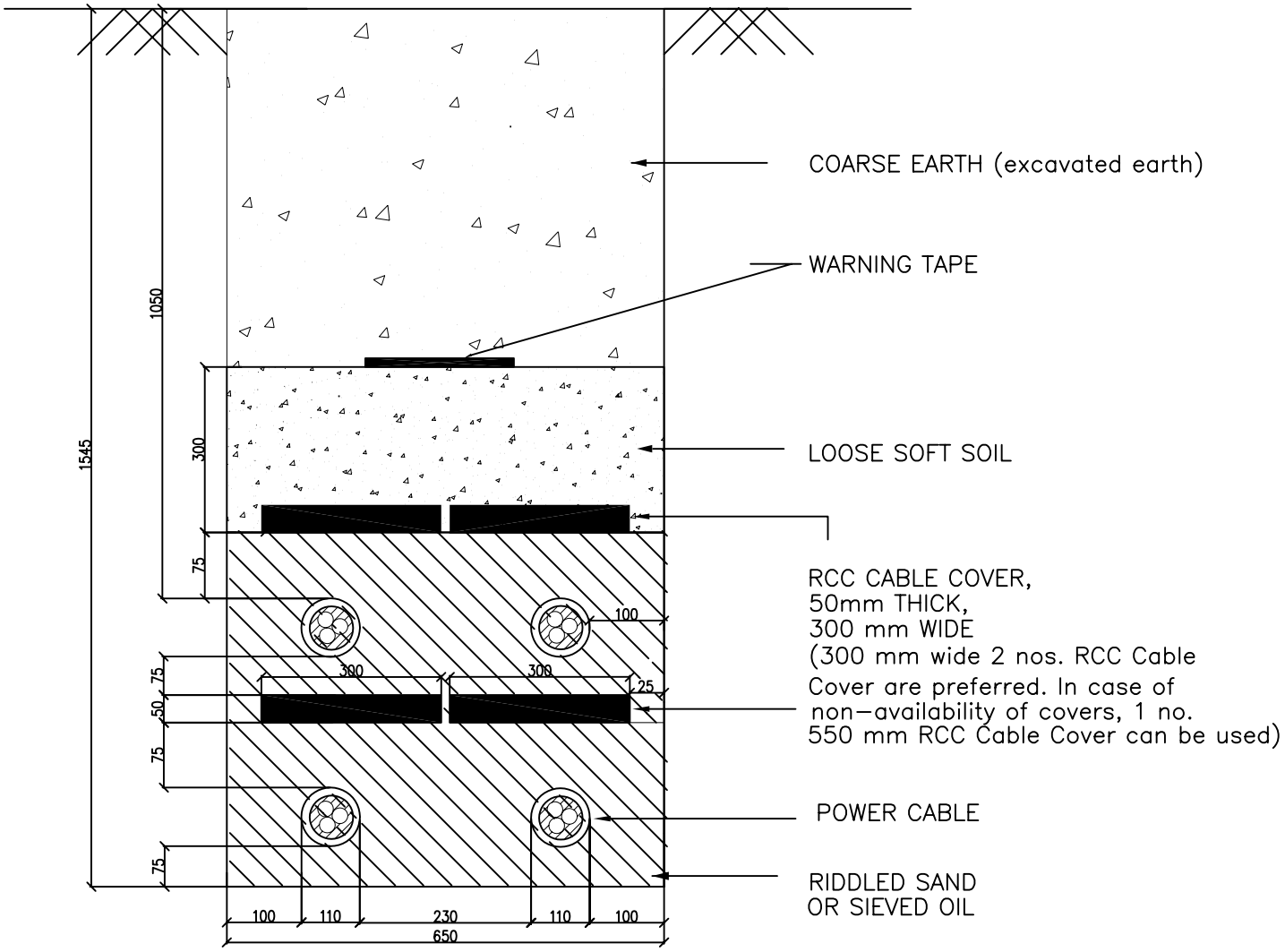
DRAWING # 5 A



TYPICAL DETAILS FOR 33KV BURRIED CABLE FOR FOUR CIRCUIT
TYPE – B 2

DRAWN	DS	TITLE:–	BSES
CHECKED	SGD	TRENCH DRAWING FOR	
APPD.	D.GUHA	3C X 400MM2, 33KV	
DATE		FOUR CIRCUIT	REV. 00
SCALE		XLPE CABLE	

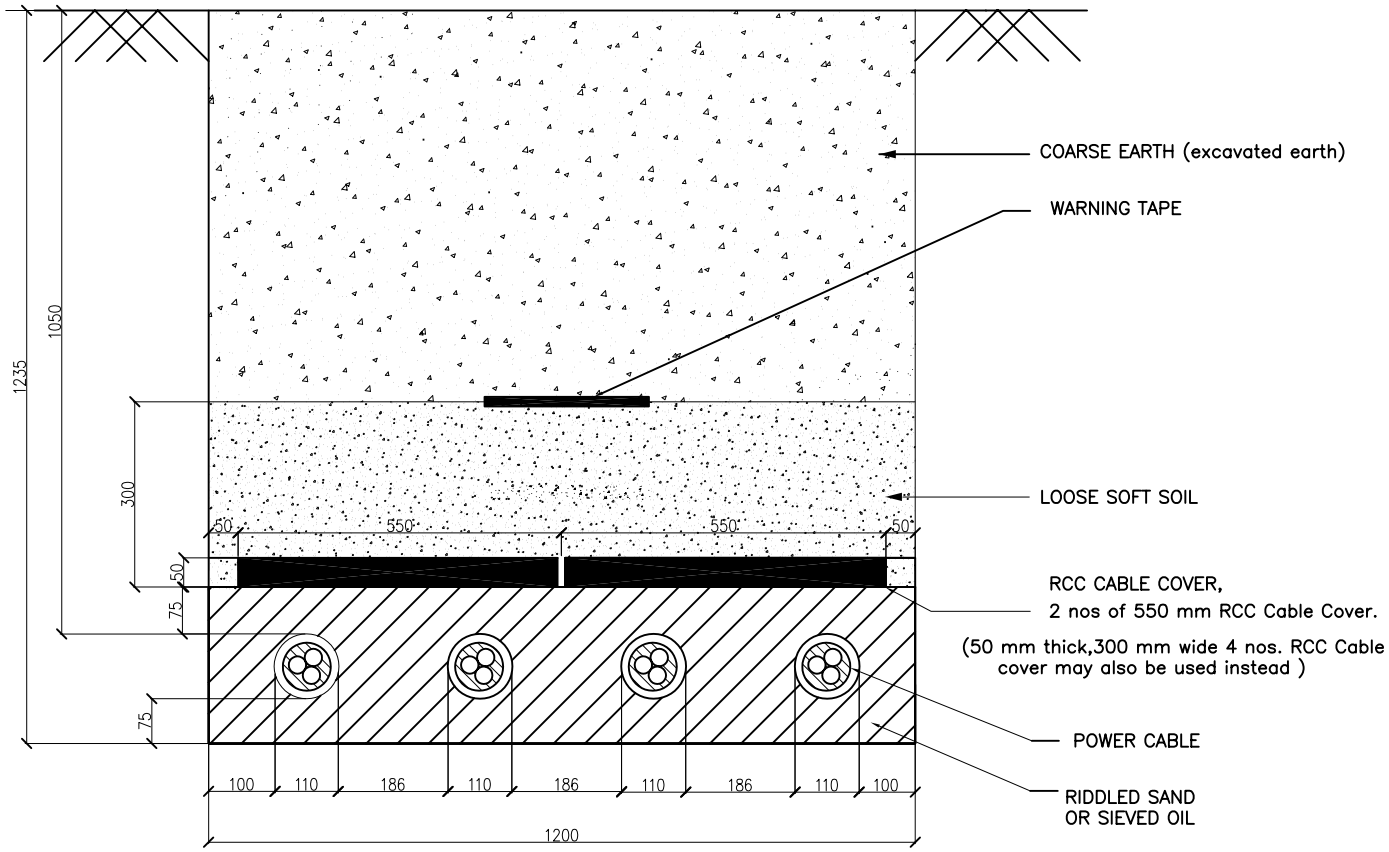
DRAWING # 5 B



TYPICAL DETAILS FOR 33KV BURRIED CABLE FOR FOUR CIRCUIT
TYPE – B 3

DRAWN	DS	TITLE:–	BSES
CHECKED	SGD	TRENCH DRAWING FOR	
APPD.	D.GUHA	3C X 400MM2, 33KV	
DATE		FOUR CIRCUIT	REV. 00
SCALE		XLPE CABLE	

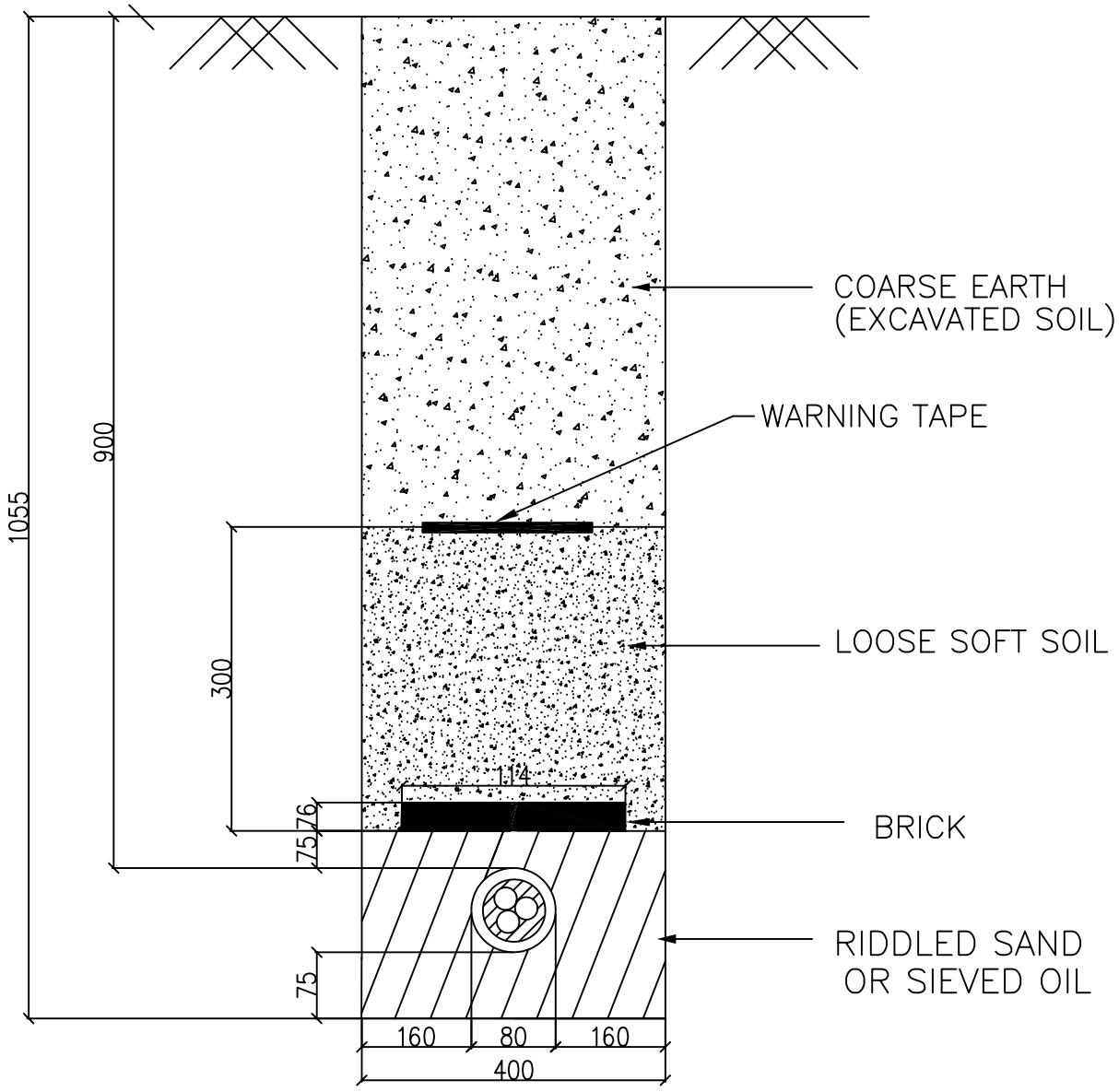
DRAWING # 5 C



TYPICAL DETAILS FOR 33KV BURRIED CABLE FOR FOUR CIRCUIT
TYPE – C 1

DRAWN	DS	TITLE:–	BSES
CHECKED	SGD	TRENCH DRAWING FOR	
APPD.	D.GUHA	3C X 400MM2, 33KV	
DATE		FOUR CIRCUIT	REV. 00
SCALE		XLPE CABLE	

DRAWING # 6

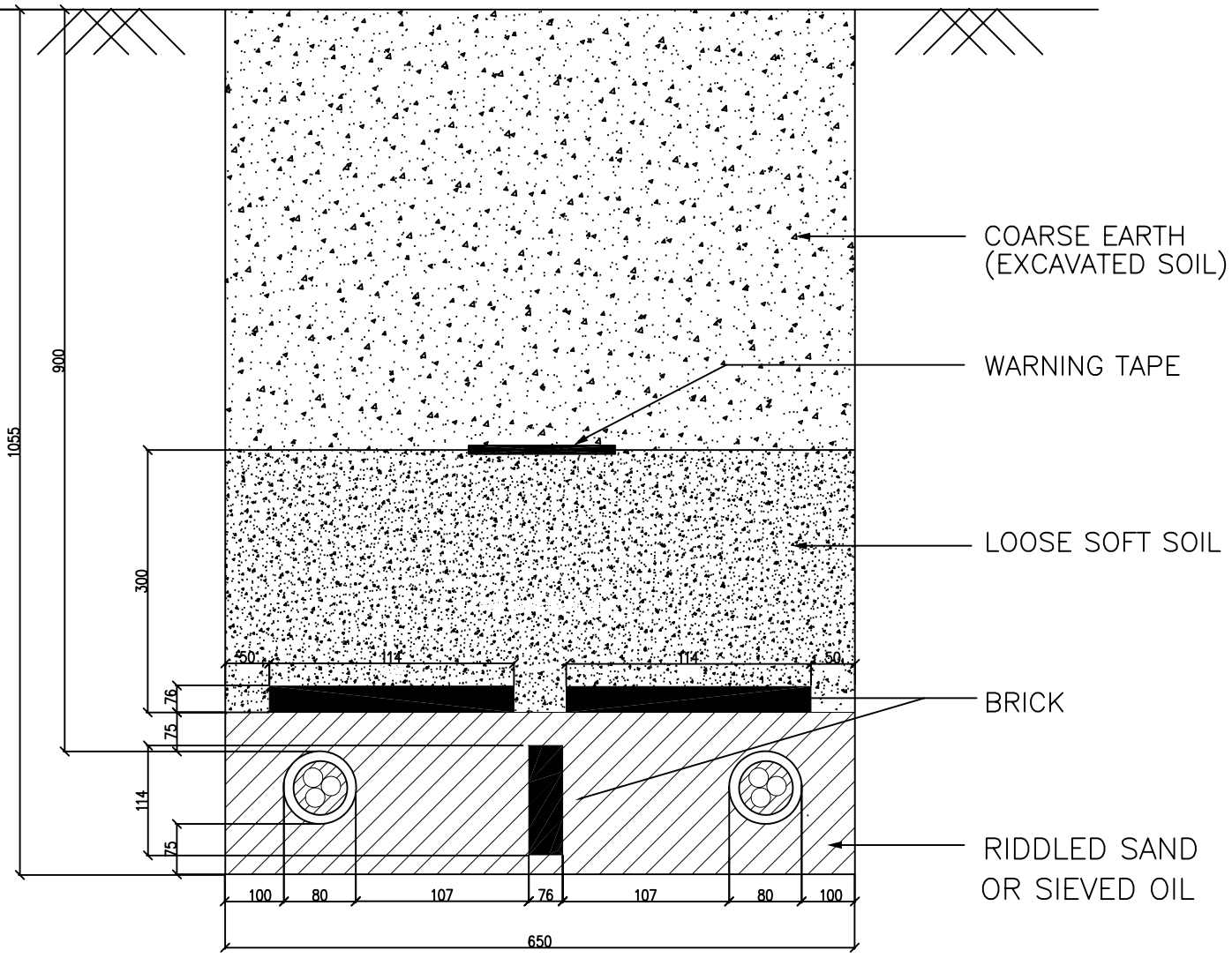


TYPICAL DETAILS FOR 11KV BURRIED CABLE FOR SINGLE CIRCUIT

TYPE – A 2

DRAWN	DS	TITLE:–	BSES
CHECKED	SGD	TRENCH DRAWING FOR	
APPD.	D.GUHA	3C X 300 Sq. mm	
DATE		11KV SINGLE CIRCUIT	REV. 00
SCALE		XLPE CABLE	

DRAWING # 7

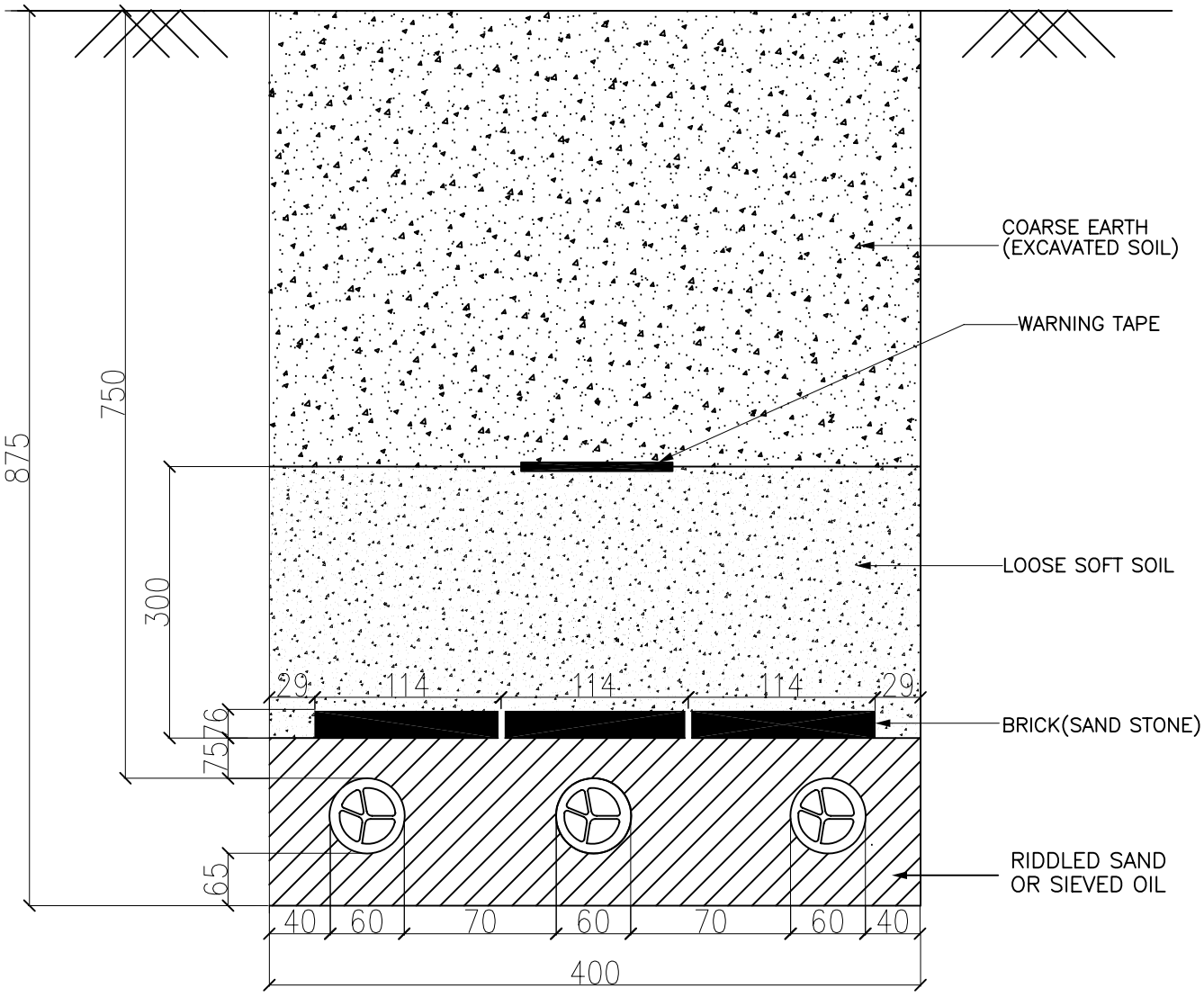


TYPICAL DETAILS FOR 11KV BURRIED CABLE FOR TWO CIRCUIT

TYPE – B 1

DRAWN	DS	TITLE:– TRENCH DRAWING FOR 3C X 300 mm Sq. or 3C X 150 mm sq II KV DOUBLE CIRCUIT XLPE CABLE	BSES
CHECKED	SGD		
APPD.	D.GUHA		
DATE			REV. 00
SCALE			

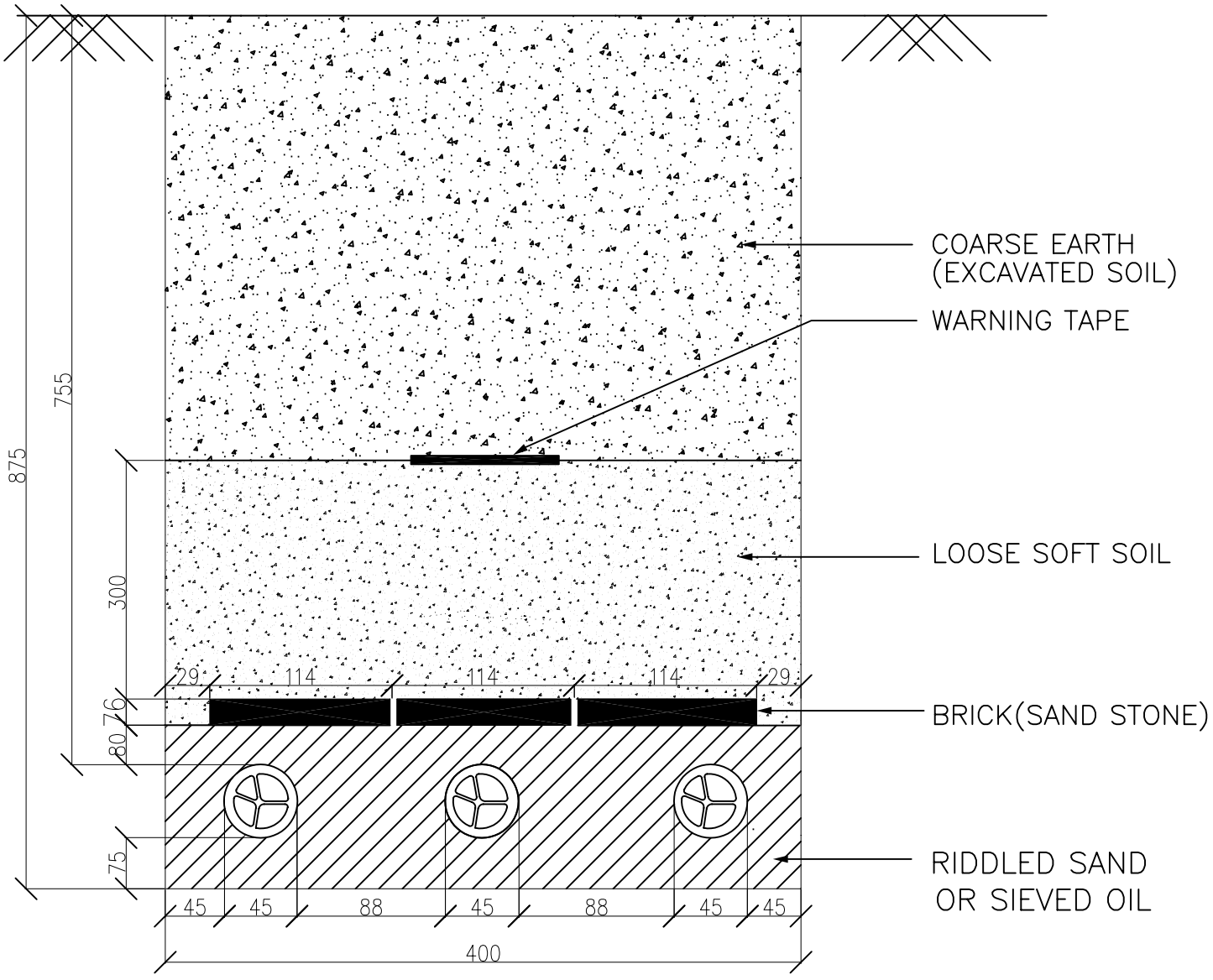
DRAWING # 8



TYPICAL DETAILS FOR 1.1KV BURRIED CABLE
TYPE – A 1

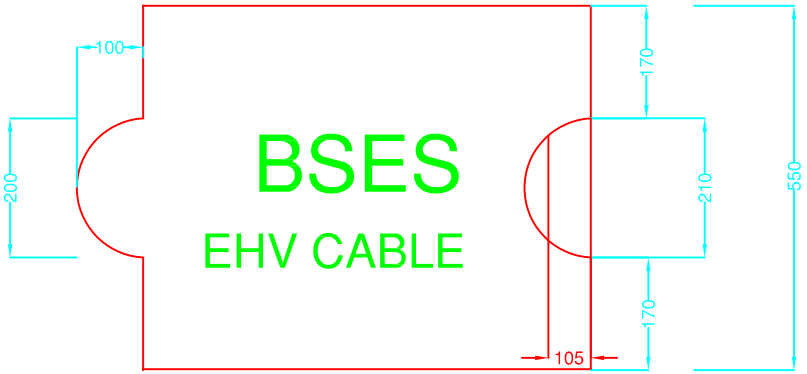
DRAWN	DS	TITLE:– TRENCH DRAWING FOR 3.5Cx300Sqmm 1.1 KV XLPE CABLE	BSES
CHECKED	SGD		
APPD.	D.GUHA		
DATE			REV. 00
SCALE			

DRAWING # 9



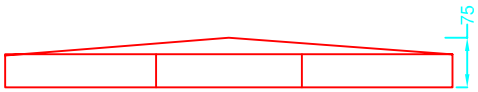
TYPICAL DETAILS FOR 1.1KV BURRIED CABLE
TYPE – A 1

DRAWN	DS	TITLE:–	BSES
CHECKED	SGD	TRENCH DRAWING FOR	
APPD.	D.GUHA	3.5Cx150Sqmm 1.1 KV	
DATE		XLPE CABLE	REV. 00
SCALE			

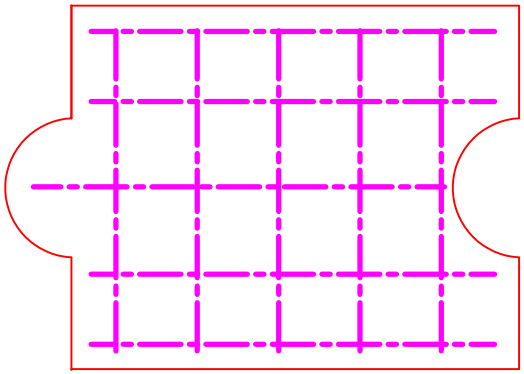


PLAN

ELEVATION



SIDE VIEW



NOTE -

(i) All dimensions are in MM.

(ii) Concrete Mix 1 : 2 : 4

(iii) MS rod - 6 MM Ø

CABLE COVER FOR EHV CABLES TYPE - A.

1. STEEL ROD - AS PER IS 432/1139

2. CONCRETE MIX SHALL BE NOT LESS THAN M200 GRADE AS PER IS 456.

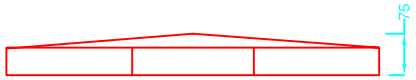
3. MOULDING SHALL BE WITH COMPACTION NOT LESS THAN 7 MN/Sq.m.(70 kgf/Sqcm)

DRAWN		TITLE:– CABLE COVER FOR EHV CABLE TYPE – A	BSES
CHECKED			
APPD.			
DATE			REV. 00
SCALE			

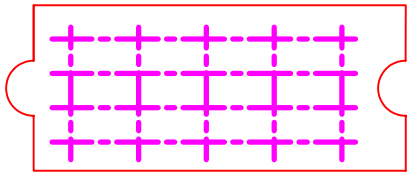
PLAN

1. STEEL ROD - AS PER IS 432/1139
2. CONCRETE MIX SHALL BE NOT LESS THAN M200 GRADE AS PER IS 456.
3. MOULDING SHALL BE WITH COMPACTION NOT LESS THAN 7 MN/Sq.m.(70 kgf/Sqcm)

ELEVATION



SIDE VIEW



NOTE -

(i) All dimensions are in MM.

(ii) Concrete Mix 1 : 2 : 4

(iii) MS rod - 6 MM Ø

CABLE COVER FOR EHV CABLES TYPE B.

DRAWN		TITLE:– CABLE COVER FOR EHV CABLES TYPE – B	BSES
CHECKED			
APPD.			
DATE			REV. 00
SCALE			

Annexure-7: Barricading and Safety

1. Dimensions of barricading- Height- 2 mtr, Length- 1.5 mtr. Refer drawing enclosed with tech spec for more details.
2. There shall not have any gap in between two barricades. Edge to edge shall be intact.
3. LED Bacon light shall be placed at 1st and 4th barricade and same shall be continue
4. Name, painting, colour, clean ness etc. shall be done on regular basis.
5. Vendor to ensure that traffic management shall not be excuse of work execution. The contactor shall not undertake loading and unloading at carriageways obstructing the free flow of vehicular traffic and encroachment of existing roads by the contactor applying the excuse of work execution.
6. Full height fence, barriers, barricades etc. shall be erected around the site in order to prevent the working area from the risk of accidents due to speedy vehicular movement. Same the way barricades protect the road users from the danger due to construction equipment and temporary structures.
7. The structure dimensions of the barricades , material and composition, its colour scheme, BSES logo and details shall be in accordance with specification and drawing laid down in the tender documents.
8. All the barricades shall be erected as per the design requirements of employer, numbered painted and maintained in good condition and also barricade in charge maintain a barricade register at site
9. All barricades shall be conspicuously seen in the dark/night time by the road users so that no vehicle hits the barricades. Conspicuity shall be ensured by affixing retro reflective strips of required size and shape at appropriate angle at bottom and middle portion of the barricades at a minimum gap of 1000 mm. In addition minimum one red light /red blinker and red beacon light should be placed at the top of each barricade.
10. No dust deposit at the front side of barricades.
11. Cable drum shall be returnable and vendor shall take it back (by bye back process) from site at their own risk and cost.
12. Once cable lying complete of a drum, within two days empty drum shall be removed from site by bye back process.
13. Trained traffic marshal with all PPE and traffic control light (Red and Green) shall be placed at site for 24x7.
14. No excuse of theft (beyond 6 hrs. of FIR) shall be acceptable.
15. During execution of job, any damage to other agency's properties shall be counted in vendor account and necessary action shall be taken by vendor to recover, repair etc.
16. Excess earth shall be removed from site after back filling. Site to be cleared to avoid flowing of dust. Barricades to be removed from site with in 24 hrs. after completion of job.
17. During non working hrs. vendor to ensure presence of supervisor for controlling any event from locals.
18. PPEs

    - Helmets

- Mask
- Jacket
- Shoes
- First Aid Box etc.

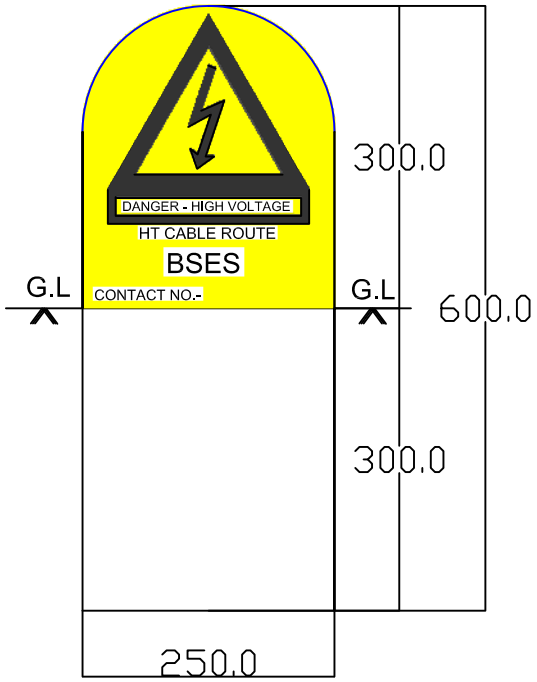
Shall be available at site 24x7. Zero tolerance on absence of PPEs to the working personnel. No excuse shall be acceptable in this regards.

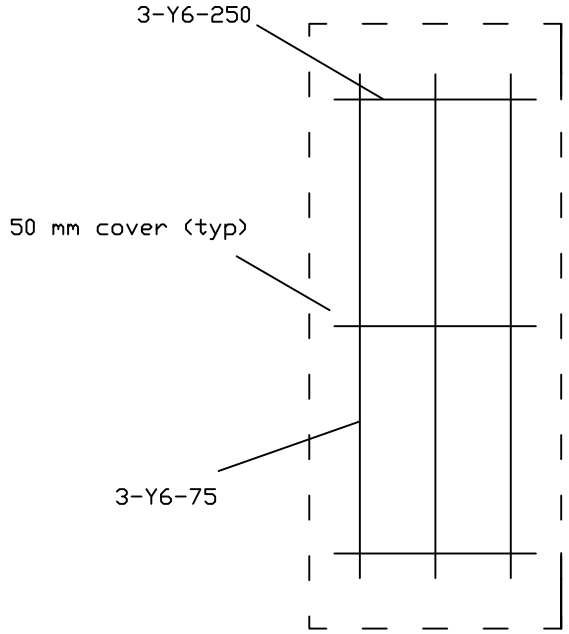
19. GPR/Scanning shall be done by vendor of whole the route and same shall be submitted to BRPL. This work shall be done by vendor before execution of job.
20. Jointing TAT- Jointing to start within 48 hrs. and shall be completed by 96 hrs.+1 day.
21. Lifting of cable drums with hydraulic machine, pulling of cable from top end of drum with pulling machine (hydraulic winch) is mandatory.
22. Violation on barricading guideline and safety norms, a fine of Rs.5000 /day shall be imposed. BRPL inspector/engineer in-charge shall be empowered to impose the above penalty.

Annexure # 8 – ROUTE MARKER AND BARRICADING DRAWING

Reinforcement Detail

DETAIL OF HT CABLE ROUTE MARKER (RCC) - BSES





Notes:-

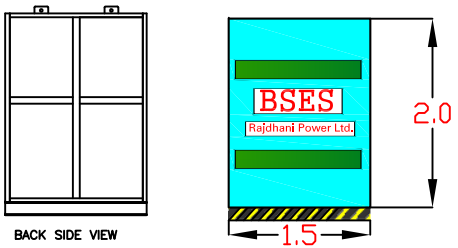
1	RCC Cable route marker with 6 mm Dia. Road and M25 concrete grade.
2	The litter/number shall be engraved on both the side route marker.
3	All dimentions are in mm unless specified.
4	Thickness of RCC shall be 75mm.
5	Yellow colour shall be visible above ground level.
6	Each route marker to be placed at an internal 50 mtr. and at every turn of route.
7	All kind of paint on route marker shall be in the scope of manufacturer.

DRAWN	R.K.JANA	TITLE:-	BSES Rajdhani Power Ltd.
CHECKED	P.B	DETAIL OF HT CABLE ROUTE MAKER (RCC).	
REVIEWED	M.B		
APPO.	K.A		DWG. NO.
DATE	16.08.16		BSES-RM-RCC-01, R0

BARRICADING FOR CABLE LAYING WORK

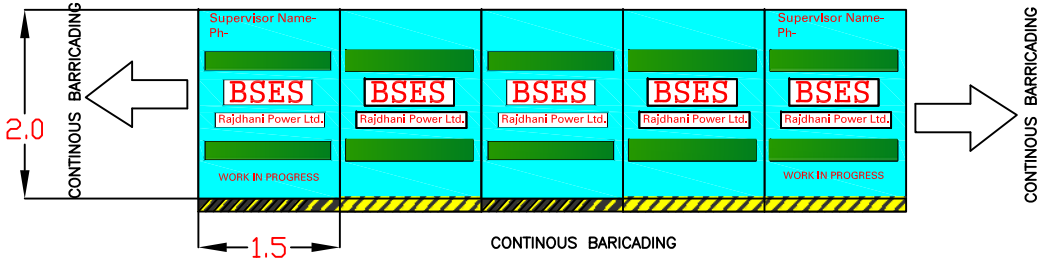
NOTE:

1. Barricading shall provided through out the route length as well as project location.
2. Plate shall be MS
3. Supervisour name, ph no, work in progress, shall be mentioned at every 1st and 4th plate of barricading through out the route.
4. Becon Light shall be provided through out the length.
5. Traffic marshal shall be Provided for traffic control by vendor.
6. Violation of safety norms and barricading shall be reviewed by BRPL and shall impose fine of Rs.5000/day as well as termination of work and short close of award.
7. After finishing of job vendor shall take return all the plate at their own risk and cost.
8. PPE's like Helmet, Mask, Jacket, safety boot etc. shall be provided vendor to all worker.



BACK SIDE VIEW

FRONT SIDE VIEW



CONTINOUS BARICADING

DRAWN	R.K.JANA	TITLE:– DRAWING–BARRICADING FOR CABLE LAYING WORK	BSES Rajdhani Power Limited
CHECKED	P.B.		
REVIEWED	A.S.		
APPD.	V.P.		
DATE	29.06.17		

Annexure#9-Note for HDPE Pipe Diameter in Cable Laying

1) Primarily our intent for laying cable will be through open trench only.
2) Trench dimensions shall be as per the standards which mentioned as below table

Sl. no.	Cable	Trench Details (mm)		
		Depth (single and double run)	Width (Single Run)	Width (Double Run)
1	LT Cable	875	400	400
2	11 kv	1055	400	650
3	33 kv	1235	400	650
4	66 Kv	1445	650	1200

3) QC team will do stage inspection after completion of digging to validate the depth of trench and will give approval for issuing of cable.
4) Execution in charge to ensure the cable laying work.
5) QC team will also inspection the laying work to validate the laying as per standards before back filling.
6) In case of site constraints, trench less cable laying shall be allowed as per the followings-
   a) Cable laying up to 50 mtr through trenchless will be allowed with approval of circle head (O&M) for road crossing or site constraints. Site photos of constraints shall be reviewed before approval by circle head.
   b) Absence of permission for digging- written disapproval by road owing agency and appropriate approval by circle head (for O&M Jobs), by O&M head (for 11kV, P&C job) and by EHV head (for EHV Jobs)
   c) The size of HDPE (PN6, PE80) pipe shall be as per the guidelines of IS-1255, 1983, clause no-6.3.4.3. Details mentioned below in below table-

Sl. No	Cable	Recommended Dia of HDPE pipe (mm)
1	66kV, 3CX300	225
2	66kV, 1CX630	180
3	66kV, 1CX1000	180
4	33kV, 3CX400	180
5	11kV, 3CX300	160
6	11kV, 3CX150	160

d) In-case of using lower size of HDPE pipe due to site conditions, the deviation for using lower HDPE pipe from above table, written approval must be taken through technical committee. Photos of the challenges while apparently the same will be reviewed by technical committee.

(However, HDPE pipe size with less than 1.5XOD of cable shall not be allowed at any stage)

Check List – For Street Light

Format no 3.2

Name Of Engineer :

Subdivision/Division :

Date :

Place where Street lights will be installed :

	Criteria	Yes	No	Remarks (If any)
1	Street light fitting fixed with double clamp on PCC pole			
2	Street light DB fixed with the G.I. clamp on PCC pole and double earth			
3	Street light cable in DB fixed with the help of gland.			
4	Street light connection provided with the help of connection point from O/H line			
5	Street light fittings must be facing downwards.			
6	Junction box of street light pole covered and locked			
7	Street light cables provided through G.I pipe from DB to street light fittings			
8	Street light fitting cover provided or not.			
9	Switching/timer working properly.			
10	Service pillar provided for street lights.			
11	Street light U/G cable laid as per the BRPL specifications.			
12	Painting of Street light poles done.			
13	Straightness of Street light poles is found O.K.			
14	Muffing of Street light poles done.			
15	Zebra painting on Street light poles done.			
16	Street Light connections made properly.			
17	Street light fittings & Junction Box earth.			
18	Street Light Cables'armour are earth on both sides properly with socket.			
19	Earthing must be provided on every fifth pole of street light.			
20	Street light poles should be erected straight			
21	Cables, used for street light (LT AB cables), should be at proper height and sholud be properly clamped.			
22	Safe clearances are to be maintained as per CEA Guidelines			

Name

Signature with stamp

BSES Rajdhani Power Ltd

CHECK LIST FOR EHV POWER TRANSFORMER

Name of S/stn			Circle	
Functional Location			Sub Div	

Sr. No.	Description of points to be checked	OBSERVATION	REMARKS
1	Physical condition of Power Transformar is in good condition	Yes/No	
2	Is Power Transformer properly leveled , fixed on plinth with proper nuts and bolts as per drawing of BSES	Yes/No	
3	Physical condition of all HV /LV Bushing their tighting of jumpers and cable end connectios	Yes/No	
4	Control Cables entries are through glands & All holes/gap also sealed	Yes/No	
5	Nomenclature of Circiut Breaker/ Equipement ID marked/written with paint on CB	Yes/No	
6	Is Power Transformer properly earth as per BRPL design & specifications	Yes/No	
7	Check for connections of NCT with Tr. Neutral and earth	Yes/No	
8	Check for all gasket joints and any oil leakage in Pr.Tr.	Yes/No	
9	Check working of MOG of main conservator tank and OLTC conservator tank	Yes/No	
10	Check oil level in main conservator tank and OLTC conservator tank	Yes/No	
11	Check physical condition of Breather, Silica Gel and Oil Level in oil cup of the breather	Yes/No	
12	Check Physical condition of Marshalling Box, Proper working of door with locking arrangment	Yes/No	
13	Check working of WTI/OTI meter, check alarm and trip settings of WTI/OTI	Yes/No	
14	Check Cooling system of the Tr.,Fan & Pump, working of fans and Oil Pump in ONAF/AFOF cooling system	Yes/No	
15	Check Remote, Local & Auto mode of cooling system of Tr.	Yes/No	
16	Check control cable connections, plugging of all holes in Marshalling Box	Yes/No	
17	Check working of OLTC driving mechanism,Lubrication and greasing of OLTC Mechanism	Yes/No	
18	Check Remote, Local & Manual operation of OLTC mechanism		
19	Measurement of Insulation resistance (with 5 KV megger)	Yes/No	
a	HV to Earth =		
b	LV to Earth =		
C	HV to LV =		

	Job done by,			**Checked by,**	
	Name & signature			Name & signature	

BSES
BSES Rajdhani Power Ltd

Format No 2.0

CHECK LIST FOR COMMISSIONING OF 11KV Meter Cubical

			Date	
Name of the Div Incharge			Sub Div Incharge	
Name of S/stn			Circle	
Functional Location			Sub Div	
SAP Tag No.			P.O. No.	
			Config	
Name of Vendor				
Year of Mfg				

Sr. No.	**Switch gear Make,Model &Type**		**Serial no**	
1				
2				
3				
4				
5				

Sr. No.	**Description of points to be checked**	**OBSERVATION**	**REMARKS**
1	Physical condition of Meter Cubical is in good condition	Yes/No	
2	Meter Cubical properly leveled , grouted & fixed on base with proper nuts and bolts as per BSES design.	Yes/No	
3	Meter Cubical has adequet clearance from all sides.	Yes/No	
a	Clear space shall not less than 1meter in width shall be provide in front of the switchboard (Back side of the switch shall be either less than 20cm or more than 75cm)	Yes/No	
b	There shall be a passage way either end of the switchboard , clear to a height of 1.8mtr.	Yes/No	
4	HT Cables entry to be sealed	Yes/No	
a	HT Cables to be fixed with cleats before S/G Bushing connection	Yes/No	
b	Nomenclature of feeder/consumer end / Equipement ID of the Meter Cubical to be marked with	Yes/No	
5	All materials checked as per BOM & found OK (for 1st time commissioning)	Yes/No/NA	
6	Drawing & Manual provided	Yes/No	
7	Manual Operations checked & found OK as per operation instruction	Yes/No	
8	Meter Cubical lock checked & found OK	Yes/No/NA	
9	Check PVC tape is on cable core for phase marking	Yes/No	
10	Cable termination with M/C bushing (Crimping of AL Socket)	Yes/No	
11	All cable end bushing are covered by external cable box & Bushing should not be damaged	Yes/No	
12	Check signage of (Danger plate / Warning / PWC / Caution / Warning) is provided	Yes/No	
13	Earthing	Yes/No	
a	Total no. of earthing (Neutral) / Body	Yes/No	
b	Earth test result found safe side (Less than 2 ohm)	Yes/No	
c	Nomenclature written with paint as per specifications.	Yes/No	
d	HT Panel / M/C Double earthed	Yes/No	
14	CT ratio (Pl. specify)	Yes/No	
15	Cable clitting support used in all compartments	Yes/No	
16	Bimetalic lug used for termination	Yes/No	
17	Brass Nut bolts / Studs provided of proper size with proper threads.	Yes/No	
18	Cable boots used over termination in all compartments.	Yes/No	
19	Terminations checked & tightened as per OEM specification.	Yes/No	
20	All cable earthed at two points directly to earth path.	Yes/No	
21	All the holes / gaps sealed.	Yes/No	
22	All the stenciling done by paint.	Yes/No	
23	OEM Representative present while comissioning. (For 1st time commissioning)	Yes/No	

24	If Yes, Name Sign					
	If No, Reason:					
25	Remarks (Product related any abnormality & suggestion if any) :					
	Job done by,			**Checked by,**		
	Name & signature			Name & signature		

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CHECK LIST FOR COMMISSIONING OF 11KV SF6 DRY TYPE SWITCHGEAR

					Document No:	BSES/BRPL/PMCELL/SOP/SWITCHGEAR/0003/REV 0.0
					Date	
Name of the Div Incharge					Sub Div Incharge	
Name of S/stn					Circle	
Functional Location					Sub Div	
SAP Tag No.					P.O. No.	
Protection Relay Make					Config	
Name of Vendor					FPI Make	
Year of Mfg						
Sr. No.	**Switch gear Make,Model &Type**		**Serial no**	**Switch No.**	**Counter no**	
1						
2						
3						
4						
5						

Sr. No.	**Description of points to be checked**	**OBSERVATION**	**REMARKS**
1	Physical condition of RMU is in good condition	Yes/No	
2	HT Panel / RMU Properly leveled , grouted & fixed on base with proper nuts and bolts as per drawing of BSES	Yes/No	
3	RMU has adequet clearance from all sides.	Yes/No	
a	Clear space shall not less than 1meter in width shall be provide in front of the switchboard (Back side of the switch shall be either less than 20cm or more than 75cm)	Yes/No	
b	There shall be a passage way either end of the switchboard , clear to a height of 1.8mtr.	Yes/No	
4	HT Cables entry to be sealed	Yes/No	
a	HT Cables to be fixed with cleats before S/G Bushing connection	Yes/No	
b	Nomenclature of all feeders / Equipement ID of the RMU to be marked with paint	Yes/No	
5	All materials checked as per BOM & found OK (for 1st time commissioning)	Yes/No/NA	
6	Drawing & Manual provided	Yes/No	
7	The pointer on the SF6 Gas pressure gauge (Manometer) is in the green area or red area	Yes/No	
8	Manual Operations checked & found OK as per operation instruction	Yes/No	
9	MIMIC indication checked w.r.t. ON-OFF-Earth position & found OK	Yes/No	
10	Padlocks & Interlock checked & found OK	Yes/No/NA	
11	ID box cover open only when switch is in earth position	Yes/No	
12	Check no PVC tape is on cable core for phase marking	Yes/No	
13	Cable termination with RMU bushing (Crimping of AL Socket)	Yes/No	
14	All cable end bushing are covered by external cable box & Bushing should not be damaged	Yes/No	
15	Check signage of (Danger plate / Warning / PWC / Caution / Warning) is provided	Yes/No	
16	Earthing	Yes/No	
a	Total no. of earthing (Neutral) / Body	Yes/No	
b	Earth test result found safe side (Less than 2 ohm)	Yes/No	
c	Nomenclature written with paint as per specifications.	Yes/No	
d	HT Panel / RMU Double earthed	Yes/No	
17	**Insulation resistance measured before HV test. (Pl. specify the values)**		
	Breaker Switch in Open position and Isolator switch closed). Contact resistance to be less	All Isolator Switch and Breaker in close position. **(Contact resitance to be less than 500 uohms)**	
a	**R1 -R2 - ----------** **R2-R3 - ----------** **R1-R3 - ----------** **R -Y - ----------** **R - Earth - ----------**		
b	**Y1 - Y2 - ----------** **Y2 - Y3 - ----------** **Y1 - Y3 - ----------** **Y - B - ----------** **Y - Earth - ----------**		
c	**B1- B2 - ----------** **B2 - B3 - ----------** **B1 - B3 - ----------** **B- R - ----------** **B - Earth - ----------**		
18	AC HV test done, leakage current observed (Pl. specify value)		
19	Function of VPIS checked in all compartments & found OK.	Yes/No	
20	CT ratio (Pl. specify)	Yes/No	
21	Primary Injection done	Yes/No	
22	Relay setting done as per DT rating.	Yes/No	
23	FPI setting done	Yes/No	
24	Cable clitting support used in all compartments	Yes/No	

25	Bimetalic lug used for termination					Yes/No	
26	Brass Nut bolts / Studs provided of proper size with proper threads.					Yes/No	
27	Cable boots used over termination in all compartments.					Yes/No	
28	Terminations checked & tightened as per OEM specification.					Yes/No	
29	Earth switch contact resistance measured. (Please specify resi. value)						
a	switch 1						
b	switch 2						
c	switch 3						
d	switch 4						
30	All cable earthed at two points directly to earth path.					Yes/No	
31	All the holes / gaps sealed.					Yes/No	
32	All the stenciling done by paint.					Yes/No	
33	OEM Representative present while comissioning. (For 1st time commissioning)					Yes/No	
34	If Yes, Name Sign						
	If No, Reason:						
35	Remarks (Product related any abnormality & suggestion if any) :						
	Job done by,			**Checked by,**			
	Name & signature			Name & signature			

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Format No 4.0

CHECK LIST FOR COMMISSIONING OF FEEDER PILLAR

Document No: BSES/BRPL/QC/SOP/FEEDERPILLAR/0004/REV0.0 Date

Name of the Div Incharge		Sub Div Incharge	
Name of S/stn		Circle	
Functional Location		Sub Div	
SAP Tag No.		P.O. No.	
Name of Vendor			
Year of Mfg			

Sr. No.	**Feeder Pillar, Model &Type**	**Serial no**	**Switch No.**	**Counter no**	
1					
2					
3					

Sr. No.	**Description of points to be checked**	**OBSERVATION**	**REMARKS**
1	Physical condition of Feeder Pillar is in good condition	Yes/No	
2	Feeder Pillar Properly leveled , grouted & fixed on base with proper nuts and bolts as per drawing of BSES	Yes/No	
3	Feeder Pillar has adequet workable clearance from all sides.	Yes/No	
4	LT Cables entry to be sealed & All holes/gap also sealed	Yes/No	
5	Nomenclature of all feeders / Equipement ID of the Feeder Pillar to be marked	Yes/No	
6	Feeder Pillar is properly earth with the provision of double earthing	Yes/No	
7	Earth test result found safe side (Less than 5 ohm)	Yes/No/NA	
8	Feeder Pillar Double earthed	Yes/No	
9	Tend erminations of all cable made properly with bus bar in Feeder Pillar	Yes/No	
10	All cable armour earthed at two points directly to earth path.	Yes/No	
11	I/D termination/joints prepare on LT cable which are connected at Feeder Pillar	Yes/No	
12	Crimping of All Sockets properly	Yes/No	
13	Fuses/links as per standard	Yes/No	
14	LV Circuits identified clearly	Yes/No	
15	Danger plate provided on Feeder Pillar/Service Pillar	Yes/No	

	Job done by,		**Checked by,**	
	Name & signature		Name & signature	

BSES Rajdhani Power Ltd

Format No 11.0

CHECK LIST FOR COMMISSIONING OF PACKAGE S/S

Document No: BSES/BRPL/QC/SOP/PSS/0011/REV0.0 Date

Name of the Div Incharge				Sub Div Incharge		
Name of S/stn				Circle		
Functional Location				Sub Div		
SAP Tag No.				P.O. No.		
Name of Vendor						
Year of Mfg						

Sr. No.	**Equipement**	**Model &Type**	**Serial no**	**Make**	**Year**	**Rating**	**SAP Tag No.**
1	PSS						
2	DTR						
	RMU						
3	LTACB/MCCB/LT Switch						

Sr. No.	**Description of points to be checked**	**OBSERVATION**	**REMARKS**
1	Physical condition of Package S/Stn. is in good condition	Yes/No	
2	Package S/Stn. Properly leveled , grouted & fixed on base with proper nuts and bolts as per drawing of BSES	Yes/No	
3	Package S/Stn. has adequet workable clearance from all sides.	Yes/No	
4	LT & HT Cables entries sealed & All holes/gap also sealed	Yes/No	
5	Nomenclature of all feeders / Equipement ID marked/written with paint on all equipments inside the PSS and also on PSS.	Yes/No	
6	Package Sub-Station and all its associated electrical equipments/cables are properly earth as per BRPL design & specifications	Yes/No	
7	Danger plate provided on each side of Package Sub- Station	Yes/No	
8	End Terminations of all cables made properly with bus bar in PSS	Yes/No	
9	All cable armour earthed at two points directly to earth path.	Yes/No	
10	I/D termination/joints prepare on LT cable which are connected at PSS	Yes/No	
11	Double Barrel Sockets/lugs provided on Cable end terminations for their connections	Yes/No	
12	Crimping of All Sockets properly	Yes/No	
13	Fuses/links as per standard	Yes/No	
14	LV Circuits identified clearly with cable identification tags	Yes/No	
15	HV Circuits identified clearly with cable identification tags	Yes/No	
16	No.s of earthings carried out for Package Sub-Station		No. of earthings to be mention
17	Earth test result found safe side (Less than 5 ohm)	Yes/No/NA	(Earth results :-)

	Job done by,			**Checked by,**	
	Name & signature			Name & signature	

BSES Rajdhani Power Ltd

CHECK SHEET FOR LT ACB COMMISSIOING

				Date	
			Document no.		
	Name of S/stn		Circle		
	Functional Location		Division		

ACB Details

S.No.		ACB No.1	ACB No. 2	ACB No. 3	ACB No. 4	ACB No. 5	ACB No. 6	LT Main	REMARKS
1	SAP Tag No.								
2	Make								
3	Sr. No.								
4	Year of Mfg								
5	Rating in Amp								REMARKS
6	Nos of O/G cables connected								
7	Protection Relay Make								
8	ProtectionRelay Model								
9	**Load Details in Amp(After commissioing Air Circuit Breaker)**								
a	R								
b	Y								
c	B								
d	N								
		Visual Inspection of Components							
10	**Description**	**Observations**							
a	Mechanism ON/OFF Operation	OK	OK						
b	Spring charge Mechanism	OK	OK						
11	**Temperature readings After commissioing of Air circuit Breaker**								
a	Max Temp in Deg C at all I/C termination								
b	Max Temp in Deg C at all O/G termination								
12	ACB Handle	Existing	Existing						
13	Condition of lugs	OK	OK						
14	Height of ACB Frame should be minimum 1mtr.(if not ok than raise the height of mounting frame	OK	OK						
15	Nomanclature on ACB	OK	OK						
16	Condition of Top / Front cover	OK	OK						
17	Physical verification of ACB terminated cables w.r.t mentioned Nomanclature on ACB	OK	OK						
18	Checking of Protection wiring terminals	OK	OK						
19	Mounting of ACB (proper tightning with nuts & bolts)	OK	OK						
20	Condition/Strength of ACB Support Structure frame	OK	OK						
21	Allignment of ACB support structure	Vertical alligned	Vertical alligned						
22	Cable & LT leads supporting arrangement on the LT installation of ACB	Exists	Exists						
23	Earth terminal connection of ACB	OK	OK						
24	Earth connection of mounting structure	NA	NA						
26	Replacement/Tightening of all nuts & bots at I/C and O/G bus bar	Done	Done						
27	**Protection**								
28	CT Primary injection test								
29	Tightening of protection wiring terminals								
31	Megger value of ACB Ph-Ph & Ph-E (1.1 KV)								
32	**Temperature readings after 1 Hr of clearing the Shutdown (By IR temp gun)**								
33	Max Temp in Deg C at all I/C termination								
34	Max Temp in Deg C at all O/G termination								
	Remarks:								

	Job done by,		**Checked by,**	
	Name & signature		Name & signature	

1.1 Annexure 1 : Check Sheet for HT Cable Laying

Sr No	Checklist	Yes	No
1	Route survey by cable route tracer to identify low depth cables of other utility		
2	Road cutting permission received		
3	Test Pit for type of soil (rocky/soft)		
4	Proper loading, unloading of cable drum done by using Crane		
5	Physical inspection of Cable for damages		
6	Arrangement of Menpower with PPE		
7	Proper barricading arrangement done before excavation		
8	Drum properly supported for free reeling		
9	Cable rollers are used for pulling		
10	Sharp Stones removed from pit		
11	Proper Depth of pit maintained (1.05 mtr)		
12	Proper River sand bed at bottom and top of the cable (75 mm)		
13	Tiles/bricks placed over the entire the cable length		
14	Warning tape placed over the entire cable length		
15	Proper refilling done		
16	Testing of cable after completed laying work		
17	IR Value of Phase to Earth		
18	IR Value of Phase to Phase		
19	Empty cable drum returned to store		
20	HDPE pipe Installed at crossing, low depths		
21	Site cleaned after laying		
22	Coffin at low depth cables and joints used		
23	HT cable laid through the HDPE pipes in trenchless portion/section		
24	Separation bricks are used between HT cables which are laid parallel		
25	Identification tags used at time of laying of cable if it is in scope of work		
26	Route marker and joint marker provided on the route of the cable(if possible)		
27	Availability of Danger Notice		

Name

Signature with stamp

BSES Rajdhani Power Ltd

Format no. 1.1. Check sheet for commissioning of oil type DT Plinth mounted

		Document no.	BSES/BRPL/PM CELL/SOP/DISTRIBUTION TRANSFORMER/0002/REV 0.0
Work order/Scheme no.		Functional Location	
Shutdown ID		Equipment ID	
Name of Substation		Make	
Division / Sub-Division		CT Ratio	
Grid Name		Year of mfg.	
S/stn. Type (Outdoor / Indoor)		Trf. Rating	
Substation ID		Mfg. S.no.	
Reason of installation		DT Meter No	
PTW no.			

	CheckList	Reference	observations	Critical/Not Critical	Remarks
	Physical inspection				
1	Condition of HT / LT bushing	No signs of cracks on the bushings	Ok/not ok	Critical	
2	Condition of radiator / Fins ,tank,conservator,breather pipe	dents/ Damaged	Ok/not ok	non critical	
3	check for any oil leakage	For any parts of transfomers	Yes/no	Critical	
4	LT palm condition	No burrs and surface smooth	Ok/not ok	non critical	
5	Tap changer locked	Locked	Yes/no	non critical	
6	Condition of Expolsion vent	Diaphragm intact	Ok/ not ok	Critical	
7	Breather and silica gel condition	Blue is ok Pink not Ok	Ok/ not ok	non critical	
8	Oil in breather cup		Yes/no	non critical	
9	Primastic oil gauage	Prismatic oil gauge glass cracked or oil not visible	Ok/not ok	critical	
10	MOG condition		Ok/not ok	non critical	
11	oil level in conservator upto normal level	Half marked on conservator tank	Yes/no	critical	
12	earthing of substation(if mesh ok , if individual then not ok)	less than 5 ohms	Ok/ not ok	Critical	
13	Availability of test report(manufacturer's and workshop)		Yes/no	non critical	
	Installation				
1	Plinth as per design	As per civil drawing no. and BOQ MS channels size 100mmx 50mmx6mm MS angle size 50mmx50mmx6mm	Yes/no	Critical	
2	Leveling of the plinth	levelled	Ok/not ok	Critical	
3	accessability of crane to the substation		Yes/no	Not critical	
4	If not ,tools required for dragging is available		Yes/no	Critical	

5	Availability of tools and tackles	As per BSES manual no.BSES/BRPL/PM CELL/SOP/DISTRIBUTION TRANSFORMER/0002/REV 0.0	Yes/no	non critical	
6	PPE's availability	As per BSES manual no.BSES/BRPL/PM CELL/SOP/DISTRIBUTION TRANSFORMER/0002/REV 0.0	Yes/no	Critical	
7	Testing instruments availability	As per BSES manual no.BSES/BRPL/PM CELL/SOP/DISTRIBUTION TRANSFORMER/0002/REV 0.0	Yes/no	critical	
8	whether the safe clearance of transformer from other installations	Fence to transformer=min. 1mtr. Transformer to transformer=min. 1mtr. RMU to transformer- min. 2 mtr. Transformer to LTACB- min 800 mm	Yes/no	critical	
9	Whether LT frame /LT supports with cleat exist		Yes/no	Critical	
10	Condition of LT frame/LT support with cleats		Ok/not ok	Not critical	
11	Whether HT frame /HT supports with cleat exist		Yes/no	Critical	
12	Condition of HT frame/HT support with cleats		Ok/not ok	Not critical	
	Testing				
1	Whether the test carried as per the site test report format	As per BSES manual no.BSES/BRPL/PM CELL/SOP/DISTRIBUTION TRANSFORMER/0002/REV 0.0	Yes/no	Not critical	
2	Whether any IR deviation in before and after results is more than +/- 25 %		Yes/no	Critical	
	commissioning				
1	Whether LT lead are tightened enough to cleats inorder to avoid any mechanical stress on bushing	Tightening by torque wrench	Yes/no	non Critical	
2	Whether HT lead are tightened enough to cleats inorder to avoid any mechanical stress on bushing	Tightening by torque wrench	Yes/no	non Critical	
3	Whether neutral earth connections are made as per BSES earth practices	2 nos. (by 50 x 6 mm each)	Yes/no	Critical	
4	Whether body earth connections are made as per BSES earth practices	2 nos. (by 50 x 6 mm each)	Yes/no	Critical	
5	Locking of trf. on plinth/Mounting structure		Yes/no	Critical	
6	whether HT cable and LT leads connected to RMU breaker and LTACB	HV & LV sides connected properly with long barrel aluminium of sockets with hydraulic crimping	Yes/no	non Critical	
7	Whether protection settings are done as per the recommendation		Yes/no	Critical	

8	whether wiring and testing of the MOG done	As per BSES manual no.BSES/BRPL/PM CELL/SOP/DISTRIBUTION TRANSFORMER/0002/REV 0.0	Yes/no	non Critical	
9	Whether energy audit is informed for the installation of DT meter		Yes/no	non Critical	
10	Whether Bimetallic washer/strip provided at the interface of brass and aluminium		Yes/no	non Critical	
11	HT tapes as recommended in manual (BSES/BRPL/PM CELL/SOP/DISTRIBUTION TRANSFORMER/0002/REV 0.0)has been provided	Filler tape EPR tape Silicon tape	Yes/no	non Critical	
12	LT tapes as recommended in manual(BSES/BRPL/PM CELL/SOP/DISTRIBUTION TRANSFORMER/0002/REV 0.0) has been provided	Premium vinyl tape	Yes/no	non Critical	
13	Cleaning of substation done		Yes/no	Not critical	
14	Locking of the substation		Yes/no	not Critical	

Checked by:-

Approved by:-

BSES Rajdhani Power Ltd

CHECKSHEET FOR FENCING

1	Name of the Div Incharge		Document No:	
2	Div/Circle		Config	
3	Functional Location		Name of S/stn	
4	SAP Tag No.		Sub Div	
5	Protection Relay Make		Name of Vendor	
6	Year of Mfg		FPI Make	
7	P.O. No.		Switch Gear Make	
8	Sub Div Incharge		Switch Gear Model	

SNo	Description of points to be checked	References	A-Contractor			B-Execution Team			C-Quality Team				REMARKS
			Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Observations	Status (Cleared / Not Cleared)	
1.	Brick masonry toe wall provided for fencing. (Earth work in excavation: -- 400 mm (depth) for brick masonry toe wall of 9 inches/230 mm width and 100 mm thick cement concrete 1:4:8 (1 Cement : 4 Coarse Sand :8 Graded stone aggregate 40 mm thick) (Brick toe wall: -- Brick masonry wall in cement mortar 1 ; 4 around the transformer to hold the M.S fencing embedded in cement concrete (1:2:4) blocks and plastered the wall with cement mortar (1:4) having cement concrete coping 50 mm thick (1:2:4 mix) on the top.)	57(3)… The minimum factors of safety shall be based on such load as may cause failure of the, support to perform its function, assuming that the foundation' and other components of the structure are intact										

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CHECKSHEET FOR FENCING

1	Name of the Div Incharge		Document No:	
2	Div/Circle		Config	
3	Functional Location		Name of S/stn	
4	SAP Tag No.		Sub Div	
5	Protection Relay Make		Name of Vendor	
6	Year of Mfg		FPI Make	
7	P.O. No.		Switch Gear Make	
8	Sub Div Incharge		Switch Gear Model	

SNo	Description of points to be checked	References	A-Contractor			B-Execution Team			C-Quality Team				REMARKS
			Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Observations	Status (Cleared / Not Cleared)	
2.	Fencing height & its fabrication according to the design of the BRPL (M.S Fencing ; -- M.S Steel panels of size 1200 mm X 2120 mm(ht) consisting of M.S angle 40 mm X 40 mm X 5 mm frame and I.R.C mesh (wt. 7.75 Kg / sq mtr) duly welded in the frame with M.S flats / M.S tee. The panels are fixed with welding with M.S channel 100 mm X 50 mm at equal intervals of 1200 mm. Gate of size 2400 mm X 2120 mm is provided.)	49(1)(ii)… outdoor sub-stations except pole type sub-stations and outdoor switching stations shall, unless the apparatus is completely enclosed in a metal covering connected with earth, the said apparatus also being connected with the system by armored cables, be efficiently protected by fencing not less than 1.8 metres in height or other means so as to prevent access											
3.	Fencing structure double earthed	48(1)(iii)… All non-current carrying metal parts associated with an installation of voltage exceeding 650 V shall be effectively earthed to a grounding system or mat											

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CHECKSHEET FOR FENCING

1	Name of the Div Incharge		Document No:	
2	Div/Circle		Config	
3	Functional Location		Name of S/stn	
4	SAP Tag No.		Sub Div	
5	Protection Relay Make		Name of Vendor	
6	Year of Mfg		FPI Make	
7	P.O. No.		Switch Gear Make	
8	Sub Div Incharge		Switch Gear Model	

SNo	Description of points to be checked	References	A-Contractor			B-Execution Team			C-Quality Team				REMARKS
			Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Observations	Status (Cleared / Not Cleared)	
4.	Fencing should be grouted properly with cement concrete & covered with brick foundation which is dully cement & coarse sand plastered with a Hole Fast.	As Per Sno 2											
5.	Fencing painted properly as per specification of BRPL.	19(6)… All panels shall be painted with the description of its identification….											
6.	Yard of the S/Stn. leveled & cleaned.	44(2)(xiii)…cleaning or for other work, the said conductors and apparatus shall be so arranged that these may be made dead in sections, and that work on any such section may be carried on by a designated person without danger											
7.	Fencing door with proper locking arrangement.	23(4)… covers and doors are kept closed and locked and are so provided that they can be opened only by means of a key											

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CHECKSHEET FOR FENCING													
1	Name of the Div Incharge					Document No:							
2	Div/Circle					Config							
3	Functional Location					Name of S/stn							
4	SAP Tag No.					Sub Div							
5	Protection Relay Make					Name of Vendor							
6	Year of Mfg					FPI Make							
7	P.O. No.					Switch Gear Make							
8	Sub Div Incharge					Switch Gear Model							

SNo	Description of points to be checked	References	A-Contractor			B-Execution Team			C-Quality Team				REMARKS
			Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Observations	Status (Cleared / Not Cleared)	
		or a special appliance.											
8.	Proper size of M.S hinges (65 mm size of 5 mm M.S. Sheet) including nut & bolt to be welded as per BRPL design.	As Per Sno-2											
	CHECKS AND VERIFICATION												
1	Name												
2	Company Name												
3	Name of Project Manager(vendor)												
4	Name of Project Manager(Execution)												
5	Quality Team Leader												
6	Signatures												

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CHECKSHEET FOR HIGH MAST

1	Name of the Div Incharge		Document No:	
2	Div/Circle		Config	
3	Functional Location		Name of S/stn	
4	SAP Tag No.		Sub Div	
5	Protection Relay Make		Name of Vendor	
6	Year of Mfg		FPI Make	
7	P.O. No.		Switch Gear Make	
8	Sub Div Incharge		Switch Gear Model	

SNo	Description of points to be checked	References	A-Contractor			B-Execution Team			C-Quality Team				REMARKS
			Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Observations	Status (Cleared / Not Cleared)	
1.	Area Cleanup (Any unwanted elements debris etc)	12(1) All electric supply lines and apparatus shall be of sufficient rating for power, insulation and estimated fault current and of sufficient mechanical strength, for the duty cycle which they may be required to perform under the environmental conditions of installation, and shall be constructed, installed, protected, worked and maintained in such a manner as to ensure safety of human beings, animals and property											
2.	Hand hole cover and bolts	57 Maximum stresses and factors of safety											
3.	Light tables latched fully into place and functioning properly	As above											
4.	Gear Box	As above											
5.	Transitional Yoke and Cables	As above											

CHECKSHEET FOR HIGH MAST

1	Name of the Div Incharge		Document No:	
2	Div/Circle		Config	
3	Functional Location		Name of S/stn	
4	SAP Tag No.		Sub Div	
5	Protection Relay Make		Name of Vendor	
6	Year of Mfg		FPI Make	
7	P.O. No.		Switch Gear Make	
8	Sub Div Incharge		Switch Gear Model	

SNo	Description of points to be checked	References	A-Contractor			B-Execution Team			C-Quality Team				REMARKS
			Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Observations	Status (Cleared / Not Cleared)	
6.	Lift Cables	As above											
7.	Latch System Reflectors	As above											
8.	Operation of Lowering Device	As above											
9.	Mechanical Devices	As above											
10.	High Mast Lowering Device	As above											
11.	For Fixture Mounting Ring: Electrical connections , reflectors and glassware of all luminaries , fixture mountings for tightness , cable and cable grip for damage, aiming and angle on floodlights.	As above											
12.	Grounding System	41(xiv) All metal casing or metallic coverings containing or protecting any electric supply line or apparatus shall be connected with earth and shall											

CHECKSHEET FOR HIGH MAST													
1	Name of the Div Incharge					Document No:							
2	Div/Circle					Config							
3	Functional Location					Name of S/stn							
4	SAP Tag No.					Sub Div							
5	Protection Relay Make					Name of Vendor							
6	Year of Mfg					FPI Make							
7	P.O. No.					Switch Gear Make							
8	Sub Div Incharge					Switch Gear Model							

SNo	Description of points to be checked	References	A-Contractor			B-Execution Team			C-Quality Team				REMARKS
			Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Observations	Status (Cleared / Not Cleared)	
		be so joined and connected across all junction boxes and other openings as to make good mechanical and electrical connection throughout their whole length:											
13.	Electrical System Check	12(1) All electric supply lines and apparatus shall be of sufficient rating for power, insulation and estimated fault current and of sufficient mechanical strength, for the duty cycle which they may be required to perform under the environmental conditions of installation, and shall be constructed, installed, protected, worked and maintained in such a manner as to ensure safety of human beings, animals and property											
14.	Electrical Devices	As above											
15.	Pole Cable & Connections	As above											
16.	Any tilting of the foundation or	As above											

CHECKSHEET FOR HIGH MAST													
1	Name of the Div Incharge					Document No:							
2	Div/Circle					Config							
3	Functional Location					Name of S/stn							
4	SAP Tag No.					Sub Div							
5	Protection Relay Make					Name of Vendor							
6	Year of Mfg					FPI Make							
7	P.O. No.					Switch Gear Make							
8	Sub Div Incharge					Switch Gear Model							

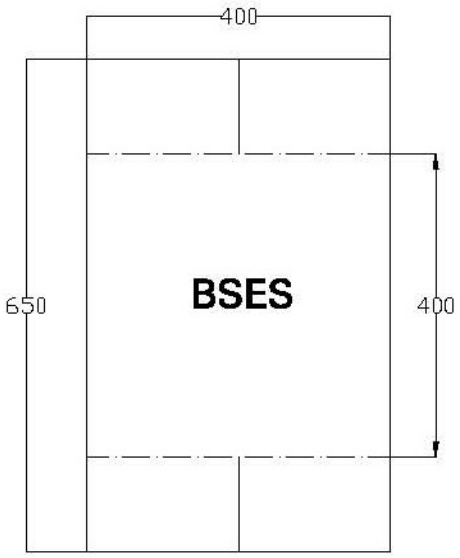
SNo	Description of points to be checked	References	A-Contractor			B-Execution Team			C-Quality Team				REMARKS
			Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Observations	Status (Cleared / Not Cleared)	
	any obvious structural damage or failures. Excessive cracking, spalling, or crushing beneath the base plate												
17.	any signs of bending or excessive corrosion of bolts	As above											
18.	Nuts (top and bottom) are tight and tack welded to washer, and washer to base plate.	As above											
19.	The base plate bears uniformly on the leveling nuts.	57 Maximum stresses and factors of safety											
20.	Look for any apparent failure of the shaft connection weld and any excessive rusting or corrosion in the weld area.	As above											
21.	Make sure there is no grout beneath the base plate.	As above											
22.	Check the hydraulic fluid level and hydraulic fittings for leaks.	As above											

CHECKSHEET FOR HIGH MAST

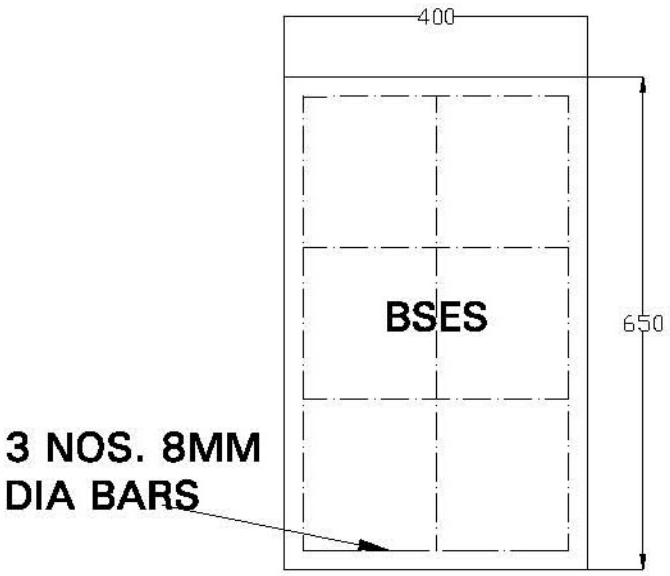
1	Name of the Div Incharge		Document No:	
2	Div/Circle		Config	
3	Functional Location		Name of S/stn	
4	SAP Tag No.		Sub Div	
5	Protection Relay Make		Name of Vendor	
6	Year of Mfg		FPI Make	
7	P.O. No.		Switch Gear Make	
8	Sub Div Incharge		Switch Gear Model	

SNo	Description of points to be checked	References	A-Contractor			B-Execution Team			C-Quality Team				REMARKS
			Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Status (Cleared / Not Cleared)	Responsibility	Documentary Evidence attached	Observations	Status (Cleared / Not Cleared)	
23.	Remove and filter the hydraulic fluid or replace with new fluid.	As above											
24.	Plinth of the High Mast is made as per the BRPL Specifications/O.E.M. (design of the plinth must be provided by the Execution Incharge.	57(3) The minimum factors of safety shall be based on such load as may cause failure of the, support to perform its function, assuming that the foundation' and other components of the structure are intact											
	CHECKS AND VERIFICATION												
1	Name												
2	Company Name												
3	Name of Project Manager(vendor)												
4	Name of Project Manager(Execution)												
5	Quality Team Leader												
6	Signatures												

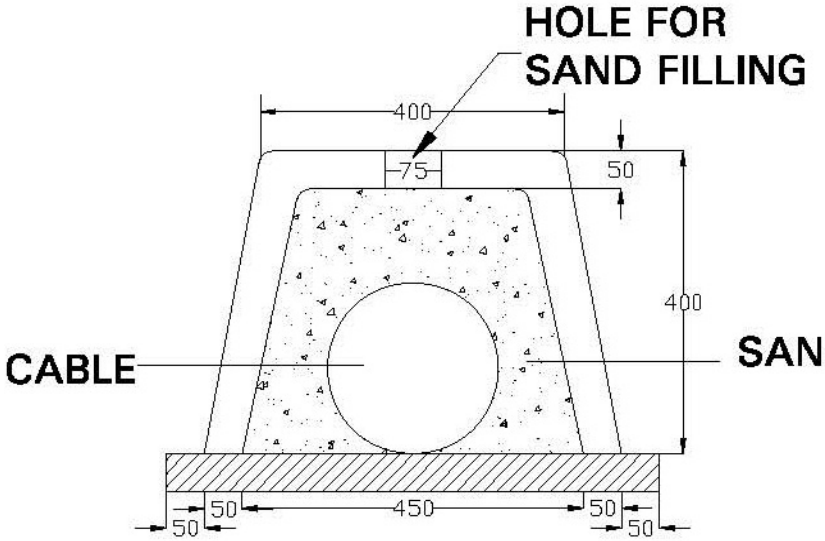
DRAWING OF COFFIN FOR JOINTS



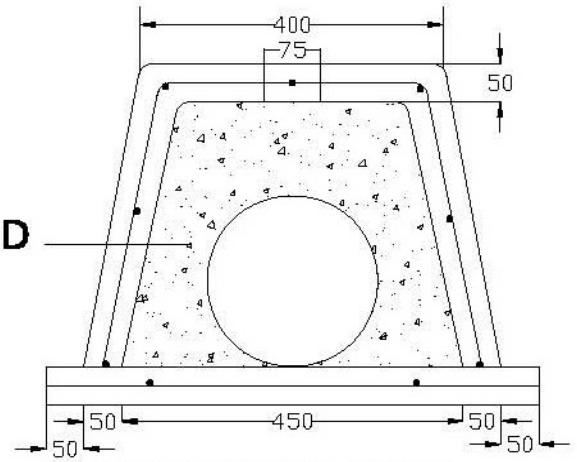
A. PLAN



B. REINFORCEMENT DETAILS 300 MM



D. ELEVATION



E. REINFORCEMENT DETAILS

NOTES :-

1. ALL DIMENSIONS ARE IN MM
2. CONCRETE MIX 1:1.5:3
3. LENGTH OF COFFIN FOR CONSTRUCTIONAL PURPOSE ONLY. ONE COFFIN SHOULD COVER ENTIRE LENGTH OF JOINT

DRAWN	SUMIT
CHECKED	ABHAY
REVIWED	A.T
APPD.	V.P
DATE	30.01.18

TITLE :-

DRAWING OF COFFIN COVER AT CABLE JOINTS

BSES

BSES Rajdhani Power Limited

DRAWING NO.

LT O/H LINES		Observation (Yes/No)	Remarks (if Any)
1	**Erection of LT Poles:-** i) LT poles erected in Straight position		
	ii) Zebra painting done on each LT pole		
	iii) Stud pole fixed with clamps		
	iv) Washer used with nuts and bolts		
	v) LT fittings tightened properly on LT poles.		
	vi) One earthing provided for every fifth HT/ LT poles & connected to accessories on the pole.		
2	**Clearances:-** i) Across Street :5.8 Meter		
	ii) Along Street : 5.5 Meter		
	iii) Without Across or Along Street : 4.6 Meter (If Bare Conductor)		
	iv) Without Across or Along Street : 4.0 Meter (Insulated Conductor)		
	v) Line Passes Over Building Vertical Clearance : 2.5 Meter		
	vi) Line Passes Adjustment of Building Horizontal Clearance : 1.2 Meter		
3	Stringing & Sagging of O/H conductor or LT AB cable as per specification		
4	Egg insulator used for every stay *(insulator has been placed at height not less than 3.0 Mtr. from the ground)*		
5	Earth guard provided below the LT line & connected with pole earthing		
6	LT cable mounted on the pole through the G.I. pipe fixed with double clamp & with the help of at least 2 nos. wooden cleat		
7	LT cables / Service cable earthed by their armoured		
8	Glands used for service & feeder cables in DBs & DBs properly sealed.		
9	Service connections done by making Connector Points (Ghodi) on LT conductor of the Line		
10	Piercing Joints taped at the ends		
11	DBs (Pole mounted Distribution boxes) double earthed & fixed at proper height		
12	Messenger wire of LT AB cable connected with each other with the help of jumper & fittings and also connected with pole earthing		

LT U/G CABLES		Observation (Yes/No)	Remarks (if Any)
1	The Depth of the LT cable trench satisfactory *(90 cm.)*		
2	LT cable laid as per the BRPL specification with Bricks and sand cushioning		
3	LT cable laid through the HDPE pipes in trenchless portion / Section		
4	LT cable mounted on the pole through the G.I. pipe fixed with double clamp & with the help of at least two nos. of wooden cleats.		
5	LT cables / Service cable earthed by their armored at both sides.		
6	G.I. Pipe should not be rest on cable insulation.		

Name-

Signature with stamp-