



**NED UNIVERSITY OF ENGINEERING & TECHNOLOGY  
PROCUREMENT CELL**

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**“Say No to Corruption”**

**Director Procurement**

No. DP/ COS-122609/6735/ **1031**  
January 10, 2019

**Notice Inviting Tender**


NEDUET invites sealed bids on single stage one envelope procedure from firms having registration with Income Tax, Sales Tax and Sindh Revenue Board and PEC (whichever is applicable) to carry out following:

S#	Tender / Number	Tender Schedule – Date and Time				Tender Fee Rs
		Issue / Sale		Submission	Opening	
		From	To			
1	Providing laying and connecting main electrical cable for Department of Metallurgical Engineering. Tender No.PC/NED/COS/ Electrical Work/6735/18	15.01.2019	31.01.2019	01.02.2019 10:30 A.M	01.02.2019 11:00 A.M	1000/-

**Eligibility Criteria**

- The bidder must have at least 3 years of experience in the relevant field
- Details of turn-over (Including in terms of Rupees) of at least last three years that average turnover of last three years should not be less than Rs. 5 million, as per online annual returns submitted to FBR.
- Registration with FBR / SRB (whichever is applicable) and must have valid professional Tax Certificate.

Tender Fee and Bid Security @ 2.5% of bid cost in shape of Payorder should be in favor of Director Finance. Bidding documents can be obtained and shall be submitted in the office of ADP – II as per above schedule. Bidders are requested to give their Best and Final Price as “No Negotiations” is permitted. Bidding Documents containing detailed terms and conditions are available at Websites [www.neduet.edu.pk](http://www.neduet.edu.pk) and [www.ppms.pprasinhd.gov.pk](http://www.ppms.pprasinhd.gov.pk).

  
**Director Procurement**  
10/11/2019

ISSUED ON: \_\_\_\_\_

ISSUED TO: \_\_\_\_\_

NED UNIVERSITY OF ENGINEERING & TECHNOLOGY



**“Providing laying and connecting main electrical cable  
for Department of Metallurgical Engineering”**

TENDER NO. PC/NED/COS/Electrical Work/6735/18

**Procurement Cell**

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# Instructions to Bidders

## General Rules and Directions for the Guidance of Contractors.

1. All work proposed to be executed by contract shall be notified in a form of Notice Inviting Tender (NIT)/Invitation for Bid (IFB) hoisted on website of Authority and Procuring Agency and also in printed media where ever required as per rules.

NIT must state the description of the work, dates, time and place of issuing, submission, opening of bids, completion time, cost of bidding document and bid security either in lump sum or percentage of Estimated Cost/Bid Cost. The interested bidder must have valid NTN also.

2. Content of Bidding Documents must include but not limited to: Conditions of contract, Contract Data, specifications or its reference, Bill of Quantities containing description of items with scheduled/item rates with premium to be filled in form of percentage above/ below or on item rates to be quoted, Form of Agreement and drawings

3. **Fixed Price Contracts:** The Bid prices and rates are fixed during currency of contract and under no circumstance shall any contractor be entitled to claim enhanced rates for any item in this contract

4. The Procuring Agency shall have right of rejecting all or any of the tenders as per provisions of SPP Rules 2010.

5. **Conditional Offer:** Any person who submits a tender shall fill up the usual printed form stating at what percentage above or below on the rates specified in Bill of Quantities for items of work to be carried out: he is willing to undertake the work and also quote the rates for those items which are based on market rates. Only one rate of such percentage, on all the Scheduled Rates shall be framed. Tenders, which propose any alternative in the works specified in the said form of invitation to tender or in the time allowed for carrying out the work, or which contain any other conditions, will be liable to rejection. No printed form of tender shall include a tender for more than one work, but if contractor wish to tender for two or more works, they shall submit a separate tender for each.

The envelope containing the tender documents shall refer the name and number of the work.

6. All works shall be measured by standard instruments according to the rules.

7. Bidders shall provide evidence of their eligibility as and when requested by the Procuring Agency.
8. Any bid received by the Agency after the deadline for submission of bids shall be rejected and returned unopened to the bidder.
9. Prior to the detailed evaluation of bids, the Procuring Agency will determine whether the bidder fulfills all codal requirements of eligibility criteria given in the tender notice such as registration with tax authorities, registration with PEC (where applicable), turnover statement, experience statement, and any other condition mentioned in the NIT and bidding document. If the bidder does not fulfill any of these conditions, it shall not be evaluated further
10. Bid without bid security of required amount and prescribed form shall be rejected.
11. Bids determined to be substantially responsive shall be checked for any arithmetic errors. Arithmetical errors shall be rectified on the following basis;
  - (A) **In case of schedule rates**, the amount of percentage quoted above or below will be checked and added or subtracted from amount of bill of quantities to arrive the final bid cost
  - (B). **In case of item rates**, .If there is a discrepancy between the unit rate and the total cost that is obtained by multiplying the unit rate and quantity, the unit rate shall prevail and the total cost will be corrected unless in the opinion of the Agency there is an obvious misplacement of the decimal point in the unit rate, in which case the total cost as quoted will govern and the unit rate corrected. If there is a discrepancy between the total bid amount and the sum of total costs, the sum of the total costs shall prevail and the total bid amount shall be corrected.
  - (C). Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.

## BIDDING DATA

- (a) **Name of Procuring Agency:** NED University of Engineering & Technology, University Road, Karachi.
- (b) **Brief Description of Works:** “Providing laying and connecting main electrical cable for Metallurgical Engineering”
- (c) **Procuring Agency’s address:** NED University of Engineering & Technology, Main University Road, Karachi.
- (d) **Estimated Cost:** ---
- (e) **Amount of Bid Security:** 2.5% amount in Shape of Pay Order
- (f) **Period of Bid Validity (days):-** (90 days)
- (g) **Performance Bond:** 5 % of Work Order Amount
- (h) **Percentage, if any, to be deducted from bills, (Retention Money)** 10% Amount
- (i) **Deadline for Submission of Bids along with time:** As notified in NIT
- (j) **Venue, Time, and Date of Bid Opening:** As notified in NIT
- (k) **Time for Completion from written order of commence:** 45 days
- (l) **Time of Maintenance** 06 Months
- (m) **Liquidity damages:** 0.1% of the contract amount per day for the work remain un-completed and un-completed after due date upto maximum of 10% and after that termination of contract.
- (n) **Deposit Receipt No:** Date: \_\_\_\_\_ Amount: \_\_\_\_\_
- (o) **Eligibility**
- Registration with FBR for Income Tax, Sales Tax in case of procurement of goods, registration with the Sindh Revenue Board in case of Procurement of Works and Services and registration with Pakistan Engineering Council as the case may and are not black listed in any procuring agency or authority.
  - At least three years relevant experience
  - At least three years turnover details that average turnover of last three years should not be less than Rs. 5 Million.

**(p) Other Terms & Conditions**

- (a) Under following conditions bid can be rejected**
- (i) Conditional and telegraphic bids/tenders.
  - (ii) Bids not accompanied by bid security of 2.50% of The Bid price and relevant documents mentioned in (b) below)
  - (iii) Bids received after specified date and time.
  - (iv) Bid must be signed, named & stamped by the authorized person of the firm / Companies along with authorized letter.
  - (v) Blacklisted firms/companies
  - (vi) If bid quoted without government taxes and duties etc.
  - (vii) Bidders are advised that before filling the bidding documents all pages of bidding documents should carefully be rechecked. If any page(s) / paper(s) of bidding documents are missing that can be downloaded from the official website of this University and SPPRA, and also can be obtained from the office of the ADP-2 in Procurement Cell, NEDUET, Karachi. Bid(s) with incomplete bidding documents will straightaway be rejected
  - viii Bidders are required to provide their valid e-mail Ids and Contact numbers(s) for effective and timely communication.
- (b) Responsive Bidder is required to submit following documents with their bid:**
- (i) List of similar assignments with cost (mention number of projects with their cost) Under-taken over the past 03 years.
  - (ii) Details of equipment, machineries and transport Owned by firms/contractor. (if applicable).
  - (iii) Financial Statement and income tax returns for the last 03 years.
  - (iv) Affidavit that firm has never been blacklisted.
  - (v) Copy of CNIC / Establishment of Firm/ Company etc.
  - (vi) Proof of Registration of NTN, GST, SRB & PEC. (Whichever is applicable)
- (q).** For any query and clarification about BoQ items and drawings etc. bidder may contact the Directorate of Services of this University in working hours.

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**Director Procurement**

## Conditions of Contract

**Clause – 1: Commencement & Completion Dates of work.** The contractor shall not enter upon or commence any portion or work except with the written authority and instructions of the Engineer-in-charge or of in subordinate-in-charge of the work. Failing such authority the contractor shall have no claim to ask for measurements of or payment for work.

The contractor shall proceed with the works with due expedition and without delay and complete the works in the time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall reckoned from the date on which the order to commence work is given to the contractor. And further to ensure good progress during the execution of the work, contractor shall be bound, in all in which the time allowed for completion of any work exceeds one month, to achieve progress on the prorated basis.

**Clause – 2: Liquidated Damages.** The contractor shall pay liquidated damages to the Agency at the rate per day stated in the bidding data for each day that the completion date is later than the Intended completion date; the amount of liquidated damage paid by the contractor to the Agency shall not exceed 10 percent of the contract price. Agency may deduct liquidated damages from payments due to the contractor. Payment of liquidated damages does not affect the contractor's liabilities.

### Clause – 3: Termination of the Contract.

- (A). Procuring Agency/Executive Engineer may terminate the contract if either of the following conditions exists:-
- i. Contractor causes a breach of any clause of the Contract.
  - ii. The progress of any particular portion of the work is unsatisfactory and notice of 10 days has expired.
  - iii. In case of abandonment of the work owing to the serious illness or death of the contractor or any other cause.
  - iv. Contractor can also request for termination of contract if a payment certified by the Engineer is not paid to the contractor within 60 days of the date of the submission of the bill.
- (B). The Executive Engineer/Procuring Agency has power to adopt any of the following courses as may deem fit:-
- i. To forfeit the security deposit available except conditions mentioned at A (iii) and (iv) above.
  - ii. To finalize the work by measuring the work done by the contractor.

- (C) In the event of any of the above courses being adopted by the Executive Engineer/Procuring Agency, the contractor shall have:-
- i. No claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials, or entered into any engagements, or made any advances on account of, or with a view to the execution of the work or the performance of the contract,
  - ii. However, the contractor can claim for the work done at site duly certified by the executive engineer in writing regarding the performance of such work and has not been paid.

Procuring Agency/Engineer may invite fresh bids for remaining work.

**Clause 4: Possession of the site and claims for compensation for delay.** The Engineer shall give possession of all parts of the site to the contractor. If possession of site is not given by the date stated in the contract data, no compensation shall be allowed for any delay caused in starting of the work on account of any acquisition of land, water standing in borrow pits/ compartments or in according sanction to estimates. In such case, either date of commencement will be changed or period of completion is to be extended accordingly.

**Clause –5: Extension of Intended Completion Date.** The Procuring Agency either at its own initiatives before the date of completion or on desire of the contractor may extend the intended completion date, if an event (which hinders the execution of contract) occurs or a variation order is issued which makes it impossible to complete the work by the intended completion date for such period as he may think necessary or proper. The decision of the Executive Engineer in this matter shall be final; where time has been extended under this or any other clause of this agreement, the date for completion of the work shall be the date fixed by the order giving the extension or by the aggregate of all such orders, made under this agreement.

When time has been extended as aforesaid, it shall continue to be the essence of the contract and all clauses of the contract shall continue to be operative during the extended period.

**Clause –6: Specifications.** The contractor shall execute the whole and every part of the work in the most substantial and work-man-like manner and both as regards materials and all other matters in strict accordance with the specifications lodged in the office of the Executive Engineer and initialed by the parties, the said specification being a part of the contract. The contractor shall also confirm exactly, fully and faithfully to the designs, drawing, and instructions in writing relating to the work signed by the Engineer-in-charge and lodge in his office and to which the contractor shall be entitled to have access at such office or on the site of work for the purpose of inspection during office hours and the contractor shall, if he so requires, be entitled at his own expense to make or cause to be made copies of the specifications, and of all such designs, drawings, and instructions as aforesaid.

**Clause – 7: Payments.**

- (A). **Interim/Running Bill.** A bill shall be submitted by the contractor as frequently as the progress of the work may justify for all work executed and not included in any previous bill at least once in a month and the Engineer-in-charge shall take or cause to be taken the requisite measurements for the purpose of having the same verified and the claim, as far as admissible, adjusted, if possible before the expiry of ten days from the presentation of the bill, at any time depute a subordinate to measure up the said work in the presence of the contractor or his authorized agent, whose countersignature to the measurement list will be sufficient to warrant and the Engineer-in-charge may prepare a bill from such list which shall be binding on the contractor in all respects.

The Engineer /Procuring Agency shall pass/certify the amount to be paid to the contractor, which he considers due and payable in respect thereof, subject to deduction of security deposit, advance payment if any made to him and taxes.

All such intermediate payment shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed, and shall not preclude the Engineer-in-charge from recoveries from final bill and rectification of defects and unsatisfactory items of works pointed out to him during defect liability period.

- (B). **The Final Bill.** A bill shall be submitted by the contractor within one month of the date fixed for the completion of the work otherwise Engineer-in-charge's certificate of the measurements and of the total amount payable for the works shall be final and binding on all parties.

**Clause – 8: Reduced Rates.** In cases where the items of work are not accepted as so completed, the Engineer-in-charge may make payment on account of such items at such reduced rates as he may consider reasonable in the preparation of final or on running account bills with reasons recorded in writing.

**Clause – 9: Issuance of Variation and Repeat Orders.**

- (A). Agency may issue a Variation Order for procurement of works, physical services from the original contractor to cover any increase or decrease in quantities, including the introduction of new work items that are either due to change of plans, design or alignment to suit actual field conditions, within the general scope and physical boundaries of the contract.
- (B) Contractor shall not perform a variation until the Procuring Agency has authorized the variation in writing subject to the limit not exceeding the contract cost by of 15% on the same conditions in all respects on which he agreed to do them in the

Work, and at the same rates, as are specified in the tender for the main work. The contractor has no right to claim for compensation by reason of alterations or curtailment of the work.

- (C). In case the nature of the work in the variation does not correspond with items in the Bill of Quantities, the quotation by the contractor is to be in the form of new rates for the relevant items of work, and if the Engineer-in-charge is satisfied that the rate quoted is within the rate worked out by him on detailed rate analysis, and then only he shall allow him that rate after approval from higher authority.
- (D). The time for the completion of the work shall be extended in the proportion that the additional work bear to the original contract work.
- (E). In case of quantities of work executed result the Initial Contract Price to be exceeded by more than 15%, and then Engineer can adjust the rates for those quantities causing excess the cost of contract beyond 15% after approval of Superintending Engineer.
- (F). **Repeat Order:** Any cumulative variation, beyond the 15% of initial contract amount, shall be subject of another contract to be tendered out if the works are separable from the original contract.

#### **Clause-10: Quality Control.**

- (A). **Identifying Defects:** If at any time before the security deposit is refunded to the contractor/during defect liability period mentioned in bid data, the Engineer-in-charge or his subordinate-in-charge of the work may instruct the contractor to uncover and test any part of the works which he considers may have a defect due to use of unsound materials or unskillful workmanship and the contractor has to carry out a test at his own cost irrespective of work already approved or paid.
- (B). **Correction of Defects:** The contractor shall be bound forthwith to rectify or remove and reconstruct the work so specified in whole or in part, as the case may require. The contractor shall correct the notified defect within the Defects Correction Period mentioned in notice.
- (C). **Uncorrected Defects:**
  - i. In the case of any such failure, the Engineer-in-charge shall give the contractor at least 14 days notice of his intention to use a third party to correct a defect. He may rectify or remove, and re-execute the work or remove and replace the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor.

- ii. If the Engineer considers that rectification/correction of a defect is not essential and it may be accepted or made use of; it shall be within his discretion to accept the same at such reduced rates as he may fix therefore.

**Clause – 11:**

- (A). **Inspection of Operations.** The Engineer and his subordinates, shall at all reasonable times have access to the site for supervision and inspection of works under or in course of execution in pursuance of the contract and the contractor shall afford every facility for and every assistance in obtaining the right to such access.
- (B). **Dates for Inspection and Testing.** The Engineer shall give the contractor reasonable notice of the intention of the Engineer-in-charge or his subordinate to visit the work shall have been given to the contractor, then he either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for that purpose, orders given to the contractor's duly authorized agent shall be considered to have the same force an effect as if they had been given to the contractor himself.

**Clause – 12: Examination of work before covering up.**

- (A). No part of the works shall be covered up or put out of view/beyond the reach without giving notice of not less than five days to the Engineer whenever any such part of the works or foundations is or are ready or about to be ready for examination and the Engineer shall, without delay, unless he considers it unnecessary and advises the contractor accordingly, attend for the purpose of examining and measuring such part of the works or of examining such foundations;
- (B). If any work is covered up or placed beyond the reach of measurement without such notice having been given, the same shall be uncovered at the contractor's expense, and in default thereof no payment or allowance shall be made for such work, or for the materials with which the same was executed.

**Clause – 13: Risks.** The contractor shall be responsible for all risks of loss of or damage to physical property or facilities or related services at the premises and of personal injury and death which arise during and in consequence of its performance of the contract. if any damage is caused while the work is in progress or become apparent within four months of the grant of the certificate of completion, final or otherwise, the contractor shall make good the same at his own expense, or in default the Engineer may cause the same to be made good by other workmen, and deduct the expenses from retention money lying with the Engineer.

**Clause-14: Measures for prevention of fire and safety measures.** The contractor shall not set fire to any standing jungle, trees, bush-wood or grass without a written permit from the Executive Engineer. When such permit is given, and also in all cases when destroying, cutting or uprooting trees, bush-wood, grass, etc by fire, the contractor shall take necessary measures to prevent such fire spreading to or otherwise damaging surrounding property. The contractor is responsible for the safety of all its activities including protection of the environment on and off the site. Compensation of all damage done intentionally or unintentionally on or off the site by the contractor's labour shall be paid by him.

**Clause-15:Sub-contracting.** The contractor shall not subcontract the whole of the works, except where otherwise provided by the contract. The contractor shall not subcontract any part of the works without the prior consent of the Engineer. Any such consent shall not relieve the contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any subcontractor, his agents, servants or workmen as if these acts, defaults or neglects were those of the contractor, his agents' servants or workmen. The provisions of this contract shall apply to such subcontractor or his employees as if he or it were employees of the contractor.

**Clause – 16: Disputes.** All disputes arising in connection with the present contract, and which cannot be amicably settled between the parties, , the decision of the Superintending Engineer of the circle/officer/one grade higher to awarding authority shall be final, conclusive and binding on all parties to the contract upon all questions relating to the meaning of the specifications, designs drawings, and instructions, hereinbefore mentioned and as to the quality of workmanship, or materials used on the work or as to any other questions, claim, right, matter, or thing whatsoever in any way arising out of, or relating to the contract design, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the execution, of failure to execute the same, whether arising, during the progress of the work, or after the completion or abandonment thereof.

**Clause –17: Site Clearance.** On completion of the work, the contractor shall be furnished with a certificate by the Executive Engineer (hereinafter called the Engineer in-charge) of such completion, but neither such certificate shall be given nor shall the work be considered to be complete until the contractor shall have removed all temporary structures and materials brought at site either for use or for operation facilities including cleaning debris and dirt at the site. If the contractor fails to comply with the requirements of this clause then Engineer-in-charge, may at the expense of the contractor remove and dispose of the same as he thinks fit and shall deduct the amount of all expenses so incurred from the contractor's retention money. The contractor shall have no claim in respect of any surplus materials as aforesaid except for any sum actually realized by the sale thereof.

**Clause –18: Financial Assistance /Advance Payment.**

(A). **Mobilization advance** is not allowed.

(B). **Secured Advance against materials brought at site.**

- i. Secured Advance may be permitted only against imperishable materials/quantities anticipated to be consumed / utilized on the work within a period of three months from the date of issue of secured advance and definitely not for full quantities of materials for the entire work/contract. The sum payable for such materials on site shall not exceed 75% of the market price of materials;
- ii. Recovery of Secured Advance paid to the contractor under the above provisions shall be affected from the monthly payments on actual consumption basis, but not later than period more than three months (even if unutilized).

**Clause –19: Recovery as arrears of Land Revenue.** Any sum due to the Government by the contractor shall be liable for recovery as arrears of Land Revenue.

**Clause –20: Refund of Security Deposit/Retention Money.** On completion of the whole of the works (a work should be considered as complete for the purpose of refund of security deposit to a contractor from the last date on which its final measurements are checked by a competent authority, if such check is necessary otherwise from the last date of recording the final measurements), the defects notice period has also passed and the Engineer has certified that all defects notified to the contractor before the end of this period have been corrected, the security deposit lodged by a contractor (in cash or recovered in installments from his bills) shall be refunded to him after the expiry of 06 Months from the date on which the work is completed.

**Divisional Accountant**

**Contractor**

**Executive Engineer/Procuring Agency**

# BILL OF QUANTITIES

**(A) Description and rate of Items based on Composite Schedule of Rates.**

Item No	Quantities	Description of item to be executed at site	Rate	Unit	Amount in Rupees
1	2	3	4	5	6

**Amount TOTAL (a)**

----- % above/below on the rates of CSR.

**Amount to be added/deducted on the basis  
Of premium quoted. TOTAL (b)**

**Total (A) = a+b in words & figures:**

Contractor

Executive Engineer/Procuring Agency

**(B) Description and rate of Items based on Market (Offered rates)**

Item No	Quantities	Description of item to be executed at site	Rate	Unit	Amount in Rupees

Total (B) in words & figures:

Contractor

Executive Engineer/Procuring Agency

## Summary of Bill of Quantities.

Cost of Bid

Amount

1. (A) Cost based on Composite Schedule of Rates.

2. (B) Cost based on Non Schedule of Rates.

TOTAL COST OF BID (C) = Total (A) + Total (B)

Contractor

Executive Engineer/Procuring Agency

EXCAVATION, LAYING AND CONNECTING OF MAIN ELECTRICAL CABLE FOR  
DEPARTMENT OF METALLURGICAL ENGINEERING NED UNIVERSITY

**BOQ OF ELECTRICAL WORK**

S/ No.	Non-Schedule Items	Description Of Item	Qty.	Rate	Amount
		<b><u>WIRING ACCESSORIES:</u></b> All wiring shall be done with 600/1100 volt Grade PVC insulated cables.			
01	Non Schedule Item.	Supply, Excavation, laying, installation, termination, testing and commissioning of 120mm <sup>2</sup> , 4core Cu, PVC/SWA/PVC cable of <b>Pakistan Cable/AGE/Pioneer</b> or equivalent make, lay underground. Excavation the trench manually all kinds of soil hard & rocky, 0.5meter width & 01 meter depth, 4inch sand cushion, laying of cable cover with ordinary sand, protection tiles (red bricks 6x12") & warning tape, than back filling with fresh soil. Also fixing of Al. casting Cable marker, will be fix at a distance of 20 meter and at turning point, also provide 150 & 100mm dia. UPVC pipe of <b>Pak arab / Dadex</b> or equivalent make, at under floor/road cutting and make the same as before. Complete in all respect such as Cu Lugs and cable gland etc. as par requirement, as per drawing and as approved by the Electrical consultant/ Directorate of Services.	100Mts.		
02	Non Schedule Item.	Supply, installation, testing & commissioning of 02Nos. of 300A TP MCCB 25KA <b>Terasaki</b> Malaysia / <b>ABB</b> Germany / <b>Legrand</b> France or equivalent make.01No TP should be Fix with MS Box (housing) in Sub Station as feeding point. Connect with existing LT panel in Sub-Station. Also Providing and connecting of 70mm <sup>2</sup> , 4core Cu, PVC/ PVC cable of <b>Pakistan Cable /AGE/Pioneer</b> or equivalent make (06 meter) and another one TP should be Fix in the generator DB of Instrumentation center. The job should be completed in all respect such as Cable, cable gland and Cu lugs etc. as per required and as approved by the Electrical consultant/ Directorate of Services	01 Job.		
				<b>Total:-</b>	

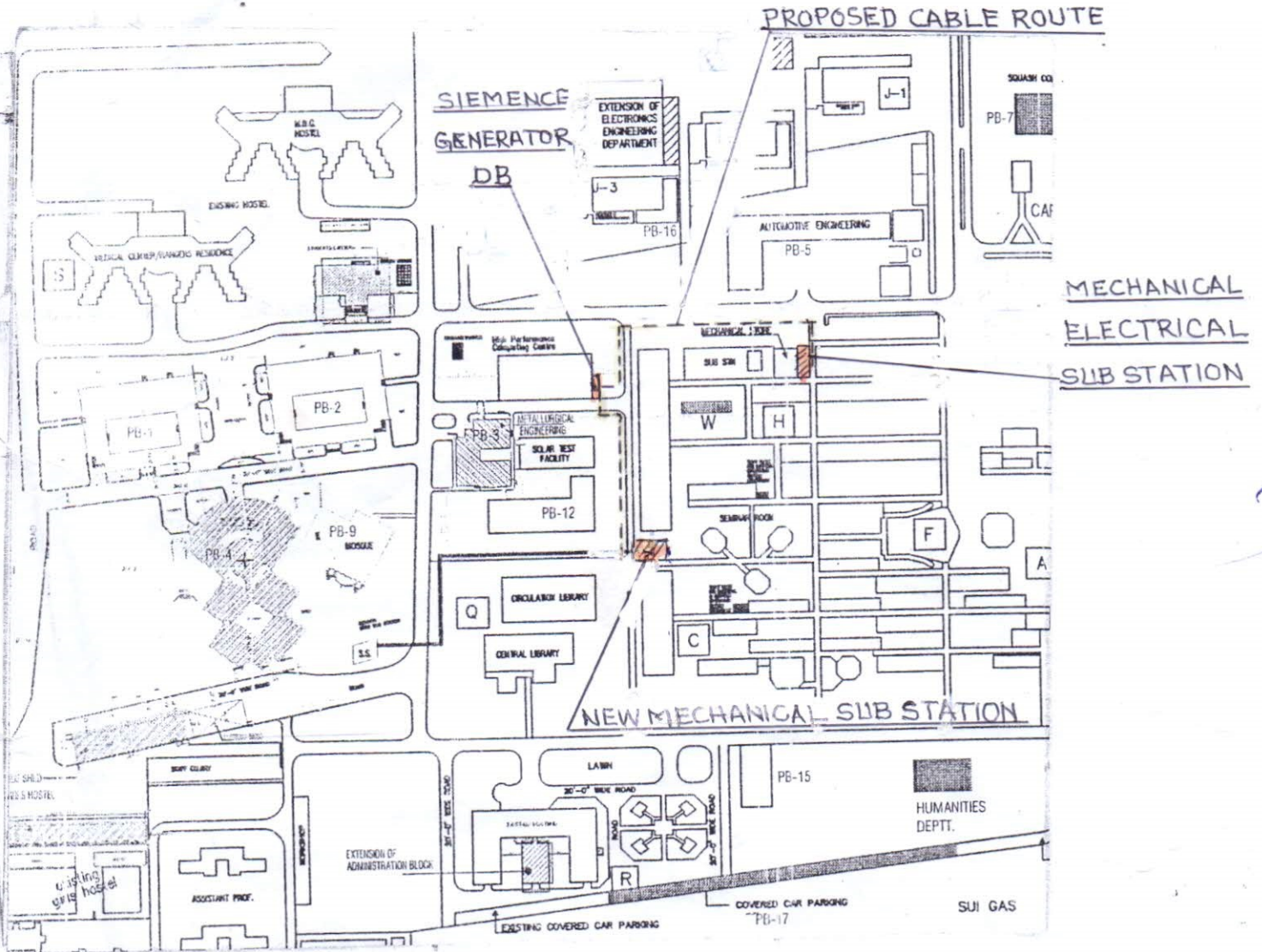
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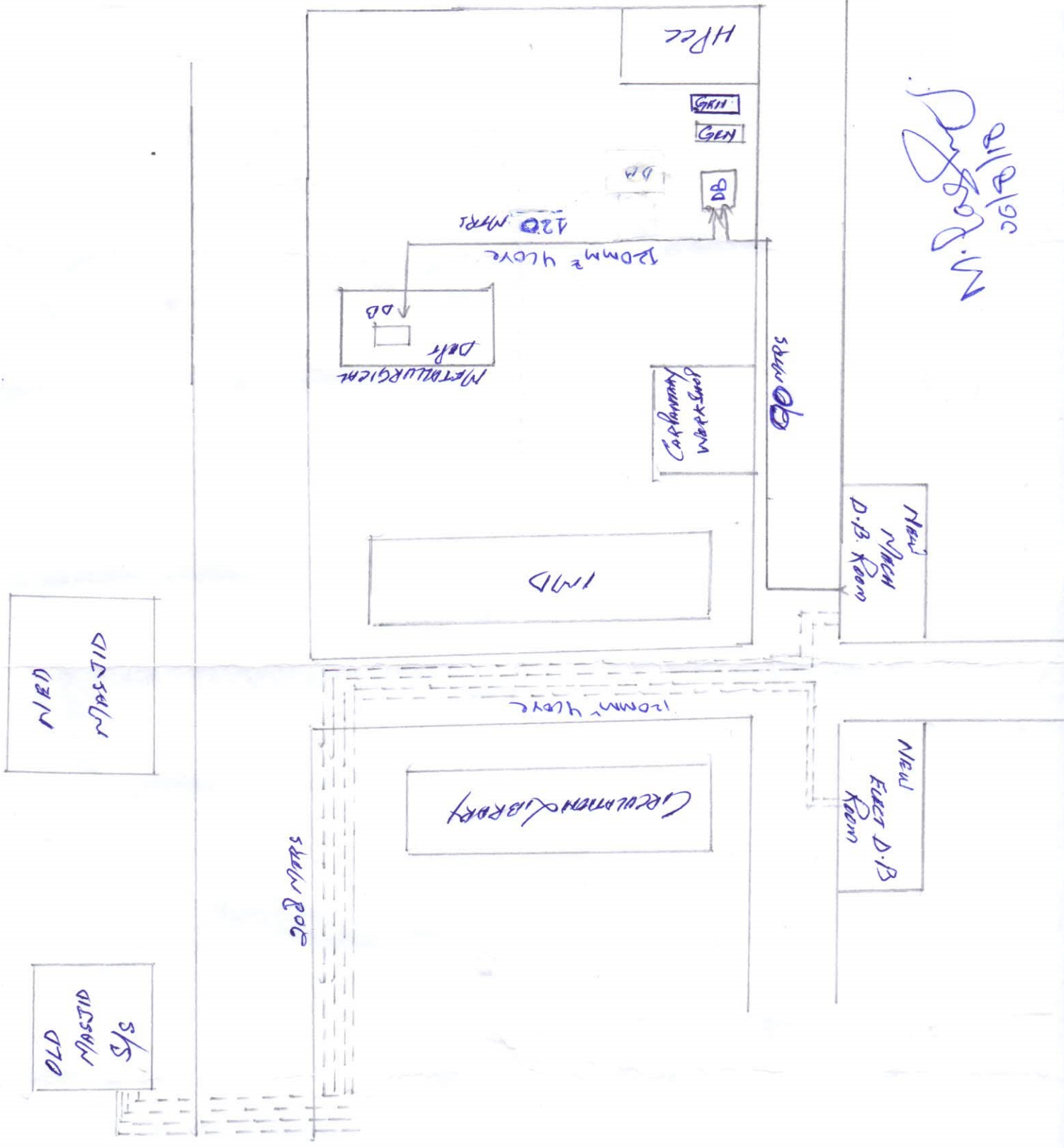
POWER REQUIREMENT FOR INSTALLATION OF LAB EQUIPMENT  
OF METALURGICAL ENGINEERING DEPARTMENT NED UNIVERSITY

ELECTRICAL WORK



Layout Drawing of proposed cable route

all @ 19c  
Prof. M.



#80

OLD SUB-STATION MASJID

