

Pakistan Ordnance Factories

WAH CANTT



CONTRACT AGREEMENT NO. -GM-Wah-2026-27

% age Rate TENDER AND CONTRACT FOR WORKS

(To be read in conjunction with General Conditions of Contract PAFW-2249 /1978 Revised)

Subject:

Contractor

Accepting Officer /
Officer authorized by him

TENDER NOTICE

1. Applications are invited by 29-10-2026 for tender documents of “_____” addressed to the GM Civil Wah Works Quaid Avenue Directorate Civil Works Pakistan Ordnance Factories Wah Cantt.
2. Work is to be completed within x months from the date of commencement as will be given in first written Work Order.
3. Copies of the Conditions of Contract, Schedules, Drawings and other documents connected with the work (signed for the purpose of identifications) will be opened for inspection by the tenderers at the office of the GM Civil Wah Works (DCW) POF-Wah Cantt during office hours. Tenderers will be deemed to have full knowledge thereof whether they inspect them or not.
4. A tenderer shall also be deemed to have satisfied himself generally as to the scope, extent and nature of the work to be done.
5. The tender must be accomplished by a non-refundable fee by means of a crossed postal order / pay order for Rs. 500/- in favour of GM Civil Wah Works Wah Cantt.
6. Under no circumstances, father and his son(s) or other close relatives will be allowed to tender for the same contract as separate competitors. A breach of this condition will render the tenders of the parties liable to rejection.
7. Tenders will be issued from the office of GM Civil Wah Works (DCW) POFs Wah Cantt. Duly filled tenders with quoted %age on MES Schedule of rates / quoted rates must be delivered on/before **1030hrs** in Bid Centre (Rabta Hall) near C-04 Gate on **14-11-2026** and will be opened at **1100hrs** in the presence of those competitors who may be present at that time at Bid Centre adjacent to Rabita Hall near C-04 Gate, The Mall, POFs Wah Cantt.
8. GM Civil Wah Works will be the Accepting Officer, hereinafter referred to as such for the purpose of this Contract.
9. Accepting Officer does not bind himself to accept the lowest or any other tender or to give reasons for not doing so.
10. The tenderers should be careful to deliver bonafide tenders, which satisfy each and every condition, laid down in the tender. The decision of the Accepting Officer, as to whether a tender is bonafide or not, shall be final, conclusive and binding on the tenderers.
11. Any tenderer which proposes alterations to any of the conditions laid down or which imposes other conditions of any description whatsoever, is liable to rejection.
12. Earnest Money **Rs.** _____ Mn shall be deposited with the POFs, in shape of Call Deposit Receipt drawn in favour of GM Civil Wah Works POF- Wah Cantt. No tender will be deemed complete and valid unless it is accompanied with Earnest Money. Earnest Money will be refunded to the unsuccessful tenderers.
13. Earnest Money to successful tenderer shall be released in the following manners subjected to contract sum: -

Contractor

Accepting Officer /
Officer authorized by him

- a. If contract sum is less than Rs. 10.00 million, earnest money shall be released after the payment of final bill.
 - b. If contract sum is Rs. 10.00 million or above, earnest money shall be released after the submission of Performance Bond/Bank Guarantee.
14. Security Money @ 02% of final work done shall be deducted from the final payment of successful tenderer.
15. Security Money shall be retained till one year after the official date of completion of work and refunded after deducting any money that might have fallen due, due to any reason, during the one-year maintenance period.
16. At any time prior to the date for the submission of tenders, the Accepting Officer may issue a notice in writing to all the recipients of these tender documents, deleting, varying or extending any item in these documents. Any such notice shall then become part of the tender documents and be treated as such by the tenderers.
17. Successful Tenderer is required to furnish a certificate to the effect that they have cleared all professional taxes payable by them. Such certificates would be issued by the competent Authority of Excise and Taxation Department.
18. Refer clause-15 of PAFW-2249 (Revised), the Contractor(s) shall purchase the taxable goods/materials used in the works from sales tax registered persons against sales tax invoice(s) and same invoice(s) as evidence of its legal purchase may be presented before release of payment(s).
19. If the successful tenderer is not in ATL (Active Tax Payers List) of FBR for Income Tax & Sales Tax at the time of any payment, then payment to the successful tenderer shall not be released until the successful tenderer files his mandatory returns and appears on ATL of FBR.
20. Mobilization advance @ 10% (ten percent) of contract sum will be paid to the contractor on production of a bank guarantee of the equivalent amount, issued through any scheduled bank of Pakistan. The recovery will be made in four equal installments before the final bill.

Contractor

Accepting Officer /
Officer authorized by him

PAKISTAN ORDNANCE FACTORIES**WAH CANTT.**

REF _____

Dated : _____-01-2026_____

“_____” during the period of _____ x months
from the date as will be specified in the first written work order.

M/s _____ of _____ are hereby authorized to tender for the above work. The Tender must be delivered at Bid Centre adjacent to Rabta Hall near C-04 Gate Wah Cantt on/before 1030 hours on 24-01-2026 addressed to GM Civil Wah Works Quaid Avenue, POFs Wah Cantt marked on the outside of envelope of tender documents as Contract Agreement No. 01-GM-Wah-2025-26

2. All documents must be returned whether or not a tender has been submitted.
3. Any correspondence concerning this tender should be addressed as indicated at the top of this sheet quoting reference as given.

**THE PRESIDENT OF ISLAMIC REPUBLIC OF PAKISTAN DOES NOT BIND HIMSELF TO ACCEPT THE
LOWEST OR ANY TENDER.**

4. This contract comprises _____ pages as detailed below and _____ sheets of drawings.

i.	TENDER NOTICE	02 Pages
ii.	CONTRACT FORMS	10 Pages
iii.	SPECIAL CONDITIONS	04 Pages
iv.	PARTICULAR SPECIFICATIONS	18 Pages
v.	GENERAL CONDITION OF CONTRACT PAFW-2249 (Revised)	____ Pages
vi.	AMENDMENT TO PAFW-2249 (1978)	03 Pages
vii.	SAFETY INSTRUCTION	09 Pages
viii.	INTEGRITY PACT	01 Page

Contractor

Accepting Officer /
Officer authorized by him

Mr. _____ is hereby authorized to initial corrections in this contract agreement and to sign and initial all documents pertaining to it.

DATED ____ - ____ - 2026

(Abdul Samad)
GM Civil Wah Works
ACCEPTING OFFICER

Classified/Secret

Contractor

Accepting Officer /
Officer authorized by him

SCHEDULE "A"**(List of Buildings or Works)**

Sr. No.	Description of Work	No. of Drawings	No. of Unit Required	Period for completion of individual items after the date of handing over the site
1	_____ complete in all respect, according to drawings , special conditions, specifications as laid down in MES Schedule of Rates 2025 i/c errata/addendum, special conditions and general conditions of contract PAFW 2249.	As per list attached.	Whole job.	_____ x months from the date of commencement as will be given in the first written Work Order.

Contractor

Accepting Officer /
Officer authorized by him

LIST OF DRAWINGS

(To be read in conjunction with Schedule "A")

S No.	Drawing No.	No. of Sheets
1	POF/C/2144	01

Classified/Secret

Contractor

Accepting Officer /
Officer authorized by him

SCHEDULE – 'B'**(LIST OF STORES TO BE ISSUED TO CONTRACTOR)**

**SEE CONDITION 13,37 & 53 of
PAFW-2249 (1978)**

S. No.	PARTICULARS	RATE AT WHICH STORE ETC WILL BE ISSUED		PLACE OF ISSUE
		UNIT	RATE	
1.				
2.				
3.				
4.				

(ITEMS ONLY)

Note:-

1. In case of excess issue of stores over that of approved quantities the same shall have to returned by the Contractor to the place of issue without damage in the condition they were issued to him, failing which recovery will be affected at stock book rate plus 10% or Market rate or MES Schedule of Rates ____ plus contractor's percentage whichever is higher.
2. No stores will be issued for scaffolding, hoisting, slinging, centering, shuttering and RCC pipe etc and these will be arranged for by the contractor himself.

Contractor

Accepting Officer /
Officer authorized by him

Note Schedule "B" continued: -

3. Tolerance on material issued under schedule "B" would be permissible as shown in the following table: -

S. No.	Name of Material	Permissible Tolerance	REMARKS
1.	Cement.	1 %	Cement quantities to be deducted from the MES Schedule of Rates ____.
2.	M.S. Joists.	2.5 %	
3.	M.S. Plates and Flat Bars	2.5 %	
4.	M.S. Angle and MS. Tees	5 %	
5.	M.S. Round Bars or Square Bars a) Upto 10 mm Thickness b) Over 10 mm Thickness	5 % 5 %	
6.	Ironite	1 %	
7.	Had grade Deformed bars Round	5 %	
8.	Bitumen or Asphalt Paving.	5 %	

4. One bag of cement shall be taken as 50 KG for the purpose of issue of cement under this schedule.

Contractor

Accepting Officer /
Officer authorized by him

SCHEDULE "C"

(LIST OF STORES WHICH WILL BE SUPPLIED TO THE CONTRACTOR FOR FIXING ONLY, THE COST OF THE STORES BEING CHARGED DIRECT TO THE WORK)

SEE CONDITION 13,37 & 53 of
PAFW-2249 (1978)

S No.	DESCRIPTION	PLACE OF ISSUE	REMARKS
1	2	3	4

NIL

Contractor

Accepting Officer /
Officer authorized by him

SCHEDULE "D"**(LIST OF PLANT AND TOOLS (OTHER THAN TRANSPORT) WHICH WILL BE ISSUED TO THE CONTRACTORS)****SEE CONDITION 17,38 & 58 of
PAFW-2249 (1978)**

S No.	Particulars	Detail of Operations Supplied	Hire Per Unit Per Working Hrs. (Rs.)	Hire Per Unit Per non-working Hrs. (Rs.)	Place of Issue (By Name)
-------	-------------	-------------------------------	--------------------------------------	--	--------------------------

NIL

Note: -

1. Issue of any T & P is discretionary and subject to being available in good working condition. The contractor shall arrange and procure through his own sources any particular or additional items of T & P required by him but that may not be available for issue by the department.
2. Any item of T&P not mentioned above, but is required and is available with POFs may be issued at the prescribed rates of the department.
3. The Contractor shall have no claim whatsoever if any of the T&P OUT OF WORKING ORDER DURING TRANSIT OR OPERATION ON THE WORK.
4. The Contractor shall be responsible for the safe custody and safe transportation from time he takes over the charge of the T&P from the shop or T&P yard till he returns same to the department.
5. Hire charges be levied for working and non-working days or a minimum duration of 8 hours per day. One day per week will be allowed for maintenance of the plant. Times worked over 8 hours per day will be charged at the full rates, part of an hour being counted as a whole hour. Fridays and Holidays will be treated as working days for levy of hire charges. No Charges will be recovered for the maintenance day and the period during which T&P remained idle due to mechanical breakdown.

Contractor

 Accepting Officer /
 Officer authorized by him

SCHEDULE "F"

S No.	Description of Items	Unit	Rate
-------	----------------------	------	------

NIL

Contractor

Accepting Officer /
Officer authorized by him

**TENDER TO THE PRESIDENT OF
ISLAMIC REPUBLIC OF PAKISTAN**

Having examined and perused the following documents: -

1. Schedule "A", "B", "C", "D" & "F" attached hereto,
2. Special Conditions,
3. Particular Specifications,
4. General Conditions of Contract PAFW-2249 (1978),
5. Drawings as per list attached hereto,
6. MES Schedule of Rates 2025 amended up-to-date,

I/We agree to execute all the works referred to in the said documents upon the terms and conditions contained or referred to herein at the rates contained in the aforesaid MES Schedule and the special schedule of rates, attached hereto, if any.

Contractor to insert here Rate percent striking out Words not required, if no Schedule rates are offered Nil should be inserted in both the spaces.

	Quoted percentage / rates for B & R Works and Electrical Works
Adding hereto	
Deducting here from.	

In words for (B&R and Electrical Works).

Or at such other rates as may be fixed under the provision No. 59 and to carry out such Deviations as may be ordered vide condition No.10. up to a maximum of $\pm 15\%$ (+ Fifteen Percentage).

Signature_____ in the capacity of _____

duly authorized to sign the tender for and on behalf of _____

Postal Address: - _____

Telegraphic Address: - _____ Tele No. _____

i) Witness: _____ 2) Witness: _____

Address: _____ Address: _____

Contractor

Accepting Officer /
Officer authorized by him

Subject: - Construction of 03 x Covered Bins at R & D Wah Cantt.

ACCEPTANCE

The above tender is accepted by me on behalf of **PRESIDENT OF ISLAMIC REPUBLIC OF PAKISTAN**, at quoted %age @ _____ % (_____ Percent) above / below on Rates of MES Schedule of Rates 2025 for B & R and Electrical Works in the subject project.

Signature: _____ dated this _____ day of _____ 2026

APPOINTMENT: **GM Civil Wah Works**
Directorate Civil Works

(Abdul Samad)
GM Civil Wah Works
ACCEPTING OFFICER

Contractor

Accepting Officer /
Officer authorized by him

SPECIAL CONDITIONS

1. The work as described herein shall be carried out in accordance with the enclosed specification and be in accordance with good engineering practice and recognized principles. Specifications and other conditions laid down in MES Schedule of Rates 2021 will be applicable to this contract in addition to the specifications and special conditions of the contract, the latter, however, taking precedence over the former wherever these are at variance with each other.
2. The Accepting Officer shall be the ultimate deciding authority on all questions relating to the meaning of specification, costing, explanation of drawings, Instructions mentioned herein, quality of workmanship, materials intended to be incorporated in the works and his decision shall be final, conclusive and binding on the contractor.
3. The Contractor shall complete the items of works as per the priority ordered from time to time by the Accepting Officer or the controlling Officer, Contractor shall follow the spirit of condition-12 of the PAFW-2249 (1978) and achieve the rate of progress given in time and progress chart Persistent failure to maintain the progress without any valid reason /may result in cancellation of the contract under condition-57 of PAFW-2249 (1978).
4. The Contractor shall finish the work in accordance with the true meaning and intent of this contract, either the same may or may not be specifically shown therein or referred to in the conditions and specifications.
5. The buildings set out shall be made as per the stipulated coordinates, plinth level to be maintained as given on the drawings. The contractor shall be responsible for maintaining the level burjis intact until floors are laid finally, in reference to datum and shall be responsible for laying plinth and floor, at the correct levels. He will not be paid anything extra for additional work that he may have to perform due to incorrect transfer of levels by him.
6. The Contractor shall make adequate arrangements for covering the walls, floors roads etc. during severe weather conditions and protect work including projections, wood work, plaster, decoration work etc, from damages during the progress of work, He shall make available all necessary materials like tarpaulin, covering cloth, weather sheets, screens etc. for the protection of work.
7. The Contractor shall safeguard and protect the existing roads, buildings, structures, machinery and adjoining all other property moveable and immovable and will not cause any damage thereto. In case of any damage, injury or defect, he shall make good the same at his risk and expense.
8. The Contractor shall supply samples of the materials, fittings, and fixtures as required for approval of the Engineer-in-Charge before incorporation in the work and before manufacturing or taking provisioning action for required quantity. The approved samples shall be kept in the office of the Engineer-in-Charge for reference and check up.
9. If the work is delayed due to delay in delivery by the Government, of the Stores enumerated in Schedule 'B' and 'C' no claim whatsoever of the Contractor shall be entertained by POF on account of his labour remaining idle.
10. Steel for reinforcement, as given in Schedule 'B' shall be issued to the Contractor by weight. While calculating by measurement, the quantities actually consumed in the work, the weight will be worked out in accordance with M.E.S. Schedule of Rates 2021. Where the unit weight of any item is not available in the MES Schedule of Rates 2021. It will be based on the relevant

Contractor

Accepting Officer /
Officer authorized by him

British Standard. The rate quoted by the Contractor is deemed to cover variation on account of rolling margin upto 5% (both ways) of the above rates. In case Contractor claims the variation to be in excess of this tolerance limit, he may ask for check and verification before incorporation of the steel in work. After the steel has been incorporated in the work, no such claim will be entertained and the rate quoted by the Contractor shall be deemed to cover the variation of all extent.

11. The Contractor is required to keep himself in touch with day to day position regarding the supply of materials from the Engineer, store section, so as to adjust the progress of his work, that the labour may not remain idle.
12. The Contractor is advised to visit the site of work and make himself fully acquainted with the nature of work involved. He shall be deemed to have acquainted himself with all the above conditions and situations as may be present or likely to be encountered as well as the security rules. Consequently, he should account for all eventualities in his tendered rates and prices and no excess cost whatsoever or any claim shall be entertained on any account arising from any of the above causes.
13. Tendered rates or amount should be inclusive of all taxes, etc. payable to the central and provincial government or local bodies and no claim on this account shall be entertained by POFs.
14. Tendered rates or amount shall include all incidental charges in connection with the work such as the cost of removing trees, not exceeding 225mm girth, shrubs, etc. which may interfere with the execution of the work.
15. The Contractor may have to make temporary approach roads etc. at his own cost to facilitate carriage of materials. Such approach roads shall be aligned in a manner approved by the Engineer in charge.
16. Being prohibited Areas, entry of personnel and vehicles to Wah Cantt as well as the site of work is restricted. The Contractor shall confirm strictly to security Rules of the Area.
17. On completion of the works finally, the work shall be cleaned and cleared of all debris and mortar before handing over the complete work to the POFs. The entire site and premises shall also be cleared of all unwanted and unsightly matter and the place left dressed up, clean and tidy, without which the work not be deemed to be complete in all respects.
18. In case of any unsatisfactory work by the contractor, the POF shall get it rectified or redone at contractor's risk and cost through any other agency and the contractor shall have no objection as to what agency is employed in completing the outstanding work.
Such work may also be carried out by employing departmental labour, at the discretion of the Accepting Officer. In case of departmental labour, the departmental charges, etc, shall be leveled at 17% (seventeen percent) on the completion cost.
19. The Firm/Contractor are prohibited from publishing any thing in the press relating to the contracts which may give out their relationship with Defence Services including POFs without getting it vetted by the Accepting Officer.
20. Officer detailed by Ministry of Defence. Directorate General Inter Services Intelligence will have be right to enter the premises to exercise check and or periodical inspections of firms record relating to Defence Contracts to ensure that all classified correspondence is being properly kept and maintained. The Contractor's authorized staff/labour and vehicles will be allowed to enter through the nearest gate of respective factory where work is being carried out and will not be allowed to go anywhere else except with the valid permission of the Controlling Officer/Engineer-in-Charge. During work all the staff/ labour will remain at site upto specified timings and will not be allowed to visit any other shop to borrow things/T & P etc. They shall not be allowed to violate danger area safety instructions and use factory material illegally.

 Contractor

 Accepting Officer /
 Officer authorized by him

21. The supplier shall undertake that on information about the same/and/or purchase of the stores under this contract shall not be communicated to any person other than the manufacturer of the stores or to any press or any agency not authorized by Pakistan Ordnance Factories Board to receive it.
22. The Contractor shall be responsible to the POFs for and shall effectually maintain in a complete state of repair and in good condition, fair wear and tear accepted, to the satisfaction of the Engineer-in-Charge, the whole of the work for a period of twelve calendar months from the certified date of completion thereof.
23. In these documents, POFs means "Pakistan Ordnance Factories" acting through the "Accepting Officer".
24. In these documents wherever the word "Engineer" appears. It shall mean the "Engineer-in-Charge".
25. The contractor shall be issued only one set of Tender Documents and Drawings. This supersedes Clause No. 4 of PAFW-2249 (1978).
26. The Contractor will be responsible for testing of pipelines and manholes etc as per specifications laid down in MES Schedule of Rates OR as per specifications attached herewith at his own expense. Rates for laying/joining of pipes and construction of manholes are inclusive of all charges for testing and no separate payment will be made for testing of pipelines and manholes.
27. A cell of a few selected personnel security-wise cleared will be created within the management to handle classified correspondence from Pakistan Defence Services and knowledge of Defence deals will only be restricted to them.
28. Correspondence from Pakistan Defence Services will be treated as "Confidential" or "Secret" as the case may be and it shall not be divulged to any unauthorized source.
29. The grooves in cement plaster, at junction of Burnt Brick Work and R.C.C./ P.C.C. work, as directed by the Engineer Incharge, shall be considered covered in the rate of cement plaster.
30. Tendered percentage/rate or amount shall cover cost for providing and laying of P.C.C. foundation beds under collars of R.C.C. drain pipes/Sewage lines etc. hunching of pipes with P.C.C. and P.C.C. saddles, complete all as per drawings, specifications and as additionally directed by the Engineer-in-Charge. No separate payment will be made for the same
31. If at any time the contractor desires to enclose his site of work to facilitate his working condition, inside the factories or any other restricted area, he will have to provide double fencing at his own cost as will be instructed by the Engineer-in-Charge. In such cases contractor will obtain prior permission for such fencing and will not start the fence work unless allowed to do so in-writing.
32. (a) The contractor will furnish a certificate to the effect that he has cleared all Professional Tax payable by him. Such certificate would be issued by the competent authority of Excise and Taxation Department.
(b) Final payment will not be released unless such certificate is provided by the contractors.
33. The contractor shall be issued cement under schedule 'B' for various items of work on the basis of calculation sheet as given in MES Schedule of Rates-2021 i/c errata/addenda. Notwithstanding anything to
34. The contrary, should the contractor require any additional quantity of cement in any or all of the works to achieve strength or finish in accordance with the specifications thereof, he should adjust the same in his tendered amount / %age / unit rates. No price adjustment shall be admissible under any circumstances subsequent to the submission of tender.
35. In MES Schedule of Rates 2021 of G.I./M.S. pipe work will also cover the cost of "UNION SOCKETS" in addition to other fittings. No separate payment will be made for the same.

Contractor

Accepting Officer /
Officer authorized by him

36. A work diary, showing daily activities on site of work such as number of workmen employed, materials brought by the contractor on site and climate conditions etc. shall be maintained by the Engineer-in-charge/site staff, cooperation in maintaining the work diary and will sign on this diary at the end of each day.
37. The contractor will get the Sui Gas work completed through a sub-contractor approved by Sui Northern Gas Pipe Line Ltd. Islamabad.
38. Contractor will submit a programme of works showing the order of precedence in which he proposes to carry out the works. This programme shall be in the form of a detailed CPM/Bar chart and shall show material procurement schedule, deployment of labour, financial forecast of the works, etc in accordance with clause of the conditions of contract.
39. Contractor will submit a detailed plan showing location of his stores, offices, workshops and other facilities.
40. Contractor will submit detailed statement showing the deployment of his supervisory staff in accordance with clause of conditions alongwith CV of the project in-charge.
41. Contractor will be required to keep the entire site of work clean and tidy during the execution of work to ensure intended finishing. The debris shall be removed on daily basis from the site as per the instruction of the Engineer-in-charge.
42. The contractor shall read and follow Specifications of concrete as per MES Schedule of rates 2021.

Contractor

Accepting Officer /
Officer authorized by him

**PARTICULAR
SPECIFICATIONS**

Contractor

Accepting Officer /
Officer authorized by him

LIST OF PARTICULAR SPECIFICATIONS**BUILDING**

1. EXCAVATIONS AND EARTH WORK.
2. CEMENT CONCRETE.
3. STEEL REINFORCEMENT.
4. MASONRY.
5. PLASTERING AND POINTING.
6. DOORS / WINDOWS.
7. IRON-MONGERY / BRASS-MONGERY.
8. FOR WATER SUPPLY, SANITARY FITTINGS AND SEWERAGE.
9. ELECTRIFICATION.
10. CONTINUITY OF REINFORCEMENT CONCRETE.
11. MARBLE TILES

ROAD

1. REMOVAL OF TREES.
2. CLEARING AND GRUBBING
3. STRIPPING.
4. REPAIR OF POT HOLES.
5. BITUMINOUS PAVEMENT PATCHING.
6. SUB BASE (GRANULAR).
7. WATER BOUND MACADAM (BASE COURSE).
8. BITUMINOUS TACK COAT.
9. BITUMEN PRIME COAT.
 - a. MEDIUM CURING ASPHALT.
10. ASPHALTIC BASE COURSE (WITH JOB MIX FORMULA).
 - a. ASPHALT CEMENT AASHTO M 20.
11. ASPHALTIC WEARING COURSE PLANT MIX (PRE-MIX CARPETTING).
 - a. ASPHALT CEMENT AASHTO M 20.
11. ASPHALTIC WEARING COURSE (WITH JOB MIX FORMULA).
 - a. ASPHALT CEMENT AASHTO M 20.
12. TRAFIC MARKING.

1. **EXCAVATION AND EARTH WORK**

- 1.01 General: These specifications cover excavation, filling/back filling and disposal of excavated earth/spoil. The contractor shall take levels of all the areas with respect to a bench mark established by him at the site of the work. All levels/elevations of the works shall be taken with respect to this bench mark as datum.
- 1.02 Keeping works clear of water: The contractor shall keep all excavated areas clear of water throughout the period of excavation at his own cost except or otherwise permitted or instructed by the Engineer-In-Charge. Any water-logged material shall be either stripped off or drained and re-compacted properly.
- 1.03 Excavation: All excavation of every description and whatsoever substance encountered shall be performed to the dimensions and levels indicated on the drawings. However, in foundations, the excavation shall be carried down to a depth of nearly 100 mm above the final level of excavation and the last 100 mm of the excavation shall be trimmed carefully to the smooth elevation shown on the drawings. Once any foundation has been excavated to the final trimmed elevation, a lean concrete layer of the thickness shown

 Contractor

 Accepting Officer /
 Officer authorized by him

on the drawings shall be placed at the earliest and in any case it must not be left overnight. In the event of any excavation having been carried out deeper than authorized the same shall be filled in by the contractor at his own cost to the required levels with lean concrete of (1:4:8).

- 1.04 **Shoring:** The contractor shall provide all necessary shoring to excavations to ensure the safety of the workmen and freedom from damage to any adjacent paving, structures and utilities. The cost of necessary shoring shall be deemed to be included in the rates for excavation or back filling.

2. **CEMENT CONCRETE**

- 2.01 **Scope:** These specifications relate to concrete in all parts of the work.

- 2.02 **Materials:** The sources of supply of all materials to be provided by the Contractor shall be approved by the Engineer-in-charge or his representative before these materials are delivered to the site.

- 2.03 **Cement:** Ordinary Portland cement complying in all particulars with B.S-12 shall be used except as otherwise specified in contract documents. When ordered, the contractor shall have to perform or arrange for the performance of any one or all tests and analysis prescribed by B.S.12. All cement shall be stored in rain or damp proof building to avoid deterioration. Separate consignment shall be stored separately to permit access to each and all separate consignments.

- 2.04 **Coarse Aggregate:** All coarse aggregate shall be crushed stone. It shall be well graded and clean free from loam, clay and other impurities. The samples of aggregates to be used shall be submitted to the Engineer-in-Charge or his representative for approval and the aggregates actually used for the works shall be similar in all respects to the approved samples. The grading shall be checked at least for every 28 CUM of material supplied to ensure that the grading is uniform and conform to the samples.

- 2.05 **Fine Aggregate:** Sand from an approved quarry shall be used. It shall be free from dust and salts and conform to the following grading:

Sieve (Specification E-11)	%age Passing
9.5 mm (3/8" In)	100
4.75mm (No. 4)	95 to 100
2.36mm (No. 8)	80 to 100
1.18mm (No. 16)	50 to 85
600 μ m (No. 30)	25 to 60
300 μ m (No. 50)	10 to 30
150 μ m (No. 100)	2 to 10

- 2.06 **Water:** Water shall be clean and free from oil, acids or other injurious substances and fit for human consumption.

- 2.07 **Concrete Types:** The concrete to be used in various parts of the works has been given as under according to the minimum requirement of strength.

Nominal Mix.	Work Test Specified minimum value of crushing strength of test	Cylindrical Compressive Strength
	7 days PSI	28 days PSI
1:4:8	650	1000
1:3:6	1000	1500
1:2:4	2000	3000
1:1-1/2:3	2500	3750
1:1:2	3000	4500

Contractor

Accepting Officer /
Officer authorized by him

The concrete having 28 days' Minimum Cylindrical Compressive strength 3000, 3500, 4000, 5000, 6000 and PQC 600 psi, including arrangements and use of Weigh Batching Plant, Concrete pumps, Vibrations etc. and transportation upto 10Km by Transit Mixer have been accounted for in the rates.

Concrete type in various parts of the works is specified on the drawings according to the required minimum works crushing strengths. The specified minimum strength as well as the required finish shall be achieved by complete and strict quality control rather than by the use of increased proportion of cement i.e. by carefully selecting the aggregates, by controlling water/cement ratio by mechanical vibration, by adequate curing and by finishing of the exposed surfaces immediately on removal of the form work.

2.08 Proportioning: Volumetric proportions will be allowed. The gauge boxes for volumetric batching shall be provided for measuring the coarse and fine aggregates. These boxes shall be deep and narrow rather than shallow and wide and shall be fitted with handles. Tests for bulking of sand shall be made at intervals. When cement is rebagged, it will be done by weight so that a complete bag will weigh 50 KG.

2.09 Mixing: Concrete shall be mixed in mechanical mixer. Mixing shall continue for a period until there is apparently a uniform distribution of the materials and the mass is uniform in colour.

2.10 Transporting: The concrete shall be transported from the place of mixing to the place of final deposit as rapidly as practicable by means, which will prevent segregation or loss of or to ingredients. It shall be deposited as nearly as practicable to its final position so as to avoid re handling or flowing. All skips, vehicles or containers used for transporting the concrete shall be thoroughly cleaned.

2.11 Placing: Concrete shall be placed soon after it has been mixed. Once the concrete has left the mixer no more water shall be added.

Concreting shall be carried out continuously between the construction joints. When work has to be resumed on the surface which has hardened, the surface shall be thoroughly hacked, swept clean, wetted and covered with cement and sand slurry composed of the same ratio as that of the concrete mix.

The concrete shall be thoroughly compacted by means of mechanical vibrators and carefully worked around the formwork. No concreting operation shall be started without prior approval in writing of the Engineer-in-Charge. Concreting during non-working hours or by night is expressly prohibited unless specifically permitted by the Engineer-in-Charge. Similarly, no concreting operation shall be carried out during weather when the temperature is below 5° centigrade or when the rain is imminent and/or is raining until proper measures are adopted to the approval of Engineer-in-Charge.

2.12 Curing: Concreting shall be kept continuously moist for a minimum period of 15 days. All concrete members such as columns shall be completely wrapped in gunny bags or similar materials and this wrapping shall be kept in a permanently wet state for the aforementioned period. In case of roof/floor slabs, the finished area may be partitioned off by means of mud partitions and these areas shall be filled with water, tops of precast elements shall be kept moist on the first day and the next day side forms shall be removed and the elements be covered with wet gunny bags or similar material and cured for a period of three days. Thereafter they shall be cured in shade for another period of 10 days.

 Contractor

 Accepting Officer /
 Officer authorized by him

- 2.13 Control test Cylinders: In order to maintain strict quality control of concrete, Cylinder-testing shall be carried out in accordance with the procedure laid in B.S. 114:1969 Six test Cylinders shall be made from each batch of concrete for ascertaining crushing strength after 7 and 28 days. To ensure that the samples are representative of the concrete in the structure, a number of samples shall be taken from different point. Each sample shall be large enough to make at least three test specimens and shall be taken from one point in the work. The location from which each sample is taken shall be noted. The cost of making test Cylinders and their testing in an approved Lab/POF lab is deemed to be included in the concrete rates. The contractor is also permitted to establish site Lab. for above purpose which shall operate under the control of POF Engineer in Charge of the Work. The moulds for the testing shall be of metal with inner faces accurately machined to ensure that the opposite sides of the specimen are plane and parallel. Each mould shall be provided with a metal base having a smooth machined surface. Fresh concrete for test specimens shall be placed in the mould in 50 mm layer and thoroughly compacted with a steel bar 375 mm long having a ramming face 25 mm square and a weight of 4 lbs. For 150 mm test Cylinders the concrete shall be subjected to at least 25 strokes per layer. The test Cylinders shall then be cured as closely as possible in all respects to actual concrete used in the works for the same period as the actual concrete is being used. Testing shall be done in the laboratory and carried out as per British Standard specifications, 1881:1970.
- 2.14 Cylinder Strength: The Cylinders shall be tested at 7 and 28 days after casting. The appropriate strength requirement shall be considered to be satisfied if none of the strengths of the Cylinders is below the specified Cylinders strength and if the average strength of the three Cylinders is not less than the specified Cylinders strength and the difference between the greatest and the least strengths is not more than 15% of that average. The testing of the Cylinders shall be the responsibility of the contractor and the cost thereof borne by him. Complete record of Cylinders tests shall be maintained at site.
- 2.15 Test Loading of Structure: If after concreting there is any doubt as to the materials and or workmanship employed in the structural reinforced concrete, the contractor might be required to test load whole or part of the work so doubted and the structure shall be loaded to full design load plus 25%. The standard of acceptance of this test shall be as per C.P. 114. The cost of such tests will be borne by the Contractor. Should the tests result be negative, the contractor shall be required to demolish and reconstruct the works or parts thereof so proved unsatisfactory at his own cost.
- 2.16 Formwork: All formwork or shuttering shall be well and stoutly constructed from cladded timber or steel. It shall be fully capable of supporting all the loads due to the fresh concrete and due to construction equipment and operations, including mechanical vibration, without deformation or deflection. It is expressly stipulated that the contractor shall use properly designed forms and that he should devote the utmost care to their adequate design, manufacture and erection etc. Should the results obtained from inadequately designed or inadequately manufactured forms prove to be unsatisfactory then besides rejection of unsatisfactory work, all the delays and costs resulting there from, including all penalties, if any, for delays in completing the work within the stipulated contract period, shall be at the contractor's expense.

Contractor

Accepting Officer /
Officer authorized by him

All joints between boards and/or panels shall be flush and grout tight. If necessary these joints shall be well caulked prior to concreting. Spacer blocks and/or properly dimensioned spacer rings mounted directly on the reinforcement shall be used for ensuring the correct cover to steel reinforcement. Prior to placing concrete, all forms shall be inspected and all debris and extraneous matter removed. Care shall be taken that reinforcement is not contaminated with form oil.

Temporary stops ends at construction joints shall be carefully constructed to fit neatly around all projecting reinforcement and fixtures and the joints shall be carefully packed to prevent grout leaks.

Under no circumstances shall the formwork be struck until the minimum time has elapsed after casting as follows: -

Cold weather 5 ° C to 12 ° C	Normal weather above 12 ° C
---------------------------------	--------------------------------

Removal of side forms	36 hours	24 hours
Removal of Soffit to slabs	21 days	15 days
Removal of Soffit to beams	28 days	21 days

All formwork shall be removed without shock or vibration, which might damage the concrete.

Formwork shall be so constructed that the dimensions of the concrete members shall be achieved as shown in the drawings when concrete is placed and compacted therein.

3. **STEEL REINFORCEMENT**

- 3.01 **Scope:** The work under this part consists of cutting, bending, placing and binding of reinforcement as shown on the drawings, as detailed in the bar bending schedules in accordance with the specifications contained herein and as additionally directed by the Engineer-in-Charge or his representative.
- 3.02 **Storage:** Reinforcement shall be stored clear of the ground and shall be supported sufficiently to prevent permanent bending of bars while stacked.
- 3.03 **Bending:** Reinforcement shall be accurately cut and bent to the exact dimensions and shapes shown in the drawings and/or bending schedules, the former, however, taking precedence over the latter wherever these are at variance with each other.
- 3.04 **Fixing and Placing:** All reinforcement shall be accurately and securely fixed and tied in place, by means of 14-SWG black annealed steel wire, as shown on the drawings. Great care shall be taken to maintain the cover specified. Where concrete blocks are used for ensuring the cover they shall be made of mortar not less than 1 part of cement, 2 parts of sand. The Contractor will provide concrete blocks at his own cost. Where the contractor is asked by the Engineer-in-Charge in writing to provide steel bars chairs and steel spacers to keep the placed reinforcement in position these shall be paid to the contractor under item of steel reinforcing bars of Schedule of rates.
- 3.05 Concreting shall not start until reinforcement for a particular casting of concrete has been inspected and Engineer-in-Charge gives permission. Engineer-in-Charge shall have the right to reject out of hand any concrete that has been cast without his prior permission and to order the demolition and reconstruction of all such concrete at the Contractor's expense.
- 3.06 **Laps:** The position of various laps in the bars and their lengths have been stipulated in the drawings. However, when it becomes necessary to lap reinforcement at places not shown on the drawings, the position of such laps shall be subject to the approval of the Engineer-in-Charge. The length of such laps shall not be less than bond length. The

Contractor

Accepting Officer /
Officer authorized by him

lapped length shall be paid to the contractor under the item of steel reinforcing bars of Sch. of rates.

4. **MASONRY**

- 4.01 Scope: The work under this section includes the masonry in foundations, walls and partitions, both load bearing and non-load bearing.
- 4.02 Cement: Same as described for cement concrete.
- 4.03 Sand: The sand shall be from approved source and free from dust and salts.
- 4.04 Bricks: All bricks are to be obtained from an approved kiln and shall be of 1st class quality. They shall be well burnt, uniform in shape and size, hard and square and emit a clear ringing sound when struck. They shall be free from nodules of lime. Bricks shall have crushing strength of not less than 1500 p.s.i. and not absorb water more than 18% of their own weight when dry. Samples of bricks shall be submitted to establish their suitability and prior approval of the Engineer-in-Charge for use in the work. All subsequent deliveries must be in accordance with the samples approved. Cost of testing bricks in an approved lab. shall be borne by the Contractor.
- 4.05 Stone: The stone shall be of best average quality limestone obtainable in the locality. It shall be hard, sound, and free from veins, flaws or other defects. The stone shall be of suitable sizes and in one piece where ordered.
- 4.06 Water: Same as described for cement concrete.
- 4.07 Brickwork: All bricks shall be thoroughly soaked in water before laying in cement mortar. All brickwork shall be in English Bond. No half bricks or bats shall be used except where necessary to complete the bond. The joints or faces which are to be plastered or pointed shall be raked 10 mm deep while the mortar is green but not later than 24 hours after the work is done. Brickwork shall gauge four courses in a foot in height including four joints. The walls shall be carried up regularly, not leaving any part more than 3 feet lower than another. All new work will be kept watered and damp for such period as directed not exceeding 14 days. The contractor shall build in or cut and pin in with mortar to ends of sills, lintels, metal window lugs, door fixing clamps and the like where required.
- 4.08 Stone-Masonry: Strictly in accordance with MES Schedule of Rates.
- 4.09 (a) Cement Concrete Block Masonry: Standard concrete masonry block units shall be provided by contractor for use where required throughout building structure fabricated from approved types of local masonry materials and conforming to in every respect to the requirements specified hereinafter.
Units shall be of uniform dimension with reasonably true surface and equal to sample approved by the Engineer-in-Charge. Concrete masonry units shall be of uniform colour and aggregate mix specified in the drawings, and be free of imperfections or deformations that will present an unsightly appearance. All edges shall be true and straight and at right angles with each other and without any chipped or otherwise broken edges.
No unit containing any of the foregoing defects shall be laid up in any wall under any condition. Non-compliance will be a subject for rejection by Engineer-in-Charge. Comply with the following requirements: -
1. On standard sizes, thickness and shapes, including control joint block, closer and shapes required and necessary for the construction, and free from any deleterious matter that will stain plaster or corrode metal.
- (b) Visual Inspection: All units shall be sound and free from cracks or other irregularities or defects that would interfere with the proper placing of the unit or impair the strength or performance as a construction.

Contractor

Accepting Officer /
Officer authorized by him

- (c) Sampling and Testing: The Engineer-in-Charge or his authorized representative shall be accorded proper facilities to inspect and sample the units at place of manufacture from lots properly cured and ready for incorporation in the work. At least ten days shall be allowed for completion of tests if demand necessary by Engineer. The Engineer-in-Charge reserves the right to made as many tests from a sampling of his own choice from the accrued manufactured and cured block units declared ready for use and testing. In case more than one sampling and testing of specimens fails to conform to the test requirements, the entire lot shall be a subject for rejection.
- (d) Curing: Concrete masonry units after unmoulding and proper "Stacking" shall be stored under cover out of sun in a well ventilated location where they can be mist sprayed and kept damp for a minimum of ten days, and then shall be allowed to completely dry-out for an additional fourteen (14) days and in no instance permitted to be again wetted by rain before testing and approval for use where required.
- (e) Solid Concrete Masonry Units: The applicable requirements specified herein before for the manufacture of concrete masonry units shall apply to solid concrete masonry units as follows: -
- (f) Physical Requirements:
Compressive strength min. 1000 P.S.I. at 28 days.

4.10 Erection and Workmanship:

- (a) General: All masonry laid plumb, true to line, with level and accurately spaced courses and reveals, with corners plumb and true, and with each course breaking joint with the course below. Bond shall be kept plumb throughout.
- (b) Concrete Masonry Units: Masonry units as specified herein before erected where and as shown on drawings. Each course solidly bedded in an approved mortar with vertical joints breaking half way over course below. Vertical joints bettered their entire length. Each course bounded at corners and intersections, and either bonded into or anchored to the adjacent constructions with metal anchors spaced as specified herein before. No cells shall be left open in face surfaces. All units shall terminate against beam or slab soffits above and be wedged tight with concrete wedges and joints flushed solidly with mortar. Damp units of shapes and sizes required to bound with wall units and "built in" where shown on drawings. Sections of masonry units shall be incorporated in the masonry work where required to support plumbing or heating fixtures.
Note: Dark coloured mortar for dark masonry units and light coloured for light units.

5. PLASTERING AND POINTING

Scope:

5.01 The work under this section pertains and includes: -

- (a) Plastering or pointing on brickwork, plastering on concrete surfaces only where specifically required. It shall include plastering on reveals, jambs, recesses and return in walls and grooves at junction of B.B. work and R.C.C./P.C.C. works as directed by the Engineer-in-Charge.
- (b) Patching and repairing surfaces and miscellaneous items of work necessary for proper execution and finishing of plastering or pointing.

5.02 Cement: Same as described for cement concrete.

5.03 Sand: The sand shall be from approved source, free from dust and salts.

Contractor

Accepting Officer /
Officer authorized by him

- 5.04 Preparation of Surfaces: The brickwork to be plastered shall have all joints racked out to a depth of 10 mm and be well washed down. Concrete surface to be plastered shall be cleaned to remove all grease, oil and other surface impurities, which otherwise adversely affect the adhesion of plaster to the surface concerned, lightly hacked by approved means to give the required key for plastering.
- 5.05 Preparation of Cement Plaster: The plaster shall be prepared from cement mixed with sand in volumetric proportions specified. Only limited water shall be added for proper workability.
- 5.06 Application of Plaster: The plaster shall be applied with a float and well pressed into the joints and properly set; preparatory coats to be scratched to provide key for the next coat. Thickness of any layer or coat shall not exceed 13 mm. One coat work shall finish 13 mm thick; subsequent coats shall not exceed 6 mm thick each.
The plaster surface shall be tested frequently with a 10 feet straight edge. Plaster containing cracks, blisters, pits or any other defects shall not be acceptable. Defective or loose plaster shall be removed and redone at contractor's expense.
The plastered surface shall be kept wet for such period as directed but not exceeding 14 days.
- 5.07 Pointing: The mortar for pointing shall be prepared from cement mixed with sand in volumetric proportions specified. Only limited water shall be added for proper workability. Surfaces to be pointed shall be prepared in the same way as for plastering. All pointing on external faces of walls shall be weather struck type. The pointed surfaces shall be covered for such period as directed but not exceeding 14 days.

6. **DOORS / WINDOWS.**

- 6.01 Scope: The work under this section pertains to all doors/windows of wood or of Steel/Aluminum.
- 6.02 Timber: All timber shall be 1st Class Deodar wood, well-seasoned, mature growth, uniform in texture, straight in fiber, free from sapwood, loose or dead knots, open slakes, rot, decay and all other defects and blemishes, timber shall be approved by the Engineer-in-Charge before incorporation in the work.
- 6.03 Bolts, Nuts, Studs, etc.: They shall be wrought iron of approved manufacture and forged with heads in one piece, threaded for required lengths.
- 6.04 Nails: The nails shall be oval, square or round wire of approved manufacture and lengths as required.
- 6.05 Screws: The screws shall be of approved manufacture of strong bright steel, galvanized where ordered of the gauge and of flat or round head patterns as required.
- 6.06 Workmanship: Woodwork shall be neatly and truly finished to exact dimensions and details as per drawings. All joints shall be mortice and tenon unless otherwise specified. All mortice and tenon joints shall fit truly and fully. Holes of correct size shall be drilled before inserting screws. Driving in screws with a hammer shall not be allowed. All screws shall be dipped in oil before being inserted in the wood. If any undue shrinkage or bad workmanship is discovered after the woodwork has been erected the contractor shall forthwith amend the same without any extra charges. All portions of woodwork built into or against or close to masonry or concrete shall be treated with wood preservative. All wooden chowkats or frames of doors shall be secured to concrete or masonry by M.S. holdfasts of flat iron 25mm x 3mm x 225mm long with forked ends with 2 screws 63 mm long. 4 to every window frame and 6 to every doorframe. The joints in framed joinery shall be pinned with hardwood pins and put together with glue items of iron-mongery for all woodwork shall be carefully fitted and securely attached. Upon completion of the work all locks and hinges shall be oiled.

 Contractor

 Accepting Officer /
 Officer authorized by him

- 6.07 Flush Shutters: These will be of approved manufacture all both sides commercial veneered. Both shutters and veneering will be machine pressed. The shutters will also have hardwood edging 13 mm thick fixed with screws except as otherwise specified in drawings. Samples of complete shutters shall be submitted by the Contractor to Engineer-in-Charge for approval before ordering. The Contractor shall not proceed with the fixing of door facing unless the core of doors has been checked and approved by the Engineer-in-Charge.

7. **IRON-MONGERY / BRASS-MONGERY**

- 1.01 All articles of ironmongery/brass mongery shall be of approved manufacturer, all according to the specification as given in the current MES Schedules of Rates. Samples of articles shall be submitted by the Contractor to the Engineer-in-Charge for approval before ordering. The rates inter-alia include fixing to hardwood or soft wood with suitable screws etc. including brass screws for fixing brass articles. Articles shall be provided to wooden open able doors and windows as shown below, except where otherwise shown in the drawings or described: -

Sr. No.	DESCRIPTION	UNIT	DOORS		WINDOWS	
			DOUBLE LEAF	SINGLE LEAF	DOUBLE LEAF	SINGLE LEAF
1.	125 mm BUTT HINGES	Nos.	6	3	-	-
2.	100 mm BUTT HINGES	"	-	-	4	2
3.	200 mm TOWER BOLTS	"	1	1	-	-
4.	150 mm TOWER BOLTS	"	2	1	1	1
5.	100 mm TOWER BOLTS	"	-	-	2	1
6.	SHISHAM STOPS WITH ONE 75 mm BUTT HINGE	"	2	1	2	1
7.	150 mm BOW HANDLES	"	2	2	1	1
8.	125 mm X 50 mm X 75 mm DEODAR WOOD CHOCKS.	"	2	1	2	1

- 1.02 Wire Gauze: It shall be of iron tinned of 24 gauge x 12 x 12 meshes or as shown in the drawings, fixed in rebate and secured with wooden fillet bradded in.
- 1.03 Aluminum Doors/Windows: Aluminum doors and windows shall be of "Aluminum Anodized" manufactured by the manufacturers as approved by the Engineer-in-Charge. It is clarified further to the specification of Schedule of Rates that for "Deluxe Model" and "Premium Model"; wall thickness of frames as well as sashes shall be similar i.e. not less than 16 mm and 18 mm respectively. Payment to the contractor will however, be made under the relevant schedule items without any extra adjustment and no claim whatsoever, will be entertained in this behalf for any different interpretation. In this regard Specifications given in MES Schedule of Rates shall be followed accordingly.

2. **SPECIFICATIONS FOR WATER SUPPLY, SANITARY FITTINGS AND SEWERAGE.**

- 8.01 General: All work shall be so installed / carried out as to be readily accessible for operation, maintenance and repair
- 8.02 The Contractor shall allow in his price for cutting chases, holes etc. and subsequently repairing the surface disturbed without any extra cost. The Contractor shall also include in his tendered price for testing the entire system to the satisfaction of Engineer-in-Charge.
- 8.03 Planking and Shoring: The sides of trenches shall be supported by planking and strutting, if necessary so as to ensure a proper, safe and speedy excavation of work.

Contractor

Accepting Officer /
Officer authorized by him

- 8.04 Back Filling: No trench shall be back filled until the pipe work has been tested and approved by the Engineer-in-Charge. All back fill shall be compacted so as to achieve the original density of soil to avoid soil subsidence.
- 8.05 Plumbers Brass Work: All brass work shall conform to BS 1010 or equivalent specification. However, weight of brass stop-cocks and bib-cocks of 15 mm (internal dia.) shall not be less than 410 grams and 370 grams respectively.
- 8.06 Sanitary Fittings:
- W.C. apparatus, urinals and wash hand Basins etc, shall be of best quality Pakistan (1st quality) made viz: of ICL, Karam Ceramic/or equivalent as approved by the Engineer-in-Charge. However, W.C. Asiatic pattern should be of "Orissa" type, large size and 'P' traps shall be of cast iron. The Contractor is advised to adjust his quoted percentage accordingly because he will not be paid any extra cost for providing "Orissa" type, W.C. and cast iron 'P' trap.
 - The entire sanitary fittings, sewerage and water supply pipes shall be tested at Contractor's expense in such a manner as directed by the Engineer-in-Charge and the Contractor will be responsible to re-do, refix or replace any defective item without any extra cost.

9. **SPECIFICATIONS FOR ELECTRIFICATION.**

- 9.01 **GENERAL:** All works shall be carried out in accordance with the specifications laid down in the M.E.S. Schedule of Rates 2021 as amended and as directed on site and shall be in accordance with the latest edition (including amendments) of the Regulations for the electrical equipments of Buildings here after referred to as "IEE Regulations" and the "Indian Electricity Rules 1937" as adopted by Pakistan except where such regulations are modified by these specifications, which take precedence.
- 9.02 All Cables/wiring used should be concealed with PVC insulated of following manufactures: -
- M/s. Pakistan Cables, Karachi.
 - M/s. Pioneer Cables Ltd; Hub Chowki, Baluchistan.
 - M/s. Shama Wire and Cables Industries (Pvt.) Ltd, Lahore.
 - M/s. M. H. Cables, Karachi.
 - M/s. New Age Cables (Pvt.) Ltd, Lahore.
 - M/s. A.G.E. Peshawar.
- 9.03. Incandescent Lamps and Fluorescent Tubes should be of following manufacturer.
- M/s. Phillips Elect. Co, Pakistan Ltd, Karachi.
 - M/s. Corn Pak. Ltd, Karachi.
 - M/s. Khyber Electric Bulbs, Peshawar.
 - M/s. Shafaq Bulb, Lahore.
- 9.04. Switches, Light/Power Plugs, Ceiling Roses, shall be of P.P.I. Ceiling/Exhaust Fans used must be of Millat, Climax or Asia make.

10. **SPECIFICATION FOR CONTINUITY OF REINFORCEMENT CONCRETE.**

- 10.01. The reinforcement steel of buildings in which explosives are stored or manufactured will be bounded together in the following manner: -
- The reinforcement bars will be bound together at every junction with suitably strong binding wire of the same material as the main reinforcement bars.
 - The bars will be spot welded together at all outer junctions of the reinforcement mesh ensuring that every bar is welded at least in two places near its extremities. No two welds will be more than six feet apart.
 - If a bar is longer than 6 ft., additional spot-welds will be provided at junction points between the extreme junction welds.

Contractor

Accepting Officer /
Officer authorized by him

- iv) If the bars are shorter than the total length of reinforcement, all joints will be welded and the nearest junction on either side of the joint will spot-welded.
- v) All welds must be done after thoroughly cleaning the surface to be welded together.
- vi) The welds must be physically strong enough to ensure that they do not break in handling, pouring or due to normal forces wherein use.
- 10.02 After completion of welding, Electrical Section will test the continuity by use of a "Ductor" set. One lead will be properly connected to one end of any bar while the other lead will be connected to all the other ends in turn and readings recorded. Continuity resistance of less than 0.1 ohm only will be acceptable. In case of bars with joints, continuity from one end of the bar to the other will also be checked.
- 10.03 Concrete pouring will only be done after obtaining a certificate from Electrical section.
- 10.04 The reinforcement of one wall will be bonded and welded to reinforcement of next wall and the roof at-least four points per reinforcement panel. These points will be suitably spaced.
- 10.05 At-least four bars from every wall and roof, suitably spaced, will be left projecting at least six inches out side the finished structure for connecting it to earth net work.

11. Tiles

- 11.01 Marble Tiles: Marble shall be compact, dense, metamorphic rock of lime stone origin, from quarries in Pakistan. It shall have specific gravity of about 2.7 and density of 2723.14Kgs/Cum (170lbs/cuft. It must be evenly grained with sugar like appearance, when broken. The type of marble has been specified as standard, deluxe and Premium based on size and thickness and shall be approved by Engineer – Incharge.
- 11.02 Granite Tiles: Granite Tiles shall be of approved quality, colour and grain. The type of granite tiles shall be specified as standard, deluxe and Premium based on size and thickness and shall be approved by Engineer – Incharge.
- 11.03 Terrazzo (Mosaic) Tile: The Tiles shall adhere to the specifications given below and approved by the Engineer Incharge. These will be hydraulically compressed at 140Kg/Sq.cm. Normal size and thickness of the tiles shall be as follows:
 - i) **200mmx200mmx20mm of white or ordinary cement** with coloured or white marble chips of ratio 2 parts of cement and 3 parts of marble chips (max size 10mm) thick topping on 10mm thick of CM 1:2.
 - ii) **300mmx300mmx25mm of white or ordinary cement** with coloured or white marble chips of ratio 2 parts of cement and 3 parts of marble chips (max size 10mm) thick topping on 10mm thick of CM 1:2.
- 11.04 Glazed / Ceramic / Porcelain Tiles: The glazed / matt / ceramic / porcelain tiles have been categorized in three categories i.e Standard, Deluxe and Premium depending upon size and will be approved by Engineer – Incharge.
- 11.05 Floor Tiles Full Body: Shall have hard and tough material of full thickness of the tiles and as approved by Engineer – Incharge.
- 11.06 Floor / Wall Glazed Tiles: Shall have 1mm thick glazing on top of the tile and as approved by Engineer – Incharge.
- 11.07 PVC Tiles: Shall be of specified thickness and type locally manufactured. Samples shall be submitted to the Engineer Incharge for obtaining approval before start of the work.
- 11.05 Paving Stones
 - Strength: It shall have minimum 28 days cylindrical compressive strength:
 - a). 35MPa (5000PSI) for 50mm thickness
 - b). 48MPa (7000PSI) for 60 / 80mm thickness

 Contractor

 Accepting Officer /
 Officer authorized by him

Thickness of sub-base, pavers and different shapes of pavers : is recommended thickness of sub-base and pavers as specified in the MES Schedule of Rates-2021.

ROAD

11. REMOVAL OF TREES

11.01 **DESCRIPTION:** This work shall consist of the removal of trees and stumps to a depth not less than fifty (50) centimeters or as designated by the Engineer to ensure complete removal of roots and stumps and their disposal delivery to the POF as directed by the Engineer Incharge.

11.02 **CONSTRUCTION REQUIREMENTS:**

- a. Such individual trees as the Engineer may designate and mark in white paint shall be left standing uninjured. All other trees to be removed shall be counted and an inventory prepared showing girth of the tree stem.
- b. When necessary to prevent injury to other trees or structures or to minimize danger to traffic, trees shall be cut in sections from top downwards.
- c. Hole or loose earth resulting from the removal of trees shall be filled and re-compacted to a degree of compaction of adjoining area. Any extra material required for such purpose shall be paid at the rate quoted for the item elsewhere in tender.

11.02 **GENERAL REQUIREMENTS:** Contractor shall prevent damage to all under-ground utilities, such as pipes cables or conduits etc. For this purpose if so required, removal of trees shall be carried out manually. The contractor at his own expense shall immediately repair any under-ground or over-round property damaged by him.

11.03 **MEASUREMENTS AND PAYMENT.**

- a. **MEASUREMENT:** Engineer and Contractor shall jointly measure the girth and number of trees to be removed under this item. Any tree having a girth of 225mm or less measured six hundred (600) mm above ground level shall not be measured under this item, as the same shall be removed under item "Clearing and Grubbing".
- b. **PAYMENT:** The quantities determined as provided above shall be paid as per MES Schedule of Rates 2000, special rate or Pro-rata Rate whichever is applicable shall be deemed to include all cost of lab our equipment and incidental charges related to the item.

12. CLEARING AND GRUBBING

12.01 **DESCRIPTION:** This work shall consist of removal to the specified depth, grubbing and disposal of all surface objects. Stumps, roots, bushes, vegetation, logs rubbish and other objectionable material except such objects as are designated to remain or are to be removed in accordance with other section of specification.

12.02 **CONSTRUCTION REQUIREMENTS**

- a. **CLEARING /GRUBBING:** In roadway cut areas, all surface objects or any object to the depth of 30 Cm below sub grade level such as stumps, roots, vegetation, bushes, logs & rubbish shall be cleared and/or grubbed as directed by Engineer.
- b. In roadway fill areas where clearing and grubbing is required, it shall be carried out to the depth as directed by the Engineer below sub grade level as described above.
- c. Before bottom layer of embankment is placed, contractor will grub up and remove without extra payment, any vegetation that may, in the meantime have grown on surface previously cleared and grubbed.

Contractor

Accepting Officer /
Officer authorized by him

12.03 PROTECTION AND RESTORATION.

The Contractor shall prevent damage to all pipes, conduits, wires, cables or structure above or below ground. No land monuments, property markers, or official datum points shall be damaged or removed until the Employer/Engineer has witnessed or otherwise referenced their locations and approved their removal. The Contractor shall so control his operations as to prevent damage to shrubs, which are to be preserved. Protection may include fences and boards lashed to shrubs to prevent damage from blasting or machine operations.

12.04 DISPOSAL OF DEBRIS

Debris shall be disposed off at locations approved by the engineer. No material will be permitted to be pushed or placed on adjacent areas of land/property without prior approval of the engineer.

12.05 MEASUREMENT AND PAYMENT

- a. No measurement/payment shall be made separately for this item of work.
- b. Engineer shall ensure that a minimum of 500 Square meter area is designated for clearing and grubbing in any stretch of roadway for the sake of ease to construction activities.
- c. Clearing and grubbing carried out by the contractor in cuts and borrow pits shall not be measured for direct payment.

13. STRIPPING

13.01 DESCRIPTION: This work shall consist of removing top soil, transporting and depositing in stockpiles or spreading where indicated on the drawings or as directed by the Engineer.

13.02 CONSTRUCTION REQUIREMENT: The areas from which stripping of topsoil is required shall be as indicated on the drawings or as directed by the Engineer. The contractor shall remove topsoil from these areas to depth as directed by engineer. Stripping of topsoil in any case shall be not less than 10 cm in depth. The removed topsoil shall be transported, deposited in stockpiles at locations designated by the Engineer and/or spread where indicated on the drawings or as directed by the Engineer.

The topsoil shall be placed separately from other excavated materials and be completely removed to the required depth from the area prior to the beginning of regular excavation or embankment work in that area.

13.03 MEASUREMENT AND PAYMENT

No measurement and payment shall be made separately for this item of work.

14. Repair of pot holes

14.01 DESCRIPTION: Depression or hollow in a road surface caused by wear or sinking shall be repaired where indicated on the drawings or as directed by the Engineer.

14.02 CONSTRUCTION REQUIREMENT: The potholes must be repaired by compaction which shall be done with equipment suited to the job. A vibratory plate compactor is recommended for small patches, whereas roller may be more effective for larger areas. Straight edge or string line shall be used to check riding quality and alignment of the patch or as directed by the Engineer.

14.03 MEASUREMENT AND PAYMENT

As this activity already included in compaction of roads, hence no measurement and payment shall be made separately for this item of work.

 Contractor

 Accepting Officer /
 Officer authorized by him

PAFW-2249
(Revised)

MILITARY ENGINEER SERVICES
General Conditions for contracts

Classified/Secret

Contractor

Accepting Officer /
Officer authorized by him

TABLE OF CONTENTS
CHAPTER I – DEFINITIONS

1	Definitions
---	-------------

CHAPTER II – SCOPE OF THE CONTRACT

2	Heading to the conditions
3	Time
4	Contract documents
5	Scope of work to be carried out (Applicable generally to measurement and Lump sum contracts.
6	Works to be carried out (Applicable to term contracts for minor works, Re-construction or Repairs other than periodical services and mud plastering
7	Works to be carried out (Applicable to term contracts for periodical services, detailed in Table 'F' MES Regulations and mud plastering
8	Prime cost sums
9	Provisional lump sums
10	Deviation /Variations
11	Emergency works and urgent repairs
12	Works Programme
13	Stores and materials
14	Patent rights
15	Octroi and other charges
16	Royalties
17	Plant and equipment
18	Transport
19	Assignment or transfer of contract
20	Sub-contracts

CHAPTER III - PERFORMANCE OF THE CONTRACT

21	Order under the contract
22	Admission to site
23	Possession of site
24	Contractor's supervision
25	Duties and powers of garrison engineer's representative
26	Labour/supervisory staff
27	Fair wages
28	MES contractors' labour regulations
29	Accommodation for labour

30	Anti-material precautions
31	Conservancy
32	Interference and nuisance
33	Water
34	Temporary workshops, stores etc

Contractor

Accepting Officer /
Officer authorized by him

35	Stores and materials on site
36	Tools and plants on site
37	Statement of hire charges
38	Precautions against risks
39	Notices and fees
40	Setting out the works
41	Site drainage
42	Excavation
43	Foundation
44	Covering in works
45	Approval of works by stages
46	Execution of the works
47	Day work
48	Inspection of the works
49	Responsibility for buildings
50	Damage and loss
51	Completion
52	Compensation for delay
53	Laws governing the contract
54	Cancellation of contract for corrupt acts
55	Cancellation of contract for default
56	Termination of contract (Applicable only to term contracts)
57	Special powers of determination (Applicable only to measurement and lump sum Contracts)

CHAPTER IV – VALUATION AND PAYMENT

58	Records and measurements
59	Valuation of deviations
60	Advances on account
61	Final bill (Applicable only to measurement and lump sum contracts)
62	Final bill (Applicable only to term contracts)
63	Security money during maintenance period
64	Payment of bills
65	Recovery/refund
66	Deduction of income tax
67	Arbitration
68	Amendments / revisions in PAFW-2249

Contractor

Accepting Officer /
Officer authorized by him

CHAPTER-I : DEFINITIONS**1. Definitions.**

- a. **Contract.** The Contract means the documents forming the tender and acceptance thereof, together with the documents referred to therein including these conditions, all applicable Schedules and/or General Summary attached to the form of tender, the MES Schedule, the Specifications and the Drawings, and all these documents, as applicable taken together shall be deemed to form one contract and shall be complementary to one another.
- b. **Tender Documents.** The Tender documents means the form of tender, the applicable schedules and/or General summary; these conditions specifications and/or Drawings and any other documents referred to therein, as loaned to Contractor for the purpose of preparing his tender.
- c. **Works.** The works means the works described in the tender documents, or in the case of Term Contracts, in individual works orders and/or accompanying Drawings and Specifications as may be issued from time to time to the contractor by the GE or Engineer-in-charge within the powers conferred upon them, including all modified extra or additional works and obligations to be carried out either on the Site or at any factory or workshop or other place for subsequent incorporation, as required for the performance of the Contract.
- d. **Site.** The Site means the lands and/or other places on, in into or through which work is to be executed under the Contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
- e. **Contractor:** - The Contractor means the individual or firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representatives of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assigns of such individual or firm or company.
- f. **Government:** - Government means the President of Islamic Republic of Pakistan, his successors in office and assigns.
- g. **CMES/GE:** - The CMES means the Commander Military Engineer Services of the Area in which the Contract operates. The GE means the Garrison Engineer of the Division in which the Contract operates. The term GE shall be deemed to cover Project Engineer, Maintenance Engineer, Independent Assistant Garrison Engineer and independent Assistant Maintenance Engineer, including assistant Project Engineer.
- h. **Engineer-in-Charge:** - the Engineer-in-Charge means the officer appointed by the Accepting Officer to superintend the Works, or part of Works.
- j. **Accepting Officer:** - The Accepting Officer means the officer who signs the contract on behalf of President under the powers conferred on him by the government.
- k. **DI&E.** DI&E means Directorate of Inspection and Evaluation of E-in-C's Branch responsible to carry out Technical Examination of works/services.

Contractor

Accepting Officer /
Officer authorized by him

- l. **Controlling Officer:-** The Controlling Officer means the “Accepting Officer” or the officer nominated by the “Accepting Officer” to exercise on his behalf control of the contract as specified therein.
- m. **M.E.S:-** MES means the “**Military Engineer Services**”.
- n. **Specification/Drawings:-** In the case of measurement and Term contracts specifications means those contained in the MES Schedule together with any amendments, etc., authorized thereto by the tender documents. “Drawing” refer to those accompanying the tender documents and/or any works orders referred to therein.
- o. **Contractor’s Percentage:-**
- (1) In the case of Lump Sum Contract where the Bills of Quantities are priced by the contractor, the contractor’s percentage means the percentage as addition or deduction, as the case may be by which the total amount of the cost of Bills of Quantities as carried to schedule “A” varies from the total valuation of Bills of Quantities at MES Schedule of Rates.
- (2) In the case of Measurement and Term Contract “Contractor’s percentage” shall if the context so permits, means the uniform percentage tendered by the contractor and accepted by the Accepting Officer, and the expression “Contract Rates” shall likewise means the rates in the MES Schedule as adjusted by the said Contractor’s percentage, if any.
- p. **Contract Sum:-** The Contract Sum means the sum accepted or the sum calculated in accordance with the prices accepted in the tender and/or the Contract rates as payable to the Contractor for the full and entire execution and completion of the work.
- q. **Final Sum:-** The Final sum means the amount payable under Contract by Government to the Contractor for the full and entire execution and completion of the works , or in the case of Term Contracts, of individual work orders.
- r. **Accepted Risk:-** The Accepted Risk means the risk on the Site accepted by the govt. of tempest ,flood, earthquake, riot , civil war, insurrection, and from damage by aircraft.
- s. **Date of completion:-** The date for completion is the date or dates for completion of the whole or any part of the works, set out in or ascertained in accordance with the individual works order of the tender documents, or any subsequent agreed amendment thereto.
- t. **Week:-** A week means seven days without regard to the number of hours worked or not worked in that day.

Contractor

Accepting Officer /
Officer authorized by him

- u. **Day** :- A Day means a day of 24 hours irrespective of the number of hours worked or not worked in that day.
- v. **Working day**:- A Working day means any day other than that prescribed by the negotiable instruments act as being a holiday and consists of the number of hours of labour as commonly recognized by good employer in the district where the work is carried out.
- w. **Deviation Order**:- Deviation Order means an order given by the GE to effect an alteration, addition or deduction, which does not radically affect the scope or nature of the contract.
- x. **Emergency Works**:- Emergency works means any urgent measures which, in the opinion of the Engineer-in-Charge, become necessary during the progress of the works to obviate any risk of accident or failure or which become necessary for security.
- y. **Prime Cost**:- “Prime cost” and “prime cost sums” and the letter “P.C.” or a combination of the same, means the amount actually paid by the Contractors for any articles, commodity or special work and include all proper charges for packing, carriage and delivery to the site, after deduction of all trade discounts, rebates and allowances and all discounts obtainable for cash in so far as such discounts exceed 2-1/2 percent.
- z. **Provisional Sum**:- Provisional sum or “Provisional Lump Sum” means a lump sum included, the MES in the tender documents and represents the estimated value of work or which details are not available at the time of going to tender.
- aa. **Provisional Item**:- Provisional items means items for which approximate quantities have been included in the tender documents.
- bb. **Day work**:- Day work means items of labour and/or materials which in the opinion of the engineer-in-charge are not capable of being evaluated by the accepted methods of measurement or assessment.
- cc. **Maintenance period**:- Maintenance period means twelve calendar months unless specified otherwise after the work has been completed and certified so by the GE.
- dd. **Singular and plural**:- Words importing the singular also include the plural and vice-versa where the context requires.

CHAPTER – II SCOPE OF THE CONTRACT

2. **Headings To The Conditions.** The headings in the conditions of the Contract shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
3. **Time.** Time is of the essence of the contract and is specified in the tender documents or in each individual work order.
4. **Contract Documents.**
 - a. **Delay in Documents Mutually explanatory**:- The several documents forming the contract are to be taken as mutually explanatory of one another and in case of

 Contractor

 Accepting Officer /
 Officer authorized by him

ambiguities or discrepancies the same shall be explained by the Accepting Officer through engineer-in-Charge who shall issue appropriate instructions in writing.

- b. **Supply of Documents:-** Accepting Officer or in the case of term contracts the officer empowered to issue the work, shall furnish or cause to be furnished to the contractor three copies each of the signed drawings referred to in schedule "A" and/or "H" conditions of contract. Specifications and un-priced Bills of quantities and of any additional drawings which may be found necessary to be issued during the progress of the work. The Contractor shall keep one copy on the site. On the completion or earlier determination or cancellation of the contract all drawings and Specifications issued to Contractor shall be returned to the GE.
 - c. **Notice by Contractor:-** The contractor shall give adequate notice in writing to the Engineer-in-charge of any further drawings of specifications or instructions that the contractor may require for the execution of the works or otherwise under the contract.
 - d. **Delay in Issue:-** If by any failure or inability of the Engineer-in-Charge to issue at a time reasonable in all circumstances additional drawings or instructions requested by the contractor and considered necessary by the Accepting Officer the contractor suffers delay, then the Engineer-in-Charge shall take such delay into account in determining any extension of time under clause-12 hereof.
 - e. **Security of Documents:-** The contract is confidential and must be strictly confined to the contractor's own use (except so far as confidential disclosure to sub-contractors or suppliers is necessary) and to the purposes of the contract.
5. **Scope of Works to be carried out (Applicable Generally to Measurement and Lump Sum Contract, PAFW-2159).**
- a. The contract shall, except as provided under Schedule B.C.D and E include all labour, materials, tools, plant, equipment and transport which may be required in preparation for and in the full and entire execution and completion of the works.
 - b. **Schedule "A"** and bills of quantities (where applicable) unless otherwise specified , shall be deemed to have been prepared in accordance with good practice and recognized principles and the description given therein shall be understood to include waste on materials, carriage and cartage, carrying in return of empties, hoisting, setting, fitting and fixing in position and all other labour and labours necessary in and for full and entire execution and completion of aforesaid.
 - c. Any error in description or in quantity in schedule "A" and/or bills of quantities or any omission there from shall not vitiate the contract or release the contractor from the obligation to execute the whole or any part of the work comprised therein according to drawings and specifications, or from any of his other obligations under the contract.
 - d. **Rectification of Error:-** Where the contract sum is based on the quantities in Schedule "A" and/or bills of Quantities and the cumulative effect of the errors calculated as specified below varies the contract sum (exclusive of provisional lump sum if any) by more than 5

-8-

Contractor

Accepting Officer /
Officer authorized by him

percent, then the errors shall be rectified in the following manner, as applicable and the contract sum shall be increased or decreased accordingly.

- (1) Where the priced bills of quantities form a part of the contract, the effect of the errors shall be calculated on the basis of prices inserted by the contractor's in schedule "A" and/or bills of quantities.
- (2) Where priced bills of quantities do not form part of contract, the effect of the errors shall be calculated on the basis of the MES Schedule of Rates subject to the contractor's percentage.

The contract sum so altered shall for all purposes of this contract be substituted for the sum originally accepted as if the contract had been accepted at the altered price instead of the original price and such alteration shall not be considered as a deviation. Provided that this increase or decrease in the contract sum shall not affect contractor's percentage which shall continue to be based on the original contract.

- e. Further the aforesaid omission or discrepancy between the drawings. Schedule "A" or bill of quantities shall be rectified as deviation under clause 10. in that any item not included in bill of quantities but executed in accordance with the drawings shall be paid as addition and any item included in bills of quantities but not executed shall be adjusted as deduction.
- f. Provided further that there shall be no rectification of any errors, omissions or wrong estimates in the prices inserted by the contractor in bills of quantities, which he priced, or in his computations therein or calculations thereon.
- g. The insertion of the name of any firm in the tender documents is for the purpose of specifying a class or quality of material or workmanship and articles or materials so specified may be obtained from any other firm subject to the prior written approval of the Controlling Officer whose decision in the matter shall be final and conclusive.
- h. In the case of discrepancy between schedule" A", bill of quantities, specifications and/or the drawings, the Accepting Officer shall be the sole deciding authority as to which shall prevail and his decision shall be final and conclusive.
- j. (1) The contractor shall be deemed to have inspected and examined the site and its surroundings and to have satisfied himself before submitting his tender as to the nature of the ground and sub-soil (having taken into account any information connected therewith which may have been provided by or on behalf of the government) the form and nature of the site, the extent and nature of the work and materials necessary for the completion of the works, the means of communication with and access to the site, the accommodation he may require and in general to have obtained for himself all necessary information as to risks, contingencies and all other circumstances influencing or affecting his tender. No claim on account of any misunderstanding in this regard shall be entertained.
- (2) The contractor shall be deemed to have satisfied himself before submitting his tender as to the correctness and sufficiency of the amount and prices quoted by him in

 Contractor

 Accepting Officer /
 Officer authorized by him

Schedule "A" and or Priced Bills of Quantities which shall (except in so far as, it is otherwise provided in the Contract) cover all his obligations under the Contract.

6. **Works to be carried out (Applicable to Term Contracts for Minor Works, Reconstruction of Repairs other than Periodical Services and Mud Plastering. (PAFW-1821).**

- a. The contract shall, except as provided under Schedule "B" or "C" and condition 13 hereof include all labour, material, tools, plant, equipment and transport which may be required in preparation for and in the full and entire execution and completion of any new work or works, reconstruction or repairs within the contract area, which the contractor may be called upon to carry out and which can be priced under the M.E.S. Schedule or rates and for which the total estimate at contract rates of any single work, job or service as defined below shall not exceed Rs. 1,00,000 subject to the following reservations:-
 - (1) The construction of field defenses and shelters within the contract area on and during mobilization may be excluded from the contract.
 - (2) All road, path, parade ground, tree planting and gardening work and renewal of mud floors shall be excluded from the contract. All periodical services such as painting, white/colour washing, oiling, distempering and also mud plastering, leaping with allied items, shall also be excluded subject to the conditions that those services are not connected with minor/original works and petty renewals of other items of work. GE's decision whether or not any of the services mentioned above are connected with minor/original works and petty renewals will be final and binding on the contractors.
 - (3) All electrical and water supply works and steam or hot water installation estimated to cost over Rs. 10,000/- shall be excluded from the contract and at the discretion of the GE may such work estimated to cost Rs. 10,000/- or under may also be excluded.(Not applicable in the case of term contracts of E/M works).
 - (4) The GE may employ on work otherwise included within the scope of contract:-
 - (a) Any number of serving soldiers, the regular civilian staff of the MES and Transport whether owned by the government or hired locally.
 - (b) In addition a limited number of civilian work people. Except in the event of contractor's default the number so employed shall not exceed the average specified in the tender documents. (Those employed on work reserved in sub-clause-6a (1 to 3) above not included.
- b. The estimates referred to above shall be based on the contract rates and shall include contingencies but exclude the surplus MES stores referred to in condition 13 hereof and any stores to be obtained under special contract, the GE shall be the sole judge of what constitute a single work, job or services and shall be entitled to treat the contract area as a whole for the purpose of grouping work as may be convenient.
- c. The contractor will be deemed to have satisfied himself as to the nature of the works likely to be ordered upon him, local facilities for the supply of labour and material, within the contract area and of access to the site or sites, and all other matters affecting the execution

 Contractor

 Accepting Officer /
 Officer authorized by him

and completion of the works. No extra charges consequent on misunderstanding or otherwise will be allowed.

7. **Works to be Carried out (Applicable to Term Contracts for Periodical Services, detailed in Table “F” MES Regulations and Mud Plastering.(PAFW- 1779).**

- a. The contract shall except as provided under schedule “B” and/or “C” include all labour, materials, tools, plant, equipment and transport which may be required in preparation for and in the full and entire execution and completion of all the periodical services and decorating works within the contract area, which the contractor may be called upon to carry out and which can be priced under the MES schedule of rates and for which the total estimate at contract rates of any single works job or services as defined below shall not exceed Rs. 50,000.00.
- b. The contract will include all periodical services and decorating work; such as painting, white/colour washing, oiling, distempering and also mud plastering leaping with allied items of work. GE's decision whether or not any of the services mentioned above are connected with minor/original works and petty renewals will be final and binding on the contractors.
- c. The GE may employ on work otherwise included within the scope of the contract:-
 - (1) Any number of serving soldiers, and the regular civilian staff of the MES.
 - (2) In addition a limited number of civilian work people. Except in the event of contractor's default, the number so employed shall not exceed the average specified in tender documents.
- d. The contractor will be deemed to have satisfied himself as to facilities for the supply of labour and materials within the contract area and of access to the site or sites, and all other matters affecting the execution and completion of the works. The (nature of the works likely to be ordered upon him, local No extra charges consequent on misunderstanding or otherwise will be allowed.

8. **Prime Cost Sums.**

- a. All prime cost sums shall be reserved for the supply of materials or the execution of work by person to be nominated by the Accepting officer or selected in such a way as he may direct.
- b. The full amount of the prime cost sums inserted in the tender documents and the value of the percentage addition thereto quoted by the contractor for profit, etc, will be deducted from the Contract Sum. The contractor shall be paid the actual prime cost as defined, plus the percentage addition quoted by him for profit and establishment charges, etc., adjusted pro rata thereto. He shall produce to the CMES such quotations, invoices and receipted bills as may be necessary to show the actual details of the sums paid by him.
- c. He shall also be paid for fixing where applicable, in accordance with the conditions of contract, the payment for fixing shall cover unloading, getting in, up-packing, return of empties and other incidental expenses.

Contractor

Accepting Officer /
Officer authorized by him

- d. The GE may order and pay for all or any portion of such items direct, in which case the Contractor will be paid an amount in respect of administrative expenses, etc., actually incurred by him in respect of such items, at the percentage rate included by him in the tender documents adjusted prorata on the amount actually paid direct by GE in regard to the original scope of the Prime Cost Sum.

9. **Provisional Lump Sums.**

- a. The full amount of provisional lump sums inserted in the tender documents shall be deducted from the contract sum and the value of work ordered and executed hereunder shall be ascertained by measurement or valuation as for deviation. No work under these items is to be begun without instructions in writing from the Engineer-in-Charge.
- b. No addition or deduction shall be made by the contractor to the amount of provisional lump sum as included in the tender documents.

10. **Deviations/Variations**

- a. The Engineer-in-Charge may make any deviation of the form, quality or quantity of the works or any part thereof that in his opinion be necessary and for that purpose or if for any other reason if in his opinion be desirable shall have power to order the Contractors to do and the Contractor shall do any of the following.
- (1) Increase or decrease the quantity of any work included in the Contract.
 - (2) Omit any such work.
 - (3) Change the levels lines position and dimensions of any part of the works and no such deviation shall in any way violate or invalidate the Contract but the value (if any) of all such deviation shall be taken into account in ascertaining the Final sum of Contract
- b. No such deviation shall be made by the Contractor without an order in writing of the Engineer-in-Charge. Provided also that if for any reason the Engineer-in-Charge shall consider it desirable to give any such order verbally the contractor shall comply with such order and any confirmation in writing of such verbal orders given by the Engineer-in-Charge whether before or after the carrying out of the order shall be deemed to be an order in writing within the meaning of this clause. Provided further that if the contractor shall confirm in writing to the engineer-in-Charge any verbal order of the engineer-in-charge and if such confirmation is not contradicted in writing within fourteen days after the receipt of contractor's letter it shall be deemed to be an order in writing by the Engineer-in-charge.

11. **Emergency Works And Urgent Repairs.**

- a. **Emergency Works:-** If any emergency works become necessary and the contractor is unable (in respect whereof the decision of the engineer-in-Charge shall be final and conclusive) or unwilling to carry them out an once, the Engineer-in-Charge may get the

Contractor

Accepting Officer /
Officer authorized by him

work done through another contract, DEL, troop labour, or any other means available to him. If the emergency works shall be such as the contractor is liable under the contract to carry out at his own expenses or which are included in the contract rates for works being executed by the contractor, all such expenses incurred on them by government shall be recoverable from the contractor and if necessary be adjusted or set off against any sum payable to him under this or any other contract.

- b. **Urgent Repairs:-** If by reason of any accident or failure other event occurring to in or in connection with works or any part thereof either during the execution of the works or during the period of maintenance any remedial or other work or repair shall in the opinion of the Engineer-in-Charge be urgently necessary for security and safety reasons and the contractor is unable or unwilling at once to do such work or repair the government may by his own or other workmen do such work or repairs as the Engineer-in-Charge may consider necessary. If the work or repair so done by the Government is the work which in the opinion of the Engineer-in-Charge the contractor was liable to do at his own expense under the contract, all costs and charges properly incurred by the Government in so doing shall on demand be paid by the contractor to the Government or may be deducted by the Government from any sum due or which may become due to the contractor. Provided always that the Engineer-in-Charge shall as soon after the occurrence of any such emergency as may be reasonably practicable notify the contractor thereof in writing.

12. **Works Programme**

- a. **Programme to be Furnished:** - The time and progress chart shall be prepared in direct relation to the time stated in the tender documents or the works order for the completion of the individual items thereof and/or the contract order as a whole. It shall indicate the forecast of the dates for commencement and completion of the various trade processes or section of the works and shall be amended as may be required by agreement between the GE and the contractor within the limitation of time imposed in the tender documents or the works orders. The contractor shall whenever have required by the GE or his representative furnish for his information particulars in writing of the contractor's arrangements for the carrying out of the works and of the constructional plant and temporary works which the contractor intends to supply, use or construct as the case may be. The submission to the approval by the GE or his rep of such Programme or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibilities under the contract.
- b. **Commencement of Work:** - The Contractor shall commence in works on site on receipt by him of an order in writing to this effect from the GE and shall proceed with the same with due expedition and without delay except as may be expressly sanctioned or ordered by the GE.
- c. **Suspension of Works:** - The contractor shall on the written order of the Engineer-in-Charge suspend the progress of the works or any part thereof for such time or times and in such manner as the Engineer-in-charge may consider necessary and shall during such suspension properly protect and secure the work so far as is necessary in the opinion of the Engineer-in-Charge. He shall not resume work thereon until so directed in writing by the Engineer-in-Charge.

Contractor

Accepting Officer /
Officer authorized by him

- d. Subject to any requirement in the tender documents as to completion of any portion of the work before completion of the whole of the work, the works shall be completed within the time stated in the Tender or earlier if so stipulated in the Time and progress Chart (calculated from the date of commencement named in the work order) or such extended time as may be allowed under the Contract.
- e. **Suspension lasting more than three months:-** If the progress of works or any part thereof is suspended on the written order of the Engineer-in-Charge and if permission to resume work is not given by the Engineer-in-Charge within a period of 3 months from the date of suspension then the contractor may unless such suspension is otherwise provided for in the contract or continues to be necessary by reason of some default on the part of the contractor serve a written notice on the Engineer-in-Charge requiring permission with 28 days from the receipt of such notice to proceed with the works or that part thereof in regard to which progress is suspended. If within the said 28 days, the Engineer-in-charge does not grant such permission the Contractor by a further written notice so served may (but is not bound to) elect to treat the suspension where it affects part only of the works as an omission of such part under Clause-10 or where it affects the whole works as an abandonment of the contract under clause-57 hereof.
- f. **Extension of time for completion.** If the works are delayed by force majeure or by reason of any exceptionally inclement weather or by reason of authorized extras or additions or deviations in the Contract or by delay in delivery by the Government of the stores enumerated in Schedules "B" & "C" and the specifications, or by reasons of any civil commotion, riot, local combination of workmen or strikes or lockouts or by reason of any material being unprocurable or due to suspension of whole or part of the work under this clause, a fair and reasonable extension of time for completion, as may be decided by GE, shall be made in respect thereof. Provided that the GE is not bound to take into account any extra or additional work or other special circumstances unless the contractor has, within 7 days after such work has been commenced or such circumstances have arisen or before the date or the extended date of completion under the contract agreement whichever is earlier, delivered to the GE's representative full and detailed particulars of any claim to extension of time to which he may consider himself entitled. Provided further that in case of suspension of work, the contractor will be allowed time for completion not less than the period which was still remaining on the day the work was suspended. No other claim in this respect for compensation or otherwise, will be admitted.

In case of extension of time is not acceptable the contractor, the matter shall be referred to the CMES whose decision shall be final.

13. **Store and Materials.**

- a. The contractor shall, at his own expense, supply all stores and materials required for the contract, other than those listed in schedule "B" which are to be provided by government at the rates detailed therein and schedule "C" for fixing only in addition in the case of Term Contracts, the GE may call upon the Contractor to supply all necessary labour, etc., in fixing serviceable MES surplus materials which have accrued in the

Contractor

Accepting Officer /
Officer authorized by him

execution of other works, and in agreement with the contractor the fixing of any materials salvaged from demolitions. All stores and materials to be supplied by the Contractor shall be the best of the respective kinds described in the specifications and the contractor shall upon the request of the engineer-in-charge, furnish him with proof to his satisfaction that the stores and materials so comply.

- b. The contractor shall at his own expense and without delay, supply samples of stores and materials proposed to be used in the execution of the works as may be required by the Engineer-in-charge who may reject all stores and materials not corresponding in quality and/or character with approved samples.
 - c. In the case of stores provided under Schedule "B" and/or "C" the Contractor shall bear the cost of loading, transporting to site, unloading, storing under-cover as required, assembling and joining the several parts together as necessary and incorporating and fixing these stores and materials in the works, including all preparatory work of whatever description as may be required, and of closing, preparing loading and returning empty cases or containers to the place of issue without any extra charge, except containers or empty cases of those stores the issue rates of which are inclusive of the cost of containers.
 - d. In case of term Contracts, the Engineer-in-Charge may also call upon the Contractor to provide transport, labour for loading and unloading and storage for such surplus materials as are to be fixed by the Contractor under the provisions quoted above.
14. **Patent Rights;** - The contractor shall fully indemnify Government or any agent, servant or employee of Government against any action, claim or proceeding relating to infringement or the use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the Contract. In the event of any claims being made or action brought against Government, or any agent, servant or employee of Government in respect of any such matters as aforesaid, the Contractor shall immediately be notified thereof.
15. **Octroi and Other Charges;**- All charges on account of control, terminal tax or sales tax and/or other duties on materials obtained for the works shall be borne by the contractor. Octroi charges are, however, not payable by for the works shall be borne by the contractor on materials provided by Government, on payment for incorporation in Government works.
16. **Royalties;**- No royalty will be recovered for materials which the contractor may be allowed to remove from quarrels situated on land which is in charge of the MES authorities or from land in Cantonments in charge of the Military Estate Officers.
17. **Plant and Equipment;**-
- a. The Contractor shall at his own expense supply all tools; plant and equipment required for the execution of the contract, provided that those listed in Schedule "D" may be hired by Government, if the contractor shall in respect thereof give to the Engineer-In-Charge reasonable notice in writing of his requirements. The contractor shall in that case pay the charges specified in Schedule "D" to cover Government provision, operators, petrol, Oil and Lubricants for all Government plant and equipment issued on hire.

Contractor

Accepting Officer /
Officer authorized by him

- b. Government plant and equipment hired to the Contractor shall at his own expense be conveyed by him, from the place of issue to the Site and returned to the place of issue on completion of the work or earlier on instructions in writing from the Engineer-In-Charge. The contractor shall be responsible to the CMES (whose decision regarding responsibility and the cost of repairs shall be final and conclusive) for the maintenance of the said plant and equipment in proper working order and condition during the period of hire (damage from the accepted risks and fair wear and tear excepted) and shall, subject to damage aforesaid return the same in a condition equal to that when taken over by him. He shall have no claim to any payment of compensation or otherwise howsoever, on account of the determination of the hire of such plant equipment which Government are entitled to do without assigning any reason whatsoever.

18. **Transport:-**

- a (1) The Contractor shall at his own expense supply all transport required for the execute or contract other than that listed in Schedule "E" which will be provided by Government on hire.
- (2) The hire rates for government transport shall be inclusive of all running costs, driver, oil and lubricant.
- (3) The Contractor shall be responsible for the loading and unloading of vehicles and shall comply with such restrictions regarding weight-carrying capacities, nature of materials to be transported and routes to be followed as may be notified to him by the Engineer-in-Charge from time to time during the period of hire, as well as to observe reasonable precautions at all time to prevent damage to and undue wear and tear of the vehicles.
- (4) Government transport shall remain under the control of Government while on hire to the Contractor but Government accepts no liability for any loss or damage to goods conveyed therein, arising out of or in any way connected with the operation of the said vehicles. The contractor shall indemnify government against any loss or damage to the period or property of government, or any agent, servant or employees of government, or to say third party due to any neglect or default of the Contractor, his agents, servants, or work people, connected with the use by him of the transport.
- b. Applicable to Term contracts:- The contractor shall at his own expense supply all transport required for the execution of the Contract.

19. **Assignment Or Transfer Of Contract.**

The contractor shall not without the prior written approval of the Accepting Officer assign or transfer the Contract, or any part thereof or any share, or interest therein. No sum of money to become payable under the contract shall be payable to any person other than the contractor unless the prior written approval of the Accepting officer to the Assignment or transfer of such money is given.

20. **Sub-Contracts.**

Contractor

Accepting Officer /
Officer authorized by him

- a. The contractor shall not sublet the whole of the works. Except where otherwise provided by the contract the Contractor shall not sublet any part of the works without the prior written approval of the Accepting Officer.
- b. The Accepting officer may invite offers for performance by sub-contractors of any work in satisfaction of prime cost sums included in the tender documents. In the exercise of his options, offers will be made returnable to the Accepting Officer who shall select the firm to do the work and inform the Contractor who will be required to conclude a contract with the nominated sub-contractor for the execution of the work as specified by the Accepting Officer to the sub-contractor. The Accepting Officer shall not nominate any sub-contractor against whom the Contractor shall make reasonable objection.
- c. The contractor shall be responsible for any sub-contractor or contractor who may carry out any work or supply any material in connection with the contract, whether such person be selected by the Accepting Officers or by Contractor. The contractor shall make good any loss or damage suffered by Government by reason of default, neglect or failure on the part of such person in relation to such work or material.
- d. Nothing herein contained shall relieve the Contractor of his liabilities and obligations under the Contract or in any way affect the Contractor's direct responsibility to Government nor shall it render Government in any way responsible to such Sub-contractor.

CHAPTER III – PERFORMANCE OF THE CONTRACT

21. **Order under the Contract.** All orders, notices, etc. to be given under the Contract shall be in writing, typescript or printed and if sent by registered post to the last known place of abode or business of the Contractor shall be deemed to have been served on the date when in the ordinary course of post it would have been delivered to him. The Contractor shall carry out without delay all orders given to him.
22. **Admission to Site**
 - a. The contractor will not be permitted to enter on (other than for inspection purposes) or take possession of the site until instructed to do so by the GE. The portions of the site to be occupied by the Contractor will, on no account, be allowed to extend his operations beyond these areas.
 - b. The Contractor shall provide, if necessary or if required on the Site all temporary access thereto and shall alter, adapt and maintain the same as required from time to time and shall remove and clear away as and when no longer required and make good any damage thus caused.
 - c. The GE shall have power to execute other works (whether or not in connection with the works) on the Site contemporaneously with the execution of the works and the Contractor shall give reasonable facilities for such purpose.
 - c. Controlling Officer reserve the right of taking over at any time any portion of the Site which it may require and the Contractor shall at his own expense clear such portion forthwith. No

 Contractor

 Accepting Officer /
 Officer authorized by him

photographs of the site or of the Works or any part hereof shall be taken, published or otherwise circulated without the prior written approval of the Controlling Officer.

- d. No such approval shall however exempt the contractor from complying with any statutory provisions in regard to the taking and publication of such photographs.
 - e. Any MES officials connected with the Contract shall have right of entry to the site at any time.
 - f. The Engineer-in-Charge shall have the power to execute from the Site any person whose admission thereto may in his opinion be undesirable for any reason whatsoever.
23. **Possession of Site:** Save in so far as the contract may prescribe the extent of portions of the Site of which the Contractor is to be given possession from time to time and the order in which such portion shall be made available to him subject to any requirement in the contract as to the order in which the works shall be executed the GE by a written order given to the Contractor possession of so construction of the works in accordance with the programme referred to in Clause 12 hereof (if any) and otherwise in accordance with reasonable proposals of the Contractor as he shall be notice in writing to GE make and will from time to time as the works proceed give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the construction of the works with due dispatch in accordance with the said programme or proposals (as the case may be).

24. **Contractor's Supervision**

- a. The Contractor shall either himself supervise the execution of the contract provided he has the requisite qualifications laid down below or shall appoint a competent engineer approved by the controlling officer, possessing these qualifications to supervise and assist him in the execution of the contract:-

(1) Contracts upto Rs. 5 lacs	Qualified Overseer.
(2) Contracts above Rs. 5 lacs	Graduate Engineer/Retired Gazetted Engineer Officer of a Govt.deptt; such as MES, PWD & PIDC etc.
- b. If in the opinion of the Controlling Officer the Contractor himself although fulfilling the above qualifications cannot give his full personal attention to the works he shall when called upon employ an engineer agent at his own expense.
- c. If the contractor fails to appoint a suitable engineer agent on being ordered to do so the Controlling Officer shall have full power to suspend the execution of the works until such date as a suitable engineer is appointed by him. If within a time to be specified by the Controlling Officer the contractor fails to appoint all engineer the controlling officer shall have full powers to employ a suitable engineer for the supervision of works at the risk and cost of the contractor and the contract shall be held responsible for the delay so caused to the works. Pay of the engineer so employed will be recovered from any payment due to the contractor.

 Contractor

 Accepting Officer /
Officer authorized by him

- d. Orders given to the contractor's Agent shall be considered to have the same force as if they had been given to the Contractor himself.
 - e. The contractor or his agent shall be in attendance at the site during all working hours, and shall superintend and execution of the works with such additional assistance in each trade as the Engineer-in-Charge may consider necessary.
 - f. The Contractor or his accredited Agent shall attend, when required, and without making any charge for doing so, either at the office of the Engineer-in-Charge or on the Works to receive instructions.
 - g. The Controlling Officer shall have full powers, and without giving any reason, to require the contractor immediately to cease to employ in connection with this Contract any Agent, servant or employee whose continued employment is in his opinion undesirable.
25. **Duties and Powers of Garrison Engineer's Representative.** The duties of GE representative are to watch and supervise the works and to test and examine any materials to be used and work-manship employed in connection with the works. He shall have no authority to relieve the contractor of any of his duties or obligations under the contract nor except as expressly provided otherwise in the contract to order and work involving delay or any extra payment by the Government nor to make any variation of or in the works.
26. **Labour Supervisory Staff.**
- a. The contractor shall employ labour in sufficient number to maintain the required rate of progress and of quality to ensure workmanship of the degree required by the specifications and to the satisfaction of the Engineer-in-Charge.
 - b. The contractor shall provide and employ on the site in connection with the execution and maintenance of the works:
 - (1) Only such technical assistants as are skilled & experienced in their respective callings and such sub-agents, foremen and leading hands as are competent to give proper supervision to the work they are required to supervise and
 - (2) Such skilled, semi-skilled and unskilled labour as is necessary for the proper and timely execution and maintenance of the works.
 - c. The Engineer-in-Charge shall be at liberty to object to and required the contractor to remove forthwith from the works any person employed by the contractor in or about the execution or maintenance of works who in the opinion of the Engineer-in-Charge misconducts himself or is incompetent or negligent in the power performance of his duties or whose employment is otherwise considered by the Engineer-in-Charge to be undesirable and such person shall not be again employed upon the works and shall be replaced as soon as possible by a competent substitute approved by the Engineer-in-Charge.
 - d. The contractor shall remain liable for the payment of all wages or other dues to him work people or employees under the payment of Wages Act, 1936, Employees Liability

Contractor

Accepting Officer /
Officer authorized by him

Act, 1938, Workman Compensation Act, 1923 or any other Act or enactments relating thereto and rules framed thereunder from time to time. The contractor shall work only on and during the hours of a working day unless he obtains the prior written approval of Engineer-in-Charge to do otherwise. If such approval is given no liability in respect of any excess cost arising therefrom shall be incurred by the Government.

- e. The contractor shall furnish to the Engineer-in-Charge every morning a distribution return of the number and description by trades of his work people employed on the works.
- f. The contractor will arrange to provide free of charge, medical attendance and aid, including the provision and use of drugs and medical supplies to his work people whilst employed at site in connection with the execution of the works, Hospital treatment if required will also be provided.
- g. The contractor shall not employ in connection with the works any person who has not completed his sixteenth year of age.
- h. The contractor and his staff/labour shall not carry arms, ammunition to the work site without the prior written permission of the Engineer-in-Charge.

27. **Fair Wages**

- a. The contractor shall pay not less than fair wage to labourers engaged by him on the work. The "Fair Wage" means wage whether for time or piece work fixed from time to time by the appropriate local wage fixing authority or in the absence of such authority, not less favorable than those commonly recognized by good employers in the district where the work is carried on.
- b. The contractor shall, notwithstanding the provisions of any contract to the contrary cause to be paid a fair wage to labourers indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labourers had been immediately employed by him.
- c. In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this agreement, the contractor shall comply with or cause to be complied with the MES. Contractor's labour Regulations made by Government in regard to payment of wages, wage period, deduction from wages recovery of wages not paid and/or deductions unauthorizedly made maintenance of wage Register, wage Cards publication of scale of wages and other terms of employment, inspections and submission of periodical returns and all other matters of a like nature.
- d. The Garrison Engineer-in-Charge concerned shall have the right to deduct, from the money due to the contractor, any sum required or estimated to be required for making good the loss suffered by the worker or workers by reasons on non fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deduction made from his or their wages, which are not justified by their terms of the contract or non observance of the Regulations.

Contractor

Accepting Officer /
Officer authorized by him

- e. Vis-à-vis, the Pakistan Government, the Contractor shall be primarily liable for payment to be made under and for the observance of the Regulations aforesaid without prejudice to his right to claim indemnity from his sub-contractors.
- f. The regulations aforesaid shall be deemed to be a part of this contract and any breach thereof shall be a breach of this contract.

28. **MES Contractor's Labour Regulations.**

- a. **Short Title.** These Regulations may be called "the MES Contractor's Labour Regulations".
- b. **Definitions.** In these Regulations unless otherwise expressed or indicated, the following words and expressions shall have the meaning hereby assigned to them respectively that is to say:-
 - (1) "Labour" means workers employed by an MES Contractor directly or indirectly through a sub-contractor or other persons or by an agent on his behalf.
 - (2) "Fair Wage" means a wage as defined in the explanation under clause 29.
 - (3) "Contractor" as far as the labour regulations are concerned shall include every person whether a sub-contractor or headman or agent, employing labour on the work taken on contract.
 - (4) "Wages" shall have the same meaning as defined in the payment of wages Act and include time and piece rate wage.
- c. **Display of Notice Regarding Wages etc.**
The Contractor shall:-
 - (1) Before he commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clean and legible condition in conspicuous places on the work, notice in English and in the local language spoken by the majority of the workers giving the rate of wages, which are certified in accordance with clause 29.
 - (2) Send a copy of such notices to the Garrison Engineer and Labour Welfare Officer.
- d. **Payment of Wages.** Wages due to every worker shall be paid to him direct. all wages shall be paid in current coin or currency or in both.
- e. **Fixation of Wages period.**
 - (1) The contractor shall fix the wages period in respect of which the wages shall be payable.
 - (2) No wage period shall exceed one month.

Contractor

Accepting Officer /
Officer authorized by him

- (3) Wages of every workman employed on the contract shall be paid before the expiry of ten days after the last day of the wage period in respect of which the wages are payable.
- (4) When the employment of any worker is terminated by or on behalf of the contractors, the wages earned by him shall be paid before the expiry of the day succeeding the one on which his employment is terminated.
- (5) All payment of Wages shall be made on a working day.

f. Wage Register and Wage Cards, etc.

- (1) The contractor shall maintain a Wage Register of each worker in such form as may be convenient but the same shall include the following particulars:-
 - (a) Rate of daily or monthly wages.
 - (b) Nature of work on which employed.
 - (c) Total number of days worked during each wage period and total amount payable for the work during each wage period.
 - (d) All deductions made from the wages with an indication in each case of the ground for which the deduction is made.
 - (e) Wages actually paid for each wage period.
- (2) The contractor shall also maintain a wage card for each worker employed on the work.
- (3) The CMES may grant an exemption from the maintenance of Wage Register and /or Cards to a contractor who in his opinion may not directly or indirectly employ more than 20 Persons on the work.

g. Fines and Deductions which may be Made from Wages

- (1) The Wages of a worker shall be paid to him without any deduction of any kind except the following:-
 - (a) Fines.
 - (b) Deductions for absence from duty, i.e. from the place or places where by the terms of his employment he is required to work. The amount of deduction shall be in Proportion to the period for which he was absent.
 - (c) Deduction for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money for which he is required to account, where such damage or loss is directly attributable to his neglect or default.

Contractor

Accepting Officer /
Officer authorized by him

- (d) Any other deductions which the Pakistan Government may from time to time allow.
- (2) No fines shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deduction.
- (3) The total amount of fines which may be imposed in any one wage period on a worker shall not exceed an amount equal to three paise in rupees of the wages payable to him in respect of that wage period.
- (4) No fine imposed on any worker shall be recovered from him by installments or after expiry of 60 days from the date on which it was imposed.
- (5) No fine shall be imposed by the contractor for recovery from the wages of any worker on his own accord for any act or omission, unless the Central Labour Commissioner is satisfied with the reasons justifying such action and the amount of fine proposed and finally appears there.
- h. Register of Fine etc.
- (1) The contractor shall maintain a Register of Fines and Deductions for Damage or Loss, such Register shall mentioned the reasons for which fine was imposed or deduction for damage or loss was made.
- (2) The contractor shall maintain a list in English and in the local language clearly defining acts and omission for which penalty or fine can be imposed. He shall display such list and maintain it in a clean and legible condition in conspicuous places on the work
- j. Preservation of Register. The wage Register, the wage Cards and the Register of Fines and Deductions required to be maintained under these regulations shall be preserved for 12 months after the date of the last entry made in them.
- k. Powers of labour Welfare Officer to Make Investigations or Enquiry and to Recommend Imposition of Fine. The Labour Welfare Officer or any other person authorized by the Pakistan Government on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of the Fair Wage Clause and the provisions of these Regulations. He shall investigate into any complaint regarding the default made by the contractor or sub-contractor in regard to such provisions. The Labour Welfare Officer may with the written approval of the Central Labour Commissioner also recommend to the Garrison Engineer/Engineer-in-Charge concerned such fine not exceeding Rs.50 for which default as the Central Labour Commissioner considers fit to be imposed on the contractor for non-compliance with the Fair Wage Clause and these Regulations and the Garrison Engineer/Engineer-in-Charge may, if he considers the imposition of fine justified, impose the fine and deduct the amount thereof from any bill due to the contractor. But if he disagrees with the

 Contractor

 Accepting Officer /
 Officer authorized by him

recommendation of the Labour Welfare Officer, he will pass on his paper to the CMES concerned whose decision shall be final.

- l. Report of Labour Welfare Officer. The Labour Welfare Officer or other person authorized as aforesaid shall submit a report of the results of his investigation or other enquiry to the Garrison Engineer concerned indicating the extent, if any, to which the default has been committed with a note that necessary deductions from the contractor's bill be made and wages and other dues be paid to the labourers concerned.
- m. Appeal Against the Decision of Labour Welfare Officer. Any person aggrieved by the decision and recommendation of the Labour Welfare Officer or other person so authorized may appeal against such decision to the Central Labour Commissioner but subject to the decision of the Officer shall be final and binding upon the contractor.
- n. Inspection of Registers and Cards The contractor shall allow inspection of the registers and cards to any of his workers or to his agent at a convenient time and place after due notice is received on to the Labour Welfare Officer or any other person authorized by the Pakistan Government on his behalf.
- o. Submission of Returns. The contractor shall submit periodical returns as may be specified from time to time.
- p. Amendment. The Central Government may from time to time add to or amend these Regulations and on any question as to the application, interpretation, effect of these Regulations, the decision of the Central Labour Commissioner to the Government of Pakistan or any other person authorized by the Central Government in that behalf shall be final.

29. Accommodation for Labour

- a. The contractor shall during the progress of the works provide, erect and maintain at his own expense and to approved standards and scales all necessary temporary living, bazaar and sanitary accommodation required for his work people on the site in connection with the execution of the works.
- b. The planning, siting and erection of these buildings shall be approved by the Engineer-in-Charge and the whole of such temporary accommodation shall at all times during the progress of the works be kept tidy and in a clean and sanitary condition to the entire satisfaction of Engineer-in-Charge and at the contractor's expense. The contractor shall conform generally to the sanitary requirement of the local Medical Health authorities and at all times adopt such precautions as may be necessary to prevent soil pollution of the site.
- c. On completion of the works the whole of such temporary buildings shall be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled, effectively sealed off and the whole of the site left clean and tidy to the entire satisfaction of the Engineer-in-Charge and at the contractor's expense.

Contractor

Accepting Officer /
Officer authorized by him

30. **Anti Material Precautions.** The contractor shall, at his own expense, conform to all anti-material instructions given to him by the Engineer-in-Charge including the filling up of burrow pits.
31. **Conservancy**
- a. The Contractor shall at his own expense carry out all instructions issued to him by the Engineer-in-Charge to effects a proper disposal soil and other conservancy work in respect of the Contractor's work in respect of the Contractor's work people or employees on the site.
 - b. The Contractor will bear the cost of any charges levied by the Cantonment Authority for the execution of such work on his behalf.
32. **Interference and Nuisance.**
- a. All operations necessary for the execution of the works shall so far as compliance with the requirements of the contract permits be carried on so as not to interfere unnecessarily or improperly with public convenience or the access to or use or occupation of public or private roads and footpaths or to or of properties whether in the possession of the Government department or of any other person and the contractor shall save harmless and indemnify the Government in respect of all claims, demands, proceedings, damages, costs, charges and expenses whatsoever arising out of or in relation to any such matters.
 - b. Further all work shall be carried out without unreasonable noise and disturbance. The contractor shall indemnify the government from and against any liability for damages on account of noise or other disturbance created while or in carrying out the works and against all claims, demands, proceedings, damages costs, charges and expenses whatsoever in regard or in relation to such liability.
33. **Water**
- a. In the case of Measurement and Lump Sum Contracts, the Contractor shall be responsible for the provision of all water, including temporary plumbing work and connections, required for the use of the Works and of this work-people or employees engaged thereon, whether or not a water supply exists on the Site, and all expenses in respect thereof shall be borne and paid by the Contractor.
 - b. In the case of Term Contracts all water required for the works shall be free and shall be obtained from such points as may be directed. The Contractor shall be responsible for the provision of all necessary temporary plumbing work and connection and shall remove the same when directed at his own expense.
 - c. The water used for any or all requirements shall be subject to the prior written approval of the Engineer-in-Charge.
 - d. Water used on work or by labour when supplied by the Defence Department will be charged for at the rate of 31 paise per every 100 Rupees worth of the cost of work including contractor's percentage if the water unmetered. In case the supply is metered water charges will be Rs. 4.00 per 1000 gallons.

Contractor

Accepting Officer /
Officer authorized by him

34. Temporary Workshops, Stores, etc.

- a. The contractor shall during the progress of the work provide, erect and maintain at his own expense all necessary temporary workshop, stores, offices, etc., as are required for the proper and efficient execution of the works. The planning, sitting and erection of these buildings shall be to the approval of the Engineer-in-Charge and they shall at all times be kept tidy and in a clean and sanitary condition to the entire satisfaction of Engineer-in-Charge and at the contractor's expense.
- b. On completion of the Works the whole of such temporary building shall be cleared away and the Site reinstated and left clean and tidy to the entire satisfaction of the Engineer-in-Charge and at the Contractor's expense.
- c. Additionally, the GE may at his discretion permit the contractor to occupy as workshops and stores such Government buildings as may be available at the Site or Station for that purpose and in the event of the Contractor occupying such accommodation, prescribed rent for the same shall be recoverable from him. The Contractor undertakes to maintain such premises at his own expense in a clean and sanitary condition and to deliver up the same on completion of the work or the termination of the Contract, or in the event of the said buildings being required by the GE, within one month of an order to the effect in a clean state complete in every particular (damage from the accepted risks and fair wear and tear excepted).

35. Stores and Materials on Site:-

- a. Stores and materials required for the works are to be deposited by the Contractor only in place to be indicated by the Engineer-in-Charge.
- b. The contractor shall give the Engineer-in-Charge reasonable notice writing of his requirements of Government stores and materials and on approval of his demand. Being notified to him shall make immediate arrangement for the drawing of same. Such stores and materials shall be transported by the contractor at his own expense direct from the place of issue to the Site of the Works, unless prior written approval is obtained from the Engineer-in-Charge to do otherwise.
- c. MES officers concerned with the Contract shall have power at any time to inspect and examine any stores and materials intended to be used in or on the works, either on the site or at any factory or workshop or other place where the same are lying or from which they are being obtained and the contractor shall give such facilities as may be required to be given for such inspection and examination.
- d. The Engineer-in-Charge shall be entitled to have tests made of any stores or materials supplied by the Contractor who shall provide at his own expense all facilities, which the Engineer-in-Charge may require for this purpose. If at the discretion of the Controlling Officer an independent expert is employed to make any such tests, his charges shall be borne by the Contractor only if the test discloses that the said stores or materials are not in accordance with the provisions of the Contract.

Contractor

Accepting Officer /
Officer authorized by him

- e. Should the GE consider at any time during the construction or reconstructions or prior to the expiration of maintenance period that stores or materials provided by the Contractor are unsound, or of a quality inferior to that contracted for, or otherwise not in accordance with the contract in respect whereof the decision of the CMES shall be final and conclusive, the Contractor shall on demand in writing from the GE specifying the stores or materials complained about notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith remove the stores or materials so specified and provide other proper and suitable stores or materials at his own expense and in the event of his failing to do so within a period to be specified by the GE in the demand aforesaid, the GE may replace with others stores or materials complained of at the risk and expense in all respects of the Contractor. The liability of the contractor under this Condition shall not extend beyond the maintenance period aforesaid except as regards stores or materials which the GE shall have previously given notice to the Contractor to replace.
 - f. All stores and materials brought to the Site shall become and remain the property of Government and shall not be removed off the Site without the prior written approval of the GE. But whenever the Works are finally completed, the Contractor shall at his own expense forthwith remove from the Site all surplus stores and materials originally supplied by him and upon such removal, the same shall revert in and become the property of the Contractor. All Government stores and materials issued to the Contractor for incorporation or fixing in the Works and which, making due allowance for reasonable wear and tear and/or waste, have not on completion of the Works been so incorporated or fixed shall be returned by the Contractor at his own expense to the place of issue.
 - g. Surplus stores and/or materials returned by the Contractor will be credited him at a price not exceeding that at which the said stores and materials were originally issued to him but due consideration shall be given to and all allowance claimed by Government in respect of any depreciation or damage suffered by the stores and/or materials whilst in the custody of the Contractor. In the event of a contractor failing to return the surplus stores and materials issued to him under Schedules B and C for incorporation therein, recovery will be affected from him at the Stock Book rate or Market Rate whichever is higher.
36. **Tools and Plants on Site:-**
- a. All constructional plant provided by the contractor shall when brought on to the site be deemed to be exclusively intended for the construction and completion of the works and the contractor shall not remove the same or any part thereof (save for the purpose of moving it from one part of the site to another) without the consent in writing of the GE.
 - b. Upon completion of the works or determination of the contract for reasons other than default of the Contractor, the contractor shall remove from the site, all the said constructional plant.
 - c. The Government shall not at any time be liable for the loss of or damage to any of the said constructional plant.

 Contractor

 Accepting Officer /
 Officer authorized by him

37. **Statement of Hire Charges** A weekly detailed statement of the hire charges, incurred in respect of Government tools, Plant equipment and/or transport shall be given to the contractor by the Engineer-in-Charge.
38. **Precautions Against Risks**
- a. The contractor shall be responsible at his own expense for precaution to prevent loss or damage from any and all risks and to minimize the amount of any such loss or damage and for provision of all protective works, casing, coverings etc, required for the purpose until the works have been handed over complete to the GE.
 - b. All Govt. Buildings rented to the contractor for workshops or stores shall be insured by the contractor in favour of Govt. to their full value against risk or loss or damage from whatsoever cause arising other than the accepted risks and policy of insurance and receipts for premium shall be produced when required by the GE, provided always that when part only of a building is rented to the contractor he will be required to insure the buildings only if used by him for the purpose of storing or using materials of a combustible nature as to which the decision of the GE shall be final and conclusive.
 - c. If the contractor shall fail to effect and keep in force the insurance referred to in Sub-clause "b" above, the GE may effect and keep in force any such insurance and pay such premium as may be necessary for that purpose and from time to time deduct the amount so paid by the Govt. as aforesaid from any amount which may become due to the Contractor or recover the same as a debit due from the Contractor.

Contractor

Accepting Officer /
Officer authorized by him

- d. The contractor shall provide all watchmen necessary for the protection of the site, the works and of materials and plant and all thing on the site during the currency of the contract and shall solely be responsible for and shall take all reasonable and proper steps for protecting, securing, lighting and watching all places on or about the works and the site which may be dangerous to any person whatsoever.
39. **Notices and Fees.** The Contractor shall give all notices required by any statutory Provision or by regulations and/or bye-laws of any local authority and or of any public service company or authority effected by the works or with whose system the same are or will be connected and shall pay and indemnify Government against any fees or charge demandable by law under such acts, regulations and /or bye-laws in respect of the Works and shall make and supply all drawings and plans required in connection with any such notices.
40. **Setting out the Works:** The Contractor shall be responsible for the true and proposed setting out of the works in relation to original point lines and levels of reference given by the GE in writing and for the correctness of the position, levels, dimensions and alignment of all parts of the works and for the provision of all necessary instruments, appliances and labour in connection therewith. If at any time during the progress of the works any error shall appear or arise in the position, levels, dimensions or alignment of any part of the works, the contractor on being required to do so by the GE or his rep shall at his own expense rectify error to the satisfaction of the GE or his rep unless such error is based on incorrect data supplied in writing by the GE or his rep in which case the expense of rectify the same shall be borne by the Government. The checking of any setting out or of any line or level by the GE or his rep not any way relieve the contractor of his responsibility for correctness thereof and the contractor shall careful protect and preserve all bench marks, sigh trails, pages and other things used in setting out the works.
41. **Site Drainage:** All water that may accumulate on the site during the progress of the works, or in trenches and excavations, from other than accepted risk shall be removed from the site to the entire satisfaction of the Engineer-in-Charge and at the Contractor's expense.
42. **Excavation.** Materials of any kind obtained from excavation of the site including fossils, coins, articles of value or antiquity and structure or other remains or things of geological or archaeological interest discovered on the site of the works shall be deemed to be the property of the government and the contractor shall take reasonable precaution to prevent his workmen or any other persons from removing or damaging any such articles or thing and immediately upon discovery thereof shall acquaint the GE's representative of such discovery and carry out at the expense of Government except where otherwise included in the obligations of contractor, GE's representative's order as to the disposal of the same.
43. **Foundations.** The Contractor shall not lay any foundations until the excavations for the same have been examined and approved in writing by the Engineer-in-Charge.
44. **Covering in Works**
- a. The Contractor shall give reasonable notice in writing to the Engineer-in-Charge whenever any work is to be permanently covered or concealed, whether by earth or other means and in default of doing so shall, if required by the Engineer-in-Charge uncover such work at his own expense.

Contractor

Accepting Officer /
Officer authorized by him

- b. Extra soil required for filling etc. shall be obtained only from those places for which prior written approval has been given by the Engineer-in-Charge.
45. **Approval of Works by Stage.** All works embracing more than one process shall be subject to examination and approval at each stage thereof and the Contractor shall give due notice in writing to Engineer-in-Charge when each stage is ready. In default of such notice being received, the Engineer-in-Charge shall be entitled to appraise the quality and extent thereof and in the event of any dispute the decision of the Controlling Officer thereon shall be final and conclusive.
46. **Execution of the Works.** The work shall be executed in a workmanlike manner and to the satisfactions in all respects of the GE. In the case of measurement and Lump Sum Contracts, and in special circumstances, Term Contracts, the Engineer-in-Charge will communicate or confirm his instructions to the Contractor in respect of the execution of work in a "Work Site Order Book", maintained at his office and the Contractor shall confirm receipt of such instructions by signing the relevant entries in this book. Such entries will rank as order or notice in writing within the intent and meaning of these conditions.
47. **Day Work**
- a. No day work shall be performed without the prior written instructions' of the GE. The contractor shall give to the Engineer-in-Charge reasonable notice of the start of any work ordered to be executed by the day work and shall deliver to the Engineer-in-Charge within two days of the end of each day week a return in duplicate, giving full detailed accounts of labour and materials for the pay-week. One of these returns if found correct, will be certified by the Engineer-in-Charge and returned to the Contractor and must be produced at the adjustment of accounts.
- b. An invoice in duplicate, signed by the Contractor or his Agent, shall be sent with each delivery of materials for day work and the Contractor will be furnished with a receipt, signed by the Engineer-in-Charge, specifying the description, quantities, weight or measurement (as the case may be) of the articles approved, reference will be made to this receipt in the return aforesaid and the receipt itself is to be produced in support of Contractor's bill.
- c. In the case of Lump Sum contracts, the rates to be charged and the percentage addition for profit and establishment charges, etc will be agreed upon between the Controlling Officer and the Contractor prior to the execution of the work.
48. **Inspection of the Works**
- a. MES Officers concerned with the Contracts shall have power at any time to inspect and examine any part of the works and the Contractor shall give such facilities as may be required to be given for such inspection and examination.

Contractor

Accepting Officer /
Officer authorized by him

- b. Should the GE consider, at any time during the construction or reconstruction or prior to the expiration of the maintenance period, that any work has been executed with unsound, imperfect or unskillful workmanship or of a quality inferior to that contracted for, or not otherwise in accordance with the Contract (in respect whereof the decision of the CMES shall be final and conclusive), the contractor shall on demand in writing from the GE specifying the fault, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct the works so specified, in whole or in part as the case may require, at his own expense, and in the event of his failing to do so within a period to be specified by the GE in his demand aforesaid, the GE may carry out the work by other means at the risk and expense in all respects of the contractor. Provided always that the liability of the Contractor under this condition shall not extend beyond the maintenance period except as regards workmanship which the GE shall have previously given notice to the Contractor to rectify.
49. **Responsibility for Building** In the event any building, or part of a building being handed over to the Contractor for the execution of works thereto under the provisions of the Contract, he shall give a written receipt for all fixture, glass, etc and he shall be required to make good at his own expense all damage resulting from any cause whatsoever, accepted risks and fire excepted (unless such fire shall have been caused through the negligence of the Contractor or any of his agents, servants or employees), while in his charge and to deliver up the said building or part of thereof to the Engineer-in-Charge in a clean state complete in every particular, on the completion of the work.
50. **Damage and Loss**
- a. All plants, temporary buildings, equipment and things on the site provided by or on behalf of the Contractor for the construction of, but not for incorporation in the work shall stand at the risk and be in the sole charge of the contractor and the Contractor shall be responsible for and with all possible speed make good, any loss or damage thereto arising from any cause whatsoever, including the accepted risks.
- b. Save as above, the works and all materials and things whatsoever including such as may have been provided by Government on the Site in connection with and for the purposes of the Contract shall stand at the risk and be in the sole charge of the Contractor and the Contractor shall be responsible for, and with all possible speed make good any loss of damage thereto arising from any cause whatsoever, other than the accepted risks and shall deliver up all the Works to the GE in a clean state, complete in every particular. In event of any loss or damage thereto from any of the accepted risks or from fire under the provisions of the preceding condition, the following provisions shall have effect:-
- (1) The Contractor shall, as may be directed in writing by the GE remove from the Site and debris and so much of the work, as shall have been damaged, taking to the GE's stores such articles and/or materials as may be directed.

Contractor

Accepting Officer /
Officer authorized by him

- (2) The Contractor shall, as may be directed in writing by the GE proceed with the erection and completion of the Works under and in accordance, with the provisions and conditions, of the contract, and
- (3) There shall be added to the Contract Sum the net amount due, ascertained in the same manner as for deviations, or as prescribed for payment in respect of the re-execution of the work lost or damaged, the replacement of any materials and things lost or damaged but not incorporated in the Works at the date when the loss or damage occurred and the removal by the Contractor as provided above of the debris and damage work referred to therein.

Provided always that the Contractor shall not be entitled to payment under this Condition in respect of so much of such loss or damage as has been occasioned by any failure on his part to perform his obligations under the Contract.

- c. Save as provided above, the Contractor shall at his own expense reinstate and make good to the satisfaction of the GE or make compensation for any injury, loss or damage occasioned to any property or right whatever including property and rights of Govt. (or agents, servants or employees of Government) being injury, loss or damage arising out of in any way in connection with the execution of the Contract and further, the Contractor shall indemnify Government against all claims enforceable against Government (or any agent, servant or employees of Government) or which would be so enforceable against Government, were Government a private person, in respect of any such injury resulting in death, loss or injury to any person whomsoever or property including all claim which may arise under the workmen' Compensation ACT or otherwise.

51. Completion

- a. The works shall be completed to the entire satisfaction of the GE and in accordance with the agreed forecast of time and progress where operative and on the completion thereof as certified by GE, the Contractor shall clear away and remove from the site all constructional plant, equipment, surplus, materials, rubbish, temporary works of every kind and things (other than such items as have been provided by Government which shall be returned to the place of issue) and leave the whole of the site and permanent works, clean and in a workmanlike condition to the satisfaction of the GE.
- b. The Controlling Officer shall have power to take over from the Contractor from time to time such sections of the Works as have been completed to the satisfaction of the GE.
- c. The GE shall certify to the Contractor the date on which the Works are completed and the state thereof. The GE shall also certify to the Contractor the state of the Works at the end of the maintenance period, where applicable.

Contractor

Accepting Officer /
Officer authorized by him

52. Compensation for Delay

- a. If the Contractor fails to complete the Works and clear the Site, as stated in Clause 53, on or before the date of completion stated in the Tender documents or extended under Clause 12, he shall without prejudice to any other right or remedy of Government on account of such breach be liable to pay as compensation an amount equal to one per cent of the Contract Sum or of the measured value of the Works Order for every week that the whole of the Works remain uncompleted or in the case of items for which individual dates for completion have been specified an amount equal to one percent of the Contract value of such items for every week that such items remain uncompleted even though the contract as a whole be completed by the completion date, the amount being calculated proportionately in cases where the works or items remain uncompleted for broken periods of a week as for example, 1/7% for each day for which the works or items so remain uncompleted. Provided that total amount of compensation so payable under this condition shall be exceed 10% the Contract sum.
- b. The payment or deduction of such compensation shall not relieve the Contractor from his obligations to complete the Works or from any other of his obligations and liabilities under the contract.
- c. If before the completion of the works, any part of the Works has been certified by the Engineer-in-Charge as completed and is fit for occupation/use the amount of such compensation for delay after such certification will be reduced in the proportion which the value of the part so certified bears the value of the whole of the Works.
- d. Bonus will be paid for early completion of the works to a maximum of 5% of the Contract Sum only when time is considered at a premium and this clause is specifically provided in the special conditions of the contract.

53. Laws Governing the Contract

- a. This contract shall be governed by the laws in force for the time being in Pakistan.
- b. The contractor shall ascertain and confirm in all respect with the provisions of any general of Local Act of parliament and the Regulations and Bye-laws of any local or other statutory authority which may be applicable to the Works and with such rules and regulations of public bodies and companies as aforesaid and shall keep the government indemnified against all penalties and liability of every kind for breach of any of such Acts, Regulations or Bye-laws; Provided always that:-
 - (1) The contractor shall not be required to indemnify the Government against the consequences of any such breach which is the unavoidable result of complying with the Drawings and/or specifications.
 - (2) If the Drawings or Specifications shall at any time be found not to be in conformity with such Act, Regulation or Bye-law, the GE shall issue such instructions including the order of a variation under Clause 10 as may be necessary to ensure conformity with such Act, Regulation or Bye-law.

Contractor

Accepting Officer /
Officer authorized by him

- c. Provision of performance Bond/bank Guarantee by the Contractor: For the contracts amounting to Rs. 10 millions or more the contractor will deposit a performance bond/bank guarantee equal to 5% of the value of the contract, with a registered/reputed bank duly pledged in favour of the accepting officer before the acceptance letter is issued to him. The bond/guarantee can be released to the contractor by the accepting officer after successful/satisfactory completion of the entire work. In case the contractor abandons the work before completion due to any reason, whatsoever, the amount thus pledged may be utilized by the department for completing the remaining work or a portion thereof. In such an eventuality, the contractor will not have any right to claim the amount thus pledged in favour of department.

54. **Cancellation of Contract for corrupt Acts.** The Accepting Officer, whose decision shall be final and conclusive, shall without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to Government, cancel the Contract in any of the following case and the Contractor shall be subject to payment of any loss or damage resulting from any such cancellation to the like extent as is provided in the case of cancellation for default. If the Contractor shall:-

- a. Offer or give or agree to give any person in Government service any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other.
- b. Try to neck fraudulent payment by producing false requisitions/bills.
- c. Enter into a contract which Government in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms or payment thereof have previously been disclosed in writing to the Accepting Officer, or
- d. Obtained a contract with Government as a result of ring tendering or other non-bonafide methods of competitive tendering without first disclosing the fact in writing to the Accepting officer.

55. **Cancellation of Contract for Default.**

- a. The Accepting Officer may without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to government, cancel the contract in any of the following cases, if the Contractor:-
 - (1) Being an individual, or if a firm, any partner thereof shall at any time be adjudged bankrupt or have receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition under any Bankruptcy Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Bankruptcy Act for the time being in force for the sequestration of his estate or if a trust deed be granted by him on behalf of his creditors, or
 - (2) Being a Company, shall pass a resolution or the Court shall make an order for the liquidation of its affairs, or a receiver or manager on behalf of the debenture

Contractor

Accepting Officer /
Officer authorized by him

holders shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint receiver or manager, or

- (3) Fails to comply with any of the terms and conditions of the Contract or after reasonable notice in writing, with order properly issued there under or
- (4) Fails to complete the Works and clear the Site on or before the date of completion or
- (5) Assigns, transfers, sublets or attempts to assign, transfer or sublet any portion of the work without the prior written approval of the Accepting Officer.

- b. Whenever the Accepting Officer exercises his authority to cancel the Contract under this Condition he may complete the works by any means at the Contractor's risk and expense. The Contractor shall be entitled to receive payment of work performed, in the Contract value thereof less the cost of completing the Works in his default as certified by the GE and if the cost of so certified exceeds the sum of money held by Government as otherwise due to the Contractor, the Accepting Officer may recover the deficit from the Contractor by other means but if such cost of the work so completed is less than the contract value of the work the contractor shall not be entitled to any credit therefore.

56. **Termination of Contract (Applicable only to Term Contracts)**. Unless cancelled under Clause-57 or where order to the full amount contracted for have been placed on the contractor in which case the contract will automatically be considered to have been terminated, the contract shall remain in force for a period of not less than six months and may be terminated at the end of that period or at any time thereafter, provided that six weeks' notice in writing to the effect shall have previously been given by either party. The work for which written orders have been issued before the termination of the contract shall be deemed to be within the contract although the time for completion is beyond the date of termination of the contract and the contractor will beyond to complete the same.

57. **Special powers of Determination (Applicable only to Measurement and Lump Sum Contracts):-**

- a. If at any time after the acceptance of the tender, Government shall for any reason whatsoever decide to foreclose the whole or part of the contract, the Accepting Officer shall give notice in writing of the fact to the Contractor, who shall have no claim to any payment of compensation or otherwise on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequence of the foreclosing of the works.
- b. He shall be paid at Contract rates, for the full amount of the work executed including such additional works e.g. clearing of Site, etc., as may be rendered necessary by the said foreclosing. He shall also be allowed a reasonable payment (as decided by the Accepting Officer) for any expenses sustained on account of labour and materials collected but which could not be utilized on the works, as verified by the GE.

Contractor

Accepting Officer /
Officer authorized by him

CHAPTER IV – VALUATION AND PAYMENT**58. Records and Measurements**

- a. All items having a financial value shall be entered in the MES measurement Book PAFW-2261 or in the case of Term contracts for maintenance and repair work, on other approved Army Form, as applicable so that a complete record is obtained of all work performed under the Contract.
- b. Buildings, etc, priced in Schedule 'A' as a unit lump sum will be entered by number at the unit lump sum. Work carried out for agreed lump sums will be described and similarly recorded. Lump sum omissions will be entered for deduction. Measurement shall be restricted to that required to ascertain the financial liability of Government.
- c. Work which falls to be measured in details shall be measured physically without reference to any local custom that may obtain, excepting where it may otherwise be directed in the tender documents. The measurements shall be taken jointly by any person or persons, duly authorized on the part of the MES and by the Contractor. The Engineer-in-Charge shall give reasonable notice in writing to the Contractor and the Contractor shall, without extra charge, provide assistance with every appliance and other things necessary for measurement. The Contractor shall bear all the costs of his own measurement.
- d. Measurements shall be entered in the MES Measurement Book or approved other Army Form as applicable and signed and dated by both parties each day on the Site on completion of measurement. If the Contractor objects to any of the measurements recorded on behalf of the MES, a note to that effect will be made in the MES Measurement Book or other approved Army Form as applicable against the item or items objected to; and such note shall be signed and dated by both parties engaged in taking the measurement.
- e. If as a result of such objection, it becomes necessary to re-measure the work wholly or in part, the expense of such re-measurement shall be borne by the Party requiring the measurements to be retaken provided that a net error is found by this re-measurement to amount to less than 5 percent of the value as recorded by the first measurement. But where the net errors amount to 5 percent or over of the said value, then the cost is to be borne by the other party. In any case, if the net value of errors found exceeds Rs.500 (Rupees five hundred only) the expense of re-measurement is to be borne by the other party.
- f. If the Contractor's representative fails to attend when required, the Engineer-in-Charge shall have power to proceed by himself to take measurements and in that case these measurements shall be accepted by the Contractor as final.

59. Valuation of Deviations. The value of all deviations shall be ascertained by measurement or Lump Sum assessment in accordance with the following principles: -

Contractor

Accepting Officer /
Officer authorized by him

- a. Priced Bills of Quantities are Part of Contract. The valuation shall be on the basis of rates or prices for similar work in Schedule A and/or bill of quantities in so far as such rate or prices apply. Where the rates or prices in Schedule A and/or bill of quantities do not apply, the value shall be based on rates or prices deduced therefrom so far as it is practicable to do so, failing which, on rates or prices from both Schedule A and/or bill of quantities and Schedule of rates and where not directly applicable on rates or prices deduced therefrom. Where none of the foregoing methods is applicable the Schedule of rates as relevant shall be adopted. Provided further that where rates or prices from Schedule of rates are adopted, these shall be subject to contractor's percentage.
- b. Price Bill of Quantities are Not Part of Contract The valuation shall be on the basis of rates or prices of similar works in Schedule A in so far as such rates or prices apply and where such rates or prices do not directly apply the value shall be based on rates or prices deduced therefrom so far as it is practicable to do so. Failing this, the valuation shall be on the rates or prices from both Schedule A and Schedule of rates, and where not directly applicable on rates or prices deduced therefrom. Where none of the foregoing methods is applicable the Schedule of rates as relevant shall be adopted. Provided further that where rates or prices from Schedule of rates are adopted, these shall be subject to contractor's percentage.

60. **Advances on Account**

- a. The Contractor may at intervals of not less than one month submit claims on PAFW-2263 for payment of advances on account of work done and of materials delivered in connection with Measurement and Lump Sum contracts. Advance payments will also be made on account of works done under Term Contracts provided that the estimated value of work performed Rs.5,000 or more and that the value of the payments on account is not less than Rs.2,500.
- b. The Contractor shall be entitled to be paid in respect of such claims ninety percent of the value of work executed on the Site to the satisfaction of the GE.
- c. In the case of Measurement and Lump Sum contracts the Contractor shall also be entitled to be paid during the progress of the works 75 percent of the value of any materials which are in the opinion of the GE in accordance with the Contract and which have reasonably been brought on the Site in connection therewith and are adequately stored and/or protected against damage by weather or other causes, but which have not at the time of the advance been incorporated in the works.
- d. Provided always that payment shall not be made under these periodical certificates in respect of perishable materials except in the case of timber brought to site in the form of planks and/or scantling for which payment to the extent 75% of its value may be made provided further that the following conditions are fulfilled:-
 - (1) The contractor has brought the total quantity of timber required for incorporation in the work on the acceptance of contract.

 Contractor

 Accepting Officer /
 Officer authorized by him

- (2) It is stacked at site in such a manner as to allow natural seasoning to take place for as long as possible.
- e. Any sum due from the contractor on account of transport, stores, or any such matter provided by Government shall be deducted from the first advance paid after the sum becomes due.
- f. The GE shall from time to time certify the sum to which the Contractor is entitled after retaining the reserve. Any certificate relating to work done or materials delivered may be modified or corrected by any subsequent interim certificate or by the final certificate and no certificate of the GE supporting on advance payment shall of itself be conclusive evidence that any work or materials to which it relates are in accordance with the contract.

61. **Final Bill (Applicable only to Measurement and Lump Sum Contracts)**

- a. As soon as possible after the completion of the works to the satisfaction of the GE, the contractor shall forward a certified final account on PAFW-2262 in duplicate. It shall be accompanied by all abstracts, vouchers, etc supporting it and shall be prepared in the manner prescribed by the GE, No claims will be entertained after the contractor has signed the no demand certificate.
- b. The contractor shall be entitled to be paid the final sum after deductions of the following amounts, subject to the certifications of the final bill by the GE:-
 - (1) The value of payments already made on account and of any charges properly preferred under the conditions of contract.
 - (2) Security money under clause-63.
- c. No charges shall be allowed to the Contractor on account of the preparations of the final bill. If the final bill is not submitted by the contractor within 30 days after the completion of the work or if the contractor expresses in writing his inability to do so, then the final bill shall be prepared by the department.

62. **Final Bill (Applicable only to Term Contracts)**

- a. As soon possible, after the completion of the works to the satisfaction of the Engineer-in-Charge, the contractor shall forward, a certified final account on PAFW-2262 in duplicate, accompanied by all supporting abstract, vouchers, etc prepared in the manner prescribed by the GE. In respect of work orders arising out of unit requisitions of MES inspections for maintenance and repairs, any portion of such an order which remains uncompleted at the date of the next subsequent requisition or inspection may, purely to facilitate payment for completed work and without prejudice to any other right or remedy of Government in respect of any such delay, be deleted and the work orders as so amended, forthwith billed for final payment.

Contractor

Accepting Officer /
Officer authorized by him

- b. No claim will be entertained in respect of the works after the contractor has signed No Demand Certificate.
- c. The Contractor shall be entitled to be paid the final sum after deductions of the following amounts, subject to the certification of the final bill by the GE: -
 - (1) The value of payments already made on account and of any charges properly preferred under the condition of contract.
 - (2) Security money under Clause-63.

63. **Security Money During Maintenance Period** an amount equal to two percent of the work done shall be deducted from the final bill and retained as Security during the Maintenance period and shall be released on the expiration of the maintenance period to the satisfaction of Engineer-in-Charge. CMES shall however be competent to release this amount up to maximum of fifty percent of the amount so retained after the expiry of half the period of maintenance.

Instead of making deductions of Security money from the final bill, the Contractor may deposit the said amount in cash or in the form of Standing Security Bond as under: -

- (a) Government Securities.
- (b) Provincial and Municipal Debentures.
- (c) Port Trust Bonds.
- (d) Deposit Receipts of Nationalized Bank.
- (e) Post Office 5-years Cash Certificate.
- (f) Post Office Saving Bank Pass Book.
- (g) Prize Bonds.

64. **Payment of Bills** Payment of bills will be made by means of a crossed cheque to the Contractor within a reasonable time, after completion and their certification by GE.

65. **Recovery/Refund**

- a. Whenever under the contract any sum of money shall be recoverable from or payable by the contractor the same may be deducted from any sum then due or which at any time thereafter may become due to the contractor under the contract or under any other contract with Government, or from his Security Bond, or he shall pay the claim on demand, provided that in case of recovery from a contract other than the one to which the recovery pertains, the mode of effecting the recovery shall be decided by the controlling officer of the former contract.
- b. Notwithstanding anything to the contrary herein contained the Government reserve the right to carry out a post payment audit and technical examination of the final bill

Contractor

Accepting Officer /
Officer authorized by him

including all supporting vouchers and abstracts, etc. In addition to site check of the completed and ongoing projects by DI&F.

- c. If as a result of such audit and technical examination any over-payment is discovered in respect of any work done by the contractor, or alleged to have been done by him under the Contract, it shall be recovered by Government from the Contractor by any or all of the methods prescribed above or any under-payment is discovered the amount shall be duly paid to the contractor by Government.
- d. Provided that nothing stated herein before shall entitle the Government to recover any over-payment or refund any under-payment in respect of any price agreed between the CMES or GE and the contractor or under the circumstances specifically prescribed for such method of assessment, and that the said right of Government to adjust over and under-payments shall not extend beyond a period of three years from the date of payment of the final sum.
66. **Deduction of Income Tax.** Deduction of Income Tax will be effected in accordance with rules framed by the competent authorities from time to time and the laws on the subject.
67. **Arbitration** All disputes between/among the parties to the contract arising out and or relating to the contract or execution of work, other than those for which the decision of GE/CMES/DW&Ces or of any other person is under the contract expressed to be final shall, after written notice by either party to the other be referred to the sole arbitrator to be appointed by the Secretary, Law Justice and Human Rights Division. While appointing the sole arbitrator, he may also consider the panel submitted by Engineer-in-Chief of Pakistan Army. Unless the parties otherwise agree, such reference shall not be made until after completion/alleged completion, abandonment of work of the termination of the contract. The venue of arbitration shall be fixed by the sole arbitrator at his discretion. The award thus made shall be final and binding on the parties to the arbitration.

Contractor

Accepting Officer /
Officer authorized by him

AMENDMENT NO. 1 TO PAFW-2249 OF 1978 (GENERAL CONDITIONS OF CONTRACT

1. "FOR" 'Military Engineering Services and MES
"READ" 'Pakistan Ordnance Factories and POFs respectively wherever occurring'

2. CLAUSE 1(g) Delete existing clause and substitute

The CMES means the Superintendent Civil Engineer of the area in which the contract operates. The G.E. means Works Manager (Civil) and independent Asstt Works Manager (Civil) of the Division in which the contract operates.

3. CLAUSE 1(h). Delete existing clause and substitute:

The Engineer-in-Charge means the Officer appointed by the Accepting Officer/Controlling Officer to superintend the works, or part of works.

4. CLAUSE-24 Add a new clause No. 24-A as under:

a) The Contractor shall acquaint himself and shall be deemed to have acquainted himself with the provision of the official Secret Act-1923 as amended from time to time and other security provisions prevailing in the area in which he is working and shall abide by and conform to them. He will further assure that he will be personally responsible for ensuring that his employees (supervising staff and labour etc.) are made acquainted with and abide by all such rules and orders, in the event of the breach of the said conditions on the part of the Contractor or any of his employees, the Contractor shall in addition to any other liability under law have to suffer all the consequences as a result thereof. The Controlling Officer shall be the deciding authority on the action to be taken against the Contractor.

b) The Contractor shall furnish a certificate on the following lines on acceptance of tender and before the issue of Work Order to commence work: -

i) I hereby certify that I have read and understood the requirements of the Official Secret Act 1923 as amended from time to time and other security orders pertaining to POF and that in case of any breach I will be liable to any action as may be deemed fit by the Competent Authority.

ii) I also certify that I will invariably verify the bonafide of the men before employing them on work against the Fy. area in order to ensure that they are not a security risk. In case of work to be executed in restricted area of the POF. I will employ only the labour screened by the Security Section of POF and will arrange a photographed pass for each.

iii) I undertake to accept full responsibility for damage and other consequences that might arise due to any of my men violating the Security and other rules of POF. I also undertake that all the men who would be employed by me will be issued with proper wage cards which will be surrendered daily at the gates on entrance and collected back on passing out of the Factory Gate. This will be in addition to the normal token in vogue in the Factory.

Contractor

Accepting Officer /
Officer authorized by him

-2-

5. CLAUSE-28. Delete last Para i.e. "Reproduce-6 (ii) of amendment" and substitute with such Para (i) as under: -

" In every case in which by virtue of the provision of section 12, sub-section (i) of the Workmen's Act, 1923 as amended from time to time POFs is obliged to pay compensation to a worker by the Contractor in execution of the works subject to the provision that the Financial accounts of the contractor have enough credit balance from which to pay the compensation POFs will recover from the contractor the amount of the compensation to be paid and without prejudice to the rights of the POFs, under section 12, sub-section (2) of the said Act. POFs shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit under this Contract and/or by other means.

6. CLAUSE-33 i) Delete existing Sub-Para (d) and substitute:
- d) Water used on works or by labour when supplied by POF will be charged for at the rate of 37 paises per every 100 Rupees worth of the cost of work including contractor's percentage.
- ii) Add two new sub-paras (e & f) to Clause 33.
- e) Water connection will be given at one point only beyond which the contractor will have to make his own arrangement for distribution.
- 1) Supply of water will be restricted to the specified hours as prevalent in POF from time to time. Contractor must, therefore, make adequate arrangement at his own cost for the storage of water to meet his requirements during shut off hours.

7. CLAUSE-35 Last line of para (g)
- FOR "Stock book rate or the Market Rate whichever is higher".
- READ "Stock book rate plus 10% or the Market Rate or the current MES Schedule of Rates (amended up to date) plus Contractor's percentage whichever is higher".

8. Clause No.53 (c)

FOR **Provision of Performance Bond / Bank Guarantee by the Contractor:** For the contracts amounting to Rs. 10 million or more the contractor will deposit a performance bond/bank guarantee equal to 5% of the value of the contract, with a registered/reputed bank duly pledged in favour of the accepting officer before the acceptance letter is issued to him. The bond/guarantee can be released to the contractor by the Accepting Officer after successful/satisfactory completion of the entire work. In case the contractor abandons the work before completion due to any reason,

 Contractor

 Accepting Officer /
 Officer authorized by him

whatsoever, the amount thus pledged may be utilized by the department for completing the remaining work or a portion thereof. In such an eventuality, the contractor will not have any right to claim the amount thus pledged in favour of department.

READ

Provision of Performance Bond / Bank Guarantee / Insurance Guarantee by the Contractor: For the contracts amounting to Rs. 10 millions or more the contractor will deposit a performance bond/bank guarantee equal to 5% of the value of the contract, with a Scheduled Bank of Pakistan or Insurance Guarantee equal to 10% of the value of work with a reputed Insurance Company of "AA" rating and above registered with Securities and Exchange Commission of Pakistan (SECP) and acceptable to the department. The bond/guarantee can be released to the contractor by the accepting officer after successful/satisfactory completion of the entire work. In case the contractor abandons the work before completion due to any reason, whatsoever, the amount thus pledged may be utilized by the department for completing the remaining work or a portion thereof. In such an eventuality, the contractor will not have any right to claim the amount thus pledged in favour of department.

9. CLAUSE-67 Delete the entire clause.

Contractor

Accepting Officer /
Officer authorized by him

SAFETY INSTRUCTIONS IN CONSTRUCTION ACTIVITIES FOR EMPLOYEES OF CONTRACTOR AND CLIENT

1. Potential hazards for persons in construction activities include; **Falls (from heights), Trench collapse, Scaffold collapse, Electric shock and arc flash/arc blast, Failure to use proper personal protective equipment and Repetitive motion injuries.**
2. **Causes of hazards and their pre-cautionary measures:**
 - a. **Scaffolding:** When scaffolds are not erected or used properly, fall hazards can occur. Construction related persons frequently work on scaffolds. Protecting them from scaffold-related accidents would prevent a large number of injuries and fatalities each year. Therefore ensure the followings:-
 - (1) Scaffold must be sound, rigid and sufficient to carry its own weight plus four times the maximum intended load without settling or displacement.
 - (2) It must be erected on solid footing / place.
 - (3) Unstable objects, such as barrels, boxes, loose bricks or concrete blocks must not be used to support scaffolds or planks.
 - (4) Scaffold must not be erected, moved, dismantled or altered except under the supervision of a competent person.
 - (5) Scaffold must be equipped with guardrails, midrails and toe-boards.
 - (6) Scaffold accessories such as braces, brackets, trusses, screw legs or ladders that are damaged or weakened from any cause must be immediately repaired or replaced.
 - (7) Scaffold platforms must be tightly planked with scaffold plank grade material or equivalent.
 - (8) A "competent person" must inspect the scaffolding and, at designated intervals, re-inspect it.
 - (9) Rigging on suspension scaffolds must be inspected by a competent person before each shift and after any occurrence that could affect structural integrity to ensure that all connections are tight and that no damage to the rigging has occurred since its last use.
 - (10) Synthetic and natural rope used in suspension scaffolding must be protected from heat-producing sources.
 - (11) Employees must be instructed about the hazards of using diagonal braces as fall protection.
 - (12) Scaffold can be accessed by using ladders and stairwells.

Contractor

Accepting Officer /
Officer authorized by him

- (13) Scaffolds must be at least 10 feet from electric power lines at all times.
- (14) Employees are not permitted to work on scaffolds when covered with snow, ice, or other slippery materials.
- (15) Employees are not permitted to work on scaffolds in bad weather or high winds unless a competent person has determined that it is safe to do so.
- (16) Ladders, boxes, barrels, buckets or other makeshift platforms are not used to raise work height.

b. **Fall Protection:** Each year, falls consistently account for the greatest number of fatalities in the construction industry. A number of factors are often involved in falls, including unstable working surfaces, misuse or failure to use fall protection equipment and human error. Use of guardrails, fall arrest systems, safety nets, covers and restraint systems can prevent many deaths and injuries from falls. Therefore ensure the followings:-

- (1) Consider using aerial lifts or elevated platforms to provide safer elevated working surfaces.
- (2) Erect guardrail systems with toe-boards and warning lines or install control line systems to protect persons involved in construction activities near the edges of floors and roofs.
- (3) Cover floor holes; and/or Use safety net systems or personal fall arrest systems (body harnesses).

c. **Ladders:** Ladders are another source of injuries and fatalities during construction activities. Nearly half of these injuries were serious enough to require time off the job. Therefore ensure the followings:-

- (1) Use the correct ladder for the task.
- (2) Have a competent person visually inspect a ladder before use for any defects such as:
 - (a) Structural damage, split/bent side rails, broken or missing rungs/steps/cleats and missing or damaged safety devices.
 - (b) Grease, dirt or other contaminants that could cause slips or falls.
 - (c) Paint or stickers (except warning labels) that could hide possible defects.
- (3) Make sure that ladders are long enough to safely reach the work area.
- (4) Mark or tag ("Do Not Use") damaged or defective ladders for repair or replacement, or destroy them immediately.

Contractor

Accepting Officer /
Officer authorized by him

- (5) Never load ladders beyond the maximum intended load or beyond the manufacturer's rated capacity.
 - (6) Be sure the load rating can support the weight of the user, including materials and tools.
 - (7) Avoid using ladders with metallic components near electrical work and overhead power lines.
- d. **Stairways:** Slips, trips and falls on stairways are a major source of injuries and fatalities during construction activities. Therefore, ensure the followings:-
- (1) Stairway treads and walkways must be free of dangerous objects, debris and materials.
 - (2) Slippery conditions on stairways and walkways must be corrected immediately.
 - (3) Make sure that treads cover the entire step and landing.
 - (4) Stairways having four or more risers or rising more than 30 inches must have at least one handrail.
- e. **Trenching:** Trench collapses cause dozens of fatalities and hundreds of injuries each year. Therefore ensure the followings:-
- (1) Never enter in an unprotected trench.
 - (2) Always use a protective system for trenches 5 feet deep or greater.
 - (3) Employ a registered professional engineer to design a protective system for trenches 20 feet deep or greater.
 - (4) Protective Systems:
 - (a) Sloping to protect workers by cutting back the trench wall at an angle inclined away from the excavation not steeper than a height/depth ratio of 1/1/ 2 :1, according to the sloping requirements for the type of soil.
 - (b) Shoring to protect workers by installing supports to prevent soil movement for trenches that do not exceed 20 feet in depth.
 - (c) Shielding to protect workers by using trench boxes or other types of supports to prevent soil cave-ins.
 - (5) Always provide a way to exit a trench--such as a ladder, stairway or ramp--no more than 25 feet of lateral travel for employees in the trench.
 - (6) Keep spoils at least two feet back from the edge of a trench.

Contractor

Accepting Officer /
Officer authorized by him

- (7) Make sure that trenches are inspected by a competent person prior to entry and after any hazard-increasing event such as a rainstorm, vibrations or excessive surcharge loads.
- (8) Maximum allowable slopes for excavations less than 20 ft. (6.09 m) based on soil type and angle to the horizontal are as follows:

TABLE - ALLOWABLE SLOPES

Soil type	Height/Depth ratio	Slope angle
Stable Rock (granite or sandstone)	Vertical	90°
Type A (clay)	3/4 : 1	53°
Type B (gravel, silt)	1 : 1	45°
Type C (sand)	1 1/2 : 1	34°
Type A (short-term) (For a maximum depth of 12 ft.)	1/2 : 1	63°

- f. **Cranes & Derricks:** Significant and serious injuries may occur if cranes/derricks are not inspected before use and if they are not used properly. Often these injuries occur when a worker is struck by an overhead load or caught within the crane's swing radius. Many crane fatalities occur when the boom of a crane or its load line contact an overhead power line. Therefore ensure the followings:-
- (1) Check all cranes/derricks controls to insure proper operation before use.
 - (2) Inspect wire rope, chains and hook for any damage.
 - (3) Know the weight of the load that the crane/derrick is to lift.
 - (4) Ensure that the load does not exceed the rated capacity of crane/derrick.
 - (5) Raise the load a few inches to verify balance and the effectiveness of the brake system.
 - (6) Check all rigging prior to use; do not wrap hoist ropes or chains around the load.
 - (7) Do not move a load over workers.
 - (8) Barricade accessible areas within the crane's swing radius.
 - (9) Watch for overhead electrical distribution and transmission lines and maintain a safe working clearance of at least 10 feet from energized electrical lines.
 - (10) Cranes and derricks are restricted from operating within 10 feet of any electrical power line. The upper rotating structure supporting the boom and

 Contractor

 Accepting Officer /
 Officer authorized by him

materials being handled is provided with an electrical ground while working near energized transmitter towers.

- (11) Rated load capacities, operating speed and instructions are posted and visible to the operator. Cranes are equipped with a load chart. The operator understands and uses the load chart. The operator can determine the angle and length of the crane boom at all times.
- (12) Crane machinery and other rigging equipment is inspected daily prior to use to make sure that it is in good condition.
- (13) Accessible areas within the crane's swing radius are barricaded.
- (14) Tag lines are used to prevent dangerous swing or spin of materials when raised or lowered by a crane or derrick.
- (15) Illustrations of hand signals to crane and derrick operators are posted on the job site. The signal person uses correct signals for the crane operator to follow.
- (16) Crane outriggers are extended when required.
- (17) Crane platforms and walkways have antiskid surfaces.
- (18) Broken, worn or damaged wire rope is removed from service.
- (19) Guardrails, hand holds and steps are provided for safe and easy access to and from all areas of the crane.
- (20) Tower crane mast bolts are properly torque to the manufacturer's specifications.
- (21) Overload limits are tested and correctly set.
- (22) The maximum acceptable load and the last test results are posted on the crane.
- (23) Initial and annual inspections of all hoisting and rigging equipment are performed and reports are maintained.
- (25) Only properly trained and qualified operators are allowed to work with hoisting and rigging equipment.

g. **Hazard Communication:** Failure to recognize the hazards associated with chemicals can cause chemical burns, respiratory problems, fires and explosions. Therefore ensure the followings:-

- (1) A list of hazardous substances used in the workplace is maintained and readily available at the work site. Maintain a Material Safety Data Sheet (MSDS) for each chemical in the facility.

Contractor

Accepting Officer /
Officer authorized by him

- (2) Make this information accessible to employees at all times in a language or formats that are clearly understood by all affected personnel.
- (3) Train employees on how to read and use the MSDS.
- (5) Follow manufacturer's MSDS instructions for handling hazardous chemicals.
- (6) Train employees about the risks of each hazardous chemical being used.
- (7) Provide spill clean-up kits in areas where chemicals are stored.
- (8) Train employees to clean up spills, protect themselves and properly dispose of used materials.
- (9) Provide proper personal protective equipment and enforce its use.
- (10) Store chemicals safely and securely.
- (11) Each container of a hazardous substance (vats, bottles, storage tanks) is labeled with product identity and a hazard warning(s) (communicating the specific health hazards and physical hazards).

h. **Forklifts:** Forklift turnover accounts for a significant number of injuries and fatalities every year in construction industry. Therefore ensure the followings:-

- (1) Train and certify all operators to ensure that they operate forklifts safely.
- (2) Do not allow any employee under 18 years old to operate a forklift.
- (3) Properly maintain haulage equipment, including tires.
- (4) Do not modify or make attachments that affect the capacity and safe operation of the forklift without written approval from the forklift's manufacturer.
- (5) Examine forklift truck for defects before using.
- (6) Follow safe operating procedures for picking up, moving, putting down and stacking loads.
- (7) Drive safely--never exceed 5 mph and slow down in congested or slippery surface areas.
- (8) Prohibit stunt driving and horseplay.
- (9) Do not handle loads that are heavier than the capacity of the industrial truck.
- (10) Remove unsafe or defective forklift trucks from service.
- (11) Operators shall always wear seatbelts.

Contractor

Accepting Officer /
Officer authorized by him

- (12) Avoid traveling with elevated loads.
- (13) Assure that rollover protective structure is in place.
- (14) Make certain that the reverse signal alarm is operational and audible above the surrounding noise level.

i. **Electric works:** Electric works account for a significant number of injuries and fatalities every year in construction industry. Therefore ensure the followings:-

- (1) Work on new and existing energized (hot) electrical circuits is prohibited until all power is shut off and grounds are attached.
- (2) An effective Lockout/Tagout system is in place.
- (3) Frayed, damaged or worn electrical cords or cables are promptly replaced.
- (4) All extension cords have grounding prongs.
- (5) Protect flexible cords and cables from damage.
- (6) Sharp corners and projections should be avoided.
- (7) All electrical tools and equipment are maintained in safe condition and checked regularly for defects and taken out of service if a defect is found.
- (8) Do not bypass any protective system or device designed to protect employees from contact with electrical energy.
- (9) Overhead electrical power lines are located and identified.
- (10) Ensure that ladders, scaffolds, equipment or materials never come within 10 feet of electrical power lines.
- (11) All electrical tools must be properly grounded unless they are of the double insulated type.
- (12) Multiple plug adapters are prohibited.

j. **Floor openings:** Floor openings during construction activities are also a source for a significant number of injuries and fatalities every year. Therefore ensure the followings:-

- (1) Floor openings (12 inches or more) are guarded by a secured cover, a guardrail or equivalent on all sides (except at entrances to stairways).
- (2) Toe-boards are installed around the edges of permanent floor openings (where persons may pass below the opening).

Contractor

Accepting Officer /
Officer authorized by him

- k. **Elevated Surfaces:** Elevated surfaces may often become a source of injuries and fatalities every year in construction industry. Therefore ensure the followings:-
- (1) Signs are posted, when appropriate, showing the elevated surface load capacity.
 - (2) Surfaces elevated more than 48 inches above the floor or ground have standard guardrails.
 - (3) All elevated surfaces (beneath which people or machinery could be exposed to falling objects) have standard 4-inch toe-boards.
 - (4) A permanent means of entry and exit with handrails is provided to elevated storage and work surfaces.
 - (5) At elevated surface, material is piled, stacked or racked in a way that prevents it from tipping, falling, collapsing, rolling or spreading.
- l. **Battery Charging:** Non-compliance of safety instructions during charging of batteries of vehicles may lead to serious injuries. Therefore ensure the followings:-
- (1) Battery charging is conducted in areas specifically designated for that purpose.
 - (2) Material handling equipment is provided for handling batteries, including conveyors, overhead hoists or equivalent devices.
 - (3) Reinstalled batteries are properly positioned and secured in the vehicle.
 - (4) Smoking is prohibited in battery charging areas. Precautions are taken to prevent open flames, sparks or electric arcs in battery charging areas.
3. Occurrence of hazards during construction activities may be eliminate to ensure the precautionary measures mentioned above. However, if any hazard has occurred than its consequences may be avoid or reduce with use of Personal Protective Equipment (PPE). Therefore ensure the use of following PPEs:-
- a. **Safety Glasses or Face Shields:** For eye and face protection , safety glasses or face shields are worn during welding, cutting, grinding, nailing (or when working with concrete and/or harmful chemicals or when exposed to flying particles) and work on energizes electrical systems etc., to avoid foreign objects getting into the eye or on the face. Eye and face protectors are selected based on anticipated hazards.
 - b. **Work Shoes or Boots:** For foot protection, work shoes or boots with slip-resistant and puncture-resistant soles are worn by the construction workers. Safety-toed footwear is worn to prevent crushed toes when working around heavy equipment or falling objects.
 - c. **Safety Gloves:** For hand protection, gloves are worn by the construction workers. Gloves should fit snugly. Workers wear the right gloves for the job (for example, heavy-duty rubber gloves for concrete work, welding gloves for welding, insulated gloves and sleeves when exposed to electrical hazards).

Contractor

Accepting Officer /
Officer authorized by him

- d. **Hard Hats:** For head protection, construction workers are worn hard hats where there is a potential for objects falling from above, bumps to their heads from fixed objects, or of accidental head contact with electrical hazards. Hard hats are routinely inspected for dents, cracks or deterioration. Hard hats are replaced after a heavy blow or electrical shock. Hard hats are maintained in good condition.
- e. **Safety Belt:** Safety belt is to be used by the workers when exposed to work at height, electrical hazards etc.
- f. **Safety Masks:** For lungs protection, safety masks are worn in dusty environment and gas masks in fuming environment/confined areas.

Classified/Secret

Contractor

Accepting Officer /
Officer authorized by him

BOQ

S No.	Description of Items	Qty	Unit	Rate	Amount
1					
2					
3					
4					
5					
6					
7					
8					
				Total Rs.	

Note: The above rates are fixed and Contract's %age quoted in the tender documents is not applicable on these rates.

Contractor

Accepting Officer /
Officer authorized by him