

TENDER NOTICE

CONSTRUCTION OF TGS SHED AT SKARDU STATION

PIA intends to **Construct TGS Shed at Skardu Station**, Contracting firms of repute, registered Pakistan Engineering Council for the year 2021-22 under category C-4 or above with Construction code CE10 may apply.

Submission of Bids:

The bidding process shall be carried out on “**Single Stage, Two Envelop**” basis as per PPRA rules # 36(a).

The interested parties can download detail bid documents from PIA/PPRA website, and submit the same along with PKR 5,000.00 (Non-refundable) Pay Order with sealed Technical Bid and 02% of bid value (Refundable) with sealed Financial Bid documents in the shape of Pay Order/Bank Draft in favor of PIACL from any schedule bank of Pakistan. Tender documents should be sent to the address of General Manager (Facilities Management) 1st Floor Flight operation building PIA Head Office Building Karachi) by November 30th, 2021 till 15:00 hrs.

The tender will be open on the same day at 15:30 hrs in the office of General Manager Facilities Management, in the presence of bidders or their representative all details regarding the tender can be downloaded from www.piac.com.pk.

PIA reserves the right to reject anyone or all bids as per PPRA rules # 33.

General Manager (Facilities Management Division)

Pakistan International Airlines

Tel: 021- 99044640

Email: gm.facilitiesmanagement@piac.aero

INVITATION TO BID

CONSTRUCTION OF TGS SHED AT SKARDU STATION

PIA intends to **Construct TGS Shed at Skardu Station**. Contracting firms of repute, registered Pakistan Engineering Council for the year 2021-22 under category C-4 or above with Construction code CE10 may apply.

The interested Contractors are requested to send their applications to the Office of undersigned along with following details:

- Name & year of establishment of firm, registered address and Fax / telephone numbers / Email.
- Valid Certificate of Pakistan Engineering Council, registered in minimum Category C- 4 with Construction Code (CE-10).
- Financial status with credit line certificate from any schedule bank .
- Latest bank statement with 03 years history.
- Valid NTN certificate. (or documentary proof if exempted)
- Details of dispute / arbitration / litigation, if any.
- All mandatory documents mentioned in check list.

No payment in respect of Mobilization Advance, Secure Advance and Escalation will be entertained at any stage of project. For preparation of bids and General Specifications, PEC / FIDIC standards should be followed.

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The interested parties can download detail bid documents from PIA/PPRA website, and submit the same along with PKR 5,000.00 (Non-refundable) Pay Order with sealed Technical Bid and 02% of bid value (Refundable) with sealed Financial Bid documents in the shape of Pay Order/Bank Draft in favor of PIACL from any schedule bank of Pakistan. Tender documents should sent on the addressed of General Manager (Facilities Management) 1st Floor Flight operation building PIA Head Office Building Karachi) by November 30th , 2021 till 15:00 hrs. The tender will be open on the same day at 15:30 hrs in the office of General Manager Facilities Management, in the presence of bidders or their representative all details regarding the tender can be downloaded from www.piac.com.pk.

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DATA SHEET

1.	The name of the Assignment is: <u>CONSTRUCTION OF TGS SHED AT SKARDU STATION AIRPORT</u>
2.	The name of the Client is: Pakistan International Airlines Corporation Limited (PIACL)
3.	The description and the objectives of the assignment are: CONSTRUCTION OF TGS SHED AT SKARDU STATION includes Civil and Electrical works
4.	Phasing of the Assignment (if any): No
5.	Pre-Proposal Conference: (If required before opening date.)
6.	The name(s) and address(es) of the Client's Official(s) is (are): GENERAL MANAGER FACILITIES MANAGEMENT DIVISION 1 ST FLOOR, FLIGHT OPERATION BUILDING PIA HEAD OFFICE. Tel: 021-99044640 Email: gmfacmgt@piac.aero
7.	The Client shall provide the following inputs: All Data and Reports available with Client
8.	Association with other Firms/JV : PROOF DOCUMENTS REQUIRED
9.	The number of copies of the Technical and Financial Proposal required are: Original Only
10.	The address for writing on the proposal is GENERAL MANAGER FACILITIES MANAGEMENT DIVISION 1 ST FLOOR, FLIGHT OPERATION BUILDING PIA HEAD OFFICE. Tel: 021-99044640 Email: gmfacmgt@piac.aero
11.	Date and time of proposal submission is before November 30th , 2021 at 15:00 Hours.
12.	Date and time of opening of Proposal is November 30th , 2021 at 15:30 Hours.
13.	Validity period of the proposal is: 120 Days
14.	The location for submission of proposal is: GENERAL MANAGER FACILITIES MANAGEMENT DIVISION 1 ST FLOOR, FLIGHT OPERATION BUILDING PIA HEAD OFFICE. Tel: 021-99044640 Email: gmfacmgt@piac.aero
15.	Assignment Completion Period a. Construction 08month

TERMS OF REFERENCES

1. **Rate.** Rates must be quoted in Pak Rupees (Inclusive of all taxes and duties imposed by the Government). Applicable duties / Taxes must also be mentioned separately in the proposal. Prices mentioned without GST/ applicable taxes will be considered inclusive of same.
2. **Registered firm:** Only sales tax registered firms can apply & having own production unit /capacity that will be visited by PIA team for evaluation if required, if exempted provide documentary proof.
3. **Bid Security/Earnest Money.** Bid security 2% of the quoted amount in form of Pay order/Bank draft is to be submitted with bids in favor of PIA given A/C detail. Cross cheques/Cash will not be accepted.
4. **Validity of Offer.** The validity period of bids must be of 120 days.
5. **Bid Acceptance.** Award of purchase order will be issued strictly on the technical qualification as per evaluation criteria attached / financial evaluation and meeting all mandatory requirements. On acceptance of the bids the successful bidder will provide "Samples" of the items and will be liable to supply the items of the approved quality during the specified period.
6. **Security Deposit** Security deposit 10% will be deducted from each running bill and same will be returned after six months. In case of any discrepancy found in work the same will be withheld without prior notification till such time the discrepancy shall be removed by the firm at his own cost and risk.
7. **Delivery.** Deliverables must reached at concerned site within a month. If deliverable material is found defective or sub-standard or not in accordance with the standards, the supplier will be required to replace them at his own cost.
8. **Inspection.** Inspections of material will be done by Project In-charge as per specification,time to time to ascertain quality material used in the project.
9. **Risk Purchase.** In the event of failure on the part of supplier to supply the material for construction on time or supplying below standard item, the material will be purchased at the Risk and Expense of the supplier and difference of rate will be paid by the supplier.
10. **Place of delivery:** TGS SHEDPLOT AT Skardu Airport.
11. **Price Variation.** Prices offered against this tender are to be firm and final.
12. **Payment terms:** Payment will be released after 21 days of receipt of each Bill from contractor.

13. Company Profile: Interested firm must submit their company profile detail documents along with previous / in hand order detail at least worth of 10-Million each.

14. Scope of Work: As per attached BOQ.

15. Proposal Evaluation

Technical Proposal

The evaluation committee appointed by the CLIENT shall carry out Technical Proposal Evaluation, applying the evaluation criteria and point system specified in the Data Sheet. Each responsive proposal shall be attributed a technical score. Firms scoring less than seventy five (70) percent points shall be rejected and their financial proposal shall be returned unopened.

Financial Proposal

The financial proposals of the technically qualified firms on the basis of evaluation of technical proposals shall be opened in the presence of the representatives of these firms, who shall be invited for the occasion and care to attend. Client shall inform the technically qualified firms regarding the date and time for opening the financial proposals. The total cost of each proposal shall be publicly announced to the attending representatives of the firms. The evaluation committee shall determine whether the financial proposals are complete and without computational errors. The lowest financial proposal among all the technically qualified bidders will be awarded the job.

16. General Specifications:

FIDIC / PEC Standards should be followed in letter and spirit.

17 Penalty clause: In the event of any delay in completion of this work by the contractor, he shall inform PIAC, before expiry of such period giving reasons / justification for delay. However, PIACL, reserves the right to take following actions:-

- a. Evaluate the request for extension in delivery period, as per its merit and may consider extension in delivery period or otherwise.
- b. In case of late delivery for the reasons well within control of the party, liquidation damages at the rate of 1% per week but not exceeding 10% of the total value of the project may be levied.

TECHNICAL EVALUATION CRITERIA

Work Experience

S. No.	Description	Marks	Explanation of Marks Obtain
01	Similar nature of Work during last 05 years	20	05 marks will be given against each project of 10 Million If the contractor executed 04 or more similar nature of work 20 marks will be given.
02	General construction of buildings worth more than 10 Million	5	01 marks will be given against every project
	Total Marks	25	

Enlistment and Registration

S.No.	Description	Marks	Explanation of Marks Obtain
01	Registration with PEC	10	C3 and above =10 Marks C4=08 Marks
02	Registration with FBR and NTN Number (if exempted proof documents must be attached)	5	
03	Enlistment with any Government Organization	5	For every enlistment 02.5 Marks will be given
	Total Marks	20	

Professional Capabilities

S.No.	Description	Marks	Explanation of Marks Obtain
01	B.SC / B.E. (Civil) Engineer Registered with PEC	10	05 Marks - Registered Engineer 10 –ProfessionalEngineer

02	Associate Engineer Civil	5	05 Marks for experience of 03 years or more 03 Marks for experience less than 03 years.
	Total Marks	15	

Equipment Capabilities

S. No.	Description	Marks	Explanation of Marks Obtain
01	Wheel Excavator /Chain Excavator	06	Certificate of Excise Dept mandatory
02	Single bag Concrete Mixture	02	Will be verified Physically
03	Scaffolding Pipes	01	Do
04	Lifter Machine	01	Do
05	Steel Shuttering Plates well maintained	01	Do
06	Vibrator machine	01	Do
07	Crush Machine /Plants	01	Do
08	Frog Jumper Compaction machine	01	Do
09	Tractor with Trolley	01	Certificate of Excise Dept mandatory
10	General Workshop/Store	05	Five marks will be given in case of availability of proper store in the city area
	Total Marks	20	

Financial Statement

S.No.	Description	Marks	Explanation of Marks Obtain
01	Bank Statement for last one year Transaction	05	For every 01 Million Transaction 01 Marks will be given
02	Bank Balance Closing	05	For every 1 Million 01 Marks will be given
03	Credit Line Certificate	05	For every 01 Million 01 Marks will be given
	Total Marks	15	

General Requirements

S. No.	Description	Marks	Explanation of Marks Obtain
01	Litigation Certificate	2.5	In case of contractor have any litigation no marks will be given
02	Blacklisting	2.5	In case of any blacklisting no marks will be given to firm or JV.
	Total Marks	05	
	Total Marks	100	
	Qualifying Marks	70	

BILL OF QUANTITIES

CIVILWORKS					
S.No.	Description	Unit	Quantity	Rate	Amount
	Earth Work				
1	General and tranches excavation in all kind of material including rock disposal of unsuitable material outside the project limit and stacking of suitable material as per instruction of in charge/Engineer.	CFT	5,562.00		
2	Back filling with approved selected material obtained from outside source ,including hauling up to any lead and lift Placing in layers and compaction etc. as approved by incharge	CFT	7,320.00		
	Reinforcement				
3	Mild steel deformed round bars Grade 40 as shown in drawing or as per instruction of Engineer, in charge.	KG	12,030.00		
	Plain & Reinforced Concrete				
4	Providing and Laying Plain Cement Concrete Class E (1:4:8)under wall footings, foundations Floorings etc as per instruction of officer Engineer.	CFT	2,292.30		
5	Providing and Laying Plain Cement Concrete Class B (1:2:4)under wall footings, Flooring Ramp set as approved by	CFT	1,950.00		

	Engineer.				
6	Providing and Laying reinforced Class Din following.				
6a	footings	CFT	790.50		
6b	Columns	CFT	833.13		
6c	Plinth Beam	CFT	829.23		
6d	Lintel Beams	CFT	195.07		
6e	Roof Beams	CFT	725.00		
6f	UGWT	CFT	516.00		
6g	OHWT	CFT	256.00		
6h	Roof Slab	CFT	501.48		
	Rubble Masonry				
7	S/F of Squared Rubble, un-coursed, roughly hammer Dressed ,well bonded, faced with hammer dressed selected stone with square quoins and jambs, any thickness in building work, plate-II ,laid dry with laid and jointed in CM1:6	CFT	1,500.90		
	Block Masonry				
8	Providing & Laying 1st Class PCC Solid Blocks, for load bearing walls (having size 6"×8"×12" mini-mum crushing strength not less than 1900psi) incl. setting and jointing in CM ratio 1:6	CFT	3,181.35		

	Cement Plaster				
9	1/2" thick 1:6 cement Sand Plaster on interior wall set complete in all respect.	SFT	4,725.00		
10	3/4" thick 1:6 Cement Plaster on beams, Column and External surface of wall complete.	SFT	4,790.00		
	Floor & Wall Finishing				
11	Providing and Laying 4" down gauge graded crushed stone ballast as hard core (4" thick) under floors Ramp sets complete.	CFT	1,782.00		
	Painting				
12	3 Coats of Distemper Paint (SPD) of approved quality ICI Burger or equivalent and color including surface preparation by provision of a film with alkali resisting primer on internal plastered surface, including rubbing with pumice stones and papering, filling dusting as per instruction of manufacturer complete in all respect	SFT	4,725.00		
13	3 Coats of weather sheet paint on exterior surface ICI Burger or equivalent complete in all respect including surface preparation by provision of a film with alkali resisting primer on internal plastered surface, including rubbing with pumice stones and papering, filling dusting as per instruction of manufacturer complete in all respect	SFT	4,790.00		

14	02 Coats of synthetic Enamel Painting ICI Burger or equivalent on doors and frames incl. application of primer, surface preparation by sand paper complete in all respect including surface preparation by provision of a film with alkali resisting primer on internal plastered surface, including rubbing with pumice stones and papering, filling dusting as per instruction of manufacturer complete in all respect	SFT	1,560.00		
	Doors & Windows				
15	<p>Providing and fixing double leaf steel sliding doors made to critical or equivalent standard and of approved sections fully paneled with M. S. Sheet of 16 gauge painted with two coats of red oxide paint including with angle iron frame and diagonal braces, gunmetal roller and pulleys, angle iron top guides fixed to T-iron brackets and T-iron bottom track fixed in C.C. 1:2:4 with bolts including locking arrangement and handles etc using approved brass section oxidized fittings, iron lugs, including cutting holes and making good damages to walls etc. complete as per drawings and as per specifications.</p> <p>Size of doors are as under D1 = $2 \times 18' \times 18' = 648 \text{ sft}$ D2 = $3 \times 18' \times 11' = 594 \text{ Sft}$ <hr/> Total = 1,242 sft</p>	SFT	1,242.00		

16	Supply and Fixing of 32mm thick wooden solid flush doors and as per approved design with 18 SWG pre painted MS frame fix properly fixed with wall with CC 1:2:4 incl. rate of all ironmongerie rivets, hinges handles tower bolts, rozet locks, push plates set and two coats of emulsion paint approved shade as per instruction of engineer in charge cost of deodar 4" wooden beading polish ed also included	SFT	80.00		
17	S/F of Aluminum Windows/, ventilators Dulex Model incl. erection cutting and fix the window and ventilators as per drawing and specification sample must be approved prior to installation cost of 5mm thick plain imported quality glass is included	SFT	337.50		
18	Wooden roof trusses Howe and Mono design with rafter, king post, tie, 3" x 4", purlins, joists 4" x 4", batten 2.5" x 2.5" completely fixed on roof beam with 12" x 12" fish plates gusset bolts all joints must fixed with help of fish plates 3mm thick complete in all respect as per design and approved by Engineer	Sft	4,560.00		
19	Supply and fix, corrugated galv d steel sheet 22 B G, fixed to timber frame in g or purlins, with one and half corrugations side laps and 150mm end laps, fixed with 'U' bolts 10mm dia fiber and galv d, curved or limpet washers at center's not ex c 380mm	Sft	6,000.00		
	Supply and fix, plain galv d steel sheets 24 B G in ridges, hips valleys and straight and sleeve				

20	pieces etc, incl wooden battens as required.	Sft	340.00		
21	Supply and fix, AC building pipe class 'A' 80mm, with spigot and socket joints and hexagonal hard for rain water incl jointing and supports. MS flat 19mm x 6mm spaced not exceeding 1 meter apart.	Rft	120.00		
22	S/F of Pre-fabricated Meshwire for boundary wall with NO 9 mesh wire spacing must be 4" x 4" complete in all respect incl fixing of MS tubes in CC 1:2:4 welding of wire with MS tube as per site in charge instruction	Sft	600.00		
23	Providing and laying 3" thick C.C. Floor (1:3:6) at plinth and plinth protection side complete in all respect as per drawing and instruction of site in charge	Sft	990.00		
24	Land Development incl all kind of cutting and Filling lead material complete with Grassing in all respect	L/S	1.00		
25	P/L OF Tuff Tiles (Pavers) 3" Thick Having 7000psi Crushing Strength (Heavy Duty) Manufactured By (Izhar Pvt Ltd. , Bin Crete, Tuff Pavers Pvt Ltd, Concrete Concept or equivalent) I/C Grouting With Sand In Joints I/C Finishing To Require Slope Complete in all Respect As Approved And Directed By The Engineer In charge (in natural Colored) including 2" thick and Cushion.	Sft	2,255.00		
Total Amount					

PLUMBINGWORK					
S.No.	Description	Unit	Quantity	Rate	Amount
1	P/L Glazed or Matt finished Porcelain tiles (Master or Equivalent) at any height any approved color texture in walls and floors incl. set in neat cement and joints grouted with white/ colored cement as directed by Engineer. Sample of tile must be approved from user department.	SFT	750		
2	S/F of WC Asiatic pattern large size, light color with integral foot rests, flushing cistern 13 Lt r Capacity T-stopcock, waste Pate ,plastic connections etc to concrete complete in all respect (Orissa-900, II or Equivalent).	Each	2		
3	S/F of Plastic connection with brass union at both ends best quality	Each	4		
4	S/F of Stainless steel Water taps 20mm, Master, Sonex or Equivalent	Each	4		
5	S/F of Stainless steel pillar cocks w/an or high neck Master, Sonex or Equivalent as approved by engineer and user.	Each	2		
6	S/F of UPVC Pipe 100mm Schedule-40 For Sewage with all necessary fittings incl .elbow , Plugel bow, tee ,socket ,Long radius bends, Coupler Socket ,Cowl as directed by engineer in charge .	RFT	40		
7	S/F of UPVC Pipe 75mm Schedule-40 For wastewater with all necessary fittings incl. elbow, Plugel bow, tee, socket, Long radius bends, Coupler Socket, Cowl as directed by engineer in charge	RFT	60		

8	SF OfPPRPipe(Dadex/Plasthermorequivalent)forwater Supplyincl.allfittings elbow,socket, teeetcmakingproperholescuttingandclippingproperly13-20mmDiacompleteinallrespectasdirected byengineer/in charge.	RFT	250		
9	Siphon/ P- trapwareglazed150mmDiaaspersiteorengineerdirective.	Each	4		
10	WasteTrap/Jali150mmby150mmStainlesssteelbest qualityas approvedbyengineer.	Each	4		
11	SupplyandFixingofWHBglazedwareoneholecomplete withbottletrap,wastepipescoupling,chainandplugexceptMixtureasperengineerinstruction.	Each	2		
12	Supplyandfixingof5mmthickbest qualitylookingmirrorBelgiummadeproperlygroove datcornersandfixitwithwashbasinor counterproperlyas perinstruction ofEngineer.	SFT	10		
13	ConstructionofSeptic tankforwasteseparationincluding15'thickUnCours edrubblemasonrywallwith1/2"thickcementplaster usingCMratio1:4alsoblockmasonryplasteredpartiti onwalltoseparatethesolidwasteandsewagewater,i nlet andout let wastepipesRCC slab overthe tank	Each	1		
14	Constructionofsoakagepit/well20' deepand10"externalDiaproperlyfills withlargesizestoneandbolderventpipeasperdrawin gandasperinstructionofEngineer/In charge	Each	1		
15	BoringforwaterandinstallationofSolarwaterPumpi ncludingallkindofcivilandelectricworkasperinstruct ion ofEngineer	Each	1		

16	Construction of Water reservoir on the ground level for the purpose of water storage incl. 8' thick RCC wall by using deformed steel 40 Grade as per drawing and concrete 1:1-1/2:3 with RCC slab over the tank	L/S	1		
17	Construction of Concrete Main Hole as per drawing and site engineer instruction plastered both surface with CM ratio 1:6 as	Each	2		
18	Fabrication of Dry Kitchenette with openable cabinet shutters incl all kind of ironmongery, Washings sink plumbing fittings, Marble slab fixed on wooden Struts	Sft	32		
	Total Amount				

ELECTRICWORK					
S.No.	Description	Unit	Quantity	Rate	Amount
1	Wiring of Light Fan or call bell point with 1.5mm PVC Insulated wire 1/2" Dia PVC conduit recessed in wall or columns	Per/Point	40.00		
2	Wiring for submain with 2*2.5mm PVC Insulated wire 300/500V grade Score copper contactor wire in 3/4" Dia PVC conduit recessed in wall columns required	RFT	200		
3	Wiring of submain with 2*4mm PVC Insulated wire 300/500V grade Score copper contactor wiring in 1" Dia PVC conduit recessed in columns walls etc	RFT	150		
4	PF off flush type 15 Amps 3 Pin Combines switches and socket units (Power Plug) fixed of given on all kind of sheets or boards as desired by engineer	Each	10		
5	P/F of earthing set with 2'*2'*1/8" copper plated buried in the ground at the depth of 12' or less as water comes out from the ground level with salt charcoal ore earthing chemical powder etc making the pit 12' deep by excavation of all type of soil except soft and hard rock	Per/set	1		
6	S/f of energy meters single phase syed baio equivalent	Each	1		
7	S/f of 25W LED ceiling lights incl. fixing the lights in roof with fancy holders and proper electric wiring with 3/29 cables Pakistan or KM as desired by engineer.	Each	10		
8	P/f of fancy type light switches with micro board 7"*4" and fancy buttons best quality approved by engineer	Each	10		

9	P/F of Micro fancy type light Plug 4*6 incl. glass cover best quality	Each	5		
10	P/F of Electric Geyser best quality faisal, golden or ICL 15 Gallon capacity	Each	1		
11	P/F of ceiling Light panel SMD 18W Tuff, Philips or sogo as per instruction of Engineer	Each	10		
12	S/F of LED Tube lights 12W Philips or equivalent as per instruction of engineer with electric wiring	Each	10		
13	P/F of Fancy garden light complete with wiring and poles as per instruction of engineer	Each	10		
14	P/F of distribution board with metallic body flush type locking arrangement 1.5mm thick steel sheet and equipped with following 01-100-A MCB SP Terasaki 05-10-AMCB SP Terasaki 05-15-AMCB SP Terasaki 04-30 -AMCB SP Terasaki 02-bass bar 01-earth bar 01-V meter	Each	1		
Total Amount					

FINANCIAL EVALUATION

<u>SNO.</u>	<u>DESCRIPTION</u>	<u>AMOUNT</u>
1	CIVIL WORKS	
2	PLUMBING WORKS	
3	ELECTRIC WORKS	
	GRAND TOTAL	

Note:

- All materials used for construction should be approved by Engineer In-charge.
- Beside general sales taxes (G.S.T) all other applicable taxes are considered to be included in the quoted price.
- 10% security deposit will be deducted from each running bill of the contractor and remain withheld at P.I.A Finance Dept. for the period of 6 months after completion of job.
- Any item provided below standards will be returned back and required to be replaced at the cost of supplier or the contractor & if he failed to supply the replaced item as per required standard the same will be purchased from the open market and amount will be deducted from the bill of the supplier.
- Completion time is 180 days after receiving of purchase order to successful bidder.

Declaration

I declare that to the best of my knowledge, the answers submitted in this document are correct. I understand that the information will be used in the process to assess my organization's suitability to be invited to tender I understand that client may reject this document if there is a failure to answer all relevant questions fully provide false/misleading information:

Signature: _____

Name: _____

Position (Job Title) _____

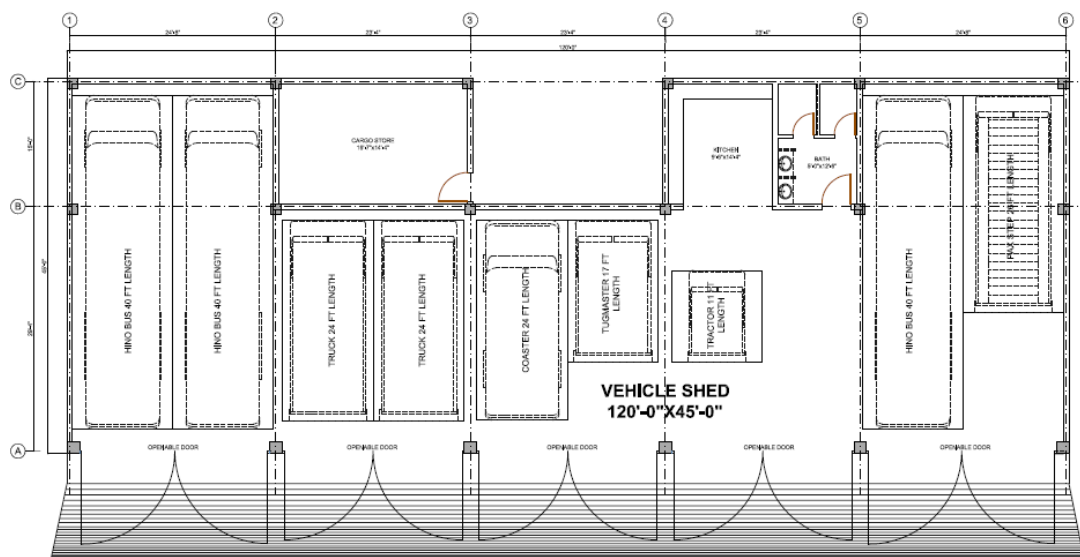
Date: _____

Telephone No. _____

Note: Declaration to be placed on stamp paper with the technical documents.

3D & 2D DRAWINGS TGS SHED AT SKARDU STATION





Vendor List	
S.No.	Items Description
1	Deform Steel Grade 40
2	Paint Nippon, Jotun, Gobis or Equivalent as approved by Engineer.
3	Porcelain tiles Master or Equivalent brand as approved by Engineer.
4	Water closet Porta design or equivalent as approved by Engineer.
5	Plumbing items e.g bib cock, pillar cock, taps, mixers e.t.c are of Master, Sonex or Equivalent as approved by engineer.
6	PPR Pipe of Dadex /Plastherm or equivalent as approved by Engineer.
7	Electrical wiring Pakistan cables, AGS, Fast or equivalent as approved by Engineer.
8	Breakers of Hager, Schneider or equivalent as approved by Engineer.
9	Electrical sheets of Clipsal or equivalent as approved by Engineer