

Materials and Workmanship

Demolition of
existing
roofing

19. The existing roof of the classroom No. 1 & 3 is to be demolished in two stages including the electrical wiring and fittings to the satisfaction of the Architect. The existing and cables being affected electrical fittings are to be carefully taken down and set aside for refixing.

Unless otherwise specified, materials arising from the demolition will become the property of the Contractor and are to be removed from the site as the work proceeds. Return all furniture and fittings to the School Authorities as directed.

Provide adequate support to the existing structure and protection to the existing fixture and finishes of the structure and electrical installation. Any damage occurring shall be made good at the Contractor's expense. Prevent unauthorised access to the partly demolished structure and leave safe at end of each day's work.

The Contractor is required to disconnect all electrical and other services prior to proceeding with the demolition works and to take precautions to prevent fire or explosion. Cause as little inconvenience as possible to adjoining owners or the public when carrying out demolition. Prevent dust arising by well watering debris during the work in progress.

Remove all debris arising from the demolition to an approved dump and leave the site clean and tidy prior to proceeding with the reconstruction work.

Concretor

20. When r.c.c. construction is to be employed the steel reinforcement must be inspected and approved by the Architect or his representative before concreting.

All concrete work shall be 1:2:4 mix, well consolidated and finished to true dimensions.

Construct R.C.C. beams to details and position as shown on drg. No. 2267/2B, A/67745m and A/67746m.

Bricklayer

21. All external walls are to be built with **second quality** bricks in English Bond in 1:3 mix cement and sand mortar. No portion being laid and raised more than **1 metre higher** than the other at one time.

Construct vent holes in walls to the positions and details as shown on drawing No. A/67745m and completed with 6 mm wipe mesh and 25 x 25 mm m.s. angle framing.

Construct verge with **225 mm thick brickwork** as shown on drawing No. A/67746m and sketch PN/1.

Samples of bricks must be submitted to the Architect for approval before use.

Plasterer

22. All existing cracked and defective internal & external wall plaster shall be hacked off and made good with cement, lime and sand plaster applied in two coats as follows :-

- a) First coat **10 mm thick - mix 1:4:16.**
- b) Finishing coat **6 mm thick - mix 1:12:30.**

Apply two coats of cement paint to all new plastered surfaces on external walls to match existing.

Roofer

23. Roofs are to be constructed with steel trusses and "Big Six" corrugated asbestos cement sheet roofing. All steel works must be primed with **one coat** zinc chromate primer before fixing in position.

Asbestos cement sheets are to be Everite "Big Six" manufactured in accordance with B.S. 690 (large section corrugation). The sheets are to be correctly mitred and laid with not less than one and a half corrugations side laps and 150 mm end laps, properly secured to the steel framing with 6 mm diameter g.i. hook bolts fitted with washers and nuts. Holes are to be drilled, NOT punched in the crown of the corrugations. Mastic must be inserted between the nuts, washers and corrugations to ensure water-tightness. **Fixing of G.I. hook bolts should not exceed 300 mm centre to centre.**

Asbestos ridge cappings are to be fixed with g.i. hook bolts as described above.

Carpenter
and Joiner

24. Unless otherwise specified, all timber used shall be of best quality Singapore Campor (San Cheong) well seasoned, free from large, loose or dead knots, worm holes and of full specified sizes and dimensions. All timber works inside the false ceiling or in contact with concrete, brickwork etc. must be treated with two coats of approved wood preservative.

Construct false ceiling of 13 mm thick "Treetex" or other equal and approved insulation board to details as shown on drawings A/67744m, A/67745m, and A/67746m.

Metalwork

25. Construct the steel trusses and purlins in strict accordance with details and sizes as indicated on drawings No. 2267/2B (type 2), A/67745m, A/67746m and sketch PN/1.

The Contractor is required to modify the dimension of the steel trusses to suit the existing structure.

Painter

26. All new metal works are to be primed with zinc chromate primer and painted with two coats of synthetic enamel paint. All new timber works are to be primed with aluminium primer and painted with two coats of synthetic enamel paint.

The internal walls, windows, doors and fittings of the Office Block are to be prepared and redecorated with **two coats work in accordance with schedule of Redecoration,**

and roof surface

The external walls/are to be properly prepared and painted with **two coats** cement paint to match existing. Repaint all windows and doors with **two coats** synthetic enamel paint.

Making good
works distrubed

27. The adjacent premises, paving and any other work distrubed during the course of the work must be made good to the satisfaction of the Architect.

Electrical
Installation

28. The Contractor shall include in his tender a sum for taking down, setting aside and refixing the electrical wiring and fittings as necessary. This work must be carried out by a Licensed Electrical contractor to the satisfaction of the Government Building Services Engineer and completed in accordance with the relevant regulations and standards.

When taking down the existing electrical installation, the contractor shall exercise his utmost care to maintain the fittings, cables and accessories etc. in good and proper condition. Any of these items being damaged due to the Contractor's negligence shall be replaced at the contractor's own expense without extra charge to the employer.

After completion of reroofing and false ceiling works, the electrical installations shall be refixed to their original positions. Wooden battens of suitable size shall be provided for running of cables and fixing of lighting fittings. New cable clips shall be used. Fan hooks of adequate design as shown on the detail drawing shall also be made for hanging of ceiling fans.

No cables shall be run inside the false ceiling.

Electrical
Installation

~~28. The Contractor shall include in his tender a sum for taking down setting aside and refixing or renewing the electrical wiring and fittings as necessary. This work must be carried out by a Licensed Electrical contractor to the approval of the Government Building Services Engineer.~~

Cost of Tests

29. The cost of making any test directed by the Architect shall be borne by the Contractor if the test shows the materials of workmanship not to be in accordance with the Contract or the instructions of the Architect, but otherwise by the Owner.

Liquidated
damages
for delay

30. If the Contractor shall fail to complete the Works or any portion of the Works within the prescribed Time for Completion then amount of liquidated damages \$300 (Hong Kong Dollars Three Hundred) per day will be deducted from the Contract Amount.

Orders for
variations

31. The Architect shall make any variation of the form, quality or quantity of the Works or any part thereof that may in his opinion be necessary for the completion of the Works and for that purpose or, if for any other reason it shall in his opinion be desirable, shall have power to order the Contractor to do, and the Contractor shall do any as instructed in writing. No such variation shall vitiate or invalidate the Contract but the value (if any) of all such variations shall be taken into account in ascertaining the amount of the Final Contract Sum.

Forfeiture

32. If the Contractor shall become bankrupt or has abandoned the Contract or without reasonable excuse has suspended the progress of the Works seven days or has to the detriment of good workmanship or in defiance of the Architect's instruction to the contrary sub-let the whole or any part of the Contract or has failed to proceed with the Works with due diligence then the Architect, after giving seven days' notice in writing to the Contractor, may enter upon the Site and the Works and expel the Contractor therefrom without thereby avoiding the Contract or releasing the Contractor from any of his obligations or liabilities under the Contract or affecting the rights and powers conferred on the Owner or the Architect by the Contract and may himself complete.

Forfeiture

32. The Works or may employ any other contractor to complete the Works and the Architect or such other contractor may use for such completion so much of the Constructional Plant, Temporary Works and materials which have been deemed to become the property of the Owner under the provisions of the Contract as he or they think proper and the Owner may at any time sell any of the said Constructional plant, Temporary Works and unused materials and apply the proceeds of sale in or towards the satisfaction of any sums due or which may become due to the Owner from the Contractor under the Contract.

Payment after
Forfeiture

33. (i) If the Architect shall enter and expel the Contractor under the prescribed Forfeiture, the Owner shall not be liable to pay to the Contractor any money on account of the Contract until the expiration of the Defects Liability Period and thereafter until the costs of completion and maintenance, liquidated damages for delay in completion, if any, and all other expense incurred by the Owner have been ascertained and the amount thereof certified by the Architect.

(ii) The Contractor shall then be entitled to receive only such sum or sums, if any, as the Architect may certify would have been due to him upon due completion by him after deducting the amount certified for the purposes of sub-clause (i) but if such amount shall exceed the sum which would have been payable to the Contractor on due completion by him then the Contractor shall upon demand pay to the Owner the amount of such excess and it shall be deemed a debt due by the Contractor to the Owner and may be deducted by the Architect from any moneys due or which may become due to the Contractor whether under this or any other contract with the Architect.

Major Repairs 1982/83 and Emergency Repairs

Schedule of works - This should be read in conjunction
with the Particular Specification & drawings

1. Carefully take down the existing electrical wiring and fittings and set aside the electrical fittings for refixing.
2. Take down the existing Chinese tile roofing ^{in two stages} including all the roof timbers i.e. battens, purlins, trusses, wall plates etc. of the ~~Office~~ ^{classroom} No. 1 & 3 block. Remove all debris to an approved dump.
3. Carefully take down existing brickwork or granite block on top of the rear wall and prepare the surfaces including cutting pockets and roughening old concrete surface for receiving new r.c.c. beams and brickwork.
4. Construct new r.c.c. beams to size and positions as shown on drawings (A/67745m, A/67746m and 2267/2B) Form holes in correct positions for holding down bolts of the steel trusses.
5. Construct steel trusses to correct dimensions, numbers and positions as shown on drawings 2267/2B, A/67745m, A/67746m & sketch PN/1. The span and rise of the trusses must be modified and constructed to suit the dimensions of the existing structure.
6. Apply **one coat** zinc chromate primer to all steel trusses and iron works before fixing in position.
7. Encase the holding down bolts of the steel trusses in the r.c.c. beams with 1:3 mix cement/sand mortar.
8. Construct steel purlins on the trusses in accordance with drawings 2267/2B.

9. Install "Big Six" corrugated asbestos cement sheet roofing with 6" 150 mm end laps and 1½ corrugation side laps as described. Install asbestos cement ridge capping of same manufacture of the roofing sheets; care must be taken to ensure the ridge is entirely watertight.
10. Construct verges with bricks and 1:3 cement/sand mortar as shown on drawing A/67746M. Fill up the gap between the roofing sheets and walls with bricks in 1:3 cement/sand mortar. Form vent holes to the positions and size as shown on drawing No. A/67745m and make good wall plaster to match the existing.
11. Construct false ceiling in accordance with the drawings. The work includes provision of trap doors and timber brackets for electrical fittings to the positions as shown in the drawings A/67745 m
A/67746m. All timber works inside the false ceiling are to be treated with two coats approved wood preservative before fixing in position. All wood plugs and steel bolts encased in walls or concrete should be cut in the shape of "Dovetail" as shown in drawings.
- ~~12. Install new electrical wiring to the Office block and refix all the electrical fittings to the positions as directed. Work to include provision of new fittings if necessary and the work should be carried out by a licensed electrical contractor to the entire satisfaction of the Government Building Services Engineer.~~
13. Apply two coats plastic emulsion paint to insulation boards of the false ceiling and one coat aluminium primer and two coats synthetic enamel paint to all hardwood covering fillets. Complete internal and external redecoration throughout the office block in one coat work. Touch up and make good the works distrubed to match existing.
- ~~14. General cleaning up the school premises and remove away all debris.~~

12. Take down the existing electrical installation in classroom No.1 & 3 as necessary and refix to positions as directed in a neat and proper manner. The installation may be affected comprises the following :
 - a. 8 Nos. 1500 mm fluorescent batten fittings.
 - b. 2 Nos. 1500 mm fluorescent chalkboard fittings.
 - c. 4 Nos. 1400 mm ceiling fans, and
 - d. 1 lot cables and accessories.
13. Apply two coats plastic emulsion paint to insulation boards of the false ceiling and one coat aluminium primer and two coats synthetic enamel paint to all hardwood covering fillets. Complete internal and external redecoration throughout the two classrooms in two coat work.
14. Repair/Replace broken/cracked chinese tiles on roofs of classroom No. 2 and teacher office with similar new material to match existing and repair all cracks in walls of the school premises before painting.
15. Reconstruct 150 mm half round surface channel (approx. 17 metre long) with 1:2:4 mix concrete and smooth surface to match existing in the location shown on sketch PN/1.
16. Take down and replace are piece broken asbestos corrugated sheet on roof of rain shelter with similar new material and m.s. fittings to match existing.
17. Take down and repair boy's and girl's latrine cubical metal doors and ironmongery fittings and scrape off all rust and apply one coat of rust inhibitor before priming.
18. Take up and reconstruct subsided/cracked basketball paving with 75 mm thick 1:2:4 mix concrete (approx. 25 M²) and trowell smooth the surface in the location as directed. Rate to include cutting straight lines to existing concrete to form construction joints and fill up the subsided level with 20 mm agg. to form concrete bed to match existing concrete paving level.
19. Repair and tidy up existing barbed wires/m.s. angle posts and rear gate where found necessary.

20. Take down & replace 2 Nos. dilapidated backing boards of basketball stand with 20 mm thick patent fibre glass board, obtainable from specialist supplier. Rate to include replacing m.s. rings and bolts if necessary.
 21. Prime one coat of zinc chromate to all new metal work and one coat of bituminous aluminium primer to all new wood ~~work~~ work before fixing in position. Scrape and clean all rust on existing metal surface and prime one coat of zinc chromate before painting.
 22. Cut and form 12 Nos. 75 x 75 mm hole in wall of "Pai Lau" for cover over flow of gutters in the location as directed, clean up all round or debris in the gutters and apply two coat bituminous paint to the surface of gutters.
 23. Replace broken glass, broken casement stays or fasteners of metal windows and doors of the school premises.
 24. Scrape wash down, prepare and apply to internal and external surfaces throughout the school premises, boy's and girl's latrine, store rooms, kitchen, m.s. angle posts of fencing, m.s. gates, rain shelter, "Pai Lau" playground lining and equipments and external ancillary works, etc. in two-coat work in accordance with "Schedule of Redecorations".
 25. Remove all debris and general cleaning up the school premises and the site.
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MAJOR REPAIRS FOR 1982 /83
SCHEDULE OF REDECORATIONS FOR VILLAGE TYPE SCHOOLS

Ha Tsuen Heung, Pak Nai Public School

Pat Nai Village, Deep Bay, N.T.

KEY

A - No work
B - Touch up
C - Redecorate

L - Linewash
W - Whiten
CD - Chinese distemper
WD - Washable distemper
E - Emulsion paint

CP - Cement paint
P - Synthetic
V - Varnish
WP - Wax polish
PV - Polyurethane Varnish

	Entrance Hall	Assembly Hall	Classroom	Staff Room	Office	Special Room	Latrine	Store Room	Rain Shelter	M.S. Gate	Equipment of Playground	M.S. Angle Posts of Boundary Fence	Pipe Works
Basic treatment			C		C		C	C	C				
Tiled roof													
External surface			CP		CP								
Asbestos sheet roof													
External surface							CP	CP	CP				
*Roof frame member													
(a) Timber (b) Steel			P		P		P	P	P				
*Ceiling													
(a) Asbestos													
(b) Tiles (c) False							CP		CP				
Internal wall			CD		CD		CP	CD					
External wall													
Dados 1220 High			P		P								
Skirting			P		P								
Door & frame			P		P		P	P					
Window & frame			P		P			P					
Guard bar			P		P			P					
Blackboard and Bulletin board			P		P								
Timber dias			P										
Wooden fixtures and Metal works			P		P			P		P	P	P	P

Remarks : - (i) Redecoration to be applied to all existing painted surface.
(ii) All wood work and metal work to be decorated with two coat of synthetic paint and primer coat as required.

SUMMARY OF TENDER

Preliminaries

Internal Redecorations

External Redecorations

General Repairs

Replacement of roofing to classroom no. 1 & 3

Electrical installation

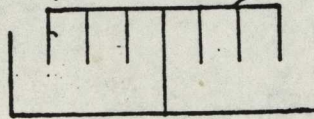
Total Amount Carried to Form of Tender \$

\$	¢

Signed Date
(Contractor) Chop

Witness : Date

Boy's & Girl's latrine



Basketball Court

Teacher Office

Construct verge on roof of this gable wall and make good tiled roof of Teacher Office where has been disturbed.

Take down and reconstruct the roof of classroom no.1 in second stage.

Construct verge on roof of this gable wall and make good tiled roof of classroom no.2 where has been disturbed.

Classroom No. 2

Reconstruct 150 mm. half round surface CHANNEL as specified.

Store

Rain Shelter

Kitchen

Take down and reconstruct the roof of classroom no. 3 in first stage.

LAYOUT PLAN OF PAK NEI PUBLIC SCHOOL