Number of pages. 10
Date of receipt 1-9-
Initials of reference

M.R.O. 1—82 403—21-11-50

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

Ser 8 12 51

G.O. No. 1267	Press Mis.
Dated 21-2-	18 52

Not to be folded or roughly handled

No. 59. Read the following letter from Colonel C. E. FABER, Chief Engineer; to H. FORBES, Esq., Acting Secretary to Government, dated 3rd December 1857, No. 5664.

SIR,

With reference to Extract Minutes of Consultation No. 1418, dated 28th July last, I have the honor to forward for submission to Government Plans and Estimates of additional buildings and improvements proposed for adapting the Gun Carriage Manufactory to the employment of the Machinery lately sent out from England for that purpose.

1 Letter from the Garrison Engineer No. 501, dated 27th November 1857.
1 Memo.
1 Abstract Estimate.
6 Plans.

2. The Estimate amounting in the aggregate to Rupees (98,100) ninety-eight thousand and one hundred, has been carefully framed by the Garrison Engineer in communication with the Superintendent Major Maitland, as well as the Mechanical Engineers sent out by the Honorable Court.

3. The reasons for deciding on the erection of the buildings on the present site are correctly stated in para. 5 of Captain Rawlins' letter.

4. The estimates enumerated in para. 6 are as follows :—

	Rs.
General Workshop	40,300
Steam Saw Mills	16,900
Alterations and additions to Smithey	15,600
Buildings for 2 Nasmyth's Hammers	13,900
Tramway	3,900
Platform for tiring wheels	1,500
Additions to Foundry	6,000
Total	98,100

5. In para. 7 Captain Rawlins, specifies the dimensions and capabilities of the General Workshop, and shews that it is amply provided with every requisite, for the most efficient operation.

6. Para. 8 describes the provision made for the Steam Saw Mills.

7. In para. 9 the alterations and additions to the present Smithy are specified.

8. Para. 10 shews the arrangements for setting up the two Nasmyth's Hammers.

9. The Railway and platform for tiring wheels are described in paras. 11 and 12, and in para. 13 the estimate for additions to the Foundry is explained.

10. The plans have undergone as careful examination in this Office as the time allows, and as they as well as the estimates appear to be most carefully and correctly prepared, I beg to recommend the estimates for entry in the Budget of 1858-59, as the Machinery is already received, and should be erected as early as practicable.

Letter from Captain H. W. RAWLINS, Garrison Engineer; to Colonel C. E. FABER, Chief Engineer, dated 27th November 1857, No. 501.

SIR,

In obedience to the orders communicated in your resolution No. 2653 of 4th August last, forwarding Extract Minutes Consultation No. 1418 of 28th July preceding, regarding the additional buildings and improvements required for the Gun Carriage Factory; I have the honor to submit plans and estimates for the same, amounting in the aggregate to Rupees (98,100) ninety-eight thousand and one hundred.

Engines, Boilers and Machines, &c. for the General Workshop already received.

4 Drilling machines double geered.

1 6 feet planing machine.

1 Punching and Shearing machine.

1 Machine for cutting screws.

1 Nut cutting machine.

2 Hand Lathes 10 inches, 12 feet bed.

1 Self-acting Lathe 10 inches, 14 feet bed.

1 Hand Lathe 6 inches, 8 feet bed.

2 Hand Lathes 12 inches, 14 feet bed.

1 Hand Lathe 7 inches, 8 feet bed.

1 Self-acting Lathe 7 inches, 10 feet bed.

1 Hand Lathe 8½ inches, 10 feet bed.

1 High pressure Steam Engine with two cylinders each 10½ inches diameter, improved metallic piston, governor, wrought iron crank, and crank shaft, turned fly-wheel with wrought iron arms, main belt pulley. The whole mounted on one massive framing so as to be entirely independent of the building. The two cylinders to be so arranged as to be worked together, or separately, according to the amount of power required.

2 Strong wrought iron Cylindrical, double flued, high pressure boilers, each 14 feet long × 6′ 3″ diameter, fire flues 2′ 3″ diameter, steam dome 2 feet diameter, 2 feet 9 inches high, having strong cast iron surface planed, cover bolted on strong cast iron man hole frame, and wrought-iron cover and fixings. The Boiler stayed in the most substantial manner, with three longitudinal stays above the flues, and two under the flues, fitted with wrought iron front plates and doors, dead plates, middle bearers, bridge plates, fire bars, damper and frame counterpoise, &c., also including one registered absolute safety valve, 12 inches area and weights for 50 lbs. pressure. One Shaeffer's patent steam pressure guage, graduated to indicate from 1 to 60 lbs. pressure. Shut off valve, check valve, two brass hand guage cocks, set of brass cocks for glass guage, mud pipe and brass blow off cock. These Boilers so arranged as to be worked together or separately as may be desired.

1 Pumping engine 2¾″ ram to supply water to the boilers; and pipes to convey steam from both or either of the boilers to the steam engine, consisting of 36 feet of 2 inches bore wrought iron steam pipe, with suitable bends, exhaust steam pipe, and steam and water pipes for pumping engine.

One hundred and twenty feet of wrought iron bright shafting 3 inches diameter,

5 Cast iron coupling boxes bored, turned, key seated and fitted to the shafting with steel keys.

16 Pullies turned, bored, key seated, and fitted to the shafting, with steel keys diameter 18 inches, breadth 12 inches.

9 Cast iron hangers for the 3 inches shafting, fitted with cast iron caps, finished brass bearing and bolts to attach them to the roof timbers.

2 Wall boxes each fitted with a pedestal having brasses, &c., complete.

One hundred feet of best leather strapping 2 inches broad.

One hundred and fifty feet do do 2½ inches broad.

One hundred and fifty feet do do 3 inches broad.

One hundred feet do do 3½ inches broad.

Four Travelling Tables for the service of four vertical wall Drilling Machines and rails for the Tables to move to and from.

Four sets of Self-acting motion for Drilling Machines, Machines, &c. expected from England for General Workshop.

1 Endless sawing machine for cutting curves.
1 Improved wood planing machine for logs like the one at Woolwich.
1 Boiler to supply water to the engines of wood planing machine 14 × 5 feet 6.
1 Pumping engine 2¼ inches ram.
22 Pullies 18 inches diameter and 2 pairs of mitre wheels.
300 Feet of leather strapping.
600 Feet of wrought iron bridge rails.
4 Turn tables, 2 trucks.
1 Set of hand screwing tackle from ¼ inch to 1½ inches.
2 Ratchet drills and 4 drill stands.
4 Windlasses or crabs.
12 Pairs of patent pully blocks.
1 Wheel cutting machine.
1 Double pillar—double geered drill.
2 6 Inches paring or slotting machines.
2 Curvilinear planing machines.
1 Bolt screwing machine.
1 Portable drill.
1 3 Feet 6 inches planing machine.
1 Slotting drill.
1 Ambidextre Lathe.

Engines, Boilers, Machines, &c., for the Smithey already received.

1 Registered high pressure Steam Engine 10½ inches cylinder, 12 inches stroke, with improved metallic piston, force pump and governor; wrought iron crank and crank shaft, and two fly wheels the runs of which are turned so as to act as pullies for driving the fans. The whole mounted on a substantial planed base plate.

1 Strong wrought iron Cylindrical Boiler 14 feet long, 5 feet 6 inches diameter with internal fire-flue 33 inches diameter, Steam Dome fitted with strong cast iron planed cover-stayed in the most effective manner, with wrought iron longitudinal stays, fitted with wrought iron front plate, fire door, dead plate, bearers and fire bars. Damper and frame with counterpoise, &c. also including registered absolute safety valve and weights to 50 lbs. pressure, one Shaeffer's patent Steam pressure guage to indicate to 60 lbs. pressure, shut off valve, check valve, two brass hand guage cocks, set of Brass Cocks for glass guage mud pipe and blow off Cock.

Steam and water pipes to connect the Engine and Boiler and Exhaust Steam pipe.
Sixty-four feet of flanged cast iron pipes 12 inches bore.
Seven hundred feet of flanged cast iron pipes 6 inches bore.

50 Double flanged joint pieces with branch to Smiths' fires fitted with blast regulater, all flanges turned and fitted with bolts for connecting.

Also Screwed bolts and nuts for jointing the pipes.

Nasmyth's Steam Hammers, &c.

1 Steam Hammer, 15 Cwt.
1 do do 7 ,,
1 do Boiler for do
1 Furnace for do

Machines &c., expected from England for the Smithy.

2 3 feet Fans for Smithy Fires
223 feet of 6 inches flanged cast iron Pipes.
22 Double flanged Joint pieces.

Machines &c., expected from England for the Foundry.

1 Cupola for 5 tons metal with pipes, tueyers, &c.
1 Charging stage with stairs.
1 Crane and hoisting Crab for lifting metal to Cupola.
1 3 feet Fan.
1 5 Tons Ladle, one 3 Ton do. one. 15 cwt. one 5 cwt. and two 2½.
6 Hand Ladles.
1 Travelling Crane for Foundry, 36 feet wide and 60 long to lift 10 tons.
200 feet of wrought iron Bridge Rails.
1 Beam for turning over boxes, 4 Canhooks, 4 J hooks.
4 Screw or tightening chains, 4 leg chains, 12 rammers.
1 Sledge Hammer, 2 hand Hammers 6 wood mallets, 12 Moulders spades.
1 Coke Shovel, 2 watering Cans, 9 Riddles and Sieves assorted.
4 Hand Brushes, 2 Pair Bellows, 6 Blocking bags, 4 water Buckets.
1 Set of Cupola Irons with screen.
1 Steam Engine.

Engines, Machines &c. for the Saw Mill already received.

1 Large Travelling Saw Bed.
1 Large hand Bench.
1 Small Saw Bench.
8 Circular Saws for large Travelling Beds 2-60 inches, 2-54 inches, 2-48 inches, and 2-42 inches.
9 Circular Saws for large hand Bench, 3-42 inches, 3-36 inches, and 3-30 inches.
6 Circular Saws for small Saw Bench 2-24 inches, 2-20 inches and 2-18 inches.

1 High Pressure Wall Engine 13½ inches Cylinder 15 inches stroke, improved metallic piston governor, wrought iron cranks and crank shaft with main shaft and pulleys and 200 feet of steam pipe for working the Saw Mills with shafting and pulleys &c.

Gun Carriage Manufactory,
Madras 24th November 1857.

(Signed) J. MAITLAND, Major,
Suptt. Gun Carriage Manufactory.

Applied for from England but not received.

3 Smoke Prevention apparatus for the Steam Boilers.
1 do do do for the Steam Hammer Boiler.

(A true Copy)

(Signed) H. W. RAWLINS, *Captain,*
Garrison Engineer.

No. 60. ORDER THEREON, No. 2267; dated 5th December 1857.

Ordered to be referred to the Military Department for consideration.

(Signed) H. FORBES,
Acting Secretary to Government.

-1-

Central Office of Public Works
Fort Saint George
3d December 1857

Military

No. 5664.

From,
The Chief Engineer

To,
The Secretary to Government F.W.D.

Sir,

With reference to Extract Mins: Cons: No 1148 dated 28th July last I have the honor to forward for submission to Government plans and Estimates of additional buildings and improvements proposed for adapting the Gun Carriage Manufactory to the employment of the Machinery lately sent out from England for that purpose.

2 The estimate amounting in the aggregate to Rupees (98,100) Ninety eight thousand and one hundred, has been carefully framed by the Garrison Engineer in communication with the Superintendent Major Maitland as well as the Mechanical Engineers sent out by the Honorable Court.

3 The reasons for deciding on the erection of the buildings on the present site are correctly stated in Para 3 of Captain Rawlins's letter.

4 The estimates enumerated in Para 6 are as

Enclosures 9.
1 Letter from the Garrison Engineer No 501 dated 27th November 1857
1 Memo.
1 Abstract Estimate.
6 Plans.
1

follows

follows:—

General Workshop	20,300
Steam Saw Mills	16,900
Alterations and additions to Smithy	15,600
Buildings for Nasmyth Hammers	13,900
Tramway	3,900
Platform for tiring wheels	1,500
Additions to Foundry	6,000
	98,100

5 In Para 7 Captain Rawlins specifies the dimensions and capabilities of the general workshop, and shews that it is amply provided with every requisite, for the most efficient operation.

6 Para 8 describes the provision made for the Steam Saw Mills.—

7 In Para 9 the alterations and additions to the present Smithy are specified.

8 Para 10 Shews the Arrangements for setting up the two Nasmyth Hammers.—

9 The Railway and platform for tiring Wheels are described in Paras 11 and 12, and in Para 13 the Estimate for additions to the Foundry is explained.

10 The Plans have undergone as careful examination in this Office as the time allows, and as they as well as the estimates appear to be most carefully and correctly prepared, I beg to recommend the estimates for entry in the Budget of 1858/59 as the Brickwork is already begun, and should be carried on as early as practicable.

I have the honor to be
Sir,
Your most Obt Servt
Alex Taylor Colonel
Chief Engineer.

Central Office of P. W.
Fort—Saint George,
3 December 1857.

L.R.

To
The Secretary to Government P. W. D.

Ans 28 July/57. N° 87185.

Military Department
Ord. 8th Dec. 1857. 528-
2401-

From The Chief Engineer

To The Secretary to Government
N.W.P.

Dated 3d
Received 12th December 1857

No 5864.

Enclosures 8.

Ans. 8th Dec. 1857.

Intimating that the Estimate contained in the letter of the 3d Dec. 1857 for annual repairs to Bungalows, Godowns, Hospitals, Barracks and Compounds at the Town Carriage Factory at Cawnpore — Will be ordered

N° 156

N° 2267.

Ordered, to be referred to the Military Board. &c. &c. &c.

Fort St. George
5. Dec 1857

Copied to the Military Department with 8 Enclosures.