M.R.O. 1—77,006—8-6-37.

(1) Number of pages_____

(2) Date of repair_____

(3) Initials of the Referencer_____

MADRAS RECORD OFFICE.

Government of Madras.

Public works **DEPARTMENT.**

G.O. No. 356, 357, 2996 Press / Mis.

Dated 17 - 12 - 1872.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 17th December 1872.

No. 356. Read the following letter from the Superintending Engineer, 7th Division, to the Chief Engineer and Secretary to Government, Public Works Department, dated Coimbatore, 26th November 1872, No. 208:—

With reference to your memorandum, No. 174, dated 22nd October last, I have the honour to forward two skeleton estimates with specification therein called for.

Estimate for constructing Latrines of twenty-eight Seats of Dry-earth System, framed on the Plan sanctioned in G. O., No. 45, of 7th May 1872.

No.	Measurement. L.	B.	D.	Contents	Particulars of Work.	Rate. Rs.	A.	P.	Per	Amount Rs.	A.	P.
24	2½	2½	2	300	Foundation to pillars							
24	2	2	1	96	Basement to do.							
...	110	1½	1	137½	Foundation to walls around							
1	45	½	½	25 9/16	Do. to centre screen wall							
2	12¼	1½	½	22 11/16	Do. to exterior screen walls ...							
26	3½	½	½	36 9/16	Do. to screen walls dividing seats...							
2	4½	4	½	18	Do. to water cisterns							
2	3	3	½	9	Do. to urinal do.							
2	9½	1½	½	17 11/32	Do. to dry-earth stores							
				662 11/16	Cubic feet, or 24½ cubic yards of rough stone-in-chunam				C. yd.			
12	1½	1½	6½	236¼	} Pillars above							
12	1½	1½	5	135								
...	114	1	8½	339	Walls around including basement							
...	12	1	5½	69	Do. on sides of openings including basement.							
1	45	½	3	101¼	Centre screen walls do. ...							
2	12	1	4	96	Exterior do. do. ...							
26	3½	½	3½	113½	Screen walls dividing seats							
2	14	½	2½	35	Walls of water cisterns							
2	8	½	1½	12	Do. of urinal do.							
2	9¼	½	2	29¼	Do of dry-earth store							
2	44	2½	½	165	Under-channels behind the seats							
				1,391¼	Cubic feet, or 51½ cubic yards of brick or stone-in-chunam including one coat of plaster...				C. yd.			
...	45	....	...	45	Running feet of coping with do.				R. ft.			
28	1½	1	½	28	Covering stones over openings				Each.			
28	2½	4	1	280	Platform, deducting for troughs							
				280	Cubic feet, or 10⅓ cubic yards brick or stone-in-chunam and tarred over				C. yd.			
28	6	1½	...	252	Troughs and sides							
2	44	1½	...	110	Channels behind the seats							
2	56	½	...	56	Urinal channels							
2	1½	1½	...	4½	Do. cisterns							
2	3	3	...	18	Water do.							
				440½	Square feet, or 4⅓ squares of flooring with jelly-in-chunam and asphalted over, ½ inch thick				Sqr.			
...	50	9	...	450	Passages							
2	50	4	...	400	Centre floor							
				850	Square feet, or 8½ squares flooring with jelly in chunam and tarred over				Do.			
...	500	3	...	1,500	Square feet, or 15 squares of tarring the walls behind the seats, interior pillars, dividing screen walls, front of the platform, dry-earth stores, and the walls of the water and urinary cisterns inside				Do.			
2	55	14	...	1,540	Square feet, or 15⅜ squares of roofing with jungle-wood bressummers, struts and brackets, purlins, rafters, feather edges, reepers, nails, pot or pan-tiles and chunam borders, etc., complete				Do.			
...	114	2½	...	285	Square feet, or 2 17/18 squares of honeycomb work with brick or tiles in chunam ...				Do.			
					Sundries, etc, including excavation ...							
					Total Estimate ...							

Coimbatore,
26th November 1872.

(Signed) W. FAREWELL, Lieut.-Colonel, Staff Corps,
Superintending Engineer, 7th Division.

Estimate for a new Design of Latrine of Dry-earth System to be constructed at the Taluq Cutcherries in the 7th Division, Public Works Department, for eight Seats, as per Plan sanctioned in G. O., No. 1,887, *dated 9th August* 1872.

Number.	Measurement. Length.	Breadth.	Depth.	Contents.	Particulars of Work.	Per	Rate. Rs.	A.	P.	Amount. Rs.	A.	P.	Total.
12	2	2	2	96	Foundation to pillars								
12	1½	1½	1	27	Basement to do.								
...	87	1½	1	103½	Foundation to walls around and centre ...								
10	3½	1	½	26¼	Do. to screen walls interior								
4	4	1	½	12	Do. to dry-earth stores								
2	2½	2½	½	7 9/16	Do. to urinal cisterns								
2	6	1½	1½	22½	Do. to screen wall exterior								
				302 1/16	Cubic feet, or 11 cubic yards of rough stone-in-chunam	C. yd.							
12	1½	1½	6½	98 3/32	Pillars above (average height)								
...	94	½	3½	246 3/32	Walls around and centre including basement.								
...	4	½	2½	7½	Ends above the walls behind the seat to support honeycomb work								
10	3½	½	3½	91 7/32	Screen walls interior including basement ...								
4	4	½	2	16	Dry-earth stores								
2	7½	½	1½	8 7/32	Urinal cisterns								
...	14 1/16	2½	½	27 11/32	Under centre channel								
2	5½	½	4½	37½	Screen wall exterior								
				534 1/16	Cubic feet, or 20 cubic yards of brick or stone-in-chunam including one coat of plaster	Do.							
2	6	...	...	12	Running feet of coping with do. over screen wall exterior	R ft.							
8	1½	½	½	8	Covering stones over the openings	Each							
8	2½	4	1	80	Platform deducting for trough								
				80	Cubic feet, or 3 cubic yards of brick or stone-in-chunam and tarred over	C. yd.							
...	14¼	1½	...	18 7/16	Centre channel								
8	6	½	..	36	Troughs								
2	20	½	...	20	Urinary channels								
2	1½	1½	...	4½	Do. cisterns								
				78 13/16	Square feet, or ⅛ squares of flooring with jelly-in-chunam and asphalted over it half inch thick	Sqre.							
2	20½	3	...	124½	} Passages								
2	12½	3	...	75									
...	14¼	2½	....	33 3/16	Centre floor								
				232 11/16	Square feet, or 2⅜ squares of flooring with jelly in chunam and tarred over	Do.							
...	183	...	3	549	Square feet, or 5½ squares of tarring the walls behind the seats, interior screen walls, dry-earth store, and inside walls of the urinal cisterns	Do.							
...	25	...	26	650	Square feet, or 6½ squares of roofing with jungle-wood pillar plates, bressummers, rafters, reepers, nails, pot or pan-tiles, and chunam borders, etc	Do.							
...	90	...	2½	225	Square feet, or 2¼ squares of honeycomb work with brick or tile in chunam ...	Do.							
					Total ...								
					Sundries, etc., including excavation and concrete bed for foundation								
					Total Estimate ...								

Coimbatore, (Signed) W. FAREWELL, Lieut.-Colonel, Staff Corps,
26th November 1872. *Superintending Engineer, 7th Division.*

Specification for constructing a Latrine of eight Seats of Dry-earth System.

Excavation.—Excavation to be made to the required depth according to the nature of the soil and well-rammed with six inches of concrete.

Foundation and Basement.—Rough stone-in-chunam of the dimensions given in the plan should be used.

Superstructure.—Pillars, walls between them, and troughs behind the seats of the dimensions given in plan to be of burnt bricks or of stone-in-chunam properly bonded, leaving openings to troughs in the interior walls, the exterior screen walls to have six inches coping, and the whole structure to receive one coat of chunam plaster well floated and whitewashed, except the portions where tarred.

Honeycomb Work.—To be of either tiles or bricks-in-chunam over the walls all round and centre to two and a half feet high, as shown in the plan.

Covering Stones over Openings.—To be built in the walls over the openings to the troughs, as shown in the plan.

Platform and Troughs.—To be of burnt brick or stone in chunam, with trough or duct in the centre, sloping both ways, as per section in the plan. The portion used for standing upon the platform to be of stone where such can be economically provided.

Asphalte-flooring and Tarring.—The main central trough, under-ducts and the floor inside of the urinary cisterns to be asphalted half inch thick, and all the walls inside and earth-bins to the height of three feet to be paid over with a coat of tar and asphalte, 3 lbs. of tar to 1 lb. of asphalte well-boiled together and applied hot.

Jelly-flooring.—The passage everywhere to be floored with three-inch jelly-in-chunam well-rammed and tarred over with the same mixture as above noted.

Roof.—Roof to consist of good jungle-wood bressummer, pillar caps, rafters with ties, reepers, and feather edge to eaves to be fastened with suitable nails and covered with pan or pot-tiles and chunam borders.

Gables.—To be left open for ventilation.

All building rubbish to be cleared away from the vicinity of the building after its completion.

Coimbatore, (Signed) W. FAREWELL, Lieut.-Colonel, Staff Corps,
26th November 1872. *Superintending Engineer, 7th Division.*

No. 357. Order thereon, 17th December 1872, No. 2,936.

CIVIL WORKS, No. 19.

Ordered that these estimates with specification be printed and circulated to District Engineers, and to Municipalities through the Financial Department, with reference to the under-mentioned Orders:—

No. 45, of 17th May 1872.
,, 1,887, of 9th August 1872.

(True Extract.)

Colonel, R. E.,
Secretary to Government.

To the District Engineers.
,, Major R. B. Kennedy.
,, the Financial Department.
,, the Revenue do.

Exd. A. S. Rodgers.

Estimate for a new design of Latrine of Dry Earth System to be constructed at the Talaq Cutcherries, in the 7th Division P. W. Department for 8 seats as per Plan sanctioned in G. O. No 1887 dated 9th August 1872

No.	Measurement Length	Breadth	Depth	Content	Particulars of work	Per	Rate	Amount	Total
12	2	2	2	96	Foundation to Pillars				
12	1½	1½	1	27	Basement to do				
"	87	1¼	1.	108¾	Foundation to walls around and Centre.				
10	3½	1	¾	26¼	do to screen walls interior				
4	4	1	¾	12	do to Dry earth Stores				
2	2¾	2¾	½	7 9/16	do to Urinal cisterns				
2	6	1¼	1½	22½	do to Screen wall exterior				
				302/16	C/ft or 11 C/yds of Rough Stone in Chunam	C/yd.			
12	1⅛	1⅛	6½	98 23/32	Pillars above Average height				
"	94	¾	3½	246¾	Walls around and Centre inclu-ding basement				
"	4	¾	2½	7½	Ends above the walls behind the seat to support Honey Comb work				
10	3½	¾	3½	91⅞	Screen walls interior inclu-ding basement				
4	4	½	2	16	Dry earth stores				
2	7½	⅜	1½	8 7/16	Urinal Cisterns				
"	14¾	2½	¾	27 21/32	Under Centre Channel				
2	5½	¾	4½	37⅞	Screen wall exterior				
				534/16	C/ft or 20 C/yds of Brick or Stone in Chunam including 1 Coat of Plaster	do			
2	6	"	"	12	R/ft of Coping with do over Screen wall exterior	R/ft			
8	1½	¾	⅓	8	Covering Stones over the open-ings	Ea			

Carried Over

Estimate for Constructing Latrines of 28 Seats of Dry Earth System framed on the Plan sanctioned in G.O. No 450 of 7th May 1872

Number	Length	Breadth	Depth	Contents	Particulars of work.	Rate	Per	Amount
						96		
24	2½	2½	2	300	Foundation to Pillars			
24	2	2	1	96	Basement to do			
"	110	1¼	1	137½	Foundation to walls around			
1	45	¾	¾	25 7/16	do to Centre Screen wall			
2	12¼	1¼	¾	22 31/32	do to Exterior Screen walls			
26	3¾	¾	½	36 9/16	do to Screen walls dividing Seats			
2	4½	4	½	18	do to Water Cisterns			
2	3	3	½	9	do to Urinal do			
2	9¼	1¼	¾	17 11/32	do to Dry Earth Stores			
				662 11/16	Cft or 24½ Cyds of Rough Stone in Chunam		C.yd.	
12	1½	1½	8¾	236¼	Pillars above			
12	1½	1½	5	135				
"	114	1	3½	399	Walls around including Basement			
"	12	1	5¾	69	do on sides of openings including do			
1	45	¾	3	101¼	Centre Screen walls do do			
2	12	1	4	96	Exterior do do do do			
26	3¾	⅓	3½	113¾	Screen walls dividing Seats			
2	14	½	2½	35	Walls of Water Cisterns			
2	8	½	1½	12	do of Urinal do			
2	9¾	¾	2	29¼	do of Dry earth Store			
2	44	2½	¾	165	Under channels behind the seats			
				1391½	Cft or 51½ C.yds of Brick or Stone in Chunam including 1 Coat of plaster		C.yd.	
45	"	"		45	Rft Neck of Coping with do		Rft	
28	1½	1	⅓	28	Covering Stones over Openings		Ea	
28	2½	4	1	280	Platform, deducting for troughs			
				280	Cft or 10⅓ C.yds Brick or Stone in Chunam and tarred over		C.yd	

P.W.S. 811/72.

Estimate for
Designs & Estimate
Dry earth Latrines
Tore Cantonment
Executed
Executive Engineer
& Draftsman

Copy
Executive Engineer's Dft
Estimate & Designs
for Dry Earth Latrines
Lent to D. Pollen Esq
Dated 26th December
1872. No. 208.

28	6	1½	"	252	Troughs and sides
2	44	1¼	"	110	Channels behind the seats
2	56	½	"	56	Urinal Channels
2	1½	1½	"	4½	do Cisterns
2	3	3	"	18	Water do
				440½	Sqft or 4 3/5 Sqrs of flooring with Jelly in Chunnam & asphalted over it ½ inch thick
	50	9	"	450	Passages
2	50	4	"	400	Centre floor
				850	Sqft or 8½ Sqrs flooring with Jelly in Chunnam and tarred over
	500	3	"	1500	Sqft or 15 Sqrs of tarring the walls behind the seats, interior pillars, dividing screen walls, front of the Plat forms, dry earth stores and the walls of the water and Urinary Cisterns inside
2	55	14	"	1540	Sqft or 15 3/5 Sqrs of Roofing with Junglewood Brepsummers, Studs & Brackets, purlins, rafters, feather edges, veepers, Rails, Pot or Pan tiles & Chunnam borders &ca Complete
	111	2½	"	285	Sqft or 2 17/20 Sqrs of Honey Combe work with Brick or tiles in Chunnam
					Sundries &ca including excavation
					Total Estimate Rupees

Supy Engineer's Office 7th Dec
Coimbatore 26 November 1872

Lt Col R E
Superintending Engineer 7th Dn

Specification for Constructing a Latrine of 8 seats of Dry Earth System.

Excavation. Excavation to be made to the required depth according to the nature of the soil & well rammed with 6 inches of Concrete.

Foundation Basement. Rough stone in Chinam of the dimensions given in the Plan should be used.

Superstructure. Pillars, walls between them, and Troughs behind the seats of the dimensions given in Plan to be of burnt Bricks or of stone in Chinam properly bonded, leaving openings to troughs in the interior walls, the exterior screen walls to have 6 inches coping & the whole structure to receive one coat of Chinam plaster well floated and white washed except the portions where tarred.

Honey Comb work. To be of either tiles or bricks in Chinam over the walls all round & centre to 2½ feet high as shewn in the Plan.

Covering stones over openings To be built in the walls over the openings to the troughs as shewn in the Plan.

Platform & Troughs To be of burnt brick or stone in Chinam, with trough or duct in the centre, sloping both ways as per section in the Plan. The portion used for standing upon the Platform to be of stone where such can be economically provided.

Asphalte flooring & tarring The main central trough, under ducts and the floor inside of the urinary cistern to be asphalted ½ inch thick, and

all

In accordance with the letter from the Offg Engineer & Secretary to Govt P.W.D. dated 26th September 1912 No. 208.

Offg Engineer & Ex-Officio Secretary to Govt.

P.W.D. 8811/12.

Estimate for Construction of Latrine as per Plan & Specification attached.

Estimated Cost Rs. 128

Executive Engineer.

C.C. to Mr. [illegible] 17-11-12.

all the walls inside & earth bins to the
height of 3 feet to be paid over with a coat
of tar & asphalte, 3 lbs of tar to 1 lb of asphalte
well boiled together and applied hot.

The passage everywhere to be Jelly flooring
floored with 3" jelly in Chunam well
rammed and tarred over with the same
mixture as above noted.

Roof to consist of good jungle Roof
wood breastsummer, pillar caps, Rafters with
ties, reepers & feather edge to eaves to be
fastened with suitable nails & covered
with Pan or Pot tiles & Chunam borders.

To be left open for Gables
ventilation.

All building rubbish to be
cleared away from the vicinity of the
building after its completion.

W Smith Lt Fell S.C.

Supt Engr 7th Dn

Supt Engr Office
7th Dn Coimbatore
25th November 1872

No 208 ... Suptg Engr Office 7th Dn
Coimbatore 26th Novr 1872

From The Superintending Engineer
7th Division

To The Chief Engineer and
Secretary to Govt P.W.D.

Sir,

Enclosures 3. ... With reference to your Memo No 174, dated 22d October last, I have the honor to forward two Skeleton Estimates with Specification, therein called for.

I have the honor to be
Sir
Your most Obedt Servant
[signature] Lt Coll R.E.
Supg Engineer 7th Dn

No 208 dated 26th November 1872. Rec 2 Estimates

Supg Engr 7th Dn

P.W. 5881/72.

Rup Office Lr No 555

Specifications for Contingency acct Trichinopoly acct Paper transmitted herewith

Clo 5881

Govt. of {1872} Madras.

PUBLIC WORKS.

To The District Engineers

Dated

Rec'd. Encl. 3

G. O. 17th Decr 1872 No. 2996.

Nos. 35893-57

Subject - The estimates with specifications for latrines of dry earth system ordered to be printed & circulated to Dist.t Engrs & to Municipalities through the Dist.t Offs.