(1) பக்கங்களின் எண்ணிக்கை 74

(2) புதுக்கித் திருப்பிய நாள் 7/88

(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

பொதுப்பணி துறை

அரசாணை எண்.
மு. கோப்புத் தாள் எண். 2527 — அச்சகம்
பலவகை

நாள் : 17-8-1888 ~~198~~

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

ஆவண. கா-1—18,006—15-6-87.

2527
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17TH AUGUST 1888, No. 2527 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Military Works.

READ—the following papers:—

From Lieutenant-Colonel C. W. BRERETON, R.A., Assistant Inspector-General of Ordnance (in charge Ordnance Office), to the Secretary to Government, Military Department, dated Fort St. George, 18th July 1888, No. 64 G.

Letter No. 566, dated 22nd June 1888, from the Superintending Engineer, III Circle, Bellary, and its accompaniments.

In compliance with the order conveyed in Government of Madras Military Department No. 3095, dated 9th May 1888, I have the honor to forward, herewith, duly countersigned, in token of approval, in terms of paras. 988 and 989, Code of Regulations for the Public Works Department, 1886, plans and estimates, amounting to Rs. 45,500, for constructing workshops in the Bellary Arsenal, for approval and transfer to the Public Works Department for disposal.

2. The project has received the approval of the Director-General of Ordnance in India, and Rs. 6,858 * were expended thereon during the official year 1887-88. Rs. 22,650 * have been allotted for the current official year, and in order to prevent any of the funds lapsing and also to ensure the early completion of the workshops which are urgently required, I would request that Government in the Public Works Department may be moved to push on the work as much as possible this year.

3. Application has been made to the Director-General of Ordnance in India in the statement of new buildings required for the ensuing official year to provide funds for the completion of the work from the grant for ordnance works for that year.

No. 4974, Military.

Approved and transferred to the Public Works Department for disposal.

OOTACAMUND,
20th July 1888.

(Signed) A. KENNEY-HERBERT, Brigdr.-Genl.,
Secretary to Government.

Note by the Chief Engineer, Public Works Department.

The estimate, amounting to Rs. 45,500, for constructing workshops in the Arsenal at Bellary, is submitted for the sanction of Government with remark that it appears necessary that the workshops should be provided with ramps instead of steps.

(Signed) J. O. HASTED, Colonel, R.E.,
Chief Engineer, P.W.D.

13th August 1888.

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* Order of Government, Public Works No. 1199 W., dated 23rd April 1888, recorded in Government of Madras Military Department No. 3354, dated 18th May 1888.

BUILDINGS AND ROADS.
MILITARY WORKS.

Govt. of {1888} Madras.
PUBLIC WORKS.

Dated August, 17th.

Recd. *Encl.*

G.O., 17th Aug. 1888, No. 2527 W.

AUGUST.

Arsenal at Bellary

Estimate for constructing workshops in the —, sanctioned.

2527/3

Appendix to G.O., No. 2497 W., dated 25th September 1886.

BUILDINGS AND ROADS.

Schedule of the probable requirements of the Madras Presidency on account of Military Works for 1887-88.

Head of classification.	Executive division.	Locality.	Item No.	Projects and works.	Class.	Original Works.					Repairs.	Establishment.	Tools and plant.	Suspense.	Grand Total.	Remarks.
						Major works.			Minor works.	Total.						
						Works in progress.	New works.	Total.								
						RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	
Accommodation for Troops—Buildings for European Troops in the Plains—Permanent.	West Coast.	Malapuram.	1	New barracks for a detachment of British infantry to accommodate 100 men.	A	20,000	..	..	..	..	..	..	..	..	..	Estimate of Rs. 1,35,697 was sanctioned in G.O., No. 2305 W., dated 13th September 1886. Item No. 1, class A works, budget of 1886-87. Revised estimate is necessary.
	Presidency.	Bangalore.	2	Parade barracks, alterations and additions to wash-houses.	B	..	12,500	..	..	..	..	..	..	..	..	Estimate of Rs. 12,500 was sanctioned in G.O., No. 1102 W., dated 7th May 1880. Item No. 23, class C works, budget of 1886-87.
	Nilgiri ..	Wellington.	3	Quarters for three apothecaries.	B	..	16,000	..	..	..	..	..	..	..	..	Estimate is awaited.
	Bellary ..	Bellary ..	4	Collarmaker and wheeler's shop, Royal Artillery.	B	..	5,663	..	..	..	..	..	..	..	..	Estimate of Rs. 5,663 was sanctioned in G.O., No. 914 W., dated 3rd April 1884. Item No. 3, class C works, budget of 1886-87.
	Presidency.	Fort St. George.	5	Converting a racquet court into a covered gymnasium.	B	9,850	..	..	..	..	..	..	..	..	..	Estimate of Rs. 11,390 was sanctioned in G.O., No. 1552 W., dated 20th June 1884. Item No. 17, class C works, budget of 1886-87.
	Do. ..	Do. ..	6	Remodelling drainage ..	B	..	10,000	..	..	..	..	..	..	..	..	Estimate is awaited.
	Chingleput.	St. Thomas' Mount.	7	A wheeler and collarmaker's shop, West barracks.	B	..	5,660	..	..	..	..	..	..	..	..	Estimate of Rs. 5,660 was sanctioned in G.O., No. 2717 W., dated 3rd November 1884. Item No. 24, class C works, budget of 1886-87.
	West Coast.	Calicut ..	8	Providing barrack accommodation for 100 men.	B	..	..	..	..	..	..	..	..	..	..	Estimate is awaited. Amount not entered by the Quartermaster-General.
	Presidency.	Bangalore.	9	Quarters for schoolmaster and schoolmistress.	C	..	10,240	..	..	..	..	..	..	..	..	Estimate of Rs. 10,240, was sanctioned in G.O., No. 2384 W., dated 20th September 1886. Item No. 19, class C. works, budget of 1886-87.

Schedule of the probable requirements of the Madras Presidency on account of Military Works for 1887-88—*cont.*

Head of classification.	Executive division.	Locality.	Item No.	Project and works.	Class.	Original Works. Major works. Works in progress.	Original Works. Major works. New works.	Original Works. Major works. Total.	Original Works. Minor works.	Original Works. Total.	Repairs.	Establishment.	Tools and plant.	Suspense.	Grand Total.	Remarks.
						RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	
European Troops in the Plains—Permanent—*cont.*	Presidency.	Bangalore.	10	New orderly-room for 12th Lancers, or conversion of Quartermaster's stores into orderly-room and stores.	C	..	6,500	..	..	..	..	..	..	..	..	Estimate is awaited.
	Do. ..	Do. ..	11	Quarters for senior apothecary, North station hospital.	C	..	5,300	..	..	..	..	..	..	..	..	Estimate of Rs. 5,300 was sanctioned in G.O., No. 3385 W., dated 27th November 1883. Item No. 20, class C works, budget of 1886-87.
	Do. ..	Do. ..	12	Quarters for the assistant apothecary, North station hospital.	C	..	4,773	..	..	..	..	..	..	..	..	Estimate of Rs. 4,773 was sanctioned in G.O., No. 938 W., dated 5th April 1884. Item No. 21, class C works, budget of 1886-87.
	Nilgiri ..	Wellington.	13	Quarters for barrack sergeant.	C	..	7,348	..	..	..	..	..	..	..	..	Estimate of Rs. 7,348 was sanctioned in G.O., No. 1941 W., dated 21st August 1885. Item No. 10, class C works, budget of 1886-87.
	Do. ..	Do. ..	14	Gymnasium	C	..	10,000	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 7, class C works, budget of 1886-87.
	Bellary ..	Bellary ..	15	A new gun-shed, Royal Artillery.	C	..	3,970	..	..	..	..	..	..	..	..	Estimate is awaited.
	Do. ..	Do. ..	16	Swimming-bath, British infantry.	C	..	7,644	..	..	..	..	..	..	..	..	Estimate of Rs. 7,644 was sanctioned in G.O., No. 2434 W., dated 19th October 1885. Item No. 4, class C works, budget of 1886-87.
	Do. ..	Do. ..	17	Infectious disease ward and cook-house, station hospital.	C	..	6,140	..	..	..	..	..	..	..	..	Estimate of Rs. 6,140 was sanctioned in G.O., No. 320 W., dated 7th February 1884. Item No. 5, class C works, budget of 1886-87.
	Do. ..	Do. ..	18	Alterations and additions to military prison and adjoining buildings.	C	..	11,260	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 2, class C works, budget of 1886-87.
	Do. ..	Do. ..	19	Armourer's shop for the arsenal.	C	..	4,650	..	..	..	..	..	..	..	..	Estimate is awaited.
	West Coast.	Cannanore.	20	Plunge-bath for European infantry barracks.	C	..	4,640	..	..	..	..	..	..	..	..	Estimate of Rs. 4,640 was sanctioned in G.O., No. 418, dated 16th February 1876. Item No. 11, class C works, budget of 1885-87.

Head of classification.	Executive division.	Locality.	Item No.	Project and works.	Class.	Works in progress.	New works.	Total.	Minor works.	Total.	Repairs.	Establishment.	Tools and plant.	Suspense.	Grand Total.	Remarks.
Accommodation for Troops—Buildings for	Do. ..	Do. ..	21	Improving latrines for European infantry barracks.	C	..	2,780	..	..	..	..	..	..	..	..	Estimate of Rs. 2,780 was sanctioned in G.O., No. 1056 W., dated 4th April 1879. Item No. 12, class C works, budget of 1886-87.
	Do. ..	Do. ..	22	Improving the roof of regimental guard-room, European infantry barracks.	C	..	5,060	..	..	..	..	..	..	..	..	Estimate is awaited.
	Chingleput.	St. Thomas' Mount.	23	Sergeants' mess for East barracks.	C	..	6,000	..	..	..	..	..	..	..	..	Do.
	Do. ..	Do. ..	24	General improvements to the drains of the cantonment.	C	..	10,000	..	..	..	..	..	..	..	..	Do.
	Do. ..	Do. ..	25	Quarters for three medical subordinates, station hospital.	C	..	8,000	..	..	..	..	..	..	..	..	Do.
	Do. ..	Do. ..	26	Quarters for head-quarter's staff, Royal Artillery.	C	..	12,000	..	..	..	..	..	..	..	..	Do.
	Do. ..	Do. ..	27	Battery office for P/1st, Royal Artillery.	C	..	5,000	..	..	..	..	..	..	..	..	Do.
	Do. ..	Do. ..	28	Raising the roof of harness-rooms, troop lines.	C	..	4,200	..	..	..	..	..	..	..	..	Estimate of Rs. 4,200 was sanctioned in G.O., No. 5137 W., dated 17th December 1881. Item No. 25, class C works, budget of 1886-87.
	Do. ..	Do. ..	29	Wooden shed at the Proof range.	C	..	2,820	..	..	..	..	..	..	..	..	Estimate of Rs. 2,820 was sanctioned in G.O., No. 3077 W., dated 13th December 1884. Item No. 26, class C works, budget of 1886-87.
	Do. ..	Do. ..	30	Converting the disused gun-shed between the North barracks and the main guard into a coffee-shop, recreation-room, and library.	C	..	2,520	..	..	..	..	..	..	..	..	Estimate of Rs. 2,520 was sanctioned in G.O., No. 1234 W., dated 28th May 1885. Item No. 27, class C works, budget of 1886-87.
	Do. ..	Pallávaram.	31	One mortuary room for each of the three hospitals Nos. 1 to 3.	C	..	3,000	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 28, class C works, budget of 1886-87.
	Do. ..	Poonamallee.	32	Improvements to the old barracks with possibility of obviating construction of the new.	C	..	5,000	..	..	..	..	..	..	..	..	Estimate is awaited.
	Do. ..	Do. ..	33	Warrant officers' quarters.	C	..	3,500	..	..	..	..	..	..	..	..	Do.
	Do. ..	Do. ..	34	Two staff sergeants' quarters, first class.	C	..	6,000	..	..	..	..	..	..	..	..	Do.
	Do. ..	Do. ..	35	Coffee shop	C	..	9,000	..	..	..	..	..	..	..	..	Do.

Schedule of the probable requirements of the Madras Presidency on account of Military Works for 1887-88—*cont.*

Head of classification.	Executive division.	Locality.	Item No.	Projects and works.	Class.	Original Works. Major works. Works in progress.	Original Works. Major works. New works.	Original Works. Major works. Total.	Original Works. Minor works.	Original Works. Total.	Repairs.	Establishment.	Tools and plant.	Suspense.	Grand Total.	Remarks.
						RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	
Accommodation for Native Troops.	Presidency.	Bangalore.	36	Public buildings for one regiment of native infantry.	A	11,636	..	..	..	..	..	..	..	..	..	Estimate of Rs. 21,636 was sanctioned in G.O., No. 2952 W., dated 29th November 1884. Item No. 11, class B works, budget of 1886-87.
	Trichinopoly.	Trichinopoly.	37	Construction of stone drains.	A	5,140	..	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 13, class B works, budget of 1886-87.
	Presidency.	Bangalore.	38	Public buildings for a regiment of native cavalry.	B	..	15,000	..	..	..	..	..	..	..	..	Estimate of Rs. 30,990 was sanctioned in G.O., No 1302 W., dated 25th May 1886. Item No. 36, class C works, budget of 1886-87.
	Do. ..	Do. ..	39	Store-rooms and workshops for the Pioneer regiment.	B	..	3,000	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 35, class C works, budget of 1886-87.
	Trichinopoly.	Trichinopoly.	40	Workshops for a Pioneer regiment.	C	..	8,000	..	..	..	..	..	..	..	..	Estimate is awaited.
	Presidency.	Madras (Râyapuram)	41	Flushing drains for native infantry lines.	C	..	4,300	..	..	..	..	..	..	..	..	Estimate of Rs. 4,300 was sanctioned in G.O., No. 1397 W., dated 4th June 1884. Item No. 34, class C works, budget of 1886-87.
	Chingleput.	Pallâvaram.	42	Magazine for a Madras infantry regiment.	C	..	4,500	..	..	..	..	..	..	..	..	Estimate of Rs. 4,900 was sanctioned in G.O., No. 334 W., dated 8th February 1886. Item No. 38, class C works, budget of 1886-87.
	Do. ..	Do. ..	43	Armourers' shop for a Madras infantry regiment.	C	..	2,880	..	..	..	..	..	..	..	..	Estimate of Rs. 2,880 was sanctioned in G.O., No. 3149 W., dated 22nd December 1884. Item No. 29, class C works, budget of 1886-87.
	Vizagapatam.	Vizianagram.	44	Regimental store-room for native infantry including storage for camp equipage.	C	..	3,480	..	..	..	..	..	..	..	..	Estimate of Rs. 3,480 was sanctioned in G.O., No. 2628 W., dated 27th October 1884. Item No. 32, class C works, budget of 1886-87.
Ordnance Works.	Presidency.	Fort St. George.	45	Construction of a new magazine in the Wallajah berm.	A	26,420	..	..	..	..	..	..	..	..	..	Estimate of Rs. 46,420 was submitted to Government of India for sanction (*vide* G.O., No. 1240 W., dated 17th May 1886). Item No 14, class B works, budget of 1886-87.
	Bellary ..	Bellary ..	46	Twelve staff sergeants' quarters, Ordnance Department.	B	..	15,000	..	..	..	..	..	..	..	..	Estimate is awaited.
	Presidency.	Madras ..	47	Coal store, Ordnance Department.	B	..	9,000	..	..	..	..	..	..	..	..	Do.
	Do. ..	Do. ..	48	Compound-wall round the the gunpowder factory.	C	..	20,200	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 39, class C works, budget of 1886-87.
	Do. ..	Do. ..	49	Extra accommodation as store rooms in the gunpowder factory.	C	..	6,000	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 40, class C works, budget of 1886-87.
Commissariat Buildings.	Presidency.	Bangalore.	50	Quarters for a Conductor, Transport Department.	C	..	5,800	..	..	..	..	..	..	..	..	Estimate of Rs. 5,800 was sanctioned in G.O., No. 992 W., dated 16th April 1886. Item No. 51, class C works, budget of 1886-87.
	Do. ..	Do. ..	51	Quarters for ambulance sergeant near cattle lines, Transport Department.	C	..	3,000	..	..	..	..	..	..	..	..	Estimate is awaited.
	Do. ..	Madras ..	52	Lines for transport attendants.	C	..	48,000	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 49, class C works, budget of 1886-87.
	Do. ..	Do. ..	53	Workshops and sheds for carts, doolies, &c., Transport Department.	C	..	5,500	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 50, class C works, budget of 1886-87.
	Do. ..	Do. ..	54	Construction of a shed at the Camp Equipage Depôt.	C	..	5,300	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 48, class C works, budget of 1886-87.
	Do. ..	Teynampet.	55	Construction of a wheat godown.	C	..	5,950	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 46, class C works budget of 1886-87.
	Chingleput.	Guindy ..	56	Quarters for station butchers attached to slaughter house.	C	..	4,730	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 52, class C works, budget of 1886-87
Fortifications.	Presidency.	Fort St. George.	57	Facing the enceinte of Fort St. George with Portland cement.	B	..	5,000	..	..	..	..	..	..	..	..	Estimate is awaited.
	North Arcot.	Vellore ..	58	Draw-bridge and gate for the fort.	B	..	6,450	..	..	..	..	..	..	..	..	Estimate of Rs. 6,450 was sanctioned in G. O., No. 528 W., dated 7th March 1885. Item No. 54, class C works, budget of 1886-87.
	Presidency.	Fort St. George.	59	Demolition of Wallajah ravelin and two lunettes.	C	..	7,426	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 53, class C works, budget of 1886-87.
Miscellaneous.	Nilgiri ..	Ootacamund.	60	Water-supply, Lawrence Asylum.	C	..	7,000	..	..	..	..	..	..	..	..	Estimate is awaited. Item No. 55, class C works, budget of 1886-87.
				Total ..	..	73,046	4,12,684	4,85,730	1,20,000	6,05,730	3,50,000	2,19,817	9,553	..	11,85,100	

LIST of Military Works estimated to cost Rs 2,500 each or under, and for which funds are required in the Public Works budget for 1887-88.

Division or district.	Station.	Description of buildings, &c., and for what corps, departments needed.	Approximate estimate of cost.	Remarks by the Commander-in-Chief.
			RS.	
Eastern district.	Fort St. George.	Store-room, forge workshop—Arsenal.	520	When funds are available.
	Do. ...	Railings to miscellaneous workshop, &c.—Arsenal.	790	
	Do. ...	A new bridge across trench in new park—Arsenal,	810	
	Do. ...	Improving store godowns—Arsenal.	700	Very necessary. Estimates already sanctioned by Government.
	Do. ...	Do. do.	847	
	Do. ...	Alterations to lower story barracks for armourer shop.	2,367	Very desirable.
	Do. ...	Mess-house verandah—Completion of.	1,900	
	Do. ...	I. room alterations for theatre.	1,000	When funds are available.
	Do. ...	Pipes to carry off main water from the barracks—Officers' quarters, &c.	990	Recommended.
	Do. ...	Improvements to military prison.	810	When funds are available.
	Do. ...	Putting up 13 ventilator windows in the mess-room of the officers' mess-house of the British Regiment.	600	
	Madras ...	Ordnance store-room—Beach ...	1,250	Necessary.
	Do. ...	Huts, infectious disease—Station hospital.	750	When funds are available.
	Do. ...	Dispensary—Veterinary department, Body Guard.	1,300	
	Do. ...	Regimental school—Perambúr lines, Madras Infantry.	1,375	
	Do. ...	Armourer shops—Perambúr lines, Madras Infantry.	2,000	
	Do. ...	Shed to hold fire-engine at the Government Bakery.	820	Approved.
	Do. ...	Constructing two servants' quarters to each of the Sub-Conductor's quarters of the Commissariat department in the Ordnance lines.	1,145	When funds are available.
	Do. ...	Constructing a water trough and laying in Red Hills water to it for the new Transport lines in the Pudupet plain.	820	
	Do. ...	Godown, wheat, &c.	1,785	
	Do. ...	Drainage—Bakery premises ...	950	
	Do. ...	Gram-boiling shed—Mule lines.	1,500	
	St. Thomas' Mount.	Commissariat—Wells, &c., public cattle depôt.	1,200	
	Do. ...	Royal Artillery—Lightning conductor, Magazine.	1,500	Most important.
	Do. ...	Closing up archway, gun-shed—P. Battery, 1st Brigade.	560	Very necessary.
	Do. ...	Improvements to Sergeants' quarters — Reserve Powder Magazine.	530	*Vide* G.O., No. 1233 W., dated 28th May 1885. Very necessary.
	Do. ...	Constructing a second verandah to the harness rooms attached to east barracks, R.A.	1,170	When funds are available.

List of Military Works estimated to cost Rs. 2,500 each or under, &c.—*cont.*

Division or district.	Station.	Description of buildings, &c., and for what corps, departments needed.	Approximate estimate of cost.	Remarks by the Commander-in-Chief.
			RS.	
Eastern district.—*cont.*	Pallávaram ...	Camp Equipage store—Madras Infantry.	1,500	When funds are available.
	Do. ...	School—Madras Infantry ...	1,230	
	Do. ...	Tiled shed	636	
	Poonamallee ...	Alteration—Barracks	1,000	
	Do. ...	Wall, new—Family quarters ...	1,000	
	Do. ...	Constructing new walls between the latrines of the family quarters.	730	
	Do. ...	Providing lightning conductor to the Station hospital.	2,400	
	Vizianagrum ...	New magazine — Madras Infantry.	1,530	Very necessary.
	Do. ...	Improvements to hospital—Madras Infantry.	515	When funds are available.
	Do. ...	Improvements to ventilation—Madras Infantry.	545	
	Berhampore ...	Building for Commissariat stores and office.	1,200	
Bangalore division.	Bangalore ...	Royal Artillery—Latrine, Staff Sergeants' quarters, Royal Horse Artillery.	2,100	Very necessary on sanitary grounds.
	Do. ...	Quarters, Battery — Quartermaster Sergeant, Royal Horse Artillery.	1,100	Desirable.
	Do. ...	Cook-house—Sergeants' mess, field batteries.	1,470	Necessary.
	Do. ...	Latrine for men—Stables, field batteries.	620	
	Do. ...	Board floor recreation room—Royal Horse Artillery.	1,240	
	Do. ...	Stone floor to gun-shed, &c. ...	1,160	
	Do. ...	Stone drains—Staff Sergeants' quarters.	564	Necessary. Estimates already sanctioned by Government.
	Do. ...	Two Riding schools	1,156	
	Do. ...	Latrine—Six seats for men at stables	600	Very desirable.
	Do. ...	Camp Equipage stores—Connecting with water-supply.	1,170	When funds are available.
	Do. ...	Latrine for followers	1,600	Necessary.
	Do. ...	South Station Hospital—Quarters for men of Army Hospital Native Corps.	924	
	Do. ...	North Station Hospital—Quarters for men of Army Hospital Native Corps.	756	
	Do. ...	Improving place of arms and hospital.	700	
	Do. ...	Improving Staff Sergeants' quarters.	2,000	When funds are available.
	Do. ...	Improving Sergeant Butcher's quarters.	525	Very necessary.
	Do. ...	Improving road from race-course barracks to slaughter-house.	1,400	When funds are available.
	Do. ...	Additions to accommodation in Transport lines.	1,545	Urgently required.
	Do. ...	Converting Sergeants' quarters into Sub-Conductors' quarters.	1,000	Very necessary.
	Do. ...	Two grass-sheds for the two field batteries.	920	Unauthorised but desirable.

List of Military Works estimated to cost Rs. 2,500 each or under, &c.—*cont.*

Division or district.	Station.	Description of buildings, &c., and for what corps, departments needed.	Approximate estimate of cost.	Remarks by the Commander-in-Chief.
			RS.	
Bangalore division—*cont.*	Bangalore ...	Constructing a stone drain in forage yard and levelling ground.	1,440	Approved.
	Do. ...	Preparing a boarded floor in the room now used as a fencing room.	800	
	Do. ...	Lining with stone the drain east and west of barrack limits, parade barracks.	1,538	Desirable.
	Wellington ...	Renewing floors of latrines and school block.	1,680	Necessary.
	Do. ..	Enlarging purveyor's stores ...	2,000	Very necessary.
	Do. ...	Cooking stoves for Staff Sergeants' quarters.	536	
	Do. ...	Supplying cooking stove, Sergeants' mess.	800	Desirable.
	Do. ...	Laying on drinking water to hospital.	2,226	
Ceded districts.	Bellary ...	Alterations and additions to Armourers' shop, Light Cavalry Regiment.	700	Urgently wanted. The execution of this work will do away with necessity for new building.
	Do. ...	Renewal floor, No. II Magazine, Fort.	616	Very necessary.
	Do. ...	Reflooring Commissariat storerooms with asphalte.	670	
	Do. ...	Drain-pipes required to be fitted around the buildings to carry off rain water from the roofs.	1,500	Desirable.
	Do. ...	Skittle Alley	1,600	When funds are available.
	Do. ...	Guard-room for hospital guard, Station hospital.	1,200	Very desirable.
	Do. ...	Compound wall for the quarters of the Army Hospital Corps.	1,346	When funds are available.
	Do. ...	Compound wall with two gates to enclose female hospital attached to Station hospital.	1,300	
	Do. ...	Compound wall for medical subordinates' quarters, Station hospital.	535	
	Do. ...	Enlarging a well in the cantonment.	854	
	Do. ...	Converting No. 5 division workshop in the Arsenal into an office for the Gate Conductor.	1,750	
Western district.	Cannanore ...	Station hospital—Sinking well.	700	Strongly recommended.
	Do. ...	Replacing the present flooring of the European Infarntry cells with concrete in chunam and asphalte.	1,100	Approved.
	Do. ...	Replacing the laterite flooring of the recreation room with concrete in chunam and asphalte, European Infantry.	2,140	When funds are available.
	Do. ...	Constructing a compound wall, and provision of a jungle-wood ceiling to the roof of the regimental cells.	756	Desirable.
	Do. ...	Alterations and improvements to the Government Bakery.	2,117	

List of Military Works estimated to cost Rs. 2,500 each or under, &c.—*cont.*

Division or district.	Station.	Description of buildings, &c., and for what corps, departments needed.	Approximate estimate of cost.	Remarks by the Commander-in-Chief.
			RS.	
Western district—*cont.*	Cannanore ...	Alterations and additions to the divisional offices of the Quartermaster-General's department.	1,577	Desirable.
	Malapuram ...	Converting beer godown into a gymnasium for detachment.	790	All very necessary.
	Do. ...	Converting wood godown into a bakery.	595	
	Do. ...	Providing a platform and pump to well.	1,110	
	Do. ...	Cattle pen in connection with slaughter-house.	612	Desirable.
	Calicut ...	Converting cook-room into a bakery.	840	Urgent.
	Do. ...	Stable and harness-room for 12 mules for the Commissariat department at West Hill Barracks.	1,900	Approved, but something on a cheape scale should be provided.
	Quilon ...	Renewing floor of hospital ...	1,970	Desirable.
	Do. ..	An Armourers' shop, Madras Infantry.	1,700	When funds are available.
	Do. ...	Two solitary cells	1,500	Approved.
	Mangalore ...	Reflooring hospital, Madras Infantry.	695	When funds are available.
	Do. ...	Additions to Armourers' workshop.	790	
	Do. ...	Constructing permanent verandah for the Quartermaster's store, Native Infantry.	630	
	Do. ...	Putting a tar composite floor in place of arms in lieu of the existing wooden floor, Native Infantry.	653	
	...	Lump sum provision for works costing below Rs. 500 each.	9,909	
		Total ...	1,20,000	

No 27/8

25th September 1886, Nos. 2497, 2498 W., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

Read—the following papers:—

From Brigadier-General E. FAUNCE, Officiating Quartermaster-General, to the Secretary to Government, Public Works Department, dated Ootacamund, 10th September 1886, No. 3275 A.

In forwarding the schedules of requirements in military works for consideration in connection with the Public Works Department budget for the coming official year, I am desired to offer the following remarks.

Major Works.

Most of these have appeared in the lists of previous years, so it is not necessary to enter into their claims for execution; but there are few which are brought forward this year for the first time, and regarding them it is desirable that something should be said.

I. New barracks at Malapuram.—The grant for the current year will complete, or almost complete, the work hitherto contemplated, but it having been decided that the garrison of that outpost should not consist of less than 150 men, it will be requisite to provide for the erection of another barrack for the 50 men, whom the present barrack will not accommodate.

A canteen too should be provided for, the medical authorities having condemned the building now used for this purpose.

II. New barracks at Calicut.—The present barracks at that station are calculated to hold 100 men only, and accommodation is wanted for 100 additional men, who will be quartered there under arrangements contemplated for the future.

III. Quarters for staff sergeants, &c., Ordnance Department, Bellary.—The recent location of the arsenal at this station demands that provision should be made for these subordinates in the neighbourhood of their duties.

IV. Quarters for Medical Warrant Officers at Wellington.—Only one medical warrant officer is now provided with public quarters; these are situated in the barracks, too far from the hospital, and might advantageously be used for another purpose. Hired houses are not to be had near the hospital, and when the head-quarters of a British infantry regiment are brought to Wellington, the demand for houses for officers will be so great that none will be available for medical warrant officers.

Minor Works.

But few of the works included in last year's schedule having been provided for in the current year, in consequence of the appropriation to works of other classes of almost two-thirds of the grant made for them,* only the few works noted in the list D, herewith forwarded, have to be removed from the very formidable list submitted last year,† while in the current year demands for a large number of other necessary works of this class have been submitted.

A list of these (E) is herewith forwarded, and the schedule of minor works, as it will then stand with these additions, will in itself show how absolutely necessary it is that for a series of years to come the Government should obtain from the Government of India exceptional grants for this class of works alone.

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* *Vide* this office letter, No. 2688 A., of 3rd August 1886, to Government, Military Department.

† *Vide* proceedings of Madras Government, No. 2445 W., of 20th October 1885.

Class A.

Works commenced for completion of which grants are required.

Command.	Station.	Item No.	Work.	Cost.	Remarks.
Bangalore division.	Bangalore ...	1	Subsidiary buildings (including magazine) for one Madras infantry regiment.	RS. 11,636	Item 11, class B, final issue, budget, 1886-87.
	Trichinopoly.	2	Construction of stone drains.	5,140	Item 13 do. do.
Western district.	Malappuram ...	3	New barracks for detachment, British infantry, to accommodate 100 men.	20,000	Item 1, class A do. Provision will have to be made for accommodating 50 more men than barracks now under construction will hold when the garrison of the West Coast is redistributed.
Eastern district.	Fort St. George.	4	New magazine, Wallajah berm.	26,420	Estimate now before Government. Item 14, class B, final issue, budget, 1886-87.

Ootacamund,
10th September 1886.

(Signed) E. FAUNCE, Brigadier-General,
Offg. Quartermaster-General.

Class B.

Works of special urgency not yet commenced, for which funds are absolutely required.

Command.	Station.	Item No.	Work.	Cost.	Remarks.
Bangalore division.	Bangalore ...	1	Subsidiary buildings, Madras cavalry regiment (less magazine).	RS. 15,000	Very urgent. Rs. 14,000 were first allotted, but subsequently surrendered (see G.O., No. 3092 W., of 30th December 1885, and No. 1084 W., of 29th April 1886). Item 36, class C, final issue, budget, 1886-87.
	Do.	2	Store-rooms and workshops for a Pioneer regiment ...	3,000	Item 35, class C do. do.
	Do.	3	Improving wash-houses, Parade barracks	12,500	Very desirable.
	Wellington ...	4	Quarters for three apothecaries	16,000	Desirable, especially if head-quarters, British infantry regiment, be sent to Wellington.
Ceded Districts.	Bellary ...	5	Twelve staff sergeants' quarters (Ordnance Department).	15,000	Most essential.
	Do.	6	Collarmaker and wheeler's shop, Royal Artillery ...	5,663	
Eastern district.	Fort St. George.	7	Converting racquet court into a covered gymnasium ...	11,890	Item 17, class C, final issue, budget, 1886-87. Rs. 9,890 were first allotted and afterwards surrendered (proceedings of Government, No. 1084 W., of 29th April 1886).
	Do.	8	Remodelling drainage	10,000	Improvements to drainage very desirable.
	Do.	9	Facing the enceinte of Fort St. George with Portland cement.	5,000	
	Saint Thomas' Mount.	10	A wheeler and collarmaker's shop for the West barracks.	5,660	
	Vellore ...	11	Drawbridge and gate to the fort	6,450	Necessary. Item 54, class C, final issue, budget, 1886-87. Rs. 6,450 were at first allotted, but afterwards surrendered (proceedings of Government, No. 1084 W., of 29th April 1886).
	Madras ...	12	Coal store, Ordnance Department	9,000	A building is now being rented for this purpose at Rs. 100 per mensem.
Western district...	Calicut ...	13	Providing barrack accommodation for 100 men ...	...	In order to do away with the necessity of keeping any British troops at Cannanore.

Ootacamund,
10th September 1886.

(Signed) E. FAUNCE, Brigadier-General,
Offg. Quartermaster-General.

CLASS C.

WORKS of less urgency not yet commenced for which also grants are required.

Command.	Station.	Item No.	Work.	Cost.	Remarks.
				RS.	
Bangalore division.	Bangalore ...	1	Quarters for schoolmaster and schoolmistress, Royal Artillery.	10,240	Estimate before Government.
	Do.	2	Quarters for a Conductor, Transport Department ...	5,800	
	Do.	3	12th Lancers. New orderly-room, or conversion of Quartermaster's stores into orderly-room and stores.	6,500	
	Do.	4	Transport Department. Quarters for ambulance sergeant near cattle lines.	3,000	
	Do.	5	Quarters for senior apothecary, North station hospital.	5,300	
	Do.	6	Quarters for assistant apothecary, North station hospital.	4,773	
	Wellington ...	7	Laying on drinking water to hospital	5,000	An estimate of Rs 2,226 havingbeen sanctioned in G.O., No. 893 W., dated 2nd April 1886, the work is transferred to minor works statement.
	Do.	8	Quarters for barrack sergeant	7,348	
	Do.	9	Gymnasium	10,000	
	Trichinopoly ...	10	Workshops for a Pioneer regiment	8,000	Commander-in-Chief considers this essential.
	Ootacamund ...	11	Water-supply, Lawrence Asylum	7,000	
Ceded Districts.	Bellary ...	12	A new gunshed, Royal Artillery	3,970	
	Do.	13	Swimming-bath, British infantry	7,644	
	Do.	14	Infectious disease ward and cook-house, station hospital.	6,140	
	Do.	15	Alterations and additions to military prison and adjoining building.	11,260	Very necessary.
	Do.	16	Armourers' shop for the arsenal	4,650	
Western district	Cannanore ...	17	Plunge-bath, European infantry barracks	4,690	
	Do.	18	Improving latrines, European infantry barracks ...	2,780	
	Do.	19	Improving roof of regimental guard-room, European infantry barracks.	5,060	
Eastern District.	Madras ...	20	Compound-wall round the gunpowder factory ...	20,240	
	Do.	21	Extra store-room, accommodation, gun carriage factory.	6,000	
	Do.	22	Quarters for station butchers attached to slaughter-house, Guindy.	4,740	
	Do.	23	Lines for Transport attendants	48,000	
	Do.	24	Workshops and sheds for carts, doolies, &c., Transport Department.	5,500	
	Do.	25	Construction of a shed at the Camp Equipage Depôt.	5,300	
	(Rayapuram) ...	26	Flushing drains for native infantry	4,300	
	Do.	27	Improvements to Barrel machine shops, gun carriage factory.	...	The work having been already completed, it has been omitted.
	Tenampet ...	28	Constructing a wheat godown	5,950	
	Fort St. George.	29	Demolition of Wallajah ravelin and 2 lunettes ...	7,434	
	St. Thomas' Mount.	30	Sergeants' mess for East barracks	6,000	
	Do.	31	General improvements of the drains of the cantonment.	10,000	
	Do.	32	Quarters for three medical subordinates, Station hospital.	8,000	Proposed to convert south barracks into quarters for medical subordinates if not required for Battery, Royal Artillery.
	Do.	33	Quarters for Head-quarters Staff, Royal Artillery ...	12,000	Proposed to convert south barracks into quarters for head-quarters staff also.
	Do.	34	Battery office for P/1st, Royal Artillery	5,000	
	Do.	35	Raising roof of harness room, troop lines	4,200	
	Do.	36	Wooden-shed at the proof range	2,820	
	Do.	37	Converting disused gun-shed between North barracks and main guard into coffee-shop, recreation-room and library.	2,520	If field battery is placed in the barracks.
	Pallávaram ...	38	One mortuary room for each of the three hospitals Nos. 1 to 3.	3,000	
	Do.	39	Magazine for a Madras infantry regiment on standard plan.	4,500	
	Do.	40	Armourers' shop for a Madras infantry regiment ...	2,880	
	Poonamallee ...	41	Improvements to old barrack with possibility of obviating construction of the new.	5,000	
	Do.	42	Lightning conductors to the Station hospital	6,360	An estimate of Rs. 2,400 having been sanctioned in G.O., No. 193 W., dated 23rd January 1886, the work is transferred to minor works statement.
	Do.	43	Warrant officers' quarters	3,500	
	Do.	44	Two staff sergeants' quarters, first class	6,000	
	Do.	45	Coffee shop	9,000	
	Vizianagram ...	46	Regimental store-room including storage for camp equipage.	3,480	

OOTACAMUND,
10th September 1886.

(Signed) E. FAUNCE, Brigadier-General,
Offg. Quartermaster General.

Office note from the Examiner, Public Works Accounts, dated 16th Sept. 1886, No. 428.

Order—dated 25th September 1886, No. 2497 W., Public Works.

Ordered that the schedule of requirements on account of military works in the Madras presidency for 1887-88 be forwarded to the Government of India in the Military Department.

2. Ordered also that the schedules be printed and circulated to Superintending Engineers, who should lose no time in submitting the necessary plans and estimates for the unsanctioned works included in the schedules, as none of them can find place in the budget estimates for 1887-88, unless plans and estimates have been previously sanctioned.

(Here enter No. 2498 W., dated 25th September 1886.)

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

To Superintending Engineers.
To the Examiner, Public Works Accounts.
" Military Department.
" Financial "

Letter—to the Secretary to the Government of India, Military Department, dated Fort St. George, 25th September 1886, No. 2498 W.

In forwarding, herewith, the proceedings of this Government, No. 2497 W., dated 25th September 1886, and the schedules of demands on account of military works for 1887-88, I am directed to solicit the special attention of the Government of India to the remarks of the Quartermaster-General contained in his letter, No. 3275 A., dated 10th September 1886, under "Minor Works," and to urge that a specially liberal grant may be assigned under this service, in order that many important works now kept back for want of funds may be undertaken in the ensuing year.

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

Exd. E. Fernandez.
Spare Copies

2527/11

GENERAL.
ACCOUNT.

Govt. of [1886] Madras.

PUBLIC WORKS.

Dated September, 25th.

Recd. *Encl.*

G.O., 25th Sept. 1886, No. 2497, 2498 W.1

SEPTEMBER.

Military Works

The schedules of requirements on account of — in the Madras presidency for 1887-88, forwarded to the Government of India and circulated to Superintending Engineers.

2527/12

FINAL ISSUE.

IMPERIAL.
MILITARY WORKS.

MADRAS.

PUBLIC WORKS DEPARTMENT.

IMPERIAL BUDGET-ESTIMATE
OF
MILITARY WORKS
OF THE
GOVERNMENT OF MADRAS
FOR THE YEAR
1888-89.

CHEPÂK,
23rd April 1888.

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

2527/125

IMPERIAL.
MILITARY WORKS.

MADRAS.

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REVENUE.

ABSTRACT OF THE BUDGET-ESTIMATE OF REVENUE OF THE PUBLIC WORKS DEPARTMENT FROM MILITARY WORKS IN MADRAS FROM 1st APRIL 1888 TO 31st MARCH 1889.

—	Actuals, 1886-87.	Budget-Estimate, 1887-88.	Revised Estimate, 1887-88.	Budget-Estimate, 1888-89.
	Rs.	Rs.	Rs.	Rs.
In Public Works Department	23,984	25,000	25,000	27,800
In Civil and Military Departments	...	...	...	...
Total ...	23,984	25,000	25,000	27,800

CHARGES.

ABSTRACT OF THE BUDGET-ESTIMATE OF EXPENDITURE OF THE PUBLIC WORKS DEPARTMENT OF MILITARY WORKS IN MADRAS FOR THE YEAR FROM 1st APRIL 1888 TO 31st MARCH 1889.

—		Reference to Detailed Estimate.	Actuals, 1886-87.	Budget-Estimate, 1887-88.	Revised Estimate, 1887-88.	Budget-Estimate, 1888-89.
			Rs.	Rs.	Rs.	Rs.
Original Works	In progress	...	1,45,707	1,42,600	1,41,395	74,277
	Not commenced					1,34,273
Repairs	Ordinary	...	3,11,795	3,00,000	3,18,242	3,00,000
	Special					
Establishment		...	1,06,754	1,03,000	1,06,979	1,08,755
Tools and Plant		...	4,589	4,400	6,884	6,995
Suspense Account		...	...	...	...	...
Total ...		...	5,68,845	5,50,000	5,73,500	6,24,300

ABSTRACT OF THE CHARGES TO BE INCURRED BY THE PUBLIC WORKS DEPARTMENT FROM IMPERIAL FUNDS AND CONTRIBUTIONS IN BOTH INDIA AND ENGLAND.

—	Actuals, 1886-87.	Budget-Estimate, 1887-88.	Revised Estimate, 1887-88.	Budget-Estimate, 1888-89. Original Works. In progress.	Budget-Estimate, 1888-89. Original Works. Not commenced.	Budget-Estimate, 1888-89. Original Works. Total.	Budget-Estimate, 1888-89. Repairs.	Budget-Estimate, 1888-89. Establishment.	Budget-Estimate, 1888-89. Tools and Plant.	Budget-Estimate, 1888-89. Suspense Account.	Budget-Estimate, 1888-89. Barrack Department.	Budget-Estimate, 1888-89. Total.
Provision from Imperial Funds.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
In India ...	5,67,207	5,50,000	5,73,500	74,277	1,34,273	2,08,550	3,00,000	1,08,755	6,995	...	...	6,24,300
In England.	1,638	...	...	...	...	...	...	...	...	...	...	...
Total ...	5,68,845	5,50,000	5,73,500	74,277	1,34,273	2,08,550	3,00,000	1,08,755	6,995	...	...	6,24,300
Provision from Contributions.												
In India ...	...	...	...	...	...	...	...	...	...	...	...	...
Grand Total ..	5,68,845	5,50,000	5,73,500	74,277	1,34,273	2,08,550	3,00,000	1,08,755	6,995	...	...	6,24,300

STATEMENT SHOWING THE WORKS ON WHICH THE OUTLAY IN ENGLAND ABOVE PROVIDED FOR IS TO BE INCURRED.

—	Actuals, 1886-87.	Budget-Estimate, 1887-88.	Revised Estimate, 1887-88.	Budget-Estimate, 1888-89. Original Works. In progress.	Budget-Estimate, 1888-89. Original Works. Not commenced.	Budget-Estimate, 1888-89. Original Works. Total.	Budget-Estimate, 1888-89. Tools and Plant.	Budget-Estimate, 1888-89. Suspense Account.	Budget-Estimate, 1888-89. Total.
	Rs.								
	1,638	...	...	...	...	...	...	...	...
Total ...	1,638	...	...	...	...	...	...	...	...

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IMPERIAL.
MILITARY WORKS.

MADRAS.

PART I.

DETAIL OF THE BUDGET-ESTIMATE FOR ORIGINAL WORKS FOR THE YEAR 1888-89.

CLASS A WORKS.

Head of Classification.	Executive Division.	Locality.	Item No.	Projects and Works.	Amount of Estimate.	Outlay. Actual to end of 1886-87.	Outlay. Probable during 1887-88.	Grant, 1888-89. Works in progress.	Grant, 1888-89. Works not commenced.	Grant, 1888-89. Total.	Item No.	Remarks and References.
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
				IMPERIAL ORDINARY. Military. *Original Works.*								
(1) *Accommodation for troops*— Buildings for European troops in the plains. Permanent.	Bellary ...	Bellary ...	1	Gun-shed for Royal Artillery ...	11,560	...	3,970	7,590	...		1	G.O., No. 1042 W., dated 6th April 1888.
	West Coast.	Malapuram ...	2	Barracks for a detachment of British Infantry to accommodate 50 additional men.	1,82,867	1,22,672	17,000	20,000	...		2	G.O., No. 2822 W., dated 21st October 1887. Item No. 1, class A works, budget of 1887-88.
Accommodation for Native troops.	Presidency.	Bangalore ...	3	Additions, &c., to public buildings, Madras Infantry Regiment, for a Pioneer Regiment.	21,636	15,188	6,636	5,000	...		3	G.O., No. 2952 W., dated 29th November 1884. Item No. 2, class A works, budget of 1887-88. Supplemental estimate is awaited.
				Total ...	...	...	...	32,590	...	32,590		

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PART I—*cont.*

DETAIL OF THE BUDGET-ESTIMATE FOR ORIGINAL WORKS FOR THE YEAR 1888-89.

CLASS B WORKS.

Head of Classification.	Executive Division.	Locality.	Item No.	Projects and Works.	Amount of Estimate.	Outlay.		Grant, 1888-89.			Item No.	Remarks and References.
						Actual to end of 1886-87.	Probable during 1887-88.	Works in progress.	Works not commenced.	Total.		
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
				IMPERIAL ORDINARY.								
				MILITARY.								
				Original Works.								
(1) *Accommodation for troops*— Buildings for European troops in the plains. Permanent.	Nilgiri ...	Wellington ...	1	Quarters for three Apothecaries ...	...	...	...	...	6,500		1	Estimate under revision. Item No. 2, class B works, budget of 1887-88.
	Chingleput.	Poonamallee...	2	New barracks	1,66,835	...	...	...	20,000		2	G.O., No. 465 W., dated 19th February 1879.
	Presidency.	Bangalore ...	3	New saddle room, British Cavalry...	4,158	...	...	...	4,158		3	G.O., No. 423 W., dated 6th February 1888.
Accommodation for Native troops.	Do. ...	Madras ...	4	Constructing 4 latrines—2 for males and 2 for females—Perambur lines.	...	...	...	...	3,000		4	Estimate is awaited. Item No. 39, class C works, budget of 1887-88.
(2) *Ordnance Works* ...	Bellary ...	Bellary ...	5	New workshops for the Arsenal ...	...	...	6,858	22,650	...		5	Estimate is awaited.
	Presidency.	Madras ...	6	Purchase of land for coal store and Artificers' quarters at Vepery.	...	...	...	...	41,625		6	Do.
	Do. ...	Do. ...	7	Turners' shop, Gun Carriage Factory.	...	...	...	...	10,000		7	Do.
	Do. ...	Do. ...	8	Extra accommodation as store-room in the Gun Carriage Factory.	6,245	...	...	...	4,105		8	G.O., No. 2946 W., dated 5th November 1887.
	...	...	9	Minor works under Ordnance ...	...	...	...	...	9,570		9	
(3) *Commissariat buildings.*	West Coast.	Calicut ...	10	Sheds for transport animals ...	...	...	...	...	3,310		10	Estimate is awaited. Item No. 46, class C works, budget of 1887-88.
(8) *Fortifications.*	Do. ...	Cannanore ...	11	Converting the Cannanore Fort into a defensible post.	7,790	4,347	...	3,064	...		11	G.O., No. 3274 W., dated 1st December 1887.
	North Arcot.	Vellore ...	12	Constructing a draw-bridge and gate for the fort.	6,450	...	...	...	6,450		12	G.O., No. 528 W., dated 7th March 1885. Item No. 11, class B works, budget of 1887-88.
	Presidency.	Bangalore ...	13	Constructing a fire-engine shed and guard-room in the Agram entrenchment.	5,555	...	...	...	5,555		13	G.O., No. 536 W., dated 16th February 1888.
			14	Reserve with the Government for incomplete major works.	...	...	...	15,973	...		14	
			15	Minor works	...	...	...	...	20,000		15	
				Total ...	...	...	...	41,687	1,34,273	1,75,960		

APPENDIX B.

LIST OF WORKS (OR CLASS C WORKS) OMITTED FROM THE BUDGET-ESTIMATE OF 1888-89, BUT ON WHICH EXPENDITURE MAY BE INCURRED DURING THE YEAR BY RE-APPROPRIATION FROM CLASS B WORKS.

Head of Classification.	Executive Division.	Locality.	Item No.	Projects and Works.	Amount of Estimate.	Outlay.		Amount applied for 1888-89.			Item No.	Remarks and References.
						Actual to end of 1886-87.	Probable during 1887-88.	Works in progress.	Works not commenced.	Total.		
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
				IMPERIAL ORDINARY.								
				MILITARY.								
				Original Works.								
(1) *Accommodation for troops*— Buildings for European troops in the plains. Permanent.	Bellary ...	Bellary ...	1	Infectious disease ward, cook-house and station hospital.	6,140	...	...	...	6,140		1	G.O., No. 320 W., dated 7th February 1884. Item No. 4, class C works, budget of 1887-88.
	Do. ...	Do. ...	2	Alterations and additions to Military prison and adjoining buildings.	...	...	...	...	11,260		2	Estimate is awaited. Item No. 5, class C works, budget of 1887-88.
	Do. ...	Do. ...	3	Swimming-bath, British Infantry.	7,644	...	...	...	7,644		3	G.O., No. 2434 W., dated 19th October 1885. Item No. 3, class C works, budget of 1887-88.
	Do. ...	Do. ...	4	Armourer's shop, 2nd Light Cavalry.	2,695	...	...	...	2,695		4	G.O., No. 2266 W., dated 14th September 1881. Item No. 1, class C works, budget of 1887-88.
	Do. ...	Do. ...	5	Quarters for the Bandmaster, British Infantry.	...	...	...	...	3,529		5	Estimate is awaited.
	Do. ...	Do. ...	6	Quarters for Schoolmaster, British Infantry Regiment.	...	...	...	...	2,950		6	Do. do.
	Do. ...	Do. ...	7	Quarters for Schoolmistress, British Infantry Regiment.	...	...	...	...	2,950		7	Do. do.
	Nilgiri ...	Wellington ...	8	Gymnasium, 2nd Royal Fusiliers.	...	...	...	...	10,000		8	Estimate is awaited. Item No. 7, class C works, budget of 1887-88.
	West Coast.	Calicut ...	9	A new barrack with subsidiary buildings for 30 men.	...	...	...	...	20,000		9	Estimate is awaited. Item No. 10, class C works, budget of 1887-88.
	Chingleput	Poonamallee...	10	Improving the old barracks ...	...	...	...	...	5,000		10	Estimate is awaited. Item No. 31, class C works, budget of 1887-88.
	Do. ...	Do. ...	11	Warrant Officers' quarters ...	...	...	...	...	3,500		11	Estimate is awaited. Item No. 32, class C works, budget of 1887-88.
	Do. ...	Do. ...	12	Two Staff Sergeants' quarters, first class.	...	...	...	...	6,000		12	Estimate is awaited. Item No. 33, class C works, budget of 1887-88.
	Do. ...	Do. ...	13	Coffee shop	...	...	...	...	9,000		13	Estimate is awaited. Item No. 34, class C works, budget of 1887-88.
	Do. ...	Pallávaram ...	14	One mortuary room for each of the three hospitals, Nos. 1 to 3.	...	...	...	...	3,000		14	Estimate is awaited. Item No. 30, class C works, budget of 1887-88.
	Do. ...	St. Thomas' Mount.	15	A wheeler and collar maker's shop for the West barracks.	5,660	...	...	...	5,660		15	G.O., No. 2717 W., dated 3rd November 1884. Item No. 21, class C works, budget of 1887-88.
	Do. ...	Do. ...	16	Sergeants' mess for East barracks.	5,450	...	...	...	6,000		16	G.O., No. 1118 W., dated 14th April 1888. Item No. 22, class C works, budget of 1887-88.
	Do. ...	Do. ...	17	Quarters for 3 Medical Subordinates attached to the Station Hospital.	...	...	...	...	8,000		17	Estimate is awaited. Item No. 24, class C works, budget of 1887-88.
	Do. ...	Do. ...	18	Quarters for head-quarters staff, Royal Artillery.	...	...	...	...	12,000		18	Estimate is awaited. Item No. 25, class C works, budget of 1887-88.
	Do. ...	Do. ...	19	General improvements to the drains of the cantonment.	...	...	...	...	10,000		19	Estimate is awaited. Item No. 23, class C works, budget of 1887-88.

APPENDIX B—*cont.*

LIST OF WORKS (OR CLASS C WORKS) OMITTED FROM THE BUDGET-ESTIMATE OF 1888-89, BUT ON WHICH EXPENDITURE MAY BE INCURRED DURING THE YEAR BY RE-APPROPRIATION FROM CLASS B WORKS—*cont.*

Head of Classification.	Executive Division.	Locality.	Item No.	Projects and Works.	Amount of Estimate.	Outlay.		Amount applied for 1888-89.			Item No.	Remarks and References.
						Actual to end of 1886-87.	Probable during 1887-88.	Works in progress.	Works not commenced.	Total.		
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
				Brought forward ...								
				IMPERIAL ORDINARY—*cont.*								
				MILITARY—*cont.*								
				Original Works—cont.								
(1) *Accommodation for troops*—Buildings for European troops in the plains. Permanent.	Chingleput.	St. Thomas' Mount.	20	Battery office for P/1st Royal Artillery, East barracks.	...	...	...	...	5,000		20	Estimate is awaited. Item No. 26, class C works, budget of 1887-88.
	Do. ...	Do. ...	21	Raising the roof of harness room, troop lines.	4,200	...	...	...	4,200		21	G.O., No. 3137 W., dated 17th December 1881. Item No. 27, class C works, budget of 1887-88.
	Do. ...	Do. ...	22	Converting the disused gun-shed between the north barracks and main guard into a coffee shop, recreation room and library.	2,520	...	...	...	2,520		22	G.O., No. 1234 W., dated 28th May 1885. Item No. 29, class C works, budget of 1887-88.
	Presidency.	Fort St. George.	23	Remodelling the drainage ...	...	...	...	...	10,000		23	Estimate is awaited. Item No. 14, class C works, budget of 1887-88.
	Do. ...	Do. ...	24	Sundry works in connection with extra accommodation, British Infantry and Royal Artillery.	...	...	...	...	20,000		24	Estimate is awaited.
	Do. ...	Do. ...	25	Repairs to floors of B, C and D blocks family quarters.	...	...	...	...	10,070		25	Do. do.
	Do. ...	Do. ...	26	Construction of coach houses and stables for the use of officers.	...	...	...	...	15,770		26	Estimate is awaited. Item No. 15, class C works, budget of 1887-88.
	Do. ...	Do. ...	27	Constructing two solitary cells in the Military prison.	...	...	...	...	2,800		27	Estimate is awaited.
	Do. ...	Bangalore ...	28	Quarters for Schoolmaster and Schoolmistress, Royal Artillery.	10,240	...	...	...	10,240		28	G.O., No. 2384 W., dated 20th September 1886. Item No. 17, class C works, budget of 1887-88.
	Do. ...	Do. ...	29	New orderly room, or conversion of Quartermaster's stores into orderly room and stores, 12th Lancers.	...	...	...	...	6,500		29	Estimate is awaited. Item No. 18, class C works, budget of 1887-88.
	Do. ...	Do. ...	30	Battery office for Royal Horse Artillery.	...	...	...	...	3,700		30	Estimate is awaited.
	Do. ...	Do. ...	31	Buildings for wheeler's shop, Royal Artillery.	...	...	...	...	3,100		31	Do. do.
	Do. ...	Do. ...	32	Drainage of Royal Horse Artillery grass-cutters' lines at Ulsoor and preventing the fouling of the adjacent nullah.	...	...	...	...	2,846		32	Do. do.
	Do. ...	Do. ...	33	Drainage, British Infantry barracks	...	...	...	...	8,000		33	Do. do.
	Do. ...	Do. ...	34	Quarters for Senior Apothecary North Station hospital.	5,300	...	...	...	5,300		34	G.O., No. 3385 W., dated 27th November 1883. Item No. 19, class C works, budget of 1887-88.

APPENDIX B—*cont.*

LIST OF WORKS (OR CLASS C WORKS) OMITTED FROM THE BUDGET-ESTIMATE OF 1888-89, BUT ON WHICH EXPENDITURE MAY BE INCURRED DURING THE YEAR BY RE-APPROPRIATION FROM CLASS B WORKS—*cont.*

Head of Classification.	Executive Division.	Locality.	Item No.	Projects and Works.	Amount of Estimate.	Outlay.		Amount applied for 1888-89.			Item No.	Remarks and References.
						Actual to end of 1886-87.	Probable during 1887-88.	Works in progress.	Works not commenced.	Total.		
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
				Brought forward ...	...							
				IMPERIAL ORDINARY—*cont.*								
				MILITARY—*cont.*								
				Original Works—cont.								
(1) *Accommodation for troops*—Buildings for European troops in the plains. Permanent Accommodation for Native troops.	Presidency.	Bangalore ...	35	Quarters for the Assistant Apothecary, North Station hospital.	4,773	...	...	...	4,773		35	G.O., No. 938 W., dated 5th April 1884. Item No. 20, class C works, budget of 1887-88.
	Vizagapatam.	Vizianagram.	36	Regimental store-room for Native Infantry, including storage for camp equipage.	3,480	...	...	...	3,480		36	G.O., No. 2628 W., dated 27th October 1884. Item No. 35, class C works, budget of 1887-88.
	Bellary ...	Bellary ...	37	School-house for Native Infantry Regiment.	3,030	...	...	...	3,030		37	G.O., No. 149 W., dated 17th January 1884. Item No. 36, class C works, budget of 1887-88.
	West Coast.	Mangalore ...	38	Providing drains for the lines of Native Infantry.	...	...	...	...	11,710		38	Estimate is awaited. Item No. 38, class C works, budget of 1887-88.
	Chingleput.	Pallávaram ...	39	Magazine for Madras Infantry Regiment on standard plan.	4,900	...	...	...	4,500		39	G.O., No. 334 W., dated 8th February 1886. Item No. 41, class C works, budget of 1887-88.
	Do. ...	Do. ...	40	Armourer's shop for Madras Infantry Regiment.	2,880	...	...	...	2,880		40	G.O., No. 3149 W., dated 22nd December 1884. Item No. 42, class C works, budget of 1887-88.
	Presidency.	Bangalore ...	41	Public buildings for a regiment of Native Infantry.	30,990	...	...	...	15,000		41	G.O., No. 1302 W., dated 25th May 1886. Item No. 6, class B works, budget of 1887-88.
	Do. ...	Madras ...	42	Flushing drains of Native Infantry lines at Ráyapuram.	4,300	...	...	...	4,300		42	G.O., No. 1397 W., dated 4th June 1884. Item No. 40, class C works, budget of 1887-88.
	Trichinopoly.	Trichinopoly.	43	Store-rooms and workshop, &c., for four Pioneers.	...	...	...	...	4,900		43	Estimate is awaited. Item No. 43, class C works, budget of 1887-88.
(2) *Ordnance Works* ...	Bellary ...	Bellary ...	44	Constructing six double quarters for the Staff Sergeants attached to the Ordnance Department.	42,420	...	...	...	10,000		44	G.O., No. 1650 W., dated 18th June 1887. Item No. 8, class B works, budget of 1887-88.
	Presidency.	Fort St. George.	45	Magazines	...	...	...	...	33,000		45	Estimate is awaited. Item No. 9, class B works, budget of 1887-88.
	Do. ...	Madras ...	46	Providing sun-shades to doors and windows in the Ordnance Lines.	4,160	...	...	...	4,160		46	G.O., No. 2248 W., dated 22nd August 1887.
	Do. ...	Do. ...	47	Shed for the camp equipage ..	6,935	...	...	...	6,935		47	G.O., No. 2558 W., dated 27th September 1887. Item No. 51, class C works, budget of 1887-88.
	Chingleput.	St. Thomas' Mount.	48	Wooden-shed at the proof range.	2,820	...	...	...	2,820		48	G.O., No. 3077 W., dated 13th December 1884.
(3) *Commissariat Buildings.*	Nílgiri ...	Wellington ...	49	Quarters for three Hospital Purveyors.	4,750	...	...	...	4,500		49	G.O., No. 615 W., dated 21st February 1888.

APPENDIX B—*concld.*

LIST OF WORKS (OR CLASS C WORKS) OMITTED FROM THE BUDGET-ESTIMATE OF 1888-89, BUT ON WHICH EXPENDITURE MAY BE INCURRED DURING THE YEAR BY RE-APPROPRIATION FROM CLASS B WORKS—*concld.*

Head of Classification.	Executive Division.	Locality.	Item No.	Projects and Works.	Amount of Estimate.	Outlay.		Amount applied for 1888-89.			Item No.	Remarks and References.
						Actual to end of 1886-87.	Probable during 1887-88.	Works in progress.	Works not commenced.	Total.		
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
				Brought forward ...								
				IMPERIAL ORDINARY—*concld.*								
				MILITARY—*concld.*								
				Original Works—concld.								
(3) *Commissariat Buildings.*	West Coast.	Malapuram ...	50	Cattle shed for the Commissariat Department.	...	...	...	...	4,000		50	Estimate is awaited.
	Do. ...	Quilon ...	51	Armourer's shop	...	...	...	...	2,600		51	Estimate is awaited.
	Chingleput.	Guindy ...	52	Quarters for Station Butcher attached to slaughter-house.	...	...	...	...	4,740		52	Estimate is awaited. Item No. 53, class C works, budget of 1887-88.
	Presidency.	Bangalore ...	53	Quarters for a Conductor, Transport Department.	5,800	...	...	...	5,800		53	G.O., No. 992 W., dated 16th April 1886. Item No. 47, class C works, budget of 1887-88.
	Do. ...	Do. ...	54	Quarters for an Ambulance Sergeant near Cattle lines, Transport Department.	...	...	...	...	3,000		54	Estimate is awaited. Item No. 48, class C works, budget of 1887-88.
	Do. ...	Madras ...	55	Workshops and sheds for carts, doolies, &c., Transport Department.	...	...	...	...	40,680		55	Estimate is awaited. Item No. 49, class C works, budget of 1887-88.
	Do. ...	Do. ...	56	Quarters for a Conductor, Commissariat Department.	...	...	...	...	4,000		56	Estimate is awaited.
	Do. ...	Teynampet ...	57	Constructing a wheat godown ...	...	...	...	...	5,950		57	Estimate is awaited. Item No. 52, class C works, budget of 1887-88.
(8) *Fortifications* ...	West Coast.	Malapuram ...	58	Constructing a fortified post ...	8,248	...	...	...	5,000		58	G.O., No. 3114 W., dated 18th November 1887. Item No. 55, class C works, budget of 1887-88.
	Presidency.	Fort St. George	59	Demolition of Wallajah ravelin and two lunettes.	...	...	...	...	7,426		59	Estimate is awaited. Item No. 57, class C works, budget of 1887-88.
	Do. ...	Do. ...	60	Constructing a draw-bridge at north gate.	...	...	...	...	2,680		60	Estimate is awaited. Item No. 58, class C works, budget of 1887-88.
	Do. ...	Do. ...	61	Demolition of out-houses, clearance of ditch and completion of walls.	...	...	...	...	10,000		61	Estimate is awaited.
(4) *Staff and Miscellaneous.*	Nilgiri ...	Ootacamund.	62	Water-supply, Lawrence Asylum...	...	...	...	...	7,000		62	Estimate is awaited. Item No. 54, class C works, budget of 1887-88.

23rd April 1888, No. 1199 W., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

Read—the following papers :—

Extract from the Proceedings of the Government of India, Military Department—(No. 640-M.W., under date Fort William, 23rd March 1888).

Madras.

Orders on the Military Works Revised Estimate for 1887-88 and Budget Estimate for 1888-89.

Read—

Military Department Resolution No. 2309-M.W., dated 3rd November 1887.
Letter No. 32 W., dated 6th January 1888, from the Government of Madras.
„ 190 W., „ 17th „ „ „ „ „
„ 441 W., „ 7th February „ „ „ „
„ 614 W., „ 21st „ „ „ „ „

Resolution—

The estimates of revenue are accepted for the sums entered in the following table :—XXXI.—Revenue.

—	Actuals, 1886-87.	Budget estimate, 1887-88	Revised estimate, 1887-88.	Budget estimate, 1888-89.
	RS.	RS.	RS.	RS.
In the Public Works Department.	23,984	25,000	25,000	27,800

44.—Expenditure.

Revised Estimate, 1887-88.

2. The revised estimate is passed for the amount of the existing grant Rs. 5,73,500, which includes the additional grants of Rs. 7,500 and Rs. 16,000 sanctioned in Military Department letter, No. 2528-M.W., dated 19th December 1887, and telegram No. 376-M.W., dated 17th February 1888, for the conversion into barracks of buildings in Fort St. George and for Minor Works, respectively.

Budget Estimate, 1888-89.

3. The estimate has been framed for the provisional grant of Rs. 5,25,000 sanctioned in Military Department Resolution, No. 2309-M.W., of 3rd November 1887, but a further sum of Rs. 99,300 is hereby allotted to provide for expenditure on Ordnance Works in Madras. Out of this sum provision must be made to meet the cost of land required for a coal store at Vepery ; the balance will be distributed, as far as may be, in accordance with Madras G.O., No. 189-W., of the 17th January 1888,

the necessary modifications being determined by the Government of Madras in communication with the Director-General of Ordnance.

4. The Government of India regrets that no extra grant can be assigned for the provision of additional accommodation for troops at St. Thomas' Mount until full information is received as to the details of the scheme. If the project be approved, the necessary funds will probably have to be provided by postponing some of the works now entered in the budget estimate.

5. The details of the estimates of expenditure passed by the Government of India are exhibited in the following table :—

—	Actuals, 1886-87.	Budget estimate, 1887-88.	Revised estimate, 1887-88.	Budget estimate, 1888-89.
	RS.	RS.	RS.	RS
Original Works — In progress	1,45,707	1,42,600	1,62,300	57,300
Original Works — Not commenced				63,300
Repairs	3,11,795	3,00,000	2,78,500	3,00,000
Total Works and Repairs ...	4,57,502	4,42,600	4,40,800	4,20,600
Establishment	1,06,754	1,03,000	1,02,600	98,100
Tools and Plant	4,589	4,400	6,600	6,300
	5,68,845	5,50,000	5,50,000	5,25,000
Add—Grants sanctioned since submission of revised estimate	...	...	7,500 16,000	...
	5,68,845	5,50,000	5,73,500	5,25,000
Add—Grant sanctioned for Ordnance Works ...	...	...	...	99,300
	5,68,845	5,50,000	5,73,500	6,24,300
Deduct Expenditure in England	1,638	...	...	...
Net Expenditure in India	5,67,207	5,50,000	5,73,500	6,24,300

6. The provision made for works in anticipation of sanction of detailed estimates is admitted on the understanding that work will not be commenced until the estimates have been approved by competent authority.

Order—

Ordered that this resolution be communicated to the Government of Madras, with the request that 45 copies of the estimates, as now passed, may be submitted so as to reach the Government of India not later than the 1st May 1888.

Ordered also that a copy be forwarded to the Accountant-General, Public Works Department, for information.

(True Extract.)

(Signed) E. COLLEN, Lieut.-Colonel,
Secretary to the Government of India.

To the Secretary to the Government of Madras,
Public Works Department.

Telegram from the Director-General of Ordnance, to the Secretary to the Government of Madras, Public Works Department, dated Simla, 17th April 1888, No. 10 E.

Your telegram. Please consult Local Ordnance what reductions can most conveniently be made.

From Colonel H. McLEOD, R.A., Inspector-General of Ordnance, to the Secretary to the Government of Madras, Public Works Department, dated Fort St. George, 20th April 1888, No. G-11.

With reference to telegram No. 11 E., dated 17th instant, from the Director-General of Ordnance in India, a copy of which is enclosed, I have the honor to inform you that the Rs. 8,830 required will be met from reappropriation from the undermentioned works referred to in letter No. 90 E. (Tour), dated Agra, 2nd January 1888, from the Director-General of Ordnance in India, to your address, republished in G.O., dated 17th idem No. 189 W. :—

Rupees 6,935 allotted for shed, Camp Equipage Depôt, Madras.

Rupees 1,895 from sum of Rs. 6,000 allotted for store rooms, Gun Carriage Factory, Madras.

Enclosure.

Telegram from the Director-General of Ordnance, to the Inspector-General of Ordnance, Madras, dated Simla, 17th April 1888, No. 11 E.

Rupees 8,830 required towards purchase site for coal store and Artificer quarters, Vepery. Inform Madras Works what reductions to meet this can most conveniently be made in works sanctioned in my 93 E. Tour 3. Report action taken.

Order—dated 23rd April 1888, No. 1199 W., Public Works.

Ordered that the final issue of the Imperial Military Works budget estimate for 1888-89 prepared for Rs. 6,24,300, being the amount adopted by the Government of India in their resolution read at the head of these proceedings, be printed and circulated for the information and guidance of the officers of the department, 45 copies as noted in the margin being forwarded to the Government of India.

	COPIES.
To Simla	20
To Calcutta	25
Total ...	45

2. The provision made by the Government of India for Ordnance Works during 1888-89 is Rs. 99,300. Out of this sum Rs. 41,625 have been set apart for the purchase of land for a coal store at Vepery, and the balance, Rs. 57,675, has been distributed under the departmental heads as shown below. The sum available for works has been distributed in communication with the Director-General of Ordnance.

	RS.
Works	46,325
Establishment	10,655
Tools and plant	695
Total ...	57,675

3. The grant provided in the preliminary issue for item 1 under class A works has been reduced to the amount of the unspent balance of the sanctioned estimate for the work.

4. The alterations referred to in the proceedings of Government noted in the margin have been carried out in the final issue.

G.O., No. 423 W., dated 6th February 1888.
" " 504 W., " 11th " "
" " 950 W., " 22nd March "

5. A sum of Rs. 5,555 has been provided for the guard-room and fire-engine shed for the Ordnance Depôt at Agram, Bangalore—(*vide* G.O., No. 536 W., dated 16th February 1888).

6. With reference to paragraph 4 of the letter from the Government of India above recorded, the Quartermaster-General will be requested to furnish the required

details of the scheme for providing additional accommodation for troops at St. Thomas' Mount.

7. With reference to paragraph 5 of G.O., No. 31 W., dated 6th January 1888, the Government of India will be requested to provide a special grant of Rs. 5,680 required for converting certain buildings in Fort St. George into barracks for sixty single men.

8. It is observed that the grant of Rs. 50,000 applied for in letter to the Government of India, No. 870 W., dated 16th March 1888, for regimental institutes in this Presidency has not been provided. The Government of India will again be requested to consider the proposal favorably and issue early orders on the subject.

9. The unsanctioned works for which funds have been provided in the budget should not be commenced until plans and estimates for them have been sanctioned.

10. The grants for incomplete major works and repairs will be held at the disposal of Government and distributed on receipt of detailed proposals from the officers concerned, with reference to paragraph 1322 of the Public Works Code.

11. The grant for minor works will also be held in reserve, and, after providing for incomplete works of 1887-88, the balance will be placed at the disposal of the officers commanding divisions and districts.

(Here enter No. 1200 W., dated 23rd April 1888.)

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

To Superintending Engineers.
To the Examiner, Public Works Accounts.
" Military Department.
" Financial "
" Director-General of Ordnance.
" Inspector-General of Ordnance.

Exd. J. Moses.
Spare Copies

GENERAL.
ACCOUNT.

Govt. of (1888) Madras.

PUBLIC WORKS.

Dated April, 23rd.

Recd. Encl

G.O., 23rd Apr. 1888, No. 1199 W.

APRIL.

Military Works Budget Estimate for 1888-89

Orders circulating the final issue of the Imperial—.

No. G. 64 22/7

ORDNANCE OFFICE:
Fort Saint George,
18 July 1888.

From
C. W. Brereton
Lieut Colonel ~~H. McLEOD~~, R. A.
— Offg Inspector General of Ordnance.
(In charge Ordnance Office)

To
The Secretary to Government,
Military Department

Sir,
With the Governor – Stonehouse Hill.—

In compliance with the order conveyed in Government of Madras Military Department No 3096 dated 9th May 1888, I have the honor to forward herewith duly countersigned in token of approval in terms of paras 988 and 989 Code of Regulations for the Public Works Department 1886 plans and estimates amounting to Rupees 45,500 for constructing Workshops in the Bellary Arsenal, for approval and transfer to the Public Works Department for disposal.—

Enclosures.
Letter No 566 dated 22nd June 1888, from the Superintending Engineer III Circle Bellary and its accompaniments.—

2.. The project has received the approval of the Director General of Ordnance in India and Rupees 6858* were expended thereon during the official year 1887-88. Rupees 22,660*

* Order of Govt. Public Works No 1199 W. dated 23rd April 1888 recorded in Govt. of Madras Mily: Department No 3354 dated 18th May 1888.—

22[x],650 have been allotted for the current Official year and in order to prevent any of the funds lapsing and also to ensure the early completion of the Workshops which are urgently required, I would request that Government in the Public Works Department may be moved to push on the work as much as possible this year.—

2.— Application has been made to the Director General of Ordnance in India in the Statement of New Buildings required for the ensuing Official year to provide funds for the completion of the work from the grant for Ordnance Works for that year.—

I have the honor to be,
Sir,
Your most obedient Servant,

C. W. Brereton Lt. Colonel R.A.,
Asstt. Inspector General of Ordnance.
(In charge Ordnance Office)

P.G. 9.5.88 Wr 194-95 a
" 18.5.88 " 457-58 a

G.O. Nos 1199 W of 23.4.88
" $\frac{2497}{2458}$ W of 25.9.86

SECRETARY TO GOVERNMENT
21.4.11
P.W. DEPARTMENT, MADRAS.

No 4974 Approved and transferred to the Public Works Department for disposal

A. Kenney Herbert Brig Genl
Secretary to Government.

Ootacamund
20th July 1888

WS109

P.W.C. No 7240

Military {1888} Department.

No. 5362

From
C. W. Brereton
~~Lieut~~ Colonel ~~H. McLEOD~~, R. A.,
~~Apt~~ Inspector General of Ordnance
(In charge Ordnance Office)
Fort Saint George.

To
The Secretary to Government,
Military Department.

With the Governor - Stonehouse Hill.

Recd 23.7.88

DATED 18th July } 1888.
RECEIVED 20

No. G.
64

Returns, countersigned in token of approval the within mentioned plans and estimates for constructing Workshops in the Bellary Arsenal -

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25/28

Army Form A 2.
(Late W.O. Form 263.

*N. B.—The Form being applicable to any Board of Officers, or Committee, or Court of Inquiry, this blank to be filled in accordingly.

The Signature of each Officer composing the Board, &c., should be attached at the end of the Proceedings.

PROCEEDINGS of a * Standing Barrack Committee
assembled at Bellary.
on the 7th day of October 1887.
by order of Colonel A. D. Parsons Commdg Ceded Distr
for the purpose of Selecting a site for a Workshop for the Arsenal

PRESIDENT.

Lieut Col. S. E. Atkinson Dy Asst Qr Mr Genl C Dt

MEMBERS.

Major G. Verdon 2nd Bedfordshire Regiment,
Major S. G. Smyth Royal Artillery,
A. H. Garrett Esqre Ex. Engineer,
Major Empson Ordce Officer In attendance

The Committee having assembled pursuant to order, proceed to insp the site on which it is proposed to build the workshop in questions they are of opinion that the only ground within the Arsenal suitable for erection of a workshop is a site

F. & B. 2000,—8—83.

W. H. MOORE, LAWRENCE ASYLUM PRESS—1882.

3/4884

the

site in line with the present Armee's store Room marked A on the Plan —

C. M. Trunson Lieut Col
President —

G. Vernon Major 2 Batt R. S
S. G. Smythe Major R. A } Members.
W. Garrett. Ex. Engr. }

C. A. Thompson Major R. A. In attendance —

Approved
C. D. Parsons Col
Commanding Ceded Districts

iron pillars instead of masonry

Gen 10
7260/88

Reg No 5824

No. 826.

F/Arsenal Office C.D
Bellary 23rd May/88

From
The Ordnance Officer
Bellary
To
The Executive Engineer
Bellary Division
Bellary

Sir,

With reference to your letter No. 173 of the 26 ultimo, I have the honor to give in the margin a copy of No. $\frac{0}{2476}$ dated 22nd May 1888 from the Inspector General of Ordnance on the subject.

> As the Exec Engineer states there will be abundance of light and that the present plan is cheaper I have no objection to its being adhered to.

I have &c &c
(Signed) C. A. Simpson Major R.E.
Ordnance Officer.

(True copy)

H Smalley Col R.E.
Supt g Engineer
3rd Circle

20/2479

2/4354

Cast iron pillars instead of masonry, the

No 4035

Arsenal Office
Bellary, 8th December 1887

From

The Ordnance Officer
Bellary.

To

The Deputy Asstt Quarter Master
General C. D. Bellary.

1 Site Plan
1 Plan of Workshops
1 Plan of arrangement of roofing Richardson and Cruddas
1 Abstract Estimate in duplicate
1 Specification
1 Report "
1 Report of Messrs Richardson and Cruddas

Sir,

In returning the Plans &c of the proposed Workshops in this Arsenal, received with your No 1848 of the 3rd Instant, I have the honor to inform you that I have shewn them to the Director General of Ordnance in India and the Inspector General of Ordnance, Madras, and that with their sanction, I have to suggest the following alterations.

I. That the site should be further to the N. E, leaving only the width of the present roadway between the end wall and the Harness Room

2. That with a view to giving more light, the roof, both of the main building and the Verandahs, should be supported on Cast iron pillars instead of Masonry, the

the intervals of the former being fitted in with iron railings or gratings, except at the Store Room, Armourers' Forge, &c Engine Room, Boiler house, Fuel store and Foreman's office, which should remain as now shewn

3. That the hangers, and plummer boxes should be fitted to the iron pillars instead of to the wooden beams.

4. That the Verandahs should be approached by an easy incline instead of by steps, to enable Carriages to be run into them for repairs &ca

II I beg also to point out that no provision appears to have been made for Benches in the Armourers' shop or for shelves in the store Rooms.

I have the honor to be,
Sir,
Your most obedient Servant
C A Lampson
Major R.A.
Ordnance officer

Enc 2/638 of 87/88

Enc 2/7260/88

Recd 9-12-87
Dis. 2548.

Sub G. in 1279a
D. G. in 5810

25/31

Superintending Engineer's Office,
3RD CIRCLE
Bellary 22d June 1888.

No. 566

FROM Col. H. Smalley R.E.
~~THE~~ SUPERINTENDING ENGINEER,
IIIRD CIRCLE.

TO
THE Inspector General
of Ordnance & Magazines
Madras

SIR,

I have the honor to retransmit the plans and estimates as per margin for workshops in the Arsenal at Bellary together with a copy of letter No. 826 dated 23d May/88 from the Ordnance officer at Bellary stating that he has no objection to the adoption of the present plan and to request that the papers may now be transmitted to Government for early sanction.

14 Enclosures.
Detd. Estimate
Abst. Estimates
Report.
Specification
Site plan.
Ordnance Officer's letter No. 4035/8-12-87
—Do— No. 826/23-5-88 to the Exec. Engineer Army.
Proceedings of Barrack Committee
Plan.
1 Estimate from Messrs Richardson and Cruddas.
1 Plan —do—
1 Wrapper sheet.

I have the honor to be
Sir
Your most obedt. servant
H. Smalley Col. R.E.
Supdg Engineer
3d Circle

12/2179

1/634b

17/118

From

The Superintending Engineer,
IIIrd Circle.

To

The Inspector Genl
of Ordnance & Magazines.

25274 / Genl / 7260/88

4857

Dated 22d } June 1888.
Received 25

Enclosures: Un

No. 566

Workshops in the Arsenal
at Bellary

Forwarding ~~Estimate &c.~~ for sanction of Govt. Estimate &c for consty. —

24 6 88

Note by the Chief Engr. P.W. Departt.

The estimate amounting to Rs. 45,500, for constructing workshops in the Arsenal at Bellary is submitted for the sanction of Govt. with remark that it appears necessary that the workshops should be provided with ramps instead of steps.

13/8/88 E. W.

11.8.88

9/1118

25/33

Public Works Department.

Current No. 7240

Letter No. 4974

Dated 20th July 1888

From the Secy. to Govt: Mily Deptt:-

NOTE OF REMARKS.

The estimate under review amounting to Rs 45,500 provides for constructing a Shed for the workshops in the Arsenal at Bellary.

The Shed is to be constructed with hammer dressed stone, the foundations are to be of burnt stone 4 feet in depth laid on 2 feet of concrete, the roof is to consist of iron trusses boarded over with one inch teak boards and covered with Mangalore tiles. The Estimate

1746-88

for the iron work was prepared by Messrs Richardson and Cruddas of Bombay and will cost Rs 1827/-

The teak-wood under Covering for the roof will cost Rs 7,240, if teak battens are used instead of the planking a saving of Rs 4000 may be effected.

For a building of this kind it seems unnecessary to have the entire roof covered in with teak boards as proposed.

In letter No 4035 of 8th December 1887 from the Ordnance Officer Bellary to the Dy. Qr. Master General C. [illegible] Bellary it is suggested that ~~iron instead of~~

1st The site should be further to the N.E. being only the width of the present roadway between the end wall and the harness room.

2nd The main building and verandahs should be supported on cast iron pillars instead of masonry pillars, and that iron railings should be provided between pillars except at the Store room, Armourers Forge, Engine room, Boiler house, Fuel Store and Foremans Office.

3rd The hangers and plummer boxes should be fitted to the iron pillars instead of the wooden beams.

4th The verandahs should be provided with ramps instead of steps in order that carriages may be run into the workshop

D/11/18.

for repairs —

It is also pointed out that provision does not appear to have been made for "Benches" in the Armourers Shop.

Remarks

It does not appear to be an advantage to place the Shed so close to the road as proposed, as workshops generally have a clear space round them —

2nd & 3rd It would be better to have the roof supported on cast iron columns instead of masonry walls & pillars, and to have the hanger & plummer boxes attached to the iron columns instead of ~~to~~ the heavy beams provided for this purpose. The proposed arrangement would probably considerably reduce the amount

~~non mention of~~

of the Estimate and further would meet the object of the proposal by giving more light and ventilation.

4th It is quite clear that ramps instead of steps would be most suitable for a workshop of this kind, where gun carriages would have to ~~[illegible]~~ be repaired, in order that they may be wheeled into the shop —

As regards the non-provision of benches in the Est: for the Armourers Shop, the Est: shows a provision of Rs 500 for benches shelves &c.

It is very necessary that the suggestions of the Ordnance Officer should be complied with, and if not too late it may be well to return the plans Est to S.E.

in order that they may be revised as far as practicable to meet the views of the Ordnance Officer.

The project has the approval of the Director General of Ordnance in India ~~and~~ a sum of Rs 6858 was expended on the work during the official year 1887-88 and a further sum of Rs 22,650 has been allotted for expenditure on the work during the current official year.

The rates are fair.

The plans & Estimate have been countersigned by the Mily Authorities and approved by Govt: in the Mily: Deptt:-

9/8/88.

Note.

The I.G. of Ordnance & the Military Dept have approved of the plan, and it does not seem advisable to refer again to the remarks of the Comy. of Ordnance Bellary, as these papers were before the I.G. of Ordnance when the plans &c were submitted for approval.

The objection to cast iron pillars is that the shed will be open to the weather in several parts.

If Machines are to be run on both sides of the shops, the shafting should run down the centre, the arrangement proposed is better than that suggested by the Comy of Ordnance.

The ramps are necessary in place of steps - for the shops only, not for the verandah -

The Est may be sanctioned with or without the ramps.

10. 8. 88

No. 2349/6

B & R
Mily Works

PUBLIC WORKS DEPARTMENT.

25 27/30

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 17th August 1888.

READ the following

From the Inspector General of Ordnance. H. E. No. 6/64 d/15th July 1888.
Endorsement by the Military Department, H. E. No. 4974 d/20th July 1888.
Note by the Chief Engineer, P. W. Department d/ 18th Augt/88

The estimate amounting to Rs. 45,500, for constructing workshops in the Arsenal at Bellary, is sanctioned.

2. Attention is drawn to the note by the Chief Engineer, P. W. Department above recorded.

3. This sanction has been registered as Imperial Ordinary No. 30 W of 1888-89 and classified as Military Original Works.

11. 8. 88

Fr 11
13/8/88

To The Supty. Engr. III Circle with genclos.
" Examiner of P. W. Acts with the duplicate abstract estimate
" Military Department

11/8.

Govt. of {1888} Madras
PUBLIC WORKS.

w/d
6 P.M.

Dated

Recd. } Enål.

G.O. 17th Augt. 1888, No. 2527 W

Arsenal at Bellary

Estimate for constructing workshops in the — sanctioned.

100/6

[illegible] P 20/8