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MADRAS RECORD OFFICE.

Government of Madras.

Public Relations DEPARTMENT.
Gen - 15-1-37

G.O. No. <u>1747</u>	Press Mis.
<u>87-88</u> Dated <u>14-9-</u> 185 <u>9</u> .	

Not to be folded or roughly handled

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*Proceedings of the Madras Government, Public Works Department,
from 9th to 15th July 1859.*

No. 87. Read the following Proceedings of the Madras Government in the Military Department, dated 2nd July 1859, No. 2367.

Authorizing the measures proposed for repairing the Fort ramparts and directing to submit estimates for the extra expense for removing the additional length of the same. } (Vide Military Proceedings from 2nd to 8th July 1859, Nos. 31 @ 33.)

No. 88. ORDER THEREON, 14th July 1859, No. 1710.

Communicated to the Chief Engineer, who will have the goodness to submit the required estimate.

(Signed) J. D. BOURDILLON,
Secretary to Government.

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MILITARY DEPARTMENT.
PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following Papers :—

From the Commandant of Engineers, Fort Saint George, 28th June 1859, No. 260; to the Secretary to Government, D. P. W.

With reference to Minutes of Consultation No. 958, dated 10th March 1859, I have the honor to report that as the Fort Works had arrived at such a stage that it was necessary to decide what course should be pursued about the foundations, I assembled the Committee of Engineer Officers, and I have now the honor to transmit their proceedings.

Proceedings of a Committee of Engineer Officers held at Fort Saint George on the 15th June 1859, to take into consideration the nature of the foundations and method to be observed in carrying into effect the repairs and alterations to the Fortifications.

PRESIDENT.

Colonel A. COTTON.

MEMBERS.

Lieutenant Colonel E. LAWFORD.

Major HORSLEY.

Do. C. ORR.

Captain HITCHINS.

The Committee having assembled agreeably to orders proceeded in the first place to inspect that portion of the Escarp wall of the North Redan on the Sea-face which is still standing, the water having, for the most part, been removed from the Ditch by the Steam Pump of 6 Horse Power lately set up on the counter-scarp.

2. The Committee observe in the first place that there are neither wells nor piles under the foundations in this part of the Fortifications, but that they are laid on the bare sand at the depth of $7\frac{1}{2}$ feet below mean water level.

3. From present appearances it would seem probable that the cracks observable on either side of the Salient Angle of the above work were caused in the first instance by the sinking of the heavy mass of masonry at the angle itself and that afterwards the wall beyond was thrust out by the lateral pressure of the arched Casemates above.

4. The Committee are of opinion however, that these cracks are not of that importance to render it necessary to remove and rebuild this portion of the Escarp Wall. They think that if proper care is taken to under-pin it as far as practicable with good concrete and to support it in front with a line of pot-wells, these latter as well as the space between them and the Escarp to be filled with concrete, it is not likely, to sink or move any further outwards, and more particularly as the weight above will be greatly reduced by the removal of the Arched Casemates according to the new section. They consider therefore that this portion of the work may be proceeded with at once on the old foundations with the additions above mentioned.

5. The Committee next proceeded to inspect the site of the East-face of the N. E. Orillon Bastion, the Rampart of which has been entirely removed for a distance of 178 feet prior to its reconstruction from the foundations. They observe that here also the old foundations, if such they can be called, were laid on the sand not more than 3 feet below mean water level and without support of any kind. There is no doubt that the failure of the work was owing partly to the disturbance of the sand by the action of underground currents, and partly to the exceedingly bad quality of the masonry, the interior of the Rampart being composed of Brick in clay.

6. The question for the Committee to decide is, how is this work to be rebuilt? Are the foundations to rest on Piles of Iron-wood as suggested by the former Committee in the 13th para. of their Report dated 18th July 1856 and recommended by Captain Francis in his Report dated 22nd December 1858, para. 8, or, as has since proposed by Major Horsley, on pot-wells sunk to the depth of 9 or 10 feet below mean water level and filled with concrete to within 3 feet of that level, and to extend beyond the base of the foundations at least half a diameter of a well or $1\frac{1}{2}$ feet. On which solid mass of concrete will come the brick masonry in cement?

After mature consideration the Committee are of opinion that a foundation, such as that Major Horsley, will answer the purpose equally well and be much cheaper than the former, and they therefore recommend it being used in this work as well as in the reconstruction of the Escarp and Counter-scarp walls of the South Redan.

8. Subjoined is a Statement of the comparative cost of each of the above methods of construction.

Statement shewing the cost of forming a bed for the foundations of the South Redan of Fort Saint George.

Bed formed with Piles and concrete.		Bed formed with ring wells filled with concrete.	
Amount of Estimate for piles and driving.....	4,777 8	240 Wells at 20 Rupees each including sinking and filling with concrete.....	4,800 0
Do. for concrete	2,271 15	Saving	2,219 7
Total Rupees..	7,049 7	Total Rupees..	7,049 7

They consider it absolutely necessary that the whole of the unsound masonry should be removed from the interior of the N. E. Demi Bastion wall before the new work is added on to it as it is quite unfit in its present state to resist the action of shot. The additional length of Rampart to be taken down and rebuilt measures 82 feet, that is supposing the whole to be of the same inferior description as that now exposed to view. This is not allowed for in the sanctioned Estimate, as it was not known when that Estimate was framed that such unsound masonry existed.

9. In conclusion the Committee find that the Steam Pump when working up to less than half its nominal Horse Power, each piston making from 28 to 30 strokes a minute and lifting the water about 18 feet, is able to keep the Ditch clear of water to the depth of 4 feet below mean water level over an area of Five thousand five hundred and ninety square feet between the dams.

Referred to the Town Major for the observations of His Excellency the Governor.

30th June 1859.

From the Town Major Fort Saint George 1st July 1859, No. 2835; to the Acting Secretary to Government Military Department.

I have had the honor, to submit the letter from the Commandant of Engineers, No. 260 of the 28th June, and the Proceedings of the Engineer Committee, that accompanied it, referred to me by you, for report to the Honorable the Governor, and have been commanded to inform you, that His Honor considers the Report very satisfactory, and entirely concurs, in the recommendations contained in it.

ORDER No. 2357, 2nd July 1859.

The Governor in Council considers the report of the Committee satisfactory and authorizes the measures proposed in Paras. 7 and 8.

2. Estimates for the extra expense for removing the additional length of Rampart will be submitted in the usual manner.

(True Extract.)

M. M. M. M. M.

Acting Dy. Secretary to Government.

To the Department Public Works. *With 20 Rupees*
 „ Commandant of Engineers.
 „ Town Major.

Exd. N. Cancasaby.

Recd 1st of A.M. 1859

Wm. 1859
J. H. 1859

Proceedings of the
Machine Society in the
William 1859

October 2nd
1859

Received 20th of Oct 1859
of 20th of Oct 1859

William 1859
J. H. 1859

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Communicated to
the Chief Engineer, who will
have the goods to return
the required estimate.

1710

Wm. 1859
J. H. 1859

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