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. 126 Press ~~Mis.~~

259-260

Dated 11 — 1 — 1866.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department,
11th January 1866.

No. 259. Read the following letter from the Committee appointed to report on the Pier, to the Secretary to Government, Public Works Department, dated Madras, 21st December 1865:—

1. Having examined the Pier, in compliance with G. O. No. 3,702, dated 6th December 1865, we have the honor to report as follows upon its condition.

2. We are of opinion that the Pier has sustained no material injury from the late storm. The damage has been confined to the cross head, which has slightly changed its form, and which has been denuded of the greater portion of the timber fender piles and waling pieces. The T irons which stretch diagonally from head to base of the exposed portions of each pair of piles at the ends of the cross head, and for two of the bays, next them along the sides, have been more or less injured, but the iron rods which take the place of the angle iron for the diagonals in the other bays of the cross head remain unscathed.

3. The storm acted with its greatest force against the north end of the cross head; and, as might be supposed, from the want of lateral support at the angles, the injuries have been greater there than at other points.

4. It would appear on an examination of the levels, that the platform at the north-east angle has sunk five inches, while at the north-west angle it has been raised $2\frac{1}{2}$ inches; at the south-west (south-east?) angle it has sunk $3\frac{1}{4}$ inches, and south-west angle it has been raised $1\frac{1}{4}$ inches.

5. The east edge of the platform, midway between the ends, has sunk less than an inch, and at the junction of the cross head with the body of the Pier there is no perceptible change.

6. The above variations of level have slightly deranged the planking and lines of rails, but not to such an extent as to interfere with the working of the goods trucks.

7. We do not think that the strength of the piles of the cross head is impaired by the slight alteration of position which they have experienced.

8. The fender piles and waling pieces must have offered an immense resistance to the passage of the waves. We are informed that they were originally placed round the cross head with a view to allow of ships being moored along side, but that the cross head has never been used, or is likely to be used for the direct loading and unloading of large vessels.

9. At present it is used for the service of rafts, and massive protective timbers are quite unnecessary either in regard to them or to Masulah boats. Feeling assured therefore that the fenders and horizontal waling pieces can answer no useful purpose, and being satisfied that the resistance they must offer during a storm must bear severely on the pile work, we would strongly recommend their removal.

10. The Superintendent of Marine informs us that he could form a protective screen of spars lashed together and to the platform, which would keep boats and rafts clear of the iron work; and that it could be hauled up or otherwise removed on the approach of a storm; and we beg to recommend this suggestion for the approval of Government.

11. The diagonal angle irons are proved to be too weak. They have to act as both ties and struts, according as any displacement of the piles may be up or down, right or left, and this form is not the most suitable that could have been selected to resist the two strains. If the diagonals had been formed of double T

Supt of Marine ✓
Marine Depr ✓ Desp 12/1/66

iron, that is with a cross section in the form of a four pointed star, they would have been much stronger to resist any strain tending to bend them. But on the other hand, if two diagonals of this shape were put up in each bay, they could not be crossed in the same plane, and if not in the same plane, there would be a leverage on the collars at their ends, which would act injuriously. We therefore confine ourselves to recommending one strut of double T iron (with the higher end on the seaward side) in each bay, in lieu of the original single T iron, and, crossing it, two wrought iron rods. The latter, it will be observed, will be in parallel planes in front and rear of the struts, and by being attached to opposite sides of the collars at head and foot of exposed portions of the piles, will not exert any force tending to turn the collars round, or in other words they will not be liable to displacement.

12. We have further to suggest that the heads of the outer row of the piles of the cross head should be strengthened, by the addition of wrought iron straps. The stability of the piles would have been materially increased had wrought iron girders, bolted to their heads, been used instead of timber; but as this alteration would now involve great inconvenience and expense, and is not indispensable, we do not recommend its being carried out.

13. It will be seen that the alterations we suggest are simple and easy of execution, and that they will not interfere with the working of the traffic. We have thought it unnecessary to furnish plans or dimensions of the proposed new iron work, believing that the details had better be left to the Officer in charge of the work, or the Superintendent of the Government Workshop.

14. It would facilitate inquiry into the nature and extent of damage which may occur in future, if the levels of the different portions of the Pier platform are correctly recorded with reference to a bench mark on the shore.

No. 260. ORDER THEREON, 11th January 1866, No. 126.

CIVIL WORKS, No. 44.

1. Forwarded to the Superintending Engineer of the 4th Division, who, in communication with the Superintendent of Marine, will submit an estimate for the removal of the fenders and waling pieces from the piles forming the cross head of the Pier, and for making the other alterations which are recommended in paragraphs 8, 9, 10, and 12.

2. Colonel Boileau will also furnish, for transmission through the Marine Department, to the Secretary of State for India, a Special Indent for such articles as may be required from England to strengthen the Pier in the manner proposed by the Committee.

(True Extract.)

Colonel, R. E.,
Secretary to Government.

To the Superintending Engineer, 4th Division.
" Superintendent of Marine.
" Marine Department.
Exd. S. T. Augustin.

No 126

Proceedings of the Madras Government
under date the 11th January 1866
Read the following

From Colonel J. Anderson and
Messrs. Fraser
R. F. Chisholm

Reporting upon the P.W.D. 21st December 1865 re
Madras Pier.

Forwarded to the Superintending
Engineer of the 4th Division, who in
communication with the Supt of
Marine, will submit an estimate
for the removal of the fenders
and waling pieces from the
piles forming the Cross Head of
the Pier, and for making the
other alterations which are re-
commended in paras 8. 9. 10
and 12.

Colonel Boileau will also
furnish, for transmission through
the Marine Dept, to the Secretary
of State for India, a special
Indent for such articles as may
be required from England to
strengthen the Pier in the
manner proposed by the
Committee —

33

To the Supt Engr 4th Div
6 — Supt of Marine
11 — Marine Dept

Dept 12/1/66

Ord. 1866 Dr. 5th
Recd. of Govt. for Jany
D. 6126.
Recd. of the Mr. Govt.
Dr. 11th Jany 166.

Madras Fort St. George
Head. — The Superintending
Engineer, 4th Dn., furnished
with certain instructions re-
lative to the alterations, &c. &c.
commended to be carried out on
the —

K. 209. 200